Bumps and boosts, an ethical alternative to nudges?

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Abstract

In this thesis I analysed two alternatives to nudges, that promote themselves as being effective as well as autonomy respecting. These alternatives are bumps and boosts. Bumps is a method that by giving feedback tries to steer people in a certain direction. Boosts try to enable people to make the best option by providing them with information, skills, strategies or by changing the environment so the information is easier to understand. Both methods are focussed on the learning mechanisms, where nudges are exploiting biases and heuristics. The question I answered is '*Can bumps and/or boosts be perceived as autonomy respecting?*'

I concluded that bumps are not always autonomy respecting, even when focussing on learning mechanisms. By using framing techniques it is possible that bumps limit someone's understanding of the choice and are therefore not autonomy respecting. Boosts on the other hand are autonomy respecting. They have the intention to provide tools, skills or information to someone to make their choice more understandable. This intention differentiates them from framing nudges that sometimes use the same techniques but with manipulative intentions.

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1. <u>Introduction</u>

Climate change is mainly caused by anthropogenic greenhouse gas concentrations (IPCC, 2018). So if we want to keep the earth habitable for humans and many animal species, we need to change our behaviour. Though the majority of people know we need to take action, it is still difficult for us to grasp what we as individuals need to do. This because climate change is the perfect moral storm as Gardiner (2011) explains. The peculiar features of climate change unable us to make the hard choices needed to mitigate climate change. Many research is done on what barriers people from acting (Lorenzoni, Nicholson-Cole & Whitmarsh, 2007; Markowitz & Shariff, 2012). Six prominent ones will be described here.

- First of all the complex nature of climate change. People feel they do not possess enough knowledge about climate change. They might have doubts about what causes it or are confused about what actions are necessary (Lorenzoni et al., 2007). There is also the link between actions and emotions. The peculiar features of climate change provokes rapid and emotional reactions. And responding to climate change demands rational reasoning, which is difficult when being emotional (Markowitz & Shariff, 2012).

- Secondly the fact that most of the polluting actions are done unintentionally, which goes together with the third factor which is an urge to defend themselves. People believe their individual actions do not play a big role in causing climate change. Many therefore point at big industries or governments to take the blame and demand them to take the lead in solving this. Even when they believe their actions will have an impact, some are still hesitant because of the free-rider effect. Why would they change their whole lifestyle when others might not (Lorenzoni et al., 2007).

- Fourth being the uncertainty of the consequences, which is also a lack of knowledge and with the inability to grasp what happens in the future or how climate change effects other places. The consequences of climate change feel far away. Ice melting in Greenland is difficult to grasp for people not living in Greenland. The same is true for the consequences in the future. People believe they will not be alive for any of the consequences to affect them and they can therefore not imagine what the consequences must be like. This makes it difficult to motivate them to act.

- Fifth is the feeling of having more important things to worry about. Between the choice cheap or green the green will in most cases not be chosen. People also have more attention for things closer to themselves, like family or their immediate environment. Especially groups that do not notice the consequences directly will give more priority to other problems (Lorenzo et al., 2007).

- Lastly the political climate makes it difficult for people to grasp climate change and come up with effective solutions. There is a lack of trust in political systems, but people still expect governments to be responsible for coming up with solutions. Then

seeing the government not being effective enough demotivates even more (Loren-zoni et al., 2007) .

These barriers make it more challenging to motivate people to change. Giving information and letting people make an informed choice is perceived as ethical. Information should enable someone to make a rational choice, but in most cases it does not result in actual behavioural change. Research shows that it neglects emotional responses (Moser, 2007) and social structures (Ockwell, Whitmarsh & O'Neill, 2009). In the case of climate change, the barriers described earlier prevent people from converting information into action. These barriers result in the feeling that they lack knowledge on where to find information, confusion about conflicting information and information over-load (Lorenzoni et al., 2007). But people also seem to think they know what is best for themselves (Mill, 1859). In the Western world the freedom to self-governing (autonomy) is perceived to have moral weight. According to Taylor (1979) one is free to the degree that one can determine their own choices and shape their own life. It can therefore be questioned if limiting people's choices and obligating people to act sustainably is the most ethical option. However, even if autonomy is perceived to have moral weight, the limitation of some options does not seem unethical to us. Think of prohibiting murder or stealing. This vague line between ethical and unethical decreasing of someone's autonomy creates space for methods to promote themselves as ethical while manipulating someone's choice. This is also where nudges fit in and where alternatives to nudges, called bumps and boosts might fit in. In this thesis I will focus on bumps and boosts and answer the question if they are autonomy respecting. Climate change will serve as a case to illustrate certain arguments. This because climate change is the perfect example of a case where simply giving information is not effective and other alternatives should be explored.

1.1 Nudging

Thaler and Sunstein (2009) promote nudges as effective as well as autonomy respecting. Their definition of a nudge is:

"A nudge, as we will use the term, is any aspect of the choice architecture that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives. To count as a mere nudge, the intervention must be easy and cheap to avoid. Nudges are not mandates. Putting fruit at eye level counts as a nudge. Banning junk food does not." (Thaler & Sunstein 2009, p. 6)

This definition however is too broad and leaves room for interpretations. Simply providing information according to this definition can be seen as a nudge, though intuitively this is not the case. So what do Thaler and Sunstein mean with choice architecture? They describe it as way to present a choice, where the choice often depends on how the choices are presented (Thaler & Sunstein, 2009). This still includes providing information. Another part of the definition that is too vague is that a nudge is easy and cheap to avoid. When is it easy and what

is cheap? Hausman and Welch (2010) argue that is not just about monetary incentives and bring the following definition to the table:

"Nudges are ways of influencing choice without limiting the choice set or making alternatives appreciably more costly in terms of time, trouble, social sanctions, and so forth. They are called for because of flaws in individual decision-making, and they work by making use of those flaws." (Hausman & Welch, 2010, p.126). Though we would like to see ourselves as perfect rational human beings, homo economicus, many of our choices are intuitive. When in familiar situations or when making a fast, intuitive choice, we can be influenced by heuristics and biases. Heuristics are methods or an aid to learning or problem-solving. An heuristic can for example be a rule of thumb, an educated guess or an intuitive judgement. Though heuristics are really helpful, they can also be used wrongly when it is based on wrong information or when the right answer is context dependent. This can even lead to severe and systematic errors (Tversk & Kahneman, 1974). Biases are a certain outlook or a prejudice to something. Heuristics and biases are used as shortcuts to problem solving and do not have to involve rational thinking. Nudges make use of biases and heuristics to steer someone in a certain direction. So to summarize, *nudges are tools to influence choice by focussing on flaws in our decision-making. They try to steer us in a certain direction. Other options however are not limited and nudges should not make other alternatives more costly in terms of time, sanctions or trouble.* So simply providing information is not a nudge, because it does not make use of flaws (heuristics and biases) in our decision-making. Banning options is also not a nudge, because it limits other options. Nudges are in between these two options.

Nudges do raise a lot of questions as well as critique. In this thesis my focus will be on the critique that nudges can violate someone's autonomy. Thaler and Sunstein (2009) themselves argue that nudges are not manipulative. We sometimes make choices that are not good for ourselves. In these cases nudges can steer us in the right direction and are therefore very helpful. Additionally nudges do not limit any choices and therefore preserves our freedom, is their argument. The critique on nudges is that altering someone's choice architecture can be violating someone's autonomy (Blumenthhal-Barby & Burroughs, 2012). Nudges seem to be most efficient when not being transparent about their purpose, but this can be perceived as limiting someone's free choice (Bruns et al,. 2018). So on the one hand nudges are perceived as a virtue, because they can steer people in the right way. On the other hand nudges are perceived as vices because they seem to manipulate people. Underwriting this critique, Kumar (2016) and Grüne-Yanoff & Hertwig (2016) came up with two alternatives to nudges, bumps and boosts.

Bumps
Bumps are focuses on associative learning. By giving feedback after performing an action, a bump tries to influence someone. People begin associating this feedback with their choices and via this they will learn the 'right' choice. Bumps do not make use of heuristics and biases and try to teach people to make certain options. With this it shows similarities with educa-

tion. This is also the difference with nudges. Nudges do not make use of learning mechanisms, but are focussed on exploiting someone's heuristics and biases.

So bumps do not make use of heuristics and biases like nudges do, but are also not the same as simply giving information, because boost do intent to influence someone. This raises the question if boost are autonomy respecting or might be manipulative.

Boosts

A boost is an approach that tries to improve people's decision-making by overcoming biases instead of exploiting them. This is to be done by supplementing someone's competences with other skills, decision tools or by restructuring the environment so that the existing skills and tools can be more effectively applied. It seems to blur with education, but it does not merely provide information but tries to develop skills or an environment where it is easier to choose. An example is changing information from text to graphics or from relative to absolute numbers. Boosts are also focussed on learning mechanisms, but are different from bumps because they do not focus on giving feedback. Where bumps try to influence someone by providing feedback, boosts try to influence someone by supplementing competences, information, decision tools etc. Grüne-Yanoff and Hertwig (2016) argue that boosts are different from framing nudges because they are not misleading information. At the same time they do say that this tool, like nudges, can be used to influence someone in a certain direction. This ambiguity is reason to question if this approach is actually autonomy respecting.

These two methods stand out by not focussing on heuristics and biases, but on learning mechanisms. Bumps and boosts are, like nudges, between simply giving information and banning options. Though they promote themselves as being effective as well as autonomy respecting, this is not critically research yet. The literature on nudges is extensive (Blumenthal-Barby & Burroughs 2012; Saghai 2013; Wilkinson 2013; Hanna 2015; Moles 2015; Nys & Engelen 2017; and Noggle 2017), but bumps and boosts seem to be have slipped trough. Not much has been written about these two methods and their implications for autonomy. This creates a situation where two methods might be promoted as being promising and effective by their inventors, but because the knowledge on the ethical side of it is lacking they might not be a better alternative to nudges.

In this thesis I will presume both approaches are effective, though empirical research is needed to confirm this. Effective in the context of climate change means being able to change behaviour of individuals so the consequences of their actions do not exceed the planetary boundaries (Rockstrom, Steffen, Noone, Persson & Chapin, 2009). Though bumps and boosts are focussed on changing the behaviour of individuals, the goal to stay within the planetary boundaries is a collective effort. However in this thesis the focus will be on if these two methods respect autonomy. Therefore research to confirm that these methods are also effective is not in the scope of this thesis.

1.2 Overview

The gap of information on the ethical implications of bumps and boosts is going to be central in this thesis and more specifically the question if these approaches are autonomy respecting. Later bumps are being questioned, because of their focus on learning mechanisms. Viktor Kumar argues that by focussing on learning mechanisms you are respecting autonomy. So after making clear what bumps are, it is important to analyse if bumps are a controlling influence to know if they are autonomy respecting.

Boosts also focus on learning mechanisms, but are more focussed on supporting the learning mechanisms with tools and skills and not on influencing the learning mechanisms itself. Though boosts do not seem to differ from education, Grüne-Yanoff and Hertwig (2016) argue they do. They also say you can use boosts to steer someone in a certain direction, which raises the question if it is a controlling influence. This will be answered in this thesis.

The question that I will be answering in this thesis is: *Are bumps and/or boosts autonomy respecting?* In the next chapter the definition on autonomy used in the rest of the thesis will become clear. In the third chapter I will use the definition of autonomy from the second chapter and analyse if it is true that nudges are violating autonomy. The fourth chapter will first give a further explanation of what bumps are, after which I will analyse if bumps are violating autonomy. In the fifth chapter I will do the same but then for boosts. After that, in chapter six, I explain that when welfare, consent or emotions play a role, there might be situations wherein manipulation is justified. I end with the conclusion that bumps can still be manipulating, though not in every situation. Boosts on the other hand are not manipulating.

2. <u>Autonomy</u>

As said before, the freedom to govern yourself has, especially in Western countries, moral weight. However there is a vague line between being able to justifiably limit ones choice and doing this but being seen as acting unethical. To judge if boosts and bumps are autonomy respecting there is need to clarify the definition of autonomy.

2.1 Autonomous person versus autonomous choice

You can be an autonomous person and you can make an autonomous choice. Being an autonomous person depends on your mental state, on if you have the capacity to make a reflective choice. This means to have "the quality of being able to do something' (American Heritage, n.d.). One's mental health must be as such that one is able to understand, reason, deliberate, manage and choose independently (Beauchamp & Childress, 2009, p. 102). Being in a coma is an example of not being an autonomous person. You are not able to understand, reason or choose independently.

But even when considered to have the capacity to make a reflective choice, there is still the possibility that your choice is not autonomous. Think of addicted smokers. One can be an autonomous person, but is in some cases unable to control his choice or action (Christman, 1989, p. 13-14). It can be questioned if the choice to light up a cigarette because of habit or addiction is autonomous. The person lighting up the cigarette might be perceived as having the capacity to make a reflective choice and is in other situations able to make an autonomous choice, though in the case of lighting a cigarette he did not make an autonomous choice. Nudges, bumps and boosts are focussed on someone's choice and not on being an autonomous person. For that reason I will not go into more detail on the capacity to make a reflective choice and presume that the people I talk about in this thesis originally have this capacity. This means that without the influence of for example a nudge, bumps or boost their mental health is as such that one is able to understand, reason, deliberate, manage and choose independently. It might however be that nudges, bumps and boosts do have effect on this capacity. Therefore I do include it as one condition to make an autonomous choice.

2.2 Autonomous choice

The goal of this chapter is to make clear what makes an action or a choice autonomous, keeping in mind the person has the capacity to make a reflective choice.

An influential definition of autonomy is the definition of Dworkin (1988). Though Dworkin applies his theory to argue for individual autonomy and not for autonomous choices, this theory is still often applied to explain autonomous choices. We all have first-order desires, which are often intuitive. Think of walking in the supermarket and craving an unhealthy snack. By critically asking ourselves if we really want to want that snack, we make an appeal to our second-order desire. When we adhere to our second-order desire, we act autonomously. So in the case of the supermarket example, the person acts autonomous when wanting to want that unhealthy snack. A person who is on a diet and wants to lose weight is

not acting autonomous when choosing the unhealthy snack over the healthy snack. However how do you know that your second-order desire is autonomous? It might be that the desire to lose weight is influenced by the Western ideal of being thin. You could argue that you then have to adhere this to the third-order desire, but this seems to end up in an endless cycle. This theory received critique on the seemingly easy way of bending this theory so it is convenient to you. You could easily argue that your second-order desire is actually eating the unhealthy snack and with that your action is autonomous. This is what Beauchamp and Childress (2009) are also arguing. They therefore came with their own theory on autonomous actions, which is also an influential theory. They say an autonomous action is one done with intention, understanding and without control. Based on these three concepts, I am going to form a clear definition with which I can analyse bumps and boosts. The three concepts are usually viewed along a spectrum. So for example with understanding it is not binary, but you can understand nothing, a little bit, a lot, everything etc. The definitions I will form in this chapter will be the threshold I use in this thesis between an autonomous and non-autonomous choice.

Intention

Beauchamp and Childress (2009, p. 104) define an action done with intention as having a plan to execute an action. The planned outcome does not need to be realized and an intentional action might also be an action someone does not wish to perform. So for an act to be intentional, as opposed to an accidental act, the person must have a concept of the act in question. Kahneman (2011) presented the dual process theory, which states that we have two ways of thinking. One unconscious and automatic, the other rational and reflective. An automatic action would be breathing, which most of the times we do unconsciously. A reflective action would then be to control your breathing for a couple of seconds. Nudges are focussed on the unconscious and automatic actions (Thaler & Sunstein, 2009). If having a concept of the act in question makes an action done with intention, then unconscious actions seem to be done unintentionally. However this seems to be too strict. Think of buying the cookies you are always buying. You unconsciously take that package, but this is also your intention. To act intentionally in this sense is wanting to perform that action. Wanting here is very broad and includes wanting to do actions you actually do not wish to perform. So for example your boss asks you to do a presentation for a group of people. You wish you did not have to do the presentation, but when doing the presentation that is the action you want/intent to perform. Tripping when getting on stage can be an action you did not want to perform and this is an accidental action. So an intentional act is an act you wanted (in the broadest form) to perform. An intentional act on itself however is not autonomous, because buying that unhealthy snack though being on a diet or even being forced to buy the snack are also intentional acts under this definition. We therefore also need to understand our action and do it without being controlled. Still to make an autonomous choice, you need to meet the condition 'Wanting (in the broadest form) to perform that action'.

Understanding

An autonomous action must also be done with understanding. Understanding might be limited by conditions like illness and immaturity or by deficiencies in communication for example. According to Beauchamp and Childress (2009) to make an autonomous choice you only need a substantial degree of understanding. They however do not specify what a substantial degree is. This aspect is more on the content of the action. When intending to perform an action we need to understand what the action contains and what the consequence of that action is. By understanding the action and its consequences, you can decide if you really want to do this action. However in some cases it is barely possible to have knowledge about all the consequences and aspects of an action. Think of buying a shirt. You need a new shirt and therefore want to buy it. However in general you also want to be a good person. A lot of shirts have a negative impact on the environment and in a lot of cases are also made by people who are being exploited. When buying a shirt it is very difficult to know every aspect that is related. Are you in this case not acting autonomous when buying a shirt? Our intuition would say that we would be autonomous when buying this t-shirt. Though strictly speaking you do not understand all the aspects of your action. So when do you have substantial knowledge to act autonomous? I argue that you would need to understand what the action contains and the direct consequences of the action to make an autonomous choice. In the case of the shirt you need to understand the process of buying that shirt and the direct consequence that the store receives money and you receive the shirt. With this I am not arguing that you can never be held responsible for the indirect consequences of your action. Being held responsible for an action and making an autonomous action are however two different things. When being able to hold someone responsible is a question that is not in the scope of this thesis. One condition for an autonomous choice then becomes 'having understanding of performing the action and the direct consequences of that action'.

Control

The third condition is to act without control by certain external sources or internal states (Beauchamp & Childress, 2009). Having at least some control over your actions is needed for it to be an autonomous choice.

I first focus on what it means to be free from certain internal states. Having some control over your action, but at the same time being free from controlling internal states raises questions. Which internal states are controlling and when are you free from this? Beauchamp and Childress (2009) themselves give the example of a mental illness as a controlling internal state, but with only one example it is still not clear when an internal state is controlling. Is being emotional also a controlling internal state? We all know examples of choices we made when being emotional that we afterwards regret, so you can say emotions influence you. But emotions can also help you make a moral judgement (Roeser, 2012). This shows that being free from control does not necessarily mean being free from influence. Like with emotions, influence can help you make a rational decision. Being free from control by

internal states is linked to the capacity to make a reflective choice. When internal states limit your capacity to self govern, so when it limits your understanding, reasoning and deliberation, it becomes a controlling internal state. Exhaustion by sleep deprivation is one example of a controlling internal state. This can affect someone's ability to comprehend complex situations and ability to make reflective choices (Harrison & Horne, 2000). When someone asks you to make a choice between energy suppliers and your exhaustion hinders you from understanding the technical implications of choosing a green or a gray energy supplier, it limits your capacity to make a reflective choice. Important to note that being tired not always limits your capacity to make a reflective choice. In most cases someone who is tired is perfectly capable of understanding, reasoning and deliberating. There are however cases that this is not the case. The same with some mental illnesses that decrease someone's cognitive function, that creates delusions or affects someone's memory. The boundary must be drawn where an internal state affects your capacity to make a reflective choice.

As said above not all influences are controlling and this is also the case for external influences. So what makes an external influence controlling? Victor Danciu (2004) distinguishes four types of influences: coercion, manipulation, rational persuasion and factual information. By coercing you are forcing or intimidating someone into making a certain decision. You are not leaving much room for someone to act in another way. Think of not having any parking space available near the supermarket, forcing people to go with public transport or by bike. By manipulating you are intentionally confusing or misleading someone to get them to act in a certain way. This leaves a bit more room for the controlled to make another decision, though you are still trying to stimulate someone in a certain direction. Making it more fun to come with public transport and bike by using colours and sounds, think of the stairs in some train stations that look like a piano (Rijnmond, 2016). Coming with a car is not made impossible, more difficult or more expensive, so it does not count as coercion. But by making it more fun to come with a bike or by public transport, you are stimulating people to choose this option. Rational persuasion is giving someone logical arguments to convince them of something. So for example when you are trying to convince someone to go by bike to a supermarket and explain it is better for the environment and for someone's health. The last one is factual information, like reading schoolbooks or academic researches.

To decide which form of influence is controlling, it needs to be defined what it means to control. Above I described a controlling internal state as an influence that limits someone's capacity to make an reflective choice. With external influences it is not only someone's capacity that can limit someone's autonomous choice, but also if the choice is available to begin with. Think of the example of coercion, where coming with a car is not even an option. It is clear that coercion is a controlling influence, which limits someone's options or pushes someone in a certain direction that is unavoidable. With coercion it is not possible for someone to make their own autonomous choice. Giving someone objective, factual information does not seem to be controlling. It does not limit the possibility for someone to understand

their choice. Giving factual information is not used to push someone in a certain direction. It might even broaden the information someone uses to come to a rational decision. Manipulation and rational persuasion are often perceived as striving the same goal, both do try to steer someone in a certain direction. They are therefore often criticized (Nettel & Roque, 2012). It is true that giving arguments can in some cases be manipulation, but there is still a clear difference between manipulation and rational persuasion, which is also important to distinguish which external influences are controlling.

When I want to convince someone to stop driving cars because it is bad for the environment, I could say: "You should stop eating meat, because eating two entrecotes emits as much greenhouse gasses as driving from Amsterdam to Barneveld. And by already eating 80% meatless you reduced your emissions by 9% (De Correspondent, 2016). This would count as rational persuasion.

When I say: "Did you know Billie Eilish, Miley Cyrus and Ariana Grand do not eat meat? It is super cool to stop eating meat.". This is manipulation. The difference is dissimulation. With manipulation the intention or method is dissimulated (Nettel & Roque, 2012). So in the case of using the celebrities you are using arguments, but by using popular people you are tricking someone into a vegetarian diet. Manipulation is not lying, because it is true that these celebrities are vegetarian or vegan. In the case of manipulating someone to stop eating meat, it might be clear that someone wants you to stop eating meat and but he is doing so by playing with your emotions, your biases or heuristics. They are not lying or coercing, but it is dissimulating. By dissimulating you make it harder for someone to understand the action and/or consequences. It could also be that your internal state, like emotions, are being influenced so that it is more difficult to make a reflective choice. So in the example someone manipulates you into eating less meat by using your need to be part of a group. The need to feel socially connected is a basic human motivation and can influence the choices you make (Walton & Cohen, 2007). By using this need to influence someone, you are dissimulating them with the result that they make a less reflective choice.

It might seem rather strict to think of every dissimulating act as manipulation, but there is a clear difference between influencing by using rational persuasion or by using manipulation. When using manipulation, and thereby being dissimulating, you intentionally choose to make it more difficult for the other to understand the choice. Understanding the choice or action is another condition to make an autonomous choice. So by manipulating and dissimulating you are making it more difficult for the other to make an autonomous choice. This is different from persuasion, where giving arguments for a certain statement is not affecting someone's understanding. It does not become more difficult for the other to make an autonomous choice.

The definition of manipulation used in this thesis is: *manipulation affects your capacity to understand or reason by using dissimulation*. Dissimulation can affect your internal state or

the external state so it becomes more difficult to make a reflective and autonomous decision. *Rational persuasion then is an open exchange of arguments and reasons to induce someone* (Klemp, 2012). So the conditions for making an autonomous choice then is 'not being coerced' and 'not being manipulated'.

2.3 Conditions for an autonomous choice

Above I described, by using the theory of Beauchamp and Childress, several conditions to make an autonomous choice. To make an autonomous choice all conditions need to be satisfied. The conditions for making an autonomous choice then are:

1. Having the capacity to make a reflective choice
2. Wanting (in the broadest form) to perform that action
3. Having understanding of performing the action and the direct consequences of that action
4. Not being coerced
5. Not being manipulated

Not all conditions will be analysed elaborately in this thesis. Because of the critique on nudges that they are manipulating and the comment that bumps and boosts are not, manipulation will be explained and analysed more elaborately.

3. <u>Nudging via biases and heuristics</u>

As said earlier, nudges raise criticism. They are perceived as manipulative, because they mostly try to influence via our biases and heuristics. By altering someone's choice architecture you are nudging them in a certain direction and this is violating someone's autonomy (Blumenthhal-Barby & Burroughs, 2012). This is because by altering their choice architecture via influencing biases and heuristics, someone's understanding of the choice might get altered, is the argument. Understanding of the choice is needed to make an autonomous choice. This thesis is focussed on boosts and bumps, which do not focus on heuristics and biases and should therefore be more autonomy respecting than nudges. However it is important to comprehend why nudges are not autonomy respecting. So first I need to answer the question 'What does the definition of autonomy formulated above mean for nudges?'. To answer this question I will use an example.

You could nudge someone to use their car less by sharing the usage of their neighbours with them. This nudge is focussed on the inclination that people want to 'follow the herd'. People want to do better than or the same as others, which is called the social comparison bias. The theory goes that when people find out that their neighbours are using the car less, they will want to compete with them by using the car even less than that (Schubert, 2017). It needs to be noted that there are many forms of nudging and some forms respect autonomy more than others. This example shows what it means for autonomy when you focus on biases and heuristics. After that I can analyse if focussing on learning mechanisms, like bumps and boosts do, makes a difference for respecting autonomy.

3.1 Having the capacity to make a reflective choice

In this thesis I presume that people originally have the capacity to make a reflective choice. This means that someone has the skills, development and ability to make an autonomous choice. Focussing heuristics and biases does not lessen this capacity, though in some cases it can influence someone's choice. Take the social comparison bias for example. Having a social comparison bias means that you still have the capacity to make a reflective choice in most cases, though in some cases your action will be influenced by your bias. When for example you have to choose between going by bike or going by car, you are normally capable of making your own decision. But when you find out that all your neighbours are taking the bike, you might be influenced by this. This however does not mean you do not have the capacity to make a reflective choice. In the case of choosing a television program to watch, you might not be influenced by this bias. A heuristic and bias influence certain decisions. It is circumstantial when you cannot autonomously choose and this has more to do with the other conditions, like manipulation or understanding. You can have the capacity, but might be manipulated into another decision for example. A nudge that uses these biases and heuristics then does not lessen your capacity, though they can be influential to your choice.

3.2 Wanting (in the broadest form) to perform that action

Wanting is about choosing to perform an action and not accidentally performing it. In the example the nudge tries to influence someone by making use of his social comparison bias. That way they try to stimulate more sustainable behaviour. However I would argue that this does not affect the condition of wanting to perform that action. When choosing to go by bike, even if the reason is because your neighbours are doing it, this is the action you want to perform. You did not accidentally end up on that bike. It might be that you wish you were in the car, but being on the bike was what you intended to do. Nudges might stimulate you into an action you would otherwise not choose, but at that moment it is the action you intend to do.

3.3 Having understanding of performing the action and the direct consequences of that action

To be able to understand the action you are going to perform and its consequences, it is important to first of all have the capacity to make a reflective choice and therefore being able to understand, which has been discussed in chapter 3.1. Secondly it is important to have the right information. When you look at the definition of a nudge it is important that alternatives are available without being more costly. Not having the right information on how to choose an alternative means that it is more troublesome and therefore does not count as a nudge anymore. A nudge should provide you with enough information to know what the action entails and how to choose for other alternatives. In some cases it is needed to explicitly explain how to choose alternatives, like with the default setting where a preferable option is set as default. Other times the action might speak for itself, like with the example used here on the usage of bikes and cars. As long as the nudge itself does not make the choice or alternatives less available. If it is the case that the nudge does that, then the nudge itself should also take measures to cancel those effects out.

What might happen is that someone for example manipulates or keeps information. This can create a situation where it would be more difficult or even impossible to understand the action and the consequences of this action. In the case of knowing what your neighbours do when deciding on the bike or car, the information might be framed. It might be that some information, like information that does not prove your point, is not included. Or that the information is presented in such a way so that it becomes more believable that most people use the bike. This can influence and lessen someone's understanding of the action. Because this is connected with manipulation, I will come back to this in chapter 3.5. But it might be possible that nudges lessen someone's understanding of the action.

3.4 Not being coerced

Nudges are not coercing. As said in the definition, alternatives should not be more costly. Being forced or threatened make alternatives more costly, because there are consequences linked to the alternatives. By showing the usages of neighbours you are not forcing people to

choose a certain option. The alternative should be available and people should easily be able to change to those alternatives. When a nudge becomes coercive, it is not a nudge.

3.5 Not being manipulated

With manipulation you try to steer someone in a certain direction by dissimulation. In the example someone uses data of neighbours to convince someone to take the bike. There is a wish to influence that person and this is done by using the social comparison bias. They know that someone bases their choice on what others are choosing. So by showing the data of their neighbours, most people will be convinced to do the same or better. The data on how neighbours transport themselves is factual information. This is not fraudulent. Looking at it like this means the nudge might not even be a nudge, but a way of communicating factual information. The goal of the nudge however is to make people use the car less. With this nudge they make use of the fact that people will follow the herd. Is this a case of dissimulation? By using a couple of examples, I will answer this question.

1. Imagine there are ten neighbours. Three of them do not use a car and seven are. You will not reach your goal by showing people that the majority is using a car. People then might think it is more socially accepted to go by car. To stimulate people to use the bike, you will need to frame the information. You will communicate that neighbour one, two and three do not use a car and leave the other seven out of it. You frame the information in a way so that it steers people in the direction you want, though you are not lying. The decision maker does not know that most people use the car and bases his choice on the fact that three neighbours do not use a car. Because his choice is influenced by a bias, it might not be a rational choice. Research shows that framing information and the influence of biases affects the rationality of a person. It is even questioned if framing causes someone to rely on heuristics and biases (De Martino, Kumaran, Seymour & Dolan, 2006). Which in turn can result in fallacies and systematic errors (Tversky & Kahneman, 1974). Because this framing of information is dissimulating and affects the rationality of a person, it is manipulation.

2. But what if all ten neighbours are not using cars and you use all the data to influence someone. It is factual information on the car usage of your neighbours. You are not communicating that you want them to use the car less and you are trying to communicate the information as objectively as possible. You do have the intention to influence people with this information by focussing on their social comparison bias. This seems a less clear of a case for manipulation, though the intention is still dissimulated. By using this bias, you are still influencing the rationality of someone (De Martino et al., 2006). Therefore it is still manipulation. It might be that the person receiving information about the car use of its neighbours understands the intention, but the intention is not immediately clear or communicated and it is focussed on a bias.

3. And what if you send the information and with it ask the question if they would like to use their car less, is it then a persuasive argument or manipulation? The intention

is clear and communicated, because you ask the question to use the car less. At the same time you are still using the social comparison bias, because you know it will work better to reach your goal. So on the one hand you can argue that it is a persuasive argument. The intention is clear, because you literally ask them to use the car less. On the other hand you could argue it is manipulative, because by focussing on the bias you are still dissimulating the situation. The person manipulated in this situation still has the choice to go by car or by bike, so the options are not limited and he is also not forced into a choice. His choice architecture however is unconsciously changed by external influences. The freedom to self govern is therefore limited in this situation. It would then be manipulation. As explained in chapter two this definition of manipulation seems rather strict. Think of teenagers trying to convince their parents by saying all their friends can stay up late. This would then also count as manipulation, because here the social comparison bias is used as well. However, as explained in chapter two, it is still an intentional choice to influence with the risk of lessening their opponents understanding. It would therefore still count as manipulation.

This means that nudges that focus on biases and heuristics are manipulative, because it is dissimulating. Being influenced by biases or false heuristics lessens someone's rationality or understanding. There might be people who are aware that someone is focussing on their bias or heuristic and is therefore not influenced by this. This however does not change the fact that the person focussing on someone's bias or heuristic was manipulating by doing so.

4. Bumps

It was Viktor Kumar (2016) who came up with bumps, a method to influence people by focusing on someone's learning mechanisms. Like nudges they do not make use of coercion or incentives, but unlike nudges they are not focussed on heuristics and biases. Kumar therefore argues that bumps are a more ethical alternative for nudges. He believes that by focussing on someone's learning mechanisms you are respecting someone's autonomy. So though bumps use learning mechanisms, they are still used to influence people. On first sight it is not clear what kind of influence Kumar means. As I explained in chapter two, there are different forms of influence of which manipulation is one. Because it is not clear to me how bumps try to influence someone and what that means for their autonomy, I will analyse if bumps are autonomy respecting. But first I will explain what bumps are.

The idea of bumps is based on the dual process model (Kahneman, 2011). According to this model there are two types of processes to come to a judgement or decision. Type 2 processes are slow, deliberative and conscious. This type enables us to make a critical judgement. We use type 2 for example when making exams. Nudges and bumps focus on type 1 processes, which are fast, spontaneous and unconscious. An example of a type 1 choice is taking the brand Coca-Cola because you are used to it. Choices based on type 1 are more receptive to biases and heuristics. Nudges therefore focus on this type, because they are trying to make use of these heuristics and biases to influence someone's choice. Bumps however are not making use of heuristics and biases, but on learning abilities. Research shows that learning does not only go via type 2 processes, but also via type 1. Examples are learning how to ride a bike. This type of learning is called implicit learning. For this kind of learning there is not much need for reflective and rational thought. Though there is still discussion on what implicit learning exactly is, most researches define it as "the capacity to learn without awareness of the products of learning" (Frensch & Rünger, 2003). This means learning complex information without being able to express the resulting knowledge (Berry, 1997). Think of speaking a language without knowing how to explain the grammar. "Explicit" learning is when you are aware of what you learn, like learning for an exam. It seems to be that implicit learning is linked with associative learning (Frensch & Rünger, 2003). Associative learning is defined as "A learning process by which a certain stimulus comes to be associated with another stimulus of behaviour, as through classical or operant conditioning" (American Heritage, n.d.). This means that you are learning something implicitly when the knowledge gained or the result of the action can be linked with the right stimulus (feedback). There are two popular methods of associative learning: trial and error and errorless learning. With trial and error learning the person gets a negative stimuli when making a mistake. Errorless learning is a way of learning that does not involve errors and focuses on positive feedback. Especially with implicit learning errorless learning is popular among academics. This is because research has shown that implicit learning is poor at eliminating errors. So by using errorless learning, you minimize the possibility of errors to stick (Baddeley & Wilson, 1994).

Bumps are using associative learning. By giving feedback on a choice, bumps try to steer someone in a certain direction. In the way I perceive bumps, the feedback received is correct. It is not based on lies or false information. It might be framed or incomplete, but not incorrect. This however is still very abstract and will hopefully be more clear by giving an example.

You want to stimulate more sustainable purchases in an Albert Heijn supermarket by teaching consumers via trial-and-error how to do this. Just giving information on sustainable purchases is not effective enough, so you want to use a bump. This you do by giving feedback to customers when they are using the 'zelfscan'. When they scan a polluting product they get a pop-up with the message that this product is not sustainably produced. The bump, by using this pop-up, is focussing on the fast and unconscious system 1 thinking. Customers can choose to get the more sustainable product and know this is a better option next time or they can stay with the product they already had. The bump is not coercive and also does not use incentives. Other options are just as accessible. It is also not focussed on a biases or heuristics, but uses a trial-and-error method to come to a result. I will use this example to analyse if the consumer can make an autonomous choice when being influenced by bumps.

4.1 Having the capacity to make a reflective choice

As already explained, I am presuming people have the capacity to make a reflective choice. With nudges it is the case that they do not limit your capacity. Bumps do not focus on heuristics and biases, but on learning mechanisms. By giving feedback they try to stimulate people to make a certain choice. Focussing on learning mechanisms might have effect on someone's capabilities. A bump uses associative learning. Associative learning is commonly used in education. Associative learning can be used to teach skills and capabilities, like riding a bike. Bumps can therefore also stimulate someone's capacity to make a reflective choice. What if you are at the supermarket and the bump wants to teach you to think critical about your choices. So every time you want to buy something, you get a pop-up with the question 'Is this the product that you want to buy?' or 'Have you thought about the alternatives?'. It might be that eventually without the pop-up you are reflecting on your purchases and asking yourself these questions. In theory it might be that bumps can stimulate the capacity to make a reflective choice.

Does this also mean it can lessen your capacity to make a reflective choice? This is more difficult. When you are taught to understand, reflect and reason, it can be influenced by manipulation. This however influences your choices, but does not permanently lessens your capacity. You are able, when not being manipulated, to reflect, understand and reason. I am going to illustrate this with an example. What if at school you always got taught the wrong skills and wrong information. Because of this you are not able to express or understand certain things, because they are not taught. This is called hermeneutical injustice (Fricker, 2007, pp.1). You miss the knowledge and information to make your reflection known, even to yourself. However would this knowledge and information be taught to you, you do have the

capacity to make a reflective choice. It is not that you are not able to reflect because of a lack of capacity, but because of a lack of understanding and knowledge. Having certain mental disturbances, like a mental illness or because of being in a coma, it is possible that even with the right knowledge you are not able to understand and therefore make an autonomous choice. This however does not happen with a bump. So a bump cannot permanently lessen you capacity to make a reflective choice.

4.2 Wanting (in the broadest form) to perform that action

Wanting to perform that actions means having the intention to perform that action. This is the opposite of an accidental action. In the example, you as a consumer are not accidently buying a product. Both when sticking with your original product or when switching to the other product, it is still your intention to buy it. The feedback given does not make your action accidental. A bump does not influence your intention.

4.3 Having understanding of performing the action and the direct consequences of that action

As explained in chapter three someone's understanding can get less when not having the capacity or when not receiving the right information. In chapter 4.1 I explained that bumps do not lessen someone's capacity. It might however be the case that bumps do not provide the right information or not enough. This can be the case when being manipulated, which I will discuss in chapter 4.5. Bumps however are focussed on giving feedback on an action and that feedback might be framed but must be correct. In the case of buying a product, the pop-up might not hold all the information like the price of other products. The information that it does hold, so the information on its sustainability, is correct. When the information is not framed, it can even increase the understanding of the consumer. When you buy a product in the supermarket for example, you understand that you have to pay a certain amount of money to get the product in your possession. When a pop-up appears on your screen you find out that another product is made more sustainably, information you might not had before. This does not limit your understanding of the action, but might increase it.

On the other hand the information a bump gives, can be framed. As explained in chapter 3.3, framing can result in less understanding when making the decision. This however is linked with manipulation which I will explain in chapter 4.5.

4.4 Not being coerced

Just like with nudges, when someone is coerced it is not a bump. When applying a bump, and thereby giving feedback, you cannot coerce someone to achieve your goal.

4.5 Not being manipulated

Bumps work by giving feedback on your choice. In the example used the customer gets a pop-up when buying certain products informing them that it is an unsustainable product. This feedback focuses on the unconscious and fast system 1 thinking and by giving feedback it tries to stimulate more sustainable behaviour. So bumps try to influence, though it is not

clear if they are manipulative or more similar to giving factual information. Kumar argues it is not manipulative because of the focus on learning mechanisms. But he says bumps are also not the same as giving factual information because they do not simply give information, but they provide information as feedback to a choice. An action needs to happen or did already happen for a bump to be used. Bumps are linked to associative learning. By giving the feedback when someone is doing or did the action, that person links the feedback to the action. So in this example when getting the pop-up 'not-sustainable' it is meant to trigger awareness that another product is better. It might be that bumps are a form or a method of giving someone information. On the other hand bumps do have links with framing. With a bump you have a specific goal in mind and you use the information that helps you reach that goal. If you want someone to buy more sustainable products, you will use specific information with specific products. It is not an objective method. And as already explained, framing information can influence the rationality of a person. This because framing causes someone to rely on heuristics and biases (De Martino et al., 2006). Which in turn can result in fallacies and systematic errors (Tversk & Kahneman, 1974). It is possible to frame information when using a bump. You could for example give the feedback 'This product is now 10% more sustainable'. People might think that this is a big improvement, while the product might still be very polluting. Though it is not a lie, it can influence people into making a choice they would not have made when having the right information.

On the other hand, giving feedback at specific times to change people's behaviour is not per se manipulation. Teachers also use associative learning to teach children specific things. When this too would be manipulation this would mean a lot of things must be manipulation. This feels counterintuitive. However what if a brand uses bumps to stimulate purchases? So for example every time you buy Seepje, a natural laundry detergent, you will get a pop-up with 'sustainable' on it. Other brands do not get this pop-up. It is not a lie that Seepje is a sustainable product and they would use the same method as the example above. This would be advertising and advertising is often seen as manipulation. Is this also the case when using bumps to advertise? As said in chapter two manipulation is not per se lying. It is more about dissimulating which results in more difficulty to understand the consequence and/or the action itself. Dissimulating can also affect your internal state, like emotions, so that it becomes more difficult to make a rational choice. Is this the case when using bumps to promote a certain brand or product? In the case of Seepje it gives feedback that Seepje is sustainable. The intention is that people will buy Seepje more often, because they would like to buy sustainable products. Using bumps in this specific case does not limit someone's understanding of the action or consequences. People will still understand that they have to buy the product and what it is used for. It also does not use emotional persuasion, so someone's internal state is not affected. Someone can still make a rational choice. It therefore seems not manipulative.

Though it is not meant to focus on heuristics and biases, it might be that in this case it influences by encouraging a positive self-image. Though it feels like emotional persuasion, it is not the same. People themselves made the decision to pursue a certain self-image. How they came to that self-image can be a decision they are manipulated in and branding products as sustainable/unsustainable, expensive/cheap etc. can trigger people with a certain self-image. This however does not manipulate people into a certain self-image. However it is important that this branding does not use emotional persuasion, because this can be manipulating. For example when promoting Seepje you can focus on the world being affected by climate change (for example how polar bears can barely survive on the melting North Pole) and how unsustainable products make it worse. You then use emotional persuasion to promote Seepje. You can even use it as a bump with the text 'By buying this product you are not worsening the situation of polar bears'. Though this might be true, you are triggering someone's emotions. By triggering someone's emotions, you are affecting their internal state. Though some say by triggering someone's emotions people make more moral decisions (Roeser, 2012), it is still the case that you manipulating someone to make a certain choice. In this case it is not the question if it is manipulation or not, but if it is justified or not. I will come back to that question in chapter six.

Viktor Kumar argues that bumps are not manipulative, because they are always used in people's best interest. He describes bumps as paternalistic or altruistic (Kumar, 2016). First of all it is questionable if bumps can only be used paternalistically or altruistically, but even if that is the case it does not mean that it therefore cannot be manipulation. An altruistic act is for the concern for the welfare of others. Manipulating someone into buying a sustainable product can be seen as altruistic. A clean and healthy earth is good for all people. As we have seen, you can use emotional persuasion to stimulate sustainable behaviour. Though it is altruistic, it still counts as manipulation. You might also say that if the goal is altruistic of paternalistic that it is justifiable to use a manipulative tool, some might even say that you are allowed to be coercive when it is paternalistic or altruistic. This I will discuss in chapter six.

Another argument Kumar uses is that a bump, unlike traditional nudges, uses rational learning mechanisms. This enhances someone's autonomy, he argues, instead of limiting it (Kumar, 2016). Someone's learning mechanism is often linked to rationality, and biases and heuristic are often seen as automatic and irrational processes. Bumps are focussed on implicit learning mechanisms. Implicit learning is still a type 1 unconscious learning process, which does not include critical judgements. As describes above a bump can enhance someone's autonomy by providing information the person can use to make their decision. You might want to eat healthy for example and did not know that the snack you bought is not the healthiest snack. A bump can then help you figure out what option is better. However it is not always like that. Bumps can also be used to teach someone specific things or information that decreases someone's understanding. Just like with the example of framing, where you use relative numbers to keep it vague. You might think, when you see a product is 10%

more sustainable, that it is the best option for you. But it might still be a polluting product. Focussing on rational learning mechanisms does not have to be autonomy enhancing.

To summarize, bumps can be used in an autonomy respecting way. However bumps can also be used in a manipulative way. It can make use of emotional persuasion or framing. This can limit someone's understanding of the choice.

5 Boosts

Grüne-Yanoff and Hertwig (2016) describe a boost as a tool that tries to improve people's decision-making by overcoming biases instead of using them. This is to be done by supplementing someone's competences with other skills, decision tools or by restructuring the environment so that the existing skills and tools can be more effectively applied. Boosts can be used in three different ways:

1) by changing the environment in which someone makes a decision to enable them to translate difficult information into understandable information

2) by identifying missing factual and procedural knowledge someone needs to make a decision and provide this information

3) by extending someone's decision-making strategies and skills

Proponents of boosts do not deny that people are not perfect thinkers, but instead of exploiting someone's biases and heuristics, boosts are overcoming them. Difficulties in the thinking process can be addressed by training, information, education, better strategies or better representation. Nudges in contrast make use of these cognitive deficiencies (Grüne-Yanoff & Hertwig, 2016). This is why boosts, according to Grüne-Yanoff and Hertwig, are autonomy respecting.

The first way boosts can be used is by changing the environment. Changing the environment you could do by changing relative numbers into absolute numbers or the other way around. Another way is to present your information in a model to make the information easier to grasp. For example when you want people to make a better decision concerning eating meat by showing them the footprint of their meat consumption. You could say that for the meat consumption of Dutch people you need 10 million hectares. People might not be able to process how much this is and it is difficult to imagine if this is a lot or not just by looking at the numbers. When you say that for the meat consumption of the Netherlands you need three times the Netherlands, people are able to figure out how much this is and they can imagine that this is a lot of land. By changing the representation of the numbers, so changing from the first representation to the second, you are using a boost. This however looks a lot like a nudge that is focussed on framing information. By framing information you are exploiting the cognitive deficiencies of someone to change their behaviour in a specific way. Grüne-Yanoff and Hertwig (2016) argue that boosts are different, because boosts are not misleading or confusing. They try to enable people to understand the information so that they can make a more solid choice. From the perspective of a boost you are not trying to use someone's deficiency, but you try to correct the deficiency. So the goal is not to push people in a certain direction, but to help them understand their choices. And by understanding more, people are able to make a better choice.

The second and third type of boosts is the one that extends someone's decision-making knowledge, skills and/or strategies. Starting with the first one, providing information can

help people make better decisions. Think back on bumps, where giving feedback teaches someone to make the right choice. The difference with bumps however is that boosts are not trying to persuade someone, like persuading someone to reduce their carbon footprint by eating less meat. They are trying to provide the skills, information or techniques necessary for someone to make the best choice (Grüne-Yanoff & Hertwig, 2016). This does raises the question how different boosts are from education. Grüne-Yanoff and Hertwig understand the confusion and they argue that boosts are not the same as education. Boosts do not merely provide information, but also try to develop skills or an environment where it is easier to choose. In my experience education does the same so the difference is still not so clear to me. It seems to me that boosts are a way of educating someone.

On the other hand boost policies are, like nudge policies, ways for the government to change someone's behaviour (Grüne-Yanoff & Hertwig, 2016). But as said boosts cannot be persuasive or framing. This is, they explain, the main difference between boosts and nudges. Boosts should help a decision maker with their decision, by providing information or learning skills or strategies. Nudges are more focussed on steering someone in a certain direction. It is still not clear however how boosts can change someone's behaviour. Grüne-Yanoff and Hertwig (2016) explain that boosts enable individuals with the ability to detect misleading information. Boosts are focused on improving people's decisions and intervene with this goal in mind. This does mean that when governments use boosts to improve someone's decision this implies the government has a particular idea of what the improved decision is. I will explain this with an example. A reason I often hear why people are not becoming vegetarian is because others are still eating meat. Why should you give up meat, when others are still eating it? Your choice for not becoming vegetarian can be based on the social comparison bias, which means that your choice depends on what others do. So most people are still eating meat and to fit in, you are also eating meat. This can be seen as a deficiency in your thinking. A government might want to lessen this deficiency to improve your decision and does this by using boosts. In this case the government can for example provide information on the effect on an individual when he or she becomes vegetarian or they can inform people that there is an increased number of vegetarians. This number can be presented in a way that is easy to understand. The goal of this boost is to provide you with information so to make a better decision without pushing you in a certain direction. However the government does in this case presume that the better decision is to stop eating meat. It says not to have the intention to steer you in a certain direction, because it wants you to make the best decision you can, but does presume what the best option for you might be by designing the boost in a certain way. This is also the critique on boosts. It might violate someone's liberty, because though it aims at improving someone's decision, it does so by intervening in their deliberations (Grüne-Yanoff & Hertwig, 2016). This critique will be further developed in chapter 5.5. For now to summarize, boosts can be used to improve someone's decision making by providing information, skills or strategies or by changing the representation of data so it is easy to understand.

To analyse if boosts respect autonomy, I will use the following example. As a government you want to lessen the use of energy because of climate goals. At the same time using less energy is good for people, because it costs them less. To accomplish this, you want to teach people how to lessen their energy use without making use of people their biases or heuristics. You therefore send an overview of usage of every individual appliance. There are products, like the Smappee, that can provide an overview like this. Most people would want their usage of energy lowered, so having knowledge on which appliances use the most energy can help you reach your goal. The boosts then tries to make your decision better by providing information in a comprehendible way.

5.1 Having the capacity to make a reflective choice

I presume people have the capacity to make a reflective choice. Boosts try to make the choice easier for the decision-maker by providing information, skills and/or strategies. Providing skills, information and strategies can influence someone's capacity, but as explained in chapter 4.1, providing wrong information, skills and strategies does not lessen someone's capacity to make a reflective choice. It can create a hermeneutical injustice and this can create a situation where the person lacks the right knowledge and skills. However being taught this, this person is able to make a reflective choice. This capability is not diminished, but is influenced by wrong information or skills. So just like with bumps, boosts cannot lessen someone's capacity. It can however stimulate someone to develop and use their capacity. Just like with bumps, boost can stimulate someone to reflect and understand their choice better. By providing information, skills or strategies, boosts can stimulate people to use their capacity to make a reflective choice.

5.2 Wanting (in the broadest form) to perform that action

The same as with nudges and bumps, someone does not perform an action accidentally because of boosts. Think of the example where someone receives information on which appliance is using the most energy. You can choose to not use the appliance, use it less or keep using it. Whatever you choose is not an accidental choice, so you are wanting to perform the action even if it is influenced by a boost.

5.3 Having understanding of performing the action and the direct consequences of that action

In the example the government provides information about the energy usage of your appliances to let you make the best decision concerning your total energy usage. A boost should not be misleading, persuasive or framing according to Grüne-Yanoff and Hertwig (2006). It can provide someone with certain information and it might leave other information out. For example when providing information on how much energy every appliance uses. The boost does not say anything about how sustainable the products are made for instance. However this does not mean that the boost lessens someone's understanding. Without the boost the person did not even know how much energy the appliances even use or maybe in a unique case someone knew, but their understanding did not become less because of the boost. By

showing which appliances use-up most of the energy, you can make a better decision when wanting to lower your energy usage. When for example the toaster is using the most energy and you decide to stop using it, you understand what this entails. You understand that you are not using the toaster and the consequence is using less energy and not being able to toast bread, with that toaster at least. The boost does not lessen your understanding of performing that action. When not being influenced by that boost you might also decide to stop using the toaster. You might know it is using energy, though probably not how much energy, and you know that by stop using it your energy usage will lower, though again not by how much. Your understanding is a bit less without the boost in this case.

Another form of boosts is changing the environment of statistical data. This is to be done by making information easier to understand. Think of the example of meat eaters in the Netherlands. It is easier to understand that for the Dutch consumption we need three times the Netherlands, than when I say we need 10 hectares of land. However there are cases where you change the environment of data to make it easier to understand, but intentionally or unintentionally frame information in a certain way. You could say 10 out of 20 are taking this test and you could also say 10 out of 20 are not taking this test. Though you say the same and it is not a lie, it is framed in a certain way. This can be seen as dissimulative and manipulates you to choose a certain option. This can limit your understanding. Because this is linked to manipulation, I will elaborate on this argument in chapter 5.5.

5.4 Not being coerced

Just like with nudges and bumps, when someone is coerced it is not a boost. When using boosts, you cannot coerce someone to achieve your goal. With a boost you provide information, skills or strategies to let someone make a better decision. Take the example, where the government is providing information on the energy usage of your appliances. It is not coercing you to use less energy by giving you this information. Knowing this information does not force you to stop using certain appliances.

Another form of boost is changing the environment of statistical data. So for example the impact of your consumption on the world can be provided in absolute numbers, like with the example on the Dutch meat consumption. You could say that for the Dutch meat consumption you need 10 million hectares of land. Or you could use a boost and say that you need three times the Netherlands. Most people can process the last option better than the first one. Changing the environment of data is not coercing someone to do something. Therefore a boost is not coercive.

5.5 Not being manipulated

As mentioned in the beginning of this chapter there is the worry that boosts can limit someone's liberty. This is because a boost is used to improve someone's decision but does so by intervening in their deliberations. By using boosts you might want to make someone's deci-

sion better, but are instead presuming that a certain choice is the better choice. This however does not automatically imply that boosts are manipulative.

To make clear what is meant by this critique I will use one example from health care. This because it is clearer when using an example with individual benefits instead of an altruistic motive. Important to note is that the numbers used in this example are made up.

In the Netherlands women can undertake a test to check if they have breast cancer. A doctor can tell them that 1) if they do this test every two years they will reduce their risk of dying from cancer from around 3 in 1000 to around 2 in 1000. He could also say that 2) the test will reduce your chance of dying from cancer by around one-third.

In the second option he uses a boost to make the information more comprehendible. The doctor thinks this will make it easier to choose the test and with that he presumes that doing the test is the best option. The question however is if this also makes boosts manipulating?

The boost used here is an example of changing the environment. This boost looks like the framing nudge. You are displaying information in a certain way to achieve a goal. Frûne-Yanoff & Hertwig (2006) argue that with boosts you will help people understand the information better and therefore they will choose the better option. With nudges it is to stimulate certain behaviour. The difference however is not the execution. In practice most of the times there is barely any difference between nudges and boosts. The difference here is the intention. With nudging you want people to choose a certain option. With boosts you want to help people choose the best option. The intention with nudging is dissimulating. For example when trying to sell a certain test and saying it has a 90% success rate or saying it fails to work 1 out of 10. The first one will have more positive selling results and will therefore be used. A nudge in this example is used to sell more products. A boost will be used with the intention so people will make a better choice. In theory the boost does not have a hidden agenda, though it could still be that the designer of the boost presumes that doing the test is a better option and that is why he tries to make the information as easily comprehendible as possible. In the example there seems nothing wrong with trying to boost people into doing or buying the test. People will choose being healthy over being unhealthy, but what if we switch to an altruistic example like with climate change? The government might want to boost people into a more sustainable behaviour, because they think this is the better option for the whole society. They might therefore choose to use boosts to make the results of green energy more comprehendible. They might make an easily understandable schedule saying what the result of investing in solar panels or other forms of green energy is. People are affected by the present bias. Yields in present time are preferred over yields in future moments, even if the yield is more. The schedule can be designed in a way that they are less affected by this bias and can therefore make a better decision. This schedule can include the impact on the environment but also on someone's wallet. This boost does not seem manipulative. When a company uses the same technique to sell more solar panels, it does seem manipulative. The line between using a boost because you want people to make a better

choice and using a nudge to steer people into making a certain choice is very thin. This very thin line also makes clear that by using a boost to let people make a better decision, you need to stay critical on if you are actually helping someone to make a better decision or if you are pushing your own preference.

I would however argue that boosts are not manipulative, though in some situations you can barely differentiate between nudges and boosts. This is because of the intention. Framing nudges try to steer people in a certain direction by presenting information in a certain way. This can affect someone's understanding, which in turn lessens someone's autonomy. Boost try to help people to understand better so they can make the best choice. Though you should be careful how you use the boost, this is an important difference. There are situations where you have to make a choice on how some information is presented. All the options will have an impact on how the information is perceived. For example with the test, you can choose to say nine tests worked and one did not, but this can also be perceived as framing. The difference with nudges and boosts is that nudges frame on purpose, while with boosts this can be done unintentional. Though this critique on boosts should be taken seriously, it does make a difference on if boosts are manipulative.

The question that still remains is how different boosts are from simply providing information. The goal of a boosts is to teach people to overcome their biases and heuristics. The result of this is that people are able to make better choices. They do so by providing information, skills and strategies in a comprehendible way. It seems to me that boosts are a way of providing information, just as education is. Education is more focussed on system 2 thinking, where boosts are more on system 1. Boosts provide information and skills via the fast and unconscious way of thinking. As said earlier in this chapter, Grüne-Yanoff and Hertwig (2006) argue that boosts are different from education, because boosts try to develop skills or an environment where it is easier to choose, but education does the same. So the only difference between education and boosts is one is focussing on system 1 thinking and the other on system 2. They are, however, both ways of providing information.

6 Justified manipulation

Manipulation is seen as something to avoid, because it is restricting someone's autonomy. Especially in the Western countries we see freedom of choice as a right we are always suppose to have (Taylor, 1979). But by saying that manipulation is always wrong we are jumping to conclusions. Autonomy is an important value, though there are cases where other values trump autonomy. This raises the question if manipulation can be justified and in what situations this is the case. In this chapter I will give three lines of arguments to justify manipulation. It is important to note that because this topic is outside the scope of my research question, I will only briefly touch upon these arguments. Further research is needed to give a complete overview.

6.1 Welfare argument

A popular argument is that manipulation or even coercion can be justified when it promotes someone's welfare. Welfare in this case means "the state of doing well especially in respect to good fortune, happiness, well-being, or prosperity" (Merriam-Webster, n.d.). So for example with the gruesome pictures on cigarette packaging, you are manipulating someone to stop smoking. These pictures are meant to disgust or scare people with the intention to make smoking undesirable. So playing with someone's emotions you are trying to steer them in a certain direction.

There are two lines of argument you can use. You could argue that manipulating is justified when it promotes benevolence. This means when it does not only prevent and remove harm, but also promotes good (Beauchamp & Childress, 2016, pp. 152). On the other hand you could argue that people know what is in their best interest. When they are manipulated, you are depriving them of the opportunity to make choices of their own. The manipulator lacks all the relevant knowledge of the person manipulated, like his values, constraints, background etc. It might be that the manipulator, even though he thinks he is doing it in the best interest of the person manipulated, does not do what is best for that person's welfare (Sunstein, 2015). John Mill (1859, pp. 51-52), a big protector of liberty, draws the line when the action harms someone else, the so called Harm Principle. When believing manipulation is only justified when the alternative would cause harm, you are focussing on non-maleficence. So where to draw the line? Because if you were to accept that manipulation is justified for the purpose of promoting benevolence it opens up a wide range of reasons to justify manipulation. More so than if you were only to accept manipulation for the purpose of non-maleficence. Besides that, harm can mean different things. It can mean causing pain, but it could also be harming or limiting someone's options (Beauchamp & Childress, 2016, pp. 153).

What if seeing someone being beaten up by someone else? Most of us would say it is justified to stop the abuser. It is in our interest not to have pain and avoiding pain is in some cases preferable to protecting someone's autonomy. So if the beating stops by telling him that all his friends and family despise violence and would be disappointed, so by exploiting

his social comparison bias, this would be justified. However there are also cases were it would be justified to cause pain. Doctors in some cases need to cause pain, but do so with good reasons. For example to save someone's live. So why is it in some cases justified to harm and in other cases justified to stop the harm? One difference between these two examples is autonomy in the form of (informed) consent. (Informed) consent is important, because it shows the person is not coerced or deceived (O'Neill, 2003). In the example of the abuser, the one abused probably did not consent to being beaten. Even in cases where defiling someone's autonomy can prevent serious complications, giving consent and therefore respecting someone's autonomy plays a big role. Because of religion, Jews do not want blood transfusions. Even if this can save their live, the doctor will not give it to them if they did not give consent. In the examples described here the line seems to be drawn when by harming someone else without consent, you are limiting someone's options. So when someone's decision is harming someone else without them giving consent, it is justified to intervene and decrease the decision makers autonomy. The other difference between the examples is the doctor harms someone to avoid more harm, whereas the harm the abuses causes is not to prevent more harm. These differences can make it in one situation justified to intervene by manipulation and in other situations not. This is however is a short description and should be explained more elaborately in further research. It does show that there are situations where manipulation might be justified.

Back to climate change. The consequences of climate change, like changes in weather and climate, are harming people's wellbeing, though these consequences might not always cause pain. The changes in weather and climate causes an increase in health problems (Wu, et al., 2016). And because of drought and flooding, more places become inhabitable (Reuveny, 2007). The problem however is that climate change is an example of a collective action problem. Though your individual action causes the problem, the consequences do not directly show. Saying your action caused a specific person harm is therefore difficult to prove. Is it in this case justifiable to manipulate someone to live more sustainable? First of all even if their individual action did not cause the entire problem, they are still responsible (Nefsky, 2012). It is not that because your action did not cause the entire consequence, that your action is not part of it. Most people in the Western world know exactly that their action is a part of what causes climate change (Lee et al., 2015). They are however paralyzed by different barriers mentioned in the introduction. You could then argue that if rational persuasion and giving information does not work, it is justifiable to manipulate them into sustainable behaviour. These people cause limitations to other people's lives. Giving certain people autonomy, while others need to find new homes or get more sick it not balanced. I therefore argue that manipulation is a justifiable method to make people more sustainable if giving information and rational persuasion do not work and their action limits or harms someone else. Because this chapter is a broad overview of the arguments, it is important that in further research exceptions and arguments against this statement should be discussed.

It might be that the goal of the person is justifiable, but still you could ask the question why to use manipulation? There might be alternatives available like rational persuasion or simply giving information. For example when you want people to live more sustainably. Most people will understand the good will of this goal and are not against it. However manipulating someone into a more sustainable live can be problematic. Especially when there are alternatives like rational persuasion or giving objective information. However this might be less effective as said in the introduction. This however is not always the case. There are still countries were the awareness of climate change is low. Research showed that 65% of the respondents in Egypt, Bangladesh, Nigeria and India did not know what climate change is. Educating these people might already have the effect you want (Lee et al., 2015). Manipulation in this case is not justifiable.

6.2 Manipulating with consent

What if people consent with manipulation? A large majority of people support green behaviour, though their behaviour does not reflect this (Pitchert & Katsikopoulos, 2008). This might be because of the barriers I talked about in the first chapter. What if people know these barriers are keeping them from their preferred behaviour and they give consent to manipulation? At the moment only 33% of the Dutch population thinks the government should force more sustainable behaviour on them (I&O Research, 2019), but what if these people would consent with manipulation of the government. Is manipulation justified when someone gives consent?

T.M. Wilkinson (2013) argues that consenting with manipulation would be consistent with autonomy. Think for example of person A who wants to live more sustainably, but is not sure how. That is why person A gives consent to the government to nudge her into more sustainable behaviour. The government, knowing most people are sensitive to social pressure, will provide person A with information on how sustainable her friends are based on public information. Person A is influenced by this information and starts living more sustainable. She is manipulated, because the government used influencing information and used her social comparison bias to achieve their goal. The government could have used objective information to persuade person A, but instead focussed on the bias of person A. They did though with consent of person A. Wilkinson (2013) argues that this makes the action of the government justified, though it is of course still manipulation.

When the government decides to set the default of energy suppliers to a green energy supplier, this is problematic. The default affects not only the people who gave consent, but also the ones that did not. Though it might be justified for the ones that gave consent, it is not for the ones that did not. As described in chapter 6.1 consent plays an important part in justifiable manipulation. Therefore it seems justifiable to manipulate when being given consent or when your action harms other without their consent. However further research is needed to confirm this.

6.3 Emotional persuasion

People perceive different barriers that withhold them from acting in the case of climate change. Climate change triggers emotional reactions, but simply giving people objective information is not setting these emotions into action (Markowitz & Shariff, 2012). Therefore people might want to use emotional persuasion to get people to act. Emotional persuasion is often seen as manipulation and not as rational persuasion (Danciu, 2014). By playing on someone's emotions the influencer tries to influence them into a certain choice. Because this influences someone's internal state, it is said that they therefore cannot make a rational choice. When being influenced by emotions it is harder to perceive risk (Sunstein, 2005). Emotions can trigger immoral behaviour, because of fear or anger for example (Roeser, 2012). Therefore it might influence someone into a choice which he would rationally not have chosen.

On the other hand emotions play an important role in acting moral. Emotions enable us to grasp morally relevant considerations. So for example with climate change, emotions can help change our behaviour into more sustainable behaviour (Roeser, 2012). In the case of climate change, were people perceive different barriers, emotional persuasion can help people overcome these barriers. Giving them information might not be effective, though emotional persuasion can make them see the urgency.

So can emotional persuasion be justified? This does not seem to be a clear case. Trigging people by using emotions can manipulate them or, even worse, can traumatize them (Hyman & Tansey, 1990). On the other hand research shows that people often perceive barriers that prevent them from acting. In these cases emotions can help overcome these barriers. Think for example the overwhelming feeling most people experience with climate change, which leaves people paralysed. By using emotional persuasion, you can trigger the compassion of people to move them into action (Slovic, 2007). To answer the question if emotional persuasion can be justified further research is needed.

6.4 Justified manipulation

In this thesis I analysed if bumps and boosts are autonomy respecting and I mostly focussed on the condition 'not being manipulated'. However as this chapter makes clear, there are situations where manipulation might be justified, even when by manipulating you are not respecting someone's autonomy. It is important to include this chapter to make clear that saying manipulation is always bad and autonomy always needs to be respected is a little reductive. Because of the short overview I gave in this chapter, there is still research needed to discuss exceptions and arguments against justified manipulation. However, because this is not in the scope of my thesis, I only included a short overview.

7. Conclusion

Giving information does not seem to have the effect needed to mitigate climate change. Barriers keep people from acting, because of the feeling they lack knowledge, experience confusion and because of information overload (Lorenzoni et al., 2007). On the other hand coercion is perceived as unethical, because choices are forced upon people. Nudges, an option that seems to be in the middle of providing information and coercion, receives critical feedback because it seems they do not respect autonomy. In this thesis I therefore analysed two alternatives to nudges, that promote themselves as being effective and autonomy respecting. These alternatives are bumps and boosts. The question that I wanted answered was '*Can bumps and/or boosts be perceived as autonomy respecting?*'.

Bumps, the method that uses feedback to steer people in a certain direction, focuses on people's learning mechanisms. Therefore, Kumar (2016) argues, bumps are respecting autonomy. However, through my analysis I came to a different conclusion. Via bumps you can give feedback that enhances someone's autonomy, but the same can be used to decrease someone's autonomy. Feedback can provide you with information to make a more informed choice. On the other hand it can also be framed information that it dissimulating and actually lowers your understanding. The argument that a focus on learning mechanisms automatically means that the method respects autonomy is in my opinion not such a clear case.

Boosts on the other hand seem to be autonomy respecting. Boosts seem to me a form of providing information. Though sharing a thin line with the framing nudge, boosts differ in their intention. The intention of a boosts is to provide people with the information, skills, strategies or environment to understand the choices and to therefore make a better choice. In some cases it happens that boosts come across the dilemma on how to present certain information. It is important to be critical when deciding how to present this information, but the intention of a boosts is to present this information in such a way that it is easier to understand for someone. Nudges on the other hand present information in such a way that it steers people into a certain direction. Nudges, by making use of biases and heuristics, create a situation which is dissimulative and they make it more difficult for the decision maker to understand the situation. Boosts do the opposite and I argue that they are therefore not manipulative.

However thinking manipulation is always to be avoided and autonomy always to be respected is a little reductive. There are situations where manipulation can be justified. In this thesis I discussed a situation where the autonomy of someone else is violated by someone's action, where the emotional barriers can be diminished by emotional persuasion and when someone has given consent to manipulation. These situations, though being touched upon briefly, do show that manipulation is not always unjustified.

7.1 Further research

In this thesis I focussed on if bumps and boosts are autonomy respecting. Because it was not in the scope of my thesis, I did presume both methods are effective. However further empirical research is needed to confirm this.

Furthermore I gave a broad overview of situations wherein manipulation can be justified. This overview is not elaborate enough to confirm that manipulation is always justified in the situations described. It mostly shows that you can question if manipulation is always unjustified and if autonomy should always be respected. Therefore further research on these situations is needed.

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