



When nudge comes to shove: Liberty and nudging in the era of big data

Henrik Skaug Sætra*

Østfold University College, Remmen, 1757, Halden, Norway



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ABSTRACT

In this article, I examine how nudging powered by Big Data relates to both negative and positive liberty. I focus in particular on how liberty is affected by appeals to irrational mechanisms. I conclude that it is problematic to use *liberty* as an argument for nudging. Such an argument would have to be based on the concept of positive liberty, empowerment and emancipation from irrationality, but I argue that even stronger arguments *against* nudging can be built on the same conception of liberty. I consider Big Data-powered nudging to have the potential to be both manipulative and coercive, and believe that we should be wary of the effects such efforts have on liberty. As I consider *liberty* to be part of what makes a good society, this becomes an effort to analyse one aspect of the effects of technology on society in general. While I do not accept arguments in favour of nudging based on *liberty*, it is easier to see that arguments based on *utility* could support nudging. I do not evaluate what the proper trade-off is between utility and liberty in this article, and it is obvious that, at times, utility trumps an absolute demand for liberty. However, I argue in favour of transparent traditional regulation and rational persuasion instead of nudging, when these approaches can serve the same purposes. Should we choose to nudge, we should not euphemise our efforts by claiming that we do so on behalf of freedom.

1. Introduction

Imagine that I could make you do what I wanted you to do without you realising that I was even involved. All I would have to do is to rearrange the information around you in ways I know would lead you in the direction I desired. I could change the sequence of the choices you have to make, and use my knowledge of your susceptibilities and weaknesses to choose the appropriate time and method of delivering my *nudge*.

In this article, I examine how nudging powered by Big Data relates to both negative and positive liberty. I first examine nudging theory as expounded in Sunstein & Thaler's [1] classic book *Nudge*. The techniques of nudging are considered to be universal, as they can be used by both private and public actors, for any imaginable purpose [2]; p. 12). I focus in particular on how liberty is affected by appeals to irrational mechanisms. I contrast nudging with *rational persuasion*, and, while some rhetoric and emotion is necessarily a part of rational persuasion, I consider it superior to methods of influence that appeal to our sub- or pre-rational faculties.

I then proceed to describe how nudging has *changed* with the advent of Big Data. Both the government and private companies gather data, and they use the data they have gathered to influence us in various ways. Nudging is based on knowledge of people and their

susceptibilities, and I argue that nudging is becoming increasingly effective in three ways. Firstly, the fact that we now have more information about individuals means that we can nudge them more effectively. Secondly, given the amount of information we have about how human beings act, we now have increasingly sophisticated theories about how individuals function. They can be used to target human vulnerabilities in ever more effective ways. Thirdly, we now have the means to target people individually, through channels such as social media, online advertising, targeted location-based information on their phones etc. Nudging is becoming more like precision bombing than the carpet-bombing of old, which makes it more effective.

In sum, nudge comes to shove in the era of Big Data, and I argue that this development is detrimental to both positive and negative liberty [3]. I will develop a set of propositions that will subsequently be used as premises for the argument proposed in the conclusion. There, I argue that nudging may constitute a form of secret coercion that is deeply troubling, and that we should not use the difficulty of regulating it as an excuse for not trying to do so. Griffy-Brown, Earp & Rosas [4] note the need to analyse the effects technology has on what they label the *Good Society*, and *freedom* is put forth as one of the foundational values of such a society [4]. Coeckelbergh [5] discusses the same issues, and explicitly calls for the use of more *political philosophy* in order to understand how technology affects society. Political philosophy, he states,

* Corresponding author.

E-mail address: Henrik.sattra@hiof.no.

"offers excellent resources for thinking about" various political principles, such as freedom, and how they are affected by technology [5]; p. 6). Nudging has given rise to principled objections since its inception and, as nudge comes to shove, it becomes coercive and a threat to liberty.

2. Nudging

'Nudging' is a term used to describe an approach to behavioural modification, without the use of force, by both private and public actors. The term was coined by Cass R. Sunstein and Richard H. Thaler, who argue that it is not only possible, but also legitimate, to 'actively influence' behaviour. Furthermore, they argue that this can be done while respecting people's freedom [6]; p. 1). The art of influencing behaviour is not new, but the new combination of insight from behavioural economics, cognitive psychology and social psychology made Sunstein & Thaler's theory an important addition to existing knowledge [7]; p. 85 [6]; p. 4).

They call their approach *libertarian paternalism*, because the goal we nudge people towards should be people's own *welfare* [6]. The issue of who is the best judge of what *my* welfare is will have to rest until later. For now, I will simply point out that idealism is all well and good, but the tools of nudging could just as easily be used for non-idealistic as for good purposes. When we take what some would call a realistic – not idealistic – stance on motivation, the theory becomes less paternalistic and, quite simply, manipulative. People's actions are steered towards *whatever* goals those who nudge us have – also towards what Sunstein labels *illicit goals* [2]; pp. 12, 41).

Nudging arose from an understanding of *irrationality* – the fact that people often make 'bad' choices. Too bad for rational choice theorists, who rely on the 'false assumption' that people usually make choices that are in their best interest [6]; pp. 4, 9). *Real* people have cognitive weaknesses. Sunstein & Thaler ([6], p. 9) refer to such things as us failing to live up to Bayes' rule, that we use rules of thumb 'that lead us to make systematic blunders', that we sometimes 'prefer A to B and B to A', that we lack self-control and that we are influenced by the framing of the issues we face.

The idea is that people often lack both self-control and a proper long-term perspective. This leads them towards choices that, among other things, make them obese and poor. This is because saving and healthy eating are examples of behaviours that require both a long-term perspective and some self-control [6]; pp. 9–11). We make better choices in situations in which we have 'experience and good information', which means that we are better at choosing the 'correct' ice cream than we are at investing our money wisely or choosing the most beneficial medical treatment [6]; p. 5). The latter actions are 'complex, uncertain, or otherwise challenging', and in such situations, many do what is cognitively easier than reaching what some categorise as the *best* decisions [8]; p. 328).

To be slightly technical, there are several reasons for our bad choices, such as the *stickiness of the default option*, *anchors* and *framing effects* [6]. People tend to choose the *default option* when they have no clear basis on choosing between alternatives, and *anchors* similarly focus people's attention on some alternative that is presented at the beginning of a choice process [6]; p. 18, 21–2). *How* something is portrayed affects how we interpret different alternatives, and this is what we refer to as *framing effects* [6]; p. 20). We also often lack clearly formed preferences, and they even change depending on how we choose – our preferences are 'ill-formed and murky' [6]; pp. 6, 23). Another factor is *suggestion*: when uncertain, we rely on a) what most people do, or b) what experts do [6]; p. 21). Yet another explanation is *inertia*, which implies that moving away from the status quo is costly in some way, and is therefore often avoided [6]; p. 22). Lastly, we have the *endowment effect*, which points to the fact that people 'value goods more highly if those goods have been initially allocated to them' [6]; pp. 22–23).

These considerations lead to the first proposition:

Nudging theory is based on the disciplines of psychology and behavioural economics, which deal with what affects people's choices, irrational choices included. It has proven to be effective, and the insights from the theory can be used by anyone with access to knowledge about people and how they act, for whatever purposes.

Firstly, nudging theory is described as a theory about *influencing* people's choices, and it is based on disciplines that deal with understanding how human beings think, act and decide [6].

Secondly, many experiments, both in laboratories and real-life implementations, show that the techniques of nudging have real effects on people's behaviour [2]; p. 8–9). This is not to claim that it is *always* effective or that it is *fully* effective when employed. Some nudges fail, as Sunstein [9] highlights in *Nudges that fail*, and, even when they work, they do not determine every individual's actions. They merely change the *proportion* of people who make the choices they are nudged towards.

Finally, the techniques of nudging are available to all actors, regardless of their intentions and goals. This is merely to state that, while some claim that nudging should only be used for good purposes, it can just as easily be used by business owners to maximise profits etc.

3 When the nudge is powered by Big Data.

3.1. The rise of big data

Our age is often referred to as the *era of Big Data* [10–12]. The term Big Data has many meanings, but Laney's *three Vs* are often used to describe it. The Vs refer to the *volume*, *velocity* and *variety* of the data in question [13]. Big Data means lots of data, moving quickly, in non-uniform data sets. This development leads us to consider it as a new phenomenon rather than just an extension of previous efforts to gather data [14]; p. 45 [10]; p. 662 [15]; p. 137).

This article is not a technical examination of Big Data. For my purposes it suffices to state that, with Big Data and the associated means of tailoring information to individuals, a) we get more information about individuals, b) we get more information about how people function in general, and c) we have the means to deliver nudges to specific individuals based on our existing knowledge of these people's preferences and inclinations.

Furthermore, Big Data is not just something private companies are involved in. Government a) gathers data and b) 'is an important secondary beneficiary' of the data gathered by others [16]; p. 1916). The combined effect of private and public efforts to gather data can be referred to as the 'surveillant assemblage' [17]. Although private and public gathering of data for different purposes *can* be considered as isolated phenomena, so much data flows in so many directions that I argue that a holistic view of the phenomenon is justified.

Richards & King [18] point to certain paradoxes of Big Data, two of which are of particular interest in this context: those of *transparency* and *identity*. The first relates to the fact that the collection of information is often hidden, and that 'its tools and techniques are opaque' [18]; p. 42). The second concerns identity formation and, more specifically, how Big Data enables actors to 'use information to nudge, to persuade, to influence, and even to restrict our identities' [18]; p. 44).

The question of whether contributing to Big Data is voluntary is a big debate in itself. Here, I will consider it as a phenomenon that is becoming close to impossible to escape. It is associated with high costs, particularly social, to withdraw from the reach of Big Data. It is also problematic that *others* who are quite similar to me, provide information that can subsequently be used to target *me*. These assumptions are somewhat controversial, and I refer readers to Cohen [16] for a more in-depth treatment of privacy and Big Data. Dotson [8] also deals with the broader impact technology has on human choice-making. I focus on the particular techniques of nudging combined with Big Data, while Dotson [8] deals more fully with technology in general. He also focuses on the difference between meaningful and meaningless choices, as this

relates to the question of how technology can be conducive to the good life.

3.2. When big data powers the nudge and makes it a shove

What is new about Big Data is a) the combination of insight into the mechanisms behind decision making and b) highly detailed knowledge of personality profiles. Advertisers have always attempted to manipulate our decisions, but the tools now available to them mean that people can be nudged more effectively than before.

While writing this, I noticed an advertorial from an online casino, which serves as a good example of this phenomenon. It boasts about its innovative nature, and how Big Data and the individual tailoring of content enable companies to attract *more* clients who play *more* and stick around *longer*. With the data now available, the casinos know more about what games each player likes, the kinds of odds and bets he likes to play, and what makes him play, stop playing and change games in the first place. Even the *clients* are said to appreciate this, as they get exactly what they prefer and believe they desire [19]. They might be happier for a while, but the ones who lose all their money will probably be left wondering what on earth happened, as they are thrown off this dazzling carousel ride that felt like just what they wanted.

Knowledge of your propensities lets actors lead you. You might have certain inclinations that you are not even consciously aware of, but that the data about you reveal [20]; p. 581). Being led in this manner is not experienced as oppressive. Good marketing based on these principles is rarely even noticed by the consumer, and people might feel freer than ever. While we previously had ‘predetermined and inevitably artificial categories’ as targets of marketing and policy, we now get information and predictions ‘finely tailored to particular situations’ – and individuals [16]; p. 2921).

The concept of Big Data-powered nudging has yet to receive systematic academic attention, but Yeung’s [21] article *‘Hypernudge: Big Data as a mode of regulation by design’* discusses some of the topics covered in this article. Yeung argues that ‘Big Data nudges are extremely powerful and potent due to their networked, continuously updated, dynamic and pervasive nature (hence ‘hypernudge’), and she claims to be providing a ‘liberal, rights-based critique’ of this phenomenon [21].

Yeung deals with the ‘liberal manipulation’ critique of nudging, consisting of a) the questioning of illegitimate motives, and b) the proposition that nudging can be construed as deception [21]; pp. 123–124). I argue that her critique of the deceptive qualities of nudging is not particularly effective, since it seems to rely on a person’s ‘right not to be deceived, rooted in a moral agent’s basic right to be treated with dignity and respect’ [21]; p. 127). While this may be a fine goal, a liberal need not go this far and can argue, as I do, that ‘hypernudging’ may be illegitimate simply because it deprives people of their *liberty*.

Helbing et al. [22] speak of the ‘big nudge’ when Big Data is combined with nudging. They point to its effectiveness, but also to various problems, such as its potential for abuse. The abusers could be criminals, or perhaps foreign powers nudging people politically, for example in order to interfere with elections. It could also be hidden government activity – activity that is not desired or approved of by the people. This is one of the main problems for proponents of nudging: the problem of determining what is considered *proper* use of such techniques.

Outside of academia, the combination of Big Data and nudging techniques has been seen as both dangerous and potentially enormously beneficial. What the articles referred to in the next paragraph show is an appreciation of how Big Data combined with nudging creates a phenomenon of greater power, and thus greater potential for both good and bad, than nudging as we used to know it.

Guszcza [23] discusses how Big Data and nudging can solve the ‘last mile-problem’ – when you know where you want (others) to go, but can’t get there. Eggers, Guszcza & Greene [24] talk of a ‘supercharged’ nudge, and how ‘big data and the Internet of Things’ offer opportunities

for improving the effectiveness of nudging, and ‘improving government’ [24]. Coughlin [25] warns us that we can ‘take nudge theory too far’ with the help of Big Data and the Internet of Things. The drawbacks of traditional nudging are overcome by using Big Data to ‘better understand the real-time mood of the person, how much digital noise they are willing to tolerate or how much nudge noise they are being subjected to at that very moment’ [25]. Kittur [26] talks of how *Big Data ‘nudges’ lead to better merchandise decisions*, and refers to Amazon’s Jeff Bezos, who states that their ‘Selling Coach’ program generates over 70 million automated machine-learned nudges a week that ‘translate to billions in increased sales to sellers’.

In politics, too, nudging is being taken ‘further than ever before’, with governments creating ‘behavioural units’, like Britain’s ‘Behavioural Insights Team’, which is working to create the best nudges with the help of Big Data [2,27]; pp. 8–9). Huggill [28] also describes the Behavioural Insights Team, and how it has added data science ‘which aims to use the latest methods from data science, machine learning and predictive analytics to make smarter policy implementations’. Such developments should leave no doubt about the importance of discussing the legitimacy and implications of nudging.

To sum up: Nudging is ‘rooted in an understanding of how people actually think’ and this understanding is becoming much more solid in the age of Big Data [6]; pp. 23–24). Furthermore, ‘[p]resentation makes a great deal of difference’ [6]; p. 24). With Big Data and social media, presentation can be tailored to fit individuals, as can the *delivery* of the nudges.

The data may show that I am most susceptible to nudges towards impulsive purchasing decisions in the morning, whereas the sweet spot for targeting you is in the evening. In addition, the data may show that I am most susceptible to subtle nudges that streamline my choices and appeal to my emotions, while you are more easily swayed by anchors and framing effects properly deployed. Today, the nudgers can target both of us in the optimal way, whereas they previously had to either choose *one* of the approaches or some sort of compromise.

Based on the considerations above, I arrive at the second proposition regarding the combination of nudging theory and Big Data:

With Big Data, nudging can become so effective that it is hard to withstand it, making the nudge more of a shove.

As described in this section, Big Data provides so much detailed information about both a) individuals and b) the way people act *in general* that nudging becomes increasingly effective. In addition, c) both the content and delivery can be tailored to individuals. While a nudge can be considered a welcome and slight push in a certain direction, a nudge fuelled by Big Data can easily become more of a solid push, or shove, that is hard to withstand.

4. Nudging and liberty

4.1. Negative and positive liberty

The distinction between negative and positive liberty is often used in the debate about how nudging affects liberty [7,29,30]. I argue that nudging is in conflict with *both* conceptions of liberty. I briefly relay the main ideas from Isaiah Berlin’s [3] original work, before I deal with the modern debate about nudging and liberty. I use liberty and freedom interchangeably in the following, as is also done in most of the literature I review here.

Negative liberty is usually understood as the absence of interference by other people [3]; p. 169). Complete absence is impossible, but anything beyond the minimal contraction of my freedom by other people is a violation of my negative liberty, and makes me ‘coerced, or it may be, enslaved’ [3]; p. 169). This aspect of negative liberty will be important in the following, as I argue that nudging might be construed as a form of coercion. It must be noted that any interference by *nature*, or other phenomena that are not *people*, is not considered an obstacle to my liberty [3]; p. 169). Even *nature* nudges, according to Sunstein

(2016, p. 35), but I will not consider such nudges. Negative liberty concerns itself with impediments caused by *other people*.

Positive liberty, on the other hand, is about being a *subject* instead of an *object* – ‘deciding, not being decided for, self-directed, and not acted upon by external nature or by other men as if I were a thing, or an animal, or a slave incapable or playing a human role, that is, of conceiving goals and policies of my own and realising them’ [3]; p. 178). Berlin (2002, p. 178) writes that positive liberty is about being one’s own master, and being in control of our own lives. My life and my actions should be the result of my own volition, and an autonomous reflective activity should ideally be what is constitutive of my life [3]; p. 178). Carter [31] prefers to speak of *self-mastery* when discussing what Berlin labels positive liberty.

Positive liberty requires a lack of obstructions. This is important, since I might be *enslaved* in many ways, despite not being physically coerced or having a restricted set of choices. If being enslaved to my passions is a contrast to positive liberty, then the fact that nudging exploits my passions and irrational inclinations becomes highly problematic. Berlin (2002, p. 179) discusses the emancipation that could follow from being freed from such slavery, and the fact that it might lead to a new and broader understanding of the self. I focus on more direct threats to liberty posed by nudging than those related to such forms of understanding of the self.

While the focus on genuine autonomy might lead one to believe that nudging is definitely inimical to positive liberty, we must note that the concept of positive liberty opens the door to the kind of paternalism that Sunstein & Thaler espouses. If I am enslaved by my irrational passions, a well-constructed nudge that lets me be free from it might be seen as making me *freer*, even if it achieves its goals through the manipulation of unconscious processes instead of rational persuasion. Paradoxically, I can be *forced to be free* under this conception of liberty, which means that nudging and positive liberty have a less obvious relationship than one might at first imagine [3]; p. 179).

I will limit myself to this understanding of the two forms of liberty in the following, despite the obvious possibility of thoroughly critiquing and developing them. Space, and the desire to perform an analysis of how nudging affects liberty preclude such a debate, so I will refer readers interested in a fuller treatment of these concepts to Berlin’s *Two Concepts of Liberty* [3] and Taylor’s [32] *What’s wrong with negative liberty* for a more detailed description. For a more general critique of the idea of two separate forms of liberty, see MacCallum [33] and Skinner [34].

4.2. Nudging and negative and positive liberty

4.2.1. Background

The debate about nudging in politics is now approximately 10 years old, and I will briefly discuss some of the main points in the debate that followed the popular book by Sunstein and Thaler [1]. I do not limit my usage of the term to government nudging, and argue, along with Sunstein [2]; that nudging can be employed by anyone, for whatever purpose. Hausman & Welch ([29], p. 131) note that advertisers and charities also nudge, and Goodwin states that advertisers have done this for a long time [7]; p. 87). *Nudge marketing* is a concept that builds on the same principles as government nudging (apart from the paternalistic demands imposed at times by Sunstein and Thaler) [35,36]. I treat private and public nudging as equal with regard to their impact on liberty.

The difficulty of regulating private nudging should not preclude a debate about its implications for liberty. Nor should it imply that we had better resign and allow it, and even promote *government nudges*, simply because private actors nudge. Some, like Hausman & Welch ([29], p. 131), seem to suggest that private nudges are acceptable due to their ubiquitous nature and resultant lack of effectiveness. I argue that the difficulty of regulating nudging is not an excuse for allowing it, and I also argue that nudges are becoming more and more effective. In

effect, these arguments in favour of nudging are considered both weak and unsatisfying.

Nudging as I define it is an attempt to influence an individual’s decision making by appealing to subconscious mechanisms or known irrational proclivities. I contrast this with *rational persuasion*, which consists of attempts to influence behaviour through open and transparent appeals to reason. I regard nudging as troubling, and I argue that it is more so today than at any time before, because of new technology and the information we now have about both human actions in general and individuals. If traditional nudging was perceived as ‘deeply troubling’, nudging powered by Big Data must be viewed as terrifying [7]; p. 86).

4.3. Negative liberty

Goodwin [7] states that the concept of nudging is based on the idea of negative liberty, and that this leads to problems when *positive* liberty is considered as well. For him, nudging is compatible with negative liberty, since it preserves *freedom of choice*. I argue that Goodwin is not correct in either of these assumptions, as a) negative liberty is more than he makes it out to be, and b) negative liberty can be negatively affected by nudging. Mills ([30], p. 28) also criticises Goodwin for having an overly simplistic view of some key concepts, such as paternalism and autonomy, and I argue that this also applies to his idea of negative liberty.

What he presents as negative liberty is a rather Hobbesian concept, where even a man who is robbed at gunpoint is free, because he has the *freedom to choose* to resist the robber. For Goodwin, ‘negative freedom is merely concerned with whether you are, strictly speaking, able to make a choice’ [7]; p. 88). Furthermore, it requires not being *physically* obstructed by external obstacles [7]; p. 88). This exact example is often used to describe the Hobbesian notion of liberty, and not Berlin’s [37]; p. 134). This is akin to the Hobbesian sailor who is free to sink if he dislikes the only other option, which is to abandon his goods in order to save himself and his ship [38]; p. 137). When I speak of negative liberty, I will not just consider *physical* obstacles, and I do not consider *theoretical*, but very *costly* alternatives sufficient to say that freedom is preserved. If another person, by conscious actions, makes it exceedingly costly for me to do what I might otherwise do without hurting him or anyone else, without him having a reason that makes his actions reasonable, this person restricts my liberty in a negative sense.¹ So, while nudging could be unproblematic based on Goodwin’s (2012, pp. 87–88) understanding of liberty, I object to this understanding, and will not employ it in the following.

Hausman & Welch [29] argue that, while they do not think nudging is *libertarian*, they do agree with Sunstein & Thaler that it would a) not be coercive, and b) ‘not significantly’ limit freedom of choice [29]; p. 124). I disagree with them on the first point, and, as to the second, it all depends on what one considers a *significant* limitation of freedom of choice. It is claimed that freedom is unharmed because people are still free to choose what they prefer [29]; p. 124). Hausman & Welch ([29], p. 124) state that Sunstein & Thaler use liberty as the ‘absence of obstacles that close off possible choices or make them more costly in time, inconvenience, unpleasantness, and so forth’. In their article, they employ the definition of liberty that Sunstein & Thaler subscribe to, which is quite close to the conception of negative liberty we have already established [29]; p. 124).

However, nudging surely makes certain actions more *costly*, *inconvenient* and *unpleasant*, and could thus constitute an obstacle to liberty. This, I suppose, is where Hausman & Welch [29] would say that the unpleasantness caused by requiring producers to print horrible photos

¹ I will not consider the question of how the law relates to liberty, and arguments such as Bastiat’s proposition that the prohibition of unlawful acts is in accordance with liberty, since such prohibitions, through law, are preservers of, rather than threats to, liberty [47]; p. 25).

meant to discourage smokers from smoking is not *significantly* limiting their freedom, even though it will surely cause displeasure and inconvenience. Thaler and Sunstein propose that their libertarian paternalism of nudges does not constitute a *mandate*, and that people will still be free to smoke, eat badly and invest poorly [7]; p. 87). It is also important to note that Sunstein [2] clearly argues from a utilitarian stance: nudges may be theoretically problematic, but still worth it. This also leads him to warn repeatedly of the ‘trap of abstraction, which can create serious confusion’ [2]; p. 26).

I will pursue the implications for the kind of liberty I have here described when discussing the coercive nature of nudging. In contrast to Goodwin ([7], p. 88), who believes that champions of negative liberty consider it an ‘abuse of words’ to see false consciousness, psychological pressure, lack of awareness etc. as obstacles to liberty, I keep this door open. Not only *physical* obstacles to action are considered threats to negative liberty, and a hypothetical freedom to choose will not necessarily be considered sufficient to render a person free if the set of choices is limited, manipulated and associated with artificially high costs of various sorts.

4.2.3. Positive liberty

One of the points often discussed in relation to nudging is *paternalism*. Nudging is often condoned because it is done in the interest of the person being nudged. I will not focus on this aspect of Sunstein & Thaler’s theory for two reasons. Firstly, I consider nudging to be a universal phenomenon that is not only associated with the government and good intentions. Secondly, I believe that it is excruciatingly difficult to arrive at a theory that leads to acceptance of the idea that one person can force, or mislead, another person to act in ways he does not wish to act, or at least does not know that he wishes to act, without his approval. That government can ban certain actions, and make undesirable actions costlier, is all well and good, as long as this is fully transparent and a matter of politics and social choice. While Sunstein & Thaler argue in favour of a similar idea of transparency, it seems obvious that affecting choice by appealing to subconscious and irrational mechanisms is *not* the same as overt governmental paternalism.

Let us assume that we have different ideas about what would be the best course of action in some imagined setting. All my attempts at rational persuasion fail, but I am *still* convinced that I know better than you do, and I want to enforce my will. I only have three options, which are a) to overtly coerce you, b) to entice you by external rewards, or c) I could exploit my knowledge of the imperfections of your decision-making processes to make you act in the way I want you to Ref. [29]; p. 126). How is the last option more acceptable than the two that are based on open and transparent incentives? If we somehow argue that it is acceptable because you do not *know* that I have achieved my goal, a whole array of mechanisms of manipulation, covert coercion and subterfuge will be available to influencers of various sorts, and I find it hard to believe that supporters of nudging really want to lead us to that conclusion. As emphasised by Sunstein [2]; popular support for nudging does not affect the issues I raise with regard to liberty.

I follow Hausman & Welch ([29], p. 128) when they argue that a person’s autonomy is diminished when ‘pushing’ becomes more than rational persuasion. When a person chooses what he does because someone has actively interfered with the available choices and the presentation of alternatives, this must surely be considered a violation of a person’s right to be his own master in a broad sense. Sunstein discusses the relationship between autonomy and nudging, and seems to argue that people delegate certain decisions to the government, and that this does not infringe on autonomy [2]; p. 63).

The arguments that *some* arrangement of choices would have influenced him either way is not in any way an argument in favour of allowing active manipulation in order to achieve *someone else’s* goals through subterfuge.

Let us assume that you are blind, and that I somehow got into your

apartment before you got up and got ready for work one morning. I saw that you had laid out your outfit for the day, and I found the colour palette you had chosen utterly distasteful. I then quickly went out and bought clothes that were much better looking, and put them in place of what you had laid out. I put the original outfit back in your closet, so that it was still available. I then left. You got up, put on the clothes I had put there and went to work. I got you to wear what I wanted without you even knowing that I had done so, and I did it all for your own good, as I consider my sense of taste to be better than yours. Particularly since you are blind, I might feebly argue, if you were to challenge me on this, when your co-workers ask you why you are suddenly all colourful and trendy. Yes, you would have worn clothes anyway, but that is in no way an argument for me to make you wear something *else*. No matter how distasteful, random or unfortunate your choice would otherwise have been. I could of course have woken you up and asked you if you wanted some help, but I could not nudge you towards trendiness in the way described here. That would be akin to changing the default option, which is one of the most common tools of nudging.

In this sense, the ideals of nudging, which supposedly only involve marginal interference with liberty through the arrangement of choices etc., means that a person’s power to choose, and thus his autonomy, is interfered with, [29]; p. 129). Hausman & Welch ([29], p. 135) state something obvious when expressing their concern that ‘exploiting decision-making foibles will ultimately diminish people’s autonomous decisions-making capabilities’ [29]; p. 135). Sunstein ([2], p. 61) is also aware of the arguments against depriving people of decision-making practice, but states that ‘[i]n many areas, what the choice-making muscle needs is rest, not exercise’.

But can a nudge not *improve* people’s positive liberty, and empower them? If irrationality makes me act in ways I would not approve of if I understood them, then perhaps I am *freer* in a world where my choices are laid out in ways that minimise the unfortunate effects of my cognitive weaknesses and lack of will power? Mandatory cooling off-periods before making choices that we know people often regret, for example, could be seen as empowering in this way [29]; p. 132). It is equivalent to a policy of forcefully tying people to the mast in order to resist the siren song.

However, nudges are not always mandatory and transparent. When they *are*, I argue that they are more akin to regular government regulation based on traditional paternalistic principles, and should be viewed as such. According to Mills ([30], p. 29), nudges are *better* than traditional regulation because they preserve choice, but his evaluation is dependent on his qualification that nudges lead us to actions that we ‘would not disagree with’. If I am not given a choice, or am not informed of what is being done, I find it hard to see this form of guidance as more liberty-friendly than regular overt regulation.

In addition to empowering through freedom from irrationality, nudges can empower by providing freedom *not* to choose, freedom from clutter etc., a point I will return to Ref. [30]; p. 29). Sunstein and Thaler rely on a specific form of rationalism when they argue that what they label *irrational* interferences in our behaviour should be corrected, but I cannot deal fully with the concept of rationality in this article [29]; p. 126).

Nudges, Mills (2013, p. 29) states, may lead us towards an ‘authentic life’, by letting us overcome our irrational impulses. He argues that positive liberty should be concerned with ‘authentic decision-making’, whereas ‘biases, blunders and temptations’ are obstacles to this [30]; p. 30). If so, helping us overcome them is clearly empowering, as it lets us achieve our ‘authentic’ goals [30]; p. 30). It is an interesting debate, but I view this line of reasoning as analogous to the debate on paternalism, where one opens the door for someone to label a person’s goals and actions as *inauthentic* and in need of correction.

Goodwin ([7], p. 88) refers to Taylor and the idea that positive liberty is about individual independence and self-fulfilment. He then seems to argue that nudging probably *cannot* be empowering, because it is based on the Hobbesian liberty he called negative liberty [7]; p. 88).

This is naturally a fallacy, as a theory may perfectly well be compatible with concepts it does not explicitly discuss. A theory *may* be empowering, even if it is founded on the idea of negative liberty.

Sunstein and Thaler prefers nudges that are transparent and subject to monitoring and acquiescence [30]; p. 30). However, they are also clearly aware that nudges are most needed, and most effective, when people face complex issues and have a hard time understanding what they really want, and what actions lead to what outcomes [30]; p. 30). Transparency and voluntariness are hard to achieve when the issues in question are in fact too complex to grasp. Otherwise, rational persuasion would most likely suffice, and I find it hard to believe that anyone would *prefer* nudging to rational persuasion if they were equally effective and available. We will also see that nudges are most effective when they are *not* transparent. If, as Mills ([30], pp. 30–31) states, personal autonomy is based on individual self-control, ‘reflective authenticity’ and ‘independence from coercive and manipulative influences’, it is difficult to accept the view that nudging is conducive to this form of liberty, or any other.

4.3. The manipulative and coercive nature of nudging

4.3.1. Nudging and coercion

One of the defining characteristics of liberalism is an aversion to coercion. Particularly the proponents of negative liberty cannot see coercion, over and above what is necessary for society and order to exist, as compatible with their idea of liberty. But what about manipulation, or even secret coercion? Raz [39]; p. 377–8) distinguishes between *manipulation* and *coercion* by stating that the first does not alter a person's options, but instead ‘perverts the way that person reaches decisions, forms preferences or adopts goals’. I argue that by, for example, manipulating choice architecture and framing, nudging might also involve interference with options, which thus makes it coercive, according to Raz [39]; p. 377).

Let us assume that there is a mountain between where I *am* and where I *want to be*. I cannot complain that I lack the *liberty* to get there quickly because of this obstacle, unless I want freedom from *necessity* and *nature*, which is not a kind of liberty I am interested in here. What, then, if *you* stood between me and where I wanted to be, and physically pushed me back and stopped me each time I attempted to pass you? You would be exerting force on me, and my liberty would suffer as a result. So far, I assume that everyone would agree.

But what if, instead of physically stopping me, you let me know that you would shoot me dead if I attempted to pass. This is where Goodwin [7] mistakenly believes that the champions of negative liberty would feel that liberty was preserved. Just because you do not use *physical* force to change my actions, you are stopping me just the same if your threat of force is credible. You have a desire to prevent me from doing something, and you impose a very high cost on the action you wish to prevent. While I still have the *choice* of being shot dead, I cannot be said to be free when you have consciously changed my incentives in such a manner. If you inform me of your intention, my actions will be changed, but what if you do not let me know that you intend to shoot me? Then I would be as free to act as ever, and I would attempt to go there. You would probably shoot me, and then I would be a victim of murder, but not really *unfree*.

But what if you just really wanted me to stay away from where I was going, and attempted to persuade me not to go? If you provided good reasons that made me change my mind, my freedom would not suffer. But what if you provided various incentives to affect my actions? If you offered to pay me 100 dollars to stay away, and I valued those 100 dollars enough to do as you wish, I would be perfectly free, as I simply used my freedom to make a transaction and changed my intentions. But what if the incentive was *negative*? If you broke the law and promised the penalty of death for my action, you would be using illegitimate force to compel me to stay away, and my freedom would be limited as a result.

But what if you simply said that you would hate me forever and never talk to me again? While I might value your friendship and decide *not* to go because of this, I would of course not be deprived of my liberty in this process. You are free to exercise your right to like or dislike my actions, and I have no cause to complain about loss of liberty. The obstructions discussed in this paragraph are those of traditional regulation and normal social life, and they are all compatible with liberty, both positive and negative.

However, what if you built a wall between me and my goal? You did this before I arrived, and you left before I got there, so I merely saw the wall when I arrived. Imagine that you even made it look exactly like a mountain, seemingly the same obstacle that we considered earlier. Would this be an obstacle that deprived me of liberty? I argue that this is akin to the nudge, and I consider it to be a clear violation of liberty, both negative and positive. The reason for this is that it has been constructed with the *intention* of changing my actions, and it conflicts with both the negative requirement not to be constricted by other people *and* the positive requirement to be autonomous and master of one's own actions.

4.6. Rational persuasion

Rational persuasion is used as a contrast to nudging, and I consider rational persuasion to be fully legitimate. Such attempts at persuasion protect individual liberty and let agents retain control of their own goals and actions [29]; pp. 129, 135 [30]; p. 32). This is in strong contrast to manipulative efforts to change an individual's actions by exploiting his/her cognitive weaknesses, ‘circumventing the individual's will’ [29]; p. 129). The difference between attempting to persuade someone and taking advantage of irrational mechanisms is important [29]; p. 129). It is important to note that Sunstein [2] labels efforts to *inform* as nudges, while I see this as rational persuasion.

Furthermore, the *goal* of the deception is of little interest. The consequentialist ethic, as exemplified by Sunstein [2]; which might justify nudging because the good effects it produces may be legitimate, but it would still be the case that *liberty* would suffer from it. We can, of course, argue that we value good effects more than liberty, and, if that is what the nudgers argue, all is good, and we can choose the politicians who propound the view we are most content with.

4.3.3. Manipulation and secret coercion

My contention is that any liberal who is opposed to *overt* coercion should not be indifferent to *secret* coercion. While the overt kind gets most attention, I argue that nudging combined with Big Data makes it possible to guide people's decisions in a way that is no less problematic than other forms of subtle guidance. Nudging is, in principle, inimical to liberty, but I claim that it becomes more problematic the more effective it is, and particularly the more *covert* it is. Goodwin [7] calls for more theorising about the manipulative nature of the nudge, especially since the ‘nudge's libertarian credentials are undermined by the fact that it targets individuals in their pre-rational state’ [7]; p. 91). It is this aspect of nudging I take issue with, and I have clearly distinguished it from *rational persuasion* and traditional overt regulation using incentives.

While Hausman & Welch (2010, p. 124) argue that nudging is not coercive, they recognise that it could be a problem that a person's actions ‘reflect the tactics of the choice architect rather than exclusively their own evaluation of alternatives’. They take a rather lenient stance on nudging, given that they clearly see that, when nudges aim to undermine an ‘individual's control over her own deliberation, as well as her ability to assess for herself her alternatives, they are *prima facie* as threatening to liberty, broadly understood, as overt coercion’ [29]; p. 130). Goodwin ([7], p. 89) also sees the same attempt to undermine control of deliberation as a cause for concern. For Mills [30]; what makes nudges troubling is that they ‘override and circumvent the autonomous agent's rational decision-making capacities’, which thereby

diminishes the agent's autonomy [30]; p. 32). He then calls this a form of manipulation of moral concern [30]; p. 33).

What I argue in this article is that secret, or covert, coercion, is as much of a threat to liberty as the more obvious kind. I would argue that it is even more of a threat a) as it is difficult to perceive, and b) since we do not have the same instinctual reaction to it as when someone *physically* coerces us.

Hausman & Welch ([29], p. 129–30) use the very interesting example of *subliminal* messages. If they were effective, they say, and if they could be used for beneficial purposes, would people still be free when influenced by them? In our previous example, let us say that you gained control over my television set and, for the past few weeks, you have been flashing rapid alternate images of death and devastation mixed in with images of the location I wanted to go to. All of a sudden I no longer want to go there, but I have no idea why. I just do not feel like it anymore. The mere prospect of going there makes me slightly queasy. No need to shoot me or block me any longer, as you have achieved your goal by using *psychological* methods.

Am I still free, even though you have achieved your goal and made me to change my actions – or indeed my very goals – by your actions? Or is it really the case that overt coercion, for example a requirement to use safety belts in cars on threat of punishment, is *less* of a threat to liberty than the covert kind? Could it be that an unhappily coerced person is in fact *freer* than a happy, but unknowingly manipulated, person is [29]; p. 130)? I would say yes. While ignorance can surely be bliss, it does not promote freedom.

4.3.4. Non-physical force

Goodwin [7] also opines that it is difficult to say that nudging is *coercive*, although, since it aims to exploit our cognitive weaknesses, it is surely *manipulative* – although he calls it a *subtle* form of manipulation [7]; pp. 86, 89). I argue that, once manipulation becomes effective enough, it can be coercive. Few state explicitly that nudging is coercive, but Hausman & Welch ([29], p. 130) agree that it is ‘alarmingly intrusive’ in that it diminishes our control over ourselves and our own evaluations of goals and alternatives. The main question is whether or not nudging involves the use of *force*. For Goodwin, coercion involves an ‘attempt to pressurize a person (or persons) into adopting different behaviours, usually by force’, and he argues that we cannot say that this definition applies to nudging [7]; p. 89). The reason is that he finds it difficult to find the use of force in a nudge [7]; p. 89). Even if his definition states that force is only *usually* applied, I will examine the use of non-physical force, as this is the key element in play. We have already seen that Goodwin thought that negative liberty was only concerned with external physical obstacles. I disagreed there, and I argue that *psychological force* can be used to coerce. This is similar to what Faden & Beauchamp [40]; p. 355) call psychological manipulation, where ‘a person is influenced by causing changes in mental processes other than those involved in understanding’.

Physical coercion is not particularly relevant, but I argue in favour of broadening the concept of coercion to include phenomenon such as *psychological coercion* and other forms of manipulation I describe here. Hopper & Hidalgo [41] write about psychological coercion, which is easily concealed and not easily understood. They argue that psychological coercion ‘can be as effective as physical violence in exerting control over a person’ [41]; p. 186).

We have already considered *threats*, for instance in the example where you attempted to dissuade me by promising to shoot or shun me. I do not consider such attempts to influence behaviour a threat to liberty when within legal bounds. What of the force of the better argument, then – if you use your force of logic to guide me towards a different goal? In such a process you would be appealing to my rational faculties and, should you succeed, it seems absurd to claim that my liberty is hurt. I cannot possibly claim freedom from arguments that change my opinion.

But rhetoric is more than logic, so what if you mix some *pathos* into your persuasive endeavour? I might not perceive this, and I may change my actions, believing the cause to be your appeal to *logos*. No matter, as what you have done is both open and legitimate. People are more than logic, as rhetoricians have argued for nearly all of human history, and we have little grounds for saying that our *rational* faculties are more important than our *emotional* ones. Furthermore, persuasion is hardly ever *purely* rational, no matter how hard we try [29]; p. 135). Antonio [42–44] has written extensively on this topic. I follow him in his argument that reason and emotion are inseparable, and that the one makes little sense without the other. If we were to ban appeals to *emotions*, we would have to ban human communication and, all of a sudden, our position would be quite absurd. Dotson ([8], p. 329) also notes that human decisions are ‘local and emotional’, rather than ‘detached and rational’.

This is an important point in relation to nudging, because nudging is based on the idea that our *rationality* is our *authentic* faculty. Any influence of emotions and other irrational mechanisms should be purged. I believe that this position is deeply problematic, partly because such a purge by nudging could take the form of manipulation, and partly because no one has the authority to decide that I should take more notice of some fictional rational process that is more present in me than my perceived feelings. You may attempt to rationally persuade me that you are right, but you cannot decide for me that *your* rationality is better than *my* desired mix of rationality, emotions and various well or ill-founded influences.

‘Best when invisible’

I have already touched upon the fact that nudges, according to Sunstein & Thaler, *should* be open to monitoring by the nudgees [29]; p. 132). It is paradoxical, however, that a lot of the nudges work far better when *covert* than when open and transparent [7]; p. 89). An obvious reason is that, if people immediately recognised the goal of the nudge and agreed with it, *rational persuasion* would suffice, and there would be little reason to appeal to unconscious and irrational mechanisms in order to manipulate behaviour.

If, instead of creating associations between death, decay and my goal, you *said* that these things were connected, I could hardly fault you. I would ask you why, and if you were able to convince me that these things *were* connected, you might succeed in diverting me. However, I would be free to consider your arguments null and void, and if so, no such associations and subconscious aversions to my goal would have been created.

Covert nudges must not be confused with rational persuasion, as they can be seen as an admission of the fact that rational persuasion is often ineffective. When someone openly targets the rational faculties of a person by providing him with facts and arguments, and attempts to persuade the person to act in a certain manner, this is persuasion, not nudging. If you can persuade someone in this manner, why use subterfuge to change their behaviour?

Framing effects are one of the prime examples of nudging [2]; p. 91). If you *know* that I have an irrational fear of snakes and that I love songbirds, you could portray the way towards my goal in two ways. You could either lament the scarcity of birds, and indicate that it is probably due to the existence of snakes in the area, which is factually true enough. Or you could alleviate my fear of snakes by saying that there is probably something like a 99.9% chance of me never seeing a snake here, and that the chances of meeting beautiful birds, just dying to sing to me, are just about as great. If you *told* me that you were framing these versions in different ways, and then provided me with the probabilities *for* and *against* whatever I liked or disliked, much of the effect would disappear. Framing is most effective when it is covert.

A nudge that is *explained* can be likened to rational persuasion, and is not of particular interest to me here. If we explain to a person that the choices have been rearranged, because of a public desire to reduce

obesity and the fact the people in general have quite a sweet tooth, the rearranged menu would be just fine. Whenever we *hide* the nudge, it becomes a nudge proper, and is meaningfully separated from rational persuasion.

A final point to note is that nudging may be problematic due to people's individual differences [7]; pp. 88–89). What if I am a cognitive scientist with great knowledge of political science and nudging. My power to discover and evaluate the nudges I encounter would be quite substantial, whereas, in the case of someone who has never heard of either the disciplines or the nudge, the same power would probably be greatly limited. Goodwin [7] points to nudging being *unfair* and, while I cannot pursue this topic here, it is possible to envisage a situation in which people with certain capacities are able to resist nudges and retain their original liberty, whereas, for others, the nudge truly becomes a coercive shove [7]; pp. 88–89). I argue that *everyone's* ability to resist the nudge is threatened by Big Data and its application, but differences in such abilities will continue to exist until we are *all* unable to resist the nudge – a situation I do not consider particularly realistic.

4.4. Nudging as a) ineffective and b) unavoidable, and c) choice as exhausting

I will briefly consider three possible arguments against being concerned about nudging. The first is that it is ineffective, the second that it is unavoidable, and the third that choice is exhausting.

4.4.1. Tolerating nudging because it is ineffective

Hausman & Welch ([29], p. 131) argue that nudging by non-governmental agents is tolerable because it is ineffective, and also that it is hard to regulate, but that is hardly a reason to resign philosophically. Furthermore, my argument is that nudging is effective, and is becoming more and more so, so this type of argument misses the mark on two accounts.

Nudging is subject to abuse, but Hausman & Welch ([29], p. 135) actually state that the main protection against this is 'our limited proficiency at exploiting flaws in human decision making and the extent to which efforts at shaping choices on the part of different agents undercut one another' [29]; p. 135). This reasoning fails for two reasons. Firstly, just because it is not effective does not make it acceptable and, secondly, we are becoming increasingly proficient at nudging, which is the main argument of this article.

Similarly, Mills seeks to argue that we should accept nudging because it is weak and too limited to be 'genuinely transformative' [30]; p. 33). While I argue that the problem with nudging is that it is a threat to liberty, Mills, states that 'the *true* failing of nudging in this regard is that it is often so benign that it will fail to be genuinely transforming because it cannot establish original (or significantly alter existing) moral or social norms' [30]; pp. 33–34).

Goodwin ([7], p. 90) argues in a similar way, stating that a *problem* with nudging is that it does not stick and leaves people vulnerable to being nudged back. I posit that it is a form of secret coercion that is inimical to freedom because it is effective, *not* that it is not effective enough. Goodwin [7] has broader goals than the preservation of freedom, however, and for him, nudging 'will not be enough' [7]; p. 90). He argues for deliberative democracy, and as such I agree, not because nudging is not *effective* enough, but because rational persuasion and debate are the *only* legitimate means of changing individuals' (lawful) actions.

While Goodwin ([7], p. 90) wants regulation of the 'rampant commercialism and unregulated markets' that may make government nudges less effective, I argue for more regulation of both private and public nudging on behalf of both positive and negative liberty.

4.4.2. Tolerating nudging because it is unavoidable

One of the arguments Sunstein and Thaler use in favour of nudging is that it is *unavoidable* [6]; p. 8, [2]. Hausman & Welch (2010, p. 124)

seem to agree with Sunstein & Thaler's proposition that manipulating choice architecture is less problematic than it might appear, since *some* organisation of the choices we make is unavoidable [29]; p. 124). They explicitly state that '[w]hen choice shaping is not avoidable, it must be permissible' [29]; p. 132).

This is related to the example in which you were blind. Let us, instead, now say that you had assigned me the task of preparing your outfit for the day, without further instructions. What should I now choose? *Some* choice is unavoidable, and following the logic established by Sunstein & Thaler and Hausman & Welch, I would now be free to choose what I considered to be in *your* best interest. If we dismiss the requirement that nudges have to be for the good of the nudgee, I would even be free to choose whatever I considered best – period. If I were in a naughty mood, and did not particularly like you, you could end up wearing a clown costume.

The obvious solution would be to elicit your preferences when I was given the assignment, so that I could choose what *you* wanted. In lieu of that, I could prepare *two* different outfits, and either tell you the difference, or leave a note in braille. Me imposing my will on you is not made legitimate just by the fact that some choice has to be made.

I would even argue that me choosing an outfit at *random* would be less problematic in relation to your liberty than me deciding consciously for you. Hausman and Welch ([29], p. 133) recognise the 'important difference' between a set of alternatives intentionally designed to lead me in a certain direction and a random design. Random design would also lead me, but only the designed choice would involve the imposing 'of the will of one agent on another', which is what I consider problematic as regards liberty [29]; p. 133).

4.4.3. Tolerating nudging because choosing is exhausting

I will only briefly consider the argument that nudging is good because *choosing* is so taxing. This is proposed by Sunstein & Thaler ([6], p. 8, 15), and it is worthy of mention. Too many alternatives can be confusing, and a limited set of choices can *feel* liberating. While this can certainly be the case, it is strange to argue that a constricted choice set *increases* liberty. If that were the case, one would definitely have to adopt the positive conception of liberty, and see this as *empowering*.

Similarly, their focus on the *default option* drives them at times towards a stance that could lead them to being seen as champions of the freedom *not to choose*. It certainly seems paradoxical, but let us consider an example.

If I am selling you an online service, and I want you to choose a certain option that I *know* you would not have chosen without my interference, I could introduce many different choices in the hope that you would not be willing to sift through them all, and instead choose the default option that I want you to choose. This would of course be rather devious, but the chances are that I would be punished by you and other customers [35]. It is, indeed, hard to regulate such tactics, but consumer protection laws, for example, can, and should, attempt to deal with them. Manipulative and misleading advertising, along with other kinds of objectionable manipulation by private companies or the government, should be regulated, even if it seems difficult to fully eradicate.

Similarly, when considering how to invest your savings for your old age, it would be quite taxing if you were required to consider and agree to each and every investment made by the fund in which you are investing. That is not a problem, however, as we very often *consciously* delegate choices to others. Such delegation is not nudging, and it is not problematic for liberty. When *you* decide that I should delegate, and remove my choices without me knowing, it becomes deeply problematic.

These considerations lead me to the third proposition about nudging and liberty.

Nudging is, in principle, inimical to liberty, particularly to the negative conception of it. Furthermore, the more effective it is, the more problematic it becomes.

Nudging is problematic due to its covert and manipulative nature. A *strong* nudge becomes more of a coercive *shove*, and thus becomes even more problematic, particularly for proponents of negative liberty who are wary of interference and coercion. While it is easy to construct arguments against nudging based on positive liberty, it is also possible to construct arguments in *favour* of nudging based on the same concept. This leads me to consider negative liberty as the most interesting approach when analysing the implications nudging has for liberty.

5. When nudge comes to shove

5.1. The premises of my argument

I briefly summarise my propositions, which now turn into the three premises in my main argument:

- P1: Nudging is about influencing behaviour, and it works
- P2: With Big Data, nudge comes to shove
- P3: Nudging is inimical to liberty, and more so as it becomes more effective

5.2. Big data nudging as a threat to liberty

As noted in the discussion of premise 3 in 4.5, I do not consider positive liberty to be the most fruitful concept when considering how liberty is affected by Big Data nudging. I wish to note that, while I consider the arguments against nudging based on loss of agency and not being one's own master as both strong and valid, other arguments in favour of paternalism and empowerment can easily be constructed on the same foundations. I have discussed these issues in 4.2, and will proceed to the threats to liberty as seen through the lens of negative liberty.

Based on the combination of premises 1, 2 and 3, I argue that strong and effective nudging constitutes a form of *coercion*. While not overt, it may constitute *secret* coercion, and coercion of any kind must be seen as inimical to liberty, and inimical to negative liberty as well. While liberals of all sorts are quite adamant about fighting overt coercion, I argue that it is time to take another look at the dangers posed by the processes I discuss here. They might be a far greater threat to liberty than the obvious violations of rights that more readily grab the headlines. Such a position requires us to view manipulative efforts and the use of non-physical force as constitutive of *interference*, to use Berlin's terminology.

If we turn to John Stuart Mill, he is *not* a champion of the kind of utilitarianism that is engendered in the 'libertarian paternalism' of Sunstein & Thaler [6]. While it may be permissible to stop a person from crossing a bridge that we (but not he) know is about to collapse, no person 'is warranted in saying to another human creature of ripe years that he shall not do with his life for his own benefit what he chooses to do with it' [45]; pp. 142, 166). This is both because men are most valuable to themselves and others when free to develop novel ways of living and 'experiments of living', and because, when it comes to their own lives, each person has 'means of knowledge immeasurably surpassing those that can be possessed by anyone else' [45]; pp. 120, 185).

However, while Hamburger [46] clearly stated that Mill is opposed to interference and denial of choice, Mill himself opens up for '[c]onsiderations to aid his judgement, exhortations to strengthen his will', as long as the individual is, in the end, free to choose for himself [45]; p. 143). Rational persuasion is fully compatible with liberty, since such efforts can 'aid his judgement' and 'strengthen his will'. Nudging as contrasted with rational persuasion, on the other hand, is usually covert, and not as effective when made explicit. Mill opens up for appeals to a person's *reason*, not devices that play on cognitive 'weaknesses' in order to achieve what we *think* a person really wants.

6. Conclusion: when big brother nudges

I acknowledge the existence of arguments in favour of nudging, but I conclude that it is problematic to use *liberty* as an argument for nudging. Such an argument would have to be based on the concept of positive liberty, empowerment and emancipation from irrationality, but I argue that even stronger arguments *against* nudging can be built on the same conception of liberty. Technology influences human decision-making in various ways, and it is important that we critically evaluate these effects [8]. In my view, Big Data-powered nudging has the potential to be both manipulative and coercive, and we should be wary of the effects such efforts have on liberty.

Most strands of liberal theory acknowledge the central findings from cognitive and behavioural theory that describe human beings' far from perfect capacity for rationality. The way we function makes us susceptible to manipulation and secret coercion, and a liberal theory can perfectly well demand regulation in order to prevent the exploitation of such weaknesses – and to protect individuals from abuse and coercion. Such an assumption does not imply that people are not autonomous and competent. It merely acknowledges the fact that we have various kinds and degrees of flaws and inclinations, and also that reason is not the only yardstick of authenticity. In the spirit of Mill, we should to a certain degree be allowed to thrive or suffer from the results of the actions these inclinations lead us to, although the government has a role in making sure that it does not exploit our weaknesses unduly, and that other actors do not do so either.

While I do not accept arguments in favour of nudging based on *liberty*, it is easy to see that arguments based on *utility* could support nudging. I do not evaluate the proper trade-off between utility and liberty in this article, and it is obvious that, at times, utility trumps an absolute demand for liberty. However, I argue in favour of transparent traditional regulation and rational persuasion instead of nudging, when these approaches can serve the same purposes. Should we choose to nudge, we should not euphemise our efforts by claiming that we do so on behalf of freedom. Sunstein's [2] trap of abstraction is perhaps not as dangerous as the trap of consequentialist pragmatism.

On a final note, the issue of regulation of nudging is beyond the scope of this article. I would argue, however, that we must not succumb to the temptation to state that, because it is *hard* to regulate nudging, it is of little interest to discuss how to attempt to do so. Particularly since technology is making the problem at hand increasingly pressing.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.techsoc.2019.04.006>.

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