A Framework of Ethical Nudges in the Design of Consumer Goods

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Abstract
This paper focuses on the use of nudging in the design of consumer goods. This perspective is different from most existing nudging literature, which tends to focus on nudging as a tool for policy makers. The change of focus to consumer goods has some implications in relation to existing classifications of nudging, namely that the non-transparent aspect of some types of nudges becomes less relevant. Instead this paper introduces a distinction of the nudging ability of a product as decisive or non-decisive for a purchase decision. This dimension is combined with a dimension from an existing framework to produce four distinct types of nudges in relation to the design of consumer goods. Through 12 examples, the paper demonstrates the relevancy of these four types of nudges. Finally, with a basis in the proposed framework, the paper discusses how designers/producers of consumer goods should proceed from here, and possible ethical ramifications of using nudges in design are highlighted.

Keywords
Nudging; Industrial design; Consumer goods; Design ethics; Design activism

The concept of ‘nudging’ was popularized by behavioural economist Richard H. Thaler and law scholar Cass R. Sunstein in their 2008 book “Nudge: Improving decisions about health, wealth, and happiness”. In this book, Thaler and Sunstein (2008) suggest that public policy-makers and other choice architects influence decision-making processes in a manner that promotes behaviour, which is in the general interest of society as well as in the interest of the decision maker. They argue that public policy-makers can influence the everyday behaviours of citizens in this manner in a cost efficient way while avoiding the use of injunctions. Since then, the concept of nudging has received widespread interest, reflected for example by Sunstein becoming an advisor on regulatory affairs for US President Barack Obama, while Thaler has been an advisor for UK Prime Minister David Cameron’s Behavioural Insights Team, referred to as ‘Nudge-unit’ (govt.uk.co). The use of nudging has, in particular, gained momentum in public health, health policy and health promotion (Saghai, 2013).

The effect and ethical aspects of nudging have been subject to widespread debates (e.g. Bovens, 2008; Chakraborty, 2010; Wilby, 2010; Bonell et al., 2011; Marteau et al., 2011; Vallgårda, 2012; Rebonato, 2012; Oliver, 2012; Burgess, 2012). Hansen and Jespersen (2013) have suggested that many discussions of nudging, ethical discussions inclusive, are suffering from unclarity as to what exactly nudging is. Thus, they propose a framework of four types of nudges, intended to “clear up some of the confusion that surrounds the ethical discussion of the nudge approach to behavioural change, and better inform its adoption in public policy-making”. The focus of their framework is on nudging in a broad perspective, ranging from government policy to design of consumer goods and services, although there seems to be a clear emphasis on the first. According to the literature we
have identified, this framework seems to be the most solid in relation to understanding different kinds of nudging.

The identified literature on the use of nudging for ethical purposes focuses on policy makers or has an even broader perspective. Compared to this literature, our paper differs by focusing solely on consumer goods. This change of focus has significant implications for the understanding of nudging. Thus, this paper proposes a framework for characterising nudging in the context of designing consumer goods, while also suggesting what nudging implies in terms of designer responsibility.

Literature review

An extensive literature review was carried out for this paper. However, because of the paper length limitations and the need for an extensive explanation of the framework suggested by Hansen and Jespersen (2013), only a minor part of the identified literature is presented. Excluded areas include 'perspectives on nudging' (e.g. Carter, 2004; Hausman and Welch, 2010; Marteau et al., 2011; Bonell et al., 2011; Burgess, 2012; Vallgård, 2012; Saghal, 2013), 'information/choice presentation' (e.g. Madrian and Shea, 2001; Johnson and Goldstein, 2003; Martin and Norton, 2009; Chandon, 2013) and 'persuasive technology' (e.g. Latour, 1992; Berdichevsky and Neuenschwander, 1999; Chóliz, 2010; Guthrie, 2013).

Nudging

In the book by Thaler and Sunstein (2008), a position called 'libertarian paternalism' is argued for. According to this position, nudging should be used by governments, institutions and businesses to help people make better decisions. This suggestion is based on the premise that people do not always act in ways that serve their own or others’ best interests, for which reason in many instances individual decision-making could be improved by using nudges. Central to the ideas of Thaler and Sunstein (2008) is that the mind processes information through two distinct systems that characterize human thought, which they refer to as the ‘reflective system’ and the ‘automatic system’ (Thaler and Sunstein, 2008, p. 19). This division is also labelled the division between ‘system 1’ and ‘system 2’ in the long-standing research on this topic, summarised by for example Kahneman (2011). Thaler and Sunstein (2008, p. 19) characterise the automatic system as "rapid and is or feels instinctive, and it does not involve what we usually associate with the word thinking". Examples of the automatic system in action include smiling upon seeing a puppy, becoming nervous by experiencing air turbulence, and ducking when a ball is coming at you. They characterise the reflective system as being deliberate and self-conscious; and examples of the operations of this system include deciding which college to attend, where to go on trips, and if to get married or not (Thaler and Sunstein, 2008, p. 20).

Thaler and Sunstein define a nudge as: “any aspect of the choice architecture that alters people’s behaviour in a predictable way without forbidding any options or significantly changing their economic incentives. To count as a nudge, the intervention must be easy and cheap to avoid” (Thaler and Sunstein, 2008, p. 6). However, in contrast to this definition, it seems that nudging need not be characterised with regard to economic incentives only, since other drivers are definitely also relevant when attempting to stimulate positive behaviour. Another definition which recognises this broader understanding of incentives is provided by Hausman and Welch (2010, p. 126): “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”. Furthermore, it should be noted that although Thaler and Sunstein (2008) and many others use the term ‘nudging’ about making people make ‘positive’ choices, the
term is not exclusively used in this manner (Saghai, 2013). In this vein, editor of The Nudge blog, John Balz, argues that a distinction should be made between nudging and libertarian paternalism: Libertarian paternalism is a political outlook, but “nudging takes place in [a] variety of realms where the nudger’s explicit goal is to promote [the nudger’s] own welfare (think of almost any consumer marketing strategy or retail store layout)” (Balz, 2013).

**Hansen and Jespersen’s framework**

As mentioned, based on our literature search conducted, we found the framework produced by Hansen and Jespersen (2013) to be the most solid starting point in so far as the goal is to understand the distinctions between different types of nudging. The framework is based on two distinctions, type 1 versus type 2 nudges, and nudging that lends itself to epistemic transparency and nudging that does not (non-transparency). Both type 1 and type 2 nudges aim at influencing automatic modes of thinking, but type 2 nudges are aimed at “influencing the attention and premises of — and hence the behaviour anchored in — reflective thinking (i.e. choices), via influencing the automatic system”, while type 1 nudges are only aimed at “influencing the behaviour maintained by automatic thinking, or consequences thereof without involving reflective thinking” (Hansen and Jespersen, 2013). As an example of a type 2 nudge, Hansen and Jespersen mention the ‘fly-in-the-urinal’ nudge, which aims at capturing the visual search processes performed by automatic thinking, and when this happens, the nudge works by attracting reflective attention. The consequence of the reflective attention is a decision to aim for the fly or not, which compared to urinals with no ‘flies’ in them increases the likelihood of a focus on the current act of urinating. In fact, the result of this particular application of nudging is claimed to be responsible for a decline in spillage of 80 per cent (Thaler and Sunstein, 2008). As an example of a type 1 nudge, Hansen and Jespersen (2013) mention the Wansink (2006) studies, which (among other results) showed that changing plate sizes in a cafeteria from a 12-inch dinner plate to a 10-inch dinner plate, without telling people this, led people to serve up and eat 22% less food. A transparent nudge is defined as “a nudge provided in such a way that the intention behind it, as well as the means by which behavioural change is pursued, could reasonably be expected to be transparent to the agent being nudged as a result of the intervention”, while a non-transparent nudge is defined as “a nudge working in a way that the citizen in the situation cannot reconstruct either the intention or the means by which behavioural change is pursued” (Hansen and Jespersen, 2013). The mentioned ‘fly in the urinal’ nudge is an example of a transparent nudge, while the ‘reduced dinner plate size’ is an example of a non-transparent nudge, assuming the consumers are not aware of the plate size manipulation.

Combining the type and transparency dimensions produces four types of nudges. The first type of nudges, ‘transparent type 2 nudges’, includes nudges which “engages the reflective system in a way that makes it easy for the citizen to reconstruct the intentions and means by which behaviour change is pursued” (Hansen and Jespersen, 2013). The mentioned ‘fly in the urinal’ nudge is an example of this type of nudge. Other examples of this type of nudge mentioned by Hansen and Jespersen (2013) include: “making particular actions salient ("look right" painted on the streets of London, or the provision of nutritional advise by showing how to combine food on a plate, as done by ChoseMyPlate.gov, in lieu of the traditional food-pyramid)”; “making preferences salient (e.g. by the use of green arrows or footprints to nudge people to take the stairs or throw litter in dustbins)”; “making consequences salient (e.g., displaying disturbing pictures on cigarette boxes, putting calorie postings on menus, or providing real-time feedback on energy-use)”; and “using social salience (e.g., electronic boards that depict one’s real-time speed in a way that makes this speed public knowledge)".

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The second type of nudges, ‘transparent type 1 nudges’, includes nudges in which reflective thinking is not engaged in what causes the behaviour change in question. Rather, reflective thinking occurs as a by-product, but in a way that easily allows for the reconstruction of ends and means” (Hansen and Jespersen, 2013). For this type of nudge, behavioural change is more or less unavoidable to begin with, but since it is transparent, the influenced person is allowed to recognise the intention and means of the nudge. The examples of this type of nudge, mentioned by Hansen and Jespersen (2013), include: “nudges that work by activating instinctive automatic responses (e.g., the use of the colour red, or flashing lights to draw attention to a sign, and the use of a car horn)”; “nudges that work by activating learned responses (e.g., the fictive and somewhat dangerous use of fake potholes painted on the road to slow driver speed)”; and “nudges that work by changing the consequences of defaults in ways you are bound to notice (changing printer defaults from one-sided to double-sided printing)”.

The third type of nudges, ‘non-transparent type 2 nudges’, includes nudges which, if to be successful, require that “the reflective system has to be engaged, but it doesn’t happen in a way that by itself gives people epistemic access to the intentions and means by which influence is pursued” (Hansen and Jespersen, 2013). The examples of this type of nudge, mentioned by Hansen and Jespersen (2013), include: “nudges in general aimed at affecting decision making by the clever framing of risks (e.g., when choosing between two medical treatments)”; “nudges aimed at improving compliance rates in subtle ways (e.g., by posting posters with human faces to increase compliance rates with norms, such as cleaning up after oneself or paying for coffee)”; “using subtle cues to activate preferences for making particular choices (e.g., taking the lid off the ice-cream freezer, leading more costumers to crave and ultimately buy ice-cream)”; “using lotteries to get people to overestimate the chance of obtaining a rare effect (e.g., lotteries to encourage tax reporting)”; and “anchoring people’s willingness for what price to pay for chocolate on their social security number”.

The fourth type of nudges, ‘non-transparent type 1 nudges’, includes nudges that “cause behaviour change without engaging the reflective system and in a way that does not make it likely to be recognized and transparent”. The mentioned ‘reduced dinner plate size’ is an example of this type of nudge. Other examples of this type of nudge, mentioned by Hansen and Jespersen (2013), include: “changing of background defaults (e.g., changing from an opt-in to an opt-out procedure for registering as an organ donor)”; “subtle and seemingly irrelevant changes to objects or arrangements in the behavioural context (e.g., changing the shape of glasses to reduce calorie intake, the removal of trays in cafeterias to reduce food waste, and rearranging cafeterias to get people to head for the salad buffet first rather than the meat)”; and “the use of anchoring expectations (e.g., announcing a longer waiting time than actually expected, so people become pleasantly surprised)”.

A framework of nudges in the design of consumer goods

Nudge transparency and consumer goods

As mentioned in the introduction, moving from a focus on governments, institutions and businesses to designers/producers of consumer goods has some implications. More specifically, in relation to consumer goods, non-transparent nudging appears to be of very narrow application, because the consumer is likely to be destined to eventually discover the nudge at some point of use, and if not, the consumer is likely to be subjected to a undesired product performance without knowing why. Among the examples of non-transparent nudges, given by Hansen and Jespersen (2013), there are no examples of consumer goods designed to, in a non-transparent manner, nudge consumers in an ethical direction. However, some products have characteristics which the consumer does not detect and which can nudge the consumer towards some kind of behaviour. One of the clearest cases may be foods which can include ingredients that dispose the consumer
nudges can be found in many forms and be rather efficient. Consumer goods seem doing kinds of nudges considered relevant to include as of present. If descriptive constitute such a significant part of nudging that such may exist. However, if this is the case, we still find it doubtful that such products can nudge ethical purposes in relation to consumer goods. Having said that, obviously, we recognize that such may exist. However, if this is the case, we still find it doubtful that such products constitute such a significant part of nudging in consumer goods that the dimension can be considered relevant to include as of present. If designers were to aim at developing these kinds of nudges, there is nothing in terms of material limitations that stand in the way of doing so. But until such development takes place, the use of nudging in relation to consumer goods seems to differ much from public policy contexts where non-transparent nudges can be found in many forms and be rather efficient.

Another possible objection to the argument of non-transparent nudges being of minor relevance in relation to consumer goods design could be that some products can nudge a user towards better behaviour because of their beauty, comfort or similar, and that this effect may not be transparent. For example, it has been shown that people experiencing rooms as beautiful, familiar or likewise (or surrounds themselves with beautiful objects) are affected in a positive way, although the persons were not necessarily aware of this connection (Mintz, 1956; Gifford, 1998). The reason that this cannot be categorized as a non-transparent nudge is that when a consumer buys beautiful furniture, it would most likely be because of reflections such as ‘this chair is beautiful, it would be nice to have’. Thus, the consumer is actually to a large extent aware of this nudge.

Although, it may not be far fetched to imagine a situation in which a designer/producer, driven by good intentions, designs a product that non-transparently nudges the consumer in an ethical direction, it may prove problematic to implement such nudges. For example, in order to minimize energy consumption in relation to a product, such as a washing machine, there are at least three principal ways of making users consume less energy: (1) drawing attention to environmental concerns; (2) making the eco-setting default, and (3) secretly redefining settings. The first strategy could be implemented by having an eco-button accompanied by illustrations that draw attention to pollution problems. This would qualify as a transparent nudge, since the purpose is to make people reflect upon environmental-friendly choices. The second strategy plays on the convenience principle, i.e. that we are more disposed to make convenient choices if we do not have clear preferences or agendas. Thus, by making the eco-button the standard choice, this may promote users to choose this setting more often. This, however, is also a transparent nudge in the same manner as the example mentioned by Hansen and Jespersen (2013) of a printer with double-sided printing default. The question would also be if this would have the desired effect unless the user would have to use significantly more effort to choose another setting. The problem with this design is, however, that it may cause users, who are not interested in using the eco-setting, to dislike the product, which in effect creates a negative publicity for the product. The third strategy is to simply call the eco-setting for ‘standard’ without informing about that this in fact is an eco-setting. The problem of this strategy is that the user most likely would realize that the washing machine’s standard setting implies slower and/or less efficient washes, as compared to other washing machines, but without being aware that this is because they are using a more environment-friendly setting. In fact, this problem illustrates a central difference between consumer goods and initiatives from policy makers, namely that in the context of consumer goods, the consumer is almost free to make alternative choices, while they only have a minor influence in relation to policy makers.

As indicated, we have not been able to identify significant non-transparent nudges with ethical purposes in relation to consumer goods. Having said that, obviously, we recognize that such may exist. However, if this is the case, we still find it doubtful that such products constitute such a significant part of nudging in consumer goods that the dimension can be considered relevant to include as of present. If designers were to aim at developing these kinds of nudges, there is nothing in terms of material limitations that stand in the way of doing so. But until such development takes place, the use of nudging in relation to consumer goods seems to differ much from public policy contexts where non-transparent nudges can be found in many forms and be rather efficient.
Decisive and non-decisive nudges

Having argued against the relevance of non-transparent nudges in relation to consumer goods, we propose to make another distinction, namely that of the nudging features of a consumer good being decisive for a purchase decision (decisive nudges) or not (non-decisive nudges). In the case of decisive nudges, the nudging feature is a major argument for the decision to buy, whereas for non-decisive nudges the decision to buy is mainly founded on other factors.

An example of a non-decisive nudge is the above-mentioned of a printer with a default of double-sided printing, which is implemented in the hope of changing the printing behaviour of the consumer. In the classification by Hansen and Jespersen (2013), this is categorized as a 'transparent type 1 nudge', where the transparency label is used because at some point it becomes evident to the user that this setting is the default, and the type 1 label is appropriate because in some parts of the process the user may print without being aware of this setting. This type of nudge can be categorized as a non-decisive nudge because it seems impossible to imagine that this feature could be a major argument (or an argument at all) for buying exactly this printer.

An example of a decisive nudge are dinner plates that are manufactured in a size smaller than the usual one in the hope that this will subconsciously trigger the user to eat less, i.e. an effect similar to the one mentioned in the Wansink (2006) studies. The big difference in this case is that in the Wansink studies the participants were not aware of eating from smaller plates, and at no point did they become aware of this. They put less on the plate and ate less without knowing it. Thus, Hansen and Jespersen (2013) categorized this as a ‘non-transparent type 1’ nudge. However, the non-transparency is lost when consumers buy smaller plates that are designed and marketed as a means to eat less. In the case of the smaller plate, it is exactly the size of the plate and the predicted effect of eating food of a smaller plate, that is the decisive reason for choosing a plate of this kind, with these particular nudging features.

Four types of ethical nudging in the design of consumer goods

By combining the distinction between decisive and non-decisive nudges with type 2 and type 1 nudges, as defined by Hansen and Jespersen (2013), four types of nudges are produced as shown in Figure 1. To make the nudge labels more explanatory, the terms ‘reflective’ and ‘non-reflective’ are used instead of ‘type 2’ and ‘type 1’, respectively.

![Diagram of Types of Nudges in Consumer Goods]

Figure 1: Types of nudges in consumer goods

The four main types of ethical nudges in the context of consumer goods can be defined as follows:
• Reflective decisive (RD) nudge: aims at influencing reflective thinking by influencing the automatic system; the nudging-features of the product are decisive for choosing the particular product.

• Reflective non-decisive (RND) nudge: aims at influencing reflective thinking by influencing the automatic system; the nudging-features of the product are not decisive for choosing the particular product.

• Non-reflective decisive (NRD) nudge: aims at influencing the behaviour maintained by automatic thinking without involving reflective thinking in part of the use process; the nudging-features of the product are decisive for choosing the particular product.

• Non-reflective non-decisive (NRND) nudge: aims at influencing the behaviour maintained by automatic thinking without involving reflective thinking in part of the use process; the nudging-features of the product are not decisive for choosing the particular product.

To further explain the nature of these four district types of nudges, subsequently examples of these nudges are provided. Table 1 provides an overview of these examples.

<table>
<thead>
<tr>
<th>Nudge type</th>
<th>Example</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>RD</td>
<td>CO2 switch</td>
<td>Make oneself use less electricity</td>
</tr>
<tr>
<td></td>
<td>Wattson clock</td>
<td>Make oneself use less electricity</td>
</tr>
<tr>
<td></td>
<td>WaterGuide</td>
<td>Make oneself use less water</td>
</tr>
<tr>
<td>RND</td>
<td>Seat belt alarm</td>
<td>Make the user use the seatbelt</td>
</tr>
<tr>
<td></td>
<td>Food with salient calorie info</td>
<td>Make the user avoid overeating</td>
</tr>
<tr>
<td></td>
<td>Smartphone with high volume warning</td>
<td>Make the user avoid hearing injury</td>
</tr>
<tr>
<td>NRD</td>
<td>Smaller plates</td>
<td>Make oneself eat less</td>
</tr>
<tr>
<td></td>
<td>Drinking glasses in particular shapes</td>
<td>Make oneself drink less alcohol</td>
</tr>
<tr>
<td></td>
<td>Cleancut dispenser</td>
<td>Make oneself use less kitchen towel</td>
</tr>
<tr>
<td>NRND</td>
<td>Printer with two-sided print def</td>
<td>Make the user use less paper</td>
</tr>
<tr>
<td></td>
<td>Computer with low power use def</td>
<td>Make the user use less energy</td>
</tr>
<tr>
<td></td>
<td>Dishwasher with eco def</td>
<td>Make the user use less energy</td>
</tr>
</tbody>
</table>

Table 1: Examples of the four types of nudging

An example of a RD nudge is the CO2 light switch sticker, from Hu2 Design, shown to the left in Figure 2. The idea of this product is that each time the light switch is used the sticker captures the attention of the user and makes him/her reflect about the CO2 emission consequences of electricity consumption. Another example of a RD nudge is the Wattson clock, from the company Energeno, shown in the middle of Figure 2. The Wattson clock initially looks just like an ordinary clock, but it comes with a clip and a transmitter which should be connected to the electricity meter of the house, so that the Wattson clock can measure the total energy expenditure of the household in real time. Besides showing the watts used, the Wattson clock can calculate the costs of running different electrical appliances. According to Jespersen (2013), developers at Energeno claim it reduces energy usage by 25%. Another example of a RD nudge is the WaterGuide, from Smile Energy, shown to the right in Figure 2. The WaterGuide should be attached to the mixer tap in the shower, and can hereafter give live feedback audibly and visually on the screen. The audio feedback makes sounds in response to water and hot water consumption, while the visual feedback consists of a lit up background in the easily recognisable traffic light colours (i.e. red, yellow and green) and animated smileys in response to consumption. According to Schmidt (2012), WaterGuide has been tested on 35 families, which resulted in a cut of 30% of the households’ water consumption.
An example of a RND nudge is a car seatbelt alarm that continuously makes noise until the seatbelt is fastened. The idea of this nudge is that the automatic system is influenced by the (annoying) alarm sound, which activates the reflective system that affects us in a way that makes us put on the seatbelt to make the sound stop; or it is seen as a reminder to the user to put it on. It should be noted, that although Hansen and Jespersen (2013) define a seatbelt alarm as a nudge, it could be debated whether its function does not makes the choice of not putting on the seatbelt appreciably more troublesome. Such discussions are, however, outside the scope of this paper. Another example of a RND nudge is saliently placed calorie information (how much does the product contain and what is the recommended daily intake) on food products, which aims to capture the attention of the consumer before using the product. For this to be a RND nudge, it should cause the user, when about to consume the food product, to become aware of the calorie information and to reflect in a manner that makes him/her eat only what is necessary. A third example of a RND nudge is the use of red colour when the volume is set too high on the volume display on a smartphone when using earphones. The red colour is associated with a warning, for which reason it automatically captures the attention of the listener, and thereby forces the user to become aware of, and thereby reflect upon, that the volume may be set too high.

An example of a NRD nudge (besides ‘reduced dinner plate size’) is specially shaped drinking glasses. According to Van Ittersum and Wansink (2005), bigger, wider and more curved drinking glasses increase the tendency to drink more, while slimmer, taller and straighter drinking glasses have the opposite effect. If a drinking glass is marketed as having this effect, and this leads to a purchase decision, it qualifies as a NRD nudge. Another example of the NRD nudge is the Cleancut Dispenser, shown in Figure 3. The Cleancut Dispenser is aimed to be able to take any brand of kitchen towel and dispenses it automatically in small strips, thereby reducing use of kitchen towels. Buying this dispenser is obviously a result of reflective behaviour, but the aim of buying the dispenser may be, besides making it easier to cut towel into smaller pieces, to make oneself use less towel without thinking about it.

An example of a NRND nudge (besides ‘default double-sided printing’) is a computer designed with a low default power setting. The power default may result in the user accepting this setting despite of being used to a more energy consuming setting. The user may without being aware of it grow accustomed to the low power setting and decide not to change it, even if eventually becoming aware that it can be changed. A similar example of a NRND nudge is a dishwasher with an eco-setting, which without hiding that it is an eco-setting presents this as a standard/default setting. Thus, in cases in which the user does not have any washing preferences, the user may choose this setting because it is the default. Since it is visible that the setting is an eco-setting, this is a transparent nudge.
Discussion

Having defined four distinct types of nudges in relation to the design of consumer goods, while recognising that these products only constitute a minor part of consumer goods, the question emerges: what are the barriers in relation to implementing such nudges? In relation to the incorporation of non-decisive nudges into consumer goods, a major challenge seems to be that the producer (unless the nudge is implemented following a public regulation) provides the consumer with some product characteristics, which the consumer in many cases did not ask for or may prefer not to have. In fact, such nudges could potentially have a detrimental effect on a great number of consumers who may choose other products as a consequence. On the other hand, companies producing products harbouring nudges may gain a reputation of being concerned about its customers and thereby attract new consumers as well as increase customer loyalty. Thus, it appears that for such nudges to gain more widespread use, products with such nudges need to be accompanied by significant marketing efforts. In relation to decisive nudges, the demand for such products seems to be a major challenge. More specifically, the relatively small availability of such products would, according to market logic, be explained by a lack of demand. Since there is a large market for products that either are good for the consumer or environment-friendly, this lack of demand appears to be related to a lack of useful products or a lack of awareness on behalf of consumers about the efficiency of such products. Thus, to promote such products, it appears that there is a need for better products and/or information about these.

However, it seems naive to believe that market mechanisms alone will pave the way for more widespread use of nudges in consumer goods. Thus, one could ask: what is the responsibility of designers? Whenever a design is implemented, it opens up certain possibilities and closes off others. How does this raise special issues, if any, regarding the ethics of design? What makes nudging unique in a design context is that nudging may both enable designers to highlight certain overall user preferred decisions opportunities, but also enables the designer to affect decisions of users or those who inhabit designed environments by bypassing the reasoning processes of users. If designers have the ability to paternalistically influence people in ways that make people make choices for themselves that are, on general accounts ‘better’ for them and better for society as a whole, than choices that may be worse, are they obliged to do so, or are they even permitted? It has to be recognised (as argued by Thaler and Sunstein) that most instances of nudging take place where a decision is already being made unconsciously. Which plates to use in a cafeteria, and how to design urinals, is a matter of choices. Some kind of plate size has to be used, and some kind of urinal design has to be used. Thus, environments and designs are already nudging us, as we speak. What we have come to realise is that we are affected in this way, all of us, and now we have a choice as to
whether we want to be ethically responsible in our designs or simply ignore the fact that people base choices in part on the basis of recognisable modalities, and ordering of objects. One could argue that because we are already being nudged in one way or another, it is not the case that by making a choice about which way to influence people we thereby undermine their autonomy any more than it is already being undermined. In cases where we are already being nudged, designers do however have ethical responsibility if they decide to incorporate nudges in their design, because they will be doing so intentionally. In certain cases where no nudging through the necessity of design is bound to take place, there will be the same ethical issue if nudging is introduced. If nudging takes place, we suggest that is in line with the preferences of users. This we take to be non-problematic, since the category non-transparent nudging seems to be so rare that users normally will be fully aware of purchasing designed goods intended at nudging them, and no one would presumably buy something that is designed for satisfying certain preferences if they did not have those preferences.

Another aspect, which needs to be considered, is that not all consumers are equally well equipped for making choices for themselves, and not everyone form their decisions based on the normal cognitive abilities. Thus, designers need to take vulnerable populations into account. For example, certain people may struggle with nudges due to limited cognitive ability, and thus transparent nudges (see for example Blumenthal-Barby and Burroughs (2012) for a related point in the context of organ donation schemes and medical treatment) may take the form of potential non-transparent nudges for someone. In these cases (as in general), designers need to consider whether a particular way of nudging may count as an instance of manipulation, perhaps as something that limits people's options of choice. Thus, when nudging by default is used, it must be fairly easy for people to opt out of the default option (Blumenthal-Barby and Burroughs (2012) make this point in the context of bio-ethics). People need to be able to recognise that they are using a designed object operating with a default option. Thaler and Sunstein are aware of this when suggesting that nudging should not burden choices (Thaler and Sunstein 2008, p. 5). However, 'burden of choice' as well as 'ease of opting out' are relative terms. If users are less educated, or illiterate or, as mentioned above, somehow impaired, what may constitute a simple procedure of change for one user, may constitute a serious challenge for another. When people are being defaulted into certain behaviour, designers need to think broadly about the consequences of doing so; both in terms of the heterogeneity of users and their abilities, but also in terms of user preferences. It is hard to imagine that every user who operates a defaulted designed object will experience that as being in line with their own reflected preferences. Thus, the idea that nudges are simply justified in virtue of being in line with user preferences can come under pressure, and a different kind of justification needs to be addressed. In the least there should be good evidence that the intended behaviour nudged for is beneficial in general. What the extent of our paternalistic responsibility should be is a further and complex issue which goes beyond the scope of this paper.

**Conclusion**

This paper has provided argumentation for why existing ways of classifying nudges are not suited when the focus is on consumer goods design in an ethical perspective — more specifically, because non-transparent nudging seems to be almost irrelevant in this context. Instead, this paper proposed a distinction of the nudging features of a product as decisive or non-decisive for a purchase decision. Employing the remaining dimension from Hansen and Jespersen (2013), the paper produced the four types of nudges: (1) reflective decisive nudges, (2) reflective non-decisive nudges, (3) non-reflective decisive nudges, and (4) non-reflective non-decisive nudges. Through 12 examples of such nudges, the paper demonstrated the relevancy of these four types of nudges, as well as the distinct difference in the nature of these.
The discussion based on the framework pointed to some of the challenges related to the different kinds of nudges, more specifically that consumers may be annoyed by non-requested nudges, while there is a lack of nudging-focused products and/or awareness about these. Furthermore, the paper argued that in relation to products that in some ways nudge us (often in relation to more consumption), designers have an obligation to consider such nudging aspects of their designs and to avoid pushing consumers in a negative direction. However, the extent of such paternalistic responsibilities needs further discussions, which are beyond the scope of this paper.

In relation to the usefulness of the proposed framework, it may aid designers and producers in making more ethical products by pointing to four distinct ways of incorporating ethical dimensions into the design of consumer goods. Furthermore, the framework may support future discussions of the use of nudging in relation to consumer goods, so that unfruitful discussions, caused by different underlying conceptions of what nudging is, can be avoided. Future research needs to explore barriers for the use of ethical nudges in relation to consumer goods, as well as continuing the discussion of the responsibility of designers’ in this context.

References


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