Sustainable left or sustainable right?

Nudging customers to choose the sustainable option in an online configurator

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Abstract

Climate change is one of the biggest challenges of our time. The need to behave more sustainably has become increasingly important. However, despite numerous attempts many people still fail to change their behaviour. Therefore, new ways must be found to increase the number of people that behave in a more sustainable manner. One way that could stimulate people to behave sustainably is by using nudges in online configurators for product customization. Based on the findings from previous research it was expected that the lateral placement (left versus right) of options in a configurator had an indirect effect via processing fluency on how often participants chose the sustainable option. Moreover, it was expected that the level of construal moderated this effect. To test this, an online experiment was conducted. The results showed that there were no significant effects of lateral placement, processing fluency and the level of construal on participants' choices. Hence, participants did not choose the sustainable option more often when this option was placed to the right (versus the left) of non-sustainable options. The level of education, product involvement and general interest in sustainability did have significant positive effects on how often the sustainable option was chosen.

Table of contents[1]

[1] Cover image: Flyalone (n.d.).

1. Introduction

Climate change is one of the biggest challenges of our time. Since the end of the nineteenth century the average global temperature has increased with 0.9 °C, the amounts of snow and ice all over the world have decreased and the sea level has risen with 19 centimetres (NASA, n.d.-a; United Nations, n.d.). Because of climate change, more and more people become victims of droughts and heat waves, tropical storms, wildfires, et cetera. In order to prevent this from happening, it is important to make sure that global warming stays within the limits of a temperature increase of 1.5 degrees Celsius (NASA, n.d.-b; NOS, 2018; United Nations, n.d.). Achieving this goal is going to be hard and it can only be achieved when people all over the world start making more sustainable choices and behave in a more sustainable manner.

People all over the world are becoming increasingly concerned about the natural environment and the climate change. Concepts like 'Think globally, act locally' encourage individuals to make decisions that address negative environmental consequences. However, despite numerous attempts from both organisations and individuals to change behaviour into more sustainable behaviour, there are still many people who fail to change even a small part of their behaviour (Arvai & Campbell-Arvai, 2012; Campbell-Arvai, Arvai, & Kalof, 2014). In order to reduce the cognitive effort that is needed when making decisions, people have developed heuristics to quickly and efficiently make a decision (Johnson et al., 2012). These can also be seen as habits that make people choose the most convenient options when making a decision. However, the most convenient options are often not the most sustainable choices. Since breaking existing habits is a hard thing to do, people could use some extra support to start exhibiting more sustainable behaviour (Holland, Aarts, & Langendam, 2006).

A solution that could tackle this problem is the use of nudges. A nudge is a small change in the presentation of different choice options. It makes the desired choice the option that is most quickly and efficiently processed. Moreover, a nudge does not forbid any other options. Therefore using a nudge makes it more likely that a person will choose the desired option (Velema, Vyth, & Steenhuis, 2017). A successful example of nudging is the use of several stickers with images of footsteps on the floor directing people towards the stairs. Many organisations want to stimulate their employees or their customers to take the stairs instead of the elevator. By using these stickers on the floor, people are more likely to follow the footsteps and take the stairs instead of using the elevator (Didenko, 2016). Nudging can also serve as a very useful tool to stimulate people to exhibit more sustainable behaviour. By changing the presentation of options in such a way that the option that is eventually chosen by

a person is the most sustainable option, nudging can facilitate sustainable behaviour (Campbell-Arvai et al., 2014).

One domain in which nudges can be used to stimulate individuals to exhibit more sustainable behaviour is in online product customization. The reason for this is twofold. First, online product customization is a strategy that integrates customers in the process of designing and producing a product. Using configurators as a tool for online product customization, customers can design their own product by choosing from a range of features, such as the size, colour and materials. Therefore configurators enable customers to let products meet their individual needs and desires (Franke & Piller, 2003). For organisations this results in a higher customer satisfaction with the organisation (Coelho & Henseler, 2012). That is why the use of configurators for product customization has become increasingly popular amongst all kinds of companies all over the world (Herrmann et al., 2011). Secondly, an important attribute of online configurators is that the underlying choice architecture can influence the decision-making process of customers (Bothos, Prost, Schrammel, Röderer, & Mentzas, 2014; Johnson et al., 2012). Hence, changing the choice architecture creates the opportunity to change the behaviour of individuals into more sustainable behaviour. In other words, by designing and incorporating small nudges in a configurator people can be guided to choose more sustainable options.

How nudges should be implemented in configurators in order to achieve more sustainable behaviour is a relatively new subject that has not received much attention in scientific research. However, building on research from other domains, it appears that the lateral placement of items can have an impact on the choice that a person makes. In other words, whether an item is placed to the left or to the right of other items can affect a person's decision. For example, Romero and Biswas (2016) demonstrated that people were more likely to choose a healthy food item when it was placed on the left side (versus the right side) of an unhealthy food item. However, when the healthy food item was placed on the right side (versus the left side) of the unhealthy food item, people were less likely to choose the healthy food item. Another research from Casasanto (2009) showed that most people tend to believe that something that is bad is placed on the left side of a continuum whereas something that is good is placed on the right side of a continuum. Because customers prefer to choose an option that is good, they are more likely to choose an option that is placed on the right side.

The question remains whether in online configurators the sustainable consumption choice should be presented on the left or on the right side of the other non-sustainable options. A theory that could provide insight into this is processing fluency. Research has shown that

people hold cognitive schemas of magnitude representation in which they organize increases in magnitude from left to right on a continuum (Chae & Hoegg, 2013; Kadosh, Brodsky, Levin, & Henik, 2008). For example, people tend to organize lower numbers (Chae & Hoegg, 2013), things that are perceived as bad (Casasanto, 2009), food items that contain less calories or that are less tasty like healthy food items (Romero & Biswas, 2016) and songs with a lower pitch distance (Kadosh et al., 2008) on the left side of a continuum. Meanwhile people tend to organize higher numbers (Chae & Hoegg, 2013), things that are perceived as good (Casasanto, 2009), food items that contain more calories and have a good taste like unhealthy food items (Romero & Biswas, 2016) and songs with a bigger pitch distance (Kadosh et al., 2008) on the right side of the continuum (Figure 1). The theory of processing fluency states that when the placement of an option is congruent with how people would mentally organize that option on a continuum, people will process information faster and thus more fluently. This results in a more favourable evaluation of the option and consequently it enhances the chance that the option is eventually chosen (Chae & Hoegg, 2013; Romero & Biswas, 2016; White, MacDonnell, & Dahl, 2011).

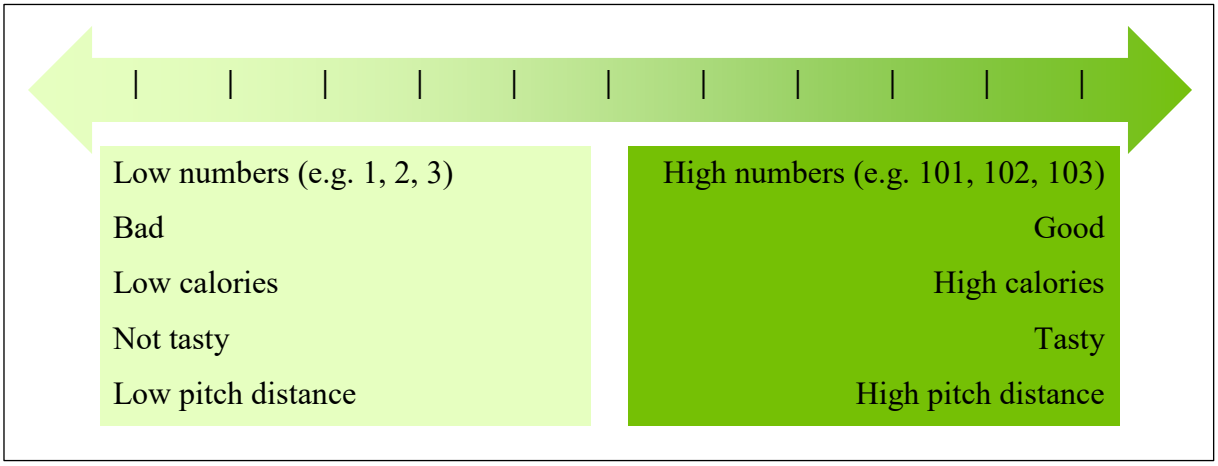

Figure 1. Illustration of how increases in magnitude are mentally organized on a continuum.

Not only processing fluency, but also the level of construal that people adopt can affect the relationship between the lateral placement of a sustainable option and the choice customers eventually make. When the perceived psychological distance between the moment of decision-making and the moment of actually using the customized product is high, people adopt a high level of construal. This causes people to think in a more abstract manner in which the long-term consequences and aspect of the product will be more salient. On the other hand, when the perceived psychological distance is low, people adopt a low level of

construal causing them to think in a more concrete manner in which the short-term consequences and aspects of the product will be more salient (Trope & Liberman, 2010). This means that which consequences and aspects of a sustainable option are more salient also depends on the level of construal that is adopted. Hence, where a sustainable option should be laterally placed in a configurator relative to other non-sustainable options may vary.

In conclusion, by laterally placing the options in a configurator in a specific manner people can be influenced to make more sustainable choices. However, how options in online configurators should be placed in order to achieve an outcome in which the sustainable option is chosen still forms a gap in scientific literature that has not yet been explored. Therefore, this research could give more insight into this. Moreover, it could also offer more fine-tuned ways not only for public policy makers, but also for managers and marketers to stimulate sustainable behaviour. Hence, the aim of this research is twofold. First the aim is to gain more insight into how a sustainable option should be laterally placed in order to nudge people to choose the most sustainable option instead of less or non-sustainable options. Secondly this research aims to gain more insight into how the level of construal and processing fluency influence this effect. This has led to the following research question:

> ‘To what extent could the lateral placement of a sustainable option in an online configurator nudge people to choose the sustainable option and what is the impact of the level of construal and processing fluency on this relationship?’

2. Theoretical background

As discussed in the previous chapter, the research question was: 'To what extent could the lateral placement of a sustainable option in an online configurator nudge people to choose the sustainable option and what is the impact of the level of construal and processing fluency on this relationship?' To provide an answer to the research question it is important to understand what the key concepts are and how they are related to each other. Therefore, this chapter gives an overview of the existing literature about these key concepts. Additionally, several hypotheses are formulated based on the theoretical findings.

2.1 Lateral placement

The choice architecture of a configurator affects the choices that customers make. By placing the different options that a configurator offers in a specific pattern organisations can influence customers' choices in such a way that the customer chooses the option that is preferred by the organisation (Bothos et al., 2014; Chae & Hoegg, 2013; Johnson et al., 2012). This fosters the idea that the choice architecture of a configurator can also nudge customers to choose the sustainable option from a group that also contains non-sustainable options. One way in which the options in a configurator can be placed in order to nudge customers to choose a specific option is by laterally placing the options (Casasanto, 2009; Romero & Biswas, 2016). The question remains how the lateral placement should look like in order to nudge people to choose a sustainable option rather than a non-sustainable option.

A theory that gives more insight into how the options that a configurator offers should be laterally placed in order to enhance the likelihood that customers choose the sustainable option is the spatial representation of magnitude. According to this theory individuals tend to mentally organize increasing magnitude of dimensions such as time, space, quantity, physical size and music pitch from left to right (Bueti & Walsh, 2009; Chae & Hoegg, 2013; Romero & Biswas, 2016). This means that people mentally place things that are considered to be longer, bigger, further, higher, faster, et cetera, to the right of things that are considered to be shorter, smaller, closer, lower and slower (Bueti & Walsh, 2009; Chae & Hoegg, 2013; Kadosh et al. 2008; Romero & Biswas, 2016). More importantly, research has also shown that people tend to mentally organize increasing magnitude of the dimension valence from left to right. This means that things that are considered as "bad" are mentally organized to the left of things that are considered as "good" (Casasanto, 2009).

Something that also explains why individuals tend to mentally organize things that are "good" on the right side has to do with linguistic and non-linguistic experiences. In the English language "right" is used in expressions that associate things that are good and lawful with rightward space, for example "the right answer", "start off on the right foot" and "the heart is in the right place". On the other hand, "left" is used in expressions like "two left feet" and "a left-handed compliment" associating things that are bad or prohibited with leftward space. This similar pattern can be found in other languages (Casasanto, 2009; Casasanto & Chrysikou, 2011). Similar associations with the words "right" and "left" can also be found in non-linguistic experiences. For example in Islamic cultures people should use their left hand for dirty tasks whereas their right hand should be used for clean and neat tasks (Casasanto, 2009) and in Western cultures it is a custom to shake a person's right hand as a way of showing sympathy.

Another theory that can give more insight into how the options in a configurator should be laterally placed is the direction of reading (and writing) in a culture. Cultures that read from left to right tend to mentally organize smaller magnitudes on the left side of space and larger magnitudes on the right side of space. On the other hand, cultures that read from right to left tend to mentally organize smaller magnitudes on the right side of space and larger magnitudes on the left side of space (Casasanto, 2009; Zebian, 2005). Contrary to the theory of spatial representation of magnitude, this theory assumes that when it comes to time and quantity the mental position of an object depends on the direction of reading and thus differs across cultures.

The body-specificity theory can also give more insight into how the options of a configurator should be laterally placed. According to this theory people whose dominant side is the right side tend to think differently about an object or interact differently with an object than people whose dominant side is the left side (Casasanto & Chrysikou, 2011). For example when an object such as a mug is placed in two different ways, namely one with the handle on the right side and one with the handle on the left side, people that are right-handed are more likely to choose the mug with the handle on the right side because that mug is easier to grab. On the other hand, people who are left-handed are more likely to choose the mug with the handle on the left side. In the context of laterally placing options this means that individuals tend to mentally organize desirable objects on their dominant side whereas they tend to mentally organize undesirable objects on their non-dominant side (Brookshire & Casasanto, 2012). Hence, individuals that are mainly right-handed tend to prefer objects that are presented on their right side. On the other hand, individuals that are mainly left-handed tent to

prefer objects that are presented on their left side (Casasanto, 2009). Because around 85% of the world population is right-handed (Goldman, 2014), it seems as if most individuals have a preference for objects presented on the right side and thus are more likely to choose an object that is presented on the right side.

2.2 Processing fluency

When the lateral placement of an option is congruent with the mental representation of that option, individuals experience more ease of information processing. In other words, the processing fluency is high. Moreover, individuals tend to evaluate objects based on the feelings that they experience when they are processing information. Information that is processed more easily will yield more positive evaluations whereas information that is processed with more difficulty will yield less positive evaluations (Chae & Hoegg, 2013; Schwarz, 2004). A positive evaluation in turn leads to a higher likelihood that a customer exhibits more favourable behaviour (Romero & Biswas, 2016; White et al., 2011). Hence, higher processing fluency will lead to a higher likelihood that a customer chooses the option that is preferred by the organisation. Based on these findings, it is argued that processing fluency mediates the relationship between the lateral placement of options in a configurator and the final choice outcome.

Although sustainable options are considered to be higher in price, they are also considered to be higher in quality (Gibbs & Hungerford, 2016) and to be better on social and environmental dimensions (Unilever, 2017) compared to non-sustainable options. Taken into account not only the theory of spatial representation of magnitude, but also linguistic and non-linguistic experiences, the fact that this research is conducted in the Netherlands where most people read from left to right, and the fact that the majority of people is right-handed, it is therefore argued that a sustainable option will most likely be mentally organized to the right of non-sustainable options. This means that the lateral placement of a sustainable option to the right of non-sustainable options will be more congruent with the mental representations that individuals hold of sustainable options and increase processing fluency. Higher processing fluency in turn will lead to a higher likelihood that the sustainable option is chosen rather than a non-sustainable option. These assumptions have led to the following hypothesis:

H1: *Laterally placing a sustainable option to the right (versus the left) of non-sustainable options results in higher processing fluency, which in turn increases the chance that the sustainable option is chosen.*

2.3 Level of construal

A high processing fluency not only depends on the lateral placement of an option, but also on the level of construal that customers adopt. According to the Construal Level Theory information can be perceived in different ways depending on whether the context of the information is construed in an abstract or in a concrete manner. However, whether the context is construed in an abstract or concrete manner is determined by the psychological distance that people experience (Trope & Liberman, 2010; Trope, Liberman, & Wakslak, 2007). This means that the subjective experience of something (e.g. an object) being close or further away from the self, here or now can affect the manner in which people think about that object (Trope & Liberman, 2010).

The Construal Level Theory distinguishes two different levels of construal, namely a low level of construal and a high level of construal. When people experience a small psychological distance, the level of construal that they adopt is low. This means that they associate information that they receive more with the present or near future rather than with a more distant future and therefore tend to think in a more concrete manner. On the other hand, when people experience a large psychological distance, the level of construal that they adopt is high. People that adopt a high level of construal associate information with the more distant future. Therefore, these people tend to think in a more abstract manner (Trope & Liberman, 2003; Trope & Liberman, 2010). Due to the level of construal that is adopted, customers also tend to weigh the different features of information that they receive differently (Fujita & Han, 2009). Whereas a low level of construal highlights the short-term consequences and benefits of the received information, a high level of construal highlights the long-term consequences and benefits of the received information (Mehta, Zhu, & Meyers-Levy, 2014; Trope & Liberman, 2010).

In their research Schill and Shaw (2016) showed that people view sustainability as something that is psychologically distant. Therefore, people perceive the distant future (or long-term) consequences and benefits of sustainability as more salient than the near future (or short-term) consequences and benefits. Moreover, Schill and Shaw (2016) found that although many people do not exhibit sustainable behaviour in the present, they do understand the importance of sustainability and believe that sustainable behaviour is desired in the future. These findings indicate that when people adopt a high level of construal, sustainability is perceived as something that is good and as something that should happen in the future. Since people tend to mentally organize things that are considered as good or related to the future on the right side of a continuum (Bueti & Walsh, 2009; Casasanto, 2009; Chae & Hoegg, 2013;

Kadosh et al. 2008; Romero & Biswas, 2016), this would implicate that when a high level of construal is adopted the sustainable options should be laterally placed to the right (versus the left) of non-sustainable options in order to increase processing fluency and to eventually increase the chance that the sustainable option is chosen.

On the other hand, research has also demonstrated that when people make a decision that affects the near future instead of the distant future, they tend to focus more on aspects that are beneficial for them in the short term (Schill & Saw, 2016; Van Dam, 2016). However, when thinking about the near future sustainability is not seen as very beneficial but rather as conflicting with the existing way of life (Van Dam, 2016). This indicates that when a low level of construal is adopted, people tend to consider sustainability more as relatively bad than as relatively good. Although this could mean that the sustainable option is probably not preferred, the chance that a sustainable option is chosen can be increased by creating a fit between the lateral placement of the option and the mental representation of that option. Hence, because things that are considered to be bad are mentally organized on the left side of a continuum (Casasanto, 2009), this would implicate that when a low level of construal is adopted the sustainable option should be placed to the left (versus the right) of non-sustainable options in order to increase processing fluency and enhance the likelihood that the sustainable option is chosen.

Based on these findings the following hypotheses were formulated:

H2a: When a low level of construal is adopted, laterally placing the sustainable option to the left of non-sustainable options enhances processing fluency, which in turn increases the likelihood that the sustainable option is chosen.

H2b: When a high level of construal is adopted, laterally placing the sustainable option to the right of non-sustainable options enhances processing fluency, which in turn increases the likelihood that the sustainable option is chosen.

2.4 The conceptual model

Figure 2 presents the conceptual model with the corresponding hypotheses as discussed in this chapter.

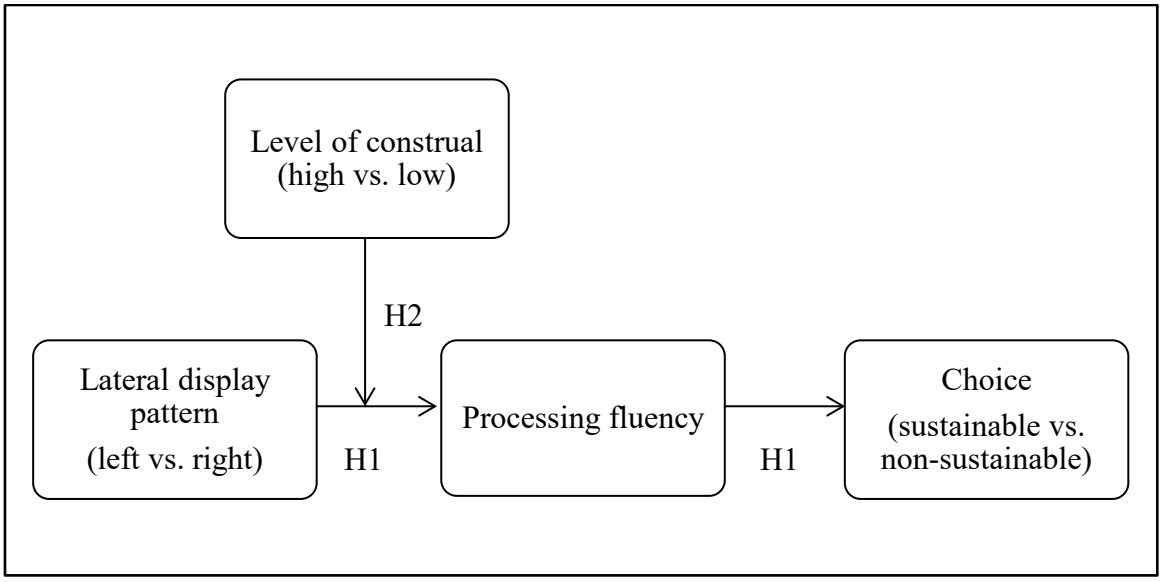

Figure 2. The conceptual model.

3. Methodology

This chapter discusses the research strategy, the design of the study, the research procedure, the sample and data collection, the construction of measurement items and the methods for data analysis. After that the research ethics will be discussed.

3.1 Research strategy

To test whether there is an indirect effect of lateral placement on choice via processing fluency and whether there is a moderating effect of the level of construal on the relationship between lateral placement and processing fluency, an experiment with a between-groups design was conducted. A reason for using an experiment was that an experiment is the most appropriate method to investigate a causal relationship because by manipulating the proposed causal variable(s) it can isolate the cause(s) and its effect(s) (Field, 2013; Field & Hole, 2002). In other words, an experiment can determine the causal effect of the manipulated independent variable(s) on the dependent variable(s). The between-groups design was chosen because it has the advantage that there is a smaller chance of practice and fatigue effects. Hence, since each participant only participates in one condition it is impossible that the performance in one condition can affect the performance in another condition within the same experiment (Field & Hole, 2002).

In this study, the independent variables 'lateral placement' and 'level of construal' were manipulated. Therefore, a 2 (sustainable left versus sustainable right) by 2 (low level of construal versus high level of construal) between-groups design was applied. Hence, as is shown in Table 1 the experiment consisted of four conditions to which the participants were assigned.

Table 1. Research design.

	Level of construal	
Lateral placement	Low construal	High construal
Sustainable left	Condition 1 Sustainable left + low construal	Condition 2 Sustainable left + high construal
Sustainable right	Condition 3 Sustainable right + low construal	Condition 4 Sustainable right + high construal

To collect data the online tool Qualtrics was used to make and distribute an online questionnaire for the experiment. The reason why an online experiment was chosen was twofold. First, with an online experiment it was possible to collect data from a large number of people. Hence, an online experiment allowed for a bigger sample that was more representative for the population as a whole (Field & Hole, 2002). This could enhance the external validity of the research (Wester, Renckstorf, & Scheepers, 2013). Secondly, this study investigated how online configurators could nudge customers to customize a product in such a way that the most sustainable product components were chosen. The most ideal option to research this would be to use an existing online configurator in order to collect data that best matches real customer behaviour. However, this option had some disadvantages. One disadvantage was that it would require collaborating with an organisation that already used an online configurator for product customization. Because the time schedule for this study was rather short, such collaboration was not possible. Another disadvantage was that using an existing online configurator would have limited the insights in the causal relationships between the variables because it was more difficult to isolate the cause(s) and its effect(s). By using a simulation of an online configurator in an online experiment it was possible to control for other variables and rule out other explanations of causal relationships.

3.2 Content description

The product that was used for the product customization in this study was a watch. Not only is a watch a product that people are familiar with, it is also a product that is very appropriate for product customization. To date there are already 24 different brands that use an online configurator to let customers customize their own watch (https://www.configurator-database.com). More importantly, many watch brands are currently engaged in sustainable initiatives that aim to make the materials and the supply chain of watches more sustainable (Bhattacharyya, 2013). Therefore, there are already many sustainable substitutes for the different components of a watch. Together these aspects made a watch an appropriate product to use in this study.

According to Huffman and Kahn (1998) customers prefer to choose an option out of a set of options with similar characteristics. Therefore it was decided to use ten different categories in which the participants had to choose one option out of a set of two or three similar options. From these ten categories, there were six used to measure the variable choice. These categories existed of one sustainable option and one or two non-sustainable options (see Table 2). The other four categories did not aim to measure the variable choice. However,

they were added to the questionnaire to make the task look more like a real configurator for product customization (see Table 3). Each option was presented with an image and a short description of what was shown on the image.

Table 2. Overview of the categories and the corresponding options that measured choice.

Category	Sustainable option	Non-sustainable option(s)
Watch strap material	Bamboo	Stainless steel, Leather
Watch case material	Bamboo	Stainless steel
Watch crystal	Bio-plastic	Mineral glass
Energy	Solar energy	Batteries
Watch box	FSC certified cardboard	Sheet metal
Delivery	Eco-friendly delivery (CO^2 neutral)	Standard delivery (3-5 working days), Express delivery (1-2 working days)

Table 3. Overview of the extra categories and options that were not used to measure choice.

Category	Options
Watch strap colour	Brown, Black, Silver
Watch case type	Round, Square
Watch case colour	Brown, Black, Silver
Watch dial	Arabic dial, Roman dial, Stick dial

Why the different options from Table 2 were chosen either as a sustainable option or as a non-sustainable option is explained in the following paragraphs.

3.2.1 Category 1: Watch strap material

For the first category of the product customization participants had to decide which material they preferred for the watch strap. The materials between which they could choose were bamboo, stainless steel and leather. Although watch brands mostly offer an even greater range of materials for the watch strap, it was decided to use a maximum of three options in this category. The reason for this was that in comparison to more options, three options can be appropriately shown on both a computer screen as a mobile phone screen without changing the lateral placement of the options.

The most common materials for watches are stainless steel and leather. Both materials are not very sustainable. Not only do the production and the recycling of steel require a large

amount of energy, the density of the material also leads to more energy consuming transportations than other materials. Additionally, to protect the steel from corrosion, toxic chemicals are often used for the coating for the material. Although many people believe that leather is a 100% natural product, this is often not the case. To prevent the leather from breaking-down and to give the leather a nice colour toxic chemicals are used to impregnate and colour the material. The use of these toxic chemicals damages the environment (Ljungberg, 2007).

To also add a sustainable option to this category, bamboo was chosen as this material is considered to be the most sustainable material for watches. Making a watch strap out of bamboo requires less energy than making a watch strap out of stainless steel. Other advantages of the use of bamboo are that less water and no chemicals are needed to make products out of bamboo, bamboo is biodegradable, and it is easily recyclable (Waite, 2009).

3.2.2 Category 2: Watch case material

The second category involved the watch case. In this category participants could choose between two materials, namely bamboo and stainless steel. The reason why only two options were given is that these materials fit with the materials of the watch strap. Because watch manufacturers do not use leather for the watch case, this option was not given in this category. The reasons why bamboo was chosen as the sustainable option and stainless steel as the non-sustainable option for the category watch case material are the same as the reasons that were given for the category watch strap material (see paragraph 3.2.1).

3.2.3 Category 3: Watch crystal

In the category watch crystal participants could choose between mineral glass and bio-plastic. Although mineral glass is more scratch resistant than bio-plastic and therefore more durable, the production requires more raw materials and more energy than the production of bio-plastic (Kale et al., 2007; Ljungberg, 2007). Bio-plastics are derived from renewable resources and therefore they can easily be recovered through organic recycling. Although it is also possible to recycle mineral glass, the recycling process of mineral glass is more difficult and requires more energy than the recycling process of bio-plastic due to higher re-melting temperatures. Moreover, for the transportation of mineral glass is generally more energy needed than for the transportation of bio-plastic since glass is heavier than bio-plastic (Ljungberg, 2007). Overall, mineral glass can be seen as more harmful to the environment

than bio-plastic. Hence, mineral glass is chosen as the non-sustainable option whereas bio-plastic is chosen as the sustainable option in the category watch crystal.

3.2.4 Category 4: Energy

There are two types of energy that are most often used to run a watch. These types of energy are batteries and solar energy. Batteries are the least sustainable option for a watch. Not only is the production of batteries very harmful to the environment because it requires a large amount of energy, they also have a very short lifecycle. Hence, to make sure that the watch keeps running many batteries are needed over the years and that damages the environment even more (Parsons, 2007). Therefore a battery is chosen as a non-sustainable option within the category energy.

A more sustainable solution for the use of batteries is solar energy. Instead of disposable batteries, the watch runs on a rechargeable battery. Contrary to normal batteries, solar energy does not require energy from fossil fuels. By using a rechargeable battery that runs on solar energy the only source left that damages the environment is the production of the battery (Parsons, 2007). Hence, solar energy is chosen as the sustainable option within the category energy.

3.2.5 Category 5: Watch box

The fifth category that was used in the configurator was the category watch box. When customers purchase a watch, the watch is packed in a special box that serves as protection for the watch. In most cases these boxes are either made of sheet metal or of FSC certified cardboard. For the production of sheet metal iron ore is needed. However, to extract iron ore a lot of energy is used that mainly comes from fossil fuels. The production of sheet metal is therefore very harmful to the environment (Ljungberg, 2007; Milieu Centraal, n.d.-a). For the production of FSC certified cardboard there is also a lot of energy needed just like a lot of water. However, the wood that is used for the production is obtained from woods that are for 100% sustainably maintained (Milieu Centraal, n.d.-b). Although both sheet metal and FSC certified cardboard can be recycled, recycling cardboard is less harmful to the environment than sheet metal. Moreover, cardboard weighs less than sheet metal meaning that the transportation of cardboard is also less damaging (Ljungberg, 2007). Hence, FSC certified cardboard is chosen as the sustainable option and sheet metal as the non-sustainable option.

3.2.6 Category 6: Delivery

The last category in the configurator contained three options, namely standard delivery, express delivery and eco-friendly delivery. Eco-friendly delivery means several things such as clustering deliveries together, waiting until the means of transport is at capacity before sending it out, or using transport that has a very small carbon footprint such as electric vehicles or bicycles (Savitsky, 2018). It can thus be stated that eco-friendly delivery is a very sustainable type of delivery. With standard delivery and express delivery the means of transport are often not appropriately full. Moreover, because with standard delivery and express delivery it is important to deliver as fast as possible, the emissions are quite high (Paazl, 2018). Hence, eco-friendly delivery is chosen as the sustainable option in the category delivery and standard delivery and express delivery are chosen as the non-sustainable options.

In this research the types of delivery were accompanied by short explanations such as "CO^2-neutral delivery" for eco-friendly delivery, "3-5 working days" for standard delivery and "1-2 working days" for express delivery. These short explanations were included in the questionnaire to assure the participants understood what was meant with each type of delivery.

3.3 Experimental design

For this study, three experiments were conducted, namely two pre-tests and the main experiment. The next paragraphs will outline these experiments. First, the two pre-tests are discussed as well as the corresponding samples, procedures, measurement items and the results. After that the sample, procedure, measurement items and the manipulation check of the main experiment are discussed.

3.3.1 Pre-test 1

The pre-test examined with an online questionnaire which options that were used for the product customization were perceived as relatively sustainable and relatively unsustainable. Furthermore, the pre-test also examined if the proposed method to manipulate the level of construal was successful. Participants could fill in the questionnaire either in Dutch or in English. To ensure that the English scales that were used to measure the variables were correctly translated to Dutch, back-translation was used. First, all scales and their corresponding items in the questionnaire were translated to Dutch by the researcher. Subsequently, another person was asked to translate the questionnaire from Dutch to English. Whenever it appeared that words that were translated from Dutch to English did not match

with the original English words, these words were changed. This was repeated until the Dutch questionnaire sufficiently matched the original English questionnaire.

3.3.1.1 Participants

For this pre-test participants were recruited via convenience sampling. This method for sampling was chosen because it allowed for an easy recruitment of participants in a short period of time. Moreover, since the pre-test neither aimed to make statements about the characteristics of the sample itself nor to be representative for a whole population a convenience sample was sufficient (Sarstedt, Bengart, Shaltoni, & Lehmann, 2017).

The participants of the pre-test were acquaintances of the researcher. They had received a short message via WhatsApp or Facebook that invited them to participate in the study. They were not given any incentive. In total 35 participants had filled in the questionnaire. However, five participants had not finished the questionnaire and needed to be deleted. Also two other participants were deleted because they had not filled in the questionnaire seriously. They had answered each question with a single letter from the alphabet or with a word that did not match with the question. Hence, in total 28 participants completed the online questionnaire. The participants had an age between 18 and 26 years old (M = 22.54; SD = 2.63). Furthermore, three participants were male (10.7%) and 25 were female (89.3%). 89.3% of the participants had a Dutch nationality whereas the other participants had a German nationality (10.7%). Most participants were students (75.0%) and had completed VWO (32.1%), a bachelor's degree (21.4%) or a master's degree (25.0%).

3.3.1.2 Procedure

Participants who joined the pre-test were randomly assigned to one out of two conditions. Each condition existed of fourteen participants. In the first condition the participants were stimulated to adopt a low level of construal, whereas in the second condition participants were stimulated to adopt a high level of construal. The experiment started with a short introduction that gave some information about the research. Additionally, the participants were informed that the questionnaire would take approximately ten minutes and that their data would be treated in a confidential and anonymous way. Besides, the participants were informed that they were allowed to refuse to participate or withdraw from participation at any moment. After that the participants had to do three task that were all preceded by a short explanation of the task itself. The first task aimed to investigate to what extent the participants believed that the shown customization options were sustainable or unsustainable. The aim of the second

task was to manipulate the level of construal that was adopted by the participants. The third and last task aimed to test if the manipulation of the adopted level of construal was successful by measuring the construal mindset of the participants. After the third task was finished the participants were asked to answer some general questions about their demographic characteristics. The experiment ended with a short note that thanked the participants for participating in the experiment.

3.3.1.3 Measurement items

For the three tasks of the pre-test, several measurements were used. These measurements are described in this paragraph.

Sustainable versus non-sustainable options. To check whether the options of the categories that were used to measure choice (see Table 2) were perceived as relatively sustainable or as relatively non-sustainable, different images with the corresponding descriptions of the options were presented to the participants. For each option the participants had to indicate on a five-point Likert scale to what extent they believed the option was sustainable (1 = very sustainable to 5 = non-sustainable).

Level of construal. In order to manipulate the adopted level of construal each participant needed to complete a task at the beginning of the experiment that was adapted from the research of Freitas, Gollwitzer and Trope (2004). Participants that were assigned to the low construal level condition were asked the following question, “How do you improve and maintain you physical health?” An example of an answer on this question could be “eating healthy”. After providing a response, participants were then asked how they would engage in the action that they had described in their answer. An example of an answer on this follow-up question could be “eating enough vegetables every day”. After providing the second answer, the participants were asked two more times to answer the follow-up question how they would engage in the previously described action. In total the participants thus needed to answer four questions. By asking these “how” questions, increasingly concrete responses were prompted triggering a more concrete way of thinking. In other words, asking the “how” question induced a low level of construal. Participants that were assigned to the high construal level condition were asked to answer the question, “Why do you improve and maintain your physical health?” An example of an answer on this question could be “to look good”. Also the participants in this condition were asked to answer three follow-up questions. However, this time the follow-up questions asked why the participant would engage in their response. Asking these “why” questions prompted increasingly abstract responses instead of

concrete responses. Hence, asking the "why" questions induced a more abstract way of thinking (in other words a high level of construal).

Construal mindset. To test whether the manipulation of the level of construal was successful, the construal mindset was measured. This was done with the Behavioural Identification Format (BIF) of Vallacher and Wegner (1987). Participants were presented with 25 items that each showed a specific behaviour. For each item participants were asked to describe the presented behaviour. They did this by choosing one out of two options that were given. One option represented a lower level of expression of thought whereas the other option represented a higher level of expression of thought. For example, the participant was asked whether he or she would describe the behaviour "eating" with either "chewing and swallowing" or "taking in food". The 25 items and their corresponding answers can be found in Appendix 1.

Demographic variables. At the end of the pre-test also some questions regarding the demographic characteristics of the participants were asked. By including these questions in the analysis, it was possible to control for the demographic characteristics. The first characteristic that was addressed was gender. Participants were asked, "What is your gender?" To answer this question participants could choose one out of the following three answers: "male", "female", "other/rather not say". The second characteristic that was addressed was age. Participants were asked, "What is your age?" after which they could fill in their age in a field that was reserved for that question. The following question addressed the characteristic nationality. Participants could answer the question, "What is your nationality?" with the option "Dutch" or with the option "other". When participants gave the answer "other" they were asked to fill in their nationality in a field that was reserved for that question. After that the participants were asked to answer the question, "What is the highest degree or level of education that you have completed?" Possible answers from which the participants could choose were: "elementary education", VMBO", "vocational education (MBO)", "HAVO", "VWO", "associate degree (HBO)", "bachelor's degree (WO)" and "master's degree (WO)" The last characteristic employment status was addressed by asking the question, "What is your current employment status?" Participants could choose one out of seven answers, namely "full-time", "part-time", "out of work and looking for work", "out of work but not looking for work", "retired", "student" and "other". Again when participants answered the question with "other" they were asked to fill in their answer in a field that was reserved for this question.

3.3.1.4 Results

Before the data could be analysed, the variables were first checked for missings. It appeared that there were no variables with missings, meaning that the dataset was accepted.

To test whether the options in the different categories that were used to measure choice were perceived as relatively sustainable or as relatively non-sustainable Paired Samples T-Tests were conducted. First, the results demonstrated that bamboo was significantly more perceived as sustainable than stainless steel, $t(27) = -3.59$, $p < .05$. Moreover, bamboo was also significantly more perceived as sustainable than leather, $t(27) = -6.77$, $p < .05$. These results indicated that in the categories watch strap material and watch case material it was appropriate to use bamboo as the sustainable option and stainless steel and leather as the non-sustainable options. Secondly, the results showed that there was no significant difference between the perceptions of bio-plastic and mineral glass, $t(27) = .00$, $p = 1.00$. Hence, this indicated that for the main experiment it was not appropriate to use the category watch crystal to measure choice. Furthermore, the results showed that solar energy was significantly more perceived as sustainable than batteries, $t(27) = -15.33$, $p < .05$ and that FSC certified cardboard was also significantly more perceived as sustainable than sheet metal $t(27) = -2.47$, $p < .05$. This meant that for the categories energy and watch box it was appropriate to use solar energy and FSC certified cardboard as the sustainable options and batteries and sheet metal as the non-sustainable options. For the last category, the results demonstrated that it was also appropriate to use eco-friendly delivery as the most sustainable option and standard delivery and express delivery as the non-sustainable option since eco-friendly delivery was significantly more perceived as sustainable than standard delivery, $t(27) = 4.46$, $p < .05$ and than express delivery, $t(27) = 11.22$, $p < .05$. The mean scores and standard deviations of each option can be found in Table 4 on the next page.

In order to check whether the manipulation of the level of construal had succeeded, first two new variables were created. The first variable that was created showed to which condition each participant was assigned. Participants that were in the low level of construal condition were coded with 0 whereas participants that were in the high level of construal condition were coded with 1. The second variable that was created calculated the sum of the scores on the 25 items of the BIF. However, before the sum of the scores could be calculated, some items first needed to be reversed in such a way that the answers of all the items were now either 0 (the low construal answer) or 1 (the high construal answer). The answers on the new variable for the sum of scores ranged from 0 to 25 with 0 indicating a preference for low-level action identification and 25 indicating a preference for high-level action identification.

Because there was now a categorically scaled independent variable and a metrically scaled dependent variable, an Independent T-Test was conducted. All the assumptions for running this test were met. First, the two conditions were independently observed, meaning that participants that were part of one condition could not be a part of the other condition. Hence, the two categories were mutually exclusive. Secondly, there were no outliers and no missings. Furthermore, the dependent variable was normally distributed ($Z_{Skewness}$ = -.29; $Z_{Kurtosiss}$ = .62). Lastly, the Levene's Test for Equality of Variances showed that there was no significant difference between the two conditions, $F(1, 26) = 1.19$, $p = .286$. This indicated that using an Independent T-Test was appropriate. The Independent T-Test showed that there was no significant effect of the level of construal on the outcome of the BIF, $t(26) = -.40$, $p = .691$. This indicated that participants in the low level of construal condition ($M = 11.93$, $SD = 5.24$) did not have a significantly lower construal mindset than the participants in the high level of construal condition ($M = 12.64$, $SD = 4.11$). Hence, the manipulation had not succeeded.

Table 4. Overview of the means and standard deviations of the different options that were included in pre-test 1.

	M	SD
Bamboo	1.89	1.39
Stainless steel	2.79	1.031
Leather	3.43	.997
Bio-plastic	2.46	1.170
Glass	2.46	.576
Solar energy	1.32	.476
Batteries	4.04	.962
FSC certified cardboard	2.71	1.049
Sheet metal	3.14	1.008
Eco-friendly delivery	2.25	1.041
Standard delivery	3.36	1.129
Express delivery	4.36	.559

A possible explanation why the manipulation had not succeeded could be that the manipulation of the level of construal only influenced the construal mindset of participants for a short amount of time. Therefore, a new manipulation check was conducted with a new variable that calculated the sum of scores on only the first eight items of the BIF. The answers

of this new variable ranged from 0 to 8 with a higher score indicating a preference for high-level action identification. The independent variable remained the same. Again, all assumptions for the Independent T-Test were met indicating that it was an appropriate method to use. The two conditions were still independently observed and there were neither outliers nor missings. The new dependent variable was normally distributed ($Z_{Skewness}$ = -.47; $Z_{Kurtosiss}$ = -.44). Moreover, the Levene's Test for Equality of Variances showed that there was again no significant difference between the two conditions, $F(1, 26) = 2.29$, $p = .143$. The results of the new Independent T-Test showed that there was no significant effect of the manipulation of the level of construal on the outcome of the BIF, $t(26) = -.47$, $p = .644$. Participants in the low level of construal condition ($M = 3.86$, $SD = 2.28$) had still no significantly lower construal mindset than participants in the high level of construal condition ($M = 4.21$, $SD = 1.72$).

In conclusion, this pre-test was only partially successful. Although it was now appropriate to use the different options for the watch customization as either a sustainable or a non-sustainable option in the main experiment, it was not appropriate to use the manipulation of the level of construal in the main experiment.

3.3.2 Pre-test 2

Because the first pre-test had demonstrated that the manipulation for the level of construal had not succeeded, a second pre-test was conducted. This pre-test examined with an online questionnaire whether a different manipulation of the level of construal worked better. The questionnaire was available in English and in Dutch. To translate the original questionnaire from English to Dutch, the same method was used as is described in paragraph 3.3.1.

3.3.2.1 Participants

For this pre-test participants were recruited via Radboud Sona Systems. Members of this system are mostly students from the Radboud University who need to earn credit points to pass certain courses of their bachelor's or master's program. As an incentive, participants received .5 credit points for participating in this study. In total 48 people participated in the online questionnaire. However, two participants were deleted because they had not finished the questionnaire. Also three other participants were deleted because they had not filled in the questionnaire seriously since they had answered every question with a single letter or with a word that did not relate to the question. Hence, in total 43 participants completed the questionnaire. The participants had an age between 18 and 25 years old ($M = 21.74$; $SD = 2.17$). Furthermore, eighteen participants were male (41.9%) and 25 were female (58.1%).

88.4% of the participants had a Dutch nationality. All other participants were German (11.6%). Moreover, all participants were students (95.3% had a bachelor's degree and 4.7% had a master's degree).

3.3.2.2 Procedure

The participants in the second pre-test were also randomly assigned to one out of two conditions. The twenty participants that were assigned to the first condition were stimulated to adopt a low level of construal. The other 23 participants were assigned to the condition in which they were stimulated to adopt a high level of construal. After a short introduction that gave a brief explanation of the research and informed the participants that their data would be treated in a confidential and anonymous way, two tasks needed to be done. Each task was also preceded by a short explanation of what needed to be done. The first task aimed to manipulate the level of construal with a new type of manipulation. The second task aimed to test if the new manipulation of the level of construal had succeeded. Subsequently, participants needed to answer some general questions about their demographic characteristics. After they had finished these general questions, the participants were thanked for participating in the experiment.

3.3.2.3 Measurement items

The measurement items that were used for the second pre-test are described below.

Level of construal. To manipulate the level of construal the participants needed to complete the Category versus Exemplar Task that was adapted from the research of Fujita, Trope, Liberman and Levin-Sagi (2006). Participants in both conditions were provided with 40 different words. Participants that were assigned to the low level of construal condition were asked to write down words that were an example of the provided words. That is, these participants were asked the following question, "An example of [provided word] is what?" This question prompted the participants to give more concrete answers. For example, one of the words with which the participants were provided was "soda". Possible answers that could be given were "Coca Cola" or "7up". Participants that were assigned to the high level of construal condition were asked to write down words that each provided word was an example of. In other words, these participants were asked to write down a category to which the provided word belonged. Therefore, these participants were asked the question, "[Provided word] is an example of?" This question prompted the participants to give more abstract answers. A possible category that could be written down for example for the word "soda"

could be “drinks”. The 40 provided words of the Category versus Exemplar Task can be found in Appendix 2.

Construal mindset. To test whether the manipulation of the level of construal had succeeded, the construal mindset was again measured with the BIF of Vallacher and Wegner (1987). An explanation of this test can be found in paragraph 3.3.1.3. The 25 items of the BIF and their corresponding answers can be found in Appendix 2.

Demographic variables. At the end of the second pre-test the same general questions as in pre-test 1 were asked. These questions addressed the demographic characteristics of the participants such as gender, age, nationality, education and employment status. The questions and their answers can be found in paragraph 3.3.1.3 and in Appendix 2.

3.3.2.4 Results

Before the data was analysed all variables were first checked for missings and outliers. Since there were no missings and no outliers, the dataset was accepted. Furthermore, some items that belonged to the BIF needed to be reversed. By reversing these items, the answers on all these items were now pointing in the same direction with the answer 0 being the low construal answer and 1 being the high construal answer.

Before it was possible to test whether the Category versus Exemplar Task had successfully manipulated the level of construal, first a new variable was created in which the participants were either coded with a 0 when they were assigned to the low level of construal condition or with a 1 when they were assigned to the high level of construal condition. This variable served as the independent variable. Subsequently, another variable was created that calculated the sum of the scores on the 25 items of the BIF. The answers on this new variable ranged from 0 to 25 with a higher score indicating a preference for high-level action identification. This variable served as the dependent variable. Because the independent variable was categorically scaled and the dependent variable metrically scaled, it was possible to conduct an Independent T-Test. All assumptions for this test were met, meaning that the two conditions were independently observed and therefore mutually exclusive, there were no outliers and missings, the dependent variable was normally distributed ($Z_{Skewness}$ = .14; $Z_{Kurtosiss}$ = -.28) and the Levene’s Test for Equality of Variances showed that there was no significant difference between the two conditions, $F(1, 41) = 3.27$, $p = .078$. In other words, it was appropriate to conduct an Independent T-Test. The results of this test showed that participants in the low level of construal condition (M = 12.40, SD = 3.20) did not have a

significantly lower construal mindset than participants in the high level of construal condition (M = 13.17, SD = 2.10), t(41) = -.948, p = .349. Hence, the manipulation had not succeeded.

Similar to pre-test 1, this pre-test also did a manipulation check with only the first eight items of the BIF of Vallacher and Wegner (1987). For the dependent variable, a new variable was created with the sum of scores on the first eight items. The answers on this new variable ranged from 0 to 8 with a higher score again indicating a preference for high-level action identification. After this was done it was tested whether it was appropriate to conduct an Independent T-Test. Again, all assumptions were met. The two conditions were still independently observed. Besides, there were still no outliers or missings. The new dependent variable was normally distributed ($Z_{Skewness}$ = -1.22; $Z_{Kurtosiss}$ = -.32). Moreover, the Levene's Test for Equality of Variances showed that there was no significant difference between the two conditions $F(1, 41) = 1.06$, $p = .309$. This time, the results of the Independent T-Test demonstrated that the manipulation of the level of construal had a significant effect on the outcome of the BIF, $t(41) = -2.35$, $p < .05$. When measuring the construal mindset with only eight items of the BIF it appeared that participants in the low level of construal condition (M = 4.10, SD = 1.59) did have a lower construal mindset than participants in the high level of construal condition (M = 5.09, SD = 1.16).

In conclusion, when only the first eight of the original 25 BIF items were used, the manipulation of the level of construal was successful. Therefore, it was decided to use the Category versus Exemplar Task of Fujita et al. (2006) to manipulate the level of construal in the main experiment. Besides, it was also decided to only use the first eight items of the BIF of Vallacher and Wegner (1987) as a manipulation check in the main experiment.

3.3.3 Main experiment

The main experiment examined with an online questionnaire what the role of the lateral placement of a sustainable option, the adopted level of construal, and processing fluency was in relation to the choices that people make when customizing a product. As was the case with pre-test 1 and pre-test 2, the questionnaire for the main experiment was available in English and in Dutch. To translate the original questionnaire from English to Dutch, the same method was used as is described in paragraph 3.3.1.

3.3.3.1 Participants

For the main experiment participants were also recruited via convenience sampling. The reason why was chosen for this type of sampling was that the period of time that was

available to conduct the experiment was rather short. Moreover, according to Hair, Black, Babin, Anderson and Tatham (2014) the recommended number of participants per condition needed to be twenty in order to maintain an adequate sample size. Hence, by using a convenience sample it was possible to not only recruit enough participants but also to do this in a rather quick and easy way (Sarstedt et al., 2017).

Three different ways were used to recruit participants. First, acquaintances of the researcher were invited via a message on Facebook or Whatsapp to fill in the online questionnaire. This group of participants did not receive an incentive. Secondly, participants were recruited via Radboud Sona Systems. Because the members of this system need to earn credit points to pass courses of their bachelor's or master's program at the Radboud University, participants received .5 credit points when they had completed the questionnaire. Lastly, more participants were recruited via the online tool SurveySwap (https://surveyswap.io). Participants that filled in the questionnaire via SurveySwap did not receive an incentive. However, by participating in studies from other people, these participants could earn points that they in turn could use on SurveySwap to let other people participate in their own studies.

Once the participants had opened the questionnaire, they were randomly assigned to one of the four conditions. There were 249 participants who had filled in the questionnaire. However, twelve participants needed to be deleted. Because one participant had not finished the questionnaire, this participant was deleted. Three other participants were deleted because they had not given serious answers. For example, one of these participants had answered the question "An example of pasta is what?" with the Dutch word "bijzonder" (in English this means special). Eight other participants were deleted because they had not completed the manipulation task correctly. Instead of giving concrete answers in the low level of construal condition and abstract answers in the high level of construal condition, these participants gave abstract answers in the low level of construal condition and concrete answers in the high level of construal condition. After deleting these participants there was a total of 237 participants left that had completed the online questionnaire. This meant that the number of participants per condition exceeded the number of twenty participants per condition as was recommended by Hair et al. (2014).

The participants of the main experiment had an age between 18 and 73 years old (M = 31.65; SD = 13.39) with the biggest group of participants having an age between the 23 and 25 years old (37.5%). Furthermore, 72 participants were male (30.4%) and 163 were female (68.8%). Only two participants (0.8%) had indicated that they had a different gender or rather

not answered the question. Most participants had a Dutch nationality (82.7%). The other participants (17.3%) had very different nationalities with German being the nationality that was answered most after Dutch. Most participants had completed an associate degree (HBO, 31.2%), a bachelor's degree (25.3%) or a master's degree (25.3%). Moreover, looking at the employment status of the participants, it appeared that most participants were still studying (49.8%), full-time employed (27.4%) or part-time employed (18.6%).

3.3.3.2 Procedure

At the beginning of the questionnaire participants were given a short introduction that informed them about the reason why the research was conducted, what was expected from them and that the questionnaire would approximately take twenty minutes. Furthermore, the introduction also informed the participants about the fact that their answers would be treated anonymously and confidentially. The participants were also told that they could refuse to participate or withdraw at any moment.

After the introduction, the participants had to do five tasks. In the first task the adopted level of construal of the participants was manipulated. Subsequently, the second task aimed to measure the actual choices that the participants made when customizing the watch. Before the participants had to make the decisions regarding which options they preferred, they were first given a short explanation of the task in which they were made aware of the fact that there were no differences between the prices of the different options and that all materials could be produced in the same range of colours. This was done to ensure that factors like personal preference for colour and price could not affect the choices of the participants. After the explanation, the participants had to answer which options they preferred in each of the ten different categories that were shown. Once the participants had chosen one option in each category, they had to start the third task. This task aimed to measure the level of processing fluency that the participants experienced. The fourth task in the experiment aimed to test if the manipulation of the adopted level of construal had been successful. This was done by measuring the construal mindset of the participants. The fifth and last task consisted of some questions addressing the control variables. After these five tasks, the participants were also asked to answer some general questions about their demographic characteristics. After the participants had finished all questions, the questionnaire was ended with a short message in which the participants were thanked for participating in the study.

3.3.3.3 Measurement items

This paragraph describes the measurements that were used in the main experiment.

Lateral placement. The lateral placement of the sustainable option (versus the non-sustainable options) was manipulated by presenting the sustainable option in each of the five categories that measured choice either to the right or to the left of the non-sustainable options.

Level of construal. To manipulate the level of construal the same measurement that was used for the second pre-test, namely the measurement of Fujita et al. (2006), was used. A description of this measurement can be found in paragraph 3.3.2.3 and in Appendix 3.

Choice. In total the participants had to choose one of the options for ten different categories of the product customization. In each of the five categories that measured choice the options that were presented consisted of one sustainable option and one or two non-sustainable options. Every time the sustainable option was chosen, the participants could receive a score of one. Because there were five categories, it was thus possible to receive a total score between 0 and 5 with the score of 0 indicating that a participant had not chosen the sustainable option in any of the categories and the score of 5 indicating that a participant had chosen the sustainable option in every category.

Processing fluency. Participants had to report how much processing fluency they experienced by finishing the following sentence: "The process of making a choice between the different options in the configurator was …". They did this by answering one item on a seven-point semantic differential (difficult to easy). This single-item measure was adopted from the research of Graf, Mayer and Landwehr (2018). They demonstrated that using a single-item measure for processing fluency is as sufficient in terms of predictive validity and reliability as using a multi-item measure (that consisted of five items). Moreover, they also showed that participants had a preference for the single-item measure and thought that the single-item measure made significantly more sense than the multi-item measure. Therefore, for this study the single-item measure was used.

Construal mindset. The construal mindset of the participants is measured in order to check whether the manipulation of the level of construal had succeeded. To measure the construal mindset eight items of the BIF of Vallacher and Wegner (1987) were used. The description of this measurement can be found in paragraph 3.3.1.3 and in Appendix 3.

Control variables. To control for other factors that might affect the relationships between the variables in this research a total of four control variables were measured. These control variables were handedness, previous experience with online customization tools, product involvement, and general interest in sustainability. To measure handedness

participants were asked to answer the question, “Are you left-handed or right-handed?” with either “left-handed” or “right-handed”. Previous experience with online customization tools was measured by asking participants, “How many times have you used an online tool for product customization?” Participants had to respond on a five-point Likert scale (1 = Very frequently, 2 = frequently, 3 = rarely, 4 = very rarely, 5 = never). To measure product involvement participants were asked to indicate their involvement with watches on four items on a five-point Likert scale (1 = strongly agree to 5 = strongly disagree). The items were, “Generally, I am very interested in watches”, “A watch is important to me”, “A watch is important in my life”, and “I am likely to buy a watch within the next six months” (Schnurr, Scholl-Grissemann, 2015). The general interest in sustainability was measured with the scale for green consumerism of Matthes and Wonneberger (2014). This scale consisted of eleven items. Although Matthes and Wonneberger used the word green for their scale, it was decided to change green into sustainable in this study. The items had to be answered on a five-point Likert Scale (1 = strongly agree to 5 = strongly disagree). One example of an item was “I am concerned about the environment”. This item and the other items that were used to measure the general interest in sustainability can be found in Appendix 3.

Demographic variables. At the end of the main experiment the same questions regarding the demographic characteristics were asked as in both pre-tests. These questions included the characteristics gender, age, nationality, educational degree and employment status. A description of the questions regarding the demographic characteristics can be found in paragraph 3.3.1.3 and in Appendix 3.

3.3.3.4 Results of the manipulation check

The manipulation check of the main experiment was similar to the manipulation checks of the two pre-tests. Hence, again a new variable was made that coded all participants with a 0 or a 1 depending on the type of manipulation for the level of construal that they were assigned to. Participants that were coded with 0 were in a low level of construal condition whereas participants that were coded with 1 were in a high level of construal condition. Also a new variable was created that calculated the sum of scores on the eight BIF-items. With these two new variables it was now possible to conduct an Independent T-Test. As was the case with the pre-tests, the two conditions that were used for the manipulation check were mutually exclusive. Also, there were no missings and no outliers. Additionally, the dependent variable was normally distributed ($Z_{Skewness}$ = -1.34, $Z_{Kurtosis}$ = -1.89). It also appeared that the two conditions did not significantly differ from each other since the Levene’s Test for Equality of

Variances was not significant $F(1, 235) = .55$, $p = .459$. In conclusion, all assumptions for the Independent T-Test were met. Therefore it was appropriate to use this method for the manipulation check. The results of the Independent T-Test showed that the manipulation of the level of construal had succeeded, $t(235) = -2.24$, $p < .05$. Participants in the low level of construal condition ($M = 4.42$, $SD = 1.88$) had a significantly lower construal mindset than participants in the high level of construal condition ($M = 4.97$, $SD = 1.94$).

3.4 Data analysis procedure

The data was analysed with the program IBM SPSS Statistics 24. Before the data could be analysed, the data was first controlled for missings, outliers and response sets. Also the distribution of the different variables was checked. To test the hypotheses a two-way Ancova was conducted. The reason that this method was chosen is that the two independent variables lateral placement and level of construal were categorical whereas the dependent variable choice was metrically scaled (Hair et al., 2014). Since the other independent variable processing fluency was also metrically scaled, this variable was added as a covariate.

3.5 Research Ethics

Prior to participation in this study participants were given information about what was expected from them. They were also informed that their answers would be used for academic purposes only as the goal of the study was to write a Master's thesis. Moreover, participants were informed that their answers would be treated confidentially and anonymously and that they could refuse to participate or withdraw from participation at any moment without a penalty. Hence, voluntary participation was ensured. Additionally, the anonymous and voluntary participation reduced the chance that participants would respond in a socially desirable way (Hair et al., 2014).

Although the participants were given a short explanation of the study, they were not fully informed about the exact goal of the study. An important reason why it was decided not to do this was that the knowledge about the goal could have altered the responses of the participants. This could have caused invalid results and conclusions. Therefore the participants were only given sufficient information about the study that was needed to fill out the questionnaire.

4. Results main experiment

As was discussed in the previous chapter, a two-way Ancova was chosen as the method to analyse the obtained data. However, before this analysis could be conducted, two new variables for lateral placement and level of construal were created. To make a new variable for lateral placement each participant was coded with a 0 when the participant was part of the sustainable left condition or with a 1 when the participant was part of the sustainable right condition. The same was done for the variable level of construal. However, here 0 indicated that the participant was part of the low level of construal condition and 1 indicated that the participant was part of the high level of construal condition.

Subsequently, a new variable for the dependent variable choice was made. This was achieved by summing up the scores of the options in the five categories that measured choice. These categories were watch strap material, watch case material, energy, watch box and delivery. Because pre-test 1 had shown that the options in the category watch crystal did not significantly differ from each other, this category was not used to make the new variable choice. For each category of choice, participants could either have a score of 1, which meant that they had chosen the sustainable option, or a score of 0, which meant that they had not chosen the sustainable option. Therefore the overall score on choice (after the scores of the five categories with sustainable and non-sustainable options were summed up) could range from 0 to 5 with 0 indicating that no sustainable options were chosen in any category and 5 indicating that in each category the sustainable option was chosen.

4.1 Checking the assumptions

After the new variables were created, it was checked whether the two-way Ancova was an appropriate method to use. The assumptions that needed to be met are discussed below.

4.1.1 Missings

The first assumption that needed to be met was the assumption that the number of missings was less than 10% of the total number of participants that had filled in the questionnaire (Hair et al., 2014). Since all participants who had not finished the questionnaire, who had not filled in the questionnaire seriously or who had not answered the questions correctly were already deleted from the dataset, there were no variables found with missings. Hence, this assumption is met.

4.1.2 Fixed effects model

There were two independent variables (lateral placement and the level of construal) that both had two conditions. Hence, there were in total four groups to which participants could be assigned. Since the online program Qualtrics randomly assigned each participant to one of these groups and since the possibility to fill in the questionnaire on the same device more than once was blocked, it was assumed that it was not possible for participants to be part of more than one group. Therefore it could be stated that the four groups were mutually exclusive. This meant that this assumption was supported.

4.1.3 Normal distribution of the metrically scaled variables

The two metrically scaled variables were processing fluency and choice. To test whether these variables were normally distributed, the skewness and kurtosis of both variables were checked. It appeared that choice was normally distributed ($Z_{Skewness}$ = .20; $Z_{Kurtosiss}$ = -.86). However, processing fluency was not normally distributed ($Z_{Skewness}$ = -5.23; $Z_{Kurtosiss}$ = 2.68). Therefore it was decided to transform this variable with the Log-transformation function. Although the new transformed variable for processing fluency was now quite symmetrical, there were still some extreme values in the tails of the distribution ($Z_{Skewness}$ = -1.02; $Z_{Kurtosiss}$ = -2.29). However, it can be assumed that the new variable is now normally distributed. Therefore this assumption was met and the transformed variable for processing fluency could be used in the two-way Ancova.

4.1.4 Equal variance across groups

A Levene's Test for Equality of Variances showed that there were no significant differences between the different groups, $F(13, 223) = 1.16$, $p = .310$. Thus, this assumption was also met.

In conclusion, the assumptions were met. This meant that the two-way Ancova was an appropriate method for the analysis of the data.

4.2 Factor analysis

Before it was possible to conduct the two-way Ancova, a factor analysis was done in order to check whether it was appropriate to form new scales with the items that measured the control variables product involvement and general interest in sustainability. The control variable product involvement was measured in the online questionnaire with four different items.

General interest in sustainability was measured with eleven items. These fifteen items were included in one factor analysis in order to enhance the convergent and discriminant validity.

The type of factor analysis that was used was common factor analysis. However, before this analysis was conducted, the assumptions for the factor analysis needed to be checked. First, the sample size was checked. According to Field (2013) the number of observations should be at least five times as big as the number of items. It appeared that the sample size was sufficiently big. Secondly, when looking at the different values for skewness and kurtosis it appeared that most items were not normally distributed. However, because there were over ten different items (fifteen in total), transforming the items that were not normally distributed could not substantially improve the distribution. Therefore it was decided that the original variables were used. Furthermore, the Bartlett's Test of Sphericity was significant ($p < .001$) and the KMO test was .877 and thus bigger than .5. In conclusion, the common factor analysis was appropriate to use.

After conducting the common factor analysis, it appeared that there were three factors with an eigenvalue above 1. Moreover, together these factors explained 67.2% of the variance. Because it was assumed that the different factors would not highly correlate with each other, orthogonal rotation was used. When checking the communalities it appeared that all communalities were above .2 and therefore sufficient. However, looking at the factor loadings it also appeared that the only item that loaded on the third factor also loaded on the first factor with a difference of less than .2 between the two factor loadings (see Table 5). This item was 'Sustainable products are good for the environment'. Therefore, this item was deleted and a new factor analysis was conducted with the fourteen items that were left.

The Bartlett's Test of Sphericity ($p < .001$) and the KMO test (which was .873 and thus bigger than .5) showed that factor analysis was again an appropriate method to use. This time the results showed that two factors had an eigenvalue above 1. Together, these factors explained 62.6% of the variance. Because again it was assumed that the two factors were not highly correlated with each other, orthogonal rotation was used. Since the correlation between the two factors was lower than .3, the orthogonal rotation was justified. When checking the communalities, it appeared that all communalities were above .2. Furthermore, all factor loadings were above .3 and there were no longer items that loaded on more than one factor (see Table 6). Therefore no other items needed to be deleted.

Table 5. Results of the first factor analysis.

	Factor 1	Factor 2	Factor 3	Communality
I am concerned about the environment	.78			.61
The condition of the environment affects the quality of my life	.63			.41
I am willing to make sacrifices to protect the environment	.75			.57
I like sustainable products	.80			.66
I feel positive towards sustainable products	.80			.74
Sustainable products are good for the environment	.45		.49	.45
I feel proud when I buy/use a sustainable product	.55			.38
I make a special effort to buy products in biodegradable packages	.71			.57
I would switch from my usual brands and buy environmentally friendly products, even if I had to give up some benefits	.80			.71
I have switched products for ecological reasons	.78			.68
When I have a choice between two equal products, I purchase the one less harmful to the environment	.69			.47
Generally, I am very interested in watches		.84		.72
A watch is important to me		.90		.84
I am likely to buy a watch within the next six months		.59		.36
A watch is important in my life		.87		.76
Eigenvalue	6.02	2.94	1.13	
Percentage of total variance	40.2	19.6	7.5	

Table 6. Results of the second factor analysis.

	Factor 1	Factor 2	Communality
I am concerned about the environment	.78		.61
The condition of the environment affects the quality of my life	.64		.41
I am willing to make sacrifices to protect the environment	.76		.58
I like sustainable products	.80		.65
I feel positive towards sustainable products	.77		.59
I feel proud when I buy/use a sustainable product	.53		.30
I make a special effort to buy products in biodegradable packages	.71		.51
I would switch from my usual brands and buy environmentally friendly products, even if I had to give up some benefits	.81		.66
I have switched products for ecological reasons	.78		.61
When I have a choice between two equal products, I purchase the one less harmful to the environment	.69		.48
Generally, I am very interested in watches		.83	.70
A watch is important to me		.90	.81
I am likely to buy a watch within the next six months		.59	.35
A watch is important in my life		.87	.76
Eigenvalue	5.82	2.94	
Percentage of total variance	41.6	21.0	

Two factors could be labelled. The first factor was labelled ‘general interest in sustainability’ because ten of the eleven items that were initially included in the questionnaire to measure this control variable loaded on this factor. The second factor was labelled ‘product involvement’ because the four items that were left were all initially included in the questionnaire to measure this control variable.

The reliability of the new scales was checked with the Cronbach’s alpha. It appeared that for product involvement Cronbach’s alpha was .88, meaning that the variable had a good

reliability. Deleting the item 'I am likely to buy a watch within the next six months' could have increased the reliability from .88 to .91. However, since this increase was smaller than .05 it was decided to keep this item in the scale.

The new variable for product involvement was created by calculating the sum of the scores on the four different items. The answers ranged from 0 to 20 with 0 indicating a low product involvement and 20 indicating a high product involvement (M = 13.41, SD = 4.09)

When looking at the reliability of the new scale for general interest in sustainability, it appeared that the Cronbach's alpha was .92. This indicated that the scale was highly reliable. Deleting items did not result in an increased Cronbach's alpha. Therefore it was decided to keep all ten items for the new scale.

Subsequently, the new variable for general interest in sustainability was made. The sum of the scores on the ten items was calculated. The scores ranged from 0 to 50 (M = 24.14, SD = 6.94). A higher score indicated a higher general interest in sustainability.

4.3 Results

A two-way Ancova was conducted using the general linear model (GLM). The independent variables lateral placement and level of construal were included as fixed factors because they were categorical. Furthermore, choice was included as the dependent variable and the transformed variable for processing fluency was included as a covariate. Because the control variables handedness and nationality were categorical, these variables where also included in the analysis as fixed factors. The other control variables (experience with configurators, gender, age, education, employment status, product involvement, and general interest in sustainability) were metrically scaled and therefore added as covariates. Since both the independent variables lateral placement and level of construal only had two categories and because also handedness and nationality only had to categories, no contrasts were used.

Table 7 shows the results of the analysis. Looking at the R squared it appeared that the total variance that was explained by the model was 33.6%. Hence, the model was a good fit. When looking at the different partial eta squared values it appeared that all values were low indicating that these variables had a low additional contribution to the model. However, there was one variable with a higher partial eta squared value, namely general interest in sustainability. This variable had a value of .245. This indicated that this variable did have a high additional contribution to the model.

Table 7. Results of the two-way Ancova with control variables.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	127.97	21	6.09	5.18	.000	.336
Intercept	13.78	1	13.78	11.70	.001	.052
Processing fluency	.02	1	.02	.01	.905	.000
Product involvement	8.49	1	8.49	7.21	.008*	.032
General interest in sustainability	82.09	1	82.09	69.73	.000**	.245
Employment status	.12	1	.12	.10	.752	.000
Education	8.10	1	8.10	6.88	.009*	.031
Age	1.13	1	1.13	.96	.328	.004
Gender	.15	1	.15	.13	.719	.001
Previous experience	1.03	1	1.03	.87	.352	.004
Level of construal	.01	1	.01	.01	.912	.000
Lateral placement	1.95	1	1.95	1.66	.199	.008
Nationality	1.30	1	1.30	.1.10	.295	.005
Handedness	.06	1	.06	.05	.821	.000
Lateral placement * Construal	.01	1	.01	.00	.950	.000
Error	253.10	215	1.18			
Total	1830.00	237				
Corrected Total	381.07	236				

Note: R Squared = .336 (Adjusted R Squared = .271).

* $p < .05$

** $p < .001$

As can be seen in Table 7, there were no significant effects of lateral placement, level of construal, processing fluency and the interaction effect of lateral placement and level of construal on choice. Hence, none of the hypotheses are supported. Also most control variables did not have a significant effect on choice. However, it appeared that education did have a significant positive influence on choice $F(1, 215) = 6.488$ $p < .05$. Furthermore, it also appeared that product involvement, $F(1, 215) = 7.21$, $p < .05$, and general interest in sustainability, $F(1, 215) = 69.73$, $p < .001$, had significant positive effects on choice. These results indicated that participants with a higher educational level ($M = 6.40$, $SD = 1.42$), participants with higher product involvement ($M = 13.41$, $SD = 4.09$) and participants with a higher general interest in sustainability ($M = 24.14$, $SD = 6.94$) were more likely to choose the sustainable option in the online configurator than participants with a lower educational level, lower product involvement or a lower general interest in sustainability.

5. Conclusion and discussion

5.1 Conclusion

This study aimed to answer the research question, 'To what extent could the lateral placement of a sustainable option in an online configurator nudge people to choose the sustainable option and what is the impact of the level of construal and processing fluency on this relationship?' In order to answer this research question three hypotheses were formulated (see Table 8) and an online experiment was conducted.

Table 8. The hypotheses.

H1	Laterally placing a sustainable option to the right (versus the left) of non-sustainable options results in higher processing fluency, which in turn increases the chance that the sustainable option is chosen.
H2a	When a low level of construal is adopted, laterally placing the sustainable option to the left of non-sustainable options enhances processing fluency, which in turn increases the likelihood that the sustainable option is chosen.
H2b	When a high level of construal is adopted, laterally placing the sustainable option to the right of non-sustainable options enhances processing fluency, which in turn increases the likelihood that the sustainable option is chosen.

The results of the main experiment showed that there was a significant effect of the manipulation task of Fujita et al. (2006) on the construal mindset of the participants. This indicated that the participants in the experiment were successfully manipulated to think either in an abstract manner or in a concrete manner.

However, the results also showed that there was no significant effect of lateral placement via processing fluency on choice. The participants did not experience more processing fluency when the sustainable option was laterally placed to the right of the non-sustainable option(s) compared to when the sustainable option was placed to the left. Furthermore, they also did not choose the sustainable option more often when this option was placed to the right of the non-sustainable option(s) than when the sustainable option was placed to the left. In short, hypothesis 1 is not supported.

The results also did not provide support for hypotheses 2a and 2b. It appeared that the moderating effect of the level of construal was not significant. This meant that placing the

sustainable option to the right for participants with a high level of construal and placing the sustainable option to the left for participants with a low level of construal did not lead to a higher processing fluency and subsequently to the sustainable options being chosen more often than when the sustainable options were placed on the other side. In other words, for both the participants with a high level of construal and the participants with a low level of construal there were no differences between the effects of the lateral placement of the sustainable option on choice.

When looking at the control variables, it appeared that there were some significant effects. The variables education, product involvement and general interest in sustainability had a positive effect on choice. It appeared that participants that were higher educated, more involved with the product or had a higher general interest in sustainability chose the sustainable options in the configurator more often.

5.2 Discussion

As this study did not provide support for any of the hypotheses, it can be concluded that the findings of this study are not in line with the previously discussed literature. Researchers like Casasanto (2009) and Romero and Biswas (2016) have shown that the lateral placement of objects can influence the choices that individuals make. Based on theories such as the mental representation of magnitude, the mental representation of valence (such as bad versus good), the direction of reading and handedness, it was argued that a sustainable option should be placed to the right for individuals who had adopted a high level of construal in order to match with the mental representation of the option (Bueti & Walsh, 2009; Casasanto, 2009; Chae & Hoegg, 2013; Kadosh et al. 2008; Romero & Biswas, 2016; Schill & Shaw, 2016). For individuals who had adopted a low level of construal it was argued that the sustainable option was placed to the left (Casasanto, 2009; Schill & Shaw, 2016; Van Dam, 2016). This would lead to higher processing fluency (Chae & Hoegg, 2013), which in turn would lead to a higher likelihood that the option was chosen (Romero & Biswas, 2016; White et al., 2011). However, contrary to the results of these studies, the present study did not find an effect of lateral placement via processing fluency on choice nor did it find a moderating effect of the level of construal on this relationship.

An explanation for the fact that processing fluency did not mediate the relationship between lateral placement and choice could be that almost all participants perceived the process of making decisions in the configurator as rather easy. When looking at the descriptive statistics of processing fluency, it appeared that 81% of all participants indicated

that choosing between the different options was either very easy or easy. Only 5.5% of the participants indicated that the decision-making process was difficult. Previous research has shown that when the lateral placement of an option and the mental representation of that option are congruent processing fluency is high (Chae & Hoegg, 2013; Schwarz, 2004). This in turn leads to a higher likelihood that favourable behaviour is exhibited (Romero & Biswas, 2016; White et al., 2011). Based on existing knowledge that people tend to believe that sustainability is desirable (and therefore good) in the future (Schill & Shaw, 2016), but conflicting with the existing way of life (and therefore bad) in the present (Van Dam, 2016), it was therefore argued that the sustainable option should be laterally placed to the right for participants with a high level of construal and to the left for participants with a low level of construal in order to achieve congruence. However, since the majority of the participants scored high on processing fluency it does not seem likely that the congruence between the lateral placement and the mental representation of options influenced processing fluency. Rather, it seems more likely that the low number of options per category in the configurator influenced participants' processing fluency. In other words, the low number of options per category could be the reason that there were no differences between the conditions when it comes to how often participants had chosen the sustainable option.

Something else that might explain why the hypotheses were not significant has to do with the fact that participants with higher product involvement and higher general interest in sustainability had chosen the sustainable options more often. People who are highly involved with a product often seek more information about the product because they want to make sure that they purchase a product with good qualities and that is durable (Bian & Moutinho, 2011). The same is true for people with a high interest in sustainability (Matthes & Wonneberger, 2014). Sustainable products are often considered to be high in quality (Gibbs & Hungerford, 2016) and better on both social and environmental dimensions (Unilever, 2017). Therefore it makes sense that the participants with high product involvement and a high general interest in sustainability chose the sustainable options regardless of the lateral placement of the options. Based on these findings, it thus seems to be that better-informed customers are less susceptible to the influence of nudges in a configurator such as the lateral placement of options.

5.3 Implications

Although the results did not provide support for any of the hypotheses, this study does have some important theoretical and managerial implications. These implications are discussed in the following paragraphs.

5.3.1 Theoretical implications

With people all over the world becoming more and more concerned about the climate change, sustainability has become an extremely popular topic. Individuals are encouraged to change their behaviour into more sustainable behaviour to reverse the negative environmental consequences of climate change (Arvai & Campbell-Arvai, 2012; Campbell-Arvai et al., 2014). In order to encourage an increasing number of individuals to behave in a sustainable manner it is important to understand the different ways in which individuals can be encouraged. Much research is already done to get more insights into the use of nudges. However, the use of nudges in online configurators to stimulate sustainable behaviour is a rather new domain in scientific research. This study has taken an important step in this direction by examining how the underlying choice architecture of online configurators can affect the decision-making process of customers. Therefore, this study contributes to the relatively scarce theoretical knowledge in this domain.

This study also contributes to research in the domain of lateral placement. Previous research that investigated lateral placement and mental representation of magnitude focused on domains such as numbers (Chae & Hoegg, 2013), healthy versus unhealthy food items (Romero & Biswas, 2016) and the perceptions of good versus bad things (Casasanto, 2009). This study, however, examined how lateral placement of sustainable options in a configurator influenced choice. That makes that this study is among the first to focus on the domain of sustainability in relation to lateral placement and mental representation of magnitude.

Furthermore, this study contributes to the current knowledge in the domain of the Construal Level Theory. This study used two different methods to manipulate the adopted level of construal of the participants. While the method of Freitas et al. (2004) that was used in the first pre-test did not succeed, the method of Fujita et al. (2006) successfully manipulated the adopted level of construal not only in the second pre-test, but also in the main experiment. This suggests that the method of Fujita et al. (2006) is a better method to use.

5.3.2 Managerial implications

Although previous research already focused on how the choice architecture of configurators can influence customers' decisions (Bothos et al., 2014; Chae & Hoegg, 2013; Johnson et al., 2012), it was not yet investigated how the choice architecture of configurators can nudge customers to choose sustainable options. This research has taken a step in extending the knowledge in this domain. However, because no significant effects were found of lateral placement, the adopted level of construal and processing fluency on choice, it is slightly difficult to make very concrete recommendations concerning the choice architecture of configurators.

Nevertheless, it is worth paying attention to the following two things. First, the fact that this research has shown that lateral placement of options in a configurator did not influence the choices that participants made, does not necessarily mean that the placements of options in general does not affect choice. This study only used either two or three different options per category for the customization of a watch. Moreover, this study only examined lateral placement of options. In order to get more insights in what type of placement of the options in a configurator works best, managers and marketers are advised to invest time and effort in investigating the effect of different types of placement through a process of trial and error.

Secondly, the results showed that there was a positive effect of general interest in sustainability on the choices of the participants. Participants who had a higher interest in sustainability were more likely to choose the sustainable options in the configurator. A possible explanation for this is that these participants had more knowledge about environmental problems and sustainable products (Matthes & Wonneberger, 2014). Hence, managers and marketers are also advised to include (more) information about the sustainable aspects of options in a configurator. By doing this, organisations can increase the number of customers that purchase products that are sustainable by enhancing customers' knowledge and interest in sustainability.

5.4 Limitations

Although this research has been carefully conducted, the results must be interpreted with caution as this research is subject to several limitations. The first limitation is that this research used an online experiment to collect data. According to Wester et al. (2013) a disadvantage of conducting an online experiment is that it is not possible to control for external factors. Because participants could fill in the questionnaire for the online experiment

whenever and wherever they wanted they could have been distracted by other factors that were not included in this research.

Another limitation is that the experiment did not use a real configurator for the customization of the watch. Instead of using an existing tool a simulation of an online configurator was used in order to control for other variables and rule out other explanations for the causal relationships. However, this also meant that the configurator that was used for the experiment did not look nor work entirely the same as a real configurator. Therefore, it could be possible that the decisions that participants made differ from decisions that they would make when using a real configurator.

Furthermore, in this research price was not included as a control variable. Participants were informed in the questionnaire that the prices of the different options in each category were the same. This was done to ensure that the choices that were made by the participants were not affected by different prices of the options. However, in real life situations price is an important factor when people are making a decision regarding a purchase. For example, in a real life situation a higher price for an option could discourage people to choose that particular option when they cannot or do not want to spend a lot of money. By not including prices for the different options in the questionnaire it could have been possible that participants made different decisions than they would have done when prices were included.

The last limitation concerns the product that was used in the experiment, namely a watch. When looking at the product involvement, it appeared that the participants in this research were in general highly involved with watches. According to Bian and Moutinho (2011) when product involvement is high, customers are more motivated and more capable to process information. This means that people that are highly involved with a product tend to think more thoroughly about all aspects of the purchase before making a decision than people that are lower involved with the product. Hence, it could be possible that using a low-involvement product in this research instead of a high-involvement product would have led to different results.

5.5 Future research

The limitations that were discussed offer some interesting avenues for future research. First, additional studies are required to examine how real online configurators (instead of a simulation of a configurator) can nudge customers to choose a sustainable option. For example, researchers could consider using an experimental design in which the configurator is not part of a questionnaire but rather part of an online shopping site. Researchers could also

consider using a configurator in which the product that is customized changes every time the participant selects a different option. These designs enhance the overall feeling of participants that the configurator is realistic and therefore cause them to behave more realistically. Hence, using a configurator that looks more realistic could lead to findings that better capture actual customer behaviour.

In addition, it could also be interesting to study the role of price. Adding prices to the options in a configurator could directly affect the choices that people make, for example because customers only have a certain amount of money to spend on a product. However, adding prices could also have an indirect effect on choice since the price of an option might also affect how customers perceive the options. For example, according to the theory of spatial representation of magnitude, customers tend to mentally organize higher prices on the right side of a continuum (Bueti & Walsh, 2009; Chae & Hoegg, 2013; Romero & Biswas, 2016). By placing an option with a higher price to the right of cheaper options in a configurator processing fluency is increased (Chae & Hoegg, 2013; Schwarz, 2004), which in turn will affect the decision that customers make (Romero & Biswas, 2016; White et al., 2011). In short, future research is required to understand the exact role of price in customers' decision processes when using an online configurator.

Another interesting avenue for future research could be to repeat this research with different products. More specifically, it could be interesting to use a low-involvement product instead of a high-involvement product. By using other (low-involvement) products, researchers can investigate whether the results of this research are generally valid or rather unique for a specific product, in this case a watch.

Besides the limitations there are also some other domains in which further research would be of great help. One of those domains is the placement of the options in a configurator. This research focused on the effect of the lateral placement (left versus right) of the options on choice. However, future research can extend this by examining the effects of placement patterns in other formats, such as vertical placement (top versus bottom) or a combination of lateral and vertical placement.

Lastly, the results of this research showed that the independent variables lateral placement, level of construal and processing fluency had a very low additional contribution to the model. This could indicate that there are other factors that affect the choices that are made in online configurators. In order to get more insight into what these other factors are, it could be useful to conduct a qualitative study that explores the underlying decision processes of customers in depth.

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Appendix 1 – Pre-test 1

(English version)

Introduction

Welcome,

My name is Laura Schaap and I am currently studying at the Radboud University Nijmegen. This questionnaire is part of my Master's thesis. Your participation in this questionnaire is very much appreciated and will help me to graduate.

The questionnaire consists of three tasks. Every task will be preceded by a brief explanation of that particular task. At the end of the questionnaire some general questions are asked. The questionnaire will take approximately 10 minutes in total.

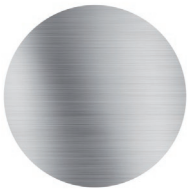
Your answers will only be used for my thesis. More importantly they will be processed anonymously and confidentially. Participation in this study is voluntary which means that you can withdraw at any time.

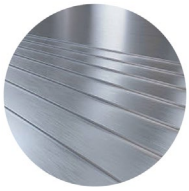
Thank you!

Laura Schaap
Student Radboud University

Part 1 – Sustainable versus non-sustainable options

In this task you will see twelve different product attributes such as materials, types of energy and types of delivery. I am interested to know whether you judge these attributes as rather sustainable or rather unsustainable. Please indicate for each individual attribute to what extent you agree with the statement.

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
 Bamboo is sustainable	O	O	O	O	O
 Leather is sustainable	O	O	O	O	O
 Stainless steel is sustainable	O	O	O	O	O
 Mineral glass is sustainable	O	O	O	O	O
 Bio-plastic is sustainable	O	O	O	O	O

 Batteries are sustainable	O	O	O	O	O
 Solar energy is sustainable	O	O	O	O	O
 Sheet metal is sustainable	O	O	O	O	O
 FSC certified cardboard is sustainable	O	O	O	O	O
 Eco-friendly delivery (CO2-neutral) is sustainable	O	O	O	O	O

O O O O O

Standard delivery (3-5 working days) is sustainable

O O O O O

Express delivery (1-2 working days) is sustainable

Part 2 – Manipulation of the level of construal

Low level of construal condition

In the next assignment I will ask you four questions about improving and maintaining your physical health. First you are asked how you would improve and maintain your physical health. After you have given an answer to this question, I will ask you a follow-up question of your given answer. This will be replicated two times. Answer the question one by one. Take your time, think about your answer, and answer the question as complete as possible.

1. How do you improve and maintain you physical health?

2. How would you engage in this action?

3. How would you engage in this action?

4. How would you engage in this action?

High level of construal condition

In the next assignment I will ask you four questions about improving and maintaining your physical health. First you are asked why you would improve and maintain your physical health. After you have given an answer to this question, I will ask you a follow-up question of your given answer. This will be replicated two times. Answer the question one by one. Take your time, think about your answer, and answer the question as complete as possible.

1. Why would you improve and maintain you physical health?

2. Why would you engage in this action?

3. Why would you engage in this action?

4. Why would you engage in this action?

Part 3 – Manipulation check

Behaviour can be interpreted in many ways. For example, writing a letter can be interpreted as "pushing keys on the key board" or "expressing thoughts". I am interested in your personal preference for identifying behaviour. In the assignment you will get a list with 25 different types of behaviours. For each behaviour you can choose between two different kinds of interpretations. For example:

Attending a course: *a. Sitting in a chair*
b. Looking at a PowerPoint

Your task is to choose the answer that describes the behaviour best. There are no right or wrong answers. I would like to know your preference. So, please choose the answer that you believe best describes the behaviour. Do not think about your answer for too long. Just follow your intuition.

1. Making a list:	a. Getting organized b. Writing things down
2.Reading:	a. Following lines of print b. Gaining knowledge
3. Joining the Army:	a. Helping the Nation's defense b. Signing up
4. Washing clothes:	a. Removing odors from clothes b. Putting clothes into the machine
5. Picking an apple:	a. Getting something to eat b. Pulling an apple off a branch
6. Chopping down a tree:	a. Wielding an axe b. Getting firewood
7. Measuring a room for carpeting:	a. Getting ready to remodel b. Using a yard stick
8. Cleaning the house:	a. Showing one's cleanliness b. Vacuuming the floor
9. Painting a room:	a. Applying brush strokes b. Making the room look fresh
10. Paying the rent:	a. Maintaining a place to live b. Writing a check
11. Caring the houseplants:	a. Watering plants b. Making the room look nice

12. Locking a door:
a. Putting a key in the lock
b. Securing the house

13. Voting:
a. Influencing the election
b. Marking a ballot

14. Climbing a tree:
a. Getting a good view
b. Holding on to branches

15. Filling out a personality test:
a. Answering questions
b. Revealing what you are like

16. Tooth brushing:
a. Preventing tooth decay
b. Moving a brush around in one's mouth

17. Taking a test:
a. Answering questions
b. Showing one's knowledge

18. Greeting someone:
a. Saying hello
b. Showing friendliness

19. Resisting temptation:
a. Saying no
b. Showing moral courage

20. Eating:
a. Getting nutrition
b. Chewing and swallowing

21. Growing a garden:
a. Planting seeds
b. Getting fresh vegetables

22. Travelling by car:
a. Following a map
b. Seeing countryside

23. Having a cavity filled:
a. Protecting your teeth
b. Going to the dentist

24. Talking to a child:
a. Teaching a child something
b. Using simple words

25. Pushing a doorbell:
a. Moving a finger
b. Seeing if someone's home

Part 4 – Demographic characteristics

This is the last part of the questionnaire. Here some general questions are asked.

What is your gender?

- Male
- Female
- Other
- Rather not say

What is your age?

What is your nationality?

- Dutch
- Other, namely:

What is the highest degree or level of education that you have completed?

- Elementary education
- VMBO
- MBO (vocational education)
- HAVO
- VWO
- Associate degree (HBO)
- Bachelor's degree (WO)
- Master's degree (WO)

What is your employment status?

- Full-time
- Part-time
- Out of work and looking for work
- Out of work but not looking for work
- Retired
- Student
- Other

End

This is the end of the questionnaire. Thank you very much for your participation.

(Dutch version)

Introductie

Welkom,

Mijn naam is Laura Schaap en ik studeer aan de Radboud Universiteit Nijmegen. Deze vragenlijst is een onderdeel van mijn Masterthesis. Je deelname aan de vragenlijst wordt erg op prijs gesteld en helpt mij met afstuderen.

De vragenlijst bestaat uit drie onderdelen. Elk onderdeel wordt voorafgegaan door een korte uitleg. Aan het eind van de vragenlijst worden nog een aantal algemene vragen gesteld. In totaal duurt de vragenlijst ongeveer 10 minuten.

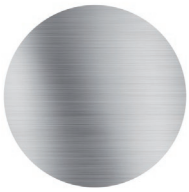
Je antwoorden zullen enkel gebruikt worden voor mijn thesis. Bovendien worden je antwoorden anoniem en in alle vertrouwen verwerkt. Deelname aan dit onderzoek is volledig vrijwillig wat betekent dat je op elke moment kunt stoppen zonder opgaaf van reden.

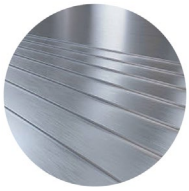
Bedankt!

Laura Schaap
Student Radboud Universiteit Nijmegen

Deel 1 – Duurzame versus niet duurzame opties

In deze taak krijg je twaalf verschillende product kenmerken te zien, zoals materialen, soorten energie en manieren van bezorging. Ik wil graag weten of jij de verschillende kenmerken beoordeelt als duurzaam of juist als niet duurzaam. Geef alsjeblieft voor elk individueel kenmerk aan in hoeverre je het eens bent met de stelling.

	Helemaal mee eens	Mee eens	Neutraal	Oneens	Helemaal oneens
 Bamboe is duurzaam	O	O	O	O	O
 Leer is duurzaam	O	O	O	O	O
 Roestvrij staal is duurzaam	O	O	O	O	O
 Mineraal glas is duurzaam	O	O	O	O	O
 Bio-plastic is duurzaam	O	O	O	O	O

 Batterijen zijn duurzaam	O	O	O	O	O
 Zonne-energie is duurzaam	O	O	O	O	O
 Blik is duurzaam	O	O	O	O	O
 FSC gecertificeerd karton is duurzaam	O	O	O	O	O
 Eco-vriendelijke bezorging (CO2-neutraal) is duurzaam	O	O	O	O	O

O	O	O	O	O

Standaard bezorging (3-5 werkdagen) is duurzaam

O	O	O	O	O

Expres bezorging (1-2 werkdagen) is duurzaam

Deel 2 – Level of construal manipulatie

Low level of construal condition

In deze taak stel ik je vier vragen over het verbeteren en onderhouden van je fysieke gezondheid. De eerste vraag heeft betrekking op hoe jij zelf je fysieke gezondheid verbetert en onderhoudt. Nadat je deze vraag hebt beantwoord volgt er een tweede vraag. Deze vraag gaat in op hoe jij het antwoord op de eerste vraag uitvoert. Dit zal daarna nog twee keer worden herhaald. Antwoord elke vraag pas nadat je de vraag erboven hebt beantwoord. Neem je tijd, denk goed na en geef een zo volledig mogelijk antwoord.

1. Hoe verbeter en onderhoud jij je fysieke gezondheid?

2. Hoe voer jij dit uit?

3. Hoe voer jij dit uit?

4. Hoe voer jij dit uit?

High level of construal condition

In deze taak stel ik je vier vragen over het verbeteren en onderhouden van je fysieke gezondheid. De eerste vraag heeft betrekking op waarom jij zelf je fysieke gezondheid verbetert en onderhoudt. Nadat je deze vraag hebt beantwoord volgt er een tweede vraag. Deze vraag gaat in op waarom jij het antwoord op de eerste vraag uitvoert. Dit zal daarna nog twee keer worden herhaald. Antwoord elke vraag pas nadat je de vraag erboven hebt beantwoord. Neem je tijd, denk goed na en geef een zo volledig mogelijk antwoord.

1. Waarom verbeter en onderhoud jij je fysieke gezondheid?

2. Waarom doe jij dit?

3. Waarom doe jij dit?

4. Waarom doe jij dit?

Deel 3 – Manipulatie check

Gedrag kan op vele manieren geïnterpreteerd worden. Bijvoorbeeld het schrijven van een brief kan geïnterpreteerd worden als “het aanraken van toetsen op je toetsenbord” of als “het uiten van gedachten”. Ik ben geïnteresseerd in jouw persoonlijke voorkeur voor het beschrijven van verschillende gedragingen. In deze taak krijg je een lijst te zien met 25 verschillende gedragingen. Bij elk gedrag kun je steeds een keuze maken uit twee verschillende beschrijvingen. Bijvoorbeeld:

Het volgen van een cursus: *a. Op een stoel zitten*
b. Naar een PowerPoint kijken

Jouw taak is om de interpretatie the kiezen die het gedrag het beste omschrijft. Er zijn geen goede of foute antwoorden. Ik wil enkel weten wat jouw mening is. Geeft dus gewoon aan

wat jij denkt dat de beste interpretatie is van het gedrag en denk vooral niet te lang na. Ga af op je gevoel.

1. Een lijstje maken:	a. Georganiseerd zijn
	b. Dingen opschrijven
2. Lezen:	a. Het volgen van geprinte regels
	b. Kennis vergaren
3. Bij het leger gaan:	a. Helpen van de nationale defensie
	b. Jezelf inschrijven
4. Kleding wassen:	a. Het verwijderen van geurtjes
	b. Kleding in de wasmachine doen
5. Een appel plukken:	a. Iets te eten pakken
	b. Een appel uit de boom pakken
6. Een boom omhakken:	a. Zwaaien met een bijl
	b. Het verkrijgen van brandhout
7. Een kamer opmeten voor tapijt:	a. Een verbouwing voorbereiden
	b. Een meetlint gebruiken
8. Het huis schoonmaken:	a. Het tonen van netheid
	b. De vloer stofzuigen
9. Een kamer schilderen:	a. Het aanbrengen van verf op de muur
	b. De kamer opfrissen
10. De huur betalen:	a. Het behouden van een woonplaats
	b. Geld overmaken
11. De planten verzorgen:	a. De planten water geven
	b. De kamer er leuk laten uitzien

12. De deur vergrendelen:
a. De sleutel in het slot doen
b. Het huis afsluiten

13. Stemmen:
a. De verkiezing beïnvloeden
b. Een rondje aankruisen

14. In een boom klimmen:
a. Een goed uitzicht krijgen
b. Jezelf vasthouden aan takken

15. Een persoonlijkheidstest doen:
a. Vragen beantwoorden
b. Ontdekken hoe je bent

16. Tandenpoetsen:
a. Tandbederf tegengaan
b. Een tandenborstel in je mond verplaatsen

17. Een toets maken:
a. Vragen beantwoorden
b. Het tonen van je kennis

18. Iemand begroeten:
a. Hallo zeggen
b. Laten zien dat je vriendelijk bent

19. Verleiding weerstaan:
a. Nee zeggen
b. Moed tonen

20. Eten:
a. Voeding binnenkrijgen
b. Kauwen en slikken

21. Een groentetuin kweken:
a. Zaadjes planten
b. Verse groentes krijgen

22. Met de auto reizen:
a. Een kaart volgen
b. De streek zien

23. Een gaatje laten vullen	a. Je tanden beschermen b. Naar de tandarts gaan
24. Tegen een kind praten	a. Een kind iets leren b. Simpele woorden gebruiken
25. Op een deurbel drukken	a. Een vinger bewegen b. Kijken of er iemand thuis is

Deel 4 – Demografische kenmerken

Dit is het laatste deel van de vragenlijst. Er worden enkel nog wat algemene vragen gesteld.

Wat is je geslacht?

- o Man
- o Vrouw
- o Anders
- o Dat zeg ik liever niet

Wat is je leeftijd?

Wat is je nationaliteit?

- o Nederlands
- o Anders, namelijk:

Wat is je hoogst behaalde opleiding?

- Basisonderwijs
- VMBO
- MBO
- HAVO
- VWO
- HBO (zowel bachelor als master)
- WO bachelor
- WO master

Wat is je huidige werksituatie?

- Fulltime
- Parttime
- Werkloos en niet op zoek naar werk
- Werkloos en op zoek naar werk
- Gepensioneerd
- Student
- Anders

Einde

Dit is het einde van de vragenlijst. Bedankt voor je deelname aan dit onderzoek.

Appendix 2 – Pre-test 2

(English version)

Introduction

Welcome,

My name is Laura Schaap and I am currently studying at the Radboud University Nijmegen. This questionnaire is part of my Master's thesis. Your participation in this questionnaire is very much appreciated and will help me to graduate.

The questionnaire consists of two tasks. Every task will be preceded by a brief explanation of that particular task. At the end of the questionnaire some general questions are asked. The questionnaire will take approximately 10 minutes in total.

Your answers will only be used for my thesis. More importantly they will be processed anonymously and confidentially. Participation in this study is voluntary which means that you can withdraw at any time.

Thank you!

Laura Schaap
Student Radboud University

Part 1 – Manipulation of the level of construal

Low level of construal condition

In this task, you will be provided with 40 words. Your task will be to write down a word that is an example of the provided word. That is, ask yourself the question, "An example of [provided word] is what?" and write down the answer you come up with. For example, if I gave you the word "dogs" you might write down "poodle" or even "Pluto" (the Disney character). Be creative, and try to think of as specific an example of the category as you can.

An example of **soda** is …
An example of **computer** is …
An example of **newspaper** is …
An example of **professor** is …
An example of **pasta** is …
An example of **book** is …
An example of **sport** is …
An example of **table** is …
An example of **shoe** is …
An example of **movie** is …
An example of **pen** is …
An example of **party leader** is …
An example of **lunch** is …
An example of **train** is …
An example of **mail** is …
An example of **actor** is …
An example of **beer** is …
An example of **phone** is …
An example of **soap** is …
An example of **fruit** is …

An example of **coin** is …
An example of **restaurant** is …
An example of **tree** is …
An example of **game** is …
An example of **painting** is …
An example of **bag** is …
An example of **water** is …
An example of **college** is …
An example of **dance** is …
An example of **candy** is …
An example of **guitar** is …
An example of **mountain** is …
An example of **poster** is …
An example of **soap opera** is …
An example of **river** is …
An example of **math** is …
An example of **king** is …
An example of **whale** is …
An example of **singer** is …
An example of **truck** is …

High level of construal condition

In this task, you will be provided with 40 words. Your task will be to write a word that you think each provided word is an example of. That is, ask yourself the question, "[Provided word] is an example of what?" and then write down the answer you come up with. For instance, if I gave you the word "poodle" you might write down "dogs" or even "animals," as a poodle is an example of a dog or animal. Be creative and come up with the most general word for which the provided word is an example.

Soda is an example of …
Computer is an example of …
Newspaper is an example of …

Coin is an example of …
Restaurant is an example of …
Tree is an example of …

Professor is an example of …
Pasta is an example of …
Book is an example of …
Sport is an example of …
Table is an example of …
Shoe is an example of …
Movie is an example of …
Pen is an example of …
Party leader is an example of …
Lunch is an example of …
Train is an example of …
Mail is an example of …
Actor is an example of …
Beer is an example of …
Phone is an example of …
Soap is an example of …
Fruit is an example of …

Game is an example of …
Painting is an example of …
Bag is an example of …
Water is an example of …
College is an example of …
Dance is an example of …
Candy is an example of …
Guitar is an example of …
Mountain is an example of …
Poster is an example of …
Soap opera is an example of …
River is an example of …
Math is an example of …
King is an example of …
Whale is an example of …
Singer is an example of …
Truck is an example of …

Part 2 – Manipulation check

Behaviour can be interpreted in many ways. For example, writing a letter can be interpreted as "pushing keys on the key board" or "expressing thoughts". I am interested in your personal preference for identifying behaviour. In the assignment you will get a list with 25 different types of behaviours. For each behaviour you can choose between two different kinds of interpretations. For example:

Attending a course: *a. Sitting in a chair*
b. Looking at a PowerPoint

Your task is to choose the answer that describes the behaviour best. There are no right or wrong answers. I would like to know your preference. So, please choose the answer that you believe best describes the behaviour. Do not think about your answer for too long. Just follow your intuition.

1. Making a list:	a. Getting organized b. Writing things down
2.Reading:	a. Following lines of print b. Gaining knowledge
3. Joining the Army:	a. Helping the Nation's defense b. Signing up
4. Washing clothes:	a. Removing odors from clothes b. Putting clothes into the machine
5. Picking an apple:	a. Getting something to eat b. Pulling an apple off a branch
6. Chopping down a tree:	a. Wielding an axe b. Getting firewood
7. Measuring a room for carpeting:	a. Getting ready to remodel b. Using a yard stick
8. Cleaning the house:	a. Showing one's cleanliness b. Vacuuming the floor
9. Painting a room:	a. Applying brush strokes b. Making the room look fresh
10. Paying the rent:	a. Maintaining a place to live b. Writing a check
11. Caring the houseplants:	a. Watering plants b. Making the room look nice

12. Locking a door:	a. Putting a key in the lock b. Securing the house
13. Voting:	a. Influencing the election b. Marking a ballot
14. Climbing a tree:	a. Getting a good view b. Holding on to branches
15. Filling out a personality test:	a. Answering questions b. Revealing what you are like
16. Tooth brushing:	a. Preventing tooth decay b. Moving a brush around in one's mouth
17. Taking a test:	a. Answering questions b. Showing one's knowledge
18. Greeting someone:	a. Saying hello b. Showing friendliness
19. Resisting temptation:	a. Saying no b. Showing moral courage
20. Eating:	a. Getting nutrition b. Chewing and swallowing
21. Growing a garden:	a. Planting seeds b. Getting fresh vegetables
22. Travelling by car:	a. Following a map b. Seeing countryside

23. Having a cavity filled:	a. Protecting your teeth
	b. Going to the dentist
24. Talking to a child:	a. Teaching a child something
	b. Using simple words
25. Pushing a doorbell:	a. Moving a finger
	b. Seeing if someone's home

Part 3 – Demographic characteristics

This is the last part of the questionnaire. Here some general questions are asked.

What is your gender?

- Male
- Female
- Other
- Rather not say

What is your age?

What is your nationality?

- Dutch
- Other, namely:

What is the highest degree or level of education that you have completed?

- Elementary education
- VMBO
- MBO (vocational education)
- HAVO
- VWO
- Associate degree (HBO)
- Bachelor's degree (WO)
- Master's degree (WO)

What is your employment status?

- Full-time
- Part-time
- Out of work and looking for work
- Out of work but not looking for work
- Retired
- Student
- Other

End

This is the end of the questionnaire. Thank you very much for your participation.

(Dutch version)

Introductie

Welkom,

Mijn naam is Laura Schaap en ik studeer aan de Radboud Universiteit Nijmegen. Deze vragenlijst is een onderdeel van mijn Masterthesis. Je deelname aan de vragenlijst wordt erg op prijs gesteld en helpt mij met afstuderen.

De vragenlijst bestaat uit twee onderdelen. Elk onderdeel wordt voorafgegaan door een korte uitleg. Aan het eind van de vragenlijst worden nog een aantal algemene vragen gesteld. In totaal duurt de vragenlijst ongeveer 10 minuten.

Je antwoorden zullen enkel gebruikt worden voor mijn thesis. Bovendien worden je antwoorden anoniem en in alle vertrouwen verwerkt. Deelname aan dit onderzoek is volledig vrijwillig wat betekent dat je op elke moment kunt stoppen zonder opgaaf van reden.

Bedankt!

Laura Schaap
Student Radboud Universiteit Nijmegen

Deel 1 – Level of construal manipulatie

Low level of construal condition

In dit onderdeel zullen er 40 woorden worden getoond. Het is jouw taak om voor elk woord een ander woord op te schrijven dat dient als een voorbeeld. Stel jezelf de vraag "Een voorbeeld van [woord] is wat?" en schrijf het antwoord op dat in je opkomt. Bijvoorbeeld, als ik je het woord "hond" geef, kun je antwoorden met "poedel" of zelfs met "Pluto" (het Disney personage). Wees creatief en probeer voor elk woord een zo specifiek mogelijk voorbeeld te geven.

Een voorbeeld van **frisdrank** is ...
Een voorbeeld van een **computer** is ...
Een voorbeeld van een **krant** is ...
Een voorbeeld van een **professor** is ...
Een voorbeeld van **pasta** is ...
Een voorbeeld van een **boek** is ...
Een voorbeeld van een **sport** is ...
Een voorbeeld van een **tafel** is ...
Een voorbeeld van een **schoen** is ...
Een voorbeeld van een **film** is …
Een voorbeeld van een **pen** is ...
Een voorbeeld van een **partijleider** is ...
Een voorbeeld van **lunch** is ...
Een voorbeeld van een **trein** is ...
Een voorbeeld van **post** is …
Een voorbeeld van een **acteur** is ...
Een voorbeeld van **bier** is ...
Een voorbeeld van een **telefoon** is ...
Een voorbeeld van **zeep** is ...
Een voorbeeld van **fruit** is ...

Een voorbeeld van een **munt** is ...
Een voorbeeld van een **restaurant** is ...
Een voorbeeld van een **boom** is ...
Een voorbeeld van een **spel** is ...
Een voorbeeld van een **schilderij** is ...
Een voorbeeld van een **tas** is ...
Een voorbeeld van **water** is ...
Een voorbeeld van een **universiteit** is ...
Een voorbeeld van een **dans** is ...
Een voorbeeld van **snoep** is ...
Een voorbeeld van een **gitaar** is ...
Een voorbeeld van een **berg** is ...
Een voorbeeld van een **poster** is ...
Een voorbeeld van een **soap serie** is ...
Een voorbeeld van een **rivier** is ...
Een voorbeeld van **wiskunde** is ...
Een voorbeeld van een **koning** is ...
Een voorbeeld van een **walvis** is ...
Een voorbeeld van een **zanger** is ...
Een voorbeeld van een **vrachtwagen** is ...

High level of construal condition

In dit onderdeel zullen er 40 woorden worden getoond. Het is jouw taak om een woord op te schrijven waarvan jij denkt dat het getoonde woord een voorbeeld is. Stel jezelf de vraag "[Woord] is een voorbeeld van?" en schrijf het antwoord op dat in je opkomt. Bijvoorbeeld, als ik je het woord "poedel" geef, kun je antwoorden met "honden" of zelfs met "dieren" aangezien een poedel zowel een voorbeeld is van een hond als van een dier. Wees creatief en probeer een zo algemeen mogelijk antwoord te geven waarvan het getoonde woord een voorbeeld is.

Frisdrank is een voorbeeld van ...
Computer is een voorbeeld van ...
Krant is een voorbeeld van ...
Professor is een voorbeeld van ...
Pasta is een voorbeeld van ...
B**oek** is een voorbeeld van ...
Sport is een voorbeeld van ...
Tafel is een voorbeeld van ...
Schoen is een voorbeeld van ...
Film is een voorbeeld van ...
Pen is een voorbeeld van ...
Partijleider is een voorbeeld van ...
Lunch is een voorbeeld van ...
Trein is een voorbeeld van ...
Post is een voorbeeld van …
Acteur is een voorbeeld van ...
Bier is een voorbeeld van ...
Telefoon is een voorbeeld van ...
Zeep is een voorbeeld van ...
Fruit is een voorbeeld van ...

Munt is een voorbeeld van ...
Restaurant is een voorbeeld van ...
Boom is een voorbeeld van ...
Spel is een voorbeeld van ...
Schilderij is een voorbeeld van ...
Tas is een voorbeeld van ...
Water is een voorbeeld van ...
Universiteit is een voorbeeld van ...
Dans is een voorbeeld van ...
Snoep is een voorbeeld van ...
Gitaar is een voorbeeld van ...
Berg is een voorbeeld van ...
Poster is een voorbeeld van ...
Soap serie is een voorbeeld van ...
Rivier is een voorbeeld van ...
Wiskunde is een voorbeeld van ...
Koning is een voorbeeld van ...
Walvis is een voorbeeld van ...
Zanger is een voorbeeld van ...
Vrachtwagen is een voorbeeld van ...

Deel 2 – Manipulatie check

Gedrag kan op vele manieren geïnterpreteerd worden. Bijvoorbeeld het schrijven van een brief kan geïnterpreteerd worden als “het aanraken van toetsen op je toetsenbord” of als “het uiten van gedachten”. Ik ben geïnteresseerd in jouw persoonlijke voorkeur voor het beschrijven van verschillende gedragingen. In deze taak krijg je een lijst te zien met 25 verschillende gedragingen. Bij elk gedrag kun je steeds een keuze maken uit twee verschillende beschrijvingen. Bijvoorbeeld:

Het volgen van een cursus: *a. Op een stoel zitten*
b. Naar een PowerPoint kijken

Jouw taak is om de interpretatie the kiezen die het gedrag het beste omschrijft. Er zijn geen goede of foute antwoorden. Ik wil enkel weten wat jouw mening is. Geeft dus gewoon aan wat jij denkt dat de beste interpretatie is van het gedrag en denk vooral niet te lang na. Ga af op je gevoel.

1. Een lijstje maken:	a. Georganiseerd zijn b. Dingen opschrijven
2. Lezen:	a. Het volgen van geprinte regels b. Kennis vergaren
3. Bij het leger gaan:	a. Helpen van de nationale defensie b. Jezelf inschrijven
4. Kleding wassen:	a. Het verwijderen van geurtjes b. Kleding in de wasmachine doen
5. Een appel plukken:	a. Iets te eten pakken b. Een appel uit de boom pakken
6. Een boom omhakken:	a. Zwaaien met een bijl b. Het verkrijgen van brandhout
7. Een kamer opmeten voor tapijt:	a. Een verbouwing voorbereiden b. Een meetlint gebruiken
8. Het huis schoonmaken:	a. Het tonen van netheid b. De vloer stofzuigen
9. Een kamer schilderen:	a. Het aanbrengen van verf op de muur b. De kamer opfrissen
10. De huur betalen:	a. Het behouden van een woonplaats b. Geld overmaken

11. De planten verzorgen:	a. De planten water geven
	b. De kamer er leuk laten uitzien
12. De deur vergrendelen:	a. De sleutel in het slot doen
	b. Het huis afsluiten
13. Stemmen:	a. De verkiezing beïnvloeden
	b. Een rondje aankruisen
14. In een boom klimmen:	a. Een goed uitzicht krijgen
	b. Jezelf vasthouden aan takken
15. Een persoonlijkheidstest doen:	a. Vragen beantwoorden
	b. Ontdekken hoe je bent
16. Tandenpoetsen:	a. Tandbederf tegengaan
	b. Een tandenborstel in je mond verplaatsen
17. Een toets maken:	a. Vragen beantwoorden
	b. Het tonen van je kennis
18. Iemand begroeten:	a. Hallo zeggen
	b. Laten zien dat je vriendelijk bent
19. Verleiding weerstaan:	a. Nee zeggen
	b. Moed tonen
20. Eten:	a. Voeding binnenkrijgen
	b. Kauwen en slikken
21. Een groentetuin kweken:	a. Zaadjes planten
	b. Verse groentes krijgen

22. Met de auto reizen:	a. Een kaart volgen b. De streek zien
23. Een gaatje laten vullen	a. Je tanden beschermen b. Naar de tandarts gaan
24. Tegen een kind praten	a. Een kind iets leren b. Simpele woorden gebruiken
25. Op een deurbel drukken	a. Een vinger bewegen b. Kijken of er iemand thuis is

Deel 3 – Demografische kenmerken

Dit is het laatste deel van de vragenlijst. Er worden enkel nog wat algemene vragen gesteld.

Wat is je geslacht?

- Man
- Vrouw
- Anders
- Dat zeg ik liever niet

Wat is je leeftijd?

Wat is je nationaliteit?

- Nederlands
- Anders, namelijk:

Wat is je hoogst behaalde opleiding?

- Basisonderwijs
- VMBO
- MBO
- HAVO
- VWO
- HBO (zowel bachelor als master)
- WO bachelor
- WO master

Wat is je huidige werksituatie?

- Fulltime
- Parttime
- Werkloos en niet op zoek naar werk
- Werkloos en op zoek naar werk
- Gepensioneerd
- Student
- Anders

Einde

Dit is het einde van de vragenlijst. Bedankt voor je deelname aan dit onderzoek.

Appendix 3 – Main experiment

(English version)

Introduction

Welcome,

My name is Laura Schaap and I am currently studying at the Radboud University Nijmegen. This questionnaire is part of my Master's thesis. Your participation in this questionnaire is very much appreciated and will help me to graduate.

The questionnaire consists of several tasks. Every task will be preceded by a brief explanation of that particular task. At the end of the questionnaire some general questions are asked. The questionnaire will take approximately 20 minutes in total.

Your answers will only be used for my thesis. More importantly they will be processed anonymously and confidentially. Participation in this study is voluntary which means that you can withdraw at any time.

Thank you!

Laura Schaap
Student Radboud University

Part 1 – Manipulation of the level of construal

Low level of construal condition

In this task, you will be provided with 40 words. Your task will be to write down a word that is an example of the provided word. That is, ask yourself the question, "An example of [provided word] is what?" and write down the answer you come up with. For example, if I gave you the word "dogs" you might write down "poodle" or even "Pluto" (the Disney character). Be creative, and try to think of as specific an example of the category as you can.

An example of **soda** is …
An example of **computer** is …
An example of **newspaper** is …
An example of **professor** is …
An example of **pasta** is …
An example of **book** is …
An example of **sport** is …
An example of **table** is …
An example of **shoe** is …
An example of **movie** is …
An example of **pen** is …
An example of **party leader** is …
An example of **lunch** is …
An example of **train** is …
An example of **mail** is …
An example of **actor** is …
An example of **beer** is …
An example of **phone** is …
An example of **soap** is …
An example of **fruit** is …

An example of **coin** is …
An example of **restaurant** is …
An example of **tree** is …
An example of **game** is …
An example of **painting** is …
An example of **bag** is …
An example of **water** is …
An example of **college** is …
An example of **dance** is …
An example of **candy** is …
An example of **guitar** is …
An example of **mountain** is …
An example of **poster** is …
An example of **soap opera** is …
An example of **river** is …
An example of **math** is …
An example of **king** is …
An example of **whale** is …
An example of **singer** is …
An example of **truck** is …

High level of construal condition

In this task, you will be provided with 40 words. Your task will be to write a word that you think each provided word is an example of. That is, ask yourself the question, "[Provided word] is an example of what?" and then write down the answer you come up with. For instance, if I gave you the word "poodle" you might write down "dogs" or even "animals," as a poodle is an example of a dog or animal. Be creative and come up with the most general word for which the provided word is an example.

Soda is an example of …
Computer is an example of …
Newspaper is an example of …

Coin is an example of …
Restaurant is an example of …
Tree is an example of …

Professor is an example of …
Pasta is an example of …
Book is an example of …
Sport is an example of …
Table is an example of …
Shoe is an example of …
Movie is an example of …
Pen is an example of …
Party leader is an example of …
Lunch is an example of …
Train is an example of …
Mail is an example of …
Actor is an example of …
Beer is an example of …
Phone is an example of …
Soap is an example of …
Fruit is an example of …

Game is an example of …
Painting is an example of …
Bag is an example of …
Water is an example of …
College is an example of …
Dance is an example of …
Candy is an example of …
Guitar is an example of …
Mountain is an example of …
Poster is an example of …
Soap opera is an example of …
River is an example of …
Math is an example of …
King is an example of …
Whale is an example of …
Singer is an example of …
Truck is an example of …

Part 2 – Lateral placement and choice

Sustainable option left

In this task you are going to customize your own watch. There are five categories from which you can choose your preferred option out of a selection of two or three options. When making a choice, keep in mind that the price of each option within a category is the same. Also keep in mind that all materials can be made in the same range of colors.

Category 1: Watch strap material

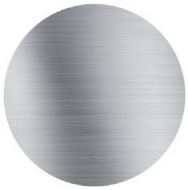
What type of material do you prefer for the strap of the watch?

Bamboo

O

Leather

O



Stainless steel

O

Category 2: Watch strap colour

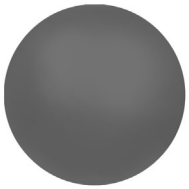
What colour do you prefer for the strap of the watch?

Brown

O

Black

O



Silver

O

Category 3: Watch case

What type of case do you prefer for the watch?

Round

O

Square

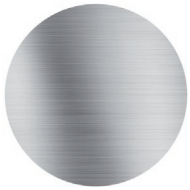
O

Category 4: Watch case material

What type of material do you prefer for the case of the watch?

Bamboo

O



Stainless steel

O

Category 5: Watch case colour

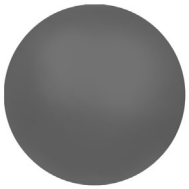
What colour do you prefer for the case of the watch?

Brown

O

Black

O



Silver

O

Category 6: Watch dial

What type of dial do you prefer for the watch?

Arabic dial

O

Roman dial

O

Stick dial

O

Category 7: Watch crystal

What type of material do you prefer for the crystal of the watch?

Bio-plastic

O

Mineral glass

O

Category 8: Energy

What type of energy do you prefer for the watch?

Solar energy

O

Batteries

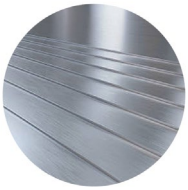
O

Category 9: Watch box

What type of material do you prefer for the box that holds the watch?

FSC certified cardboard

O



Sheet metal

O

Category 10: Delivery

What type delivery do you prefer for the watch?

Eco-friendly delivery (CO2-neutral)

O

Standard delivery (3-5 working days)

O

Express delivery (1-2 working days)

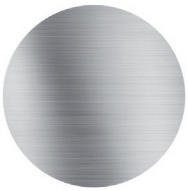
O

Sustainable option right

In this task you are going to customize your own watch. There are five categories from which you can choose your preferred option out of a selection of two or three options. When making a choice, keep in mind that the price of each option within a category is the same. Also keep in mind that all materials can be made in the same range of colors.

Category 1: Watch strap material

What type of material do you prefer for the strap of the watch?



Stainless steel

O

Leather

O

Bamboo

O

Category 2: Watch strap colour

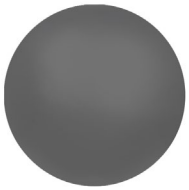
What colour do you prefer for the strap of the watch?

Brown

O

Black

O



Silver

O

Category 3: Watch case

What type of case do you prefer for the watch?

Round

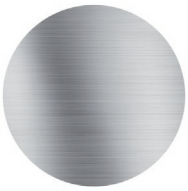
O

Square

O

Category 4: Watch case material

What type of material do you prefer for the case of the watch?



Stainless steel

O

Bamboo

O

Category 5: Watch case colour

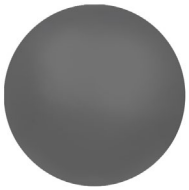
What colour do you prefer for the case of the watch?

Brown

O

Black

O



Silver

O

Category 6: Watch dial

What type of dial do you prefer for the watch?

Arabic dial

O

Roman dial

O

Stick dial

O

Category 7: Watch crystal

What type of material do you prefer for the crystal of the watch?

Mineral glass

O

Bio-plastic

O

Category 8: Energy

What type of energy do you prefer for the watch?

Battery

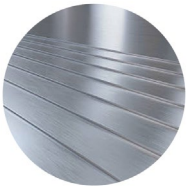
O

Solar energy

O

Category 9: Watch box

What type of material do you prefer for the box that holds the watch?



Sheet metal

O

FSC certified cardboard

O

Category 10: Delivery

What type delivery do you prefer for the watch?

Express delivery (1-2 working days)

O

Standard delivery (3-5 working days)

O

Eco-friendly delivery (CO2-neutral)

O

Part 3 – Processing fluency

Please answer the following question.

The process of making a choice between the different options in the configurator was …:

Difficult 1 2 3 4 5 Easy

Part 4 – Manipulation check

Behaviour can be interpreted in many ways. For example, writing a letter can be interpreted as "pushing keys on the key board" or "expressing thoughts". I am interested in your personal preference for identifying behaviour. In the assignment you will get a list with 25 different types of behaviours. For each behaviour you can choose between two different kinds of interpretations. For example:

Attending a course: *a. Sitting in a chair*
b. Looking at a PowerPoint

Your task is to choose the answer that describes the behaviour best. There are no right or wrong answers. I would like to know your preference. So, please choose the answer that you believe best describes the behaviour. Do not think about your answer for too long. Just follow your intuition.

1. Making a list:	a. Getting organized
	b. Writing things down
2.Reading:	a. Following lines of print
	b. Gaining knowledge
3. Joining the Army:	a. Helping the Nation's defense
	b. Signing up
4. Washing clothes:	a. Removing odors from clothes
	b. Putting clothes into the machine

5. Picking an apple:	a. Getting something to eat b. Pulling an apple off a branch
6. Chopping down a tree:	a. Wielding an axe b. Getting firewood
7. Measuring a room for carpeting:	a. Getting ready to remodel b. Using a yard stick
8. Cleaning the house:	a. Showing one's cleanliness b. Vacuuming the floor
9. Painting a room:	a. Applying brush strokes b. Making the room look fresh
10. Paying the rent:	a. Maintaining a place to live b. Writing a check
11. Caring the houseplants:	a. Watering plants b. Making the room look nice
12. Locking a door:	a. Putting a key in the lock b. Securing the house
13. Voting:	a. Influencing the election b. Marking a ballot
14. Climbing a tree:	a. Getting a good view b. Holding on to branches
15. Filling out a personality test:	a. Answering questions b. Revealing what you are like

16. Tooth brushing:	a. Preventing tooth decay b. Moving a brush around in one's mouth
17. Taking a test:	a. Answering questions b. Showing one's knowledge
18. Greeting someone:	a. Saying hello b. Showing friendliness
19. Resisting temptation:	a. Saying no b. Showing moral courage
20. Eating:	a. Getting nutrition b. Chewing and swallowing
21. Growing a garden:	a. Planting seeds b. Getting fresh vegetables
22. Travelling by car:	a. Following a map b. Seeing countryside
23. Having a cavity filled:	a. Protecting your teeth b. Going to the dentist
24. Talking to a child:	a. Teaching a child something b. Using simple words
25. Pushing a doorbell:	a. Moving a finger b. Seeing if someone's home

Part 5 – Control variables

Please answer the following questions.

Are you left-handed or right-handed?

- Left handed
- Right handed

How many times have you used an online tool for product customization?

Very frequently	Frequently	Rarely	Very rarely	Never
O	O	O	O	O

To what extent do you agree with the following statements?

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Generally, I am very interested in watches	O	O	O	O	O
A watch is important to me	O	O	O	O	O
I am likely to buy a watch within the next six months	O	O	O	O	O
A watch is important in my life	O	O	O	O	O

To what extent do you agree with the following statements?

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
I am concerned about the environment	O	O	O	O	O
The condition of the environment affects the quality of my life	O	O	O	O	O
I am willing to make sacrifices to protect the environment	O	O	O	O	O
I like sustainable products	O	O	O	O	O
I feel positive towards sustainable products	O	O	O	O	O

Sustainable products are good for the environment	O	O	O	O	O
I feel proud when I buy/use sustainable products	O	O	O	O	O
I make a special effort to buy products in biodegradable packages	O	O	O	O	O
I would switch from my usual brands and buy environmentally friendly safe cleaning products, even if I had to give up some cleaning effectiveness	O	O	O	O	O
I have switched products for ecological reasons	O	O	O	O	O
When I have a choice between two equal products, I purchase the one less harmful to the environment	O	O	O	O	O

Part 6 – Demographic characteristics

This is the last part of the questionnaire. Here some general questions are asked.

What is your gender?

- Male
- Female
- Other
- Rather not say

What is your age?

What is your nationality?

- Dutch
- Other, namely:

What is the highest degree or level of education that you have completed?

- Elementary education
- VMBO
- MBO (vocational education)
- HAVO
- VWO
- Associate degree (HBO)
- Bachelor's degree (WO)
- Master's degree (WO)

What is your current employment status?

- Full-time
- Part-time
- Out of work and looking for work
- Out of work but not looking for work
- Retired
- Student
- Other

End

This is the end of the questionnaire. Thank you very much for your participation.

(*Dutch version)*

Introductie

Welkom,

Mijn naam is Laura Schaap en ik studeer aan de Radboud Universiteit Nijmegen. Deze vragenlijst is een onderdeel van mijn Masterthesis. Je deelname aan de vragenlijst wordt erg op prijs gesteld en helpt mij met afstuderen.

De vragenlijst bestaat uit drie onderdelen. Elk onderdeel wordt voorafgegaan door een korte uitleg. Aan het eind van de vragenlijst worden nog een aantal algemene vragen gesteld. In totaal duurt de vragenlijst ongeveer 20 minuten.

Je antwoorden zullen enkel gebruikt worden voor mijn thesis. Bovendien worden je antwoorden anoniem en in alle vertrouwen verwerkt. Deelname aan dit onderzoek is volledig vrijwillig wat betekent dat je op elke moment kunt stoppen zonder opgaaf van reden.

Bedankt!

Laura Schaap
Student Radboud Universiteit Nijmegen

Deel 1 – Level of construal manipulatie

Low level of construal condition

In dit onderdeel zullen er 40 woorden worden getoond. Het is jouw taak om voor elk woord een ander woord op te schrijven dat dient als een voorbeeld. Stel jezelf de vraag "Een voorbeeld van [woord] is wat?" en schrijf het antwoord op dat in je opkomt. Bijvoorbeeld, als ik je het woord "hond" geef, kun je antwoorden met "poedel" of zelfs met "Pluto" (het Disney personage). Wees creatief en probeer voor elk woord een zo specifiek mogelijk voorbeeld te geven.

Een voorbeeld van **frisdrank** is ...
Een voorbeeld van een **computer** is ...
Een voorbeeld van een **krant** is ...
Een voorbeeld van een **professor** is ...
Een voorbeeld van **pasta** is ...
Een voorbeeld van een **boek** is ...
Een voorbeeld van een **sport** is ...
Een voorbeeld van een **tafel** is ...
Een voorbeeld van een **schoen** is ...
Een voorbeeld van een **film** is …
Een voorbeeld van een **pen** is ...
Een voorbeeld van een **partijleider** is ...
Een voorbeeld van **lunch** is ...
Een voorbeeld van een **trein** is ...
Een voorbeeld van **post** is …
Een voorbeeld van een **acteur** is ...
Een voorbeeld van **bier** is ...
Een voorbeeld van een **telefoon** is ...
Een voorbeeld van **zeep** is ...
Een voorbeeld van **fruit** is ...

Een voorbeeld van een **munt** is ...
Een voorbeeld van een **restaurant** is ...
Een voorbeeld van een **boom** is ...
Een voorbeeld van een **spel** is ...
Een voorbeeld van een **schilderij** is ...
Een voorbeeld van een **tas** is ...
Een voorbeeld van **water** is ...
Een voorbeeld van een **universiteit** is ...
Een voorbeeld van een **dans** is ...
Een voorbeeld van **snoep** is ...
Een voorbeeld van een **gitaar** is ...
Een voorbeeld van een **berg** is ...
Een voorbeeld van een **poster** is ...
Een voorbeeld van een **soap serie** is ...
Een voorbeeld van een **rivier** is ...
Een voorbeeld van **wiskunde** is ...
Een voorbeeld van een **koning** is ...
Een voorbeeld van een **walvis** is ...
Een voorbeeld van een **zanger** is ...
Een voorbeeld van een **vrachtwagen** is ...

High level of construal scondition

In dit onderdeel zullen er 40 woorden worden getoond. Het is jouw taak om een woord op te schrijven waarvan jij denkt dat het getoonde woord een voorbeeld is. Stel jezelf de vraag "[Woord] is een voorbeeld van?" en schrijf het antwoord op dat in je opkomt. Bijvoorbeeld, als ik je het woord "poedel" geef, kun je antwoorden met "honden" of zelfs met "dieren" aangezien een poedel zowel een voorbeeld is van een hond als van een dier. Wees creatief en probeer een zo algemeen mogelijk antwoord te geven waarvan het getoonde woord een voorbeeld is.

Frisdrank is een voorbeeld van ...
Computer is een voorbeeld van ...

Munt is een voorbeeld van ...
Restaurant is een voorbeeld van ...

Krant is een voorbeeld van ...
Professor is een voorbeeld van ...
Pasta is een voorbeeld van ...
B**oek** is een voorbeeld van ...
Sport is een voorbeeld van ...
Tafel is een voorbeeld van ...
Schoen is een voorbeeld van ...
Film is een voorbeeld van ...
Pen is een voorbeeld van ...
Partijleider is een voorbeeld van ...
Lunch is een voorbeeld van ...
Trein is een voorbeeld van ...
Post is een voorbeeld van …
Acteur is een voorbeeld van ...
Bier is een voorbeeld van ...
Telefoon is een voorbeeld van ...
Zeep is een voorbeeld van ...
Fruit is een voorbeeld van ...

Boom is een voorbeeld van ...
Spel is een voorbeeld van ...
Schilderij is een voorbeeld van ...
Tas is een voorbeeld van ...
Water is een voorbeeld van ...
Universiteit is een voorbeeld van ...
Dans is een voorbeeld van ...
Snoep is een voorbeeld van ...
Gitaar is een voorbeeld van ...
Berg is een voorbeeld van ...
Poster is een voorbeeld van ...
Soap serie is een voorbeeld van ...
Rivier is een voorbeeld van ...
Wiskunde is een voorbeeld van ...
Koning is een voorbeeld van ...
Walvis is een voorbeeld van ...
Zanger is een voorbeeld van ...
Vrachtwagen is een voorbeeld van ...

Deel 2 – Lateral placement en choice

Sustainable option left

In deze taak ga je jouw eigen horloge persoonlijk samenstellen. Dit doe je door in vijf verschillende categorieën steeds jouw voorkeur aan te geven voor één van de twee of drie gegeven opties. Wanneer je een keuze maakt, houd dan in gedachte dat de prijs voor elke optie in een categorie gelijk is. Daarnaast is het ook belangrijk om in gedachte te houden dat alle materialen die worden gepresenteerd geleverd kunnen worden in dezelfde reeks kleuren.

Categorie 1: Horloge band

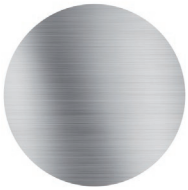
Aan welk type materiaal geef jij de voorkeur voor de band van het horloge?

Bamboe

O

Leer

O



Roestvrij staal

O

Categorie 2: Horloge band kleur

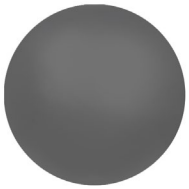
Aan welke kleur geef jij de voorkeur voor de band van het horloge

Bruin

O

Zwart

O



Zilver

O

Categorie 3: Horloge kast

Aan welke vorm geef jij de voorkeur voor de kast van het horloge?

Rond

O

Vierkant

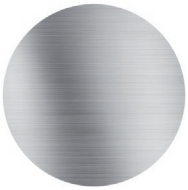
O

Categorie 4: Horloge kast materiaal

Aan welk type materiaal geef jij de voorkeur voor de kast van het horloge?

Bamboe

O



Roestvrij staal

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Categorie 5: Horloge kast kleur

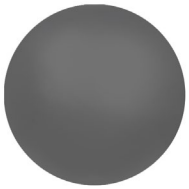
Aan welke kleur geef jij de voorkeur voor de kast van het horloge

Bruin

O

Zwart

O



Zilver

O

Categorie 6: Wijzerplaat

Aan welk type wijzerplaat geef jij de voorkeur voor het horloge?

Arabische cijfers

O

Romeinse cijfers

O

Streepjes

O

Categorie 7: Horloge glas

Aan welk type materiaal geef jij de voorkeur voor het glas van het horloge?

Bio-plastic

O

Mineraal glas

O

Categorie 8: Energie

Aan welk type energie geef jij de voorkeur voor het horloge?

Zonne-energie

O

Batterij

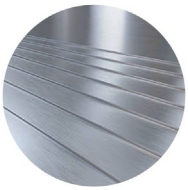
O

Categorie 9: Horloge doos

Aan welk type materiaal geef jij de voorkeur voor de doos waarin het horloge zit?

FSC gecertificeerd karton

O



Blik

O

Categorie 10: Bezorging

Aan welk type bezorging geef jij de voorkeur?

Eco-vriendelijke bezorging (CO2-neutraal)

O

Standaard bezorging (3-5 werkdagen)

O

Expres bezorging (1-2 werkdagen)

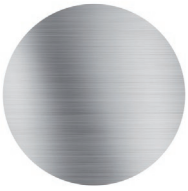
O

Sustainable option right

In deze taak ga je jouw eigen horloge persoonlijk samenstellen. Dit doe je door in vijf verschillende categorieën steeds jouw voorkeur aan te geven voor één van de twee of drie gegeven opties. Wanneer je een keuze maakt, houd dan in gedachte dat de prijs voor elke optie in een categorie gelijk is. Daarnaast is het ook belangrijk om in gedachte te houden dat alle materialen die worden gepresenteerd geleverd kunnen worden in dezelfde reeks kleuren.

Categorie 1: Horloge band

Aan welk type materiaal geef jij de voorkeur voor de band van het horloge?



Roestvrij staal

O

Leer

O

Bamboe

O

Categorie 2: Horloge band kleur

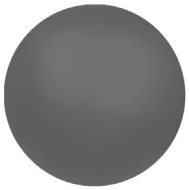
Aan welke kleur geef jij de voorkeur voor de band van het horloge

Bruin

O

Zwart

O



Zilver

O

Categorie 3: Horloge kast

Aan welke vorm geef jij de voorkeur voor de kast van het horloge?

Rond

O

Vierkant

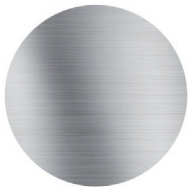
O

Categorie 4: Horloge kast materiaal

Aan welk type materiaal geef jij de voorkeur voor de kast van het horloge?

Roestvrij staal

O



Bamboe

O

Categorie 5: Horloge kast kleur

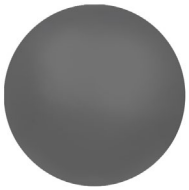
Aan welke kleur geef jij de voorkeur voor de kast van het horloge

Bruin

O

Zwart

O



Zilver

O

Categorie 6: Wijzerplaat

Aan welk type wijzerplaat geef jij de voorkeur voor het horloge?

Arabische cijfers

O

Romeinse cijfers

O

Streepjes

O

Categorie 7: Horloge glas

Aan welk type materiaal geef jij de voorkeur voor het glas van het horloge?

Mineraal glas

O

Bio-plastic

O

Categorie 8: Energie

Aan welk type energie geef jij de voorkeur voor het horloge?

Batterij

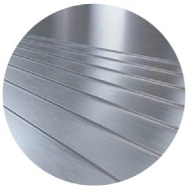
O

Zonne-energie

O

Categorie 9: Horloge doos

Aan welk type materiaal geef jij de voorkeur voor de doos waarin het horloge zit?



Blik

O

FSC gecertificeerd karton

O

Categorie 10: Bezorging

Aan welk type bezorging geef jij de voorkeur?

Expres bezorging (1-2 werkdagen)

O

Standaard bezorging (3-5 werkdagen)

O

Eco-vriendelijke bezorging (CO2-neutraal)

O

Deel 3 – Processing fluency

Beantwoorde de volgende vraag.

Het maken van een keuze tussen de verschillende opties in the configurator was …:

Moeilijk 1 2 3 4 5 Makkelijk

Deel 4 – Manipulatie check

Gedrag kan op vele manieren geïnterpreteerd worden. Bijvoorbeeld het schrijven van een brief kan geïnterpreteerd worden als “het aanraken van toetsen op je toetsenbord” of als “het uiten van gedachten”. Ik ben geïnteresseerd in jouw persoonlijke voorkeur voor het beschrijven van verschillende gedragingen. In deze taak krijg je een lijst te zien met 25 verschillende gedragingen. Bij elk gedrag kun je steeds een keuze maken uit twee verschillende beschrijvingen. Bijvoorbeeld:

Het volgen van een cursus: *a. Op een stoel zitten*
b. Naar een PowerPoint kijken

Jouw taak is om de interpretatie the kiezen die het gedrag het beste omschrijft. Er zijn geen goede of foute antwoorden. Ik wil enkel weten wat jouw mening is. Geeft dus gewoon aan wat jij denkt dat de beste interpretatie is van het gedrag en denk vooral niet te lang na. Ga af op je gevoel.

1. Een lijstje maken: a. Georganiseerd zijn
b. Dingen opschrijven

2. Lezen: a. Het volgen van geprinte regels
b. Kennis vergaren

3. Bij het leger gaan: a. Helpen van de nationale defensie
b. Jezelf inschrijven

4. Kleding wassen: a. Het verwijderen van geurtjes
b. Kleding in de wasmachine doen

5. Een appel plukken:	a. Iets te eten pakken
	b. Een appel uit de boom pakken
6. Een boom omhakken:	a. Zwaaien met een bijl
	b. Het verkrijgen van brandhout
7. Een kamer opmeten voor tapijt:	a. Een verbouwing voorbereiden
	b. Een meetlint gebruiken
8. Het huis schoonmaken:	a. Het tonen van netheid
	b. De vloer stofzuigen
9. Een kamer schilderen:	a. Het aanbrengen van verf op de muur
	b. De kamer opfrissen
10. De huur betalen:	a. Het behouden van een woonplaats
	b. Geld overmaken
11. De planten verzorgen:	a. De planten water geven
	b. De kamer er leuk laten uitzien
12. De deur vergrendelen:	a. De sleutel in het slot doen
	b. Het huis afsluiten
13. Stemmen:	a. De verkiezing beïnvloeden
	b. Een rondje aankruisen
14. In een boom klimmen:	a. Een goed uitzicht krijgen
	b. Jezelf vasthouden aan takken
15. Een persoonlijkheidstest doen:	a. Vragen beantwoorden
	b. Ontdekken hoe je bent

16. Tandenpoetsen:	a. Tandbederf tegengaan b. Een tandenborstel in je mond verplaatsen
17. Een toets maken:	a. Vragen beantwoorden b. Het tonen van je kennis
18. Iemand begroeten:	a. Hallo zeggen b. Laten zien dat je vriendelijk bent
19. Verleiding weerstaan:	a. Nee zeggen b. Moed tonen
20. Eten:	a. Voeding binnenkrijgen b. Kauwen en slikken
21. Een groentetuin kweken:	a. Zaadjes planten b. Verse groentes krijgen
22. Met de auto reizen:	a. Een kaart volgen b. De streek zien
23. Een gaatje laten vullen	a. Je tanden beschermen b. Naar de tandarts gaan
24. Tegen een kind praten	a. Een kind iets leren b. Simpele woorden gebruiken
25. Op een deurbel drukken	a. Een vinger bewegen b. Kijken of er iemand thuis is

Deel 5 – Controle variabelen

Beantwoorde de volgende vragen.

Ben je linkhandig of rechtshandig?

- Linkshandig
- Rechtshandig

Hoe vaak heb je gebruik gemaakt van een online configurator om een product naar persoonlijke wensen samen te stellen?

Heel vaak	Vaak	Soms	Zelden	Nooit
O	O	O	O	O

In hoeverre ben je het eens met de volgende stellingen?

	Helemaal mee eens	Mee eens	Neutraal	Oneens	Helemaal mee oneens
Over het algemeen ben ik erg geïnteresseerd in horloges	O	O	O	O	O
Een horloge is belangrijk voor mij	O	O	O	O	O
De kans is groot dat ik in de komende zes maanden een horloge ga kopen	O	O	O	O	O
Een horloge is erg belangrijk in mijn leven	O	O	O	O	O

In hoeverre ben je het eens met de volgende stellingen?

	Helemaal mee eens	Mee eens	Neutraal	Oneens	Helemaal mee oneens
Ik ben bezorgd om het milieu	O	O	O	O	O
De staat van het milieu beïnvloed de kwaliteit van mijn leven	O	O	O	O	O
Ik ben bereid om opofferingen te doen om het milieu te beschermen	O	O	O	O	O

Ik vind duurzame producten leuk	O	O	O	O	O
Ik heb positieve gevoelens ten opzichte van duurzame producten	O	O	O	O	O
Duurzame producten zijn goed voor het milieu	O	O	O	O	O
Ik voel me trots wanneer ik een duurzaam product koop/gebruik	O	O	O	O	O
Ik doe extra moeite om producten te kopen in biologisch afbreekbare verpakkingen	O	O	O	O	O
Ik zou voortaan milieuvriendelijke schoonmaakproducten kopen i.p.v. de producten die ik normaal gesproken gebruik, zelfs als ik daarvoor een deel van de effectiviteit van het schoonmaakmiddel moet opgeven	O	O	O	O	O
Ik ben andere producten gaan gebruiken om ecologische redenen	O	O	O	O	O
Wanneer ik de keuze heb tussen twee gelijke producten, dan koop ik het product dat het minst schadelijk is voor het milieu	O	O	O	O	O

Deel 6 – Demografische kenmerken

Dit is het laatste deel van de vragenlijst. Er worden enkel nog wat algemene vragen gesteld.

Wat is je geslacht?

- Man
- Vrouw
- Anders
- Dat zeg ik liever niet

Wat is je leeftijd?

Wat is je nationaliteit?

- Nederlands
- Anders, namelijk:

Wat is je hoogst behaalde opleiding?

- Basisonderwijs
- VMBO
- MBO
- HAVO
- VWO
- HBO (zowel bachelor als master)
- WO bachelor
- WO master

Wat is je huidige werksituatie?

- Fulltime
- Parttime
- Werkloos en niet op zoek naar werk
- Werkloos en op zoek naar werk
- Gepensioneerd
- Student
- Anders

Einde

Dit is het einde van de vragenlijst. Bedankt voor je deelname aan dit onderzoek.