THE SECRET KEY TO HEALTHY EATING

The influence of the construal level on the effect of lateral positioning on food choice

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AS COOL AS A CUCUMBER

Around February 2016 I participated in an experiment at the Faculty of Social Sciences. At some point, I had to choose between a healthy and an unhealthy food item. I looked at the screen and knew that I preferred the left choice: the healthy food item. After the decision, I wondered why I chose the healthy item. I could not explain my choice in detail. The question continued to bother me. Every time that I saw a healthy and an unhealthy food item, I wondered what factors influenced my decision. Now, around one and a half years later, I know the answer. Lateral positioning influences food choice. But, it is not just lateral positioning. This study demonstrates that just lateral positioning is not the final answer. Lateral positioning does influence food choice, but the adopted level of construal influences this effect. Hopefully, I can convince you to support this view.

To come to this conclusion, I had to walk a long road. The walk started lonely, but soon Renée Nederlof joined me. Obviously, she deserves a big thank you! Together we collected the data and analyzed the results. We were as fast as greased lightning. Within 3 days, we found more than 200 participants for our main study. With ups and downs, we analyzed the data. Luckily, we got some help creating the ups. Gathering insights from different people helped us to find the right foundation. We already saw the finish, but could not reach it. This time, V. Blazevic and dr. N.V.T. Belei jumped in. I would like to thank them for their input during the whole process, but especially at this last part of the analysis. After finishing the analysis, I wrote the report alone. Renée and I frequently challenged each other with questions about the theory, the analysis and more. In my opinion, this has greatly improved the quality of this report. Of course, I learned a lot, but I also had a lot of fun writing this report. Hopefully, this also applies to you as a reader. Enjoy reading!

Kind regards,

Anke Tuinstra

ABSTRACT

Romero and Biswas (2016) showed that lateral positioning influences food choice. I argue that the adopted level of construal influences this effect of lateral positioning on food choice. The objective of this study is to demonstrate that the adopted construal level influences this effect of lateral positioning. Therefore, the following research question has been set:

How does the adopted construal level by the consumer influence the effect of lateral positioning on the choice of the consumer between healthy and unhealthy food?

To answer this question an experiment was set up. Three pre-tests were conducted to optimize the conditions regarding the used images and the manipulation. The final images were a burger and a salad with chicken. The lateral positioning depicts two options: (1) the healthy option left or (2) the healthy option right. Consumers can adopt a low or a high construal level. For the manipulation, respondents had to give a concrete example of a word (matching low construal) or a category where the word was an example of (matching high construal). There were four groups: (1) low construal and healthy left; (2) low construal and healthy right; (3) high construal and healthy left; (4) high construal and healthy right. Respondents were randomly assigned to the various conditions. The effectiveness of the manipulation was tested through BIF-items (Vallacher & Wegner, 1989). Logistic regression was the used method of analysis for the main study.

In accordance with current literature, this study demonstrates that lateral positioning influences food choice. In addition to the current literature, it shows that the adopted construal level influences this effect of lateral positioning. If a high construal level is adopted, the lateral positioning influences food choices. However, these outcomes only hold in a model including the perceived attractiveness of the food items. In contrast, when a low construal level is adopted, the perceived attractiveness of the food items determines the choice.

Only three out of four hypotheses were accepted in this study. One hypothesis was rejected. This might be due to the fact that the UTI does not hold in the Netherlands. Also, no significant influence was found for handedness. This challenges the body-specificity theory, but it might be due to the low number of left-handed respondents. Lastly, this study did have some limitations. Therefore, future research is needed to address these issues.

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1. Introduction

Until 1980 the number of overweight people was relatively stable. Thereafter, this number has increased (Flegal, 2005). In 2013, approximately 37% of men and 38% of women were overweight. It caused an estimated 3 to 4 million deaths worldwide (Ng et al., 2014). Obesity brings along functional limitations, pain, worries and less activity (Stewart & Brook, 1983), it increases the risk of some forms of cancer (Bergström et al., 2001) and there has been found a link between obesity and depression (Luppino et al., 2010). In addition, it also brings high medical costs (Finkelstein, Fiebelkorn, & Wang, 2003) and an increased risk of death (Flegal et al., 2005). Given the increase in obesity and the negative influences on society, it is important to gain insights regarding consumers' food choice. With these insights, the important item of addressing overweight can be improved.

There already is an increase in healthy alternatives for consumers that eat outside of the home and 72% of consumers have the intention to eat healthier (Wilcox et al., 2009). Despite this, the number of overweight people is increasing. Research has shown that adding healthy alternatives to the menu actually increases the choice of hedonic food (Wilcox et al., 2009). Also, a lot of information on health is provided. However, the impact of influencing unhealthy behavior through information is limited, since most of the consumer behavior is not based on careful thoughts about the consequences. Affecting automatic behavior may be more effective (Marteau, Hollands, & Fletcher, 2012).

The lateral positioning of images can influence a customer's perception (Chae & Hoegg, 2013). Romero and Biswas (2016) showed that placing an image of the healthy choice to the left of an unhealthy choice increases the likelihood of consumers choosing the healthy option. This is based on the unhealthy = tasty intuition (UTI) and body-specificity theory (Raghunathan, Naylor, & Hoyer, 2006; Brookshire & Casasanto, 2012). Romero and Biswas (2016) assume that consumers consider healthy as "bad" and unhealthy as "good" because unhealthy is seen as tasty. According to the body-specificity theory consumers associate "good" products with their dominant side (Brookshire & Casasanto, 2012). Approximately 85% of the world population is right-handed (Uomini, 2009) and thus, right is "good". If the healthy choice is "bad" and placed to the left, this will fit with the mental representation of consumers. Due to this fit, the processing fluency increases (Lee & Aaker, 2004) and this influences choice. When the processing fluency increases, the influence of cognition on choice increases and the influence of affect decreases (Shiv & Fedorikhin, 1999). Thus, the likelihood of making the healthy choice increases and the likelihood of making the unhealthy

choice decreases. So, if consumers consider the healthy option as “bad”, placing the healthy food left fits with the mental representation of consumers. However, the adopted level of construal may affect this evaluation.

Based on construal level theory, the assumption that healthy is “bad” may be the opposite for consumers that adopt a high level of construal. The long-term consequences will become more salient if a high level of construal is adopted, and therefore, the healthy choice becomes “good” and should be placed on the right side (Trope & Liberman, 2003). This could change the effect of the lateral positioning. In situations where the consumer adopts a high construal level, the unhealthy choice may be stimulated. So, to influence the automatic behavior, the adopted construal level should be considered when positioning food choices. There are, to my best knowledge, no studies that have examined this theory-based influence of the adopted construal level. So, there is a gap in the literature.

Romero and Biswas (2016) showed that lateral positioning can have an influence on food choice. The current study extends this knowledge concerning the influence of lateral positioning on healthy food choice. According to current literature, the likelihood of choosing a healthy option (versus an unhealthy option) increases when the healthy food item is placed to the left of the unhealthy food item. Whether the adopted construal level influences this effect has not been studied yet. So, this study complements the current knowledge and affects a broad range of disciplines, since food consumption is subject in various disciplines, for instance, psychology and medical science. It contributes to food consumption theory and extends prior research by demonstrating that the adopted construal level affects the influence of lateral positioning on choice. With this information, a contribution is made to the knowledge about encouraging consumers to make healthy choices and thus a contribution is made to the health and welfare of people.

The objective of this study is to demonstrate that the adopted construal level influences the effect of lateral positioning on food choice. Consumers who adopt a high level of construal will have a preference for the long-term consequences of food and therefore will evaluate the healthy choice as “good”. This should lead to an increased likelihood of choosing the healthy option when it is placed to the right of an unhealthy choice because it fits with the mental representation and thus increases processing fluency. Processing fluency, in turn, increases the influence of cognition on the choice and decreases the influence of affect on choice, which increases the likelihood of choosing the healthy option. For this purpose, the following research question will be applied: How does the adopted construal level of

consumers influence the effect of lateral positioning on the choice of consumers between healthy and unhealthy food?

The study will be structured as follows. First, chapter two comprises the theory (§2.1) and the conceptual model (§2.2). Then the methodology and results of the pre-tests will be discussed (chapter 3). After the pre-tests, the main study is discussed. First, the methodology is explained (chapter 4), followed by the results (chapter 5). The discussion will be addressed in chapter six, including a conclusion (§6.1), the theoretical implications (§6.2), the managerial implications (§6.3), the limitations (§7.4) and recommendations for future research (§7.5).

2. Theory

2.1 Relevant theories

2.1.1 Unhealthy is tasty

Raghunathan, Naylor, and Hoyer (2006) found that consumers link unhealthy to tasty. Healthiness negatively relates to taste, the so-called unhealthy = tasty intuition (UTI). It even extends to the taste experience. An unhealthy product is perceived as tastier and provides more enjoyment. There are consumers that explicitly associate unhealthy with tasty, but the other consumers also implicitly associate unhealthy with tasty (Raghunathan, Naylor, & Hoyer, 2006). Mai and Hoffman (2015) showed that the implicit belief in UTI cannot be corrected through health consciousness. This persistence of the implicit belief in UTI can be explained through the evolution of mankind. Humans prefer food that others eat, that is sweet or salty and food which is associated with saturation. These preferences used to be an indication that the food was nutritional (Smith, 2004). In the present time, overconsumption of sugar, fat, and salt is possible, which can have negative effects on health. Therefore, food that is high in sugar, fat or salt is seen as unhealthy. However, through evolution, we think of this food as tasty. This leads to a consumers' assumption that an unhealthy choice of food is tastier.

Howlett et al. (2009) confirmed the UTI. They even found that when consumers learned that a product was unhealthy after eating it, their judgment of the tastiness of the product improved (Howlett et al., 2009). A manipulation of the perceived unhealthiness of a product does not influence the perception of how much a product is filling (Irmak, Vallen, & Robinson, 2011). So, there is no difference in saturation between unhealthy and healthy products. The choice is made based on expected enjoyment and the influence on one's health. In this case, enjoyment is a short-term consequence and health is a long-term consequence. The decision between a healthy and an unhealthy option leads to a conflict between this short-term consequence and long-term consequence. Research has confirmed this view by showing that when the hedonic goals are more salient, the likelihood of consumers choosing the unhealthy option increases (Dhar & Simonson, 1999; Shiv & Fredorikhin, 1999).

2.1.2 Right is good

By choosing the unhealthy option, the hedonic goal of enjoyment is achieved. So, when hedonic goals are salient, the unhealthy option is the "good" option. According to the body-specificity theory, there is a link between handedness and mental representation of positive concepts. People map the positive concept in line with their handedness, there is a link between placing a concept within horizontal space and the valence of that concept

(Casasanto, 2009). Right-handed people tend to map positive concepts to the right and negative concepts to the left. For left-handed people, this is the opposite. They tend to map positive concepts to the left and negative concepts to the right (Casasanto, 2009). This is most likely due to perceptual fluency (Reber, Winkielman, & Schwarz, 1998). When right-handed people interact with their environment with their right side, this goes smoother than with their left side. An increase in perceptual fluency due to the right side is the result. Reber, Winkielman, and Schwarz (1998) also linked perceptual fluency to positive affect. With a right-handed person, acting with the right-hand increases perceptual fluency, which leads to a positive evaluation of the right side. Thus, with a right-handed person the right side is related to positive affect due to their handedness and with a left-handed person, the left side is related to positive affect.

The idea that perceptual fluency causes the perception of "right is good" is confirmed in the study of Casasanto and Chrysikou (2011). They found that a forced change in handedness leads to a change in the perception of "right is good". People that are right-handed, but with whom the right hand is being disabled for a short period of time, change their perception into "left is good" (Casasanto & Chrysikou, 2011). After disabling their right side, interacting with the environment goes smoother with the left side. This instantly has an effect on the perception of which side is good. Since short-term changes already have an effect on this perception, it is likely that this effect is temporary. If the person can use his right hand again, the perception that "right is good" will return.

Now that approximately 85% of the world population is right-handed (Uomini, 2009), it is implied that for the majority of people "good is right". Raghunathan, Naylor, and Hoyer (2006) demonstrated that consumers intuitively think that unhealthy food is tastier and thus "good" and healthy food is less tasty and thus "bad". So, when healthy food is placed to the left of unhealthy food, it fits with the mental representation of the majority of people. This, in turn, leads to an increase in processing fluency (Lee & Aker, 2004).

So, a fit with the mental representation leads to processing fluency (Lee & Aker, 2004). This, in turn, leads to an increase in processing resources, compared to a misfit with the mental representation. If there is a misfit, processing resources are needed to deal with it. Shiv and Fedorikhin (1999) demonstrated that an increase in processing resources leads to an increase of the influence of cognition in choice and a decrease of the influence of affect on choice. An unhealthy choice is more affect loaded and a healthy choice is more cognitive loaded.

2.1.3 Lateral displaying

We know from past research that the lateral positioning of images can influence a customer's perception (Chae & Hoegg, 2013). So, assuming that the unhealthy choice is "good" and the healthy choice is "bad", the positioning of the unhealthy choice to the right and healthy choice to the left, fits with the mental representation. This, in turn, leads to an increase in processing fluency (Lee & Aker, 2004). When the processing fluency increases, the influence of cognition on choice increases and the influence of affect decreases (Shiv & Fedorikhin, 1999). With an increase of the influence of cognition on choice, the likelihood of choosing the healthy option also increases. This is because there are two conflicting motives when choosing between a healthy and an unhealthy option. The healthy option is good for a person's health and thus the preferred choice when the cognitive dimension is salient. The unhealthy option is tastier and thus brings more pleasure when consuming. This choice is, therefore, the preferred choice when the affect dimension is salient. So, with an increase of the influence of cognition, the likelihood of choosing the healthy option increases. In short, positioning the healthy choice left increases the likelihood of choosing the healthy option.

This latter is what Romero and Biswas (2016) demonstrated in their study. With seven studies they showed that placing an image of the healthy choice to the left of an unhealthy choice increases the likelihood of consumers choosing the healthy option. So, we know that lateral positioning can influence food choice. Romero and Biswas (2016) argue that the "unhealthy left, healthy right" perception is due to the SNARC-effect. This effect implies that number magnitude has an effect on the mental representation of the numbers. Large numbers are associated with the right side and small numbers are associated with the left side (Dehaene, Bossini, & Giraux, 1993). This effect is independent of, for instance, handedness, frequency or visual appearance. The SNARC-effect does differ across writing systems, it is the opposite for people with a right-to-left writing system (Dehaene, Bossini, & Giraux, 1993). Studies show that the SNARC-effect does not only apply to numerical values, but also for several other spatial dimensions. Ishihara et al. (2008), for example, demonstrate that magnitude representation also occurs with time (early versus late) and Kadosh et al. (2008) demonstrate this for pitch (low versus high). So, it is possible that a SNARC-effect occurs with all pairs that can be categorized in "more" and "less". The study of Lourence and Longo (2010) supports this view. They show that it also applies to children that do not master the numerical system yet. This suggests that anything that can be ordered according to magnitude, is mentally represented from left ("less") to right ("more").

Romero and Biswas (2016) assume, but do not test, that this is the case with healthy versus unhealthy food. They argue, inter alia, that unhealthy food is higher in calories and higher in taste and therefore can be categorized in "more" and "less". This is debatable because healthy food could also be categorized as "more". Healthy food is, for instance, more nutritious. They provide additional support for the healthy is left perception with the hereinabove discussed body-specificity theory. They again assume, but do not test, that unhealthy food is seen as "good" and healthy food as "bad". As argued above, unhealthy food is seen as tastier and providing more enjoyment. So, the unhealthy choice can be seen as "good" when hedonic goals are salient. By contrast, the healthy option can also be seen as "good". When the long-term goals, for instance, good physical health, are taken into account, the healthy option can be "good". For this reason, I argue that the adopted construal level influences the evaluation of the healthy and unhealthy option.

2.1.4 Construal level theory

According to construal level theory (CLT), temporal distance influences mental representation. As temporal distance grows, the information is represented in more abstract terms. For instance, an action can be interpreted at different abstraction levels. With a low level of abstraction, the process of the action is salience. By contrast, at a high level of abstraction, the purpose of the action is salience (Trope & Liberman, 2003). Moreover, it also works the other way around. With an increase of construal level, the perception of distant increases (Trope & Liberman, 2010). Information that is interpreted at a high level of construal, is associated with the distant future rather than the near future. Information that is interpreted at a low level of construal, on the other hand, is associated with the near future rather than the distant future. The high level, positive value of healthy food is, for instance, good physical health. This is attained in the distant future. The low level, positive value of unhealthy food is, for instance, the tastiness and thus enjoyment. This is attained in the near future (Trope & Liberman, 2003).

Laran (2009) found that choices with regard to the distant future can be opposite to the choice with regard to the present. This could be due to the adopted level of construal since the different levels of construal (low versus high) highlight different features (Fujita & Han, 2009). Adopting a high level of construal leads to an increase of the salience of the long-term benefits (Mehta, Zhu, & Meyers-Levy, 2014). An increase in the salience of the long-term benefits might lead to a shift in the evaluation of presented unhealthy and healthy options. In this case, the healthy option becomes the "good" choice and the unhealthy option becomes the

"bad" choice. With a low level of construal, things are thought of in concrete and detailed features (Trope & Liberman, 2003). In the case of food, this can be the taste and enjoyment of the food. At a high level of construal, essential elements are considered (Trope & Liberman, 2003). In the case of food, this can be the nutritive value and the influence on physical health. This focus on the essential features, thus a high construal level, leads to an increased preference for central elements and a decreased preference for superficial elements like the taste (Lee et al., 2014). So, with the high level of construal, the healthy option is considered "good" and the unhealthy option is considered "bad", because the nutritive value and the influence on physical health are determining factors. When a low level of construal is adopted, the opposite applies. The taste and enjoyment of the food are salience and thus the unhealthy option is "good" and the healthy option is "bad".

The study of Romero and Biswas (2016) is based on the assumption that consumers always consider the healthy option "bad" and the unhealthy option "good". However, considering the above mentioned, the adopted level of construal may affect this evaluation. This view is strengthened by the study of Fujita and Han (2009). They find that a high level of construal makes choices more virtuous than with a low level of construal. So, people make the more virtuous choice when they adopted a high construal level because the long-term benefits are more salient and thus the healthy option is the "good" choice.

Next to the increase of salience of the long-term benefits, a high level of construal also increases self-control (Trope & Liberman, 2010). This favors the delayed outcome of a choice compared to the immediate outcome (White, Macdonnel, & Dahl, 2011). Ein-gar, Goldenberg, & Sagiv (2012) demonstrated in two experiments that consumers with low self-control choose the product with short-term benefits and consumers with high self-control choose the product with long-term benefits. The self-control entails that long-term benefits overshadow the short-term benefits (Fujita, Trope, Liberman, & Levin-Sagi, 2006). This supports the view that when a high level of construal is adopted, consumers evaluate the healthy choice as "good". When a low level of construal is adopted, the opposite applies. Consumers that adopted a low level of construal evaluate the unhealthy choice as "good".

2.2 Conceptual model

As discussed above, lateral positioning influences choice. More specific, the lateral positioning of unhealthy and healthy food influences choice. If the lateral positioning fits with the mental representation of consumers, processing fluency increases, which increases self-control. An increase in self-control leads to a higher likelihood of choosing the healthy option.

There is a fit with the mental representation when the “good” option is positioned to the right and the “bad” option is positioned to the left.

The construal level moderates the influence of lateral positioning on the choice between a healthy and unhealthy option. Whether the “good” option is the healthy or unhealthy choice, depends on the adopted construal level. When a high level of construal is adopted, the healthy choice is “good” and the positioning of this option to the right increases the likelihood of choosing the healthy option. When a low level of construal is adopted, the unhealthy option is “good” and the healthy option is “bad”. Positioning the healthy option to the left increases the likelihood of choosing the healthy option.

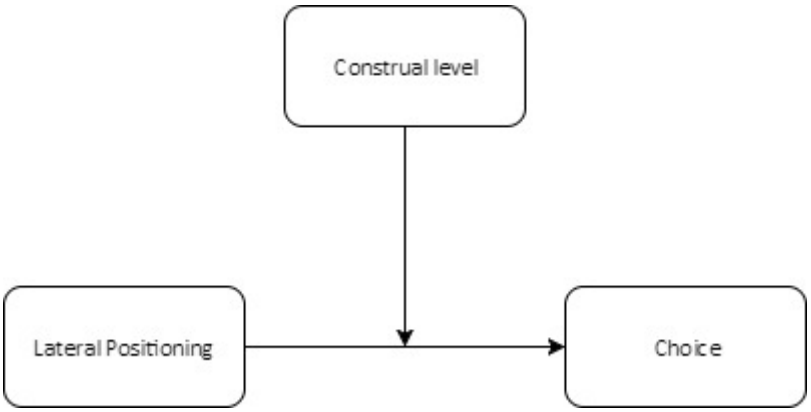

Figure 1. Conceptual model.

Figure 1 shows the conceptual model. The lateral positioning depicts two options: (1) the healthy option left or (2) the healthy option right. If the option that is evaluated as “good” is positioned to the right, the likelihood of choosing the healthy option increases. Which option is evaluated as “good” and thus should be on the right side, depends on the adopted level of construal. The adopted level of construal can be low or high.

When a high level of construal is adopted, the nutritive value and the influence on physical health become determining factors and self-control increases. This leads to a positive evaluation of the healthy option and a negative evaluation of the unhealthy option. So, the healthy option is seen as “good” and the unhealthy option as “bad”. Positioning the healthy option to the left does not fit with the mental representation. Good is associated with right and the healthy option is the “good” option, thus it should be at the right side. The misfit with the mental representation leads to a decrease in processing fluency. This leads to a decrease in self-control and an increase in the influence of affect on the decision. So, if the healthy option

is positioned to the left and the adopted level of construal is high, the likelihood of choosing the healthy option decreases. This results in the following hypothesis:

> H1: If the healthy choice is positioned to the **left** and the adopted construal level is **high**, the likelihood of choosing the healthy option **decreases**.

When a low level of construal is adopted, the hedonic goals of taste and enjoyment of the food choice will become salient. In this case, self-control is lower and emphasizing the short-term benefits is the result. Because the short-term benefits of taste and enjoyment are salient, the healthy option is the "bad" option and the unhealthy option is the "good" option. The positioning of the healthy option to the left fits with the mental representation. This fit leads to an increase of processing fluency, which leads to an increase in the influence of cognition on choice and an increase in self-control. So, if the healthy option is positioned to the left and the adopted level of construal is low, the likelihood of choosing the healthy option increases. This results in the following hypothesis:

> H2: If the healthy choice is positioned to the **left** and the adopted construal level is **low**, the likelihood of choosing the healthy option **increases**.

If the adopted level of construal is high and the healthy option is positioned to the right, the opposite of hypothesis 1 occurs. The long-term benefits are salient and thus the healthy option is "good" and the unhealthy option is "bad". Positioning the healthy option to the right leads to a fit with mental representation. This, in turn, leads to an increase in processing fluency, which leads to an increase of the influence of cognition and an increase in self-control. So, when the healthy option is positioned to the right and the adopted level of construal is high, the likelihood of choosing the healthy option increases. This results in the following hypothesis:

> H3: If the healthy option is positioned to the **right** and the adopted construal level is **high**, the likelihood of choosing the healthy option **increases**.

By contrast, if the adopted level of construal is low, the short-term benefits are salient. The healthy option becomes "bad" and the unhealthy option is "good". Positioning the healthy option to the right leads to a misfit with mental representation and thus a decrease in self-control and an increase of the influence of affect. Thus, the likelihood of choosing the healthy option decreases. This results in the following hypothesis:

H4: If the healthy option is positioned to the **right** and the adopted construal level is **low**, the likelihood of choosing the healthy option **decreases**.

The four hypotheses are tested by an experiment as explained in chapter four.

3. Pre-tests

To optimize the conditions for the main study, three pre-tests were conducted. Several manipulations and the assessment of the used images of the dishes were tested in these pre-tests. In total, three pre-tests have been conducted to find the most suitable food images and the most effective manipulation. All tests were completed individually and the respondents were randomly assigned to the various conditions. To increase the efficiency of the data collection, I have joined forces with another researcher, Renée Nederlof. Before joining forces, she had already conducted a pre-test (pre-test 1) and gave me access to the data.

3.1 Pre-test 1

3.1.1 Methodology

The first pre-test consisted of an introduction, a judgment of different images of dishes, a manipulation, a manipulation check, and some general questions (see Appendix 1). The judgment of different images was implemented to find the most suitable images for the decision between a healthy and an unhealthy food item in the main study. The presented food items were similar to the food items used by Romero and Biswas (2016). Respondents had to indicate how healthy and attractive they found these food items. For the manipulation, a manipulation technique was used that was derived from Liberman et al. (2007). Four situations were presented to the respondents, for instance, "*Ron is considering opening a bank account*" (Liberman et al., 2007, p. 144). Next, they were asked *how* or *why* the person would do this. After the manipulation, a manipulation check was included.

The effectiveness of the manipulation was tested though the Behavioral Identification Form (BIF; Vallacher & Wegner, 1989). This is a questionnaire with 25 items and it has proven its effectiveness for measuring the adopted construal level in past research (e.g., Fujita et al., 2006; Agrawal & Wan, 2009). The questionnaire was shortened to limit the required time from the respondents. Every question had two options of which one reflected a low level of construal and the other reflected a high level of construal. An average of the choices was calculated which represents the adopted construal level. The calculated average should be higher in the high construal level condition compared to the low construal level condition.

The first and second pre-test contained questions to examine whether several food images were considered healthy (versus unhealthy) and attractive (versus unattractive). This was measured using a 7-point Likert scale. The Likert scale is most widely used and has the advantage of being easy to understand for respondents (Malhotra, 2006). A Likert scale can comprise five or seven points. Whether using a five or a seven point scale, the outcomes are

similar (Dawes, 2008). The objective of this study was to examine whether construal level influences lateral positioning. The study of Romero and Biswas (2016) functioned as a base. Since they used a 7-point scale, we followed this choice in our study.

3.1.2 Data analysis procedure

In the first pre-test, the respondents were asked to rate several images of food on a 7-point Likert scale for their perceived healthiness and attractiveness. To find the appropriate images, the means of these outcomes were compared using a paired samples t-test. All respondents were asked to rate the food items both on healthiness and attractiveness. Therefore, the paired-samples t-test is the appropriate method of analysis (Field, 2013). For the manipulation, the respondents were randomly assigned to two different groups concerning construal level (high versus low). So, the independent variable 'Construal Level' is categorical. The dependent variable is the mean score on the BIF-items. The answers related to low construal (LC) were coded as 1 and the answers related to high construal (HC) were coded as 2. So, every respondent had a mean BIF-score between 1 and 2. This variable is of ratio level (Hair et al., 2014). Two groups are compared (LC versus HC). So, it is a between-group design. All the above leads to the conclusion that ANOVA is the appropriate method of analysis (Hair et al., 2014).

3.1.3 Sample

The questionnaire was completed by thirty-six respondents. The distribution by gender was skewed (77% female versus 23% male). Most respondents were Dutch, but five were from other nationalities (Canadian, American, Czech, German, and Polish). Almost all of the respondents were highly educated (87%). In terms of age, most respondents were between eighteen and twenty-four years old (62%) and almost all respondents were younger than thirty-four (90%). One respondent was younger than eighteen. Because we could not find out whether this was a child or a young adult, we deleted the data from this respondent. Therefore, the final sample size was thirty-five.

For the manipulation check, ANOVA was the used method of analysis. The absolute minimum is that each group has a sample. The two groups (LC versus HC) consisted of respectively sixteen and twenty samples. Hair et al. (2014) recommend a sample size of at least twenty observations per group. One group (LC) does not meet this requirement. The problem of small sample sizes is especially important in research where groups are not set. In our study, the groups are set. Therefore, the slightly too small sample size is not a major constraint (Hair et al., 2014).

3.1.4 Results

The goal of the first pre-test was to test the images of food items and to test the used manipulation. The various food items were a salad, burgers with fries, a broccoli salad, a grilled cheese sandwich, an acai bowl, a dessert, raisins, and cookies. The outcome of the analysis can be found in Appendix 5.

3.1.4.1 Paired samples t-test

For the main study, it is important that the healthy food item is seen as significant healthier than the unhealthy one. At the same time, the attractiveness of the food images has to be fairly even. An overview of the means of the various items can be found in Table 1. The broccoli salad is perceived as the healthiest (M = 6.57, SD = .774). The dessert is perceived as least healthy (M = 2.03, SD = 1.071). However, a salad is mostly seen as the main course, whilst a dessert is mostly the last part of a meal. Therefore, the who food items are not comparable. Looking at the means, the attractiveness of the salad (M = 4.37, SD = 1.516) and the burger (M = 4.54, SD = 1.837) are close to each other, whilst the healthiness of the salad (M = 6.20, SD = .901) and the burger (M = 2.20, SD = 1.052) are far apart. So, the salad and burger are most suitable for the decision between a healthy and an unhealthy food item.

Food item	*Salad*	*Burger with Fries*	*Broccoli Salad*	*Grilled Cheese Sandwich*	*Acai Bowl*	*Dessert*	*Raisins*	*Cookies*
Mean Healthiness	6.20	2.20	6.57	2.40	5.57	2.03	4.63	2.31
Mean Attractiveness	4.37	4.54	4.26	4.29	6.09	4.23	3.14	4.91

Table 1: Means of the various food items

To compare the salad and the burger concerning healthiness, a paired samples t-test has been conducted with the following hypotheses:

H_0 = There is no difference between the mean of the perceived healthiness of the salad and the mean of the perceived healthiness of the burger.

H_A = There is a difference between the mean of the perceived healthiness of the salad and the mean of the perceived healthiness of the burger.

There was a significant difference in the scores for the salad (M = 6.20, SD = .901) and the burger (M = 2.20, SD = 1.052) concerning healthiness, $t(34) = 19.14$, $p < .05$ (see Table 2).

This implies that we can reject H_0 and that we can confirm H_A.

	Salad	*Burger*	*Significance of the difference*
Mean Healthiness	6.20	2.20	.000
Mean Attractiveness	4.37	4.54	.668

Table 2: Outcome paired samples t-test

Another paired samples t-test has been conducted to compare the salad and the burger concerning attractiveness. The following hypotheses have been established:
H_0 = There is no difference between the mean of attractiveness for the salad and the mean of attractiveness for the burger.
H_A = There is a difference between the mean of attractiveness for the salad and the mean of attractiveness for the burger.
The food items should be fairly even concerning attractiveness. Therefore, we do not want a significant difference and thus, we want to reject H_A and accept H_0. There is no significant difference in the scores for the salad (M = 4.37, SD = 1.516) and the burger (M = 4.54, SD = 1.837) concerning attractiveness, t(34) = -.43, p = .668 (see Table 2). This implies that H_A can be rejected and that H_0 is confirmed.

3.1.4.2 ANOVA

The effectiveness of the manipulation was tested through BIF-items (Vallacher & Wegner, 1989). The answers on these items were coded 1 (matching LC) and 2 (matching HC). A new variable was created that represented the average BIF-score. To check whether there was a significant difference between the groups (LC versus HC), a one-way ANOVA was conducted. The dependent variable (average BIF-score) is of ratio level and the independent variable (LC versus HC) is of nominal level. For ANOVA, these should be of metric (dependent) and non-metric (independent) level. So, this assumption is met. There were no outliers in the data. Also, the normal distribution of the dependent variable is sufficient (see Appendix 5). The $z_{skewness}$ value is 1.83 and the $z_{kurtosis}$ value is .47. This is below the commonly used critical value of 1.96 (Hair et al., 2014). The last assumption

concerns the equal variance across groups. As Table 10 in Appendix 5 shows, Levene's test is not significant, $F(1, 33) = 2.36$, $p = .134$. This indicates that the variances are not significantly different (Field, 2013). So, the assumption concerning equal variance across groups is met.

There is no significant effect of the adopted construal level on the average BIF-score, $F(1, 33) = .428$, $p = .518$, and thus, there is no significant difference between the groups. The mean of the HC group ($M = 1.69$, $SD = .28$) is slightly higher than the mean of the LC group ($M = 1.63$, $SD = .34$), which is the expected direction. However, this difference is not significant.

3.2 Pre-test 2

Because the burger in the first pre-test included fries and the salad was without meat, there was room for improvement concerning the pictures. Also, the outcome of the manipulation in the first pre-test was somewhat disappointing. To optimize the conditions, we conducted a second pre-test (see Appendix 2).

3.2.1 Methodology

Respondents for the second pre-test were approached individually in the researchers' own environment and they were asked to pass the question forward. First, respondents had to indicate how healthy and attractive they found two (new) food items. This procedure was similar to the first pre-test and the same measure was used (a 7-point Likert scale). This time, respondents were also asked to indicate how tasty they found the food items. Werle, Trendel, and Ardito (2013) found that the UTI did not hold in France. This indicates that the UTI does not hold in all countries. UTI has not been studied in the Netherlands. Therefore, we included the perceived tastiness in the second pre-test. In the first pre-test, a burger with fries was shown, which looked like a bigger portion of food than the salad. Also, the salad was vegetarian and the burger contained meat. These features could influence the decision of respondents. So, the new food images were a burger without fries and a salad with chicken. The chosen salad includes chicken because this is seen as the healthiest variant of meat.

The manipulation in the second pre-test was again a *how* versus *why* task, but now the *how* and *why* questions concerned one statement and the respondents had to answer three follow-up questions (*how* or *why)* about their given answers. In the first pre-test, the manipulation concerned the acts of a third person. Social distance (*me* versus *he*) is a form of psychological distance (Trope & Liberman, 2010). Psychological distance is related to a high level of construal. This might explain the positive results with HC in the first pre-test.

Therefore, the second pre-test concerns a statement focused on the respondent himself (*me*). By using less social distance, we hoped to create a better balance between LC and HC.

The used manipulation technique was derived from Freitas, Gollwitzer, and Trope (2004) and has been conducted in several studies (e.g., Fujita et al., 2006; White, Macdonnell, & Dahl, 2011; Vilches-Montero & Spence, 2014). A frequently asked question is *why* versus *how* respondents want to maintain good physical health. However, this might trigger hypotheses guessing since the experiment is about healthy food choice. Therefore, the *how* versus *why* task concerns the activity of maintaining personal relationships. This has also been used in previous research (e.g., Fujita & Han, 2009; Agrawal & Wan, 2009). The design of the second pre-test was similar to the first pre-test (see Appendix 2). However, the used language was an important difference. The first pre-test was conducted in English and the second pre-test in Dutch. Dutch was the mother tongue of most respondents. Using a second language may be related to psychological distance and thus HC. In addition, using the mother tongue may prevent misunderstandings and lower the barrier to participate. Therefore, we decided to use the Dutch language. Also, the length of the manipulation check differed. In the first pre-test, six out of the twenty-five BIF-items were used. To exclude the possibility of a disappointing outcome due to the shorter version, we included all BIF-items.

The data analysis procedure was similar to the first pre-test. The second pre-test contains the same items concerning healthiness and attractiveness of food images. Tastiness was measured using the same 7-point Likert scale. Therefore, a paired samples t-test is the appropriate method of analysis for this part. The manipulation check was extended, but again a new variable was created concerning the average BIF-score. So, the dependent and independent variables were the same as in pre-test 1 (average BIF-score). Therefore, ANOVA is again the appropriate method of analysis.

3.2.2 Sample

The original sample size of the second pre-test was thirty-seven. Of these respondents, thirty-two were between eighteen and thirty-four years old (86%). Most of the respondents were students (42%). So, younger respondents and students were overrepresented. The distribution by gender was in balance (50/50). All respondents were from the Netherlands. In Holland, approximately twenty-seven percent is highly educated (CBS, 2017). So, relative to the distribution among the population, the number of highly educated respondents was high (58%).

Unfortunately, the data of several respondents had to be deleted. Three people did not complete the manipulation task correctly. Also, four respondents had an extremely high response time (more than three times the median). This resulted in a final sample size of 30 respondents. The respondents are equally divided among the groups (LC versus HC), which means that both groups retain fifteen respondents. Again, ANOVA was used for the manipulation check. The set-up is similar to the first pre-test, and therefore the same sample size is required. The recommended sample size of at least twenty observations per group is not achieved since there are only fifteen observations per group. Again, this leads to some lack of power, but the groups are set and therefore it is not a major constraint (Hair et al., 2014).

3.2.3 Results

The goal of the second pre-test was similar to that of the first pre-test: testing the images of the food items and test the manipulation. The food items were a burger and a salad. The outcome of the second pre-test can be found in Appendix 6.

3.2.3.1 Paired samples t-test

For the use of the food images in the main study, it is important that the burger and the salad significantly differ in perceived healthiness, but do not significantly differ in perceived attractiveness. To compare the salad and the burger concerning healthiness, a paired samples t-test has been conducted with the following hypotheses:

H_0 = There is no difference between the mean of the perceived healthiness of the salad and the mean of the perceived healthiness of the burger.

H_A = There is a difference between the mean of the perceived healthiness of the salad and the mean of the perceived healthiness of the burger.

Another paired samples t-test has been conducted to compare the salad and the burger concerning attractiveness. The following hypotheses have been established:

H_0 = There is no difference between the mean of attractiveness for the salad and the mean of attractiveness for the burger.

H_A = There is a difference between the mean of attractiveness for the salad and the mean of attractiveness for the burger.

For the main study, we want food items that are fairly even concerning attractiveness. Therefore, we do not want a significant difference in attractiveness between the salad and the burger (H_0). The results are summarized in Table 3.

	Burger	*Salad*	*Significance of the difference*
Mean Healthiness	2.87	5.53	.000
Mean Attractiveness	4.77	4.70	.850
Mean Tastiness	4.47	4.53	.839

Table 3: Outcome paired samples t-test pre-test 2

The scores for the salad (M = 5.53, SD = 1.008) and the burger (M = 2.87, SD = 1.137) do differ significantly concerning healthiness, t(29) = -8.65, p < .05. This implies that we can reject H_0 and confirm H_A. So, there is a significant difference between the perceived healthiness of the salad and the burger. The scores for the salad (M = 4.70, SD = 1.393) and the burger (M = 4.77, SD = 1.382) do not differ significantly concerning attractiveness, t(29) = .191, p = .850. This implies that H_0 can be confirmed and H_A can be rejected. So, there is no significant difference between the perceived attractiveness of the salad and the burger.

The newly added third variable concerned the tastiness of the food items. Again the hypotheses were as follows:

H_0 = There is no difference between the mean of the perceived tastiness of the salad and the mean of the perceived healthiness of the burger.

H_A = There is a difference between the mean of the perceived tastiness of the salad and the mean of the perceived healthiness of the burger.

The outcomes are summarized in Table 3. UTI implies that unhealthy food is seen as tastier than healthy food. So, there should be a significant difference and thus H_0 should be rejected. However, the scores of the salad (M = 4.53, SD = 1.358) and the burger (M = 4.47, SD = 1.408) do not differ significantly, t(29) = -.21, p = .835. This implies that H_A should be rejected and that H_0 should be accepted. So, there is no significant difference between the perceived tastiness of the salad and the burger.

3.2.3.2 ANOVA

The effectiveness of the manipulation was tested in the same manner as in pre-test one, but with the full BIF (Vallacher & Wegner, 1989). Again, the items were coded 1 (matching LC) and 2 (matching HC) and a new variable was created concerning the average BIF-score. A one-way ANOVA was conducted to check whether there was a significant difference between the respondents in the different groups (LC versus HC).

To conduct an ANOVA, the dependent variable should be metric and the independent variable non-metric (Hair et al., 2014). This assumption is met since the dependent variable (average BIF-score) is of ratio level and the independent variable is of a nominal level (LC versus HC). The next assumption concerns outliers and missing values. As mentioned in paragraph 3.2.3, the data of seven respondents was deleted. Three respondents did not complete the manipulation task correctly. The answers were missing or the same answer was repeated. Also, there were some extreme response times. The median of the duration of the task was around eleven minutes. Respondents were asked to think carefully about their answers and thus response times can vary. However, the respondents were also asked to complete the task at once. Taking this into consideration, we decided to delete the respondents that had a response time higher than three times the median (2010 seconds). Four respondents were deleted with response times of respectively 8094, 2962, 2552, and 2505 seconds. Lastly, the normal distribution was sufficient ($z_{skewness} = .46$; $z_{kurtosis} = .19$) and Levene's Test was not significant, $F(1, 28) = .66$, $p = .423$ (see Appendix 6). The latter indicates that the variances are not significantly different (Field, 2013). So, the assumptions of normal distribution and equal variance across groups are met.

There was no significant effect of the level of construal on the outcome of the BIF-items, $F(1, 28) = 1.427$, $p = .242$ (see Appendix 6). The mean of LC group ($M = 1.63$, $SD = .17$) is slightly higher than the mean of HC group ($M = 1.55$, $SD = .20$). We expected a higher average BIF-score for the HC group. So, the direction of the results is exactly opposite to the expectation.

3.3 Pre-test 3

The second pre-test confirmed that we had useful pictures of food items. However, the results of the manipulation were again disappointing. To optimize the manipulation, we conducted a third pre-test (see Appendix 3).

3.3.1 Methodology

The third pre-test did not include the questions concerning the food images, but the rest was similar to the second pre-test. So, it contained an introduction, a manipulation, the same manipulation check, and some general questions (see Appendix 3). Since the first two manipulations concerning *how* and *why* questions failed, a different manipulation was used. Respondents were asked to give concrete or abstract examples of words, for instance, wine. Respondents in the LC group had to give a concrete example of the words, for instance, a merlot in the case of wine. Respondents in the HC group had to answer the question where the

given word was an example of. For instance, wine is an example of an alcoholic beverage. This manipulation was based on Fujita et al. (2006). It was a new method, but they confirmed this manipulation technique with a significant result. Respondents for the third pre-test were again approached personally through WhatsApp, Facebook, and e-mail. In addition, persons were randomly approached at the Radboud University in Nijmegen.

The effectiveness of the manipulation was again tested with BIF-items (Vallacher & Wegner, 1989) and the items were coded 1 (matching LC) versus 2 (matching HC). Again, a new variable was created concerning the average BIF-score. Since the manipulation check remained the same, ANOVA was the appropriate method of analysis with the third pre-test.

3.3.2 Sample

The original sample size was forty-five. Again, most respondents (91%) were young (between 18 and 34) and a considerable part of the respondents were students (44%). The distribution by gender is a bit skew, but not problematic (40% male and 60% female). Almost half of the respondents were highly educated (49%). Just as in the second pre-test, all respondents were from the Netherlands.

Again, data of several respondents was deleted. There were five respondents with an extremely high response time (2 ½ times the median). Also, a group of respondents filled in the questionnaire at a small distance of the researchers. One person was not paying attention. He was trying to be funny with his answers and he was discussing the study, including possible answers on questions, with people that were passing by that he knew. Lastly, there was one respondent that did not fill in the questionnaire correctly. In total, the data of seven respondents was deleted. This resulted in a final sample size of thirty-eight. The respondents were equally distributed among the groups, resulting in nineteen observations per group. This is close to the recommended twenty observations per group (Hair et al., 2014). It is not a great sample size, but it is tolerable.

3.3.3 Results

The goal of the third was to optimize the manipulation for the main study. The used analysis method was ANOVA. The purpose of this analysis was to check whether there was a significant difference between the respondents in the different conditions (LC versus HC).

Just as in the first and second pre-test, the dependent variable (average BIF-score) is of ratio level and the independent variable is of a nominal level (LC versus HC). This is suitable for ANOVA. Concerning the outliers, the data of seven respondents were deleted because the

task was performed incorrectly and because of extreme response times. Again, it was a task where the respondents had to think carefully about their answers. This might explain some of the variances in response time. However, the third pre-test consisted of fewer tasks than the first two pre-tests and respondents were asked to complete the questionnaire at once. For this reason, the difference in response time should be a bit smaller. Therefore, we deleted the data of the respondents that had a response time of more than 2 ½ times the median (634 seconds). This involved five respondents with response times of respectively 9104, 3663, 2968, 1921, and 1517 seconds. The normal distribution is sufficient ($z_{skewness}$ =.24; $z_{kurtosis}$ = .45; see Appendix 6). Levene's test was not significant, F(1, 36) = ,285, p = .597. So, the assumptions for ANOVA are met.

Again, there is no significant effect of the construal level condition on the average BIF-score, F(1, 36) = .188, p = .667 (see Appendix 7). Surprisingly, just as in pre-test 2, the means are in the opposite direction than expected. The mean of the LC group (M = 1.62, SD = .19) is higher than the mean of the HC group (M = 1.59, SD = .20).

Fujita et al. (2006) used the same manipulation method and did find a significant result. They only used eight of the BIF-items. It is possible that the manipulation only influences the mind-set for a short amount of time. To check this, we ran another ANOVA, but with the mean of the first eight BIF-items (see Appendix 7). The dependent and independent variable remain the same. Outliers were already checked. The dependent variable has a normal distribution ($z_{skewness}$ = .08; $z_{kurtosis}$ = .1.04). Levene's test is not significant, F(1, 36) = .011, p = .915. So, all the assumptions for ANOVA are met.

The outcome has improved (see Appendix 7), but there still is no significant effect (p = .175). The effect of the construal level condition on the outcome of the BIF-items has improved, F(1, 36) = 1.911, p = .175. Also, the direction of the differences in means is correct now. The mean of the LC group (M = 1.54, SD = .26) is lower than the mean of the HC group (M = 1.65, SD = .24). Apparently, there is a small, but not significant, effect of the manipulation. However, it does not last long.

4. Methodology main study

After the conditions were optimized in line with the results of the pre-test, the main study was conducted. The main experiment consisted of an introduction, a manipulation of the construal level of respondents, a choice between a healthy and an unhealthy dish, a manipulation check, a lateral check, a check on the assessment of the dishes used, and some general questions (see Appendix 4).

4.1 Methodology

For the main experiment, the potential respondents were mainly approached via online channels, for example, e-mail, Facebook, and forums. Since the results of the manipulation check in the third pre-test were the best, this manipulation of the construal level was used. After the manipulation, respondents had to choose between the healthy and unhealthy food items. After this, a manipulation check was conducted. From the results of the pre-tests, we concluded that respondents did not stay in the manipulated state during the full questionnaire. Also, the authors of the article from whom we derived the manipulation used only eight out of twenty-five questions. Therefore, we decided to only include eight BIF-items. This also contributed to the limited time that was required to complete the main study.

For the decision between a healthy and an unhealthy food item, we used the method of study 1B of Romero and Biswas (2016). Studies 1A and 1B had the same findings. The first study, 1A, was conducted with actual restaurant menus and the second study, 1B, was conducted on a computer (Romero & Biswas, 2016). To minimize the impact on the respondents, study 1B is repeated. The findings were the same, but by conducting the experiment on a computer the effort asked from the respondents is limited. Thus, the respondents had to choose between two food items, a burger and a salad. These options were presented in a set. Combined with the two different construal levels, this resulted in four different groups. Two of these groups saw the healthy option to the left and the unhealthy option to the right. For the other two groups, this was the opposite. So, the healthy option is positioned to the right and the unhealthy option to the left.

To check if the respondents organized the healthy and unhealthy items according to the hypotheses, we also conducted a lateral check. This task was similar to study 2A of Romero and Biswas (2016). On the screen, respondents saw two empty boxes named “left box” and “right box”. Respondents were given six word pairs and they were asked which word they would place in the left box. After the lateral check, the assessment of the images

with food items was checked. Respondents were asked to indicate how healthy, attractive and tasty they found the two food items presented earlier.

Lastly, some questions containing control factors were included. The control factors were hunger, mood, and to what extent respondents engage in healthy eating. Finkelstein and Fishbach (2010) showed that there is a link between healthy food and hunger. It is possible that people that are more hungry, choose the unhealthy option more often since healthy food is associated with hunger instead of taking away the feeling of being hungry. Garg, Wansink, and Inman (2007) showed that mood also influences food choice. When people are sad, the likelihood that they choose hedonic food (the unhealthy option) increases. When people are happy, this likelihood decreases. Fedorikhin and Patrick (2010) also showed that people in a positive mood choose the healthy option more often. Therefore, mood was included as a control factor. Being engaged in healthy eating could also influence the decision. Lastly, some general factors were included. These questions included diet, gender, age, education, and handedness.

Some questions concerning the control factors, might be sensitive. For this reason, these questions were placed at the end of the questionnaire. This entails a higher willingness to answer these questions (Malhotra, 2006). Hunger, mood and engagement in healthy eating are measured by means of a 7-point Likert scale because these are easy to understand for respondents (Malhotra, 2006). With a study containing several tasks, there is the possibility that respondents suspect that there is a relation between the different tasks and even that they guess the hypotheses. To prevent that the data was being influenced through hypotheses guessing, a “funneled debriefing” was included (Bargh & Chartrand, 2000). This part consisted of questions about the expected purpose and relatedness of the tasks (see Appendix 4).

4.2 Sample

With the main study, 290 individual respondents started the survey. In total, 218 respondents completed the study. 144 of these respondents were between eighteen and thirty-four (66%) and ninety-four of the respondents were students (43%). The distribution by gender is skewed. Of the respondents, only 25% was male. Most respondents were Dutch, but there were eight respondents from other nationalities (Belgian (3), German (3), Italian (1), and Moroccan(1)). Just as in the pre-tests, the majority of the respondents was highly educated (63%).

We deleted the data of several respondents. Respondents were asked to complete the survey at once, but with extreme high response times it is questionable if the respondent followed this instruction. The main study consisted of several tasks and this might explain some of the variation in response time. We used three times the median as a guideline for exclusion. Seven respondents had a response time that was higher and their data was deleted. One respondent did not perform the manipulation task correctly and two respondents gave answers as if they were in the opposite condition (low versus high). This indicates that they did not read the instructions well, so their data was also deleted. Unfortunately, three people did not make a decision between the healthy and unhealthy food items. Since this decision is the main outcome of our study, we could not use their answers. Lastly, the data of four respondents was deleted based on their answers about the hypotheses or the comments in general. Three of them were quite close with their ideas concerning the hypotheses and this might have influenced their answers. One person commented that he was drunk while filling in the questionnaire. After the deletion, the final sample size was 201. Hair et al. (2014) recommend a sample size of ten per estimated parameter. The dependent variable has two outcomes, burger or salad. The used model includes four independent variables. This leads to a recommended sample size of 10*2*4 = 80. Leech, Barrett, and Morgan (2014) recommend a sample size of twenty per independent variable, with a minimum of sixty observations in total. This again leads to a recommended sample size of 4*20 = 80. This leads to the conclusion that the sample size of 201 is sufficient.

4.3 Data analysis procedure

The main study concerns differences between groups. The dependent variable is the food choice, a categorical variable. More concrete, the outcome variable is dichotomous. The independent variables are ‘Position Food’ and ‘Construal Level’. The variable ‘Position Food’ is a nominal variable in which two groups can be distinguished: a group with the healthy option on the right and a group with the healthy option on the left. The variable ‘Construal Level’ is also nominal. It consists of two groups which differ in the adopted level of construal (low versus high). Since the variables, in this case, are non-metric, logistic regression is the appropriate method of analysis.

4.4 Addressing the ethics

Participation in the studies was voluntary and respondents could withdraw from participation at any time. The respondents were informed that the data was processed anonymously. All respondents received an introduction concerning the structure and the

expected duration of the experiment. There were no risks involved in participating. We did not inform the respondents immediately about the purpose of the studies, to prevent that the purpose was discussed with potential respondents. The possibility was given to send an e-mail or to fill in contact information to be informed about the purpose and/or the outcomes of the studies. Also, respondents were given contact information of both researchers. Respondents were informed that they could contact the researcher if there were any questions about the experiment. All experiments contained only needed questions to avoid asking unnecessary effort from respondents.

5. Results main study

5.1 Manipulation check

In the main study, a manipulation check was implemented in the experiment after the question concerning the decision between the salad and the burger. The effectiveness of the manipulation was checked similar to the pre-tests, thus through the Behavioral Identification Form (Vallacher & Wegner, 1989). For the analysis, the items were coded 1 (matching LC) versus 2 (matching HC). Just as with the pre-tests, a new variable was created for the average score on the BIF-items. ANOVA was the used method of analysis. The purpose was to check whether there was a significant difference in the adopted construal level between the respondents in the different conditions (low versus high).

The dependent variable is the average score on the BIF-items and thus it is of ratio level. The independent variable is the construal level condition (low versus high), which is nominal. This is suitable for ANOVA. Some respondents were already deleted because they did not complete the experiment correctly and some were deleted because they were really close to guessing the hypotheses. Concerning the outliers, seven out of the 218 respondents had a response time that was longer than three times the median. The normal distribution of the dependent variable is sufficient ($z_{skewness}$ = .33; $z_{kurtosis}$ = 1.46; see Appendix 8). The variances are not significantly different, since Levene's test was not significant, F(1, 199) = 1.92, p = .168 (Field, 2013). So, the assumptions for ANOVA are met.

The results can be found in Appendix 8. The outcome of the one-way ANOVA is not significant. This indicates that there is no significant effect of the construal level condition on the outcome of the BIF-items, F(1, 199) = .038, p = .845. The mean of LC (M = 1.57, SD = .24) is equal to the mean of HC (M = 1.57, SD = .22).

In paragraph 3.3.3 I argued that the manipulation might only influence the mind-set for a short amount of time. Respondents had to make the decision between a salad and a burger after the manipulation. The manipulation check was implemented after this decision. Therefore, it is possible that the respondents did not stay in the mind-set during the full manipulation check. To control for this argumentation, I conducted another ANOVA, but with only four out of the eight BIF-items. The results of this analysis can be found in Appendix 8. The dependent and independent variables are the same as in the first analysis. Also, the outliers were already checked. The normal distribution of the dependent variable is skew ($z_{skewness}$ = 3.125; $z_{kurtosis}$ = .59). Because of the large sample size, this is not problematic (Hair

et al., 2014). Levene's test is not significant, $F(1, 199) = 1.140$, $p = .287$. Again, all the assumptions of ANOVA are met.

The outcome of the analysis is improved compared to the analysis with eight BIF-items. There is a significant effect ($p < .05$). So, the effect of the construal level condition on the outcome of the BIF-items has improved, $F(1, 199) = 5.353$, $p < .05$. The mean of LC ($M = 1.69$, $SD = .23$) is lower than the mean of HC ($M = 1.76$, $SD = .21$). So, the direction of the difference in the means is also correct. Apparently, there is a significant effect of the manipulation on the adopted level of construal. However, it does not last long.

5.2 Meeting the assumptions for logistic regression

The independent variables are 'Position Food' and 'Construal Level'. They both have two categories and thus they are nominal. The dependent variable is 'Food Choice'. Respondents could choose between two items, a salad, and a burger. So, this variable is also of a nominal level. With logistic regression, each observation should be independent. The questionnaire was taken by individual respondents, so this assumption is met. We only want to include relevant variables. For this reason, the stepwise method is followed.

Multicollinearity can have a biasing effect with logistic regression (Field, 2013). To check for multicollinearity, the analysis for linear regression in SPSS was used with the same independent and dependent variables (see Appendix 9). Table 3 shows the tolerance and VIF values. A tolerance value of .1 or higher and a VIF value lower than 10 is acceptable. Table 4 shows that the used variables meet this requirement. Therefore, the assumption of multicollinearity is met.

	Tolerance	*VIF*
'Position Food'	.993	1.007
'Construal Level'	.998	1.002
'Attractiveness Burger'	.995	1.005
'Attractiveness Salad'	.998	1.002

Table 4: Multicollinearity

5.3 Building the model and checking the control variables

We systematically build up the model by adding variables. The main effect from our theory is the positioning of the food, therefore, we started with a model (model 1) that

includes the association between ‘Position Food’ and the decision (Field, 2013). We hypothesized that the adopted construal level might influence the effect of lateral positioning on the decision. For this reason, we added ‘Construal Level’ in the second model (model 2). We also expected an interaction between ‘Position Food’ and ‘Construal Level’, so this was added (model 3). According to the literature, some variables may influence the food choice. These variables are added one by one. Table 5 includes ‘Attractiveness Burger’ (model 4) and ‘Attractiveness Salad’ (model 5). In Table 6 shows the outcomes when the other variables are added. Model 6 includes ‘Healthy Lifestyle’. Next, ‘Hunger’ is added (model 7). Lastly, ‘Mood’ is added (model 8). The outcome of this stepwise method can be found in Appendix 10. No significant model was found with ‘Position Food’, ‘Construal level’, and the interaction-effect (see Table 5). After adding the variable ‘Attractiveness Burger’ the model became significant ($\chi^2 = 41.573$, $p < .05$). Adding the variable ‘Attractiveness Salad’ improved the model significantly ($\chi^2 = 62.779$, $p < .05$). It also increased the prediction ability (81.6% versus 70.1%; see Table 5). The other control variables do not significantly improve the model (see Table 6). Thus, the fifth model including ‘Position Food’, ‘Construal level’, the interaction-effect, ‘Attractiveness Burger’, and ‘Attractiveness Salad’ has the best model fit.

	Base Model	*Model 1*	*Model 2*	*Model 3*	*Model 4*	*Model 5*
Percentage Correct	64.7	64.7	64.7	64.7	70.1	81.6
Model Significance		.380	.622	.213	.000	.000
Block Significance		.380	.672	.060	.000	.000
-2 Log Likelihood	261.069	260.299	260.120	256.581	215.008	152.229

Table 5: Outcome theory-based control variables, model 1 to 5

	Base Model	*Model 5*	*Model 6*	*Model 7*	*Model 8*
Percentage Correct	64.7	81.6	81.1	83.6	81.6
Model Significance		.000	.000	.000	.000
Block Significance		.000	.279	.162	.159
-2 Log Likelihood	261.069	152.229	151.055	149.095	147.112

Table 6: Outcome theory-based control variables, model 5 to 8

After finding the model with the best fit, we checked if some control variables would improve this fit. We controlled for 'Hunger', 'Diet', 'Gender', 'Age', 'Education', an interaction between 'Position Food' and 'Handedness', and an interaction between 'Construal Level', 'Position', and 'Handedness'. None of the control variables significantly improved the model fit (see Table 7 and 8). For the complete overview of the outcomes see Appendix 10.

	Used Model	*Hunger*	*Diet*	*Gender*	*Age*
Percentage Correct	81.6	82.6	82.6	81.6	81.6
Block Significance		.194	.310	.067	.727
-2 Log Likelihood	152.229	150.541	151.197	148.864	152.107

Table 7: Outcome control variables

	Used Model	*Education*	*Position x Handedness*	*Position x Construal x Handedness*
Percentage Correct	81.6	83.1	82.3	81.8
Block		.183	.529	.181

Significance				
-2 Log Likelihood	152.229	143.395	149.818	148.429

Table 8: Outcome control variables

There might be a possibility that only 'Attractiveness Burger' and 'Attractiveness Salad' determine the model. For this reason, we checked whether a model with only these variables would significantly improve by adding 'Positioning Food', 'Construal Level', and the interaction-effect. The results can be found in Appendix 10. Adding the variables 'Positioning Food' and 'Construal Level' did not significantly improve the model, but with the interaction 'Positioning Food by Construal Level' the model did improve significantly ($\chi^2 = 7.753$, $p < .05$; see Table 9). Therefore, we can conclude that the model with the independent variables 'Position Food', 'Construal level', 'Position Food x Construal Level', 'Attractiveness Burger', and 'Attractiveness Salad' has the best fit.

	'Attractivenss Burger' + 'Attractivenss Salad'	*'Positioning Food' added*	*'Construal Level' added*	*Interaction effect added*
Percentage Correct	80.6	80.1	81.6	81.6
Block Significance		.498	.298	.005
-2 Log Likelihood	161.525	161.066	159.982	152.229

Table 9: Outcome added value of theorized variables

5.4 Model fit

Testing the used model against the base model results in a significant outcome ($\chi^2 = 108.840$, $p < .05$). The -2LL decreases (261.069 versus 152.229), which indicates a better model fit (Hair et al., 2014). Also, the predictive ability increases for the used model against the base model (81.6% versus 64.7%). The variables 'Attractiveness Burger' and 'Attractiveness Salad' have a significant influence ($p < .05$) on the decision outside the model.

The Hosmer and Lemeshow Test shows whether the predicted and measured values of the dependent variable match. Therefore, a non-significant outcome is desirable since this indicates that there is no significant difference between the predicted and measured values

(Hair et al., 2014). In this case the Hosmer and Lemeshow Test is not significant (χ^2 = 10,741, p = .217). This indicates that the model has an acceptable fit (Hair et al., 2014).

The R^2-like measures indicate a moderately strong relationship between the independent variables and the grouping based on choice. Table 10 shows that the used model can explain almost half of the variance. The overall model has a predictive accuracy of 81.6%. The model does make a better prediction for the salad than for the burger (87.7% versus 70.4%; see Appendix 11).

R^2-like measures	
Cox & Snell R^2	.418
Nagelkerke R^2	.575
Pseudo R^2	.417

Table 10: R^2-like measures

5.5 The results

All variables make a significant contribution to the prediction (p < .05), except 'Position Food' (p = .201; see Table 11). The exp(B) value of 'Construal Level' indicates that when the adopted construal level switches from 0 (LC) to 1 (HC) the odds ratio is 6.95 times as large. This indicates that within the model, people that adopted a high construal level are 6.95 times more likely to choose the salad. For 'Attractiveness Salad' the exp(B) value is 4.34. So, if the 'Attractiveness Salad' increases by one, the person is 4.34 times more likely to choose the salad. The odds ratio of 'Attractiveness Burger' (exp(B) = .359) is lower than one. This indicates that when the perceived attractiveness of the burger increases, the likelihood of choosing the salad decreases. The confidence interval for the odds ratio of the discussed variables does not contain the value one. So, the direction of the effect is true in the population (Field, 2013). Behind the interaction-effect between 'Construal Level' and 'Positioning' are four pre-set groups. So, the interaction-effect cannot be interpreted correctly. For this reason, another logistic regression is conducted.

	B	*S.E.*	*Sig.*	*Lower*	*Odds Ratio*	*Upper*
'Position Food'	.693	.542	.201	.691	2.001	5.793
'Construal Level'	1.939	.733	.008	1.653	6.952	29.245

'Position Food by Construal Level'	-2.405	.904	.008	.015	.090	.531
'Attractiveness Burger'	-1.024	.182	.000	.251	.359	.514
'Attractiveness Salad'	1.468	.247	.000	2.675	4.341	7.043

Table 11: Outcome Logistic Regression

To interpret the interaction-effect, another logistic regression is conducted. The variables concerning 'Position Food' and 'Construal Level' are replaced by the variable 'Group'. 'Group' is a categorical variable comprising the four different groups (LC and Healthy Right, LC and Healthy Left, HC and Healthy right, and HC and Healthy left). The outcome can be found in Appendix 12. The four groups are pre-set groups categorized by the positioning of the food items and the construal level condition. The outcome of the model fit corresponds with the outcome of the previous logistic regression with 'Position Food', 'Construal Level', and 'Position Food by Construal Level'. Table 12 shows the results for the variables in the equation.

	B	*S.E.*	*Sig.*	*Lower*	*Odds Ratio*	*Upper*
'Attractiveness Burger'	-1.024	.182	.000	.251	.359	.514
'Attractiveness Salad'	1.468	.247	.000	2.675	4.341	7.043
Group			.047			
Group(1)	-.228	.563	.685	.264	.796	2.398
Group(2)	.466	.522	.373	.573	1.593	4.432
Group(3)	1.711	.696	.014	1.413	5.535	21.675

Table 12: Outcome Logistic Regression with 'Group'

Again, 'Attractiveness Burger' and 'Attractiveness Salad' have a significant Wald statistic ($p < .05$). So, these variables significantly contribute to the prediction of the outcome (Field, 2013). The variable 'Group' also makes a significant contribution ($p < .05$). From the base, only 'Group(3)' differs significantly. The base group concerns the respondents in the condition HC and healthy left. The third group, that differs significantly from this base group,

concerns the respondents in the condition HC and healthy right. The odds ratio is above one and thus, when a high construal level is adopted, the chance of choosing the salad increases if the healthy food item is positioned to the right, confirming hypothesis three. The confidence interval for the odds ratio of this variable does not contain the value one. So, the direction of the effect is true in the population (Field, 2013). 'Group(1)' and 'Group(2)' do not significantly differ from the base group. However, we can see that the B-value is the highest for 'Group(3)' (B = 1.711). The B-value is positive, so the chance of choosing the salad increases. This latter is also the case for 'Group(2)' (B = .466), but the difference with the base group is not significant (p = .373). The B-value of 'Group(1)' is negative, so the chance of choosing the salad decreases for respondents in 'Group(1)' compared to the base group. According to these results, we can order the groups according to the chance that a member of the group chooses the healthy food item relative to each other. The order would then be:

1. 'Group(1)', which is the **low** construal level condition with the healthy option positioned to the **right**.
2. The reference group, which is the **high** construal level condition with the healthy option positioned to the **left**.
3. 'Group(2)', which is the **low** construal level condition with the healthy option positioned to the **left**.
4. 'Group(3)', which is the **high** construal level condition with the healthy option positioned to the **right**.

There is a significant difference between the HC groups ($p < .05$). Since the base group was a HC group, it is not clear whether the groups in the low construal level condition differ significantly from each other. They did not differ significantly from the used base group (HC and healthy left; see Table 12). Rerunning the logistic regression with the first group (LC and healthy right) shows that only the group in the condition HC and healthy right differs significantly from the first group ($p < .05$; see Appendix 12). The low construal level condition groups do not differ significantly ($p = .201$), challenging hypotheses two and four.

In addition, 'Group(2)' does differ significantly ($p < .05$) when the base model is the condition LC and healthy right. According to the hypotheses, 'Group(2)' (HC, healthy right) should have an increased likelihood of choosing the healthy option compared to the base group (LC, healthy right). The B-value is positive (B = 1.939) and the odds ratio is higher than one (Exp(B) = 6.952). This indicates that that 'Group(2)' indeed has an increased likelihood of choosing the salad compared to the base group. So, this also implies that when

the healthy option is positioned to the right and the adopted construal level is low, the likelihood of choosing the healthy option decreases. This confirms hypothesis four.

5.6 Controlling for the effect of lateral positioning

5.6.1 High construal level condition

From the above-mentioned results we can conclude that there are groups that differ significantly. To confirm that the significant difference between the two groups in the high construal level condition is due to the positioning of the food items, we conducted another logistic regression with only the data of the respondents in the high construal level condition. We made two models: the first model contains 'Position Food' and in the second model 'Attractiveness Burger' and 'Attractiveness Salad' are added. Because the control variable 'Gender' was close to significant ($\chi^2 = 3.365$, $p = .067$), we added a third model with this variable to control whether this would improve the model significantly. The results can be found in Appendix 13.

Table 13 shows that the first model is significant ($\chi^2 = 3.857$, $p < .05$), but the percentage of correct estimates does not increase compared to the base model and it does not explain many of the variance (Nagelkerke $R^2 = .055$; Cox & Snell $R^2 = .040$). Adding the variables 'Attractiveness Burger' and 'Attractiveness Salad' significantly improves the model ($\chi^2 = 50.640$, $p < .05$). The percentage of correct estimates also increases and the explained variance is also higher (Nagelkerke $R^2 = .605$; Cox & Snell $R^2 = .437$). The variable gender does not lead to a significant improvement in model fit ($\chi^2 = 1.654$, $p = .198$). So, we can conclude that the second model has a better model fit.

	Base	*Model 1*	*Model 2*	*Model 3*
Percentage Correct	66.3	66.3	82.1	83.2
Model Chi-Square		3.857	54.497	56.150
Model Significance		.050	.000	.000
Block Chi-Square		3.857	50.640	1.654
Block Significance		.050	.000	.198
Nagelkerke R Square		.055	.605	.619
Cox & Snell R Square		.040	.437	.446
-2 Log Likelikhood	121.395	117.537	66.898	65.244
Hosmer and Lemeshow Test		.	.571	.693

Table 13: Outcome HC

Model 2 is considerably better than the base model. A decrease of the -2LL indicates a better model fit (Hair et al., 2014). The -2LL of the base model is 121.395, whilst the -2LL of model two is 66.898. Also, the predictive ability increased from 66.3% to 82.1%. The Block Chi-Square shows that including the variables in the model leads to a significant improvement of the model ($\chi^2 = 50.640$, $p < .05$).

The Hosmer and Lemeshow Test shows whether there is a correlation between the predicted and the measured dependent variable. A significant outcome implies that there is a significant difference. Therefore, we do not want a significant result for the Hosmer and Lemeshow Test. With model 2, there is no significant difference between the predicted and the measured dependent variable ($\chi^2 = 5{,}736$, $p = .571$). This implies that the model has an acceptable fit (Hair et al., 2014).

The R^2-like measures can range between zero and one. An outcome of one indicates a perfect model fit. Table 14 shows that model 2 explains approximately half of the variance of the dependent variable. The overall model has a predictive accuracy of 82.1% (see Appendix 13). Again, the model makes a better prediction of the respondents that will choose a salad (87.3%) than the respondents that will choose a burger (71.9%).

	R^2-like measures
Cox & Snell R^2	.437
Nagelkerke R^2	.605
Pseudo R^2	.449

Table 14: R^2-like measures

All the variables in the model have a significant Wald statistic ($p < .05$; see Table 15). This leads to the conclusion that the variables 'Position Food', 'Attractiveness Burger', and 'Attractiveness Salad' significantly contribute to the prediction of the outcome (Field, 2013). Table 14 shows the odds ratios. The variable 'Position Food' is categorical with two values, to wit zero (healthy right) and one (healthy left). The B-value of 'Position Food' is negative (B = -.1473) and the odds ratio is lower than one (Exp(B) = .229). This indicates that when the value of 'Position Food' shifts from zero (healthy right) to one (healthy left), the chance of choosing the salad decreases. This confirms hypotheses one and three. However, this is only true when combined with the variables 'Attractiveness Burger' and 'Attractiveness Salad'. So, the lateral positioning of food items influences the decision for people that adopted a high construal level when combined with the perceived attractiveness of the food choices. The

direction of the variables ‘Attractiveness Burger’ and ‘Attractiveness Salad’ is logical. If the perceived attractiveness of the burger increases, the chance of choosing the salad decreases (B = -1.161; Exp(B) = .313). For the perceived attractiveness of the salad, the opposite holds. If the perceived attractiveness of the salad increases, the chance of choosing the salad increases (B = 1.186; Exp(B) = 6.117). Lastly, the values of the confidence interval for the odds ratio of the variables do not contain the value one. This leads to the conclusion that the direction of the effect is true in the population (Field, 2013).

	B	*S.E.*	*Sig.*	*Lower*	*Odds Ratio*	*Upper*
‘Position Food’	-.1473	.686	.032	.060	.229	.879
‘Attractiveness Burger’	-1.161	.300	.000	.174	.313	.564
‘Attractiveness Salad’	1.186	.319	.000	1.753	3.275	6.117

Table 15: Outcome Logistic Regression HC

5.6.2 Low construal level condition

To get more insight in the non-significant difference between the two groups in the low construal level condition, we also conducted a logistic regression with the data of these groups. The structure is similar to the logistic regression with the HC groups. Three models were made: the first model contains ‘Position Food’, with the second model ‘Attractiveness Burger’ and ‘Attractiveness Salad’ are added, and with the third model the control variable ‘Gender’ is added. The results can be found in Appendix 14.

The first model is not significant (χ^2 = .419, p = .518) and the percentage of correct estimates did not increase compared to the base model (63.2%; see Table 16). Adding the variables ‘Attractiveness Burger’ and ‘Attractiveness Salad’ does improve the model significantly (χ^2 = 55.796, p < .05). This model is significant (χ^2 = 56.215, p < .05). After adding these variables, the percentage of correct estimates improves from 63.2% to 81.1%. The explained variance also improved (Nagelkerke R^2 = .563; Cox & Snell R^2 = .412). Adding the variable ‘Gender’ does not improve the model significantly (χ^2 1.885, p = .170). It does improve the predictive power from 81.1% to 83.0% and the explained variance is also improved (Nagelkerke R^2 = .577; Cox & Snell R^2 = .422). However, the improvement is not

great and it is not significant (χ^2 1.885, p = .170). This leads to the conclusion that the second model has the best model fit.

	Base	*Model 1*	*Model 2*	*Model 3*
Percentage Correct	63.2	63.2	81.1	83.0
Model Chi-Square		.419	56.215	58.100
Model Significance		.518	.000	.000
Block Chi-Square		.419	55.796	1.885
Block Significance		.518	.000	.170
Nagelkerke R Square		.005	.563	.577
Cox & Snell R Square		.004	.412	.422
-2 Log Likelikhood	139.462	139.044	83.248	81.363
Hosmer and Lemeshow Test		.	.063	.913

Table 16: Outcome LC

Compared to the base model, model 2 is considerably better. There is a decrease in the -2LL (see Table 16), which indicates a better model fit (Hair et al., 2014). The predictive ability also increased (63.2% versus 81.1%). Also, the Block Chi-Square shows that including the variables in the model leads to a significant improvement ($\chi^2 = 55.796$, $p < .05$). The outcome of the Hosmer and Lemeshow Test is not significant ($\chi^2 = 14{,}804$, $p = .063$). So, there is no significant difference between the predicted and the measured dependent variable. This implies that the model has an acceptable fit (Hair et al., 2014).

The explained variance from the model is close to half of the variance of the dependent model (see Table 17). The overall model has a predictive accuracy of 81.1%. Just as with HC, the model makes a better prediction for respondents that will choose the salad (88.1%) compared to the respondents that will choose the burger (69.2%).

	R^2-like measures
Cox & Snell R^2	.412
Nagelkerke R^2	.563
Pseudo R^2	.403

Table 17: R^2-like measures

Table 18 shows that the Wald statistic of 'Position Food' is not significant (p = .169). This indicates that this variable does not significantly contribute to the prediction of the outcome (Field, 2013). Since there was no significant difference between the two groups in the low construal level condition, this was expected. The variables 'Attractiveness Burger' and 'Attractiveness Salad' do have a significant influence on the decision between the burger and the salad. The odds ratio of 'Attractiveness Burger' is lower than one (.360) and the B-value is negative (-1.021). This indicates that an increase in the perceived attractiveness of the burger leads to a decrease in the chance that the respondent chooses the salad. The odds ratio of 'Attractiveness Salad' is higher than one (5.680) and the B-value is positive (1.737). So, an increase of the perceived attractiveness of the salad leads to an increase in the chance that a respondent chooses the salad. The variable 'Position Food' is categorical. It has two values, to wit zero (healthy right) and one (healthy left). Table 18 shows that when there is a shift from the value zero (healthy right) to one (healthy left), the chance that the respondent chooses the salad increases (B = .786; Exp(B) = 2.195). This is in line with hypotheses two and four, but the influence of this variable does not significantly contribute to the prediction of the outcome. So, the direction is correct, but it is not significant.

	B	*S.E.*	*Sig.*	*Lower*	*Odds Ratio*	*Upper*
'Position Food'	.786	.572	.169	.715	2.195	6.737
'Attractiveness Burger'	-1.021	.249	.000	.221	.360	.587
'Attractiveness Salad'	1.737	.386	.000	2.666	5.680	12.101

Table 18: Outcome Logistic Regression LC

6. Discussion

6.1 Conclusion

6.1.1 The influence of construal level on positioning

In accordance to Romero and Biswas (2016), lateral positioning can influence food choice. However, this effect is influenced by the adopted construal level. Lateral positioning of food images significantly influences food choice when a high construal level is adopted. When a low construal level is adopted, the influence of lateral positioning is not significant. So, we can conclude that the adopted level of construal influences the effect of lateral positioning. We hypothesized four outcomes for the different groups. Of the four hypotheses, three were confirmed:

> H1: If the healthy choice is positioned to the **left** and the adopted construal level is **high**, the likelihood of choosing the healthy option **increases**.

> H3: If the healthy option is positioned to the **right** and the adopted construal level is **high**, the likelihood of choosing the healthy option **increases**.

> H4: If the healthy option is positioned to the **right** and the adopted construal level is **low**, the likelihood of choosing the healthy option **decreases**.

Hypothesis two (if the healthy choice is positioned to the left and the adopted construal level is low, the likelihood of choosing the healthy option increases) is not confirmed. The outcome was in the right direction, but the difference was not significant.

From the results, we can conclude that construal level has an influence on positioning. A more in-depth analysis of the results showed that the effectiveness of the influence of positioning depends on the adopted construal level. People that adopted a high construal level, are influenced by lateral positioning. However, people that adopted a low construal level, are not significantly influenced by lateral positioning. Remember, all the above only holds in a model including the perceived attractiveness of the shown food items.

We checked for UTI in pre-test two. There was no significant difference between the perceived tastiness of the salad and the burger. This might explain the disappointing result for respondent in the low construal condition. UTI does not hold in the Netherlands, so unhealthy is not seen as more tasty. According to the current literature, the idea is that unhealthy is seen as more tasty. Therefore, the unhealthy option should be the “good” option on the short-term. After all, the short-term consequence of good taste is enjoyment. Our results challenge this

theory. The UTI does not hold, so the unhealthy option is not seen as more tasty. This means that the short-term consequence of enjoyment through better taste is not per definition achieved by choosing the unhealthy option. The unhealthy option is no longer the "good" option. This also explains why the perceived attractiveness is important. Unhealthy is not per definition tasty, so the choice depends on the perceived attractiveness. For respondents in the low construal condition, the short-term consequences are salient. The expected short-term consequences like enjoyment depend on the perceived attractiveness of the food items. Long-term consequences are not important and thus, there are no conflicting motives. Therefore, it is the attractiveness of the food items that determents the choice.

For the respondents in the high construal level, the long-term consequences should become salient. The perceived attractiveness is focused on short-term consequences. Long-term consequences depend on the healthiness of the food item. Now that the healthiness is also important, the lateral positioning can have an influence on choice. There might be conflicting motives through the perceived attractiveness and the perceived healthiness of the food items. If the motives are conflicting, a fit with the mental representation increases the influence of cognition on the choice. This leads to an increase in the likelihood of choosing the healthy option. The theory is based on the assumption that there are conflicting motives. So, with the respondents in the high construal level condition the theory is applicable. With the people in the low construal condition, there are less conflicting motives since the short-term consequences are salient. This may explain why the results do not follow the proposed theory.

6.1.2 Unhealthy = tasty intuition

As mentioned above, the UTI did not hold in the second pre-test. Respondents were asked to rate the food items based on perceived tastiness. Raghunathan, Naylor, and Hoyer (2006) found that consumers link unhealthy to tasty. There should be a negative relationship between healthiness and taste, this is the unhealthy = tasty intuition. Mai and Hoffman (2015) confirmed this intuition. Remarkably, we did not find this link between the unhealthy item and tastiness in the second pre-test. There was no significant difference between the perceived healthiness of the food items. Previous research confirming the UTI has been conducted in America. Werle, Trendel, and Ardito (2013) found that the UTI is the opposite in France. Healthy food was linked to tastiness, so apparently, there is a healthy = tasty intuition in France. We did not find a significant difference between the food items. So, both healthy and

unhealthy are not seen as more tasty. Apparently, there is no (un)healthy = tasty intuition in the Netherlands. From the above, we can conclude that the UTI does not hold in all countries.

6.1.3 Body-specificity theory

In our model, no significant influence was found that could be assigned to handedness. This challenges the body-specificity theory on which our concept is partly based. The "right is good"-assumption is based on body-specificity theory and thus an influence was expected. It is possible that our results are due to the low number of respondents that are left-handed. From the respondents, 14% was left-handed. This involves 30 respondents. In an ideal situation, the distribution of these left-handed respondents among the groups is even. There are four different groups based on the construal level condition and the lateral positioning. If we want to measure the influence of the left-handed people, they should be divided among these four groups. This leads to a group size of seven or eight respondents per group and this is in an optimal situation. So, there is a good possibility that the group sizes are not sufficient to measure the influence of handedness (Hair et al., 2014).

6.1.4 Lateral positioning

The results show that lateral positioning can have an influence on decision making. This is in line with the current literature. However, the results show that for the decision between a healthy and an unhealthy food item, lateral positioning only has an effect for people that adopted a high level of construal. As mentioned above, this might be due to the presence of conflicting motives. When a low construal level is adopted, the short-term consequences should be salient. The attractiveness determines the decision and there are no conflicting motives. The long-term consequences are not thought of. However, when a high construal level is adopted, the long-term consequences should become salient. These long-term consequences may conflict with the preference based on short-term consequences. In this situation, there are conflicting motives and the decision now depends on the dominance of affect or cognition. This dominance can be affected through the lateral positioning of the food items. If the lateral positioning fits with the mental representation, this increases the processing fluency (Lee & Aker, 2004). An increase in processing fluency leads to an increased influence of cognition on choice (Shiv & Fedorikhin, 1999). According to Romero and Biswas (2016), it also strengthens self-control. Therefore, the likelihood of choosing the healthy option increases.

6.1.5 Moderators

Romero and Biswas (2016) requested studies concerning the moderators of lateral positioning. Construal level obviously is one of these moderators, but we checked for some other moderators. A healthy lifestyle, hunger, and mood did not improve the model with the stepwise method. This implies that a healthy lifestyle, hunger, and mood are not moderators that influence the effects of lateral positioning. A possible moderator that Romero and Biswas (2016) mentioned, was cultural background. We did not check for the cultural background, but we do have indications that the UTI does not hold in all countries. As mentioned above, this might be a possible explanation that the results only confirmed three out of four hypotheses. This also means that the UTI might influence the effect of lateral positioning. That UTI could not be confirmed in France and the Netherlands might be due to cultural differences. So, this indicates that cultural background is a possible moderator. Lastly, handedness might be a moderator. This study is based on the "right is good" perception (Casasanto, 2009). Perceptual fluency is the cause of this perception (Casasanto & Chrysikou, 2011). For left-handed people, this perceptual fluency is linked to their left side. This indicates a "left is good" perception for left-handed people. Unfortunately, we did not find a significant influence of handedness. However, this might be due to the small amount of left-handed respondents. Therefore, no conclusions can be drawn concerning handedness as a moderator.

6.2 Theoretical implications

Food consumption is subject in various disciplines, for instance, psychology and medical science. Therefore, this study affects a broad range of disciplines. It contributes to food consumption theory and extends prior research by demonstrating that the adopted level of construal affects the influence that lateral positioning has on decision making. By demonstrating the influence of construal level on the effect of lateral positioning, a gap in the literature has been closed. There were, to my best knowledge, no studies that examined this theory-based influence of the adopted construal level on the effect of lateral positioning. By closing this gap, a contribution is made to the knowledge concerning the encouragement of making healthy choices.

This study, especially pre-test 2, also contributes to the theory concerning UTI. Werle, Trendel, and Ardito (2013) already showed that the UTI does not hold in France. They actually found the opposite, so, a healthy = tasty intuition. In the second pre-test, we added a question concerning the perceived tastiness of the food items. No significant difference was

found between the perceived tastiness of the burger and the perceived tastiness of the salad. This confirms that UTI does not hold in all countries and thus, it contributes to the current knowledge concerning UTI.

Lastly, a contribution is made to the current knowledge concerning Construal Level Theory (CLT). Three manipulations of the adopted construal level that were used in previous research were checked in the pre-tests. The outcomes were disappointing. From these outcomes, we can conclude that the adopted construal level is difficult to manipulate. Also, we found that the manipulation of the construal level did not last long.

6.3 Managerial implications

Our results show that construal level and lateral positioning do have an influence on food choice. However, this only holds in the model including the perceived attractiveness of the food items. This outcome can help eateries with the design of the communication of their dishes towards consumers when selling the healthy dishes is preferred. In general, to stimulate healthy choices, it is advisable to place the healthy option to the right. We found that consumers who adopted a high construal level, choose the healthy option more often when it is positioned to the right of the unhealthy option. For consumers that adopted a low construal level, the direction is the opposite, but this difference was not significant. So, when there is no influence on construal level, positioning the healthy option to the right of the unhealthy option is most effective.

Of course, one can try to influence the construal level to improve the influence of positioning on choice. If consumers adopt a high construal level, more influence can be exercised through lateral positioning. This may be achieved by creating psychological distance. The consumer itself is the reference point and any form of distance (e.g. time, space, social) can create psychological distance. This can be achieved through the usage of more polite language or using words instead of pictures (Trope & Liberman, 2010). More polite language is linked to a higher level of construal (Stephan, Liberman, and Trope, 2010). Within an eatery this can be achieved for instance by using the phrase “Hello madam/sir, what would you like for dinner?” instead of “Hi, what do you want to order?”. This also increases spatial distance, which again is linked to a high level of construal (Stephan, Liberman, and Trope, 2010). Using words instead of pictures is also linked to a high level of construal (Amit, Algom, and Trope, 2009). This can be explained through the representation of an item. Words are abstract and pictures are concrete. For instance, if an eatery offers a chicken salad, the word itself is categorical and abstract. You do not have a concrete idea of the offered salad in

this specific situation, but of a chicken salad in general. In the situation where a picture is included, you get a concrete idea of the offered salad. You see the specific salad with all of its details in the picture. So, using words instead of pictures stimulates consumers to adopt a high level of construal. In general, using more details is linked to low construal level. So, using only general and essential information (e.g. nutrition) might stimulate adopting a high construal level (Trope & Liberman, 2003). Lastly, black and white marketing communications are also linked to a high construal level (Lee et al., 2014).

6.4 Limitations

This study has limitations. First of all, the samples of all studies were not a good reflection of society. Compared to the Dutch population, the respondents were above average in education. Almost half of the respondents were students, which is not in line with the population. Also, the majority of the respondents was between eighteen and thirty-four and female. This lack of a good reflection of the society may have influenced the results.

For the pre-tests, the sample sizes were quite small. This decreases power. Also, the respondents were recruited through convenience sampling. Therefore, the sample might not be an optimal representation of the population. In addition, for the pre-tests and the main study, respondents were approached via the internet. The questionnaires were completed in the respondent's own environment. This may have led to distraction during the tasks. In the pre-tests, none of the manipulations led to a significant difference between the groups. This might also be due to distraction because respondents were approached via the internet.

These disappointing results concerning the manipulations during the pre-tests are an important limitation of this study. Three, in previous research used, manipulations were tested and none of them had sufficient results. Looking at just four BIF-items, the manipulation seemed to have worked for a short amount of time in the main study. Therefore, results were discussed as if the manipulation worked. This is based on the assumption that the manipulation did change the mind-set, but this change only lasted for a short amount of time. To confirm this assumption, further research is needed.

The observant reader probably noticed that the lateral check that was implemented in the main study, was not discussed. Respondents were asked for comments about the experiment and observed relationships between tasks. Many respondents knew that the experiment involved healthy choices after being asked to make a decision between a salad and a burger. They suspected that the experiment was about healthy eating. For this reason,

several respondents indicated that this knowledge influenced the task concerning the lateral check. Therefore, we suspected a bias in the outcome of the lateral check through the order of tasks in the experiment. This lateral check might be a nice addition to support our theory, but in future research, it should be taken separately.

Also, the control factors 'Attractiveness Salad' and 'Attractiveness Burger' were included in the same questionnaire after the manipulation and after the choice. These factors made a significant contribution to the model with the logistic regression. The effect of the manipulation on the adopted construal level did not last long. Therefore, it is not expected that the manipulation influenced the perceived attractiveness of the food items. However, it cannot be ruled out. Also, because the factors were included after the decision and after the lateral check, there is a possibility that the respondents were biased. The remarks of the respondents showed that people suspected that the study was about healthy food choices. This suspicion may have been present during the task concerning the perceived attractiveness of the food items and thus influence the answer on these questions. Therefore, the found influence of attractiveness of the food items may vary according to the structure of the questionnaire.

Lastly, our theory was based on the body-specificity theory. Casasanto (2009) showed that whether right is associated with "good" and left with "bad" is dependent on the dominant side of a consumer and that this is independent of the directional reading habits. However, there are studies that show that directional reading habits have an influence on the effect of laterally displaying images. In this study, all respondents have a left-to-right reading habit. So, it is possible that repeating this study with consumers from cultures with right-to-left reading habits yields different results. Further research is needed to address this matter.

6.5 Future research

Three manipulations of the adopted construal level were tested in the pre-tests. These manipulations were already used in previous research. The outcomes were disappointing. From this, we can conclude that manipulating the adopted level of construal is difficult. But since the manipulations did work in previous research, there might be factors that influence the success of the manipulation. Examples of these factors may be the used language (mother tongue versus non-native), language use (more or less polite), or environmental factors like the used colors or experienced solidarity with the researcher. This knowledge might improve the application of manipulations. Therefore, it is an interesting and useful topic for future research. By improving the knowledge concerning the manipulation of the adopted construal level, an improvement of the research involving CLT in general might be achieved.

For future research, the UTI is also an interesting topic. Apparently, the UTI differs per country. In the American studies an UTI was found, but in France, a healthy = tasty intuition was found. In the current study, no (un)healthy = tasty intuition was found since there was no significant difference in the perceived tastiness of the food items. These different results indicate that the UTI differs globally. However, UTI has not been studied globally. Therefore, this could be an interesting topic for future research. We do not know how and why UTI differs per country. So, there is a gap in the current literature. Studying the UTI globally can close this gap and thus, it would contribute to the current knowledge.

The UTI itself is an interesting subject for future research, but because the UTI differs per country, it is also of added value to repeat this study in different countries. The UTI holds in America. Therefore, it is expected that the outcome of repeating this study in America will be more in line with the theory. In France, the opposite will hold. The UTI does not apply in France and thus, there is a good chance that unhealthy is never seen as "good". Therefore, the outcome of the same research is expected to be less in line with the theory in France. So, repeating this study in different countries is expected to yield different outcomes.

Lastly, to confirm the outcomes of this study, conducting the same study in a controlled laboratory setting is advisable. For instance, this might improve the effectiveness of the manipulation and thus lead to slightly different results. Lastly, the respondents in the low construal condition were not influenced through positioning. If this holds in future research, it would be helpful to know which factors do influence the decision. In the current study, several factors have been researched. Therefore, we can exclude hunger, mood, (un)healthy lifestyle, gender, education, diet, age, and handedness. The perceived attractiveness of the food items did influence the food choice. However, there might be other factors that influence food choice. An example might be the amount of sleep. If someone does not sleep well or much, there may be a craving for fast energy and thus for sugar. Future research is needed to examine possible factors that influence the food choice for consumers that adopted a low construal level.

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Appendix 1: Pre-test 1

1. Introduction

   Dear respondent,

   Thank you very much for taking your time to fill in this questionnaire.

   For my Master thesis I am doing research into the field of Marketing. For this research, your input is needed. I am interested in your opinion, so please note that there are no wrong answers. The questionnaire will take approximately 5-10 minutes of your time. It would be very appreciated if you would read the questions carefully and would answer every question if possible. The answers will be treated in a confidential and anonymous way. Please note that this questionnaire will be in English.

   Thank you very much for your time & cooperation!

   Warm regards,

   Renée Nederlof

   Student Master Marketing

   Radboud University Nijmegen

2. Judgment images

   For this research, I am interested in how people perceive several food items in terms of **healthiness** and **attractiveness**. In the next section, I will ask you therefore to indicate how you do perceive the food item presented on the picture. First, in terms of healthiness and second, in terms of attractiveness. In total eight different pictures will be presented. Please take your time and answer the questions carefully.

   Please indicate how **healthy** you find the presented food item:

   (1 – unhealthy) o o o o o o o (7 – healthy)

   Please indicate how **healthy** you find the presented food item:

   (1 – unhealthy) o o o o o o o (7 – healthy)

   Please indicate how **healthy** you find the presented food item:

(1 – unhealthy) o o o o o o o (7 – healthy)

Please indicate how **healthy** you find the presented food item:

(1 – unhealthy) o o o o o o o (7 – healthy)

Please indicate how **healthy** you find the presented food item:

(1 – unhealthy) o o o o o o o (7 – healthy)

Please indicate how **healthy** you find the presented food item:

(1 – unhealthy) o o o o o o o (7 – healthy)

Please indicate how **healthy** you find the presented food item:

(1 – unhealthy) o o o o o o o (7 – healthy)

Please indicate how **healthy** you find the presented food item:

(1 – unhealthy) o o o o o o o (7 – healthy)

Please indicate how **attractive** you find the presented food item:

(1 – unattractive) o o o o o o o (7 – attractive)

Please indicate how **attractive** you find the presented food item:

(1 – unattractive) o o o o o o o (7 – attractive)

Please indicate how **attractive** you find the presented food item:

(1 – unattractive) o o o o o o o (7 – attractive)

Please indicate how **attractive** you find the presented food item:

(1 – unattractive) o o o o o o o (7 – attractive)

Please indicate how **attractive** you find the presented food item:

(1 – unattractive) o o o o o o o (7 – attractive)

Please indicate how **attractive** you find the presented food item:

(1 – unattractive) o o o o o o o (7 – attractive)

Please indicate how **attractive** you find the presented food item:

(1 – unattractive) o o o o o o o (7 – attractive)

Please indicate how **attractive** you find the presented food item:

(1 – unattractive) o o o o o o o (7 – attractive)

3. Manipulation Low Construal

Next, I am studying how well people can express their thoughts when given specific scenario-based instructions. The following four questions of this questionnaire are related to this subject. I would like to ask you to read the scenario-based instruction very carefully and to take your time to express your thoughts. To give you an idea of what is expected from you, please read the following example.

Example:

Situation: Ron is considering doing some groceries.

Please describe <u>how</u> you think Ron would do that?

Ron will get his car, drive to the supermarket, get a basket and fill his basked full with products he needs.

4. **Situation 1:** Ron is considering opening a bank account.
   Please describe how you think Ron would do that?
   Situation 2: Heidi is conserving enrolling in a fitness program.
   Please describe how you think Heidi would do that?
   Situation 3: Chris is considering going to driving school.
   Please describe how you think Chris would do that?
   Situation 4: Angela is considering subscribing to a newspaper.
   Please describe how you think Angela would do that?
5. Manipulation High Construal
   Next, I am studying how well people can express their thoughts when given specific scenario-based instructions. The following four questions of this questionnaire are related to this subject. I would like to ask you to read the scenario-based instruction very carefully and to take your time to express your thoughts. To give you an idea of what is expected from you, please read the following example.
   Example:
   Situation: Bas is considering doing some groceries.
   Please describe why you think Bas would do that?

   Bas needs to do some groceries because he is out of some products (e.g. food) he needs for this evening.
6. **Situation 1:** Ron is considering opening a bank account.
   Please describe why you think Ron would do that?
   Situation 2: Heidi is conserving enrolling in a fitness program.
   Please describe why you think Heidi would do that?
   Situation 3: Chris is considering going to driving school.
   Please describe why you think Chris would do that?
   Situation 4: Angela is considering subscribing to a newspaper.
   Please describe why you think Angela would do that?
7. Manipulation check
   In the following section, I am interested in your personal preferences for how a number of different behaviours should be described. Each person can namely describe any behaviour in a different way. For example, one person might describe the situation taking a test as showing one's knowledge while another person might describe it as answering questions. I would like to ask you to select the best description that you believe is the most appropriate description of the following six described behaviours. Please note that there are no wrong answers and that you need to select **one option**.
   1. Picking an apple
      a. Getting something to eat
      b. Pulling an apple of a branch
   2. Painting in a room
      a. Applying brush strokes
      b. Making the room look fresh
   3. Locking a door
      a. Putting a key in the lock
      b. Securing the house
   4. Voting
      a. Influencing the election
      b. Marking a ballot
   5. Filling out a personality test

a. Answering questions
b. Revealing what you are like

6. Greeting someone
a. Saying hello
b. Showing friendliness

8. General questions
a. With which hand do you write?
   - o Left
   - o Right
   - o Both

b. Are you currently on a diet?
   - o Yes
   - o No

c. How hungry do you feel at the moment?
   (1 – Not at all) o o o o o o o (7 – Very much)

d. To what extent do you have the goal to eat healthy?
   (1 – Not at all) o o o o o o o (7 – Very much)

e. How do you feel at this moment?
   (1 – Very negative) o o o o o o o (7 – Very positive)

f. What is your gender?
   - o Male
   - o Female

g. What is your age?
   - o Under 18
   - o 18 – 24
   - o 25 – 34
   - o 35 – 44
   - o 45 – 54
   - o 55 – 64
   - o 65 – 74
   - o 75 – 84
   - o 85 or older

h. What is your nationality?
   - o Dutch
   - o Other, namely

i. What is your highest degree?
   - o TL
   - o HAVO
   - o MBO
   - o HBO Bachelor
   - o WO Bachelor
   - o HBO Master
   - o WO Master

j. Current occupation
   - o Employed full time

- Employed part time
- Unemployed looking for work
- Unemployed not looking for work
- Retired
- Student
- Other namely

k. The closing

Thank you very much for your participation!
If you do have any questions or feedback concerning the questionnaire, feel free to post it underneath.
Thank you for your time.
Warm regards,
Renée Nederlof
R.Nederlof@student.ru.nl

Appendix 2: Pre-test 2

1. Introduction:
   Welkom bij het onderzoek.
   Wij zullen ons eerst even voorstellen. Wij zijn Renée en Anke, studenten aan de Radboud Universiteit. Op dit moment zijn wij bezig met onze masterthesis en hiervoor zullen wij een onderzoek gaan uitvoeren. Voordat wij beginnen aan het daadwerkelijke onderzoek, willen wij graag enkele dingen testen. Om deze reden hebben wij het onderzoek opgezet dat je zo gaat invullen.
   Het onderzoek bestaat uit drie verschillende hoofddelen. Het eerste onderdeel bestaat uit het beoordelen van twee gerechten. Vervolgens komt een vraag over het onderhouden en verbeteren van persoonlijke relaties. *Neem alsjeblieft de tijd voor dit gedeelte, denk goed na over je antwoorden en geef zo uitgebreid mogelijk antwoord.* Het derde gedeelte is een vragenlijst over gedragingen. Voor elk gedeelte krijg je nog een korte uitleg. Het geheel duurt ongeveer vijftien minuten. De antwoorden zullen anoniem verwerkt worden.
   Bedankt voor je deelname!
   Welcome to the study.
   We will first introduce ourselves. We are Renée and Anke, students at the Radboud University. At this moment we are working on our master thesis and for this we will conduct a study. Before we begin with the main study, we want to test some things. For this reason, we set up the study you are about to take.
   The study consists of three different parts. The first part consists of judging two dishes. Then there is a question about maintaining and improving personal relationships. Please take your time for this part, thing well about your answers and answer extensively. The third part is a questionnaire about behaviors. Before each part you will get a brief explanation. The whole study takes about fifteen minutes. The answers will be processed anonymously.
   Thank you for your participation!
2. Introduction first part (rating the dishes):
   Je gaat nu beginnen met het eerste onderdeel. Voor dit onderdeel zijn wij geïnteresseerd in hoe mensen verschillende gerechten beoordelen op basis van gezondheid, aantrekkelijkheid en smaakvolheid. Je krijg zo twee afbeeldingen te zien. Bij elke afbeelding horen drie vragen. Deze vragen hebben betrekking op jouw mening over het gerecht.
   You are about to start with the first part of the study. For this part we are interested in how people judge different dishes based on healthiness, attractiveness, and tastiness. You will see two images. Each image comes with three questions. The questions relate to your opinion about the dish.

a.

b. Geef alsjeblieft aan hoe gezond je het gerecht vindt op een schaal van 1 tot 7.

(1 – zeer ongezond) o o o o o o o (7 – zeer gezond)

Please rate the dish on healthiness on a scale from 1 to 7.

c. Geef alsjeblieft aan hoe aantrekkelijk je het gerecht vindt op een schaal van 1 tot 7.

(1 – zeer onaantrekkelijk) o o o o o o o (7- zeer aantrekkelijk)

Please rate the dish on attrectiveness on a scale from 1 to 7.

d. Geef alsjeblieft aan hoe smaakvol je het gerecht vindt op een schaal van 1 tot 7.

(1 – smaakloos) o o o o o o o (7- zeer smaakvol)

Please rate the dish on tastiness on a scale from 1 to 7.

e.

f. Geef alsjeblieft aan hoe gezond je het volgende gerecht vindt op een schaal van 1 tot 7.

(1 – zeer ongezond) o o o o o o o (7 – zeer gezond)

Please rate the dish on healthiness on a scale from 1 to 7.

g. Geef alsjeblieft aan hoe aantrekkelijk je het gerecht vindt op een schaal van 1 tot 7.

(1 – zeer onaantrekkelijk) o o o o o o o (7- zeer aantrekkelijk)

Please rate the dish on attrectiveness on a scale from 1 to 7.

h. Geef alsjeblieft aan hoe smaakvol je het gerecht vindt op een schaal van 1 tot 7.

(1 – smaakloos) o o o o o o o (7-zeer smaakvol)

Please rate the dish on tastiness on a scale from 1 to 7.

3. Introduction Manipulation Low Construal

Het volgende gedeelte betreft vragen over het onderhouden en verbeteren van persoonlijke relaties. Allereerst, krijg je een statement te zien. Vervolgens worden vier vragen gesteld. De eerste vraag gaat over de statement. Na het beantwoorden van deze vraag, wordt er een vervolgvraag gesteld over het door jouw gegeven antwoord. Dit herhaalt zich nog twee keer. Beantwoord de vragen één voor één. *Neem de tijd, denk goed na over de antwoorden en antwoord zo uitgebreid mogelijk.*

The next part concerns questions about maintaining and improving personal relationships. First, you will see a statement. Next, for questions will be asked. The first question is about the statement. After answering this question, a next question is asked about your given answer. This will repeat twice. Answer the questions one by one. Take your time, think about the answers, and answer extensively.

Ik wil mijn persoonlijke relaties onderhouden en verbeteren	*I want to maintain and improve my personal relationships*
Hoe?	*How?*
Hoe?	*How?*
Hoe?	*How?*
Hoe?	*How?*

4. Introduction Manipulation High Construal

Het volgende gedeelte betreft vragen over het onderhouden en verbeteren van persoonlijke relaties. **Let op, werk van onder naar boven.**

Allereerst, krijg je onder aan de pagina een statement te zien. Vervolgens worden van onder naar boven vier vragen gesteld. De eerste vraag gaat over de statement. Na het beantwoorden van deze vraag, wordt er een vervolgvraag gesteld over het door jouw gegeven antwoord. Dit herhaalt zich nog twee keer. Beantwoord de vragen één voor één van onder naar boven. Neem de tijd, denk goed na over de antwoorden en antwoord zo uitgebreid mogelijk.

The next part concerns questions about maintaining and improving personal relationships. ***Please note, work from bottom to top.***

First, you will see a statement at the bottom of the page. Next, from bottom to top four questions will be asked. The first question is about the statement. After answering this question, a next question is asked about your given answer. This will repeat twice. Answer the questions one by one from bottom to top. Take your time, think about the answers, and answer extensively.

Waarom?	*Why?*
Waarom?	*Why?*
Waarom?	*Why?*
Waarom?	*Why?*
Ik wil mijn persoonlijke relaties onderhouden en verbeteren	*I want to maintain and improve my personal relationships*

5. Manipulation check (BIF), introduction:
   Dit is het laatste onderdeel.
   Gedrag kan op vele manieren opgevat worden. Bijvoorbeeld het schrijven van een brief kan worden opgevat als “het indrukken van toetsen” of “het uiten van gedachtes”. Ik ben geïnteresseerd in jouw persoonlijke voorkeur voor het beschrijven van verschillende gedragingen. Er volgt zo een lijst met verschillende gedragingen. Bij elke gedraging staan twee keuzes met verschillende wijzen van interpretatie.

   Een voorbeeld:
   Het bijwonen van een cursus.
   a. Op een stoel zitten;
   b. Kijken naar een powerpoint.

   Jouw taak is te kiezen welke opvatting het gedrag het beste omschrijft. Er zijn geen onjuiste antwoorden. Mensen verschillen simpelweg in deze opvattingen en ik wil graag jouw voorkeur weten. Dus kies de opvatting waarvan jij denkt dat die het gedrag het beste omschrijft.

   This is the last part of the study.
   Behavior can be interpreted in different ways. For example, writing a letter can be interpreted as “pressing keys” or “expressing thoughts”. I am interested in your personal preference regarding describing different behaviors. With every behavior there are two choices of different interpretations.

   An example:
   1. Attending a course.
   a. Sitting on a chair;
   b. Looking at a powerpoint.

   Your task is to choose which concept best describes the task. There are no wrong or right answers. People simply differ in these views and I want to know your preference. So, choose the view that you think best describes the behavior.
6. The manipulation check (BIF):
   1. Het maken van een lijst:
      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. Inschrijven
   4. Kleding wassen:

    a. Het verwijderen van geurtjes
    b. Kleding in de wasmachine stoppen
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. Klaarmaken om te verbouwen
    b. Een meetlint gebruiken
8. Het huis schoonmaken:
    a. Het tonen van netheid
    b. De vloer stofzuigen
9. Een kamer verven:
    a. Met een kwast over de muur gaan
    b. De kamer opfrissen
10. De huur betalen:
    a. Het behouden van een woonplaats
    b. Het geld overmaken
11. De planten verzorgen:
    a. De planten water geven
    b. De kamer er leuk uit laten zien
12. De deur vergrendelen:
    a. De sleutel in het slot doen
    b. Het huis afsluiten
13. Stemmen:
    a. De verkiezing beïnvloeden
    b. Een rondje markeren
14. In een boom klimmen:
    a. Een goed uitzicht krijgen
    b. Vasthouden aan takken
15. Een persoonlijkheidstest invullen:
    a. Vragen beantwoorden
    b. Onthullen wat je leuk vindt
16. Tanden poetsen:
    a. Tandbederf tegengaan
    b. Een borstel in je mond verplaatsen
17. Een test maken:
    a. Vragen beantwoorden
    b. Het tonen van kennis
18. Iemand begroeten:
    a. Hallo zeggen
    b. Vriendelijk zijn
19. Verleiding weerstaan:
    a. Nee zeggen
    b. Moed tonen

20. Eten:
    a. Voeding binnenkrijgen
    b. Kauwen en slikken
21. Een tuin kweken:
    a. Zaadjes planten
    b. Verse groentes krijgen
22. Met de auto reizen:
    a. Een kaart volgen
    b. Het zien van de streek
23. Een gaatje laten vullen:
    a. Het beschermen van de tanden
    b. Naar de tandarts gaan
24. Tegen een kind praten:
    a. Het kind iets leren
    b. Simpele woorden gebruiken
25. Op een deurbel drukken:
    a. Een vinger bewegen
    b. Kijken of iemand thuis is

7. General questions
   Tot slot nog enkele algemene vragen.
   Finally, some general questions.
   a. Wat is je leeftijd?
      What is your age?
      - o Onder de 18
      - o 18 – 24
      - o 25 – 34
      - o 35 – 44
      - o 45 – 54
      - o 55 – 64
      - o 64 – 74
      - o 75 – 84
      - o 85 of ouder

   b. Wat is je geslacht?
      What is your gender?
      - o Man
      - o Vrouw

   c. Wat is je nationaliteit?
      What is your nationality?
      - o Nederlands
      - o Anders, namelijk

   d. Wat is je hoogst behaalde opleiding?
      What is your education?
      - o VMBO
      - o HAVO
      - o VWO
      - o MBO
      - o HBO

- o WO Bachelor
- o WO Master

e. Wat is je huidige werksituatie? Er is slechts 1 antwoord mogelijk, dus kies je voornaamste bezigheid.
Wat is your current work situation? Only one answer is possible, so choose your main occupation.
- o Fulltime
- o Parttime
- o Werkzoekende
- o Werkloos, niet werkzoekende
- o Gepensioneerd
- o Student(e)
- o Anders, namelijk

f. Volg je op dit moment een dieet? (Bijv. gewichtsverlies, vegetarisch, glutenvrij)
Are you following a diet? (e.g. weight loss, vegetarian, gluten free)
- o Ja
- o Nee

g. Hoeveel honger heb je op dit moment?
How hungry are you at the moment?

(1 – helemaal geen honger) o o o o o o o (7- zeer veel honger)

h. In hoeverre ben je bezig met gezond eten?
To what extent are you concerned with healthy eating?

(1 – helemaal niet) o o o o o o o (7- heel erg)

i. Hoe voel je je op dit moment?
How are you feeling right now?

(1 – heel negatief) o o o o o o o (7- heel positief)

8. The closing

Dit waren alle vragen.
Heb je nog vragen of opmerkingen, voel je vrij ze hieronder te plaatsen.
Verstuur je antwoorden door op de “volgende”-knop te drukken.
Bedankt voor het meedoen!
These were all questions.
If you have questions or remarks, feel free to place them below in the box.
Send your answers by pressing the “next”-button.
Thank you for your participation!

Appendix 3: Pre-test 3

1. Introduction:
   Welkom bij het onderzoek.
   Wij zullen ons eerst even voorstellen. Wij zijn Renée en Anke, studenten aan de Radboud Universiteit. Op dit moment zijn wij bezig met onze masterthesis en hiervoor zullen wij een onderzoek gaan uitvoeren. Voordat wij beginnen aan het daadwerkelijke onderzoek, willen wij graag enkele dingen testen. Om deze reden hebben wij het onderzoek opgezet dat je zo gaat invullen.
   Het onderzoek bestaat uit twee verschillende taken. Voor elke taak, krijg je een korte uitleg te zien. De enquête wordt afgesloten met enkele algemene vragen. Het geheel duurt ongeveer 10 minuten. De antwoorden zullen anoniem verwerkt worden.
   Alvast bedankt voor je deelname!
   Welcome to the study.
   We will first introduce ourselves. We are Renée and Anke, students at the Radboud University. At this moment we are working on our master thesis and for this we will conduct a study. Before we begin with the main study, we want to test some things. For this reason, we set up the study you are about to take.
   The study consists of two different tasks. For each task, you will get a brief explanation. The survey ends with some general questions. The whole survey takes around ten minutes. The answers will be processed anonymously.
   Thank you for your participation!
2. Manipulation Low Construal
   In deze taak krijg je in totaal 30 verschillende woorden te zien. Het is jouw taak om van elk woord een concreet voorbeeld te geven. Bijvoorbeeld: “Een voorbeeld van wijn is…?”. Het gegeven woord is hier “wijn”. Een concreet voorbeeld van wijn zou kunnen zijn “merlot”. Schrijf in het lege vak jouw antwoord, in dit voorbeeld dus “merlot”.
   Dit ziet er als volgt uit:

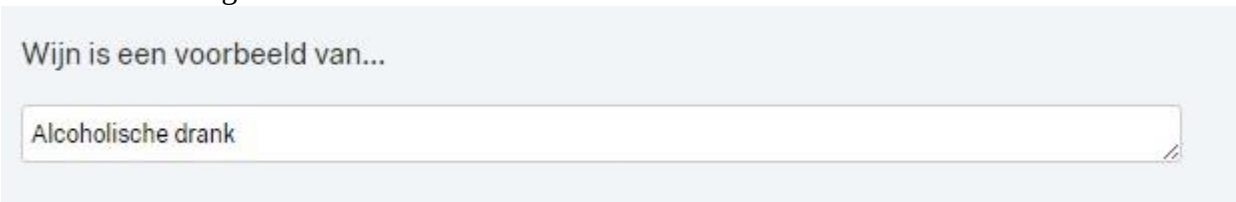
   

   Neem je tijd, er zijn geen goede of foute antwoorden.
   In this task you will get 30 different words. It is your task to given a concrete example of every word. For example: “An example of wine is…?”. The given word here is “wine”. A possible concrete example of wine could be “merlot”. You may write your answer in the empty box, in this example “merlot”.
   This is as follows: (see above)
   Take your time, there are no right or wrong answers.
   1. **Cola** is een voorbeeld van …?
   2. **Shampoo** is een voorbeeld van …?
   3. **Kunstenaar** is een voorbeeld van …?
   4. **Broek** is een voorbeeld van …?
   5. **Telefoon** is een voorbeeld van …?
   6. **Stripboek** is een voorbeeld van …?

7. **Ring** is een voorbeeld van …?
8. **Appel** is een voorbeeld van …?
9. **Opleiding** is een voorbeeld van …?
10. **Presentatrice** is een voorbeeld van …?
11. **Restaurant** is een voorbeeld van …?
12. **Fiets** is een voorbeeld van …?
13. **Bier** is een voorbeeld van …?
14. **Tafel** is een voorbeeld van …?
15. **Jas** is een voorbeeld van …?
16. **Vis** is een voorbeeld van …?
17. **Hotel** is een voorbeeld van …?
18. **Munt** is een voorbeeld van …?
19. **Pasta** is een voorbeeld van …?
20. **Glas** is een voorbeeld van …?
21. **Auto** is een voorbeeld van …?
22. **Haarkleur** is een voorbeeld van …?
23. **Supermarkt** is een voorbeeld van …?
24. **Tijdschrift** is een voorbeeld van …?
25. **Sport** is een voorbeeld van …?
26. **Lunch** is een voorbeeld van …?
27. **Schilderij** is een voorbeeld van …?
28. **Snoep** is een voorbeeld van …?
29. **Hond** is een voorbeeld van …?
30. **Brood** is een voorbeeld van …?

3. Manipulation High Construal

In deze taak krijg je in totaal 30 verschillende woorden te zien. Het is jouw taak om een woord in te vullen waar jij denkt dat het gegeven woord een voorbeeld van is. Dus als het woord bijvoorbeeld “wijn” is, dan is de vraag “Wijn is een voorbeeld van…?”. Een voorbeeld van een antwoord is dan “alcoholische drank”. Schrijf in het lege vak jouw antwoord, in dit voorbeeld dus “alcoholische drank”.
Dit ziet er als volgt uit:



Neem je tijd, er zijn geen goede of foute antwoorden.
In this task you will get 30 different words. It is your task to fill in a word of which you think that the given word is an example of. So, if the word is for instance “wine”, the question is “Wine is an example of…?”. A possible answer in this case is “alcoholic beverage”. You may write your answer in the empty box, in this example “alcoholic beverage”.
This is as follows: (see above)
Take your time, there are no right or wrong answers.

1. Een voorbeeld van **cola** is …?
2. Een voorbeeld van **shampoo** is…?
3. Een voorbeeld van een **kunstenaar** is…?

4. Een voorbeeld van een **broek** is…?
5. Een voorbeeld van een **telefoon** is…?
6. Een voorbeeld van een **stripboek** is…?
7. Een voorbeeld van een **ring** is…?
8. Een voorbeeld van een **appel** is…?
9. Een voorbeeld van een **opleiding** is…?
10. Een voorbeeld van een **presentatrice** is…?
11. Een voorbeeld van een **restaurant** is…?
12. Een voorbeeld van een **fiets** is…?
13. Een voorbeeld van **bier** is…?
14. Een voorbeeld van een **tafel** is…?
15. Een voorbeeld van een **jas** is…?
16. Een voorbeeld van een **vis** is…?
17. Een voorbeeld van een **hotel** is…?
18. Een voorbeeld van een **munt** is…?
19. Een voorbeeld van **pasta** is…?
20. Een voorbeeld van **glas** is…?
21. Een voorbeeld van een **auto** is…?
22. Een voorbeeld van **haarkleur** is…?
23. Een voorbeeld van een **supermarkt** is…?
24. Een voorbeeld van een **tijdschrift** is…?
25. Een voorbeeld van **sport** is…?
26. Een voorbeeld van **lunch** is…?
27. Een voorbeeld van een **schilderij** is…?
28. Een voorbeeld van **snoep** is…?
29. Een voorbeeld van een **hond** is…?
30. Een voorbeeld van **brood** is…?

4. Manipulation check, general questions and the closing: same as pre-test 2.

Appendix 4: Main experiment

1. Introduction:

   Beste deelnemers, welkom bij dit onderzoek.
   Wij waarderen het zeer dat je ons wilt helpen. Dit onderzoek is deel van onze opleiding. Wij, Renée en Anke, zijn studenten aan de Radboud Universiteit te Nijmegen. Op dit moment zijn wij bezig met onze masterthesis en dit is ook de reden voor dit onderzoek.
   Het onderzoek zelf bestaat uit vier verschillende taken. Voor elke taak, krijg je een korte uitleg te zien. De enquête wordt afgesloten met enkele algemene vragen.
   Helaas werken sommige taken niet goed op de telefoon, waardoor invullen alleen op de computer of tablet kan. Het geheel duurt ongeveer 10-15 minuten. Enige concentratie is nodig. We vragen je daarom om tussentijds niet te stoppen. De antwoorden zullen anoniem verwerkt worden.
   Alvast bedankt voor je deelname!
   Dear partcipants, welcome to this study.
   We appreciate it that you want to help us. This research is part of our education. We, Renée and Anke, are students at the Radboud University in Nijmegen. At this moment we are working on our master thesis and this is the reason for the current study.
   The study consists of four different tasks. Before each task you will get a short explanation. The survey ends with some general questions.
   Unfortunatly, some tasks do not work well on a smartphone. Therefore, participating is only possible via a computer or tablet. The whole survey takes approximately 10 to 15 minutes. Some concentration is needed. Because of this, we ask you to complete the survey at once. The answers will be processed anonymously.
   Thank you in advance for your participation!
2. Manipulation is the same as in pre-test 3.
3. Unhealthy left

   De tweede taak is als volgt. Stel dat je op dit moment een keuze mag maken tussen twee gerechten. De prijs en portie van beide gerechten zijn gelijk.
   Naar welk gerecht gaat jouw voorkeur op dit moment uit?
   The second task is as follows. Suppose that you may choose between two dishes. The price and portion of both dishes are equal. Which dish do you prefer at this moment?

4. Unhealthy right

   De tweede taak is als volgt. Stel dat je op dit moment een keuze mag maken tussen twee gerechten. De prijs en portie van beide gerechten zijn gelijk.

Naar welk gerecht gaat jouw voorkeur op dit moment uit?
The second task is as follows. Suppose that you may choose between two dishes. The price and portion of both dishes are equal. Which dish do you prefer at this moment?

5. Manipulation check is the same as in pre-test 2 and 3, but with only the 8 first questions instead of all 25 questions.
6. Lateral check
   In de volgende taak, krijg je telkens twee woorden te zien. De vraag aan jou is, welk woord zou jij in de linker box plaatsen? Denk niet te lang na over je antwoord, ga af op je gevoel.
   In the next task, you will see to words per case. The question is which word you would place in the left box. Do not think about your answer too long, follow your intuition.

   a. Kies het woord dat jij in de linker box wilt plaatsen.
      Choose the word that you want to place in the left box.
      - Email
      - Telefoongesprek

   b. Kies het woord dat jij in de linker box wilt plaatsen.
      Choose the word that you want to place in the left box.
      - Aardbeien
      - Cheesecake

   c. Kies het woord dat jij in de linker box wilt plaatsen.
      Choose the word that you want to place in the left box.
      - Genot
      - Voedzaamheid

   d. Kies het woord dat jij in de linker box wilt plaatsen.
      Choose the word that you want to place in the left box.
      - Gefrituurde kip

- o Gerookte kip

e. Kies het woord dat jij in de linker box wilt plaatsen.
Choose the word that you want to place in the left box.
   - o Werk
   - o Plezier

f. Kies het woord dat jij in de linker box wilt plaatsen.
Choose the word that you want to place in the left box.
   - o Gezond eten
   - o Ongezond eten

7. Wij zijn nog geïnteresseerd in hoe mensen verschillende gerechten beoordelen op basis van gezondheid, aantrekkelijkheid en smaakvolheid. Je krijgt zo opnieuw de twee afbeeldingen één voor één te zien. Wacht alsjeblieft tot de afbeeldingen geladen zijn. Beoordeel de gerechten op een schaal van 1 tot 7.
We are interested in how people judge different dishes based on healthiness, attrectiveness, and tastiness. You will get to see the two images of the dishes again one by one. Please wait until the images are fully loaded. Judge the dishes on a scale from 1 to 7.

a. Geef alsjeblieft aan hoe gezond je het gerecht vindt op een schaal van 1 tot 7.
(1 – zeer ongezond) o o o o o o o (7 – zeer gezond)
Please rate the dish on healthiness on a scale from 1 to 7.

b. Geef alsjeblieft aan hoe aantrekkelijk je het gerecht vindt op een schaal van 1 tot 7.
(1 – zeer onaantrekkelijk) o o o o o o o (7- zeer aantrekkelijk)
Please rate the dish on attrectiveness on a scale from 1 to 7.

c. Geef alsjeblieft aan hoe smaakvol je het gerecht vindt op een schaal van 1 tot 7.
(1 – smaakloos) o o o o o o o (7- zeer smaakvol)
Please rate the dish on tastiness on a scale from 1 to 7.

d. Geef alsjeblieft aan hoe gezond je het volgende gerecht vindt op een schaal van 1 tot 7.

(1 – zeer ongezond) o o o o o o o (7 – zeer gezond)

Please rate the dish on healthiness on a scale from 1 to 7.

e. Geef alsjeblieft aan hoe aantrekkelijk je het gerecht vindt op een schaal van 1 tot 7.

(1 – zeer onaantrekkelijk) o o o o o o o (7- zeer aantrekkelijk)

Please rate the dish on attrectiveness on a scale from 1 to 7.

f. Geef alsjeblieft aan hoe smaakvol je het gerecht vindt op een schaal van 1 tot 7.

(1 – smaakloos) o o o o o o o (7- zeer smaakvol)

Please rate the dish on tastiness on a scale from 1 to 7.

8. General questions

Tot slot nog enkele algemene vragen.

Finally, some general questions.

a. In hoeverre ben je bezig met gezond eten?

To what extent are you concerned with healthy eating?

(1 – helemaal niet) o o o o o o o (7- heel erg)

b. Hoeveel honger heb je op dit moment?

How hungry are you at the moment?

(1 – helemaal geen honger) o o o o o o o (7- zeer veel honger)

c. Hoe voel je je op dit moment?

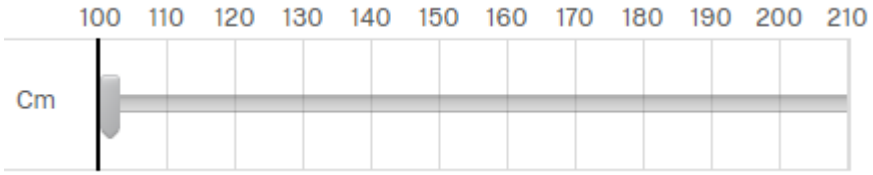
How are you feeling right now?

(1 – heel negatief) o o o o o o o (7- heel positief)

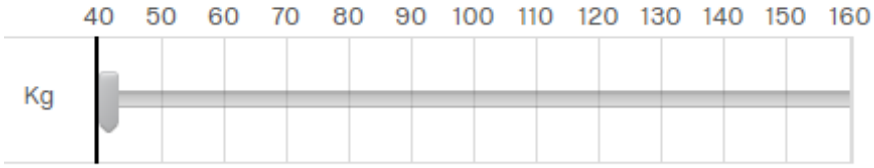
d. Ben je links- of rechtshandig?

- o Links
- o Rechts

e. Wat ongeveer jouw lichaamslengte in centimeters?
What is your body length in centimeters?



f. Wat is ongeveer jouw gewicht in kilogram?
What is your weight in kilograms?



g. Volg je op dit moment een dieet? (Bijv. gewichtsverlies, vegetarisch, glutenvrij)
Are you following a diet? (e.g. weight loss, vegetarian, gluten free)
   - o Ja
   - o Nee

h. Wat is je leeftijd?
What is your age?
   - o Onder de 18
   - o 18 – 24
   - o 25 – 34
   - o 35 – 44
   - o 45 – 54
   - o 55 – 64
   - o 64 – 74
   - o 75 – 84
   - o 85 of ouder

i. Wat is je geslacht?
What is your gender?
   - o Man
   - o Vrouw

j. Wat is je nationaliteit?
What is your nationality?
   - o Nederlands
   - o Anders, namelijk

k. Wat is je hoogst behaalde opleiding?
What is your education?
   - o VMBO
   - o HAVO
   - o VWO
   - o MBO
   - o HBO
   - o WO Bachelor
   - o WO Master

l. Wat is je huidige werksituatie? Er is slechts 1 antwoord mogelijk, dus kies je voornaamste bezigheid.
Wat is your current work situation? Only one answer is possible, so choose your main occupation.
- o Fulltime
- o Parttime
- o Werkzoekende
- o Werkloos, niet werkzoekende
- o Gepensioneerd
- o Student(e)
- o Anders, namelijk

9. Suspicion of the objective of the study
Ter afsluiting, wij zijn erg benieuwd of je enige vermoedens had over het doel van het onderzoek. De laatste vragen gaan dan ook over het doel van het onderzoek.
To conclude, we are very curious if you had any suspicions about the objective of the study. Therefore, the last questions are about the objective of the study.
   a. Wat denk je dat het doel van het onderzoek was?
   What do you think that the objective of this study was?
   b. Waren er verschillende taken naar jouw mening aan elkaar gerelateerd? (*Zo ja, hoe?*)
   In your opinion, were there different tasks related to each other? (If yes, how?)
   c. Hebben delen van dit onderzoek jouw uitvoering van de verschillende taken beïnvloed? (*Zo ja, hoe?*)
   Were there parts of this study that influenced your performance on the other tasks. (If yes, how?)
10. The closing
Dit waren alle vragen.
Heb je nog vragen of opmerkingen, voel je vrij ze hieronder te plaatsen. Mocht je geïnteresseerd zijn in het doel van dit onderzoek of de resultaten willen ontvangen, stuur dan een e-mail naar r.nederlof@student.ru.nl of a.tuinstra@student.ru.nl.
Verstuur je antwoorden door op de "volgende"- knop te drukken.
Bedankt voor het meedoen!
Met vriendelijke groet,
Renée en Anke
These were all questions.
If you have any questions or remarks, feel free to place them below in the box. If you are interested in the objective of this research or if you want to receive the results, send an e-mail to r.nederlof@student.ru.nl or a.tuinstra@student.ru.nl.
Send your answers by pressing the “next”-button.
Thank you for your participation!
Kind regards,
Renée and Anke

Appendix 5: Outcome pre-test 1

Part 1: Comparison of the images of food items

Table 1: The perceived healthiness

	N	Minimum	Maximum	Mean	Std. Deviation
Salad	35	4	7	6,20	,901
Burger with fries	35	1	5	2,20	1,052
Broccoli salad	35	5	7	6,57	,739
Grilled Cheese Sandwich	35	1	5	2,40	1,035
Acai Bowl	35	4	7	5,57	,979
Dessert	35	1	5	2,03	1,071
Raisins	35	1	7	4,63	1,395
Cookies	35	1	5	2,31	1,078
Valid N (listwise)	35				

Table 2: The perceived attractiveness

	N	Minimum	Maximum	Mean	Std. Deviation
Salad	35	1	7	4,37	1,516
Burger with fries	35	1	7	4,54	1,837
Grilled Cheese	35	1	7	4,29	1,582
Broccoli salad	35	1	7	4,26	1,738
Acai Bowl	35	3	7	6,09	1,095
Dessert	35	1	7	4,23	1,664
Cookies	35	2	7	4,91	1,560
Raisins	35	1	6	3,14	1,648
Valid N (listwise)	35				

Table 3: Statistics sample healthiness

			Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Salad		6,20	35	,901	,152
	Burger with fries		2,20	35	1,052	,178

Table 4: Outcome paired samples t-test healthiness

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Salad - Burger with fries	4,000	1,237	,209	3,575	4,425	19,135	34	,000

Table 5: Statistics sample attractiveness

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Salad	4,37	35	1,516	,256
	Burger with fries	4,54	35	1,837	,310

Table 6: Outcome paired samples t-test attractiveness

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Salad - Burger with fries	-,171	2,345	,396	-,977	,634	-,432	34	,668

Part 2: The One-way ANOVA

Table 7: Statistics mean dependent variable

N	Valid	35
	Missing	0
Skewness		-,759
Std. Error of Skewness		,398
Kurtosis		-,386
Std. Error of Kurtosis		,778

Table 8: Distribution dependent variable

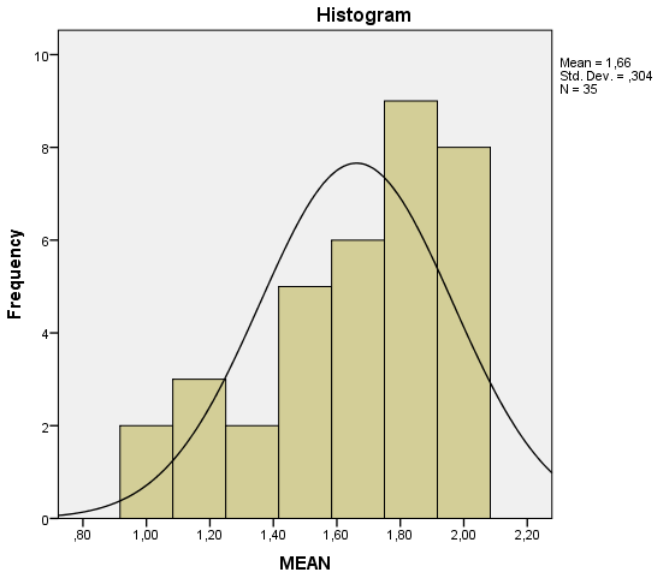


Table 9: Descriptives mean dependent variable

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
LC	16	1,6250	,33610	,08402	1,4459	1,8041	1,00	2,00
HC	19	1,6930	,27924	,06406	1,5584	1,8276	1,00	2,00
Total	35	1,6619	,30380	,05135	1,5575	1,7663	1,00	2,00

Table 10: Levene's test

Levene Statistic	df1	df2	Sig.
2,358	1	33	,134

Table 11: Outcome ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,040	1	,040	,428	,518
Within Groups	3,098	33	,094		
Total	3,138	34			

Appendix 6: Outcome pre-test 2

Part 1: Comparison of the images of food items

Table 1: Descriptives

	N	Minimum	Maximum	Mean	Std. Deviation
HealthBurger	30	1	6	2,87	1,137
AttractivenessBurger	30	2	7	4,77	1,382
TasteBurger	30	2	7	4,47	1,408
HealthSalad	30	2	7	5,53	1,008
AttractivenessSalad	30	1	7	4,70	1,393
TasteSalad	30	1	7	4,53	1,358
Valid N (listwise)	30				

Table 2: Statistics paired samples

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	HealthBurger	2,87	30	1,137	,208
	HealthSalad	5,53	30	1,008	,184
Pair 2	AttractivenessBurger	4,77	30	1,382	,252
	AttractivenessSalad	4,70	30	1,393	,254
Pair 3	TasteBurger	4,47	30	1,408	,257
	TasteSalad	4,53	30	1,358	,248

Table 3: Outcome paired samples t-test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
HealthBurger - HealthSalad	-2,667	1,688	,308	-3,297	-2,036	-8,651	29	,000
AttractivenessBurger - AttractivenessSalad	,067	1,911	,349	-,647	,780	,191	29	,850
TasteBurger - TasteSalad	-,067	1,780	,325	-,731	,598	-,205	29	,839

Part 2: The One-way ANOVA

Table 3: Statistics response time

Duration (in seconds)		
N	Valid	34
	Missing	0
Mean		1196,0588
Median		670,5000
Std. Deviation		1444,32098
Range		7743,00
Minimum		351,00
Maximum		8094,00

Table 4: Statistics mean dependent variable

N	Valid	30
	Missing	0
Skewness		,206
Std. Error of Skewness		,427
Kurtosis		-,167
Std. Error of Kurtosis		,833

Table 5: Distribution dependent variable

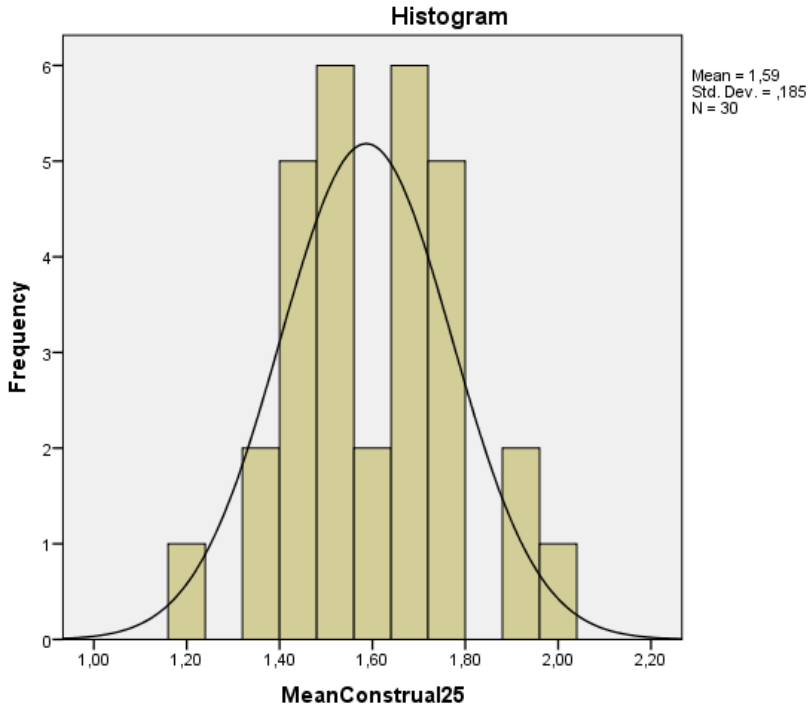


Table 6: Descriptives

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Low Construal	15	1,6267	,16881	,04359	1,5332	1,7201	1,40	2,00
High Construal	15	1,5467	,19693	,05085	1,4376	1,6557	1,20	1,92
Total	30	1,5867	,18475	,03373	1,5177	1,6557	1,20	2,00

Table 7: Levene's test

Levene Statistic	df1	df2	Sig.
,662	1	28	,423

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,048	1	,048	1,427	,242
Within Groups	,942	28	,034		
Total	,990	29			

Appendix 7: Outcome pre-test 3

Table 1: Statistics response time

Duration (in seconds)		
N	Valid	45
	Missing	1
Mean		1010,1333
Median		634,0000
Std. Deviation		1390,43645
Range		8798,00
Minimum		306,00
Maximum		9104,00

Table 2: Statistics mean dependent variable (25 BIF-items)

N	Valid	38
	Missing	0
Skewness		,097
Std. Error of Skewness		,383
Kurtosis		-,359
Std. Error of Kurtosis		,750

Table 3: Distribution dependent variable (25 BIF-items)

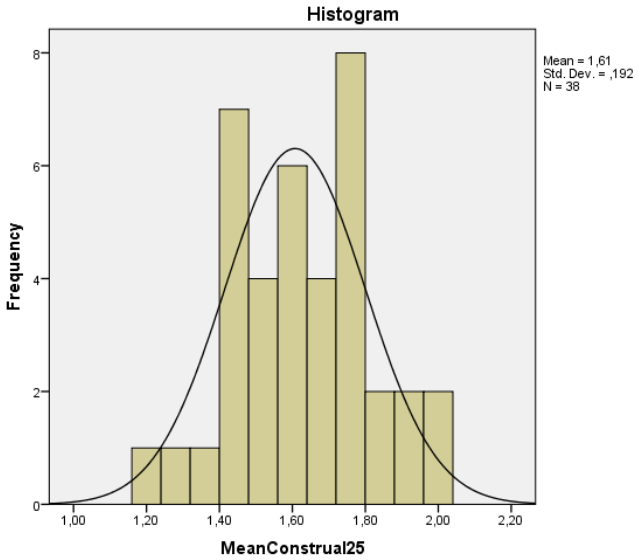


Table 4: Descriptives of the mean (25 BIF-items)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Low Construal	19	1,6211	,18684	,04286	1,5310	1,7111	1,20	1,96
High Construal	19	1,5937	,20189	,04632	1,4964	1,6910	1,24	2,00
Total	38	1,6074	,19236	,03121	1,5441	1,6706	1,20	2,00

Table 5: Levene's test (25 BIF-items)

Levene Statistic	df1	df2	Sig.
,285	1	36	,597

Table 6: Outcome ANOVA (25 BIF-items)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,007	1	,007	,188	,667
Within Groups	1,362	36	,038		
Total	1,369	37			

Table 7: Statistics mean dependent variable (8 BIF-items)

N	Valid	38
	Missing	0
Skewness		,030
Std. Error of Skewness		,383
Kurtosis		-,823
Std. Error of Kurtosis		,750

Table 8: Distribution dependent variable (8 BIF-items)

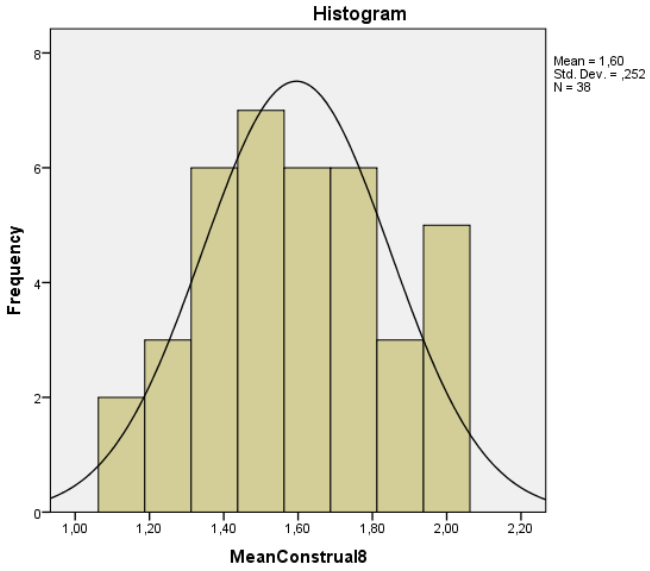


Table 9: Descriptives of the mean (8 BIF-items)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Low Construal	19	1,5395	,25703	,05897	1,4156	1,6634	1,13	2,00
High Construal	19	1,6513	,24145	,05539	1,5349	1,7677	1,25	2,00
Total	38	1,5954	,25241	,04095	1,5124	1,6784	1,13	2,00

Table 10: Levene's test (8 BIF-items)

Levene Statistic	df1	df2	Sig.
,011	1	36	,915

Table 11: Outcome ANOVA (8 BIF-items)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,119	1	,119	1,911	,175
Within Groups	2,238	36	,062		
Total	2,357	37			

Appendix 8: Manipulation check of main study

Table 1: Statistics mean dependent variable

N	Valid	201
	Missing	0
Skewness		,057
Std. Error of Skewness		,172
Kurtosis		-,507
Std. Error of Kurtosis		,341

Table 2: Distribution dependent variable

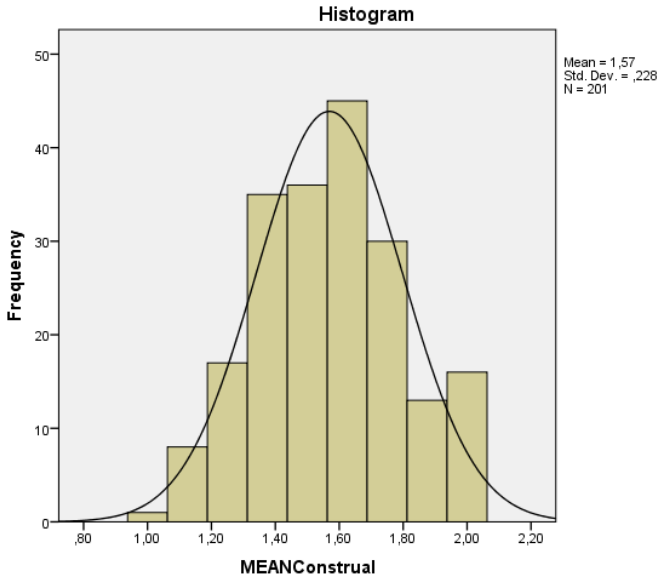


Table 3: Levene's test

Levene Statistic	df1	df2	Sig.
1,919	1	199	,168

Table 4: Descriptives of the mean

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
LC	106	1,5660	,24042	,02335	1,5197	1,6123	1,00	2,00
HC	95	1,5724	,21541	,02210	1,5285	1,6163	1,13	2,00
Total	201	1,5690	,22839	,01611	1,5373	1,6008	1,00	2,00

Table 5: Outcome ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,002	1	,002	,038	,845
Within Groups	10,431	199	,052		
Total	10,433	200			

Manipulation check with four BIF-items

Table 6: Statistics mean dependent variable

N	Valid	201
	Missing	0
Skewness		-,540
Std. Error of Skewness		,172
Kurtosis		-,203
Std. Error of Kurtosis		,341

Table 7: Distribution dependent variable

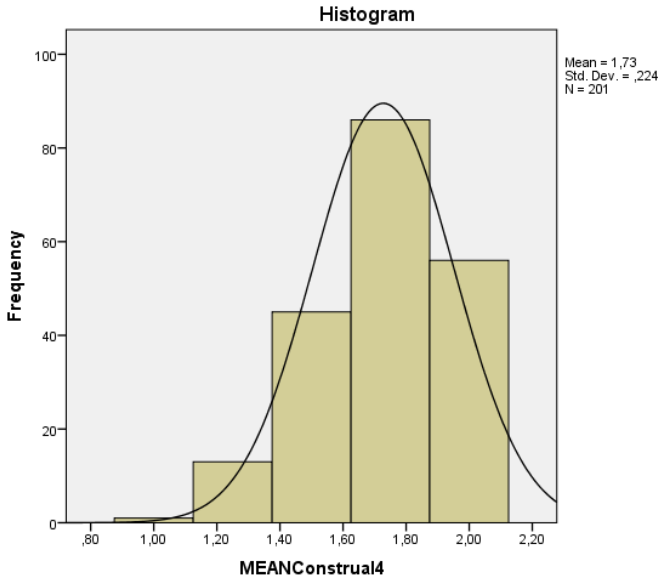


Table 8: Levene's test

Levene Statistic	df1	df2	Sig.
1,140	1	199	,287

Table 9: Descriptives mean of the dependent variable

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
LC	106	1,6934	,22960	,02230	1,6492	1,7376	1,00	2,00
HC	95	1,7658	,21204	,02175	1,7226	1,8090	1,25	2,00
Total	201	1,7276	,22388	,01579	1,6965	1,7588	1,00	2,00

Table 10: Outcome ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,263	1	,263	5,353	,022
Within Groups	9,762	199	,049		
Total	10,024	200			

Appendix 9: Multicollinearity

Table 1: Tolerance and VIF

Model	t	Sig.	Correlations			Collinearity Statistics	
			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	2,800	,006					
PositionFood	-,926	,356	-,062	-,066	-,052	,993	1,007
ConstrualLevel	,409	,683	,032	,029	,023	,998	1,002
Attractiveness burger	-7,358	,000	-,429	-,465	-,412	,995	1,005
Attractiveness salad	7,965	,000	,456	,495	,446	,998	1,002

Table 2: Collinearity

Dimension	Eigenvalue	Condition Index	Variance Proportions				
			(Constant)	PositionFood	ConstrualLevel	Attractiveness burger	Attractiveness salad
1	3,991	1,000	,00	,02	,02	,01	,00
2	,535	2,730	,00	,36	,60	,00	,00
3	,358	3,338	,01	,62	,36	,04	,02
4	,091	6,622	,01	,00	,01	,71	,25
5	,025	12,654	,97	,01	,02	,24	,73
a. Dependent Variable: Choice							

Appendix 10: Outcome stepwise method

The models in table 1:

- Model 1: ‘Positioning Food’;
- Model 2: + ‘Construal Level’;
- Model 3: + ‘Positioning Food’ x ‘Construal Level’;
- Model 4: + ‘Attractiveness Burger’;
- Model 5: + ‘Attractiveness Salad’;
- Model 6: + ‘Healthy Lifestyle’;
- Model 7: + ‘Hunger’;
- Model 8: + ‘Mood’.

Table 1: Outcome stepwise logistic regression, model 1 to 5

	Base model	Model 1	Model 2	Model 3	Model 4	Model 5
Percentage correct	64.7	64.7	64.7	64.7	70.1	81.6
Model Chi-square		.770	.949	4.488	46.061	108.840
Model significance		.380	.622	.213	.000	.000
Block Chi-square		.770	.179	3.539	41.573	62.779
Block significance		.380	.672	.060	.000	.000
Nagelkerke R Square		.005	.006	.030	.282	.575
Cox & Snell R Square		.004	.005	.022	.205	.418
-2 Log likelihood	261.069	260,299	260,120	256,581	215.008	152.229
Hosmer and Lemeshow Test		-	.171	1.000	.146	.217

Table 2: Outcome stepwise logistic regression, model 5 to 8

	Base model	Model 5	Model 6	Model 7	Model 8
Percentage correct	64.7	81.6	81.1	83.6	81.6
Model Chi-square		108.840	110.014	111.974	113.957
Model significance		.000	.000	.000	.000
Block Chi-square		62.779	1.174	1.960	1.983
Block significance		.000	.279	.162	.159
Nagelkerke R Square		.575	.580	.587	.595
Cox & Snell R Square		.418	.422	.427	.433
-2 Log likelihood	261.069	260,299	260,120	256,581	215.008
Hosmer and Lemeshow Test		-	.171	1.000	.146

Table 3: Outcome including control variables

	Model 5	Hunger	Diet	Gender	Age
Percentage correct	81.6	82.6	82.6	81.6	81.6
Model Chi-square	108.840	110.528	109.872	112.205	108.962
Model significance	.000	.000	.000	.000	.000
Block Chi-square	62.779	1.688	1.032	3.365	.122
Block significance	.000	.194	.310	.067	.727
Nagelkerke R Square	.575	.582	.579	.588	.575
Cox & Snell R Square	.418	.423	.421	.428	.418
-2 Log likelihood	152.229	150.541	151.197	148.864	152.107
Hosmer and Lemeshow Test	.217	.273	.141	.279	.278

Table 4: Outcome including control variables

	Model 5	Education	Construal x position x handedness	Handedness x position
Percentage correct	81.6	83.1	81.8	82.3
Model Chi-square	108.840	117.674	108.816	107.426
Model significance	.000	.000	.000	.000
Block Chi-square	62.779	8.834	1.786	.397
Block significance	.000	.183	.181	.529
Nagelkerke R Square	.575	.609	.581	.576
Cox & Snell R Square	.418	.443	.423	.419
-2 Log likelihood	152.229	143.395	148.429	149.818
Hosmer and Lemeshow Test	.217	.908	.048	.030

Table 5: Check for Attractiveness

	'Attractiveness Burger' + 'Attractiveness Salad'	'Position Food' added	'Construal Level' added	Interaction effect added
Percentage correct	80.6	80.1	81.6	81.6
Model Chi-Square	99.544	100.004	101.087	108.840
Model significance	.000	.000	.000	.000
Block Chi-square	99.544	.459	1.084	7.753
Block significance	.000	.498	.298	.005
Nagelkerke R Square	.537	.539	.544	.575
Cox & Snell R Square	.391	.392	.395	.418
-2 Log likelihood	161.525	161.066	159.982	152.229
Hosmer and Lemeshow Test	.904	.830	.601	.217

Appendix 11: Outcome logistic regression

Base model

Table 1: Iteration history

Iteration		-2 Log likelihood	Coefficients
			Constant
Step 0	1	261,084	,587
	2	261,069	,605
	3	261,069	,605
a. Constant is included in the model.			
b. Initial -2 Log Likelihood: 261,069			
c. Estimation terminated at iteration number 3 because parameter estimates changed by less than ,001.			

Table 2: Classification table

Classification Table[a,b]					
	Observed		Predicted		
			Choice		Percentage Correct
			Burger	Salad	
Step 0	Choice	Burger	0	71	,0
		Salad	0	130	100,0
	Overall Percentage				64,7
a. Constant is included in the model.					
b. The cut value is ,500					

Table 3: Variables not in the equation

			Score	df	Sig.
Step 0	Variables	PositionFood(1)	,769	1	,381
		ConstrualLevel(1)	,212	1	,645
		ConstrualLevel(1) by PositionFood(1)	1,736	1	,188
		Attractiveness burger	36,941	1	,000
		Attractiveness salad	41,815	1	,000
	Overall Statistics		81,529	5	,000

Used model

Table 4: Tests of model coefficients

		Chi-square	df	Sig.
Step 1	Step	108,840	5	,000
	Block	108,840	5	,000
	Model	108,840	5	,000

Table 5: Model summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	152,229[a]	,418	,575
a. Estimation terminated at iteration number 6 because parameter estimates changed by less than ,001.			

Table 6: Hosmer and Lemeshow test

Step	Chi-square	df	Sig.
1	10,741	8	,217

Table 7: Classification table

	Observed		Predicted		
			Choice		Percentage Correct
			Burger	Salad	
Step 1	Choice	Burger	50	21	70,4
		Salad	16	114	87,7
	Overall Percentage				81,6
a. The cut value is ,500					

Table 8: Variables in the equation

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
PositionFood(1)	,693	,542	1,635	1	,201	2,001	,691	5,793
ConstrualLevel(1)	1,939	,733	6,997	1	,008	6,952	1,653	29,245
ConstrualLevel(1) by PositionFood(1)	-2,405	,904	7,080	1	,008	,090	,015	,531
Attractiveness burger	-1,024	,182	31,476	1	,000	,359	,251	,514
Attractiveness salad	1,468	,247	35,347	1	,000	4,341	2,675	7,043
Constant	-2,181	1,243	3,079	1	,079	,113		
a. Variable(s) entered on step 1: PositionFood, ConstrualLevel, ConstrualLevel * PositionFood , Attractiveness burger , Attractiveness salad.								

Appendix 12: Outcome logistic regression 'Group'

Table 1: Iteration history

Iteration		-2 Log likelihood	Coefficients
			Constant
Step 0	1	261,084	,587
	2	261,069	,605
	3	261,069	,605
a. Constant is included in the model.			
b. Initial -2 Log Likelihood: 261,069			
c. Estimation terminated at iteration number 3 because parameter estimates changed by less than ,001.			

Table 2: Classification table

	Observed		Predicted		
			Choice		Percentage Correct
			Burger	Salad	
Step 0	Choice	Burger	0	71	,0
		Salad	0	130	100,0
	Overall Percentage				64,7
a. Constant is included in the model.					
b. The cut value is ,500					

Table 3: Variables not in the equation

			Score	df	Sig.
Step 0	Variables	Attractiveness burger	36,941	1	,000
		Attractiveness salad	41,815	1	,000
		Group	4,383	3	,223
		Group(1)	,637	1	,425
		Group(2)	,066	1	,797
		Group(3)	3,329	1	,068
	Overall Statistics		81,529	5	,000

Table 4: Test op model coefficients

		Chi-square	df	Sig.
Step 1	Step	108,840	5	,000
	Block	108,840	5	,000

	Model	108,840	5	,000

Table 5: Model summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	152,229[a]	,418	,575

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than ,001.

Table 6: Hosmer and Lemeshow test

Step	Chi-square	df	Sig.
1	10,741	8	,217

Table 7: Classification table

	Observed		Predicted		
			Choice		Percentage Correct
			Burger	Salad	
Step 1	Choice	Burger	50	21	70,4
		Salad	16	114	87,7
	Overall Percentage				81,6

a. The cut value is ,500

Table 8: Variables in the equation (reference category = last)

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
Attractiveness burger	-1,024	,182	31,476	1	,000	,359	,251	,514
Attractiveness salad	1,468	,247	35,347	1	,000	4,341	2,675	7,043
Group			7,962	3	,047			
Group(1)	-,228	,563	,164	1	,685	,796	,264	2,398
Group(2)	,466	,522	,795	1	,373	1,593	,573	4,432
Group(3)	1,711	,696	6,036	1	,014	5,535	1,413	21,675
Constant	-1,953	1,228	2,527	1	,112	,142		

a. Variable(s) entered on step 1: Attractiveness burger , Attractiveness salad , Group.

Table 9: Variables in the equation (reference category = first)

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
Attractiveness burger	-1,024	,182	31,476	1	,000	,359	,251	,514
Attractiveness salad	1,468	,247	35,347	1	,000	4,341	2,675	7,043
Group			7,962	3	,047			
Group(1)	,693	,542	1,635	1	,201	2,001	,691	5,793
Group(2)	1,939	,733	6,997	1	,008	6,952	1,653	29,245
Group(3)	,228	,563	,164	1	,685	1,256	,417	3,784
Constant	-2,181	1,243	3,079	1	,079	,113		
a. Variable(s) entered on step 1: Attractiveness burger , Attractiveness salad , Group.								

Appendix 13: Outcome logistic regression with the high construal level condition

Base model

Table 1: Iteration history

Iteration		-2 Log likelihood	Coefficients
			Constant
Step 0	1	121,408	,653
	2	121,395	,677
	3	121,395	,677
a. Constant is included in the model.			
b. Initial -2 Log Likelihood: 121,395			
c. Estimation terminated at iteration number 3 because parameter estimates changed by less than ,001.			

Table 2: Classification table

Classification Table[a,b]					
	Observed		Predicted		
			Choice		Percentage Correct
			Burger	Salad	
Step 0	Choice	Burger	0	32	,0
		Salad	0	63	100,0
	Overall Percentage				66,3
a. Constant is included in the model.					
b. The cut value is ,500					

Block 1

Table 3: Tests of model coefficients

		Chi-square	df	Sig.
Step 1	Step	3,857	1	,050
	Block	3,857	1	,050
	Model	3,857	1	,050

Table 4: Model summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	117,537[a]	,040	,055
a. Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001.			

Table 5: Hosmer and Lemeshow test

Step	Chi-square	df	Sig.
1	,000	0	.

Table 6: Classification table

	Observed		Predicted		
			Choice		Percentage Correct
			Burger	Salad	
Step 1	Choice	Burger	0	32	,0
		Salad	0	63	100,0
	Overall Percentage				66,3
a. The cut value is ,500					

Table 7: Variables in the equation

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
PositionFood(1)	-,864	,446	3,752	1	,053	,422	,176	1,010
Constant	1,126	,332	11,489	1	,001	3,083		
a. Variable(s) entered on step 1: PositionFood.								

Block 2

Table 8: Tests of model coefficients

		Chi-square	df	Sig.
Step 1	Step	50,640	2	,000
	Block	50,640	2	,000
	Model	54,497	3	,000

Table 9: Model summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	66,898[a]	,437	,605
a. Estimation terminated at iteration number 6 because parameter estimates changed by less than ,001.			

Table 10: Hosmer and Lemeshow test

Step	Chi-square	df	Sig.
1	5,736	7	,571

Table 11: Classification table

	Observed		Predicted		
			Choice		Percentage Correct
			Burger	Salad	
Step 1	Choice	Burger	23	9	71,9
		Salad	8	55	87,3
	Overall Percentage				82,1
a. The cut value is ,500					

Table 12: Variables in the equation

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
PositionFood(1)	-1,473	,686	4,611	1	,032	,229	,060	,879
Attractiveness burger	-1,161	,300	14,986	1	,000	,313	,174	,564
Attractiveness salad	1,186	,319	13,844	1	,000	3,275	1,753	6,117
Constant	1,647	1,814	,825	1	,364	5,194		
a. Variable(s) entered on step 1: Attractiveness burger , Attractiveness salad .								

Block 3

Table 13: Tests of model coefficients

		Chi-square	df	Sig.
Step 1	Step	1,654	1	,198
	Block	1,654	1	,198
	Model	56,150	4	,000

Table 14: Model summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	65,244[a]	,446	,619
a. Estimation terminated at iteration number 6 because parameter estimates changed by less than ,001.			

Table 15: Hosmer and Lemeshow test

Step	Chi-square	df	Sig.
1	4,733	7	,693

Table 16: Classification table

	Observed		Predicted		
			Choice		Percentage Correct
			Burger	Salad	
Step 1	Choice	Burger	25	7	78,1
		Salad	9	54	85,7
	Overall Percentage				83,2
a. The cut value is ,500					

Table 17: Variables in the equation

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
PositionFood(1)	-1,521	,700	4,724	1	,030	,218	,055	,861
Attractiveness burger	-1,147	,305	14,185	1	,000	,318	,175	,577
Attractiveness salad	1,210	,329	13,562	1	,000	3,354	1,761	6,385
Gender (1)	,895	,707	1,604	1	,205	2,447	,613	9,773
Constant	,843	1,940	,189	1	,664	2,324		
a. Variable(s) entered on step 1: Gender .								

Appendix 14: Outcome logistic regression with the low construal level condition

Base model

Table 1: Iteration history

Iteration		-2 Log likelihood	Coefficients
			Constant
Step 0	1	139,467	,528
	2	139,462	,541
	3	139,462	,541
a. Constant is included in the model.			
b. Initial -2 Log Likelihood: 139,462			
c. Estimation terminated at iteration number 3 because parameter estimates changed by less than ,001.			

Table 2: Classification table

	Observed		Predicted		
			Choice		Percentage Correct
			Burger	Salad	
Step 0	Choice	Burger	0	39	,0
		Salad	0	67	100,0
	Overall Percentage				63,2
a. Constant is included in the model.					
b. The cut value is ,500					

Block 1

Table 3: Tests of model coefficients

		Chi-square	df	Sig.
Step 1	Step	,419	1	,518
	Block	,419	1	,518
	Model	,419	1	,518

Table 4: Model summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	139,044[a]	,004	,005
a. Estimation terminated at iteration number 3 because parameter estimates changed by less than ,001.			

Table 5: Hosmer and Lemeshow test

Step	Chi-square	df	Sig.
1	,000	0	.

Table 6: Classification table

			Predicted		
	Observed		Choice		Percentage Correct
			Burger	Salad	
Step 1	Choice	Burger	0	39	,0
		Salad	0	67	100,0
	Overall Percentage				63,2
a. The cut value is ,500					

Table 7: Variables in the equation

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
PositionFood (1)	,261	,404	,418	1	,518	1,298	,588	2,864
Constant	,405	,289	1,973	1	,160	1,500		
a. Variable(s) entered on step 1: PositionFood.								

Block 2

Table 8: Tests of model coefficients

		Chi-square	df	Sig.
Step 1	Step	55,796	2	,000
	Block	55,796	2	,000
	Model	56,215	3	,000

Table 9: Model summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	83,248[a]	,412	,563
a. Estimation terminated at iteration number 6 because parameter estimates changed by less than ,001.			

Table 10: Hosmer and Lemeshow test

Step	Chi-square	df	Sig.
1	14,804	8	,063

Table 11: Classification table

			Predicted		
			Choice		Percentage Correct
			Burger	Salad	
Step 1	Choice	Burger	27	12	69,2
		Salad	8	59	88,1
	Overall Percentage				81,1
a. The cut value is ,500					

Table 12: Variables in the equation

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
PositionFood(1)	,786	,572	1,888	1	,169	2,195	,715	6,737
Attractiveness burger	-1,021	,249	16,752	1	,000	,360	,221	,587
Attractiveness salad	1,737	,386	20,260	1	,000	5,680	2,666	12,101
Constant	-3,577	1,663	4,625	1	,032	,028		
a. Variable(s) entered on step 1: Attractiveness burger , Attractiveness salad .								

Block 3

Table 13: Tests of model coefficients

		Chi-square	df	Sig.
Step 1	Step	1,885	1	,170
	Block	1,885	1	,170
	Model	58,100	4	,000

Table 14: Model summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	81,363[a]	,422	,577
a. Estimation terminated at iteration number 6 because parameter estimates changed by less than ,001.			

Table 15: Hosmer and Lemeshow test

Step	Chi-square	df	Sig.
1	3,323	8	,913

Table 16: Classification table

	Observed		Predicted		
			Choice		Percentage Correct
			Burger	Salad	
Step 1	Choice	Burger	26	13	66,7
		Salad	5	62	92,5
	Overall Percentage				83,0
a. The cut value is ,500					

Table 17: Variables in the equation

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
PositionFood(1)	,824	,579	2,021	1	,155	2,278	,732	7,091
Attractiveness burger	-1,001	,249	16,222	1	,000	,367	,226	,598
Attractiveness salad	1,784	,393	20,566	1	,000	5,953	2,754	12,870
Gender (1)	,878	,644	1,860	1	,173	2,407	,681	8,504
Constant	-4,583	1,848	6,149	1	,013	,010		
a. Variable(s) entered on step 1: Gender .								