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Mental Simulation and Evaluation of Food: Effect of Process and Outcome Simulation on Liking and Wanting of a Product. The case of a cereal bar.

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Preface

After following several courses from the Management and Consumer Behavior (MCB) chair group, I was particularly interested in the thesis presentation of this chair group. I attended all the thesis presentations, and the presentation of MCB confirmed my interest. While having a conversation with Frans Verhees about the different fields within MCB, I became interested in sensory science. I contacted Betina Piqueras Fiszman and got linked to Naomí Munoz Vilches, who sent me some background literature about 'Mental simulation'. After reading some literature and discussing the topic, this thesis subject satisfied me. It was not easy to come to the current hypotheses, because there are so many different uses of mental simulation and it has not been examined extensively in the food domain. Besides that, I never did an analysis with a within-subjects design, and this was more difficult than expected. However, with the help of my supervisors I managed to accomplish it. I want to thank them for the positive support and the pleasant way of communicating.

Abstract

People believe that healthy food is generally less fulfilling than unhealthy alternatives. These beliefs, that are bad for people's health, may partly depend on product evaluation and product evaluation is expected to be susceptible to influence by means of mental simulation. Mental simulation is the imitative mental representation of events or series of events and used as an advertising strategy that leads to persuasion. In a 2x1 within-subjects design, an online quantitative research was done to measure the effects of different simulation types on the product evaluation of a cereal bar in terms of liking, immediate wanting and experiential or functional features. The cereal bar is perceived as malleable in product type, which means that it is perceived as highly functional as well as highly experiential. Food choice motive (health or sensory) was expected to affect the effect of mental simulation on product evaluation. It appeared that when process simulation is used, product evaluation of the cereal bar is based mainly on experiential features, and immediate wanting increases compared to no mental simulation. Besides that, when outcome simulation is used, product evaluation of the cereal bar is based mainly on functional features, and immediate wanting increases compared to no mental simulation as well. No significant differences for the score on liking the cereal bar are found across the three conditions. And no significant differences for product evaluation are found between different food choice motives (health or sensory). Since it appeared that product evaluation can be influenced at least to some degree, this can help to create strategies to make people evaluate healthy food better. The results of this research are discussed and subsequently, some recommendations are made for further research.

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Introduction

Imagine yourself being in the supermarket, which products would you choose? Selecting food is an activity that concerns every consumer. Whereas it is generally the case that people eat because they need to fulfill their appetite, there are also other goals consumers hold when selecting food. For example, to maintain good health or for the experience of eating the food. When consumers select food with the goal of maintaining good health, the food is highly functional for them and when consumers select the food for the experience of eating it, the food is highly experiential for them. Unhealthy food is often highly experiential and low functional and healthy food is often highly functional and low experiential. However, food is bi-dimensional, meaning that it can be experiential and functional at the same time but in different magnitude.

People believe that healthy food is generally less fulfilling than unhealthy alternatives (Finkelstein & Fishbach, 2010). To be even more specific, 4 out of 10 consumers believe that healthy foods do not taste good according to a consumer insight report released by Catalina Marketing (Weingarten, 2011). This belief in combination with a lack of self-control and knowledge about nutrition results in people eating too much unhealthy food just for the experience of eating it, which has negative consequences for their well-being. In the USA alone, over one third of children and over two thirds of adults are obese or overweight (Ogden et al. 2014). That is why promoting healthy food choice is a central issue for public welfare and a continuous challenge for policy makers and marketers. A lot of attention is paid to helping consumers make these healthier decisions. An important driver for food choice is the evaluation of the product. If you can influence the evaluation, you are closer to a new strategy to make people eat healthier.

A few of the current strategies to make people eat healthier in the form of front-of-pack nutrition labels are for example, nutrition tables, labels based on Guideline Daily Amounts (GDA's), multiple traffic light (MTL) labels, and signpost logos (e.g., Health Tick, Choices Logo) (Van Herpen & Van Trijp, 2011).

To contribute to these strategies, this research examines the role of mental simulation in influencing product evaluation of food. If the product evaluation of food can be influenced in a predictable way, this can contribute to strategies to make people eat healthier. Mental simulation is the imitative mental representation of events or series of events (Taylor & Schneider, 1989). For example, when you park your car you must imagine if the car would fit the parking spot or not. Or when you read a book, you imagine how the characters look like and maybe even how they feel. Mental simulation is a widely-used advertising strategy that encourages consumers to imagine themselves in positive scenarios involving the advertised products. Visualizing oneself in a positive scenario with the advertised product evokes a positive effect and thereby boosts the perceived realism of the experience, which in turn leads to persuasion (Escalas, 2004; Green & Brock, 2000). This mental simulation strategy is different from other advertisement strategies, because it instructs consumers to visualize themselves in a positive scenario and thereby creates an environment that encourages a higher degree of self-engagement with the advertisement (Jeong & Jang, 2016). For example, advertisers of chewing gum encourage consumers to imagine how chewing the gum will stimulate their senses and advertisers of lottery tickets encourage consumers to imagine themselves winning the lottery. Such text used in advertising can induce simulations of either the process of using a product or outcomes associated with a product, and both process and outcome simulation can influence consumers' product evaluation.

In the domain of food, mental simulation can be used to shift the attention to the attributes of the food that would impact the evaluation. Process simulation is used to let the consumer imagine eating the food and outcome simulation is used to let the consumer imagine the benefits/consequences of having eaten the food. When the consumer runs through the event of eating the product in his/her mind and imagines it in a concrete and specific form, it often makes this event seem within reach and this in turn influences evaluation.

The literature on mental simulation has also shown its unique effect on the information processing of consumers. Successfully visualizing using a product and subsequently receiving its benefits leads to a positive affect, which makes consumers more likely to use affective judgment and less likely to be critical during the analyzation of ad arguments. Ultimately, regardless of the quality of the information

and ad arguments about a product's attributes, consumers using mental simulation are more likely to have positive attitudes and purchase intentions (Escalas, 2004; Praxmarer, 2011).

The research discussed so far, which focuses on specific thinking instructions given to consumers, concerns instructed mental simulation. Besides instructed mental simulation, research has demonstrated that exposure to a product or a picture of a product triggers automatic mental simulation which can also influence preferences and attitudes (e.g., Beilock & Holt 2007; Eelen, Dewitte & Warlop 2013; Elder & Krishna 2012; Shen & Sengupta 2012). However, in this research the focus will be on instructed mental simulation and its influence on product evaluation. Instructed mental simulation shall hereafter be referred to as mental simulation. The effects of the three conditions with different mental simulation types on product evaluation of a food product will be examined. This will be done by using process and outcome simulation for a product that is according to a pilot test perceived as malleable, meaning that it is perceived as highly functional and highly experiential at the same time (the results of the pilot test are presented in Table 1. in appendix I). The difference in product evaluation across conditions will be used to explore whether the two different mental simulation types will lead to the customer focusing on different attributes of the product and to get insight in how the product is evaluated. The food choice motive of a consumer can have a moderating effect on the product evaluation, this will also be examined. These results can show how product evaluation can be influenced by mental simulation. And this knowledge about the effect of mental simulation on product evaluation, contributes to creating strategies to make people eat healthier. However, these strategies also need other valuable insights and the focus of this research is to explore the process of using mental simulation for a food product and subsequently, the way the evaluation of the product takes place only.

Theoretical framework

The theoretical framework will be divided in 5 sections. First, the relevant literature on mental simulation will be discussed, with a focus on process and outcome simulation. Second, the difference between the experiential dimension and the functional dimension of food products will be described. Third, the way in which product evaluation is used in this research will be explained. Fourth, the moderating effect of the food choice motive will be discussed. Finally, the conceptual model will be presented.

Mental simulation (process and outcome)

Mental simulation can be defined as the imitative mental representation of events or series of events in the mind of the consumer (Taylor & Schneider 1989). Mental simulation (also called mental imagery) has already been studied in psychology (Taylor et al., 1998) and in different marketing contexts (e.g., MacInnis & Price 1990; Shiv, Baba & Joel Huber 2000; Zhao, Min, Hoeffler & Dahl 2009).

Mental simulation involves various cognitive hypothetical scenario constructs, such as fantasizing about likely or less likely future events and re-experiencing or reconstructing past events (Escalas, 2004). Empirical research has showed that when people imagine hypothetical events and are then asked to rate the likelihood of these events, they are more likely to believe these events will actually occur following mental simulation than following other cognitive activities that have focused on these hypothetical events (e.g., Anderson, 1983; Anderson & Sechler, 1986; Carroll, 1978; Gregory, Cialdini & Carpenter, 1982; Hirt & Sherman, 1985; Sherman, Skov, Hervitz & Stock, 1981; see Koehler, 1991, for a review). Several social psychological studies have concluded that mental simulation can affect consumers' brand evaluations and behavioral intentions (Escalas, 2004; Phillips, Olson & Baumgartner, 1995; Sujan, Bettman & Baumgartner, 1993). And in studies of advertisements, mental simulation is already used as an advertising tactic that promotes products or brands by encouraging consumers to imagine themselves using these products and brands (Escalas, 2004; Praxmarer, 2011). So, mental simulation can change product evaluation, which involves 'liking' and 'wanting' in this research which will be explained later.

Two types of mental simulation that are of relevance for this research can be distinguished, process simulation and outcome simulation. Process simulation refers to the imagination of going through the process of reaching a goal step-by-step and outcome simulation involves the desirable outcome of achieving the goal (Pham & Taylor 1999). For example, imagining yourself going through the step-by-step process of parking your car for process simulation and imagining your car parked successfully for outcome simulation.

According to the availability heuristic, individuals estimate the likelihood of an event based on the "ease with which instances or associations come to mind" (Tversky & Kahneman, 1973, p. 208). When a consumer imagines using a product, the cognitive ability of doing so increases, thereby leading individuals believe the actual product usage is more likely to occur. Based on this cognitive approach, Phillips et al., (1995) declare that self-constructed mental simulations of potential consumption situations motivate these consumption behaviors. This is because mental simulation involves acting of the consumer themselves and detailed product-related behaviors. Cognitive information processing is based on "cold", deliberate, and analytic thinking. On the other hand, affective information processing is based on "hot", rapid, and emotional feelings (Epstein 1994; Metcalfe & Mischel 1999). A large body of research has examined the effect of affective and cognitive processing modes and has found that focusing on the cognitive versus affective components leads to very different attitudes (Edell & Burke 1987), evaluations (Zauberman, Diehl & Ariely 2006), and decisions (Dhar & Wertenbroch 2000; Hsee & Rottenstreich 2004; Metcalfe & Mischel 1999; Shiv 2000 & Nowlis 2004). In this research, the focus will be on cognitive information processing only.

Researchers have asked participants to imagine the process of using a product and focus on how they would incorporate this product into their daily routine for process simulation and imagining the end benefits that they would receive from using the product for outcome simulation (Escalas & Luce 2003, 2004). They show that advertisements that emphasize the process of using the product facilitate higher intentions to use the product. Process simulation results in higher intentions to use the product, because

it facilitates a spontaneous planning process in comparison to advertisements that emphasize the benefits of using the product. Besides that, marketing research shows that advertisements with text encouraging process simulations are effective at increasing purchase intentions (Escalas, 2004) and reducing rejection of new products (Hoeffler, 2003), while outcome simulations render choosing between alternatives easier and less stressful (Thompson, Hamilton & Petrova, 2009). Furthermore, outcome simulation maintains that envisioning the outcome that one wants to achieve may facilitate efforts to achieve a goal or enhance perceptions of self-efficacy (Pham & Taylor, 1999). So, both types of mental simulation can have a positive effect on product evaluation.

Applying this to the food domain, consumers are instructed to mentally simulate the process of eating a food product, they might imagine the step-by-step process of seeing, smelling tasting, hearing and feeling the product. And consumers are instructed to mentally simulate the outcome of eating a food product, they imagine the benefits/consequences of having eaten the food.

Product type (experiential and functional dimension)

Consumer attitudes are inherently bi-dimensional, because consumers purchase goods and services and perform consumption behaviors for two basic reasons: for consummatory affective (hedonic) gratification (from sensory attributes), and for utilitarian reasons concerned with “expectations of consequences” (Batra & Ahtola, 1991, p. 159).

A consumption object is cognitively placed on both a utilitarian dimension of instrumentality (e.g., how useful or beneficial the object is), and on a hedonic dimension measuring the experiential affect associated with the object (e.g., how pleasant and agreeable those associated feelings are) (Batra & Ahtola, 1991, p. 161). The hedonic dimension results from sensations from using the product and the utilitarian dimension is derived from the functions performed by products (Voss, Spangenberg & Grohmann, 2003). The scores on the hedonic and the utilitarian dimension contribute, in different magnitude, to the overall reasons or motivations for consumption. Batra and Ahtola (1991) found that these motivations need not be mutually exclusive, a product can be perceived as highly experiential and highly functional at the same time. In general, fruits contain both dimensions. For example, a banana can be perceived as pleasant to eat (experiential) and as a great energy booster (functional). These motivations do not need to be evaluatively consistent, according to Batra and Ahtola (1991). Meaning that a product can be perceived as highly experiential and low in functionality (e.g., smoking) or a product can be perceived as low in experience and highly functional (e.g., nutritional supplement). A product can be malleable, meaning that it is perceived as both functional and experiential and in the relative scale it is perceived as relatively neutral. So, a manifestation of the functional and experiential dimension not being mutually exclusive. Products that are malleable are expected to be influenced more by mental simulation, since there is no strong natural focus on process or outcome. To simplify things, only a malleable product will be used in this research and this will be a cereal bar.

In the terminology used in this research, the experiential (hedonic) determinant of overall evaluations is presumed to be based on the consumer’s assessment of how much pleasure the food gives them so, to what extent the food satisfies wanting. The functional (utilitarian) determinant is based on their assessment about the instrumental value of the food’s functional attributes so, to what extent the food satisfies need.

There is a theory, called processing fluency, that can give insight into the effect of combining product type with simulation type. Processing fluency is the subjective ease with which a stimulus is processed (Reber, Schwarz & Winkielman, 2004). They found that the more fluently perceivers can process an object, the more positive their aesthetic response is. This explains that when consumers are faced with a situation of congruence, the processing fluency allows the evaluation of a product to be made fast and without much effort and therefore, congruence should lead to an affectively positive outcome. Moreover, research in consumer behavior shows that consumers believe that healthy foods do not taste good (Chandon & Wansink 2007; Raghunathan, Naylor & Hoyer, 2006). This suggests that healthy (highly functional) foods lack process related savory perceptions. From this reasoning, it is expected that using process simulation for functional products would result in an incongruence. Besides that,

when eating unhealthy foods (often highly experiential), it is expected that focusing on the outcome, by emphasizing energy and nutritional value would probably lead to a lower evaluation. So, an incongruence between product type and simulation type is expected to lead to a lower evaluation. However, in this research this will not be addressed. The aim of this research is to explore how effective the type of mental simulation is in shifting consumer's attention focus on different attributes of a food product on which consumer base the evaluation of that food product. A malleable product will be used. This product is a cereal bar, which is as mentioned before according to a pilot test perceived as high in functionality and high in experience (Table 1. in appendix I). The cereal bar is used to find out if mental simulation works to direct consumer's attention to specific product attributes that are experiential or functional. Besides that, the cereal bar is used to explore the impact of this attention to specific product attributes on product evaluation.

Product evaluation

Product evaluation in this research, involves liking and wanting. Generally, people want things they like and like things they want. However, these two concepts differ from each other, because liking is associated with emotions and wanting is associated with motivation (Berridge, 1999). A correlational study has led to data that can be interpreted as a manifestation of liking without wanting. According to self-reports of participants, those who were less hungry had less desire to eat pizza (Cornell, Rodin, & Weingarten, 1989). These participants might have experienced an emotional "attraction" in response to the pizza without experiencing a motivational attraction to it. So, they might like pizza but did not want it, because they were not hungry. Therefore, liking is more stable than wanting. Besides the difference between liking and wanting, wanting alone has at least two different meanings, it can either be impulsive or it can be a result of self-control (D'Argembeau, Xu, Lu, Van der Linden & Bechara, 2008). For example, you may feel an impulsive wanting to eat chips, yet control yourself and say literally, "I do not want it." In this research, the impulsive wanting (craving) is referred to as 'wanting it now' and the wanting as a result of self-control is referred to as 'wanting it for later'. The focus in this research will be on 'the degree of wanting now' since, it is expected to be more susceptible to change than liking.

According to the Elaborated Intrusion Theory of desire (EI Theory), cravings or desires ('wanting now') are affectively laden cognitive events, where an object or activity and associated pleasure or relief are in focal attention (Kavanagh, Andrade & May, 2005). Initial awareness of food sometimes even results in salivation. Certain triggers can lead, via automatic associative processes, to an apparently spontaneous thought about eating intruding into consciousness. It is shown, that the extent of priming of food-related words was associated with the frequency of intrusive thoughts about eating (Berry, Andrade & May, 2007). When linking process simulation to the EI Theory, it is expected that using process simulation as a trigger will result in more cravings. When imagining eating a food product it conveys some of the real pleasure of eating it. More realistic and vivid images convey greater pleasure, however make us more acutely aware of the difference between our current state (not eating the food) and our desired state (eating the food) at the same time. When the desire remains unfulfilled (you do not eat the food) the imagery is not pleasurable anymore and motivates consumers to achieve the desire and this results in consumers wanting the food now (May, Kavanagh & Andrade, 2015).

Besides that, when consumers shift their attention to the outcomes of eating an unhealthy product (outcome simulation), they might think of unwanted consequences of eating the food which results in not wanting the food now. Thus, outcome simulation might help to decrease the desire for the food now, because it replaces the images of the experience by goals that are further in the future. People think of the results of eating the unhealthy food and this can prevent a craving. This is expected for a product that has unwanted consequences. However, in this research a malleable product is used and it is expected that the functional dimension will lead to positive consequences of eating the product and therefore to a positive effect on product evaluation as well. When consumers get more engaged with the product, by means of either process or outcome simulation, it is expected that immediate wanting will increase compared to no mental simulation.

Based on the literature, there are a few expectations about the effect of mental simulation on product evaluation. In short, it is expected that using process simulation as a trigger will result in more cravings. When imagining eating a food product it conveys some of the real pleasure of eating it. More realistic

and vivid images convey greater pleasure, however make us more acutely aware of the difference between our current state (not eating the food) and our desired state (eating the food) at the same time. When the desire remains unfulfilled (you do not eat the food) the imagery is not pleasurable anymore and motivates consumers to achieve the desire and this results in consumers wanting the food now (May, Kavanagh & Andrade, 2015). Besides that, Escalas and Luce (2003, 2004) show that advertisements that emphasize the process of using the product facilitate higher intentions to use the product. Process simulation results in higher intentions to use the product, because it facilitates a spontaneous planning process in comparison to advertisements that emphasize the benefits of using the product. However, outcome simulation is also expected to increase immediate wanting of a malleable product, compared to no mental simulation. This expectation is formed, because according to Pham and Taylor (1999), outcome simulation maintains that envisioning the outcome that one wants to achieve may facilitate efforts to achieve a goal or enhance perceptions of self-efficacy. However, this reasoning suggests that it is provided that the outcome should be a goal. In this research, the product that is used scores high in functionality, so the outcome of eating the cereal bar is perceived as functional, which can be seen as a goal. Therefore, it is hypothesized:

H1: A) Using process simulation, immediate wanting of a malleable product will increase compared to no mental simulation, and B) product evaluation (liking and wanting now) of a malleable product will be based mainly on experiential features (sensory, appearance, and sensations).

H2: A) Using outcome simulation, immediate wanting of a malleable product will increase compared to no mental simulation, and B) product evaluation (liking and wanting now) of a malleable product will be based mainly on functional features (healthiness, functionality, and practicality).

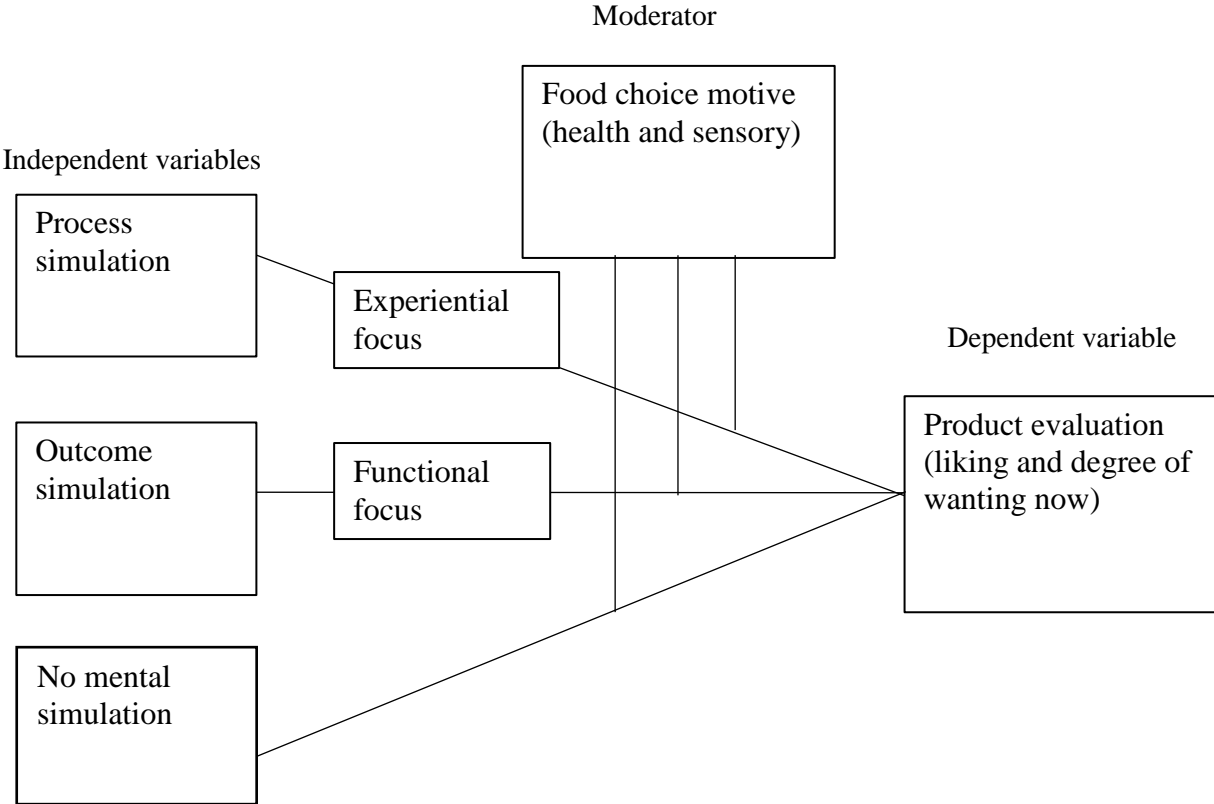
Food choice motive

Understanding food choice motive is needed to find out if it affects the effect of simulation type on product evaluation. If a person finds health significantly more important than sensory, he/she will probably be inclined to focus on outcome instead of process regardless of the mental simulation. And if a person finds sensory significantly more important than health, he/she will probably be inclined to focus more on process instead of outcome regardless of the mental simulation. This is expected to result in the effect of process simulation, which shifts the attention of the consumer to the experience of eating the product, being less effective on product evaluation for sensory oriented consumers compared to health oriented consumers. This is expected, because sensory oriented consumers already focus more on the process of eating a product, which can result in the mental simulation being less effective. Besides that, it is expected that the effect of outcome simulation, which shifts the attention of the consumer to the benefits/consequences of having eaten the product, being less effective on product evaluation for health oriented consumers compared to sensory oriented consumers. This is expected, because health oriented consumers already focus more on the outcome of having eaten a product, which can result in the mental simulation being less effective. Therefore, the following hypotheses are formed:

H3: Using outcome simulation influences the evaluation of a malleable product (liking and wanting now) less for mainly health oriented people compared to mainly sensory oriented people.

H4: Using process simulation influences the evaluation of a malleable product (liking and wanting now) less for mainly sensory oriented people compared to mainly health oriented people.

Conceptual model



Method

Design

The quantitative research was done by means of an online experiment, with a 2 (mental simulation: process, outcome) x 1 (product: malleable) within-subjects design. Three surveys were used, that had to be filled in within 2 weeks and participants filled in one survey a day. The first survey had to be filled in at day 1, half of the participants filled in the second survey at day 2 and the third survey at day 3 and the other half of the participants the other way around to rule out the sequential effect. So, survey 2 and 3 were interchangeable. These 3 days were distributed over 2 weeks.

Participants

The 142 participants that took part in this research were mainly Wageningen University students, since a convenience sample was used. However, also other people that can understand English could participate. Standard emailing lists, were used to collect the respondents. Of these respondents 61 were deleted, because they did not fill in all three surveys, which resulted in 81 valid respondents. There were 12 male participants and 69 female participants that took part in this research. Of these respondents, 65 were in the age range of 18-24, 12 were in the age range of 25-34, 1 was in the age range of 35-44, and 3 were 45 or older. Most of the respondents were in the age range of 18-24, because they are students.

Procedure

An e-mailing list was used to send the link of the first survey and ask students if they would want to take part in the research. Participants filled in three surveys online, within two weeks. At first, they received the link for survey 1 only. One day after they filled in the first survey, they received the next survey and they received the last survey a day after they filled in the second survey. They could not fill in more than one survey a day, because they would remember what they filled in at the previous survey and this could have affected the results. The surveys were created in Qualtrics and therefore took place in a non-physical environment.

Survey 1 (No mental simulation):

The first survey did not include mental simulation and it served to find out how the participants perceived the product (score on functionality and experience) and how they evaluated the product without mental simulation. Therefore, different scales were used. In the first two scales was asked to what extent participants thought of experience and functionality respectively when consuming the product. These questions were asked to find out if the participants confirmed that the product is perceived as high in functionality and high in experience, as in the pilot test (see the results of the pilot test in Table 1. in appendix I). In the third scale, they had to evaluate the dominance/salience of the two dimensions (experience and functionality) when considering them for an eating occasion. Subsequently, questions about the evaluation were asked. Participants had to indicate how much they liked the cereal bar, how much they wanted the cereal bar now and how much they wanted the cereal bar for later.

Survey 2 (Process simulation):

The second survey included process simulation and it served to find out how participants evaluated the product after they got instructions for process simulation. Participants got instructions for process simulation (see appendix II, Survey 2, Q3, for the specific instructions) and were asked which specific features/characteristics of the product they would think of while eating the cereal bar. They were asked again how much they liked the cereal bar, how much they wanted the cereal bar for now and how much they wanted it for later. Subsequently, they were asked to choose 3 of the 8 given attributes to indicate which they considered while rating the product.

Survey 3 (outcome simulation):

The third survey included outcome simulation and it served to find out how participants evaluated the product after they got instructions for outcome simulation. Besides that, in this survey the questions about the food choice motives were asked. These food choice motive questions were not in the first

survey, because the first survey had to be the shortest to make sure people did not become unmotivated to fill in all three of the surveys. Participants got instructions for outcome simulation (see appendix II, Survey 3, Q3, for the specific instructions) and were asked what specific benefits/consequences of having eaten the cereal would be. They were asked again how much they liked the cereal bar, how much they wanted it for now and how much they wanted it for later. Subsequently, they were asked again to choose 3 of the 8 given attributes to indicate which they considered while rating the product. Finally, questions about the food choice motive of participants were asked. Food choice motive was the moderator in this research. The Food Choice Questionnaire of Steptoe, and Pollard (1995), was used to find out the main food choice motive of the respondents. Only the health and sensory dimensions were used, since these were the only ones that were of relevance for this research.

After they filled in all three of the surveys, they were thanked for their collaboration and they could win a €20 voucher. The 3 surveys are presented in the way they were conducted in appendix II. The surveys were pre-tested, and after the pre-test some small changes were made.

Data analysis

After having collected all the data, outliers or mistakes were checked and removed. Besides that, the descriptive statistics were conducted. Subsequently, the internal consistency had to be measured to check whether the Food Choice Questionnaire, of Steptoe and Pollard (1995), was reliable (Cronbach's $\alpha > 0.7$).

Then, the effect of hunger on the evaluation of the product was checked, by means of a repeated measurements ANOVA. And if the product indeed was perceived as malleable, by using paired t-test for the questions about the experience and functionality dimension (Q 4 and 5 in Survey 1, appendix II).

After that, a manipulation check was done to examine whether the manipulation was successful or not. This was done by means of a program called Wordle (Feinberg, 2014), that creates a word-cloud that shows the words that were filled in more than others, larger than others. This is a qualitative method to check the manipulation. See figures 4 and 5, for the word-cloud.

Subsequently, the extent to which respondents 'wanted the cereal bar now' after the manipulation was compared across the three conditions. This was done by means of a repeated measurements ANOVA. This was also done for the extent to which respondents 'liked' the cereal bar after the manipulation across the three conditions. After finding out if there were differences, pairwise comparisons were done to see between which conditions the differences were significant.

Then, the attributes (experiential or functional) on which the evaluation of the cereal bar was based were determined. To find out if the product evaluation in the process simulation was based significantly more on experiential features than functional features and the product evaluation in the outcome simulation significantly more on functional features than experiential features, a chi square test was performed. The features: sensory, appearance and sensation were computed into one variable, called `experiential_features`. And the features: practicality, functionality and healthiness were computed into one variable, called `functional_features`. The attributes social and context were distractors, so they could be ignored. The frequency of the experiential attributes in the process simulation condition was compared to the frequency of the experiential attributes in the outcome condition. Besides that, the frequency of the functional attributes in the process simulation condition was compared to the frequency of the functional attributes in the outcome simulation condition. Furthermore, the frequencies of the experiential and the functional features within the two conditions were compared. In short, there was checked if the frequencies were independent.

Finally, a regression analysis was done to find out whether food choice motive (health orientation and sensory orientation) had a significant effect on "liking" and "wanting now" in the three conditions.

Results

The internal consistency of the Food Choice motive questions for “health” and “sensory” were checked by conducting the Cronbach’s alpha. The Cronbach’s alpha for the “health” and “sensory” scales were respectively 0.750 and 0.739, so both scales were reliable.

To check whether the hunger differed significantly across the different conditions per respondent, a repeated measurements ANOVA was conducted ($F(2)=0.81$, $P=0.447$). Therefore, can be concluded that there was no significant difference in the hunger in the three different conditions. The mean hunger in the first survey was 43.31, in the second survey it was 45.86 and in the third survey it was 48.21 on a scale from 0 to 100.

To check if the cereal bar with a mean score of 58 ($SD=21.74$) on experience is perceived as significantly high in experience, a right tailed one-sample t-test was performed ($df=80$, $P=0.001$). Thus, the cereal bar is significantly perceived as high in experience. And to check if the cereal bar with a mean score of 65 ($SD=19.97$) on functionality is also experienced as significantly high in functionality, another right tailed one-sample t-test is performed ($df=80$, $P=0.000$). This means that the cereal bar is also significantly perceived as high in functionality. For the mean score on the relative scale of 44 ($SD=18.54$), it was expected from the earlier pilot-test (Table 1. in appendix I) that the score did not significantly differ from 50. To check this, a two-tailed one-sample t-test is performed ($df=80$, $P=0.006$). Thus, the score on the relative scale differed significantly from 50. The cereal bar is perceived as both high in experience and in functionality, however higher in functionality than in experience if measured relatively. So, the earlier pilot-test about the cereal bar being perceived as malleable is partly confirmed. See Table 1. in appendix I for a schematic overview of the product type perception.

For the manipulation check, two word-clouds were made. As can be seen in the word-cloud of the process simulation condition, words that are linked to the process of eating a cereal bar were used a lot, such as: taste, sweetness, structure, sticky and crunchy. Besides that, in the word-cloud of the outcome simulation condition, words that are linked to the outcome of having eaten a cereal bar were used a lot, such as: full, satisfied and energy. The word “hungry” is stated most in the outcome condition, however the words “not”, “anymore” and “less” were used in combination with hungry. This indicates that the manipulations were successful.

Subsequently, the extent to which respondents ‘wanted the cereal bar now’ after the manipulation, was compared across the three conditions. This was done by means of a repeated measurements ANOVA ($F(2)=10.67$, $P=0.000$). Therefore, it can be concluded that there was a significant difference in the extent to which participants ‘wanted the cereal bar now’ in the different conditions. To find out between which conditions the differences were significant, pairwise comparisons were done. The differences in wanting now were significant between the no mental simulation condition and the process simulation condition ($P=0.000$). They were also significant between the no mental simulation condition and the outcome simulation condition ($P=0.000$). However, not between the process simulation condition and the outcome simulation condition ($P=1.000$). The mean ‘wanting now’ in the no mental simulation condition, the process simulation condition and the outcome simulation condition were respectively, 32.74, 46.85, and 45.83.

This repeated measurements ANOVA was also done for the extent to which respondents ‘liked’ the cereal bar after the manipulation across the three conditions ($F(2)=2.69$, $P=0.071$). Therefore, can be concluded that there was no significant difference in the extent to which participants liked the cereal bar in the different conditions. The mean ‘liking’ in the no mental simulation condition, the process simulation condition and the outcome simulation condition were respectively, 53.20, 57.26, and 55.57.

Then, the attributes (experiential or functional) which the evaluation of the cereal bar was based on were determined. The features: sensory, appearance and sensation were computed into one variable, called `experiential_features`. And the features: practicality, functionality and healthiness were computed into

one variable, called functional_features. The attributes social and context were distractors, so they were omitted. A schematic overview of the frequencies is provided by Table 2.

Table 2. Schematic overview of the frequencies

	Process condition	Outcome condition
Experiential features	124	91
Functional features	100	133

To find out if the product evaluation in the process simulation was based significantly more on experiential features than functional features and the product evaluation in the outcome simulation significantly more on functional features than experiential features, a chi square test was performed ($\chi^2=9.7389$, $P=0.002$). So, it can be concluded that the attributes were the evaluation is based on differed significantly across conditions. In the process simulation, the evaluation of the cereal bar was based significantly more on functional features than experiential features and in the outcome simulation condition, the evaluation of the cereal bar was based significantly more on experiential features than functional features.

Finally, a regression analysis was done to find out whether food choice motive (health orientation and sensory orientation) had a significant effect on “liking” and “wanting now” in the three conditions. See Table 3. for the P-values in the different conditions.

Table 3. P-values in the different conditions

	No mental simulation	Process simulation	Outcome simulation
P-value for wanting now with difference in orientation	0.521	0.580	0.529
P-value for liking with difference in orientation	0.438	0.115	0.663

None of the P-values were significant, so health orientation and sensory orientation did not have a significant effect on wanting now and liking in the three conditions.

Discussion

Overall, this research shed light on the effect of mental simulation in influencing product evaluation. If product evaluation can be influenced, this will contribute to creating strategies to make people eat healthier. In this part, the results will be discussed and compared to the existing literature on the subject mental simulation. Based on this literature, there are a few expectations about the effect of mental simulation on product evaluation. Process simulation is expected to increase immediate wanting of a malleable product, compared to no mental simulation. This expectation is formed, because when imagining eating a food product (by means of process simulation) it conveys some of the real pleasure of eating it. More realistic and vivid images convey greater pleasure, however make us more acutely aware of the difference between our current state (not eating the food) and our desired state (eating the food) at the same time. When the desire remains unfulfilled (you do not eat the food) the imagery is not pleasurable anymore and motivates consumers to achieve the desire and this results in consumers wanting the food now (May, Kavanagh & Andrade, 2015). Besides that, Escalas and Luce (2003, 2004) show that advertisements that emphasize the process of using the product facilitate higher intentions to use the product. Process simulation results in higher intentions to use the product, because it facilitates a spontaneous planning process in comparison to advertisements that emphasize the benefits of using the product. However, outcome simulation is also expected to increase immediate wanting of a malleable product, compared to no mental simulation. This expectation is formed, because according to Pham and Taylor (1999), outcome simulation maintains that envisioning the outcome that one wants to achieve may facilitate efforts to achieve a goal or enhance perceptions of self-efficacy. However, this reasoning suggests that it is provided that the outcome should be a goal. In this research, the product that is used scores high in functionality, so the outcome of eating the cereal bar is perceived as functional, which can be seen as a goal. However, a recommendation for further research could be to test whether outcome simulation also increases immediate wanting compared to no mental simulation for a product that has a low score on functionality. It could be that outcome simulation used in combination with a product that has a low score on functionality results in a decrease of wanting now, compared to no mental simulation. Moreover, in the research of Pham and Taylor (1999 p. 258), the results suggested that “envisioning the desired outcome did not prompt effective actions to bring about the desired goal. In fact, outcome simulation can have negative effects on goal directed behavior.” In this research, it appeared that both process and outcome simulation worked to increase immediate wanting, compared to no mental simulation. So, H1 A and H2 A were confirmed. It maybe seems surprising that outcome simulation was effective to increase immediate wanting, because the results of Pham and Taylor (1999), suggest that outcome simulation had a negative effect on goal directed behavior. However, there is still a difference between wanting something and really doing it. So, outcome simulation might be effective to make people want a product immediately, but maybe not at making people really eating it. Therefore, a recommendation for further research could be to use both process and outcome simulation for different malleable products and find out which products participants really eat. Moreover, the attitude-behavior gap might also exist between wanting products in general and really buying these products.

Besides influencing the wanting of a product, it was also expected that the different types of mental simulation could shift consumer’s attention focus on different attributes of a food product on which consumers base the evaluation of that food product. Since process simulation involves the imagination of going through the process of reaching a goal step-by-step (Pham & Taylor, 1999), it was expected that process simulation applied to the food domain involves focusing on the process of eating a product. When people focus on the process of eating a product, it was expected that experiential features (sensory, appearance and sensations) became in more focal attention. Therefore, it was expected that product evaluation in terms of liking and wanting is based mainly on experiential features when process simulation is used. Besides that, since outcome simulation involves imagining the end benefits that are received from using a product (Escalas & Luce 2003, 2004), it was expected that outcome simulation applied to the food domain involves imagining the benefits/consequences (outcome) of having eaten the food. When people focus on the outcome of eating a product, it was expected that functional features (healthiness, functionality and practicality) became in more focal attention. Therefore, it was expected that product evaluation in terms of liking and wanting is based mainly on functional features when outcome simulation is used.

It appeared that when process simulation was used, product evaluation of the cereal bar was based mainly on experiential features and when outcome simulation was used, product evaluation of the cereal bar was based mainly on functional features. So, H1 B and H2 B were confirmed as well.

Furthermore, it was expected that outcome simulation influences the evaluation of a product, in terms of liking and wanting now, less for mainly health oriented people compared to mainly sensory oriented people. This expectation was formed, because mainly health oriented people will probably already focus more on the benefits/consequences of having eaten the product regardless the outcome simulation. Besides that, it was expected that process simulation influences the evaluation of a product, in terms of liking and wanting now, less for mainly sensory oriented people compared to mainly health oriented people. This expectation was formed, because mainly sensory oriented people will probably already focus more on the features/characteristics of the product while eating it regardless the process simulation. However, in this research there was no moderating effect found of food choice motive. So, H3 and H4 were rejected. This could be explained by a possible gap between attitude and behavior. Respondents fill in to what extent they find certain attributes of health and sensory important. They might fill in that they find certain attributes important in general, but do not act like these motives in every situation. Or people might fill in they find sensory important, but do not like the taste of a cereal bar, so also have a low score on product evaluation in the process simulation condition. Besides that, people might find the energy they get from having eaten the cereal bar also important, so they score high on product evaluation in the outcome simulation condition. This leads to respondents that score highest on sensory, to evaluate the product better in the outcome simulation condition, because the energy they get from the cereal bar they think tastes bad becomes in more focal attention. This is just an example of a measurement that could lead to the current non-significant results. So, in this case it would be better to use more different products to make sure the results can be generalized to a certain product type and not only a specific product, this will enhance the external validity. In this research, just one product is used that is malleable, when different product types are used it is possible to see the pattern in interaction between simulation type and product type. This will probably result in different outcomes. For example, with a product that has unwanted consequences when it is eaten, the liking and immediate wanting will probably score lower when outcome simulation is used, compared to process simulation. Therefore, a recommendation for further research is to examine the congruence and incongruence between product type and simulation type further.

There were no significant differences in the extent to which participants 'liked' the cereal bar in the different conditions. This was as expected, because liking is more stable than wanting, which makes liking harder to influence than wanting. Moreover, it could be explained by the cognitive information processing that is used, this may have a stronger effect on the wanting, which is less emotional, than on the liking, which is more emotional according to D'Argembeau et al. (2008).

Limitations

As in many student-based research, the technique of convenience sampling is used, which has a limited reach for participants of different ages, from different cultures and different (social) environments. The questionnaire was predominantly filled in by people that were part of an emailing list from Wageningen university. This resulted in an overrepresented age range of the respondents of 18-24, namely 65 of the 81 respondents were in this age range. Besides that, there were 12 male participants and 69 female participants that took part in this research. This resulted in an overrepresentation of females, namely 85.2%. The mean age of the population in the Netherlands was in 2017, 41.6 (Centraal Bureau voor de Statistiek, 2017). Therefore, the sample was not very diverse, varied or similar to the Dutch population and could have been different if another sampling method was used. Consequently, the external validity is not as high as desired. However, 81 respondents are sufficient in this within-respondents design. The respondents could win a voucher, which served as an incentive to fill in the survey. This incentive could be a limitation because it could lead to respondents filling in the survey only for the voucher and not paying attention to the questions. However, for the open questions it was possible to check whether they formulated a real response or not. Besides that, half of the participants filled in survey 2 as second survey and survey 3 as third survey and the other half the other way around. Moreover, only 1 survey could be filled in a day. This decreased the sequential effect and therefore strengthens the internal validity.

Furthermore, the setting of the experiment could have influenced the results. The surveys were conducted in an online environment and the participants knew they were participating in a research. The setting is different if a participant sees a real advertisement in which mental simulation is used. It is possible that participants paid more attention to certain details, because they knew they had to answer questions about the product. Moreover, the picture of the cereal bar could have been more influencing in evaluating the product than the instructions for process and outcome simulation. According to the elaboration likelihood model of Petty and Cacioppo (1986), people tend to process advertisements peripherally, especially when they are low involved with the issue. This means that they base their evaluation mainly on the picture of the cereal bar instead of the mental simulation instructions. However, respondents evaluated the cereal bar differently across conditions, which indicates that they did not base their evaluation solely on the picture of the cereal bar. Moreover, in the process and outcome simulation conditions, respondents had to indicate which attributes they based their evaluation on and these attributes were different across these two conditions.

Besides that, the mean hunger on a scale from 0 to 100 was in all three conditions lower than medium. Since, the means in the three conditions were respectively, 43.31, 45.86 and 48.21. If participants are not very hungry they will probably have a lower score on 'wanting the cereal bar now' regardless the mental simulation. If they were a bit hungrier, the differences across conditions were maybe clearer. However, the rather constant score on hunger, made sure that the individual effects of the different simulation types were not distorted.

Contributions and implications

After this research, it is confirmed that when process simulation is used, product evaluation of a malleable food product will be based mainly on experiential features (sensory, appearance and sensations). Besides that, when outcome simulation is used, product evaluation of a malleable food product will be based mainly on functional features (healthiness, functionality and practicality). This reveals which features to focus on when creating a food advertisement, if a certain simulation type is used. So, combine process simulation with the emphasis on the sensory, appearance and sensations of a food product in an advertisement. Further, combine outcome simulation with the emphasis on the healthiness, functionality and practicality of a food product in an advertisement.

Besides that, it is shown that both simulation types can work to increase immediate wanting for a food product that scores high on functionality and experience. This works slightly stronger for process simulation than for outcome simulation. This can help to increase immediate wanting of healthy products and therefore, make people eat healthier. To implement this in daily life, marketers of healthy food products should use mental simulation in their advertisements and match the focus of the advertisements to the right features in combination with the right mental simulation as mentioned before. However, healthy products can be different in the score on the functional and experiential dimension. So, it is still not clear what is the best way to advertise all kinds of healthy products. When a product has a different score on the functional and experiential dimension than the cereal bar used in this research, the simulation types can have another effect on product evaluation. However, it is still unknown if this depends on the experiential and functional dimension only. Therefore, another recommendation for further research is to compare healthy products that score differently on the experiential and functional dimension and look at the effect of no mental simulation, process simulation and outcome simulation on product evaluation. In addition, it is important to define the different kinds of healthy products. This can be done for unhealthy products as well, because maybe there is a possibility to decrease the product evaluation of unhealthy products. However, some ethical issues are concerned in that case. Is it ethically responsible to create advertisements that have the opposite goal, and can make consumers dislike a product? A last recommendation for future research is therefore, to examine if this decreasing of the product evaluation of unhealthy food products works and if it is ethically responsible.

Conclusion

It can be concluded that both process and outcome simulation can increase immediate wanting of a malleable product compared to no mental simulation. When process simulation is used, product evaluation of a malleable product will be based mainly on experiential features (sensory, appearance and sensations). And when outcome simulation is used, product evaluation will be based mainly on functional features (healthiness, functionality and practicality). However, food choice motive (health or sensory), did not have a significant effect on wanting and liking across the three conditions. So, there is no moderating effect of food choice motive on product evaluation.

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Appendix I

Table 1. Schematic overview of the product type perception in the pilot-test and in this research and the absolute difference

	Experience	Functional	Relative
Pilot	64.56	63.61	49.44
This research	57.98	65.14	44.23
Difference	6.58	1.53	5.21

Appendix II

MS Survey 1 (no mental simulation)

Start of Block: Default Question Block

Q1 We thank you for helping us today and appreciate your participation in this experiment. The study you volunteered to participate in, is organized by the Marketing and Consumer Behaviour Group of Wageningen University. This questionnaire will take you about 3 minutes. We will ask you to answer some questions about a food product. You can win a €20 (VVV or similar) voucher with your participation, if you fill in all three surveys. We need your email-address to send you the links of the surveys and to let you know if you won the €20 voucher, no other emails will be sent to you. Please read carefully. The information in the study provided by you in the questionnaire will be kept strictly confidential. If you have questions at any time about the study or the procedures, you may contact the researcher; Kim van Leeuwen, phone: +31 (0) 621614646, email: kim.vanleeuwen@wur.nl

Page Break

Q2

How hungry are you now? (1)



Page Break

Q3 Imagine that you are about to make a choice among different foods. For the questions below, consider the following description of these two dimensions:

Experience:

- Sensory-rich/dull
- Delightful/not delightful
- Fun/not fun
- Yummy/yucky
- Boring/interesting

Functionality:

- Filling/not filling
- Functional/nonfunctional

- Practical/impractical
- Helpful/unhelpful
- Necessary/unnecessary

Q4 Cereal bar






When considering this product as a meal/snack, to what extent would you think of the experience of consuming the product? And to what extent would you think of the functionality of consuming the product?

Experience (3)	
Functionality (4)	

Q5 Using the same definitions as before, please evaluate the relative **dominance/salience** of the two dimensions when considering them for an eating occasion. **Note:** The more you drag the bar to **your right** the more you evaluate the food for its **experience**. And the more you drag the bar to **your left** the more you evaluate the food for its **functionality**. If the bar is in the **midpoint**, you are evaluating the two dimensions **equally**.

Cereal bar (1)	
----------------	--

Q6

How much do you like the cereal bar? (1)	
How much do you want the cereal bar now? (2)	
How much do you want the cereal bar for later? (3)	

Page Break

Q7 What is your gender?

- Male (1)
- Female (2)

Q8 Which age range are you in?

- 18-24 (1)
- 25-34 (2)
- 35-44 (3)
- 45 or older (4)

Q9 What is your e-mail address?

End of Block: Default Question Block

MS Survey 2 (process simulation)

Start of Block: Default Question Block

Q1 We thank you for helping us again today and appreciate your participation in this experiment. The study you volunteered to participate in, is organized by the Marketing and Consumer Behaviour Group of Wageningen University. This questionnaire will take you about 5 minutes, and it involves imagination. We will ask you to **imagine consuming** a food product. In a cognitive condition, you will be asked to focus on the **specific benefits while** consuming the product. Please read carefully. We kindly ask you to engage on this task, and imagine every detail as vividly as possible.

The information in the study provided by you in the questionnaire will be kept strictly confidential. You can win a €20 (VVV or similar) voucher with your participation, if you fill in all three surveys. We will ask you for your email address to make sure you filled in the three surveys and to contact you if you win! If you have questions at any time about the study or the procedures, you may contact the researcher; Kim van Leeuwen, phone: +31 (0) 621614646, email: kim.vanleeuwen@wur.nl

Page Break

Q2

How hungry are you now? (1)

Page Break




Q3 You have a cereal bar in your hand, imagine that you will start eating the cereal bar, what would you do first? Imagine yourself eating the cereal bar.



Q4 Try to think rational. Imagine yourself performing the step-by-step of eating the cereal bar. Focus on every detail while eating it. Which specific **features/characteristics** of the product do you think of **while eating** the cereal bar? (Please be as specific as possible)

Page Break

Q5 Please indicate the extent to which you agree or disagree with the following statements:

I had no difficulty imagining eating the cereal bar in my head (1)	
I had no difficulty creating images of the cereal bar in my mind (2)	
The images of cereal bar came quickly to my mind (3)	




Page Break

Q6 Did these images that came to your mind make you hungry?

- Yes (1)
 - Maybe (2)
 - No (3)
-

Page Break

Q7

How much do you like the cereal bar? (1)	
How much do you want the cereal bar now? (2)	
How much do you want the cereal bar for later? (3)	

Page Break



Q8 Which attributes of the product did you consider to rate the product in the last question? (Please drag max. 3 items to the box.)

Attributes on which you based your evaluation

_____ Sensory (1)

_____ Appearance (2)

_____ Sensation (3)

_____ Practicality (4)

_____ Functionality (5)

_____ Healthiness (6)

_____ Social (7)

_____ Context (8)

Page Break

Q9 Please state the same e-mail address as in the previous survey.

End of Block: Default Question Block

MS Survey 3 (outcome simulation)

Start of Block: Default Question Block

Q1 We thank you for helping us again today and appreciate your participation in this experiment. The study you volunteered to participate in, is organized by the Marketing and Consumer Behaviour Group of Wageningen University.

This questionnaire will take you about 5 minutes, and it involves imagination. We will ask you to **imagine having consumed** a food product. In a cognitive condition, you will be asked to focus on the **specific benefits after** having consumed the product. Please read carefully. We kindly ask you to engage on this task, and imagine every detail as vividly as possible.

The information in the study provided by you in the questionnaire will be kept strictly confidential. You can win a €20 (VVV or similar) voucher with your participation, if you fill in all three surveys. We will ask you for your email address to make sure you filled in the three surveys and to contact you if you win!

If you have questions at any time about the study or the procedures, you may contact the researcher; Kim van Leeuwen, phone: +31 (0) 621614646, email: kim.vanleeuwen@wur.nl

Page Break

Q2

How hungry are you now? (1)



Page Break






Q3

Try to think rational. Imagine that you have eaten a cereal bar. Now, please take a moment to imagine what the effects are that you may experience **after** having eaten the cereal bar.

What would be the specific **benefits/consequences** of **having eaten** the cereal bar? (Please be as specific as possible)

Page Break

Q4 Please indicate the extent to which you agree or disagree with the following statement:

I had no difficulty imagining having eaten the cereal bar in my head (1)	
I had no difficulty creating images of the cereal bar in my mind (2)	
The images of cereal bar came quickly to my mind (3)	




Page Break

Q5 Did these images that came to your mind make you hungry?

- Yes (1)
- Maybe (2)
- No (3)

Page Break

Q6 Please indicate the extent to which you agree or disagree with the following statement:

How much do you like the cereal bar? (1)	
How much do you want the cereal bar now? (2)	
How much do you want the cereal bar for later? (3)	

Page Break



Q7 Which attributes of the product did you consider to rate the product in the last question? (Please drag max. 3 items to the box.)

Attributes on which you based your evaluation

_____ Sensory attributes (1)

_____ Appearance (2)

_____ Sensations (3)

_____ Practicality (4)

_____ Function (5)

_____ Healthiness (6)

_____ Social (7)

_____ Context (8)

Q8 You are almost there, just two more questions!





Page Break

Q9 It is important to me that the food I eat on a typical day:

Contains a lot of vitamins and minerals (1)	
Keeps me healthy (2)	
Is nutritious (3)	
Is high in protein (4)	
Is good for my skin/teeth/hair/nails etc (5)	
Is high in fibre and roughage (6)	

Page Break

Q10 It is important to me that the food I eat on a typical day:

Smells nice (1)	
Looks nice (2)	
Has a pleasant texture (3)	
Tastes good (4)	

Page Break

Q11 Please state the same e-mail address as in the previous survey.

End of Block: Default Question Block
