



Advertisements: The effects of sensory language descriptions of products and second language use (L2) on attitude, desirability and purchase intention.

MA Thesis

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1. Abstract

The aim of this study was to determine the effect of the type of descriptions of the product (neutral language descriptions vs. sensory language descriptions) and the effect of language (L1 vs. L2) on the effectiveness of advertisements, which was executed in terms of advertisements for plant-based meat replacements. The effectiveness of advertisements was investigated in terms of attitude (attitude towards the advertisement and attitude towards language used in the advertisement), desirability of the product and purchase intention.

Sensory language descriptions are closely connected to people's senses and emotions, therefore sensory language descriptions might trigger people to form mental simulations related to the product. Such mental representations could evoke a feeling of a desire which can be effective for persuasion and, thus, the effectiveness of advertisements.

However, L1/L2 can be different in terms of embodiment and emotionality. In L1 advertisements, an effect of the type of description was expected, whereas sensory language descriptions were proposed to have a more beneficial effect than neutral language descriptions on the effectiveness of advertisements. In L2, there was no effect expected of type of descriptions, so sensory language descriptions should be as effective as neutral language descriptions. In the experiment, participants performed in either one of the four conditions (neutral/ L1, sensory/ L1, neutral/ L2 or sensory/ L2) and viewed a set of three advertisements for three different plant-based alternatives to meat, before they had to fill in a questionnaire for each advertisement. The results revealed that in L1, the type of description had a significant effect on purchase intention, where sensory language descriptions were more effective than neutral language descriptions. However, the type of description in L1 had no effect on all other dependent variables. In L2, there were no significant effects of the type of description on the effectiveness of advertisements, which suggests that neutral language descriptions were as effective as sensory language descriptions in L2 advertisements.

For MNCs that faced challenges on localization or standardization and therefore in making a choice regarding the development of advertisements in L1 or L2, the findings of this current study might be helpful.

Keywords: *advertisements, neutral language descriptions, sensory language descriptions, L1/L2, plant-based meat replacements, grounded theory of desire, language embodiment, MNCs, localization, standardization*

2. Introduction

Imagine that a well-known company that operates globally, such as Unilever in the Netherlands, wants to start developing advertisements for their customers to assist them in making more environmentally-friendly food choices, for example buying more plant-based alternatives to meat. In general, the target customers of Unilever in the Netherlands are native Dutch speakers who also probably understand English and often see it in advertisements. In the face of globalization, Unilever may come to the point where they have to choose which strategy to go for; localization or standardization. They have to decide whether they want to adapt the campaign to a specific target country, or whether they want to use a unified global campaign. The development of effective advertisements can be a challenge for multinational companies (MNCs). During this process, Unilever has to make decisions on questions such as ‘Would it be more effective to use neutral language or appealing language to describe aspects of the products such as sensory language?’ and also ‘Should we use native (L1) or non-native language (L2)?’. This study is aimed to find some possible answers to these questions.

Advertisements can be a form of marketing which people often encounter, on average people encounter thousands of ads a day (Simpson, 2017). Therefore, it can be important to consider whether different forms of language used to describe a product in advertisements might contribute to the optimization of advertisements. For instance, in the domain of food-related communication, it might be effective to describe food in an advertisement using forms of language to describe products that are appealing to the reader. So, it might be important to use appealing words which might trigger people’s senses and help them to make a vivid imaginary representation of eating the food (Waytz, Hershfield & Tamir, 2015). Consequently, using such appealing ‘sensory’ language descriptions which can trigger the reader’s senses might positively influence the attitude towards the advertisement, the desirability of the product and the purchase intention.

Besides deciding on using neutral language or sensory language as descriptions of products in advertisements, it should also be important to carefully consider which language (L1 vs. L2) might optimize the effectiveness of advertisements. Nowadays, globalization and technical innovations have made it possible to share messages to people all over the world. However, not everyone uses the same language as their native language (L1). Besides speaking an L1, people can also speak other languages on a regular basis as well, which can

be seen as second languages (L2). In the domain of advertising, the growing importance of speaking a second language can be clearly demonstrated. It could be that an advertisement on television, on a website or published in a magazine was designed in a second language in which people are proficient, but which they did not acquire from their birth. For instance, in the Netherlands, where people generally possess high proficiency levels of English, English is not considered a native language but people are often exposed to advertisements that are designed in English (Puntoni, de Langhe & Van Osselaer, 2009).

Therefore, in order to optimize the effectiveness of advertisements for MNCs, it can be relevant to investigate whether it would be more favourable to design an advertisement in someone's native language (L1) or second language (L2). Possibly, it can be more effective to use an L1 because using an L1 instead of an L2 might trigger close cognitive links that exist between L1 and emotions and memorization (Pavlenko, 2005; Pavlenko, 2012). In this way, using an L1 instead of an L2 might have beneficial effects on the attitude towards the advertisement and the attitude towards the language which could result in a higher desirability of the product and therefore a higher purchase intention.

The present study aims to contribute to our understanding of the influences of second language use and sensory language descriptions on the effectiveness of advertisements. In the domain of advertisements, previous research (Krishna, 2012; Krishna & Schwarz, 2014) has widely investigated the role of sensory marketing which might influence the effectiveness of advertisements. However, this current study is intended to address a gap in existing literature, since there is limited knowledge on how ways of using language to describe and highlight product aspects (neutral language descriptions vs. sensory language descriptions) and language (L1 vs. L2) might interact. However, in order to optimize the effectiveness of advertisements, it is necessary to find the best combination between the type of description (neutral vs. sensory language descriptions) and language (L1 vs. L2). If there will be found an effect in L1 for sensory language descriptions but this result does not hold for L2 advertisements using sensory language descriptions, this might extend current knowledge on embodiment differences and sensory language between L1/L2. The effectiveness of an advertisement will be operationalized by measuring the attitude towards the advertisement, the attitude towards language, the desirability of the product and the purchase intention.

In this present study, there will be a main research question formulated and a series of motivated hypotheses related to the elements in the main RQ will be presented at the end of the theoretical framework.

To summarize, the main research question will be formulated as follows:

‘What is the effect of appealing (sensory) language and second language use (L2) on persuasive communication as used in advertisements?’

2. Theoretical framework

2.1 Description types

First of all, it might be important to investigate whether some descriptions for products in advertisements can be more effective than others, specifically within the domain of food advertising. Forgas, (2001) found that persuasion can be linked to the trigger of emotions. People often rely on their emotions to make judgements and decisions, therefore it can be useful to look at descriptions of products that might trigger a mental state or feeling of people reading advertisements.

Prior studies by Turnwald et al., (2017), Turnwald and Crum, (2019) and Papies, (2013) have researched the role of different descriptions in food advertising and found favourable effects of using appealing sensory language descriptions that can trigger people's senses.

First of all, Turnwald et al., (2017) investigated how appealing language used to describe healthy food items (such as vegetables) could make them sound as appealing as unhealthy food items. They conducted this study in a large university cafeteria at Stanford University. Turnwald et al., (2017) mentioned that neutral food labeling (in this study by only mentioning the food's name, for example 'corn') and health-conscious labeling (focusing on nutrition value or healthy properties of the food, such as low-caloric content or low fat/sugar rates) for healthy food items was expected to be ineffective, because of the general belief that if a food item seems healthier, the taste is worse (Raghunathan, Naylor & Hoyer, 2006). In their study, Turnwald et al., (2017) tested whether appealing descriptors for healthy food which are usually used for unhealthy food, such as flavorful, indulgent and exciting descriptors could make healthy food more appealing. These appealing descriptors can be seen as forms of sensory language because they refer to the taste, smell or texture of food, which can activate people's senses and evoke a feeling or mental state such as a happy feeling (Turnwald et al., 2017). Examples of such appealing descriptors used in Turnwald et al. (2017) were 'rich buttery roasted sweet corn' for corn and 'slow- roasted caramelized zucchini bites' for zucchini. As health- conscious descriptors, examples of used descriptions were 'vitamin- rich corn' and 'lighter- choice zucchini'. For neutral food labelling, examples

of descriptors were ‘corn’ and ‘zucchini’. The results showed increased purchase rates for vegetables with appealing descriptors, which was in line with their hypothesis. It was supported that labeling vegetables with appealing descriptors was more effective as compared to using neutral descriptors or health-conscious descriptors to stimulate people to eat more healthy food such as vegetables.

Another study by Turnwald and Crum, (2019) found more evidence for positive effects that using appealing descriptions might make healthy food items more attractive. Specifically, in this study, healthy food is specified as plant-based food items. The researchers looked at the effects of taste-focused vs. health-focused labeling for vegetarian entrees versus meat entrees, conducted in a pay-by-weight café for a period of two months. In this study, vegetarian entrees were considered as more healthier meal-options because they are associated with lower cardiovascular disease, cancer and mortality rates than the meat entrees. In the experiment, there were two conditions that alternated every other day. For instance, on the first day the researchers used the health-focused labeling condition, where meat entrees were described as tasty and vegetarian entrees as healthy, on the second day they used the taste-focused labeling condition where vegetarian entrees were described as tasty and meat entrees as healthy. Indeed, it was found that more people chose vegetarian entrees when labeled as tasty instead of healthy. This might imply that a taste-focused labeling of vegetarian entrees might be an effective way to reduce people’s consumption of meat as compared to using a health-focused labeling.

Moreover, explanations for favourable outcomes of using appealing (sensory) language descriptions for products as demonstrated in previously mentioned studies can be found in literature within the domain of cognitive processes.

First of all, the favourable effects of using sensory descriptions for persuasion as found in Turnwald et al., (2017) and Turnwald and Crum, (2019) might be explained by the *embodied language theory* (Kühne & Gianelli, 2019; Willems & Casasanto, 2011). According to the embodied language theory, parts of the human brain where semantic meanings to language are stored overlap with other specific parts in the brain (sensori-motor cortices) which are necessary for processing action, semantics, emotional and sensory processes. Thus, there should be a common mechanism that is used by semantic categories and sensori-motor cortices. These sensori- motor cortices are activated for understanding language. (Kühne & Gianelli, 2019; Willems & Casasanto, 2011). In other words, there should be an overlap between language areas, such as those dealing with semantics, and other

areas, such as those that process action, emotion, and sensory information. So, it might be expected that sensory descriptions can help to trigger people's senses.

Thus, it might be arguable that language, senses, emotion and behavior could be connected to each other. In this light, appealing sensory descriptions in food advertisements could be useful because appealing language is intended to create a positive feeling from people towards the product. Turnwald et al., (2017) and Turnwald and Crum, (2019) found favorable effects of sensory language for persuasion. Sensory language descriptions might trigger people's senses directly to form a mental representation and stimulate them to imagine an experience from the past, for example eating food represented in an advertisement, which is also called *mental simulation* (Waytz et al., 2015) Mental simulation can lead to a desire and therefore be effective for persuasion. (Turnwald et al., 2017, Turnwald & Crum, 2019).

In addition to the positive effects that using appealing sensory language for product descriptions can have on mental simulation and therefore persuasion, it might also have favourable effects on other cognitive processes such as evoking a feeling of desire. This can be explained by Papies, (2013), which provided more evidence for a connection between sensori-cortices and sensory language descriptions. A study by Papies, (2013) investigated this theory and found that every time when people eat food, according to the *grounded theory of desire* (Papies, 2013) memory is created in their brain. Such memory consists of several food-related aspects (for instance the smell or taste) and enjoyment of food but also other aspects such as internal states (happiness because of the food, feeling satiated or feeling socially connected) and external factors such as the place where you have eaten the food or the ambiance. This 'rich' memory can be re-activated when people receive sensory language related to food which they can associate with their own previous eating experience. Even if people did not specifically eat the described food before, sensory language can activate simulations from previous food experiences and link this to the described food. (Papies, 2013, Papies et al., 2017). Papies, Johannes, Daneva, Semyte and Kauhanen, (2020) mentioned that a mental state such as 'hunger' is not even necessary because sensory language activates earlier associations, especially when an eating experience was rewarding.

As a logical result, it might be expected that appealing sensory language descriptions to highlight specific aspects of food will be beneficial for food advertisements. It might be hypothesized that food descriptions that use sensory language can help to trigger cognitive simulations from previous food experiences which can have a positive effect on the attitude towards the product, desirability of the food and purchase intention.

2.2 Second language use (L1/L2)

Besides neutral and sensory language descriptions that can influence the effectiveness of advertisements, L1 or L2 can also have an effect. Persuasion can be rooted in emotions like a desire and L1/L2 can differ in their level of emotional embodiment, therefore L1 or L2 might interact differently with sensory language descriptions which can have an influence on the effectiveness of persuasion as a crucial element for advertisements.

Prior research can be consulted to explain how L1 and L2 can differ in their level of embodiment. First of all, the Revised Hierarchical Model or RHM (Dufour & Kroll, 1995; Kroll & De Groot, 1997) can be used to explain the difference for L1/L2 in their level of emotional embodiment and therefore the effect of L1/L2 on the effectiveness of advertisements (Luna & Peracchio, 2001).

The RHM proposed that an L1 has a strong, direct connection to the semantic meaning of words, where an L2 was more likely to require mediation via an L1 to access a conceptual semantic word meaning until someone is sufficient proficient enough in an L2 (Dufour & Kroll, 1995; Kroll & De Groot, 1997).

In other words, Luna and Peracchio, (2001) suggested that words in L2 have to ‘pass through’ words that people have learned in L1 when people automatically process words in L2. Therefore, Luna and Peracchio, (2001) implied that people are more likely to process the conceptual and semantical meaning of a word faced in an L1 as compared to L2. The conceptual processing of words can be linked to what was proposed as the idea of *language embodiment* (Pavlenko, 2005). She explained that learning an L1 is not only a process of integrating words and sentences with information via our senses (e.g. what we see or hear) but people also seem to develop connections between words in L1, autobiographical memories and affect. In other words, when people learn their L1, they simultaneously use the L1 to develop autobiographical memory and emotion regulation systems. Therefore, an L1 contains affective and autobiographical dimensions which can explain a strong connection between L1 and perceived emotionality. (Pavlenko, 2005). Pavlenko (2012) also called this *the L1 advantage effect*, which means that people can experience higher subjective impressions of perceived emotionality in L1 vs. L2.

The RHM also suggests that other differences in the L1/L2 acquisition processes could explain differences in L1/L2 emotionality. Namely, an L1 is usually learned at an early age and in a personal and social environment (Altarriba, 2003; Harris, Gleason & Ayçiçeği, 2006). So, this could mean that people generally learn their L1 through imitation and experience and they connect words to situations and objects. An L2 is usually learned by

people because they unconsciously connect L1 words to L2 words in their mental lexicon (Luna & Peracchio, 2001) and an L2 is more likely to be learned at a later age in more formal environments such as educational settings (Altaribba, 2003; Harris et al., 2006). These differences in L1/L2 acquisition processes can imply that *language embodiment* is less likely to occur in an L2. Moreover, an effect of *disembodied cognition* (Pavlenko, 2012) is more likely to occur in an L2. An L2 can have a less direct connection to the senses and feelings because it can be mediated by an L1 until someone's proficiency level is high enough. For instance, people who learned an L2 often mentioned that they understand the emotional meaning of a word in their L2 but do not have the same feeling with these words compared to such words in L1 (Pavlenko, 2005).

For instance, an effect of *disembodied cognition* was also found in a study on the force of emotional words at bilinguals. Opitz and Degner, (2012) looked at the force of emotional words such as positive and negative emotional words in French-German speakers. The researchers found that people speaking an L2 that was not simultaneously learned with their L1 from birth, but at a later age, intuitively feel that their L1 has a higher emotional quality compared to their L2, even if their proficiency levels in both languages are high (Opitz & Degner, 2012).

Regarding L1/L2 differences on perceived emotionality in advertisements, Puntoni et al., (2009) investigated whether there were differences in perceived emotionality for textual information in advertisements in L1 vs. L2. In their study, half of the participant were Dutch native speakers and learned to speak French, the others were native French speakers who learned to speak Dutch. As stimuli, several advertisement slogans in French or Dutch were used as textual information. Participants viewed six different slogans from different product or service categories (for example a hotel or construction toys) and had to rate them on a seven- point unipolar scale (anchoring points were 'unemotional'-'emotional'). The results of this study were in line with previously mentioned literature on L1/L2 differences on embodied language and emotionality, as there was found that (regardless of the L1 was Dutch or French) participants perceived a higher sensitivity to emotional information in L1 as compared to L2.

Logically following from previously mentioned studies, it could be hypothesized that in an L1 people might experience a closer connection between words and emotions via their senses as compared to L2. For that reason, sensory language descriptions in L1 can be effective for the attitude towards the advertisement, the attitude towards the language used in the advertisement, the desirability and purchase intention. However, in an L2, semantical or

conceptual processing of words might be mediated by L1 words and therefore there might be weaker connections between L2, emotions and senses. Therefore, in L2, sensory language descriptions might not be effective for the attitude towards the advertisement, the attitude towards the language used in the advertisement, the desirability and purchase intention.

The present study

The present thesis is aimed at determining the effect of the type of descriptions of the product (neutral descriptions vs sensory descriptions) and the effect of language (L1 vs. L2) on the effectiveness of advertisements for plant-based meat replacements.

On the basis of the literature as discussed above, it is possible that the results of this current study will partially support existing literature on positive effects of using sensory language descriptions for persuasion. For instance, this might be hypothesized on the basis of findings for favourable effects of appealing sensory language on persuasion (Turnwald et al., 2017; Turnwald & Crum, 2019) and existing theories on cognitive processes such as the *grounded theory of desire* (Papies, 2013) and *mental simulation* (Papies, 2013). However, differences in emotionality in L1/L2 might have an influence on the effect of sensory language descriptions in L1 or L2. This was supported by literature as such as *the RHM* (Dufour & Kroll, 1995; Kroll & De Groot, 1997), *language embodiment* (Pavlenko, 2005), L1 vs L2 acquisition processes (Altarriba, 2003; Harris et al., 2006), and *disembodied cognition* (Pavlenko, 2012).

First of all, it might be hypothesized that in L1 there will be found an effect of the description type, where sensory language descriptions will be more effective than neutral language descriptions. As found in the literature, in the human brain there should be an overlap between language areas, such as those dealing with semantics, and other areas, such as those that process action, emotion, and sensory information. When people learn an L1, it is likely that they simultaneously use the L1 to develop autobiographical memory as well as emotion regulation systems. Thus, in L1, there can be a strong connection between semantical or conceptual processing of words and emotions via people's senses. Therefore, in an L1, sensory language descriptions can be effective because they might trigger people's senses directly. Accordingly, sensory language could activate cognitive simulations from previous food experiences and link these simulations to the described food in the advertisements. These mental simulations could lead to a desire of the advertised food, which might have a positive effect on the attitude towards the advertisement, the attitude towards language, the desirability of the product and purchase intention. Also, neutral language is less

intended to trigger a sense or feeling, so it can be less directly connected to emotions and would be less likely to activate cognitive simulations from previous food experiences. Therefore, in L1 advertisements sensory language descriptions might be more effective than neutral language descriptions.

On the other hand, in L2, it can be expected that there will be no effect of the description type, so sensory language descriptions will be as effective as neutral language descriptions. In an L2, a semantical or conceptual processing of words is mediated by words in an L1 until someone is proficient enough in an L2. Therefore, an L2 could have a less strong connection between a semantical or conceptual processing of words and emotions via people's senses. Thus, in an L2, it could be less likely that sensory language descriptions will trigger people's senses directly. As a result, cognitive simulations from previous food experiences are less likely to be activated in people's mind which can lead to a less strong feeling of a desire. Regarding neutral language descriptions, they are less likely to be effective in an L2 for attitude towards the advertisement, the attitude towards language, the desirability of the product and purchase intention because they are not designed to trigger an emotion, mental simulation and a desire. In other words, it can be expected that in L2, sensory language descriptions will be as effective as neutral language descriptions.

Thus, the following hypotheses will be formulated:

Hypothesis 1: For advertisements in L1, there will be found an effect of the description type, where sensory language descriptions will be more effective than neutral language descriptions.

Hypothesis 2: For advertisements in L2, there will be found no effect of the description type, so sensory language descriptions will be as effective as neutral language descriptions.

3. Method

3.1 Subjects

In total, 140 participants responded to the study. However, after close examination five participants were excluded for further analyses because they rated their English reading proficiency level below the required minimum level of proficiency (a score of 5 out of 10) which was needed to adequately participate in this study. As a result, there remained 135

participants for further analyses. Regarding diets, participants could select multiple options. 104 (77 %) subjects were omnivores, 15 (11.1 %) subjects were vegetarians, 2 (1.5 %) subjects were vegan and 16 (11.9 %) subjects had another diet. All participants were native Dutch speakers. 93 (68.9 %) subjects were female and 40 (29.6 %) subjects were male. Other gender categories contained fewer than five subjects, so they were excluded from further Chi-square analyses. A Chi-square test showed that the gender distribution was not significantly different across the four conditions ($\chi^2(6) = 2.85, p = .827$). In other words, this means that males and females were equally distributed over all four conditions. Regarding the educational level, 6.7 % of the subjects indicated to have a high school level, 11.9 % had a MBO level, 26.7 % indicated to have a HBO level, 20.7 % indicated to have a WO Bachelor level, 33.3 % had a WO Master level and 0.7 % had a WO PhD level. A Chi-square test showed that educational level was not significantly different across the four conditions ($\chi^2(15) = 23.42, p = .076$). Thus, educational levels were equally distributed over all four conditions. The age range for subjects varied between 19 and 75 years old ($M = 30.02, SD = 13.75$)¹. A one-way ANOVA showed that age was not significantly different across the four conditions ($F(3, 131) = 1.115, p = .346$). Thus, different age groups were equally distributed over all four conditions. The average age at which participants started learning English was 9.88 years. Regarding how often participants read Dutch advertisements, 1.5 % of the participants indicated ‘never’, 2.2% indicated ‘just a few times a year’, 2.2 % ‘monthly’, 17.0 % ‘weekly’ and 77.0 % ‘daily’. For English advertisements, 6.7 % of the participants answered ‘never’, 12.6 % ‘just a few times a year’, 7.4 % ‘monthly’, 28.9 % ‘weekly’, 44.4 % ‘daily’.

3.2 Materials

As stimuli, there have been created different advertisements for plant-based food replacements combining textual elements and photographs as visual elements. There were two independent variables which were manipulated for the different advertisement conditions. The first variable was the type of language of the advertisement, which consisted of two levels (L1 vs. L2). The type of description was the second independent variable, which consisted of two levels (neutral vs. sensory language). In total, the stimuli consisted of twelve

¹ Although Levene’s test of equality of error variances was violated because it was significant, this result was not taken into account for further analyses as this is beyond the scope of this current study

manipulated advertisements. These twelve manipulated advertisements were divided in four conditions. The four condition groups were ‘Dutch/neutral language’ (DU/NL), ‘Dutch/sensory language’ (DU/SL), ‘English/neutral language’ (EN/NL) and ‘English/sensory language’ (EN/SL). Each condition group consisted of three advertisements, containing a different product, which was a plant-based meat replacement. The materials used in all four conditions were always three advertisements for the same three plant-based meat replacements. Regarding the products that were used as plant-based meal replacements in the advertisements, the first product was a plant-based hamburger, the second product was a salad including plant-based chicken tenders as plant-based meat replacement and the third product were vegan spareribs as plant-based meat replacement. Plant-based meat replacements had been chosen because people in the Netherlands turned out to consume more meat replacers than those in any other European country, so they are apparently quite popular so, perhaps, it can be more likely that people are willing to try them (Meischke, 2021). Also, plant-based meat replacements facilitated the creation of appealing advertisements because meat replacements, such as a hamburger, can be more appealing than regular plant-based products such as a carrot.

3.2.1 Visual components of the advertisements

To start with, for each product type, three optional photographs were downloaded from different copyright-free websites to start with. Next, as part of the design phases, a pre-test has been performed in order to choose the photograph ultimately used for each product type. All three possible photographs for the plant-based hamburger product type were real plant-based meat replacements. For the other two product types, the photographs were actual pictures of real meat products that could plausibly pass as plant-based meat replacements because all photographs showed boneless meat. These real meat pictures for chicken and spareribs were chosen because they had a higher picture quality and therefore they were visually more attractive than the pictures for plant-based meat replacement pictures available for these product types. The food item was located centrally in the image, and there was a limited number of other objects visible. Only the objects that were needed to serve the food item such as a plate were visible to make sure that only the plant-based hamburger, chicken or sparerib attracted the participant’s full attention.

For the pre-test, nine different pictures for the three different food items (3 for the hamburger, 3 for the chicken and 3 for the spareribs) were tested on 11 additional

participants, to ensure that the three pictures chosen for the main experiment were as highly qualitative as possible and that the three top-rated pictures were comparable to each other so they did not unintentionally cause significantly different attitudes.

Participants viewed the nine pictures in a random order and had to rate their attitude towards each picture on a five-point Likert scale (1 = totally disagree, 5 = totally agree) anchored by four items ‘I think this picture is realistic’, ‘I think this picture is attractive’, ‘I think this picture is trustworthy’ and ‘I think this picture has a good quality’. Next, for each food type, the picture with the highest mean score across the attitude items was selected amongst the three options. For the plant-based hamburger food item, the top-rated hamburger picture had a numerically higher score ($M = 4.08$, $SD = 1.10$) than the two other options ($M = 3.83$, $SD = 1.06$; $M = 3.35$, $SD = 1.27$). For the plant-based chicken food item, the top rated chicken picture had a numerically higher score ($M = 3.83$, $SD = 1.06$) than the two other options ($M = 3.73$, $SD = 1.05$; $M = 3.70$, $SD = .87$). For the plant-based spareribs food item, the top-rated spareribs picture had a numerically higher score ($M = 3.93$, $SD = .94$) than the two other options ($M = 3.75$, $SD = 1.05$; $M = 3.45$, $SD = .97$).

Afterwards, statistical tests were conducted to check whether the highest-rated pictures for the plant-based hamburger, chicken and sparerib were found to be equally attractive. A repeated measure analysis for the attitude towards the picture with as factor the picture type (picture hamburger vs. picture chicken vs. picture spareribs) showed no main effect of the picture type ($F(2, 18) = .541$, $p = .858$, $\eta^2 = .017$).

The pre-test found no significant differences, so the three top-rated pictures for hamburger, chicken and spareribs were used in the advertisements.

3.2.2 Textual components of the advertisements

In order to add text to the pictures, there was a white text frame added next to the pictures on the left hand side. The text in this frame was manipulated for the type of language (L1/L2) and the type of description (neutral/ sensory) in the four conditions. The length of the text of all twelve advertisements, in all four conditions, was approximately 60 words, divided over three or four sentences. The textual elements were created by the researcher who is a Dutch native speaker. All texts were therefore created in Dutch and translated into English by the researcher. To ensure the content of all Dutch and English texts were as equal as possible, a linguist (MA graduate of English language and Culture) with a Dutch/ British origin back-translated the English texts to the origin language (Dutch).

The language choices for Dutch as L1 and English as L2 could be explained because English is commonly used in Dutch media and advertising contexts. Also, for understanding the advertisements, a sufficient level of English reading proficiency was required and Dutch native speakers they tend to have high English proficiency levels. Therefore, English has been chosen as an L2 to explore the effect of neutral and sensory descriptions on non-native speakers.

The descriptions of the food used in the advertisements were manipulated in terms of neutral or sensory language. However, the texts for each advertisement were kept as similar as possible, because only key words were swapped to change the description from neutral to sensory language or vice versa. Neutral language or sensory descriptions for food items in this current study were re-used, modified and translated into Dutch for the purpose of this current study based on prior research by Papies, (2013) and Turnwald et al., (2017). For instance, some sensory words that were re-used and modified were: *tasty* hamburger, *crispy* crust, *mildly-spiced* vegan spareribs and *fresh* plant-based ingredients. An example of an advertisement used for the sensory language condition can be found in Figure 1. For neutral language descriptions, some examples of neutral language words that were re-used and modified from Papies, (2013) were: *classic* hamburger, *green* cucumber, *brown* crust and *mixed* salad. An example of an advertisement used for the neutral language condition can be found in Figure 2. A complete overview of all stimuli for all four conditions can be found in Appendix A.

Wow! These new vegan spare ribs are perfect to eat during a BBQ, but they can also be prepared on the stove. These thick vegan spare ribs consist of all kinds of mixed plant-based ingredients from Dutch soil, such as yellow corn and fine pieces of carrot. The vegan spare ribs can also perfectly be combined with a classic BBQ sauce!



Figure 1. Advertisement for the plant-based spareribs in the neutral language/ English condition

Wow! These mildly spiced vegan spare ribs are a delight to eat during a BBQ, but they can also be prepared on the stove. These crispy vegan spare ribs consist of all kinds of fresh plant-based ingredients from Dutch soil, such as sweet corn and crunchy pieces of carrot. The vegan spare ribs are also delicious in combination with a slightly spicy and smoky BBQ sauce!



Figure 2. Advertisement for the plant-based spareribs in the sensory language/ English condition

Design

A 2 x 2 between-subjects design was used for this research, with the type of description (neutral language vs. sensory language) and language (L1 vs. L2) as independent variables. The choice for a between- subject design was made in order to reduce the chance of subjects finding out the purpose of the study through seeing multiple versions of the same advertisement. Each subject was exposed to only one set of three advertisements with either one type of description for the product (neutral vs. sensory) and one language condition (L1 vs. L2). Subjects were randomly distributed over four different condition groups. An overview of all condition groups can be found in Table 1.

Table 1. All four condition groups.

Condition	Type of description	Language
Condition 1	Neutral	Dutch
Condition 2	Sensory	Dutch
Condition 3	Neutral	English
Condition 4	Sensory	English

Instruments

This research contained four dependent variables, which were ‘attitude towards the advertisement’, ‘attitude towards the language used in the advertisement’, ‘desirability of the product’ and ‘purchase intention’. The instrument was an online survey featuring several items to measure all four dependent variables. The complete online survey and all items were in Dutch. All Dutch translations for items that were re-used, modified from English papers were checked by a linguist (MA graduate of English language and Culture) with a Dutch/British origin). An overview of the complete questionnaire can be found in Appendix B. The following section will provide an overview of how all dependent variables and self-rated English reading proficiency levels were operationalized.

The attitude towards the advertisement was measured by eight items anchored by five-point Likert scales: ‘clear’, ‘interesting’, ‘good quality’, ‘easy to remember’, ‘well-displayed’, ‘convincing’, ‘remarkable’ and ‘realistic’. The Likert scale used ranged from 1 to 5 (e.g. 1 = ‘completely disagree’ – 5 = ‘completely agree’). These items that were used originated from the questionnaire by Nederstigt & Hilberink-Schulpen (2019) and were modified for this current study. The reliability of ‘attitude towards the advertisement’ comprising eight items was acceptable: $\alpha = .79$. Consequently, the mean score of all eight items was used to calculate the compound variable ‘attitude towards the advertisement’ which was used in further analyses.

The attitude towards language was measured by four items anchored by five-point Likert scales: ‘easy to understand’, ‘easy to follow’, ‘nice to read’ and ‘exciting’. The Likert scale used ranged from 1 to 5 (e.g. 1 = ‘completely disagree’ – 5 = ‘completely agree’). These items were used from the questionnaire by Nederstigt and Hilberink-Schulpen, (2019) and modified for this current study. The reliability of ‘attitude towards the language used in the advertisement’ comprising four items was good: $\alpha = .85$. Consequently, the mean score of all four items was used to calculate the compound variable ‘attitude towards the language used in the advertisement’ which was used in further analyses.

Desirability of the product was measured by five items. Participants were asked to indicate what their thoughts were regarding the product in the advertisement (‘The product in the advertisement seems ...). The statement was anchored by four five-point semantic differential scales: ‘tasteless’- ‘tasty’, ‘not fresh’- ‘fresh’, ‘not nutritious’- ‘nutritious’, ‘unhealthy’ – ‘healthy’. Participants were also asked to respond to a second statement ‘I want to eat this product’. The item was anchored by a five-point Likert scale ranged from 1

‘completely disagree’ to 5 ‘completely agree’. This item was replicated from the questionnaire by Rogers and Hardman, (2015). The reliability of ‘desirability of the product’ comprising five items was acceptable: $\alpha = .73$. Consequently, the mean score of all five items was used to calculate the compound variable ‘desirability of the product’ which was used in further analyses.

The purchase intention was measured by two items anchored by five-point Likert scales. Participants were asked to respond to the statement ‘I am interested in the product’. The item was anchored by a five-point Likert scale ranging from 1 ‘completely disagree’ to 5 ‘completely agree’. Participants were also asked to respond to the statement ‘I would like to buy this product’. The item was anchored by a five-point Likert scale ranging from 1 ‘completely disagree’ to 5 ‘completely agree’. The items were replicated from the questionnaire by Spears and Singh, (2004).

Self-rated English reading proficiency was measured by one slider scale question. which had a range from 0 to 10. Participants were asked to respond to the statement ‘On a scale from 0 to 10 how high would you rate your English reading skills ?’ The item was anchored by one slider scale ranging from 0 (very bad) to 10 (very good).

Procedure

The questionnaire was implemented as a Qualtrics survey and distributed digitally via the researcher’s personal network. The link for the survey was distributed via survey swap groups on Facebook and via WhatsApp. The subjects received a short introduction together with the link and a note that the survey was designed for a MA thesis to measure the effectiveness of advertisements for meat replacements in terms of plant based food. All instructions were in Dutch. The subjects were randomly assigned to one of the four condition groups. The procedure was the same for all subjects. The subjects provided informed consent before they started the experiment. They were informed that they participated voluntarily, that they could quit the experiment at any time and that the data was anonymized directly after the participant finished the experiment. Once they confirmed their consent, they could continue and they had to fill in all demographic questions. Next, the subjects could continue the experiment. On the next page there were the instructions about the task, and the subjects had to read the instructions carefully. The instructions mentioned that the subjects were about to study in total three Dutch or English advertisements for plant-based food products. The

advertisements were in the same order for everyone. The subjects were explicitly asked to study all advertisements attentively. After each advertisement, they had to fill in questions related to the advertisement. They were informed that they could re-study the advertisements at any time while they were answering the questions and that there were no wrong answers. All questions about an advertisement had to be answered before they could move on to the next advertisement. After they had answered all questions for the third advertisement, once they clicked on the arrow to continue they were directed to the final page. The final page of the experiment indicated that all answers were saved and that participants could end the experiment by closing the page. The experiment took approximately 5 minutes. There was no financial reward or other incentive. After the experiment, the subjects were debriefed about the purpose and results of this study if they contacted the researcher.

Statistical treatment

Statistical tests were conducted to answer the research question. Data was gathered in SPSS IBM Statistics 26. Chi-square tests were conducted to ensure that there was an equal distribution of gender and educational level for all conditions. A one-way ANOVA test was conducted to make sure there was an equal distribution of age across all conditions. Four two-way ANOVAs tests were conducted in order to single out significant variations in the means of the dependent variables (attitude towards language used in the advertisement, attitude towards the advertisement, desirability and purchase intention) as a factor of the independent variables (type of language and type of description) and possible interactions between them. One-way ANOVAs would be used if necessary to explore significant interactions.

4. Results

This research was set up to shed a light on the effect of L2 and sensory language descriptions on persuasive communication, which in this research was specified as advertisements for plant-based meat replacements. The dependent variables were the attitude towards the advertisement, the attitude towards the language used in the advertisement, the desirability of the product and the purchase intention. Four different two-way analyses of variance were executed.

Effect of description type and language on the attitude towards the advertisement

Table 2. Mean scores and standard deviations (in brackets) per condition for the attitude towards the advertisement (1 = completely disagree/ more negative attitude, 5 = completely agree/ more positive attitude)

Language	Dutch		English	
	<i>M</i> (<i>SD</i>)	N	<i>M</i> (<i>SD</i>)	N
Neutral descriptions	3.38(.52)	32	3.59(.45)	34
Sensory descriptions	3.58(.62)	33	3.62(.56)	36

A two-way analysis of variance with the *type of description used in the advertisement* (neutral vs. sensory) and *type of language of the advertisement* (L1/Dutch vs. L2/English) as between subjects factors showed no significant effect of the type of description used in the advertisement on the attitude towards the advertisement ($F(1, 131) = 1.597, p = .209$). Irrespective of the type of description used in the advertisement, there was also no significant effect of the type of language of the advertisement on the attitude towards the advertisement ($F(1, 131) = 1.889, p = .172, \eta^2 = .014$). The interaction effect between the type of description used in the advertisement and the type of language of the advertisement was not statistically significant ($F(1, 131) < 1, p = .335$). All mean scores and standard deviations can be found in Table 2.

Effect of description type and type of language on the attitude towards the language used in the advertisement

Table 3. Mean scores and standard deviations (in brackets) per condition for the attitude towards the language used in the advertisement (1 = completely disagree/ more negative attitude, 5 = completely agree/ more positive attitude)

Language	Dutch		English	
	<i>M</i> (<i>SD</i>)	N	<i>M</i> (<i>SD</i>)	N
Neutral descriptions	3.65(.59)	32	3.79(.58)	34
Sensory descriptions	3.78(.56)	33	3.93(.53)	36

A two-way analysis of variance with the *type of description used in the advertisement* (neutral vs. sensory) and the *type of language of the advertisement* (L1/Dutch vs. L2/English) and as between subjects factors showed no significant effect of the type of description used in the advertisement on the attitude towards the language used in the advertisement ($F(1, 131) = 1,821, p = .180$). Irrespective of the type of descriptions used in of the advertisement, there was also no significant effect of the type of language of the advertisement on the attitude towards the language used in the advertisement ($F(1, 131) = 2,264, p = .135, \eta^2 = .017$). The interaction effect between the type of description used in the advertisement and the type of language of the advertisement was not statistically significant ($F(1, 131) < 1, p = .921$). All mean scores and standard deviations can be found in Table 3.

Effect of description type and language on the desirability of the product

Table 4. Mean scores and standard deviations (in brackets) per condition for the desirability of the product (1 = more negative score, 5 = more positive score)

Language	Dutch		English	
	<i>M(SD)</i>	N	<i>M(SD)</i>	N
Neutral descriptions	3.50(.60)	32	3.76(.52)	34
Sensory descriptions	3.77(.62)	33	3.75(.64)	36

A two-way analysis of variance with the *type of description used in the advertisement* (neutral vs. sensory) and the *type of language of the advertisement* (L1/Dutch vs. L2/English) as between subjects factors showed no significant effect of the type of description used in the advertisement on the desirability of the product ($F(1, 131) = 1,589, p = .210$). Irrespective of the type of description used in advertisement, there was also no significant effect of the type of language of the advertisement on the desirability of the product ($F(1, 131) = 1,417, p = .236, \eta^2 = .011$). The interaction effect between the type of description used in the advertisement and the type of language of the advertisement was not statistically significant ($F(1, 131) = 1,848, p = .176$). All mean scores and standard deviations can be found in Table 4.

Effect of description type and language on the purchase intention

Table 5. Mean scores and standard deviations (in brackets) per condition for the purchase intention (1 = completely disagree/ low purchase intention, 5 = completely agree/ high purchase intention)

Language	Dutch		English	
	<i>M</i> (<i>SD</i>)	N	<i>M</i> (<i>SD</i>)	N
Neutral descriptions	2.92(.86)	32	3.36(.76)	34
Sensory descriptions	3.63(.96)	33	3.40(.83)	36

A two-way analysis of variance with the *type of description used in the advertisement* (neutral vs. sensory) and *type of language of the advertisement* (L1/Dutch vs. L2/English) as between subjects factors showed a significant effect of the type of description used in the advertisement on the purchase intention ($F(1, 131) = 6,362, p = .013$). Advertisements that used sensory language descriptions ($M = 3.51, SD = .895$) led to a higher purchase intention than the advertisements that used neutral language descriptions ($M = 3.15, SD = .830$). There was no significant effect of the type of language of the advertisement on the purchase intention ($F(1, 131) < 1, p = .470, \eta^2 = .004$). All mean scores and standard deviations can be found in Table 5.

Also, there was a statistically significant interaction effect between the type of description used in the advertisement and the type of language of the advertisement ($F(1, 131) = 5,205, p = .024$). To discover where the significant interaction lies, two separate one-way ANOVAs were conducted for each category of the type of language of the advertisement (L1/Dutch vs. L2/English).

A one-way ANOVA with as factor the *type of descriptions used in the advertisement* for purchase intention on the subset of data for *Dutch* as type of language used in the advertisement showed a significant effect of type of description used in the advertisement ($F(1, 63) = 9.784, p = .003, \eta^2 = .13$). Sensory language descriptions ($M = 3.63, SD = .958$) led to a significant higher purchase intention than neutral language used for the descriptions in Dutch advertisements ($M = 2.92, SD = .856$).

With regard to the *English* advertisements group, a one-way ANOVA with as *factor type of descriptions used in the advertisement* for purchase intention revealed no significant effect of type of descriptions used in the advertisement ($F(1, 63) = .035, p < .853, \eta^2 = .001$). In other words, both neutral language descriptions and sensory language descriptions used in advertisements did not significantly differ from each other in terms of the purchase intention in English advertisements.

As one compares the outcomes of a two-way ANOVA analysis of the effect of the description type on the purchase intention and a one-way ANOVA of the effect of description type on the purchase intention for only the subset of data for the advertisements in Dutch, the effect size of sensory language use is larger for the subset of data for Dutch advertisements than both for advertisements in English and Dutch taken together. In other words, advertisements in Dutch can reinforce the effect of sensory language descriptions in advertisements aimed at Dutch native speakers.

5. Conclusion and discussion

Based on the outcomes of this study, several conclusions can be drawn. The first hypothesis of this study predicted that for L1 advertisements there would be an effect of the type of description, where sensory language descriptions would be more effective than neutral language descriptions. The results of this study were partially in line with this hypothesis. In L1, there was a benefit of sensory language over neutral language for the purchase intention. In other words, the participants who read L1 advertisements with sensory language used to describe the product did have a significantly higher purchase intention than participants who read L1 advertisements with neutral language used to describe the product.

This finding was in line with previous studies on sensory language and L1 embodiment, for example the *grounded theory of desire* (Papies, 2013), *mental simulation* (Waytz et al., 2015), *the RHM* (Dufour & Kroll, 1995; Kroll & De Groot, 1997), *language embodiment* (Pavlenko, 2005), and *L1 acquisition processes* (Altarriba, 2003; Harris et al., 2006). The participants learned their L1 in a personal environment where they used their L1 simultaneously to develop autobiographical memory and emotion regulation systems. As a result, they could have strong connections between semantical or conceptual processing of words and emotions via their senses. In L1, sensory language descriptions could have triggered the participants' senses directly because they have a large emotional arousal. For

instance, sensory words used in the L1/ sensory advertisements such as ‘*gerookte kipstukjes*’ (smokey chicken tenders), and ‘*krokant korstje*’ (crispy crust) could have triggered the senses of the participants directly, and cognitive simulations had been activated which had a positive effect on purchase intention. On the other hand, neutral language descriptions in L1 advertisements such as *classic* hamburger , *green* cucumber, *brown* crust and *mixed* salad did not include sensory information, so they were less emotionally arousing words than sensory language words. Therefore, neutral language words possibly did not trigger an emotion which is necessary for a desire and mental simulation so they were less effective than sensory language descriptions in L1.

Surprisingly, despite the positive effect of sensory language on the purchase intention, there was no effect of the description type on attitude towards the advertisement, attitude towards the language used and desirability of the product in L1, so sensory language descriptions were as effective as neutral language descriptions. Possibly, an explanation for this contradicting result can be found in the set-up of the experiment. In this current study, participants had to self-rate their attitudes, desirability of the product and purchase intention in a questionnaire. The self-rating aspect could have influenced the outcome. Self-ratings stimulate participants to form a judgement about their own thoughts, feelings and behavior (Lee, Drinnan & Carding, 2005). In this current study, the self-rating scales used in the questionnaire might not have been valid, because participants could have misinterpreted their actual thoughts and feelings. This could have influenced the outcomes of this current study for all variables, because self-ratings statements in questionnaires can make it difficult to guarantee reliability (Lee, Drinnan & Carding, 2005). To minimize a possible effect of self-ratings, a suggestion for future research could be to place participants in a within-subjects design presented with the advertisements including pictures of the food. Participants would have to read different advertisements with neutral vs. sensory language descriptions in L1 vs. L2 before they have to select one food item which they are most interested in from the set of advertised food items. In this new set-up of the experiment, rather than rating their own attitudes, people would be making actual choices, and those choices would be a more valid measure of advertisement effectiveness.

The second hypothesis expected in L2 advertisements no effect of the description type, so sensory language descriptions would be as effective as neutral language descriptions. No significant difference has been found between the L2/ neutral language descriptions condition as compared to the L2/ sensory language condition. So, participants who read advertisements in L2 with neutral language descriptions did not have different attitude

towards the advertisement, attitude towards the language used in the advertisement, desirability of the product and purchase intention as compared to participants who read advertisements in L2 with sensory language descriptions.

Possibly, L2 language proficiency level plays an important role. Although all participants self-rated their English reading proficiency level to be at least sufficient and 44% of them indicated to read English advertisements on a daily basis, there was no benefit found of sensory language descriptions over neutral language descriptions in L2. So this suggests that the L2 proficiency level of the participants was low enough so that an L2 was indeed not embodied. This result was in line with literature on the *RHM* (Dufour & Kroll, 1995; Kroll & De Groot, 1997) and *disembodied cognition* (Pavlenko, 2012) in L2. According to the *RHM*, an L2 is mediated by an L1 until someone's proficiency level in an L2 is high enough. Therefore, in line with literature on *disembodied cognition* (Pavlenko, 2012), participants could have a less strong connection between a semantical or conceptual processing of words and emotions via their senses. As a result, in L2, sensory language descriptions would not have triggered the participants' senses directly. Because of this, cognitive simulations from previous food experiences were less likely to be activated in the participants' mind and not linked to the food in the advertisement. Therefore, in L2 advertisements neutral language descriptions were as effective as sensory language descriptions because both description types did not trigger people's senses directly.

Moreover, the mean age at which the participants started learning the L2 was about 10 years old. This means that the participants did not acquire their L2 simultaneously with their L1 starting from birth, but at a later age. This was also found in previous studies by Altaribba, (2003) and Harris et al., (2006) who explained that an L2 is likely to be learned at a later age in more formal environments such as educational settings. Probably, the participants' L2 contained therefore less emotional and autobiographical dimensions than an L1 and had a less strong connection between L2 and perceived emotionality (Pavlenko, 2005). Thus, an L2 might be less 'embodied' so sensory words might have been less effective.

As a practical implication, in L1 advertisements, sensory language descriptions can be an important tool to persuade people to try 'new' products. In this study, most of the participants indicated that they were omnivores (77 %), only a small group (12.6 %) indicated that they were vegetarians or vegans. Based on these numbers, it can be expected that most participants were not familiar with plant-based meat replacements so they did not have a previous eating experience with the specific food in the advertisement. However, sensory language descriptions in L1 for plant-based meat replacements were found to be effective for

the purchase intention which suggests that sensory language descriptions in L1 advertisements are also effective to persuade people to buy 'new' food products. Papies, (2013) and Papies et al., (2017) supported this finding, they found that even if people were not familiar with food products, sensory language descriptions could have activated cognitive simulations from previous food experiences which they could link to the product in the advertisement. This finding might be also important for MNCs that are aimed at designing advertisements in L1 for other food products which are new on the market or can just be new to people. However, based on this current study claims about this practical implication can only be made for (plant-based) food products because no other products were tested. Further research is needed to find out whether sensory language descriptions in L1 may also have favourable effects on other (new) products that people can experience with their senses and for which sensory language descriptions might trigger an emotion, as for instance perfumes or skincare products.

Given these findings, a final conclusion can be drawn. In this study, there was found evidence that in L1 advertisements for plant-based meat replacements there would be an effect of the type of description, where sensory language descriptions would be more effective than neutral language descriptions on the purchase intention. However, there was no effect on the attitude towards the advertisement, the attitude towards language or the desirability of the product. For L2 advertisements there was no effect of the description type, so sensory language descriptions were as effective as neutral language descriptions. For MNCs that faced challenges on localization (L1) or standardization (L2) for advertisements the findings of this current study might be helpful. If MNCs decide to go for localization and develop their advertisements for different countries in different L1's, it might not matter whether they use neutral language descriptions or sensory language descriptions in their advertisements to be effective. However, if MNCs choose for standardization because this can be more cost efficient and develop their advertisements in one L2 such as English as a lingua franca, it might be more effective to use sensory language descriptions in their advertisements as compared to neutral language descriptions.

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Appendix A An overview of the stimuli

1 DU/NL

Vanaf nu verkrijgbaar: een klassieke hamburger, maar dan compleet veganistisch! Onze veganistische hamburger met een bruin korstje bestaat uit verschillende authentieke groentes en een mix van specerijen. Probeer nu deze simpele veganistische hamburger! Deze hamburger is ook goed te combineren met een geroosterd broodje en extra groentes zoals rijpe tomaat, groene komkommer en natuurlijk onze rosé kleurige Whiskey Cocktail saus!



Probeer nu deze moderne veganistische kipstukjes! Deze grote veganistische kipstukjes zijn een goede toevoeging aan verschillende alledaagse maaltijden, zoals een gemixte salade. Kies voor een extra dagje zonder vlees door deze veganistische kipstukjes toe te voegen aan een salade. Ook vormen de veganistische kipstukjes een passende combinatie met bijvoorbeeld een gele honing mosterd dressing!



Wow! Deze nieuwe veganistische spareribs zijn perfect om te eten tijdens een BBQ, maar ze kunnen ook in de pan worden bereid. Deze dikke veganistische spareribs bestaan uit allerlei gemixte plantaardige ingrediënten van Hollandse bodem, zoals bijvoorbeeld gele mais en fijne stukjes wortel. Ook zijn de veganistische spareribs perfect te combineren met een klassieke BBQ saus!



2 DU/SL

Vanaf nu verkrijgbaar: een smaakvolle hamburger, maar dan compleet veganistisch ! Onze veganistische hamburger met een krokant korstje bestaat uit verschillende sappige groentes en een mix van specerijen. Probeer nu deze malse veganistische hamburger! Deze hamburger is ook heerlijk in combinatie met een krokant broodje en extra groentes zoals sappige tomaat, knapperige komkommer en natuurlijk onze romige Whiskey Cocktail saus!



Probeer nu deze veganistische gerookte kipstukjes! Deze smeulige veganistische kipstukjes zijn een smaakvolle toevoeging aan verschillende lekkere frisse zomerse maaltijden, zoals een verse salade. Kies voor een extra dagje zonder vlees door deze veganistische kipstukjes toe te voegen aan een salade. Ook zijn deze veganistische kipstukjes lekker in combinatie met bijvoorbeeld een zoetzure honing mosterd dressing.



Wow! Deze mild gekruide veganistische spareribs zijn een genot om te eten tijdens een BBQ, maar ze kunnen ook in de pan worden bereid. Deze krokante veganistische spareribs bestaan uit allerlei verse plantaardige ingrediënten van Hollandse bodem, zoals bijvoorbeeld zoete mais en knapperige stukjes wortel. Ook zijn de veganistische spareribs heerlijk in combinatie met een licht kruidige en rokerige BBQ saus!



3 EN/NL

Available now: a classic burger, but completely vegan! Our vegan burger with a brown crust consists of various authentic vegetables and a mix of spices. Try this simple vegan burger now! The burger is also nice in combination with a toasted bun and extra vegetables such as ripe tomato, green cucumber and of course our rosé-coloured Whiskey Cocktail sauce!



Try these modern vegan chicken tenders now! These large vegan chicken tenders are a great addition to a variety of everyday meals, such as a mixed salad. Choose for an additional day without meat by adding these vegan chicken tenders to a salad. These vegan chicken tenders are also a suitable combination with, for example, a yellow honey mustard dressing!



Wow! These new vegan spare ribs are perfect to eat during a BBQ, but they can also be prepared on the stove. These thick vegan spare ribs consist of all kinds of mixed plant-based ingredients from Dutch soil, such as yellow corn and fine pieces of carrot. The vegan spare ribs can also perfectly be combined with a classic BBQ sauce!



4 EN/SL

Available now: a tasty burger, but completely vegan! Our vegan burger with a crispy crust consists of various juicy vegetables and a mix of spices. Try this tender vegan burger now! The burger is also delicious in combination with a crispy bun and extra vegetables such as juicy tomato, crunchy cucumber, and of course our creamy Whiskey Cocktail sauce!



Try these vegan smokey chicken tenders now! These smooth vegan chicken tenders are a tasty addition to various delicious fresh summer meals, such as a fresh salad. Choose for an additional day without meat by adding these vegan chicken pieces to a salad. These vegan chicken tenders are also delicious in combination with, for example, a sweet-and-sour honey mustard dressing



Wow! These mildly spiced vegan spare ribs are a delight to eat during a BBQ, but they can also be prepared on the stove. These crispy vegan spare ribs consist of all kinds of fresh plant-based ingredients from Dutch soil, such as sweet corn and crunchy pieces of carrot. The vegan spare ribs are also delicious in combination with a slightly spicy and smoky BBQ sauce!



Appendix B An overview of the survey questions

MA Thesis Food Advertisements

Start of Block: Instructie en informed consent

Beste deelnemer,

U wordt uitgenodigd om mee te doen aan een onderzoek naar advertenties met betrekking tot voedsel. Dit onderzoek wordt uitgevoerd door Jara Zondervan, Master student International Business Communication aan de Radboud Universiteit. Meedoen aan het onderzoek houdt in dat u een online vragenlijst gaat invullen. De vragen hebben betrekking op de verschillende advertenties die u gaat bekijken met als onderwerp plantaardige vleesvervangers. Het invullen van de vragenlijst kost ongeveer 5 minuten. U doet vrijwillig mee aan dit onderzoek. Daarom kunt u op elk moment tijdens het onderzoek uw deelname stopzetten en uw toestemming intrekken. U hoeft niet aan te geven waarom u stopt. Omdat de data meteen geanonimiseerd worden, is het na het voltooien van het experiment niet mogelijk om uw onderzoeksgegevens te laten verwijderen.

De onderzoeksgegevens die we in dit onderzoek verzamelen, zullen door wetenschappers gebruikt worden voor datasets, artikelen en presentaties. De anoniem gemaakte onderzoeksgegevens zijn tenminste 10 jaar beschikbaar voor andere wetenschappers. Als we gegevens met andere onderzoekers delen, kunnen deze dus niet tot u herleid worden. We bewaren alle onderzoeksgegevens op beveiligde wijze volgens de richtlijnen van de Radboud Universiteit. Als u meer informatie over het onderzoek wilt hebben kunt u contact opnemen met de onderzoeker, Jara Zondervan (j.zondervan@student.ru.nl) of de begeleider van dit onderzoek, E. Felker (e.felker@let.ru.nl). Alvast bedankt voor uw medewerking!

Ik stem in met deelname aan dit onderzoek zoals hierboven beschreven

- ☐ Ja, ik stem in met deelname (1)
- ☐ Nee, ik stem niet in met deelname (2)

End of Block: Instructie en informed consent

Start of Block: Algemene vragen

Wat is uw leeftijd ?

Met welk geslacht identificeert u zich het meest ?

- ☐ Vrouw (1)
- ☐ Man (2)
- ☐ Anders (3)
- ☐ Zeg ik liever niet (4)

Wat is uw hoogst afgeronde of huidig opleidingsniveau ?

- ☐ Middelbare school (1)
- ☐ MBO (2)
- ☐ HBO (3)
- ☐ WO Bachelor (4)
- ☐ WO Master (5)
- ☐ WO PhD (6)

Volgt u momenteel één van de onderstaande diëten ? Er zijn meerdere opties mogelijk

- ☐ Vegetarier (1)
- ☐ Veganist (2)
- ☐ Anders (3)
- ☐ Geen (4)

Wat is uw moedertaal ?

Op welke leeftijd bent u begonnen met het leren van de Engelse taal ?

Op een schaal van 0 tot 10, hoe hoog zou u uw Engelse leesvaardigheid inschatten ?

Slecht Matig Gemiddeld Goed Uitstekend

0 1 2 3 4 5 6 7 8 9 10

Kies een antwoord ()



Geef aan hoe vaak u in uw dagelijkse leven Engelstalige teksten leest

	Nooit (1)	Slechts een aantal keer per jaar (2)	Maandelijks (3)	Wekelijks (4)	Dagelijks (5)
Nieuwsartikelen (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Advertenties (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Boeken (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Berichten op sociale media kanalen (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Geef aan hoe vaak u in uw dagelijkse leven Nederlandstalige teksten leest

	Nooit (1)	Slechts een aantal keer per jaar (2)	Maandelijks (3)	Wekelijks (4)	Dagelijks (5)
Nieuwsartikelen (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Advertenties (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Boeken (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Berichten op sociale media kanalen (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Algemene vragen

Start of Block: 1 (DU/NL)

U krijgt zo dadelijk verschillende Nederlandstalige advertenties over plantaardig voedsel te zien waar enkele vragen over gesteld zullen worden.

Het is belangrijk dat u de advertenties aandachtig bestudeert en u kunt de advertentie altijd opnieuw bestuderen tijdens het beantwoorden van de bijbehorende vragen. Nadat u alle vragen heeft beantwoord over de betreffende advertentie krijgt u de volgende advertentie te zien. U zult in totaal 3 advertenties te zien krijgen. Onthoud dat er geen goede of foute

antwoorden zijn, het gaat hier om uw eigen mening.
Veel succes!

Start of Block: 2 (DU/SL)

U krijgt zo dadelijk verschillende Nederlandstalige advertenties over plantaardig voedsel te zien waar enkele vragen over gesteld zullen worden.

Het is belangrijk dat u de advertenties aandachtig bestudeerd en u kunt de advertentie altijd opnieuw bestuderen tijdens het beantwoorden van de bijbehorende vragen. Nadat u alle vragen heeft beantwoord over de betreffende advertentie krijgt u de volgende advertentie te zien. U zult in totaal 3 advertenties te zien krijgen. Onthoud dat er geen goede of foute antwoorden zijn, het gaat hier om uw eigen mening.
Veel succes!

Start of Block: 3 (EN/NL)

U krijgt zo dadelijk verschillende Engelstalige advertenties over plantaardig voedsel te zien waar enkele vragen over gesteld zullen worden.

Het is belangrijk dat u de advertenties aandachtig bestudeerd en u kunt de advertentie altijd opnieuw bestuderen tijdens het beantwoorden van de bijbehorende vragen. Nadat u alle vragen heeft beantwoord over de betreffende advertentie krijgt u de volgende advertentie te zien. U zult in totaal 3 advertenties te zien krijgen. Onthoud dat er geen goede of foute antwoorden zijn, het gaat hier om uw eigen mening.
Veel succes!

Start of Block: 4 (EN/SL)

U krijgt zo dadelijk verschillende Engelstalige advertenties over plantaardig voedsel te zien waar enkele vragen over gesteld zullen worden.

Het is belangrijk dat u de advertenties aandachtig bestudeerd en u kunt de advertentie altijd opnieuw bestuderen tijdens het beantwoorden van de bijbehorende vragen. Nadat u alle vragen heeft beantwoord over de betreffende advertentie krijgt u de volgende advertentie te zien. U zult in totaal 3 advertenties te zien krijgen. Onthoud dat er geen goede of foute antwoorden zijn, het gaat hier om uw eigen mening.
Veel succes!

Advertisement vegan hamburger (1 DU/NL, 2 DU/SL, 3 EN/NL, 4 EN/SL)

De advertentie was...

	Helemaal mee oneens (1)	Oneens (2)	Neutraal (3)	Eens (4)	Helemaal mee eens (5)
Duidelijk (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interessant (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Van goede kwaliteit (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Makkelijk te onthouden (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goed weergegeven (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overtuigend (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opvallend (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Realistisch (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

De taal van de advertentie was...

	Helemaal mee oneens (1)	Mee oneens (2)	Neutraal (3)	Mee eens (4)	Volledig mee eens (5)
Makkelijk om te begrijpen (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goed te volgen (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prettig om te lezen (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enthousiasmerend (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Het product in de advertentie lijkt mij...

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	
Onsmakelijk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Smakelijk
Niet vers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Vers
Niet voedend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Voedend
Ongezond	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Gezond

Q30 Ik wil dit product graag eten

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	
Helemaal mee oneens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Helemaal mee eens

Ik ben geïnteresseerd in dit product

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	
Helemaal mee oneens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Helemaal mee eens

Ik zou dit product graag willen kopen

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	
Helemaal mee oneens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Helemaal mee eens

Page Break

Advertisement vegan chicken (1 DU/NL, 2 DU/SL, 3 EN/NL, 4 EN/SL)

De advertentie was...

	Helemaal mee oneens (1)	Oneens (2)	Neutraal (3)	Eens (4)	Helemaal mee eens (5)
Duidelijk (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interessant (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Van goede kwaliteit (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Makkelijk te onthouden (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goed weergegeven (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overtuigend (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opvallend (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Realistisch (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

De taal van de advertentie was...

	Helemaal mee oneens (1)	Mee oneens (2)	Neutraal (3)	Mee eens (4)	Volledig mee eens (5)
Makkelijk om te begrijpen (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goed te volgen (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prettig om te lezen (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enthousiasmerend (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Het product in de advertentie lijkt mij...

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	
Onsmakelijk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Smakelijk
Niet vers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Vers
Niet voedend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Voedend
Ongezond	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Gezond

Ik wil dit product graag eten

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	
Helemaal mee oneens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Helemaal mee eens

Ik ben geïnteresseerd in dit product

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	
Helemaal mee oneens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Helemaal mee eens

Ik zou dit product graag willen kopen

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	
Helemaal mee oneens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Helemaal mee eens

Page Break

Advertisement vegan spareribs (1 DU/NL, 2 DU/SL, 3 EN/NL, 4 EN/SL)

De advertentie was...

	Helemaal mee oneens (1)	Oneens (2)	Neutraal (3)	Eens (4)	Helemaal mee eens (5)
Duidelijk (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interessant (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Van goede kwaliteit (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Makkelijk te onthouden (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goed weergegeven (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overtuigend (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opvallend (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Realistisch (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

De taal van de advertentie was...

	Helemaal mee oneens (1)	Mee oneens (2)	Neutraal (3)	Mee eens (4)	Volledig mee eens (5)
Makkelijk om te begrijpen (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goed te volgen (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prettig om te lezen (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enthousiasmerend (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Het product in de advertentie lijkt mij...

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	
Onsmakelijk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Smakelijk
Niet vers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Vers
Niet voedend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Voedend
Ongezond	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Gezond

Ik wil dit product graag eten

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	
Helemaal mee oneens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Helemaal mee eens

Ik ben geïnteresseerd in dit product

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	
Helemaal mee oneens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Helemaal mee eens

Ik zou dit product graag willen kopen

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	
Helemaal mee oneens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Helemaal mee eens