"An analysis of Anglo-Dutch language effects on a message's persuasive appeals in the frame of promoting meat consumption reduction"

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Abstract

As the English language has achieved the status of lingua franca of the modern corporate world, companies are more often forced to make a strategic decision between adapting advertisements to a local language or advertising in the lingua franca. Each of the options have significant benefits and drawbacks. This thesis will focus largely on the effects of this language choice on persuasive communication. Previous research shows that using an individual's native language in persuasion is generally beneficial to the perceived emotionality of the message, and is best suited when advertising services where experiences are important to the consumer. Adapting to a lingua franca, or a second language, has the merit of increasing the processability of said message and is often best suited for advertising services where credibility is important.

In this thesis, the differences in language effects will be analysed through the frame of reducing meat consumption. This decision was made because adopting an alternative diet, such as veganism or vegetarianism, is often a highly emotional process that would demonstrate differences in emotional perception when comparing languages. In order to achieve this, six different texts were analysed through a questionnaire. The texts were either Dutch or English, to attest for the language differences, and used either negative or positive emotional appeals or an informative appeal in persuasion.

In general, no significant language difference was found, both in emotional value of the message or in it's persuasive effect. This largely contradicts previous research, but could be explained by the following reasons: Reduction of meat consumption might be too complex of an emotional process for the stimuli to have had persuasive effect, the stimuli created for this thesis were too similar in terms of emotionality to have shown a significant effect, or partakers in the questionnaire were of sufficient proficiency in the lingua franca (English) to show a significant advantage for the native language.

Introduction

As English has achieved a status of lingua franca in the modern corporate world, advertising to bilinguals more often contains English words or consists of this language entirely. This utilization of the English language when advertising in non-anglophone countries is described by Hornikx, Van Meurs, and De Boer as "a strategic choice between standardization and adaptation of their advertisements. (2010)" Standardization in this context is advertising through a single language, for example a global or regional lingua franca, when communicating to (potential) customers from various nationalities. On the other hand, when utilizing an adaptation strategy advertisements are changed to the local language. When taken out of the context of language, adaptation would also (try to) have more awareness for local cultural ethics, beliefs, and practises when adapting the advertisements as well (Hornikx, Van Meurs & De Boer, 2010).

The use of emotions a tool to convince and persuade audiences has probably existed since the beginnings of human communication, and is still used to this day by politicians and marketers alike (DeSteno, Petty, Rucker, Wegener & Braverman, 2004, p. 43): "Candidates, for example, often attempt to raise the ire of their audience against certain policy positions; marketers attempt to evoke disgust among potential customers to help convince them of the need to purchase insecticides or health related products.". As such, this research hopes to provide an analysis of the impact the choice of language can have on the emotional value an advertisement tries to communicate in the ongoing debate of standardization versus adaptation.

This research will frame the analysis of this language effect on the emotionality of a message in the relevant topic of plant-based diets. Vegetarianism and veganism have become increasingly popular as dietary and lifestyle choices over the last few years; from 2017 to 2019, the estimated vegetarian population of the Netherlands has nearly doubled from 6 to 12 percent (Van Gelder, 2021), and an additional 2 percent identified themselves as vegan, of which the majority was between the ages of 18 and 34 (Van Gelder, 2021). As the interest into plant-based diets has grown exponentially in the last decade, so has corporate interest into producing, advertising, and especially selling this alternative diet. Since 2017, Albert Heijn and Jumbo - two of the largest Dutch supermarket chains - have increased vegan proteins offered to customers by 51% (Enjoli, n.d.). Albert Heijn specifically has seen a 33% increase in total vegan products stocked in this time as well (Enjoli, n.d.). In the case of marketing plant-based diets, the emotional appeals used, could for example be fear of medical issues related to meat consumption

such as heart disease, or disgust for the treatment of livestock animals (Christopher, Bartkowski & Haverda, 2018).

Being vegan designates a diet based upon the non-consumption of meat, dairy, eggs and honey; the nonuse of animal (by)products (such as leather and wool) for clothing and other goods; and the avoidance of animal tested products (The Vegan Society, 2014, as cited in Doyle, 2016). The main motivations for adopting a vegetarian or vegan lifestyle can be broadly categorized along two main branches: ethical motivations and health-based motivations. Ethically-oriented vegetarians and vegans often base their motivations around animal-welfare issues (e.g. the suffering of animals in the livestock industry) or the conviction that animals are emotional beings; health-oriented individuals in contrast adopt the lifestyle for improving their general health, or in attempts to cure diseases and ailments (Christopher, Bartkowski & Haverda, 2018). The adaptation of this lifestyle is often a gradual process, and is, in short, described as follows by Jabs, Devine, and Sobal (1998): Individuals are exposed to a certain piece of information regarding veganism, for example the environmental consequences of eating meat, that leads to a new awareness about meat consumption. This awareness leads to cognitive dissonance, which in turn leads to a re-evaluation of their food choices and a change in diet. The adaptation of a plant-based diet through such a process "allowed respondents to develop strategies, form behavior patterns, and modify personal systems of food choice to adjust to each change as it occurred without overwhelming their coping mechanisms." (Jabs, Devine & Sobal, 1998, p. 201). Contrarily to the gradual process, plant-based diets in fewer cases were adopted abruptly in certain "conversion events"; for example when making the connection between meat and animals at a young age, or when informed about certain chronic illnesses at an older age in the case of some health-motivated individuals (Jabs, Devine & Sobal, 1998). In contrast to the process described here, Gillen (2014) argues that while people assume their belief systems to be rational and logical, and more specifically for their beliefs and logic to overcome emotion when in conflict, in reality the opposite often holds true. When presented with new facts that cause cognitive dissonance, people are more likely to instead justify their belief systems and find new arguments to support it simply because they hold great emotional attachment to this belief system. As such, facts and logic are often not sufficient when arguing the adoption of a vegan diet. Instead, Gillen argues, emotional appeals could possibly be more convincing (Gillen, 2014, as cited in Gray (2015).

A similar disagreement on the importance of emotion and emotional appeals in the persuasive process, whether it be to convince someone of veganism or otherwise, can be found in academic research on emotional persuasion. Jorgensen (1998) notes a dichotomy in academic literature when trying to define what makes an appeal emotional. The first perspective views emotions as an internal state of being, which changes when exposed to a message. The other perspective views emotions as an active part of a message, which have a causal relation with the way people feel. Similarly, it seems Jabs, Devine and Sobal (1998) attribute adopting veganism to a certain change of emotion and beliefs within an individual when exposed to non-emotional information; while Gillen (2014) rather seems to describe a clash between the inherent emotionality of a message, in this case the "message" of veganism, and the emotional value one attaches to their beliefs. Due to this dichotomy, Jorgensen hopes to conceptualize what an emotional appeal is as following: "a conscious and a strategic choice, in that the emotional appeal is intentionally included in the persuasive message with the goal of changing or reinforcing the attitudes of the receiver" (Jorgensen, 1998, p. 406).

Whichever view one may hold in this debate, to establish a link between emotionality and persuasive effectiveness, numerous factors pertaining to the individual can be hardly ignored. In their research on the effect of emotionality in cancer-related messages, Dilliard and Nabi (2006) outline two factors that change the effectiveness of an emotional appeal in the individual: coping styles and prior knowledge. Coping styles pertain to the amount of information the individual exposes themselves to when confronted with threatening information. This can be done through monitoring, extensively searching for information on this new threat, or blunting, trying to avoid information regarding the threat. People of both types of coping mechanisms have individual needs and wants regarding the emotional message they could be exposed to, and thus differ in the emotional affect and by extension the persuasive effect of a message. The prior knowledge an individual has on the topic has a variety of influences on the effectiveness of a message, while it improves processing of the message, individuals are more resistant to changing their attitude (Dilliard & Nabi, 2006). In the context of veganism, while not a threat in and of itself, the same could hold true, especially when looking at veganism as a means to combat the threat of climate change or a threat to personal health. Primarily the extent of prior knowledge could have a significant effect on the persuasiveness of plant-based dietary messages, since the exposure to new information regarding veganism or the cruelties in the livestock industry seems to promote

actual attitudinal change in diet (Jabs, Devine & Sobal, 1998). People who are generally well aware of the impact of their dietary habits, potentially are less likely to experience either cognitive dissonance or "conversion events".

Since emotions seem to be so significant in human decision making processes, approaching the ongoing standardization versus adaptation debate from this perspective seems only logical. Especially when communicating to bilinguals -which in this thesis is operationalized as people capable of speaking and understanding two languages- it seems different languages elicit different emotional responses. Caldwell-Harris and Aycicegi-Dinn (2016) state the L1 (the first language spoken by an individual, the "mother tongue") more strongly channels emotions when compared to a language acquired later in life . According to the researchers, this difference seems to mainly stem from the fact that emotional regulation and language develop around a similar age, which leads to specific emotions being associated with certain objects and actions, and more specifically the words used for them. While this sense may be slightly weaker in a second language, through use and practise the L2 words and phrases will also come to be associated with certain emotions or emotional events (Caldwell-Harris & Aycicegi-Dinn, 2016). This view would suffice in most cases of bilingualism, however Pavlenko (2012) argues that the L1 versus L2 effect is highly dependent on context. In essence, both L1 and L2 have individual advantages regarding emotion-based processing of a message. Using a L1 would improve the automaticity of processing the emotional qualities of an advertisement, while the L2 reduces this automaticity which in turn decreases sensitivity for emotionally-charged words. The most important factors to the difference in L1 and L2 effects are the age effects and context effects (Pavlenko, 2012). The age at which a person acquires a second language (and to some extent and in some cases the age at which they arrive in a country with a different language) seems to have an effect on the L1 advantage, which is less pronounced in early learners of a L2 as both are acquired around the same age. Context effects refer to how the second language is acquired, for example whether this is in a classroom or while abroad. The difference in degree of emotion in these contexts is especially important to the difference in L2 effects. The L1 is highly emotional since it is acquired in a highly emotional environment like home, however an L2 acquired in a classroom will be significantly less emotional than the same language acquired abroad when emerged in the culture.

The differences of perceived emotionality existing between L1 and L2 according to Puntoni, de Langhe and van Osselaer (2009) can be attributed to Episodic Trace Theory. Rooted in cognitive psychology, Episodic Trace Theory assumes that every experience leaves a separate trace in memory. When confronted with certain stimuli, an individual is presented with an "echo" consisting of an aggregate of all information and sensations that were previously stored in these traces. Adapting this theory to the field of linguistics, the authors argue that certain sounds, intonations, words, and expressions are also (part of) certain traces stored in memory. In essence, the L1's improved ability to convey emotions can be attributed to the increased use of said language. As L1 is used more frequently, especially in emotional environments, than L2 in the lifespan of an average bilingual, the number of traces and thus the resulting echo is larger for L1. In essence, if the L2 would have been used more often in emotional contexts -in the case of a regional dialect for example- this would also elicit a larger emotional response (Puntoni, de Langhe, van Osselaer, 2009).

Important to the persuasive ability of a message seems to be emotion-based expectancies theory as argued by DeSteno et al. (2004), which shows a positive effect on persuasive success of a message when the emotions of said message match the emotions an individual expects on a certain topic. This theory is based on previous models for persuasive effect, such as the elaboration likelihood model (Petty & Cacioppo, 1986) or the expectancy-value model (Ferguson & Spence, 1984). The expectancy value model found that students were most likely to perform a task, when they expected themselves to be capable of doing so (Ferguson & Spence, 1984) The adaptation by DeSteno et al. (2004) finds emotion used when persuading an individual should match the emotion one expects to feel about the topic of the message. In the case of veganism, one could for example feel disgust at the treatment of animals in the livestock industry, fear of climate change, or happiness about their lifestyle choices. The persuasive effect of messages promoting a plant-based diet is thus dependent on emotionally matching the primary emotion felt by individuals on the topic.

When analyzing the emotional value or persuasive effect of a message, it is important to distinguish what makes an appeal or message non-emotional. The contrast that is often made in emotion-based persuasion research is between rational and emotional appeals. This distinction likely has an origin in ancient Greek Philosophy; Aristotle considered three dimensions to persuasion: Logos, Ethos, and Pathos (Jorgensen, 1998). While Logos appeals to reasoning and

deduction of arguments, Pathos is concerned with the emotionality a speaker uses to convince their audience. Ethos cannot be fitted in the rational versus emotional distinction of appeals, as it has to do with the credibility of the speaker. In advertising, the use of emotional appeals are theorized to be more effective when marketing services where the experience is very important, for example comparing restaurants or beauty salons, while rational appeals are likely more effective for services where the credibility is important to the audience, like car mechanics or a lawyer (Zhang, Sun, Liu & G. Knight, 2014).

Thesis

The increased interest in (the marketing of) plant-based diets, combined with the increased use of English in Dutch advertising, lead to significant motivation for research into the effects of foreign languages on advertising the vegan diet or lifestyle. The importance of emotional appeals, such as disgust or fear, in making this lifestyle choice cannot be denied. In the scientific debate on adaptation versus standardization, emotion could also play a large part in the effectiveness of advertising. Research on the emotionality of a message on an ethically difficult topic such as veganism could provide more insight in emotional processing as a whole, since previous research is mostly focused on more morally-ambiguous contexts. This leads to the following research question:

"What is the influence of language differences when comparing persuasive appeals on the persuasive effectiveness of a message?"

The following hypotheses are presented as well:

1. The L1 will be more effective compared to the L2 in regards to the perceived emotionality of the message (Puntoni, de Langhe & van Osselaer 2009);
2. If a difference will be found between L1 and L2, it will be greater for emotional appeals compared to informational appeals, due to the L1's improved processing of emotions (Pavlenko 2012; Caldwell-Harris & Aycicegi-Dinn, 2016);
3. If a difference is found between L1 and L2, this difference will be larger when L2 proficiency is lower. (Caldwell-Harris & Aycicegi-Dinn, 2016; Puntoni, de Langhe & van Osselaer, 2009).

Methodology

Materials

A stimulus consisting of three texts with persuasive intent to encourage the reduction of meat consumption was created to account for both a positive emotional appeal and a negative emotional appeal - to account for the different valences of emotionality - and a neutral or informational appeal. The following messages were created:

In the Netherlands, 1.7 million animals are consumed every day. This includes cows, chickens, and pigs.

Positive emotional:

By simply eating less meat, you can give these animals a chance to live the long and happy life they deserve. We can all play a part in stopping the constant increase of animal consumption. Will you be a hero and save these animals?

Negative emotional:

Your meat consumption contributes to the exploitation and slaughtering of innocent animals. The amount of death and cruelty in this industry is constantly increasing, and we are all responsible for that. Is the taste of meat worth having blood on your hands?

Informational:

The consumption of meat is associated with decreased animal welfare. The average Dutch person eats 77 kg of meat per year. This consumption has steadily been on the rise, but you can help bring this number down. Will you reduce your meat consumption or not?

To reduce variance on the basis of differences in the texts, other than the emotional and language differences, it was decided for each text to have elements. First, both the Dutch and English ads start with a common opening sentence for each valence of emotionality. Secondly, the themes of each text are similar but differ slightly in framing; they all discuss animal welfare and the rise of meat consumption to a degree, and all try to appeal to a sense of responsibility. The ads were presented on a black background so for example a background image could not influence the possible difference in language effects. These texts were then translated from English to Dutch (which can be found in appendix 1) to account for the different languages,

which lead to a total of six different texts. The translated versions were then translated back to English by an independent source, another Dutch IBC student currently analysing the L1 vs. L2 effect in emotional persuasion, which led to similar messages, confirming the translation being valid.

Attempting to quantify whether the different texts used in each advertisement had the proper emotional valence, each advertisement's words carrying emotional weight were analysed in the database established by Warriner, Kuperman, and Brysbaert (2013). It was decided to only look at nouns and verbs, since these were most dissimilar in each sentence and expected to be most important to the emotional valence. The mean and standard deviation of the arousal, dominance, and emotional valence can be found in appendix 2. Arousal is the intensity of the emotion provoked by the stimulus word, dominance is the degree of control extended by said stimulus, and valence is the pleasantness of said stimulus (Warriner, Kuperman & Brysbaert, 2013).

Subjects

The target group of this thesis was Dutch bilingual students aged 18-30, this decision was made since this group is relatively homogenous, which likely reduces variance in the results. This age group also contains more vegetarians and vegans than any other (Van Gelder, 2021), so they will be most familiar with the themes presented to them. Answers by participants who did not fit the target group, were excluded; participants were considered to not fit the group if they either: did not meet age requirements, were not students (still in high school, or already finished), or were not bilingual (both monolinguals and multilinguals were excluded). In total the online questionnaire garnered 152 valid respondents, of which 23.2% were male and 76.8% were female, the average age of respondents was 21 years old. 4.6% of the respondents studied at the MBO level, 35.5% at HBO level, a majority of 44.1% at a bachelor level in university, and 14.5% university at the masters level. All participants were raised with Dutch as a primary language, however 2% of participants were raised bilingually with another language alongside Dutch.

As the majority of participants were female (76.8%) the unequal distribution of gender could have had an influence on results. An overview of gender distribution across conditions can be found in the table below.

A Chi-square analysis of gender across each of the six conditions showed no significant differences ($X^2(5)= 13.054$, $p= .023$) in distribution across all variables. The exact distributions of each gender can be found in table 3. The self-assessed English proficiency for each of the six conditions was analysed through a one-way ANOVA; a levene's test of equality of variance was rejected ($F(5, 146)= 3.461$, $p=.006$), subsequently a Welch one-way anova showed a significant difference in proficiency between the six conditions ($F(5, 66.589)= 3.610$, $p=.006$). On average, the group with the informative appeal in Dutch ($M= 4.84$, $SD= 1.417$) rated themselves as less proficient compared to the informative appeal in English group ($M= 5.83$, $SD= .984$, Bonferroni $p=. 046$) and the positive appeal in English group ($M= 5.83$, $SD=.650$, Bonferroni $p= .046$); there were no significant differences between this group and the negative appeal in Dutch group ($p= 1$), the negative appeal in English group ($p= .215$), and the positive appeal in Dutch group ($p= 1$). Apart from the aforementioned differences, proficiency did not differ between any of the other groups (Bonferroni $p>.367$ in all cases).

Table 1. *Gender distribution across conditions*

		Condition						
		Informative NL	Informative EN	Negative NL	Negative EN	Positive NL	Positive EN	Total
Male	Count	4$_a$	11$_a$	3$_a$	7$_a$	4$_a$	6$_a$	35
	% within Condition	12.5%	47.8%	13.6%	30.4%	14.3%	26.1%	23.2%
Female	Count	28$_a$	12$_a$	19$_a$	16$_a$	24$_a$	17$_a$	116
	% within Condition	87.5%	52.2%	86.4%	69.6%	85.7%	73.9%	76.8%
	Count	32	23	22	23	28	23	151
	% within Condition	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Design

A 2 x 3 factorial between subjects design was used in this experiment. All participants were randomly assigned a language, either Dutch or English, in which both the text and the survey was displayed, and randomly assigned each of three factors of emotionality, a positive or negative emotional appeal or an informational appeal.

Instrumentation

In the questionnaire the following variables were measured: the participant's behavioural intention regarding meat consumption reduction, the emotionality of the ads, and the participants' attitude towards the ad.

Participants were first asked to note their age in years, gender (male, female, or other), and education level (MBO, HBO, university Bachelors, or university Masters". Participants were also asked to indicate how often they consume meat at the time of the questionnaire on a 7-point Likert scale, anchored with 1 being never and 7 being six or more times per week. After this, participants are randomly shown one of six possible ads. The native language of participants was also recorded, participants could either choose Dutch, Dutch plus another language, or other; as well as the age at which they acquired English, before the age of 5, after the age of 5, or other.

To test the participants' concerns regarding reducing their meat consumption a 5-point Likert scale was used anchored by 1 being strongly agree and 5 being strongly disagree, following the statement "because of the ad I would be concerned about eating less meat. To quantify behavioural intention four 7-point Likert scales (α= .777) were used anchored by 1 being strongly disagree and 7 being strongly agree. The scales were preceded by the statements Because of this ad…: "I intend to cut the number of meals with meat to half", "I intend to refrain from eating meat" , "I intend to replace meat with substitutes, vegetables or beans", and "I intend to eat vegetarian food twice as often as today" inspired by Garnett (2011).

To test the perceived emotionality of the ad a single 5-point Likert scale was used anchored by 1 being strongly disagree and 7 being strongly agree, preceded by the statement "I think this ad is emotional" (based on Puntoni, de Langhe & van Osselaer, 2009).

To test the participants' self-assessed English proficiency a 7-point Likert scale was used anchored by the values 1 being very poor and 7 being excellent, introduced by the statement "I consider my English reading proficiency as:" (Hunter en Roos, 2016).

Procedure

Participants will be asked to fill out an online questionnaire using the program Qualtrics. An opening statement informing partakers of the survey about the research preceded the questions, this statement can be found in appendix 4. Participants were then asked whether they were students and above the age of 18, if not the questionnaire would end at that point. Afterwards,

their exact age, gender, education level, and how often they eat meat per week were asked. Then participants were randomly assigned to one of the six advertisements. After reading the stimulus material, the participants then fill out the questionnaire. The exact order of questions can be found in appendix 5. Participants were asked whether they were concerned about reducing their meat consumption, their intentions regarding their meat consumption, and to what degree they found the ad emotional to analyse the main hypotheses. To assess certain background variables, participants in this questionnaire were also asked their English reading proficiency, whether they were raised as a Dutch monolingual or were raised with another language from birth, and from what age they learned English. They will not be made aware of the purpose of this research, as personal beliefs about plant-based diets could possibly lead to a purposeful misrepresentation of the emotional impact in the results.

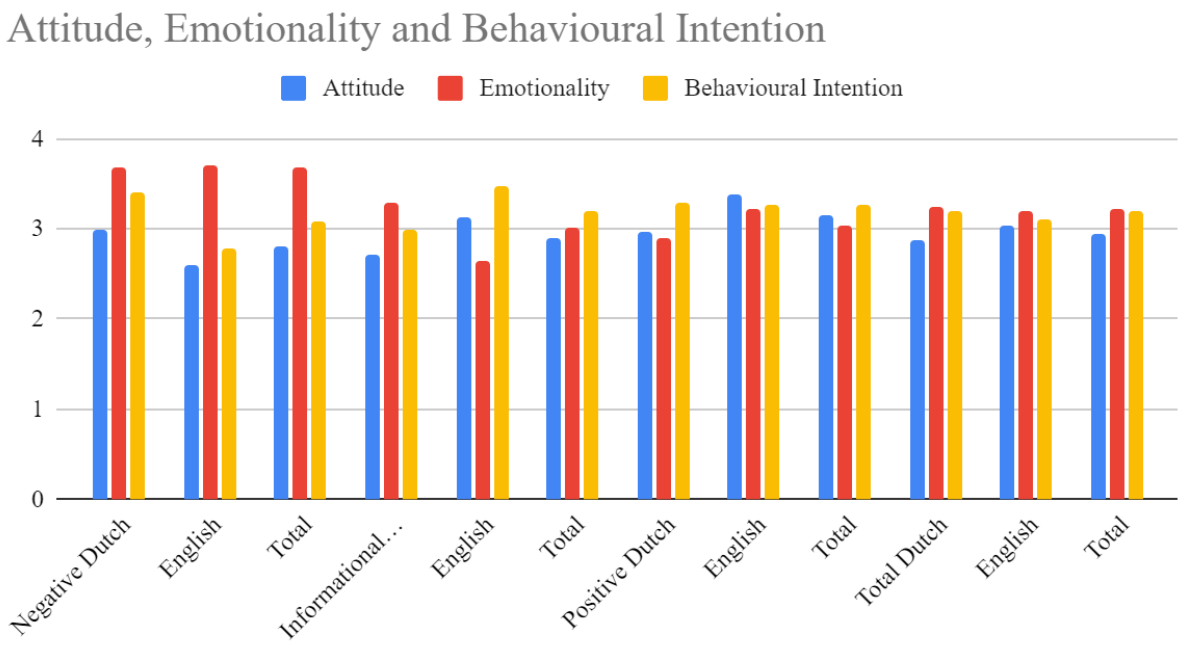
Statistical Treatment

IBM SPSS Statistics 27 will be used to analyse the data received from the online questionnaire. First, A chi-square analysis will also be done for the level of education, age, and gender to see if distribution amongst the groups is equal. This will be done for both language groups, and the specific valences of emotionality.

Results

To analyse the influence of both language (Dutch or English) and valence of the emotional appeal (positive, negative, or informational) of the ad on concerns regarding meat consumption, perceived emotionality of the ad, and behavioural intention regarding reducing meat consumption. Figure 1 shows the mean attitude, behavioural intention and perceived emotionality of each condition. A more detailed look at these descriptives can be found in table 3.

Figure 1: *Mean attitude, emotionality and behavioural intention split by language and type of appeal.*



For the main effect of the type of emotional appeal, no significant effect was found on behavioural intention ($F(2, .402) = .252$, $p = .778$) and attitude ($F(2, 1.784) = 1.489$, $p = .229$); a significant effect was found for the type of emotional appeal on perceived emotionality ($F(2, 7.338) = 6.159$, $p = .003$). No significant main effect of language could be found on either behavioural intention ($F(1, .110) = .069$, $p = .793$), attitude towards the ad ($F(1, .824) = .687$ $p = .408$) or perceived emotionality ($F(1, .359) = .301$, $p = .584$). Also, no significant interaction effect between language and the type of emotional appeal could be found on behavioural intention ($F(2, 3.729) = 2.335$, $p = .100$), attitude towards the ad ($F(2, 2.581) = 2.153$, $p = .120$), and perceived emotionality ($F(2, 3.079) = 2.585$ $p = .079$).

In regards to the significant main effect of type of persuasive appeal on emotionality, a post-hoc analysis showed the negative emotional appeal (*M*= 3.69, *SD*= .874) was perceived as significantly more emotional than the neutral appeal (*M*= 3.02, *SD*= 1.269, Bonferroni *p*= .008), and more emotional than the positive appeal (*M*= 3.04, *SD*= 1.084, Bonferroni *p*= .012). There were no significant differences between the neutral and positive emotional appeals (Bonferroni *p*= 1.000).

To analyse whether proficiency could have an effect on the results regarding the attitude, behavioural intention, and perceived emotionality, a two-way MANOVA was performed with the six conditions of the research and the self-assessed proficiency as factors. This did not show a significant interaction effect between proficiency and the type of condition on behavioural intention ($F(18, 1.584) = .978$, $p = .490$), attitude ($F(18, .825) = .675$, $p = .830$), or perceived emotionality ($F(18, .834) = .666$, $p = .839$). An overview of average proficiency across conditions can be found in the table below

Table 2. *Proficiency across conditions.*

Proficiency

	N	Mean	Std. Deviation
Informative NL	32	4.84	1.417
Informative EN	23	5.83	.984
Negative NL	22	5.23	1.193
Negative EN	23	5.65	1.027
Positive NL	29	5.07	1.486
Positive EN	23	5.83	.650
Total	152	5.36	1.237

Conclusion

The purpose of this research was to determine the influence of language when comparing positive and negative emotional appeals and informational appeals on the persuasive effect of a message. To achieve this, three hypotheses were established, which will be expanded upon below.

The first hypothesis stated that the L1 effect would be larger than the L2 effect when it comes to perceived emotionality; no support for this hypothesis could be found in this research, in fact, language did not seem to have an influence on either the perceived emotionality, attitude towards meat consumption or behavioural intention.

The second hypothesis stated that if a difference between the L1 and L2 effect was found, this effect would be larger for emotional appeals compared to the informational appeals. This hypothesis can also be rejected. Only the negative appeal was seen as more emotional than both the neutral and positive appeals. This could either be an error in manipulation on the researcher's behalf, that the language chosen in each ad was too similar in terms of emotional valence, or a case of negativity bias. Negativity bias states that, in persuasion, negative appeals carry more power than positive appeals (Chestek, 2014).

The third hypothesis suggests that as L2 proficiency increases, the L1 advantage in emotional processing diminishes. While no direct link between proficiency and, for example, emotionality could be established, average proficiency was still relatively high (M= 5.36 on a scale from 1 to 7, or 76.5%). This could explain the lack of significant L1 versus L2 differences found for the first two hypotheses. As mentioned in the limitations, this thesis only measured self-assessed English proficiency; when measuring actual proficiency, the effect of high proficiency on a diminished L1 advantage could have been more accurately determined.

The general lack of significant differences in the results of this thesis probably can be explained by the frame that was chosen to analyse the persuasive effect: reducing meat consumption. This frame of veganism or reducing meat consumption might just not suffice for research in emotional persuasion. In general, changing one's dietary behaviour seems to be a relatively gradual process, due to the enormous importance our dietary habits have in our daily lives. Individuals often already are relatively well informed and have established opinions about their dietary habits (Gillen, 2014). In only a few rare cases changing one's diet happens abruptly (Jabs, Devine & Sobal, 1998). As such, the actual impact of the messages in regards to

behavioural intention (i.e. participants starting to eat less meat) or their attitude regarding meat consumption might only be seen long after filling out the questionnaire. A longitudinal design on the other hand might be able to accurately establish a change in dietary habits in the participants over time.

Another reason for the relatively small difference in persuasive effect between both languages, could be the general lack of persuasive effect of the messages that were used in this thesis. As suggested by DeSteno et al. (2004), the emotional needs of an individual need to be met for increased persuasive effect of said message in the case of emotional persuasion. The simple dichotomy between positive and negative emotions, used in this research might simply not suffice in meeting the emotional needs in such a complex emotional process that is reducing the consumption of meat. In the case of non-emotional appeals, or informational appeals, it could be the case that the informational needs of participants were also largely neglected. A specific decision was made to keep the statistics and factual information in the messages, and especially the difference in their number across the condition of appeals, to a minimum, in an attempt to establish that differences were largely due to a change in language.

In extension of this, the coping styles of each individual might have an influence on the persuasive effect of the messages that were used. Individuals with blunting coping styles (Dilliard & Nabi, 2006) might not be well informed about the atrocities in the livestock industry or the beneficial effects of a vegetarian or vegan diet, which could result in a "conversion event" (the abrupt change of ones' diet to a vegan or vegetarian one, as mentioned by Jabs, Devine & Sobal, 1998) but it is unlikely that this change in habit was visible in the results of the present study. It is likely however that most participants in this thesis were relatively well informed about plant based diets and the importance of reducing meat consumption. This does not necessarily mean a majority of participants had monitoring coping styles (Dilliard & Nabi, 2006), which would mean they all aim to be very well informed about the impacts of their dietary choices and use this knowledge to justify these choices. It rather could mean that the average Dutch student has enough knowledge about their eating habits that the persuasive effect of the appeals used in this thesis, and to an extent the typical appeals used to promote the reduction of meat consumption on the basis of animal welfare, has diminished to a certain degree. This view would be in line with research by Dilliard and Nabi (2006) who suggest that as

an individual's prior knowledge about a subject increases, their resistance to changing their current opinion increases as well.

Discussion

Limitations

The first problem faced in this research appeared in the data collection. Since the target group in this case was relatively limited on age and the fact participants had to be students, numerous participants who did not fit the target, did get randomly assigned to the six conditions. This meant certain responses had to be excluded, which in turn resulted in uneven groups across conditions. Another possible issue was the gender disparity; while both genders did not seem to differ in regards to behavioural intention, attitude, or perceived emotionality, the disproportionate amount of female responses in general in combination with uneven distribution of the genders across the six conditions could have had an effect on the outcome of this research.

The research was also limited in the extent of measuring the impact of English proficiency. A self-assessment of English skills was decided upon instead of using an actual proficiency test such as a Lextale test (Lemhofer & Boersma, 2012). While proficiency did not seem to differ significantly across conditions, generally speaking participants who were exposed to English ads reported their proficiency as being slightly (but definitely not significantly) higher. Contrarily, a more accurate assessment of L2 proficiency could show a more accurate effect in regards to the persuasive power and emotional valence of the. As suggested by previous research, the emotional impact of certain words or expressions increases relatively to proficiency with those certain words or expressions (Puntoni, de Langhe and van Osselaer, 2009). Overall, self-assessed proficiency in the L2 was relatively high (M= 5.36, SD= 1.237) for all participants, and while there were some differences between certain conditions, the lowest average English proficiency was found in a group exposed to Dutch ads. As a result, the L1 effect compared to L2 on attitude, perceived emotionality, and behavioural intention seems to be relatively neglectable in this case due to the relatively high proficiency.

Future research

The first suggestion for future research has to do with properly constructing the manipulation, in this case the different messages. While the words in messages in this research were analysed

according to the database constructed by Warriner, Kuperman, and Brysbaert (2013), the valence of words and the valence of said words in a complete sentence can differ significantly depending on context. While generally speaking the valence of the words chosen in the ads did seem to fit the criteria, a more robust pretest of the exact messages, for example through coding said messages by a large team, could have shown the emotional impact of the messages as they are currently does not suffice.

Secondly, the messages currently used mainly focus on the motivation of animal welfare. Previous research has shown that animal welfare is often an important factor for individuals who adopt a plant-based lifestyle, but environmental impact and health-based motivations equally play a role. Considering the environmental and health motivations seem to be slightly more rational in nature since they are anchored in science, the L2 might be more effective than the L1 in such cases due to the emotional distance of said language (Caldwell-Harris & Aycicegi-Dinn, 2016).

Thirdly, Pavlenko (2012) argues that the context in which a language is acquired seems to be important to the emotional effect the language has. While this holds no basis in current research, it could be argued that a lot of the terminology and phrases used in the messages, while not uniquely used in the context of meat-reduction, are often primarily acquired and used in these contexts. Think of phrases or terms such as: animal welfare, the livestock industry, reducing meat consumption, saving the animals. Especially when viewing this through the lens of Episodic Trace Theory (Van Osselaer, 2009), the emotions an individual already has about the concepts of vegetarianism or veganism, or meat reduction in general, could be inherently linked to these words. A closer look at the specific "jargon" of meat reduction or vegetarianism and the possibly diminished persuasive effect of these terminologies, could provide insight into successfully promoting these alternative diets.

Tables

Table 3: Descriptive statistics main variables. Behavioural intention is found on the next page

Descriptive Statistics

	Appeal	Language	Mean	Std. Deviation	N
Attitude	Negative	Dutch	3.00	1.069	22
		English	2.61	1.196	23
		Total	2.80	1.140	45
	Informational	Dutch	2.72	1.170	32
		English	3.13	1.100	23
		Total	2.89	1.149	55
	Positive	Dutch	2.97	.906	29
		English	3.39	1.118	23
		Total	3.15	1.017	52
	Total	Dutch	2.88	1.052	83
		English	3.04	1.169	69
		Total	2.95	1.106	152
Emotionality	Negative	Dutch	3.68	.945	22
		English	3.70	.822	23
		Total	3.69	.874	45
	Informational	Dutch	3.28	1.198	32
		English	2.65	1.301	23
		Total	3.02	1.269	55
	Positive	Dutch	2.90	1.047	29
		English	3.22	1.126	23
		Total	3.04	1.084	52
	Total	Dutch	3.25	1.114	83
		English	3.19	1.167	69
		Total	3.22	1.135	152

Behavioural Intention	Negative	Dutch	3.41	1.297	22
		English	2.78	1.278	23
		Total	3.09	1.311	45
	Informational	Dutch	3.00	1.078	32
		English	3.48	1.344	23
		Total	3.20	1.208	55
	Positive	Dutch	3.28	1.162	29
		English	3.26	1.484	23
		Total	3.27	1.300	52
	Total	Dutch	3.20	1.166	83
		English	3.17	1.382	69
		Total	3.19	1.265	152

Appendices

Appendix 1: Ad messages Dutch

In Nederland worden dagelijks 1,7 miljoen dieren geconsumeerd. Dit omvat koeien, kippen en varkens.

Positief emotioneel:
Door simpelweg minder vlees te eten, kan je deze dieren een kans geven om het lange en gelukkige leven te leiden dat ze verdienen. We kunnen allemaal een rol spelen bij het stoppen van de constante toename van de consumptie van dieren. Word jij een held en red je deze dieren?

Negatief emotioneel:
Jouw vleesconsumptie draagt bij aan de uitbuiting en slachting van onschuldige dieren. Het aantal doden en de gruwelijkheid in deze industrie neemt voortdurend toe en we zijn allemaal verantwoordelijk daarvoor. Is de smaak van vlees het waard om bloed aan je handen te hebben?

Informatief:
De consumptie van vlees wordt geassocieerd met een verminderd dierenwelzijn. De gemiddelde Nederlander eet ongeveer 77 kg vlees per jaar. Deze consumptie stijgt voortdurend, maar jij kunt helpen dit aantal omlaag te brengen. Ga jij je vleesconsumptie verminderen of niet?

Appendix 2: Valence, Arousal, and Dominance of emotional stimuli.

Words were assessed on a 10-point scale, in the case of Valence with 1 being very negative and 10 being very positive; in the case of arousal and dominance 1 is small and 10 is large.

Positive emotional:

By simply eating less meat, you can give these animals a chance to live the long and happy life they deserve. We can all play a part in stopping the constant increase of animal consumption. Will you be a hero and save these animals?

- Eating (valence: *M*= 7.1*, SD*= 1.73; arousal: *M*= 5.87, *SD*= 1.68; dominance: *M*= 4.38 *SD*= 2.79)
- Happy (valence: *M*= 8.47*, SD*= 1.28; arousal: *M*= 6.1, *SD*= 2.45; dominance: *M*= 7.21 *SD*= 1.96)
- Life (valence: *M*= 6.68*, SD*= 2.49; arousal: *M*= 5.59, *SD*= 2.58; dominance: *M*= 5.89 *SD*= 2.42)
- Deserve (valence: *M*= 6.77*, SD*= 2.02; arousal: *M*= 4.5, *SD*= 1.88; dominance: *M*= 6.32 *SD*= 2.36)
- Play (valence: *M*= 7.55*, SD*= 1.34; arousal: *M*= 3.81, *SD*= 2.56; dominance: *M*= 6.29 *SD*= 1.96)
- Hero (valence: *M*= 7.44*, SD*= 1.97; arousal: *M*= 6.35, *SD*= 2.43; dominance: *M*= 5.78 *SD*= 2.34)
- Save (valence: *M*= 7.26*, SD*= 1.59; arousal: *M*= 4.62, *SD*= 2.46; dominance: *M*= 6.34 *SD*= 2.43)

Negative emotional:

Your meat consumption contributes to the exploitation and slaughter* of innocent animals. The amount of death and cruelty in this industry is constantly increasing, and we are all responsible for that. Is the taste of meat worth having blood on your hands?

- Exploitation (valence: *M*= 2.89*, SD*= 1.73; arousal: *M*= 6.1, *SD*= 1.34; dominance: *M*= 5 *SD*= 2.75)
- Slaughtering (valence: *M*= 2.33*, SD*= 1.85; arousal: *M*= 5.77, *SD*= 2.36; dominance: *M*= 3.57 *SD*= 2.28)
- Innocent (valence: *M*= 6.55*, SD*= 1.23; arousal: *M*= 4.4, *SD*= 2.72; dominance: *M*= 5.92 *SD*= 2.53)
- Death (valence: *M*= 1.89*, SD*= 1.24; arousal: *M*= 5.53, *SD*= 2.62; dominance: *M*= 3.42 *SD*= 2.36)
- Cruelty (valence: *M*= 2.37*, SD*= 2.22; arousal: *M= 5.9*, *SD*= 2.68; dominance: *M*= 2.64 *SD*= 2.02)
- Blood (valence: *M*= 3.48*, SD*= 1.94; arousal: *M*= 5.76, *SD*= 1.67; dominance: *M*= 3.94 *SD*= 1.43)

Informational:

The consumption of meat is associated with decreased animal welfare. The average Dutch person eats 77 kg of meat per year. This consumption has steadily been on the rise, but you can help bring this number down. Will you reduce your meat consumption or not?

- Consumption (valence: *M= 4.65 , SD*= 1.31; arousal: *M*= 3.76, *SD*= 2.39; dominance: *M*= 6 *SD*= 2.05)
- Animal (valence: *M*= 7.06*, SD*= 1.95; arousal: *M*= 4.3, *SD*= 2.7; dominance: *M*= 5.72 *SD*= 2.32)
- Welfare (valence: *M*= 3.58*, SD*= 2.19; arousal: *M*= 4.32, *SD*= 1.89; dominance: *M*= 4.25 *SD*= 1.98)
- Rise (valence: *M*= 5.73*, SD*= 1.52; arousal: *M*= 5.3, *SD*= 2.75; dominance: *M*= 7.16 *SD*= 1.92)
- Reduce (valence: *M*= 5.1*, SD*= 1.59; arousal: *M*= 3.67, *SD*= 1.83; dominance: *M*= 4.92 *SD*= 2.26)

Appendix 3: Background analysis

As the gender distribution across conditions is not split evenly, a series of independent samples t-tests were performed for the participants' gender analysing the three main dependent variables. When analysing the perceived emotionality a levene's test shows equality of variance is assumed (F=.312, p=.577) a dependent samples t-test showed no significant difference in perceived emotionality when comparing both genders (t(149)= -.239, p= .812). For the dependent variable attitude a Levene's test shows equality of variance is assumed (F=.524, p=.470), no significant differences were found (t(149)= -1.384, p= .168). For behavioural intention a Levene's test shows equality of variance is assumed (F=3.343, p= .069), again no significant differences were found between the genders (t(149)= -.869, p= .386).

In an attempt to establish whether the eating habits - how often a week they eat meat - of our participants differed in regards to both the language groups and the different emotional valences of the ads, a two-way ANOVA was performed with the language groups (English or Dutch) and the emotional valences of the appeals (positive, negative, or informative) as factors and the eating habits as dependent variable showed no significant differences in previous habits between the language groups (F(1, 152)= .600, p= .440), or the different groups of emotion (F(2, 152)= .124, p=.883).

Appendix 4: Opening statement

Welcome to the survey.

Dear participant,

Thank you for participating in our study. This questionnaire is part of the International Business Communication Bachelor's programme at Radboud University. This one-time survey, consisting of 13 questions, will take approximately 5 minutes to finish. We are conducting research on social advertisements in society. In order to do so, Dutch native speakers are needed.

All the obtained data will be confidential and will only be available to the researchers conducting this questionnaire. Your participation is completely anonymous and voluntary. You can withdraw from this questionnaire at any given point.

If you have any questions or complaints about this study, please send an e-mail to annabel.schwarz@student.ru.nl.

By filling out this form, you declare that you have been sufficiently informed about the study and that you want to voluntarily participate.

Thank you for your time,

Frances van Drogenbroek, Isi Omole, Annabel Schwarz, Bente Nijkamp, Fleur de Jong, Mees Bartholomeus, and Nguyên Lương.

Appendix 5: Questions after stimulus material

Please answer this question on the basis of the previously viewed advertisement

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
Because of the ad I would be concerned about eating less meat	○	○	○	○	○

Please answer this question on the basis of the previously viewed advertisement

	Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
Because of this ad, I intend to cut the number of meals with meat to half	○	○	○	○	○	○	○
Because of this ad, I intend to refrain from eating meat	○	○	○	○	○	○	○
Because of this ad, I intend to replace meat with meat substitutes, vegetables or beans	○	○	○	○	○	○	○
Because of this ad, I intend to eat vegetarian food twice as often as today	○	○	○	○	○	○	○

Please answer this question on the basis of the previously viewed advertisement

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
I think this ad is emotional	○	○	○	○	○

Proficiency

	Very poor	poor	Below average	Average	Good	Very good	Excellent
I consider my English reading proficiency as	○	○	○	○	○	○	○

What is your native language (the language in which you were raised from birth)?

- Dutch
- Dutch plus another language
- Other

At what age did you start learning English? (For example at school or at home)

- Before age 5
- At age 5 or later
- I've never learned English

Appendix 6: Statement of own work

Student name: B. Bartholomeus
Student number: s1005679

PLAGIARISM is the presentation by a student of an assignment or piece of work which has in fact been copied in whole or in part from another student's work, or from any other source (e.g. published books or periodicals or material from Internet sites), without due acknowledgement in the text.

DECLARATION:
a. I hereby declare that I am familiar with the faculty manual (https://www.ru.nl/facultyofarts/stip/rules-guidelines/rules/fraud-plagiarism/) and with Article 16 "Fraud and plagiarism" in the Education and Examination Regulations for the Bachelor's programme of Communication and Information Studies.
b. I also declare that I have only submitted text written in my own words
c. I certify that this thesis is my own work and that I have acknowledged all material and sources used in its preparation, whether they be books, articles, reports, lecture notes, and any other kind of document, electronic or personal communication.

Signed:
Place and date: Puth, Netherlands
07/06/2021

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