

**The effectiveness of meat reduction advertisements employing
informational and emotional appeals in a foreign language versus a native
language**

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Abstract

The aim of this study was to explore the effect of foreign versus native language use in persuasive appeals on the effectiveness of meat reduction advertisements among bilinguals. To study this effect, an experiment in the form of an online questionnaire was conducted in which native Dutch (with English as L2) participants were first showed one of six different persuasive appeals (informational, positive emotional or negative emotional in either Dutch or English) and, after that, asked about their attitude towards changing their meat-eating behaviour, intention to change their meat-eating behaviour, and perceived emotionality of the advertisement. The results of the study are contradictory to most previous research. The results showed that the language and type of appeal did not affect the participant's attitude and intention. While the negative emotional appeal was rated as most emotional, there was no difference found in emotionality between informational and positive emotional appeals.

With a total of 1132 million speakers, English is the most spoken language worldwide (Lane, 2019). More than half of those are people who speak English as a second language (Lane, 2019). English is the language of business, travel, and international relations. English is the common language between people who do not have the same first language. Because of the widespread use of English, we are able to communicate with and establish relationships with people from all over the world with different cultures and different backgrounds.

Even though English is the most used foreign language (Piller, 2003), the number of native English speakers is surprisingly low. English only has 379 million native speakers, while Chinese has more than a billion and Spanish 460 million native speakers (Lane, 2019). This means that there is a large number of bilinguals who have the English language as their second (or even third) language. According to Dewaele (2010), people who are bilingual have good proficiency in more than one language or frequently use more than one language. The first language (L1), or native language, is the language that was learned before acquiring the second language (L2). Due to the increasing globalisation, and, with that, the increasing need for a common language, more and more people acquire English as their second language.

The increasing use of English in our day-to-day life is also visible in, for example, advertising. Various studies have shown that the use of English has been increasing over the past years in advertising. In the Netherlands, more than eighty percent of advertisements in women's magazines contained English (Gerritsen, Korzilius, Van Meurs & Oorsprong, 2007). More than thirty percent of all Dutch television commercials used English words or phrases (Gerritsen et al., 2000). English is one of the most often used foreign languages in advertising because of the assumption that it is the language that most people in the world are able to understand (Nederstigt & Hilberink-Schulpen, 2017).

Advertising in a foreign versus native language

Language plays a crucial role in the effectiveness of an advertisement. Previous research has found varying results about which strategy (using a foreign or native language) is most effective in advertising. On one hand, the use of a foreign language can positively influence the effectiveness of an advertisement. Using a foreign language (e.g., English) can increase the noticeability of an advertisement and can result in the advertisement being processed on a deeper level, which results in better recall of the advertisement (Domzal, Hunt & Kernan, 1995; Hornikx & Van Meurs, 2020). The use of a foreign language in an advertisement can also result in a more favourable response to the message, than when the advertisement is solely in the reader's native language (Santello, 2013).

On the other hand, using the reader's native language in an advertisement can also result in a more positive response in some cases. When a native language is used, the reader is more likely to link the words with concepts, which results in better recall of the ad and a more positive attitude towards the product or service (Hornikx & Van Meurs, 2020; Flores & Coppock, 2018). This result has also been found in bilingual people. Messages in the bilingual's first language, compared to second-language messages, resulting in far better memory (Luna & Peracchio, 2001). A study by Nicholls and Roslow (1996), which studied the effect of Spanish and English advertisements, also supports this theory. They found that for both a Spanish-speaking and bilingual group, advertisements containing the reader's first language were remembered significantly better. According to Jiménez, Fang, and Bartholomew (2010), this phenomenon is called "the superiority effect of native language". Recent research has revealed that this superiority effect is particularly strong in advertisements with emotional appeals (Caldwell-Harris & Aycicegi-Dinn, 2016).

Effect of foreign language on emotionality

Using language that contains a lot of emotion (e.g., swearing, lying, praying, saying *I love you*) can often feel very different when speaking in a native language, compared to speaking a foreign language (Dewaele, 2010). Bilinguals generally perceive greater emotional intensity when using their first language, which is why they usually prefer using their first language when expressing emotions (Belcher & Connor, 2001). When speaking in a foreign language, automatic affective processing and emotional arousal can be weaker, than when speaking in a native language. The less emotional context that a foreign language is usually acquired and used in, can explain why the level of emotionality that is linked to a foreign language is usually lower (Caldwell-Harris & Aycicegi-Dinn, 2016; Pavlenko, 2012). The effect of weaker emotionality in a foreign language can also influence decision-making. In a study by Keysar, Hayakawa, and An (2012), who studied the judgment and decision making skills in bilinguals, it was found that bilinguals were able to make more rational decisions in their second language. Because people perceive less emotional intensity in a second language, there is a greater emotional distance, which causes reflective processing instead of biased processing (Kahneman, 2003). This can lead to more rational decision-making and less biased decisions.

The effect that a foreign language has on emotionality has also been studied with regard to advertising messages. Puntoni, De Langhe, and Van Osselaer (2008) found that when advertising in one's native language, messages are perceived with more emotional

intensity. Jiménez et al. (2010) found that for advertisements aiming to evoke feelings of hope, the use of the participants' native language resulted in higher attitudes towards the advertisement. However, for advertisements aiming to evoke feelings of disgust, the use of a foreign language resulted in higher attitudes towards the advertisement. Therefore, it can be assumed that, depending on what emotions an advertisement aims to evoke, language affects the advertisement's effectiveness differently.

Persuasive advertising

The effectiveness of an advertising message mainly depends on its persuasiveness. Communication is persuasive when the message is understood and believed by the recipient (Taillard, 2000). According to the Elaboration Likelihood Model (Petty & Cacioppo, 1986), the messages presented in an advertisement can be processed through two routes. When the recipient finds the message personally relevant (motivation to process) and has prior knowledge about the topic (ability to process), the central (or systematic) processing route will be taken. The recipient is more likely to understand and believe the message, and to change their attitude towards the topic. When the motivation and ability to process are low, the peripheral processing route will be taken. The peripheral processing route makes use of automatic mechanisms and will not likely result in a change of attitude. It is, therefore, important to take the recipient's motivation and ability to process the message into account when creating a persuasive appeal.

Informational versus emotional appeals

As mentioned previously, using a foreign language versus a native language in a message can reduce the level of perceived emotion (Puntoni et al., 2008; Belcher & Connor, 2001). Persuasive appeals, specifically emotional appeals, play an important role in persuasive communication (Dillard & Nabi, 2006; Jorgensen, 1996; Petty & Briñol, 2014). It is, therefore, relevant to know what persuasive appeals are effective, and in which circumstances.

Persuasive appeals can be divided into three separate categories: informational appeals, positive emotional appeals, and negative emotional appeals (Carfora, Bertolotti & Catellani, 2019; Noble, Pomeroy & Johnson, 2014). An informational appeal focuses on the factual and objective characteristics of the product, service or brand that is advertised (Carfora et al., 2019). On the other hand, an emotional appeal, also known as a transformational appeal, focuses on the emotions associated with the advertised product, service or brand (Carfora et al., 2019; Noble et al., 2014). While a negative emotional appeal aims to evoke

negative emotion, such as anger or fear, a positive emotional appeal uses positive emotion, such as love or happiness (Noble et al., 2014).

When reviewing previous research, it can be concluded that there is no one most effective strategy regarding persuasive appeals. Whether an informational or emotional (positive or negative) appeal is more effective, is dependent on what is advertised and what the aim of the advertisement is. However, generally, when an advertisement uses an emotional appeal, the persuasiveness of the ad relies on the kind of emotion and the level of emotion that is evoked (Yoo & MacInnis, 2005). It is essential that the advertisement is extremely emotionally evocative. However, when an informational appeal is used, the advertisement should aim to be as credible and meaningful as possible (Yoo & MacInnis, 2005). According to Panda, Panda, and Mishra (2013), emotional appeals seem to result in a more emotional response to the ad, which can result in a more positive attitude towards the brand and product. Informational appeals, while resulting in more carefree and joyous feelings, also evoked more negative feelings. They also argued that, even though informational and emotional appeals are usually perceived as separate strategies, they might be the most effective when used in combination. In reality, however, advertisers often opt to use whichever they feel is more appropriate (Dubé & Cantin, 2000). For example, nutritionists and food companies both advertise with the aim of changing food liking and consumption. While nutritionists usually advertise with informational appeals about nutritional facts and health concerns, food companies typically use advertisements with more sensorial or emotional aspects that give pleasure (Dubé & Cantin, 2000).

When comparing specific different sectors of advertising, there seems to be a clearer understanding. For pro-environmental social advertisements, negative emotional appeals, specifically, guilt-inducing appeals, are the most effective with regard to influencing behaviour and attitude towards the issue (Noble et al., 2014). For hedonic advertisements (e.g., luxury hotel advertisements) informational appeals are suggested to be more effective in improving attitude towards the product and brand (Cervellon & Galipienzo, 2015). For advertisements aimed at changing food liking and consumption, specifically milk consumption, Dubé and Cantin (2000) found that the effectiveness of the ad was dependent on the attitude bases (affective or cognitive) and type of persuasive appeal (informational or emotional). While food liking (affective attitude) was more influenced by an emotional appeal, food consumption (cognitive attitude) was more influenced by an informational appeal (Dubé & Cantin, 2000). Overall, it can be concluded that when advertising about

topics that are often perceived as personal, such as environmental causes or food consumption, it seems that emotional appeals are more effective than informational appeals.

Meat reduction advertising

This finding is also in line with research about advertising that aims to change or reduce (food) consumption. For example, in a study by Carfora et al. (2019), the most effective way to reduce red and processed meat consumption was tested. They found that informational messages were effective short-term but its effect on the participants' attitude and behavioural intention was short-lived (Carfora et al., 2019). The emotional messages, which aimed to evoke feelings of regret (for damaging one's health and the environment), resulted in immediate, strong, and long-lasting changes in the participant's attitude towards the issue and intention to change their behaviour (Carfora et al., 2019). This is in line with the findings of Palomo-Vélez, Tybur, and Van Vugt (2018), who found that messages aiming to evoke feelings of disgust were more effective than the more often used health-oriented (informational) messages, and Amiot, Boutros, Sukhanova and Karelis (2018), who found that messages that were based around eliciting fear had a long-term effect on male's meat consumption. According to these studies, negative emotional appeals (appeals evoking negative emotions, such as regret, disgust, and fear) seem to be the most effective strategy with regard to reduction advertising.

Research questions

Based on previous research, when advertising with the aim to reduce damaging habits, it can be concluded that emotional appeals are more likely than informational appeals to have a strong effect on one's attitude towards the issue and intention to change behaviourally, and are, therefore, more effective (Noble et al., 2014; Dubé & Cantin, 2000; Carfora et al., 2019). However, previous research has also suggested that a foreign language (e.g., English as a second language) can weaken the perceived emotionality in a persuasive appeal (Puntoni et al., 2008; Caldwell-Harris & Aycicegi-Dinn, 2016; Pavlenko, 2012).

This study, therefore, aims to study the effect of a foreign language versus a native language on the effectiveness of reduction advertising employing persuasive appeals. This study specifically focuses on meat reduction advertising. Meat consumption has more than tripled over the last five decades, which means that more than 340 million tonnes of meat are produced each year (Ritchie & Roser, 2017). In the Netherlands, 1.7 million animals are slaughtered every day (CBS, 2021). The increasing meat production and consumption have a

devastating impact on one's health, the environment, and animals' well-being (Ritchie & Roser, 2017). Even though it has been proven to be difficult to change dietary behaviours, people's behaviour can change with the right understandings and strategies (Godfray et al., 2018). This is the reason why this study aims to find the most effective advertising strategy to reduce meat consumption.

This study is done among bilinguals, as the effect of weaker perceived emotionality is suggested to be most present among people who speak two or more languages fluently (Belcher & Connor, 2001). The bilinguals that participated in this study have Dutch as their first language and English as their second language, as English is the most spoken foreign language in the world (Piller, 2003) and in the Netherlands (Steffen, 2019). This study helps to further determine what the effects of foreign language on emotionality in advertisements (specifically informational and emotional appeals) are and what that implicates for further research regarding effective and persuasive advertising.

To measure the effectiveness of the advertisement, this study takes the participant's attitude towards meat reduction and intention to change meat-eating behaviour into account, based on the study by Noble et al. (2014). As previous research (e.g., Yoo & MacInnis, 2005; Noble et al., 2014; Panda, Panda & Mishra, 2013) has suggested that the perceived emotionality of the persuasive appeal also influences its effectiveness, this study also takes the perceived emotionality into account.

The research question that this study aims to answer is: "*What is the effect of foreign language use in persuasive appeals on the effectiveness of meat reduction advertisements among bilinguals?*". To help answer the research question, the following sub-questions were formed:

- I. What is the effect of foreign versus native *language use* and *type of persuasive appeal* in a meat reduction advertisement on **attitude** towards changing meat-eating behaviour?
- II. What is the effect of foreign versus native *language use* and *type of persuasive appeal* in a meat reduction advertisement on **intention** to change meat-eating behaviour?
- III. What is the effect of foreign versus native *language use* and *type of persuasive appeal* in a meat reduction advertisement on **perceived emotionality** of the advertisement?

Method

Materials

To test the effect of foreign language use in persuasive appeals on the effectiveness of meat reduction advertisements among bilinguals, an experimental design studying the participants' behavioural intention, attitude towards the issue, and perceived emotionality towards the advertisement was conducted. The independent variables of this study are, therefore, the language of the advertisement (Dutch L1 or English L2) and the type of persuasive appeal (positive emotional, negative emotional, informational).

Previous research found that advertisements with messages using moral consequences (e.g., animal welfare) are more effective than health-oriented messages (Palomo-Vélez et al., 2018). Therefore, the advertisements that were used in this experiment were focused on the effect of eating meat on animal cruelty. To ensure that the design of the advertisement would not influence the results of the study, the advertisements were kept as similar as possible with regard to design (pictures, colours, font) and presented information.

There were six different advertisements: an informational, a negative emotional, and a positive emotional ad in English (see Figure 1), and an informational, a negative emotional, and a positive emotional ad in Dutch (see appendices).

The first part of the advertisements, which presented the facts about the effect of eating meat on animal cruelty, were the same in all three types of appeals: *"In the Netherlands, 1.7 million animals are consumed every day. This includes cows, chickens, and pigs."* (CBS, 2021). After the factual part, the advertisement with the informational message focused solely on the informational aspects of animal cruelty and did not contain any highly emotional words. The advertisement containing the negative emotional appeal aimed to evoke negative emotions in the subjects. To achieve that, words that are usually associated with negative feelings, such as 'exploitation', 'slaughter', 'death', 'cruelty', and 'blood' (Warriner, Kuperman & Brysbaert, 2013), were used. The advertisement with the positive emotional appeal aimed to evoke positive emotions in the subjects. Words that usually evoke positive feelings, such as 'chance', 'happy', 'life', 'hero', and 'save' (Warriner, Kuperman & Brysbaert, 2013), were used to achieve that.

The Dutch advertisements presented the exact same, translated, information as the English advertisements. To check if the advertisements in both languages contained the same information, the back-translation technique was used: an independent researcher re-translated the Dutch advertisements into English.

Figure 1. The informational, negative emotional, and positive emotional persuasive English appeals used in the experiment.

<p>In the Netherlands, 1.7 million animals are consumed every day. This includes cows, chickens, and pigs.</p> <p>The consumption of meat is associated with decreased animal welfare. The average Dutch person eats 77kg of meat per year. This consumption has steadily been on the rise, but you can help bring this number down.</p> <p>Will you reduce your meat consumption or not?</p>	<p>In the Netherlands, 1.7 million animals are consumed every day. This includes cows, chickens, and pigs.</p> <p>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.</p> <p>Is the taste of meat worth having blood on your hands?</p>	<p>In the Netherlands, 1.7 million animals are consumed every day. This includes cows, chickens, and pigs.</p> <p>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.</p> <p>Will you be a hero and save these animals?</p>
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Subjects

In total, 148 subjects participated in this experiment. The subjects were bilingual native Dutch students between the ages of 18 and 28 ($M = 21.45$, $SD = 1.94$), with English as their second language. The majority of the participants self-rated their English proficiency as ‘good (5)’ or ‘very good (6)’ ($M = 5.35$, $SD = 1.25$). Of all participants, 74.4% identified as female, 23% as male, and one person identified as non-binary. With regard to the meat-eating habits, the participants reported an average of four times a week ($M = 4.93$, $SD = 1.64$). Participants who reported that they did not eat meat were excluded from the study. The educational level of the participants ranged from MBO (post-secondary vocational education) to a master’s degree at university. Most of the participants were studying for a bachelor’s degree at university.

The participants were equally and randomly distributed over the six conditions. An ANOVA and two Chi-square tests showed that the participants were equally distributed over the conditions, regarding age ($F(5, 142) = 1.37$, $p = .240$), gender ($\chi^2(10) = 15.60$, $p = .112$), and education ($\chi^2(20) = 16.76$, $p = .668$).

Design

This study used a 2 (L1, L2) x 3 (informational, positive emotional, negative emotional appeal) between-subjects design, with a total of six conditions.

Instruments

To determine the effectiveness of the advertisements, the attitude towards meat reduction ('attitude'), the behavioural intention to reduce meat consumption ('intention'), and the perceived emotionality of the advertisement ('perceived emotionality') were measured. These dependent variables were measured via a questionnaire that consisted of three parts.

In the first part, questions regarding the participant's background (i.e., age, gender, educational level, English proficiency level, and prior knowledge) were asked. To measure the English proficiency of the participants, the participants were asked to self-report their proficiency level on a 7-point Likert scale based on Krishna and Ahluwalia (2008), ranging from 'very poor' to 'excellent'. To measure the participant's prior knowledge about the topic, they were asked how often they eat meat per week, the possible answers ranged on a 7-point Likert scale from 'never' to 'six or more days per week'. In the second part, the participants were able to view one of the advertisements. In the last part of the survey, the participants were asked questions about their attitude, intention, and perceived emotionality.

To measure the participant's attitude towards meat reduction, the participants were asked to rate how strongly they agree with the statement "because of this ad I would be concerned with eating less meat" on a 7-point Likert scale (ranging from 'strongly agree' to 'strongly disagree'). To measure the participant's behavioural intention, the participants were asked about four statements, based on Hunter and Rööös (2016), with a 7-point Likert scale (ranging from 'strongly agree' to 'strongly disagree') about their intention to reduce their meat consumption after seeing the advertisement (e.g., "because of this ad, I intent to cut the number of meals with meat in half"). The reliability of the variable 'intention' comprising four items was good: $\alpha = .87$. Consequently, the mean of all four means was used to calculate the compound variable 'intention', which was used in further analysis. To measure the perceived emotionality of the ad, the participants were asked to rate how strongly they agree with the statement "I think this ad is emotional" on a 7-point Likert scale (ranging from 'strongly agree' to 'strongly disagree'), based on Puntoni et al. (2008).

Procedure

The participants were recruited via acquaintances and via social media and asked to participate in a short online socially relevant questionnaire that is part of a bachelor's thesis. There was no reward or incentive for taking part in the study. The participant had to fill out the questionnaire individually. Beforehand, little information about the purpose of the study was given. On average, the questionnaire took 3.5 minutes.

At the start of the questionnaire, the participant was made aware that, by filling in this questionnaire, they consent to participate in the study and that they can stop at any time during the study (see appendices). The participants were randomly distributed over the six conditions, which meant their questionnaire was either in Dutch or English, depending on the condition they were assigned to. The first part of the survey included questions about their age, gender, education level, English proficiency, and prior knowledge. In the second part of the survey, the participant was able to view the advertisement (either positive emotional, negative emotional, or informational). In the last part of the survey, the participant answered multiple questions about their attitude towards the issue, intention to change their behaviour, and perceived emotionality of the advertisement.

After the subjects have completed the survey, they were thanked for participating and they were informed of the contact person, in case of questions or complaints. The procedure was the same for all subjects.

Statistical analysis

To determine how the independent variables affected the dependent variables, multiple statistical analyses were conducted. Three two-way ANOVA's were conducted to examine what the effect of the language (L1, L2) and the type of appeal (informational, positive emotional, negative emotional) was on the participant's attitude, intention, and perceived emotionality. To further determine these effects, a one-way ANOVA was conducted to examine what the effect of the type of appeal (informational, positive emotional, negative emotional) was on the participant's perceived emotionality and an independent samples t-test was conducted to measure the difference between the language (L1, L2) and the participant's perceived emotionality.

Results

The aim of this study was to examine the effect of the use of a foreign language versus a native language in persuasive appeals on the effectiveness of meat reduction advertisements among bilinguals. The effectiveness of the advertisement was measured in attitude towards changing meat-eating behaviour, intention to change meat-eating behaviour, and perceived emotionality of the advertisement.

Attitude towards changing meat-eating behaviour

To determine whether language or the type of appeal affected the participant's attitude towards changing their meat-eating behaviour, a two-way ANOVA was conducted. This two-way ANOVA with type of appeal and language of the advertisement as factors showed no significant main effect of type of appeal ($F(2, 142) = 2.00, p = .139$) and language ($F(1, 142) < 1$) on attitude towards the issue. The interaction effect between type of appeal and language of the advertisement was also not statistically significant ($F(2, 142) = 2.28, p = .106$).

Intention to change meat-eating behaviour

A two-way ANOVA was carried out to determine the effect of the type of appeal and language of the advertisement on the participants' intention to change meat-eating behaviour. This test showed that there was also no significant main effect of type of appeal ($F(2, 142) < 1$) and language ($F(1, 142) < 1$) on intention. The interaction effect between type of appeal and language of the advertisement was also not statistically significant ($F(2, 142) = 1.89, p = .155$).

Emotionality of the advertisement

To determine what the effect of the type of appeal and language of the advertisement was on the perceived emotionality of the advertisement, a two-way ANOVA was conducted. This two-way ANOVA showed no significant interaction effect between type of appeal and language of the advertisement ($F(2, 142) = 1.05, p = .353$). However, a significant main effect was found of type of appeal ($F(2, 142) = 12.32, p < .001$) and language ($F(1, 142) = 10.42, p = .002$) on perceived emotionality of the advertisement.

Table 1. The means and standard deviations (between brackets) for the persuasive appeals in English for attitude (lowest score (1) = positive attitude, highest score (5) = negative attitude), intention (lowest score (1) = high intention, highest score (7) = low intention), and emotionality (lowest score (1) = emotional, highest score (5) = not emotional).

		Attitude	Intention	Emotionality
		<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Informational	<i>n</i> = 24	2.96 (1.16)	4.66 (1.39)	3.42 (1.32)
Positive emotional	<i>n</i> = 21	2.57 (1.21)	4.61 (1.50)	2.76 (1.14)
Negative emotional	<i>n</i> = 23	3.39 (1.20)	5.12 (1.30)	2.30 (0.82)
Total	<i>n</i> = 68	2.99 (1.19)	4.80 (1.39)	2.84 (1.19)

Table 2. The means and standard deviations (between brackets) for the persuasive appeals in Dutch for attitude (lowest score (1) = positive attitude, highest score (5) = negative attitude), intention (lowest score (1) = high intention, highest score (7) = low intention), and emotionality (lowest score (1) = emotional, highest score (5) = not emotional).

		Attitude	Intention	Emotionality
		<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Informational	<i>n</i> = 30	3.40 (1.10)	5.33 (1.27)	3.73 (1.02)
Positive emotional	<i>n</i> = 29	3.03 (0.91)	4.78 (1.21)	3.66 (0.81)
Negative emotional	<i>n</i> = 21	3.00 (1.10)	4.73 (1.42)	2.76 (1.09)
Total	<i>n</i> = 80	3.16 (1.04)	4.97 (1.30)	3.45 (1.04)

To further determine the significant effect of language on perceived emotionality, an independent samples t-test was carried out. This t-test showed a significant difference between English and Dutch advertisements with regard to perceived emotionality

of the advertisement ($t(134.27) = 3.30, p = .001$). English advertisements (see Table 1) ($M = 2.84, SD = 1.19$) were perceived as more emotional than Dutch advertisements (see Table 2) ($M = 3.45, SD = 1.04$).

Lastly, to determine which type of appeal significantly differed with regard to perceived emotionality, a one-way ANOVA was conducted, which showed a significant effect of type of appeal on emotionality ($F(2, 145) = 12.52, p < .001$). The negative emotional appeal ($M = 2.52, SD = 0.98$) was perceived as more emotional than the informational appeal ($p < .001$, Bonferroni correlation; $M = 3.59, SD = 1.16$) and the positive emotional appeal ($p = .002$, Bonferroni correlation; $M = 3.28, SD = 1.05$), which can be seen in Table 3. There was no significant difference between the perceived emotionality of the informational appeal and the positive emotional appeal ($p = .417$, Bonferroni correlation).

Table 3. The means and standard deviations (between brackets) for each persuasive appeal for attitude (lowest score (1) = positive attitude, highest score (5) = negative attitude), intention (lowest score (1) = high intention, highest score (7) = low intention), and emotionality (lowest score (1) = emotional, highest score (5) = not emotional).

		Attitude	Intention	Emotionality
		$M(SD)$	$M(SD)$	$M(SD)$
Informational appeal	$n = 54$	3.20 (1.14)	5.03 (1.35)	3.59 (1.16)
Positive emotional appeal	$n = 50$	2.84 (1.02)	4.70 (1.33)	3.28 (1.05)
Negative emotional appeal	$n = 44$	3.20 (1.15)	4.93 (1.36)	2.52 (0.98)
Total	$n = 148$	3.08 (1.11)	4.89 (1.35)	3.17 (1.15)

Conclusion and discussion

Conclusion

This study explored the effect of foreign language use in persuasive appeals on the effectiveness of meat reduction advertisements among bilinguals. To study this effect, an experiment was conducted in which participants were first showed one of six different persuasive appeals (informational, positive emotional or negative emotional in either Dutch or English) and, after that, asked about their attitude towards changing their meat-eating behaviour, intention to change their meat-eating behaviour, and perceived emotionality of the advertisement.

The results of the experiment showed that using a foreign language versus a native language in a persuasive appeal did not influence the participant's attitude towards changing their meat-eating behaviour and the participant's intention to change their meat-eating behaviour. Moreover, the type of persuasive appeal (informational, positive emotional or negative emotional) also did not affect the participant's attitude and intention. With regard to perceived emotionality of the advertisement, however, the results did show a significant effect. Even though the negative emotional appeal was perceived as more emotional than the informational and positive emotional appeal, the positive emotional was, surprisingly, not perceived as more emotional than the informational appeal. Another striking finding was that the Dutch advertisements were perceived as less emotional than the English advertisements.

Discussion

Previous research has suggested that, especially with regard to reduction advertising, the use of emotional appeals can positively influence the effectiveness of the advertisement, i.e., the reader's attitude, behavioural intention, and perceived emotionality of the ad (Noble et al., 2014; Dubé & Cantin, 2000; Carfora et al., 2019). Research has also suggested that a foreign language can weaken the perceived emotionality in an emotional appeal (Puntoni et al., 2008; Caldwell-Harris & Aycicegi-Dinn, 2016; Pavlenko, 2012). Most of the results of this study were not in line with previous research. The finding that negative emotional appeals were seen as most emotionally charged, however, was in line with previous research. According to Noble et al. (2014) and Palomo-Vélez et al. (2018), negative emotional appeals can be most effective in advertising.

A possible explanation for the lack of significant results with regard to the effectiveness (attitude, intention) of the advertisement, might be that the emotional appeals

did not evoke a strong enough emotion. According to Yoo and MacInnis (2005), for an emotional appeal to be effective, it is essential that the advertisement is extremely emotionally evocative. As can be seen in the results, the positive emotional appeal was not perceived as more emotional than the informational appeal. Besides that, the participants rated the overall emotionality of the emotional appeals only moderately emotional. Therefore, for further research, it should be taken into account that the level of emotionality in advertisements should be tested beforehand to ensure the most reliable results.

A possible explanation for the contradicting results concerning the effect of the use of a foreign language in an advertisement, might be the high English proficiency of the participants. The majority of the participants reported being highly proficient in English. Usually, a foreign language is acquired and used in a less emotional context than the native language (Caldwell-Harris & Aycicegi-Dinn, 2016; Pavlenko, 2012). All participants in this study, however, are students between the ages of 18 and 28, growing up in a digital age where English is the most spoken language worldwide, and on the internet (Lane, 2019). For most people in this age group, their social life is almost completely online and, most importantly, in English. This could also indicate that the setting in which they use (and acquire) the foreign language, is a more emotional setting than is initially indicated in previous research. For further research, it is recommended to study the effect of foreign language use with this new generation.

The aforementioned group of participants could be a limitation of this study. All participants were very similar; native Dutch students aged between 18 and 28 with English as a second language. With a more diverse group of participants, the results might have been more significant. For further research, it is, therefore, recommended to ensure a more different and diverse group of participants.

The aim of this study was to help further determine what the effects of foreign language on emotionality in advertisements are and what that implicates for further research regarding effective and persuasive advertising, specifically meat reduction advertising. The findings of this study implicate that the use of a foreign language versus a native language and the type of appeal do not significantly influence the effectiveness of the advertisement. However, due to the limitations of this study and the surprising findings that could implicate that a foreign language might not influence emotionality as previously believed, it is recommended to further study the effects of language and persuasive appeals in advertisements.

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Appendices

Questionnaire English

Dear participant,

Thank you for participating in our study. This questionnaire is part of the International Business Communication Bachelor's programme at Radboud University. The one-time survey, consisting of 13 questions, will take approximately 5 minutes to finish.

All the obtained data will be confidential and will only be available to the researchers conducting the 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 Nguyễn Lương.

1. Are you a student?
Yes / No
2. Are you above the age of 18?
Yes / No
3. What is your age?
4. Which gender do you identify as?
Male / Female / Non-binary / Prefer not to say
5. What is your current educational level?
MBO / HBO / University (bachelor) / University (master) / PhD / Other
6. How many times a week do you eat meat?
7-point Likert scale: Never – 6 or more times a week

Below you will see an advertisement. The next questions in the questionnaire will be about this ad. Take your time to read it carefully as you will not be able to go back once you proceed.

7. Because of this ad, I would be concerned with eating less meat.
5-point Likert scale: Strongly agree – Strongly disagree
8. Because of this ad, I intend to cut the number of meals with meat to half.
7-point Likert scale: Strongly agree – Strongly disagree
9. Because of this ad, I intend to refrain from eating meat.
7-point Likert scale: Strongly agree – Strongly disagree
10. Because of this ad, I intend to replace meat with meat substitutes, vegetables or beans.
7-point Likert scale: Strongly agree – Strongly disagree
11. Because of this ad, I intend to eat vegetarian food twice as often as today.
7-point Likert scale: Strongly agree – Strongly disagree
12. I think this ad is emotional
5-point Likert scale: Strongly agree – Strongly disagree

13. I consider my English reading proficiency as:
7-point Likert scale: Very poor – Excellent
14. What is your native language (the language in which you were raised from birth)?
Dutch / Dutch plus another language / Other
15. 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

16. If you experienced any technical difficulties or have any comments about the study that you would like to share, please let us know here.

Questionnaire Dutch

Beste deelnemer,

Bedankt voor je deelname aan onze studie. Deze vragenlijst is onderdeel van de bacheloropleiding International Business Communication aan de Radboud Universiteit. Deze eenmalige enquête, bestaande uit 13 vragen, duurt ongeveer 5 minuten om in te vullen.

Alle verkregen gegevens zijn vertrouwelijk en zijn alleen beschikbaar voor de onderzoekers die de vragenlijst afnemen. Jouw deelname is volledig anoniem en vrijwillig. Je kan je op elk gewenst moment uit deze vragenlijst terugtrekken.

Heb je vragen of klachten over dit onderzoek, stuur dan een e-mail naar annabel.schwarz@student.ru.nl.

Door dit formulier in te vullen verklaar je voldoende geïnformeerd te zijn over de studie en vrijwillig mee te willen doen.

Alvast bedankt voor je tijd,

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

1. Ben je student?
Ja / Nee
2. Ben je 18 jaar of ouder?
Ja / Nee
3. Wat is je leeftijd?
4. Waarmee identificeer je jezelf?
Man / Vrouw / Non-binair / Wil ik liever niet zeggen
5. Wat is je huidige opleidingsniveau?
MBO / HBO / Universiteit (bachelor) / Universiteit (master) / PhD / Anders
6. Hoe vaak per week eet je vlees?
7-point Likert scale: Nooit – Dagelijks

Hieronder zie je een advertentie. De volgende vragen in de vragenlijst gaan over deze advertentie. Neem de tijd om het aandachtig door te lezen, want je kan niet meer teruggaan als je eenmaal doorklikt.

7. Door deze advertentie zou ik me interesseren in het eten van minder vlees.
5-point Likert scale: Helemaal mee eens – Helemaal mee oneens
8. Door deze advertentie ben ik van plan om mijn aantal maaltijden met vlees te halveren.
7-point Likert scale: Helemaal mee eens – Helemaal mee oneens
9. Door deze advertentie ben ik van plan om af te zien van het eten van vlees.
7-point Likert scale: Helemaal mee eens – Helemaal mee oneens
10. Door deze advertentie ben ik van plan om vlees te vervangen door vleesvervangers, groenten of bonen.
7-point Likert scale: Helemaal mee eens – Helemaal mee oneens
11. Door deze advertentie ben ik van plan om vanaf vandaag twee keer zo vaak vegetarisch te eten.
7-point Likert scale: Helemaal mee eens – Helemaal mee oneens
12. Ik vind deze advertentie emotioneel
5-point Likert scale: Helemaal mee eens – Helemaal mee oneens

13. Ik beschouw mijn Engelse leesvaardigheid als:
7-point Likert scale: Erg slecht – Uitstekend
14. Wat is je moedertaal? (De taal waarmee je opgevoed bent vanaf je geboorte)
Nederlands / Nederlands plus andere taal / Anders
15. Op welke leeftijd ben je begonnen met Engels leren? (Bijvoorbeeld op school of thuis)
Voor de leeftijd van 5 jaar / Op de leeftijd van 5 jaar of later / Ik heb nooit Engels geleerd

16. Als je technische problemen hebt ondervonden of opmerkingen hebt over het onderzoek die je zou willen delen, laat het ons dan hier weten.

Advertisements

English (informational – negative emotional – positive emotional)

<p>In the Netherlands, 1.7 million animals are consumed every day. This includes cows, chickens, and pigs.</p> <p>The consumption of meat is associated with decreased animal welfare. The average Dutch person eats 77kg of meat per year. This consumption has steadily been on the rise, but you can help bring this number down.</p> <p>Will you reduce your meat consumption or not?</p>	<p>In the Netherlands, 1.7 million animals are consumed every day. This includes cows, chickens, and pigs.</p> <p>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.</p> <p>Is the taste of meat worth having blood on your hands?</p>	<p>In the Netherlands, 1.7 million animals are consumed every day. This includes cows, chickens, and pigs.</p> <p>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.</p> <p>Will you be a hero and save these animals?</p>
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Dutch (informational – negative emotional – positive emotional)

<p>In Nederland worden dagelijks 1,7 miljoen dieren geconsumeerd. Dit omvat koeien, kippen en varkens.</p> <p>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.</p> <p>Ga jij je vleesconsumptie verminderen of niet?</p>	<p>In Nederland worden dagelijks 1,7 miljoen dieren geconsumeerd. Dit omvat koeien, kippen en varkens.</p> <p>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.</p> <p>Is de smaak van vlees het waard om bloed aan je handen te hebben?</p>	<p>In Nederland worden dagelijks 1,7 miljoen dieren geconsumeerd. Dit omvat koeien, kippen en varkens.</p> <p>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.</p> <p>Word jij een held en red je deze dieren?</p>
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