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Master Thesis

The effect of language (English vs native Dutch vs mixing languages) on consumer response in print advertising with tolerance of ambiguity as moderating factor for Dutch and Flemish consumers

Youandi van Wezenbeek

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Supervisor: dr. Andreu van Hooft

Examinator: dr. Brigitte Planken

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Abstract

In multilingual advertising contexts in countries such as the Netherlands and Flemish Belgium, foreign languages - particularly English – are frequently used to evoke associations of globalness, modernity, and success. However, recent research suggests that, in regions with high English proficiency, its symbolic impact may be diminishing. This study investigates how language choice in advertising (Dutch, English, or a mix of both) influences consumer responses, and whether this effect is moderated by tolerance of ambiguity (TA), a personality trait reflecting openness to ambiguous situations. A 3 (language: Dutch vs. English vs. mixed) \times 2 (TA: high vs. low) \times 3 (product type: jeans, toothpaste, suntan lotion) mixed factorial design was used with 177 participants from the Netherlands and Flemish Belgium. Participants evaluated three advertisements and reported their attitudes toward the ad, the product, and their purchase intention. TA was assessed using a standardized scale. The results showed no significant main effects of language or TA, nor any interaction effects. However, product type significantly influenced consumer responses, with toothpaste and suntan lotion advertisements receiving more positive evaluations than those for jeans. These findings suggest that in high English proficiency contexts, product category has a greater influence on consumer response than language choice or personality traits. The study contributes to multilingual advertising literature by questioning the assumed persuasive power of English and highlighting the importance of product relevance. Future research should examine more complex linguistic strategies, real brand stimuli, and more nuanced measures of TA.

Keywords: advertising, language choice, tolerance of ambiguity, multilingualism, consumer response, Dutch, English, product type, symbolic language use, marketing psychology

Introduction

In today's globalized marketplace, the strategic use of foreign languages in advertising has become increasingly common, particularly in countries like the Netherlands and Belgium. In these markets, English is frequently employed alongside native languages to reach broader audiences, position brands internationally, or convey specific symbolic associations. In 2007, Gerritsen, Nickerson, Van Hooft, et al. found that 64% of the analyzed print advertisements in the Netherlands contained English and even 73% in Dutch speaking Belgium. Foreign languages in advertising can be used to express foreignness, highlight globalness, or appeal to ethnicity (Hornikx & van Meurs, 2020). This study explores the impact of language choices in advertising on consumer perceptions within the Netherlands and the Dutch-speaking region of Belgium (Flemish Belgium), where Dutch is the primary language. It further investigates how the personality trait of tolerance of ambiguity (TA) moderates the effects of language choice in advertising. The findings aim to provide an understanding of how language influences consumer response and how individual psychological differences in TA shape consumer responses.

Although the prevalence of English in advertising is notable, marketers in the Netherlands and Flemish Belgium continue to rely on Dutch as the local language for its advantages, particularly because of its communicative and emotional advantages. The native language generally is more comprehensible to consumers and tends to evoke stronger emotional responses than foreign languages (Puntoni et al., 2009, Study 1). As the native language evokes stronger emotional responses, the use of the native language is found to be more suitable for advertising emotional topics, as well as hedonic products where consumer decisions often rely on gut feelings or automatic intuitive responses (Caldwell-Harris & Aycicegi-Dinn, 2016).

Despite the benefits of using the native language, foreign languages – particularly English – are also widely incorporated into advertisements in both countries. Foreign languages in general are commonly used in advertising to represent a specific country of origin (Hornikx & van Meurs, 2017). English, however, is often used to create a global image or achieve global reach as part of a standardized campaign and is believed to evoke associations with globalness, modernity and success (Gerritsen et al., 2000; Hornikx & van Meurs, 2020; Piller, 2001). While Gerritsen, Nickerson, Van Hooft, et al. (2007) found that English is often used in the Netherlands and Flemish Belgium (64% and 73% of print advertisements, respectively), its use is often limited to specific elements, such as product names, slogans, or labels, with Dutch

remaining the primary language of communication (Bhatia & Ritchie, 2006; Gerritsen, Nickerson, Van Hoof, et al., 2007)

Although English is widely present in advertising, its use does not always lead to the consumer responses marketers intend or expect. As previously mentioned, it is commonly assumed that incorporating English into advertisements enhances perceptions of globalness, modernity, and success – qualities often associated with prestigious or internationally oriented brands (Hornikx & van Meurs, 2020). Accordingly, marketers may expect consumers to respond more positively to advertisements featuring English, perceiving the products as more global, successful or modern. However, as the following paragraphs will demonstrate, several studies directly challenge these presumed associations. While some of these studies took place in predominantly Asian contexts, such as China and India, they do raise broader questions about whether the symbolic value of English in advertising is universally effective, or whether it may be contextually limited.

As for globalness, Chang (2008), found that Chinese consumers did not perceive products with English brand names as more global than those with Chinese brand names, suggesting that the expected association between English and globalness may not always hold. Similarly, Krishna & Ahluwalia (2008) reported no significant difference in Indian consumers' evaluations of advertisements featuring English slogans compared to those with local language (Hindi) slogans. Furthermore, Lin & Wang (2016) found that consumer reactions to English in advertising are context-dependent in Taiwan: while English slogans were evaluated more positively for global brands, they were less effective – and even detrimental – for local brands. In those cases, slogans in the native language led to higher perceived credibility and likeability. These findings suggest that the assumed positive effect of English depends not only on language, but also on brand origin and perceived authenticity.

The assumed association between English and modernity in advertising has also been increasingly called into question. Across 24 comparisons in four separate studies, only four instances showed that advertisements with English were perceived as more modern than those in the native language (Gerritsen et al., 2010; Gerritsen, Nickerson, van den Brandt, et al., 2007; Nickerson & Camiciottoli, 2013; Planken et al., 2010). Similarly, when it comes to the success-related perceptions, such as price or product quality, no consistent advantages were found for English-language advertisements (Gerritsen, Nickerson, van den Brandt, et al., 2007; Nickerson & Camiciottoli, 2013; Planken et al., 2010). These findings indicate that consumer expectations about English as a marker of globalness, modernity and success may be overstated or outdated.

One plausible explanation for the diminishing symbolic power of English in advertising is the overuse in non-Anglophone advertising contexts. In countries like the Netherlands and Belgium, English has become so widespread in advertising that it no longer functions as a distinctive or prestigious cue. As Raedts et al. (2015) note, the pervasive presence of English across television and print advertisements in Western Europe may have led to a normalization effect where English no longer signals modernity or globalness but becomes part of the linguistic landscape. As a result, consumers may be less likely to interpret English in advertising as a meaningful or persuasive choice, weakening its potential to enhance brand perception or influence behavior.

In addition to symbolic associations of globalness, modernity and success that English may evoke, the effectiveness of English language use in advertisements also depends heavily on consumer comprehension. When consumers struggle to understand the message, the symbolic value becomes irrelevant, and the advertisement risks losing its persuasive impact. Comprehension is therefore a crucial factor in advertising success, as it not only enables consumers to cognitively process content but also facilitates emotional engagement, trust, and brand recall. Hornikx et al. (2010) found that English slogans that were easy to understand not only received better appreciation but even outperformed native-language slogans in some cases. However, this effect was conditional on comprehensibility: when slogans became too linguistically demanding, appreciation of the advertisement declined. Although the Netherlands and Flemish Belgium consistently rank among the highest globally in English proficiency – with scores of 636 and 653 respectively on the English proficiency index (Education First (EF), 2024) – this does not guarantee full comprehension. Marketers often overestimate consumers' actual command of the language, assuming high proficiency equates to deep understanding. Yet, research by Gerritsen et al. (2000, 2010) shows that Dutch consumers, particularly older generations, frequently struggled to fully grasp the content of English in television commercials and print advertisements, leading to lower comprehension, and, ultimately, diminished advertising effectiveness.

The gap between perceived and actual comprehension can be explained, in part, by psycholinguistic research. Clahsen & Felser (2006) demonstrate that reading in a second language involves different cognitive processes than reading in a native language, particularly in terms of grammar and sentence structure. These differences persist even among advanced users, making complex advertisements more difficult to process in a foreign language. While a lack of understanding does not automatically render an advertisement ineffective, it

significantly reduces the advertisement's ability to communicate its core message, which may result in lower engagement, weaker brand recall, and reduced trust in the advertised brand.

While language comprehension lays the foundation for how advertisements in a foreign language are processed, individual psychological traits, such as tolerance of ambiguity (TA), further shape how consumers engage with and evaluate advertisements in a foreign or mixed-language context. TA refers to the degree to which an individual is comfortable with uncertainty, complexity, or ambiguous stimuli. It is generally seen as a stable personality trait that varies across individuals, with some perceiving ambiguous situations as stimulating or manageable, while others find them confusing or aversive (Furnham & Ribchester, 1995). Budner (1962, p. 29) originally defined it as the "tendency to perceive ambiguous situations as desirable", though contemporary research emphasizes that TA exists along a continuum, affecting both emotional and cognitive responses to uncertain contexts (Furnham & Marks, 2013).

Ambiguous situations frequently arise in multilingual advertising, particularly when foreign or mixed-language elements introduce unfamiliar vocabulary, multiple interpretations, or culturally specific references. Degani & Tokowicz (2010), in their research on bilingual language processing, identify three key forms of ambiguity: *translation ambiguity* (when a single word in one language has multiple translations in another), *form ambiguity* (involving near-synonyms), and *meaning ambiguity* (where distinct translations reflect different meanings). Although their work does not directly address advertising, these forms of ambiguity are also highly relevant in multilingual advertising contexts, where consumers must often navigate similar complexities in real time. Form ambiguity, in particular, has been found to be more cognitively demanding than other types, potentially increasing the perceived complexity of advertisements that include multiple or ambiguous language cues. This is especially pertinent when consumers encounter advertisements that use a mix of Dutch and English, or when slogans and product descriptions rely on ambiguous or idiomatic English expressions. From this perspective, individuals with higher TA may be better equipped to tolerate – and potentially appreciate – such complexity, whereas those with lower TA may experience confusion or disengagement. TA thus not only affects comprehension but also moderates how consumers emotionally and cognitively respond to foreign or mixed-language advertising – making it a crucial variable in this study.

Further supporting this perspective, Dewaele & Wei (2013) found that TA also plays a moderating role in language learning contexts, with moderate levels of TA associated with optimal engagement. According to their findings, individuals with low TA tend to avoid taking

risks when using a new language, while those with high TA may exhibit unquestioning acceptance and cognitive passivity (p. 232). This distinction is also relevant to advertising: just as in language learning, consumers' levels of TA are likely to shape how they process foreign or ambiguous language in advertising. Those with moderate TA may engage more thoughtfully with foreign or ambiguous language, balancing curiosity and critical analysis, while those with high or low TA might either reject the advertisement's complexity or passively accept it without deeper processing.

Moreover, TA has been shown to correlate with multilingualism: monolinguals, typically score lower on TA than multilinguals (Dewaele & Wei, 2013), suggesting that multilingual individuals may be more open to linguistic diversity in advertising. In a related study, Dewaele & Wei (2014) found that individuals with higher TA evaluated code-switching – i.e., the alternation or mixing of languages in a single utterance – more positively, perceiving it as more effective and impactful than those with lower TA. These findings further underscore the role of TA in shaping consumer reactions to the linguistic complexity characteristic of multilingual advertising. This pattern is further supported by Li et al. (2017), who introduced TA as a relevant personality trait in understanding how consumers interpret tourism advertisements that combine visual and textual elements. Their study found that ambiguity in advertisement photos – especially with text in an unknown language – can significantly influence perceived advertising effectiveness (PAE). Notably, individuals with high TA evaluated advertisements with ambiguous or foreign language more positively than those with low TA, suggesting that TA modulates consumers' ability to cope with linguistic and visual ambiguity.

Where TA reflects cognitive openness to complexity and ambiguity, uncertainty avoidance (UA), as defined by Hofstede (1980), emphasizes emotional discomfort with uncertainty and a preference for clarity and predictability. High-UA individuals tend to prefer familiar, straightforward communication, often finding foreign language or mixed-language advertisements unsettling (Alcántara-Pilar et al., 2013). In contrast, those with low UA are less sensitive to perceived risks and focus more on the overall message, making them more receptive to multilingual or ambiguous content. Although TA and UA overlap in addressing responses to ambiguity, they remain distinct constructs. TA promotes curiosity and cognitive engagement, while UA often triggers aversion to perceived risks and a preference for predictability (Grenier et al., 2005). Despite being independent factors, TA and UA are believed to strongly correlate, though this has not been definitively confirmed (Grenier et al., 2005). Due to the scope of this study, the effect of UA on consumer behavior, while interesting, will

not be explored in detail. However, the assumption that UA and TA are correlated, as suggested by Grenier et al. (2005) will be acknowledged as this correlation provides a useful contextual framework for understanding TA's role in consumer responses due to the expected level of uncertainty avoidance within the Netherlands and Belgium.

Despite extensive research on the use of foreign languages in advertising and the moderating role of TA in shaping responses to uncertainty and ambiguity, little is known about how these factors interact in a real-world advertising context. Specifically, the extent to which individual differences in TA moderate consumer responses to advertisements using a native language, a foreign language, or a mix of both remains unclear. This study therefore aims to address these gaps by examining how language choice interacts with TA to influence the consumer response to print advertisements. From this, the following main research questions arises: *How does the use of native language (Dutch), foreign language (English), or a mix of both in advertisements influence the response of Dutch and Flemish consumers, and how are these effects moderated by tolerance of ambiguity (TA)?* To address the main research question, which involves multiple factors, the study has been divided into smaller research questions based on previous research:

- RQ1: *What is the main effect of language use (Dutch, English, or a mix) on the consumer response of individuals in the Netherlands and Flemish Belgium?*
- RQ2: *How does tolerance of ambiguity (TA) moderate the relationship between language use and consumer response in the Netherlands and Belgium?*

Answering these questions is particularly relevant scientifically, as they combine insights from psychology, linguistics, and marketing—fields that are often studied in isolation. This interdisciplinary approach is underrepresented in existing research, especially regarding how individual traits like TA influence consumer behavior in multilingual contexts. Investigating TA's role in consumer responses to multilingual advertising helps fill a gap in the literature, particularly in the Netherlands and Flemish Belgium. These regions are characterized by both multilingualism and high English proficiency, and English is frequently employed in advertising – yet its intended effects are not always realized. This makes the topic especially relevant for understanding how and why multilingual advertising strategies succeed or fall short in such contexts. From a practical perspective, it will help marketers to tailor their campaigns more effectively by recognizing how consumers with different levels of TA engage with multilingual advertisements. By understanding how TA influences emotional and cognitive engagement, advertisers can better predict how consumers will process and respond to the language used in advertisements. The findings of this study could also be applied beyond

the Netherlands and Flemish Belgium, helping marketers tailor their advertising strategies in multilingual or multicultural regions. By understanding how TA influences responses to multilingual advertisements, advertisers can make more informed decisions about when to use English versus Dutch for different segments of the population. For instance, in areas with higher levels of TA, English may be more effective, while in segments with lower TA, Dutch may resonate better, ensuring more engaging and persuasive campaigns.

In the next section, the applied research method will be outlined.

Method

Materials

The stimulus material for the independent variable *language* consisted of three advertisements representing three different product types: *jeans*, *toothpaste*, and *suntan lotion*. These product types were deliberately chosen due to their central positioning on the FCB-grid developed by Ratchford (1987), which indicates that they require a moderate level of involvement in purchase decisions. This positioning makes them ideal for serving as a neutral baseline to examine the effect of language on consumer responses. Furthermore, the decision-making process for these products is neither predominantly rational nor predominantly affective, promoting consistency in cognitive and emotional engagement across all three product types. By focusing on products with moderate involvement and balanced decision-making characteristics, the study minimizes potential biases stemming from the inherent nature of the products themselves, ensuring that observed effects are primarily attributable to language as the independent variable. This approach ensures consistency in the type of decision-making required across all three product types.

Three different language versions of the advertisement were created for each product type, resulting in a different advertisement for each level of the language variable. All advertisements for each product type featured identical visuals across all three languages with the same logo and brand name. To prevent bias, only fictional brand names were used. For the brand name, only the description of the product type was different (e.g., *Solara Suntan lotion* for the English and mixed language advertisements and *Solara Zonnebrand crème* for the Dutch advertisements). The slogan's meaning also remained consistent among the advertisements, with the only variation being the language used: one ad was in English, one in Dutch, and the third incorporated a mix of both Dutch and English. In the mixed language advertisements, one full sentence of the slogan was in Dutch and the other full sentence in English. Additionally, elements such as the font and text color were uniform across all versions. The created advertisements can be found in *Appendix A – Materials*. Below the slogans per product type and language condition are listed:

- **Jeans:**
 - *English:* Your perfect fit. Every time, all the time.
 - *Dutch:* Jouw perfecte pasvorm. Altijd, elke keer.
 - *Mixed:* Your perfect fit. Altijd, elke keer.
- **Toothpaste:**

- *English*: Fresh breath, bright teeth. Always a reason to smile.
 - *Dutch*: Frisse adem, stralende tanden. Altijd een reden om te lachen.
 - *Mixed*: Frisse adem, stralende tanden. Always a reason to smile.
- **Suntan lotion:**
- *English*: Feel the glow, skip the burn. The best of both worlds.
 - *Dutch*: Voel de gloed, voorkom de pijn. Het beste van beide werelden.
 - *Mixed*: Feel the glow, skip the burn. Het beste van beide werelden.

Subjects

The sample consisted of participants from the Netherlands and Flemish Belgium, as both regions share Dutch as their native language, while differing in cultural dimensions relevant to the study. The Netherlands was selected due to its relatively low level of uncertainty avoidance, with a national score of 53 (Hofstede et al., 2010, p. 193). Although uncertainty avoidance is not identical to TA, prior research suggests a potential negative correlation between the two constructs (Grenier et al., 2005). In contrast, Flemish Belgium was included as it also has Dutch as its official language but is characterized by high uncertainty avoidance, with a score of 94 on Hofstede's scale (Hofstede et al., 2010, p. 192), which was expected to correspond to lower levels of TA.

In total, there were 247 respondents, out of which 177 completed the entire questionnaire. The incomplete responses were removed from the analysis. 93 (52.5%) of the respondents were Dutch and 76 (42,9%) of the respondents Dutch-speaking Belgians. 1.1% of the participants were French-speaking Belgians and 0.6% had both a Dutch and Belgian nationality. 2.8% had another nationality. The mean age of the respondents was 33 ($M = 33.23$, $SD = 12.27$; range: 1-71). Most of the subjects identified themselves as female (58.2%), followed by male (41.2%) and non-binary/third gender (0.6%).

The most common highest level of education was higher professional education (27.7%), followed by a university master's degree (25.4%), and upper secondary vocational education (13.0%). The remaining participants' highest level of education was General secondary education (11.9%), University bachelor's degree (10.2%), pre-vocational secondary education (3.4%), lower secondary vocational education (3.4%), primary education (2.3%), PhD / Doctorate (1.7%), no diploma (0.6%). The remaining 0.6% preferred not to answer.

From all participants, 96% spoke Dutch as their native language, followed by French (1.7%). 2.3% spoke another language. English was the second language of 68.4% of the

participants, followed by French (15.3%) and Dutch/Flemish (9.0%). 7.3% spoke another second language.

A total of 172 participants (97.2%) reported that they speak English as a foreign language. Regarding speaking proficiency, 40.1% rated their skills as "very good," followed by "good" (35.6%), "sufficient" (18.1%), and "insufficient" (3.4%). For listening comprehension, 56.5% rated their ability as "very good," followed by "good" (29.4%), "sufficient" (9.6%), and "insufficient" (1.7%). In terms of reading proficiency, 53.1% reported "very good," followed by "good" (29.9%), "sufficient" (19.7%), and "insufficient" (3.4%). Finally, for writing proficiency, 35.0% rated themselves as "very good," followed by "good" (32.2%), "sufficient" (21.5%), "insufficient" (7.0%), and "very bad" (1.7%). The mean general self-reported proficiency was 4.23 ($SD = 0.78$; range: 1.75 – 5.00), corresponding with a good proficiency.

The ages were distributed equally among the TA levels ($t(175) = 0.06, p = .515$) and among the language conditions ($F(2, 176) < 1$). Gender was also distributed equally among the language conditions ($\chi^2(4) = 2.86, p = .581$), but not among the TA levels ($\chi^2(2) = 7.76, p = .021$). Educational level was distributed equally among language conditions ($\chi^2(20) = 20.589, p = .422$), but it was not distributed equally among the TA levels ($\chi^2(10) = 18.75, p = .044$). The general English command was also distributed equally among the TA levels ($t(170) = -2.21, p = .111$) and among the language conditions ($F(2, 171) < 1, p = .665$). The English command therefore is similar across all conditions.

Design

This study employed an experimental 3 (*Language*: Dutch vs. English vs. mixed) x 2 (*TA*: high vs. low) x 3 (*Product Type*: jeans vs. toothpaste vs. suntan lotion) mixed factorial design. In this design, TA and Language functioned as between-subjects variables, whereas Product Type was treated as a within-subjects variable and was the control variable of this study.

Although the original intention was to conduct a fully between-subjects experimental 3 (*TA*: high vs. moderate vs. low) x 3 (*Language*: Dutch vs. English vs. mixed) design, this approach was revised for two main reasons. First, preliminary analyses with a repeated measures analysis of variance revealed significant differences in consumer responses across the three product types (see *Appendix B – Results of difference between product types* for all p -values), suggesting that they could not be aggregated into a single composite variable without compromising the ability to detect potential language and/or TA related effects. Second, the

original three levels of TA were reduced to two (high vs. low) to ensure sufficient statistical power and clearer (but still not optimal) group differentiation, since the distribution of TA scores was skewed, resulting in a disproportionately small number of participants in the low TA category when using three levels.

Instruments

The *attitude towards the advertisement* was measured with six five-point semantic differentials scales comprising of ‘This advertisement is...’ followed by: unbelievable – believable, unimpressive – impressive, unattractive – attractive, not clear – clear, non-eye catching – eye catching, overall disliked – overall liked. The reliability of the six items for the jeans was good ($\alpha = .83$) overall as well as for the toothpaste ($\alpha = .86$) and the suntan lotion ($\alpha = .88$). For the English language condition, the reliability of the six items for the jeans was also good ($\alpha = .84$) as well as for the toothpaste ($\alpha = .88$) and the suntan lotion ($\alpha = .88$). For the Dutch language condition, the reliability of the six items for the jeans was also good ($\alpha = .88$) as well as for the toothpaste ($\alpha = .84$) and the suntan lotion ($\alpha = .89$). Finally, for the mixed language condition, the reliability of the six items for the jeans was acceptable ($\alpha = .76$), but good for the toothpaste ($\alpha = .85$) and the suntan lotion ($\alpha = .87$). All statements were adapted from Donthu (1998). As the questionnaire was in Dutch, the statements were also translated to Dutch. All statements including the Dutch translations that were used in the questionnaire can be found in *Appendix C – Statements to determine the consumer response*.

The *attitude towards the product* was measured with nine five-point semantic differentials scales comprising of ‘This advertisement is...’ followed by: bad – good, boring – interesting, uninformative – informative, offensive – non-offensive, not useful – useful, negative – positive, irritating – not irritating, unbelievable – believable, unfavorable – favorable. The reliability of the nine items for the jeans was good ($\alpha = .84$) overall as well as for the toothpaste ($\alpha = .88$) and the suntan lotion ($\alpha = .88$). For the English language condition, the reliability of the nine items for the jeans was also good ($\alpha = .86$) as well as for the toothpaste ($\alpha = .87$) and the suntan lotion ($\alpha = .83$). For the Dutch language condition, the reliability of the nine items for the jeans was also good ($\alpha = .84$) as well as for the toothpaste ($\alpha = .89$) and the suntan lotion ($\alpha = .89$). Finally, for the mixed language condition, the reliability of the nine items for the jeans was acceptable ($\alpha = .79$), but good for the toothpaste ($\alpha = .86$) and the suntan lotion ($\alpha = .88$). All statements were adapted from Choi & Miracle (2004). As the questionnaire was in Dutch, the statements were translated to Dutch. All statements including the Dutch

translations that were used in the questionnaire can be found in *Appendix C – Statements to determine the consumer response*.

The *purchase intention* was measured with one five-point semantic differential scale comprising of ‘I would buy this product’ followed by ‘Absolutely – absolutely not’. As it is only one statement, no reliability analysis was necessary. The statement was adapted from Spears & Singh (2004). As the questionnaire was in Dutch, the statement was also translated to Dutch. The statement, including the Dutch translation that was used in the questionnaire can be found in *Appendix C – Statements to determine the consumer response*.

The *TA level*, one of the independent variables, was assessed with twelve statements derived from the Tolerance for Ambiguity Scale developed by Herman et al. (2010). The complete list of statements is provided in *Appendix D – Tolerance of Ambiguity scale*. The level of TA was determined by assigning numerical values to each response option on a five-point Likert scale: 1 for “strongly disagree,” 2 for “disagree,” 3 for “neither agree nor disagree,” 4 for “agree,” and 5 for “strongly agree.” Since some statements reflected high TA and others low TA, a subset of items (marked with an asterisk in *Appendix D – Tolerance of Ambiguity scale*) was reverse-scored prior to analysis to ensure that all higher scores reflect a high level of TA. This allowed all items to contribute uniformly to the total score, with higher scores indicating a greater tolerance for ambiguity. In these cases, the response values were recoded as follows: 5 became 1, 4 became 2, 3 remained unchanged, 2 became 4, and 1 became 5. Rather than creating a compound mean, following the same method as Herman et al. (2010), a total TA score was computed by summing the values across all twelve items, resulting in a potential score range from 12 to 60. Participants were then classified into TA categories: low TA for scores ranging from 12 to 36, and high TA for scores ranging from 37 to 60. This classification approach was adapted from the English version of the Tolerance of Ambiguity scale by Buhr & Dugas (2002). Although the original plan was to include a moderate TA category (for scores between 28 and 44), this was later revised. Preliminary data inspection indicated a skewed distribution of TA scores which would have resulted in an insufficient number of participants in the low TA group when applying the three-level model. To maintain adequate statistical power and to allow for more distinct – albeit still imperfect – group differentiation, the moderate TA category was omitted, resulting in a binary classification of TA.

Additionally, participants’ *self-assessed English proficiency* was measured using four five-point Likert scales, adapted from Flaitz (1988, p. 161). After indicated whether they spoke English, the participants speaking English rated their abilities in speaking, understanding,

reading, and writing the English language, on scales anchored by “very bad – very good” (“*zeer slecht – zeer goed*”). The items were phrased as follows: “How well do you speak the English language?” (“*Hoe goed spreek je de Engelse taal?*”), “How well do you understand the English language?” (“*Hoe goed begrijp je de Engelse taal?*”), “How well are you at reading the English language?” (“*Hoe goed ben je in het lezen van de Engelse taal?*”), and “How well are you in writing in the English language?” (“*Hoe goed ben je in het schrijven van de Engelse taal?*”). Internal consistency for the scale was excellent, with a Cronbach’s alpha value of $\alpha = .93$. Thus, a compound variable was created comprising of the total self-assessed English proficiency, called ‘general English command’.

Procedure

The questionnaire was administered online using Qualtrics, a widely used platform for academic survey research. The entire questionnaire was presented in Dutch, the native language of the target population to ensure optimal comprehension and accessibility. Participants were primarily recruited through social media platforms and personal networks. To increase participation rates, a raffle incentive was introduced: after data collection, three participants were randomly selected to receive a € 10.00 Bol.com gift voucher. Due to challenges in reaching a sufficient number of Flemish participants through these informal channels, additional respondents from Flemish Belgium were recruited via Prolific, an online participant recruitment platform. These participants received a fixed payment of £ 0,75 and were excluded from the raffle. On average, participants completed the questionnaire in 10 minutes and 55 seconds.

The survey began with an introduction to the study (without informing them of the goal) and an informed consent form, which all participants were required to read and agree to before proceeding. Respondents were then exposed to three advertisements, each representing a different product type (jeans, toothpaste, suntan lotion), displayed in one of the three language conditions (Dutch, English or a mix of both languages). After viewing each advertisement, participants responded to items measuring their *attitude towards the advertisement*, *attitude towards the product*, and *purchase intention*. Upon completion of the advertisement evaluations, participants filled out a series of statements designed to measure their level of *TA*. Finally, respondents answered several demographic questions, including their nationality, *age*, *gender*, *native language*, *second languages*, and *self-assessed English proficiency*.

At the end of the questionnaire, the respondents were asked to provide either their email address to enter the raffle or their Prolific ID, depending on the recruitment source. Both were optional.

Statistical treatment

The collected data was prepared and analyzed using IBM SPSS Statistics (version 30). Prior to analysis, relevant variables were coded and recoded where necessary.

Prior to conducting the main analysis, assumption checks were performed to ensure the validity of the parametric tests. Normality of the dependent variables was assessed through inspection of Q-Q plots, histograms, and Shapiro-Wilk tests. While slight deviations from normality were observed, these were not severe enough to violate the assumptions given the robustness of MANOVA to minor departures from normality, especially in larger samples. Levene's Test of Equality of Error Variances was used to assess homogeneity of variance across the between-subjects groups. Box's M test was conducted to test the assumption of homogeneity of covariance matrices. Additionally, Mauchly's Test of Sphericity was used to assess the assumption of sphericity for the within-subjects factor (product type). In cases where one of the assumptions has been violated, this has been mentioned in the results section and the appropriate corrections have been used to minimize the effects of these violations.

Due to the mixed factorial design of the study, with both between- and within-subjects variables, first a multivariate analysis of variance has been performed to check whether the independent variables of language, TA level and product type had a significant effect on the combination of dependent variables. As there were no significant interaction effects observed, no follow-up univariate analyses of variance were conducted to further examine the source of the interaction. To determine the main effect of the product type, first a repeated measures analysis of variance has been performed to check what the effect was on each separate dependent variable. Finally, a one-way analysis of variance has been conducted with the mean scores and standard deviations of the attitude towards the advertisement, attitude towards the product, and purchase intention for each product type to see what the difference was between the three product types.

In the next section, the results of the study will be reported.

Results

Multivariate analysis

A three-way multivariate analysis for attitude towards the advertisement, attitude towards the product, and purchase intention as dependent variables and product type, language and TA level as factors, found no significant multivariate effect of language ($F(2, 171) = 1.23, p = .296, \eta^2 = .01$) and neither of TA level ($F(1, 171) < 1, p = .728, \eta^2 = .00$). There also was no significant interaction effect of language and TA level ($F(2, 171) = 1.63, p = .199, \eta^2 = .02$), product type and language ($F(16, 328) = 40.80, p = .253, \eta^2 = .06$), product type and TA level ($F(8, 164) < 1, p = .556, \eta^2 = .04$) and no significant three-way multivariate interaction effect of language, TA level and product type ($F(16, 328) = 1.15, p = .307, \eta^2 = .05$). However, there appeared to be a significant multivariate effect of product type ($F(8, 164) = 40.80, p < .001, \eta^2 = .67$). Further univariate analyses to disentangle the multivariate effect of the product type are described below. See Table 1. for all means, standard deviations and counts.

Attitude towards the advertisement

The repeated measures analysis of variance with product type as independent (within-subjects) factor showed a significant effect of product type on attitude towards the advertisement ($F(2, 342) = 38.49, p < .001, \text{partial } \eta^2 = .18$). The attitude towards the advertisement was significantly higher for the toothpaste advertisement ($M = 3.38, SD = 0.82$) than for the suntan lotion advertisement ($p < .001, \text{Bonferroni-corrected}; M = 3.04, SD = 0.87$) and for the jeans advertisement ($p < .001, \text{Bonferroni-corrected}; M = 2.58, SD = .83$). The attitude towards advertisement for the jeans ($M = 2.58, SD = .83$) was also significantly lower than for the suntan lotion ($p < .001, \text{Bonferroni-corrected}; M = 3.04, SD = 0.87$).

Attitude towards the product

The repeated measures analysis of variance with product type as independent (within-subjects) factor also showed a significant effect of product type on attitude towards the product ($F(2, 342) = 17.36, p < .001, \text{partial } \eta^2 = .09$). The attitude towards the product was significantly higher for the toothpaste advertisement ($M = 3.52, SD = 0.72$), than for the jeans advertisement ($p < .001, \text{Bonferroni-corrected}; M = 3.13, SD = 0.68$). The attitude towards the product was also significantly higher for the suntan lotion advertisement ($M = 3.47, SD = 0.73$) than for the jeans advertisement ($p < .001, \text{Bonferroni-corrected}; M = 3.13, SD = 0.68$). There was no statistical difference between the attitude towards the product for the toothpaste

advertisement ($M = 3.52$, $SD = 0.72$) and the suntan lotion advertisement ($p = 1.000$, Bonferroni-correction; $M = 3.47$, $SD = 0.73$)

Purchase intention

Finally, the repeated measures analysis of variance with product type as independent (within-subjects) factor also showed a significant effect of product type on purchase intention ($F(2, 342) = 22.51$, $p < .001$, partial $\eta^2 = .12$). The purchase intention was significantly higher for the toothpaste advertisement ($M = 2.86$, $SD = 0.09$), than for the jeans advertisement ($p < .001$, Bonferroni-correction; $M = 2.19$, $SD = 0.09$). The purchase intention was also significantly higher for the suntan lotion advertisement ($M = 2.80$, $SD = 0.10$) than for the jeans advertisement ($p < .001$, Bonferroni-correction; $M = 2.19$, $SD = 0.09$). There was no statistical difference between the purchase intention for the toothpaste advertisement ($M = 2.86$, $SD = 0.09$) and the suntan lotion advertisement ($p = 1.000$, Bonferroni-correction; $M = 2.80$, $SD = 0.10$)

Table 1.

Means, standard deviations and counts for the consumer response per dependent variable for each product type, per language condition and TA level and the total (1 = very negative attitude, 5 = very positive attitude)

	English			Dutch			Mix			Total		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
<u><i>Attitude towards the advertisement</i></u>												
<i>Jeans</i>												
Low TA	2.70	0.86	24	2.85	0.79	17	2.42	0.82	15	2.67	0.83	56
High TA	2.63	0.81	40	2.43	0.93	41	2.53	0.75	40	2.53	0.83	121
<i>Total</i>	<i>2.66</i>	<i>0.82</i>	<i>64</i>	<i>2.56</i>	<i>0.90</i>	<i>58</i>	<i>2.50</i>	<i>0.76</i>	<i>55</i>	<i>2.58</i>	<i>0.83</i>	<i>177</i>
<i>Toothpaste</i>												
Low TA	3.31	0.93	24	3.33	0.65	17	3.17	0.58	15	3.28	0.76	56
High TA	3.60	0.81	40	3.27	0.83	41	3.41	0.88	40	3.43	0.85	121
<i>Total</i>	<i>3.49</i>	<i>0.86</i>	<i>64</i>	<i>3.29</i>	<i>0.77</i>	<i>58</i>	<i>3.35</i>	<i>0.82</i>	<i>55</i>	<i>3.38</i>	<i>0.82</i>	<i>177</i>
<i>Suntan lotion</i>												
Low TA	2.90	0.86	24	2.97	0.85	17	3.17	0.81	15	2.99	0.83	56
High TA	3.33	0.90	40	2.93	0.72	41	2.95	0.85	40	3.07	0.89	121
<i>Total</i>	<i>3.17</i>	<i>0.90</i>	<i>64</i>	<i>2.94</i>	<i>0.86</i>	<i>58</i>	<i>3.01</i>	<i>0.84</i>	<i>55</i>	<i>3.04</i>	<i>0.87</i>	<i>177</i>
<u><i>Attitude towards the product</i></u>												
<i>Jeans</i>												

	English			Dutch			Mix			Total		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
Low TA	3.24	0.69	24	3.40	0.53	17	2.82	0.61	15	3.17	0.65	56
High TA	3.14	0.71	40	3.14	0.78	41	3.04	0.60	40	3.11	0.70	121
<i>Total</i>	<i>3.18</i>	<i>0.70</i>	<i>64</i>	<i>3.22</i>	<i>0.72</i>	<i>58</i>	<i>2.98</i>	<i>0.61</i>	<i>55</i>	<i>3.13</i>	<i>0.68</i>	<i>177</i>
<i>Toothpaste</i>												
Low TA	3.42	0.79	24	3.39	0.60	17	3.33	0.50	15	3.39	0.65	56
High TA	3.73	0.66	40	3.53	0.81	41	3.52	0.74	40	3.59	0.74	121
<i>Total</i>	<i>3.61</i>	<i>0.72</i>	<i>64</i>	<i>3.49</i>	<i>0.75</i>	<i>58</i>	<i>3.46</i>	<i>0.68</i>	<i>55</i>	<i>3.52</i>	<i>0.72</i>	<i>177</i>
<i>Suntan lotion</i>												
Low TA	3.49	0.71	24	3.31	0.61	17	3.43	0.54	15	3.42	0.63	56
High TA	3.71	0.64	40	3.45	0.84	41	3.33	0.79	40	3.49	0.77	121
<i>Total</i>	<i>3.62</i>	<i>0.67</i>	<i>64</i>	<i>3.41</i>	<i>0.78</i>	<i>58</i>	<i>3.36</i>	<i>0.72</i>	<i>55</i>	<i>3.47</i>	<i>0.73</i>	<i>177</i>
<u><i>Purchase intention</i></u>												
<i>Jeans</i>												
Low TA	2.08	0.97	24	2.59	1.23	17	2.33	1.23	15	2.30	1.13	56
High TA	2.18	1.04	40	1.98	1.13	41	1.98	1.03	40	2.04	1.06	121
<i>Total</i>	<i>2.14</i>	<i>1.01</i>	<i>64</i>	<i>2.16</i>	<i>1.18</i>	<i>58</i>	<i>2.07</i>	<i>1.09</i>	<i>55</i>	<i>2.12</i>	<i>1.09</i>	<i>177</i>
<i>Toothpaste</i>												
Low TA	2.63	1.10	24	2.94	1.09	17	2.67	0.98	15	2.73	1.05	56
High TA	3.25	1.10	40	2.78	1.04	41	2.90	1.11	40	2.98	1.09	121
<i>Total</i>	<i>3.02</i>	<i>1.13</i>	<i>64</i>	<i>2.83</i>	<i>1.05</i>	<i>58</i>	<i>2.84</i>	<i>1.07</i>	<i>55</i>	<i>2.90</i>	<i>1.08</i>	<i>177</i>
<i>Suntan lotion</i>												
Low TA	2.83	1.17	24	2.82	1.29	17	2.73	1.10	15	2.80	1.17	56
High TA	3.20	1.14	40	2.76	1.09	41	2.48	1.20	40	2.81	1.17	121
<i>Total</i>	<i>3.06</i>	<i>1.15</i>	<i>64</i>	<i>2.78</i>	<i>1.14</i>	<i>58</i>	<i>2.55</i>	<i>1.17</i>	<i>55</i>	<i>2.81</i>	<i>1.17</i>	<i>177</i>

As only the product type seemed to have a significant main effect on the consumer response, a one-way analysis of variance in which the dependent variables have been merged together into one compound variable, has been conducted to see whether there was a significant difference between the means and standard deviations of the product types. This one-way analysis of variance shows that there is a significant difference between the product types ($F(2, 530) = 32.60, p < .001$). The consumer response to the jeans ($M = 2.61, SD = 0.76$) was lower than to the toothpaste ($p < .001$, Tukey HSD; $M = 3.27, SD = 0.79$) and suntan lotion ($p < .001$, Tukey HSD; $M = 3.10, SD = 0.85$). There was no statistical difference between the consumer response to the toothpaste ($M = 3.27, SD = 0.79$) and suntan lotion ($p = .112$, Tukey HSD; $M = 3.10, SD = 0.85$).

Conclusion & Discussion

This study aimed to investigate how language use (Dutch, English, or a mix of both) in advertising affects consumer responses among Dutch and Flemish audiences, and whether these effects are moderated by individuals' TA. Contrary to expectations based on prior research and theoretical frameworks, the results revealed no significant main effects of language use (*RQ1*) or TA (*RQ2*), nor any interaction between these variables and product type. The only significant factor influencing consumer responses was product type, the control variable, which affected all three dependent variables: attitude towards the advertisement, attitude toward the product, and purchase intention.

The absence of significant language effects in this study aligns with growing scholarly critiques that question the symbolic power of English in advertising, particularly in non-Anglophone contexts where it has become increasingly normalized. In Dutch and Flemish advertising, English is widely used, which may have contributed to its diminished ability to convey meanings such as modernity, success, and globalness (Raedts et al., 2015). While English was initially believed to signal these qualities (Piller, 2001), this assumption has been challenged by numerous studies across both Asian and European contexts. Research by Chang (2008), Krishna & Ahluwalia (2008), and Y. C. Lin & Wang (2016) found that English brand names and advertisements did not necessarily evoke associations with globalness or modernity in Asian markets. Similarly, studies conducted in Europe, including those by Gerritsen et al. (2010), Gerritsen, Nickerson, van den Brandt, et al. (2007), Nickerson & Camiciottoli (2013), and Planken et al. (2010), demonstrated that English often failed to serve as a persuasive cue for modernity or success. As a result, the presumed symbolic function of English in advertising may no longer hold in high-proficiency, multilingual regions such as the Netherlands and Flanders. This shift likely contributes to its limited impact on consumer responses, including attitudes toward the advertisement and product, as well as purchase intentions in this study.

Moreover, the study found no significant main effect of TA, nor any interaction effects between TA and language use. While TA has been theorized to influence how individuals respond to ambiguity and complexity in language, especially in multilingual contexts (Dewaele & Wei, 2014; Furnham & Marks, 2013), this expected moderation effect did not emerge in the data. This may be attributed to several factors. First, the operationalization of TA into a binary variable (high vs. low) may have oversimplified a more nuanced, continuous trait, potentially reducing the sensitivity of the analysis. Second, the complexity of the advertisements themselves may not have been sufficient to evoke the types of ambiguity that would differentially engage individuals with varying levels of TA. While the stimuli did contain

elements of semantic and pragmatic ambiguity – such as metaphorical language (“*Your perfect fit*”, “*Always a reason to smile*”) and idiomatic expressions (“*The best of both worlds*”) – the overall ambiguity may not have been sufficiently complex or challenging to elicit differentiated responses based on TA levels. This interpretation is consistent with findings by Li et al. (2017), who found that the effect of TA on PAE only becomes more pronounced when ambiguity is elevated, particularly when advertisements featured text in an unknown language. In contrast, when the language was known or easily understood – as was the case for most participants in the study, given the high English proficiency in the Dutch and Flemish context – TA had less impact. These findings suggest that language familiarity and the degree of ambiguity interact in shaping consumer responses, and that future research should consider manipulating both factors more explicitly to better capture the nuanced role of TA in multilingual advertising.

Interestingly, the only significant effect observed in this study was that of product type. Across all three dependent variables – attitude towards the advertisement, attitude towards the product, and purchase intention – advertisements for toothpaste and suntan lotion consistently received higher evaluations than jeans. This suggests that product category, rather than language or psychological traits like TA, more strongly influences consumer responses. This finding supports the notion that in contexts where foreign language use has become normalized, its impact may be overshadowed by more noticeable factors such as product relevance or utility. This interpretation is consistent with the Consumer Culture Positioning (CCP) framework, which posits that language strategies may lose their differentiating power when audiences become desensitized to foreign elements in advertising (Alden et al., 1999), which emphasizes the role of product involvement and the nature of the decision-making process – rational versus emotional – in shaping consumer attitudes. Overall, this finding reinforces the importance of carefully considering product-specific characteristics when designing advertising experiments, particularly when investigating relatively subtle effects such as language use or personality-based moderation.

Several limitations of this study should also be acknowledged. First, although the overall sample size was sufficient, the distribution of participants across TA levels was uneven. This imbalance necessitated the reduction of TA from a three-level variable (high, moderate, low) to a dichotomous classification (high vs. low), potentially oversimplifying a complex, multidimensional construct. This simplification may have reduced the study's sensitivity to detect nuanced moderation effects. The assumption of a negative correlation between uncertainty avoidance (UA) and TA – used to guide participant sampling – also did not manifest clearly in the data. Future research should directly measure the relationship between UA and

TA rather than relying on assumed correlations and should explore alternative operationalizations of TA. Additionally, recruiting a larger and more evenly distributed sample across the full TA spectrum would allow for more precise analysis of its moderating role.

Second, although the advertisements were carefully controlled in terms of visual design and language manipulation, they featured fictional brands and moderate-involvement products. This may have limited participants' emotional engagement and perceived relevance, thereby weakening potential language or TA effects. Future studies may benefit from incorporating real-world brand stimuli or high-involvement product categories, which could elicit stronger consumer responses and more clearly reveal the influence of language and personality traits.

Third, the linguistic manipulations in the advertisements may not have introduced sufficient degree of complexity or ambiguity to effectively test the moderating influence of TA. While the study included Dutch, English, and mixed-language slogans, these may not have been complex or ambiguous enough to evoke the cognitive or emotional engagement necessary to reveal TA-related differences. Future research should consider manipulating both language familiarity as well as the degree of ambiguity more explicitly to better capture the nuanced role of TA in multilingual advertising as well as explore the effect in tv or radio commercials. Finally, the study relied on self-reported data for English proficiency, which, while useful, may not accurately reflect actual comprehension abilities. Objective language tests could provide more reliable assessments and help determine how proficiency interacts with TA and language use in influencing consumer responses.

From a theoretical perspective, this study contributes to current literature by challenging the (already challenged) assumption and widespread belief that the use of a foreign language – particularly English – automatically enhances advertising effectiveness by invoking associations with modernity, globalness, or prestige. It also calls into question the assumption that psychological traits like TA reliably moderate consumer responses to linguistic complexity or code-switching in advertising. The absence of significant effects in both cases suggests that these factors may not exert a universal or consistent influence across contexts. From a practical standpoint, marketers operating in multilingual or highly proficient language environments should consider that the mere inclusion of English or code-switching may not be sufficient to influence consumer perceptions. Instead, attention should be given to product-specific factors and potentially to more nuanced or affect-laden advertising elements that may engage consumers more meaningfully.

Reference list

- Alcántara-Pilar, J. M., Del Barrio-García, S., & Porcu, L. (2013). A cross-cultural analysis of the effect of language on perceived risk online. *Computers in Human Behavior*, 29(3), 596–603. <https://doi.org/10.1016/j.chb.2012.10.021>
- Alden, D. L., Steenkamp, J.-B. E. M., & Batra, R. (1999). Brand positioning through advertising in Asia, North America, and Europe: The role of global consumer culture. *Journal of Marketing*, 63(1), 75–87. <https://doi.org/10.1177/002224299906300106>
- Bhatia, T. K., & Ritchie, W. C. (2006). Bilingualism in the global media and advertising. In T. K. Bhatia & W. C. Ritchie (Eds.), *The handbook of bilingualism* (pp. 512–546). Wiley. <https://doi.org/10.1002/9780470756997.ch20>
- Budner, S. (1962). Intolerance of ambiguity as a personality variable. *Journal of Personality*, 30(1), 29–50. <https://doi.org/10.1111/j.1467-6494.1962.tb02303.x>
- Buhr, K., & Dugas, M. J. (2002). The intolerance of uncertainty scale: psychometric properties of the English version. *Behaviour Research and Therapy*, 40(8), 931–945. [https://doi.org/10.1016/S0005-7967\(01\)00092-4](https://doi.org/10.1016/S0005-7967(01)00092-4)
- Caldwell-Harris, C., & Aycicegi-Dinn, A. (2016). Emotionality differences between a native and foreign language: Implications for cultural marketing strategies. *Journal of Cultural Marketing Strategy*, 0, 2056–8002.
- Chang, C. (2008). The effectiveness of using a global look in an Asian market. *Journal of Advertising Research*, 48(2), 199–214. <https://doi.org/10.2501/S0021849908080240>
- Choi, Y. K., & Miracle, G. E. (2004). The effectiveness of comparative advertising in Korea and the United States: A cross-cultural and individual-level analysis. *Journal of Advertising*, 33(4), 85–97. <https://doi.org/10.1080/00913367.2004.10639176>
- Clahsen, H., & Felser, C. (2006). How native-like is non-native language processing? In *Trends in Cognitive Sciences* (Vol. 10, Issue 12, pp. 564–570). <https://doi.org/10.1016/j.tics.2006.10.002>
- Degani, T., & Tokowicz, N. (2010). Ambiguous words are harder to learn. *Bilingualism*, 13(3), 299–314. <https://doi.org/10.1017/S1366728909990411>
- Dewaele, J. M., & Wei, L. (2013). Is multilingualism linked to a higher tolerance of ambiguity? *Bilingualism*, 16(1), 231–240. <https://doi.org/10.1017/S1366728912000570>
- Dewaele, J. M., & Wei, L. (2014). Attitudes towards code-switching among adult mono- and multilingual language users. *Journal of Multilingual and Multicultural Development*, 35(3), 235–251. <https://doi.org/10.1080/01434632.2013.859687>

- Donthu, N. (1998). A cross-country investigation of recall of and attitude toward comparative advertising. *Journal of Advertising*, 27(2), 111–122. <https://doi.org/10.1080/00913367.1998.10673556>
- Education First (EF). (2024). *EF English proficiency index: A ranking of 112 countries and regions by English skills*. <https://www.ef.nl/epi/>
- Flaitz, J. (1988). *The ideology of English: French perceptions of English as a world language*. Mouton de Gruyter.
- Furnham, A., & Marks, J. (2013). Tolerance of ambiguity: A review of the recent literature. *Psychology*, 04(09), 717–728. <https://doi.org/10.4236/psych.2013.49102>
- Furnham, A., & Ribchester, T. (1995). Tolerance of ambiguity: A review of the concept, its measurement and applications. *Current Psychology*, 14(3), 179–199. <https://doi.org/10.1007/BF02686907>
- Gerritsen, M., Korzilius, H., Van Meurs, F., & Gijsbers, I. (2000). English in Dutch commercials: Not understood and not appreciated. *Journal of Advertising Research*, 40(4), 17–31. <https://doi.org/10.2501/JAR-40-4-17-31>
- Gerritsen, M., Nickerson, C., van den Brandt, C., Dominguez, N., van Meurs, F., & Nederstigt, U. (2007). English in print advertising in Germany, Spain and the Netherlands: Frequency of occurrence, comprehensibility and the effect on corporate image. In G. Garzone & C. Ilie (Eds.), *The use of English in institutional and business settings. An intercultural perspective* (pp. 79–98). Peter Lang.
- Gerritsen, M., Nickerson, C., van Hooft, A., van Meurs, F., Korzilius, H., Nederstigt, U., Starren, M., & Crijns, R. (2010). English in product advertisements in non-English-speaking countries in Western Europe: Product image and comprehension of the text. *Journal of Global Marketing*, 23(4), 349–365. <https://doi.org/10.1080/08911762.2010.504523>
- Gerritsen, M., Nickerson, C., Van Hooft, A., Van Meurs, F., Nederstigt, U., Starren, M., & Crijns, R. (2007). English in product advertisements in Belgium, France, Germany, the Netherlands and Spain. *World Englishes*, 26(3), 291–315. <https://doi.org/10.1111/j.1467-971X.2007.00510.x>
- Grenier, S., Barrette, A. M., & Ladouceur, R. (2005). Intolerance of uncertainty and intolerance of ambiguity: Similarities and differences. *Personality and Individual Differences*, 39(3), 593–600. <https://doi.org/10.1016/j.paid.2005.02.014>
- Herman, J. L., Stevens, M. J., Bird, A., Mendenhall, M., & Oddou, G. (2010). The Tolerance for Ambiguity Scale: Towards a more refined measure for international management

- research. *International Journal of Intercultural Relations*, 34(1), 58–65. <https://doi.org/10.1016/j.ijintrel.2009.09.004>
- Hofstede, G. (1980). *Culture's Consequences: International Differences in Work-Related Values*. Sage.
- Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). What Is Different Is Dangerous. In *Cultures and organizations: Software of the mind* (3rd ed., pp. 187–234). McGraw-Hill Professional Publishing.
- Hornikx, J., & van Meurs, F. (2017). Foreign languages in advertising as implicit country-of-origin cues: Mechanism, associations, and effectiveness. *Journal of International Consumer Marketing*, 29(2), 60–73. <https://doi.org/10.1080/08961530.2016.1243996>
- Hornikx, J., & van Meurs, F. (2020). Foreign languages in advertising. In *Foreign Languages in Advertising: Linguistic and Marketing Perspectives*. Springer International Publishing. <https://doi.org/10.1007/978-3-030-31691-4>
- Hornikx, J., van Meurs, F., & de Boer, A. (2010). English or a local language in advertising?: The appreciation of easy and difficult english slogans in the Netherlands. *Journal of Business Communication*, 47(2), 169–188. <https://doi.org/10.1177/0021943610364524>
- Krishna, A., & Ahluwalia, R. (2008). Language choice in advertising to bilinguals: Asymmetric effects for multinationals versus local firms. *Journal of Consumer Research*, 35(4), 692–705. <https://doi.org/10.1086/592130>
- Li, Q., Huang, Z., & Christianson, K. (2017). Ambiguity tolerance and advertising effectiveness. *Annals of Tourism Research*, 63, 216–222. <https://doi.org/10.1016/j.annals.2016.12.004>
- Lin, Y. C., & Wang, K. Y. (2016). Language choice in advertising for multinational corporations and local firms: A reinquiry focusing on monolinguals. *Journal of Advertising*, 45(1), 43–52. <https://doi.org/10.1080/00913367.2015.1085817>
- Lin, Y.-C., & Wang, K.-Y. (2016). Local or global image? The role of consumers' local-global identity in code-switched ad effectiveness among monolinguals. *Journal of Advertising*, 45(4), 482–497. <https://doi.org/10.1080/00913367.2016.1252286>
- Nickerson, C., & Camiciottoli, B. C. (2013). Business English as a lingua franca in advertising texts in the Arabian Gulf. *Journal of Business and Technical Communication*, 27(3), 329–352. <https://doi.org/10.1177/1050651913479930>
- Piller, I. (2001). Identity constructions in multilingual advertising. *Language in Society*, 30(2), 153–186. <https://doi.org/10.1017/S0047404501002019>

- Planken, B., Meurs, F. van, & Radlinska, A. (2010). The effects of the use of English in Polish product advertisements: Implications for English for business purposes. *English for Specific Purposes*, 29(4), 225–242. <https://doi.org/10.1016/j.esp.2010.06.003>
- Puntoni, S., De Langhe, B., & Van Osselaer, S. M. J. (2009). Bilingualism and the emotional intensity of advertising language. *Journal of Consumer Research*, 35(6), 1012–1025. <https://doi.org/10.1086/595022>
- Raedts, M., Dupré, N., Hendrickx, J., & Debrauwere, S. (2015). English in television commercials in Belgium, France, Italy, the Netherlands and Spain. *World Englishes*, 34(4), 576–599. <https://doi.org/10.1111/weng.12161>
- Ratchford, B. T. (1987). New insights about the FCB Grid. *Journal of Advertising Research*, 27(4), 24–38.
- Spears, N., & Singh, S. N. (2004). Measuring attitude toward the brand and purchase intentions. *Journal of Current Issues and Research in Advertising*, 26(2), 53–66. <https://doi.org/10.1080/10641734.2004.10505164>

Appendix A – Materials

Jeans

English:



Dutch:



Mixed:



Toothpaste:

English:



Dutch:



Mixed:



Suntan lotion:

English:



Dutch



Mixed:



Appendix B – Results of difference between product types

The tables below present the results of the repeated measures analyses of variance for the three dependent variables, displaying the differences between the product types within each condition (i.e., TA level and language), as well as the corresponding significance levels (*p*-values). In Table 2. the means and standard deviations can be found per language condition and TA level for each product type, as well as the *p*-value for the attitude towards the advertisement. In Table 3. the same data can be found for the attitude towards the product and in Table 4. for the purchase intention.

Attitude towards the advertisement

Table 2.

Means (standard deviation) for attitude towards the advertisement per product type for each condition (TA level vs. language condition) and p-value.

Att. ad	English				Dutch				Mixed			
	jeans	toothp aste	suntan lotion	<i>p</i>	jeans	toothp aste	suntan lotion	<i>p</i>	jeans	toothp aste	suntan lotion	<i>p</i>
Low	2.70 (.863)	3.31 (.932)	2.90 (.855)	.007	2.85 (.786)	3.33 (6.48)	2.97 (.850)	.017	2.42 (.821)	3.17 (.577)	3.17 (.809)	.009
High	2.63 (.806)	3.60 (.814)	3.33 (.901)	.017	2.43 (.926)	3.27 (.826)	2.93 (.872)	<.001	2.53 (.749)	3.41 (.884)	2.95 (.848)	<.001

Attitude towards the product

Table 3.

Means (standard deviation) for attitude towards the product per product type for each condition (TA level vs. language condition) and p-value.

Att. prod	English				Dutch				Mixed			
	jeans	toothp aste	suntan lotion	<i>p</i>	jeans	toothp aste	suntan lotion	<i>p</i>	jeans	toothp aste	suntan lotion	<i>p</i>
Low	3,24 (.687)	3.42 (.791)	3.49 (.709)	.196	3.40 (.532)	3.53 (.812)	3.45 (.841)	.826	2.82 (.608)	3.33 (.459)	3.43 (.539)	.007
High	3.14 (.708)	3.73 (.659)	3.71 (.644)	<.001	3.14 (.780)	3.53 (.812)	3.45 (.841)	.009	3.04 (.602)	3.52 (.740)	3.33 (.778)	.008

Purchase intention

Table 4.

Means (standard deviation) for purchase intention per product type for each condition (TA level vs. language condition) and p-value.

PI	English	Dutch	Mixed
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	jeans	toothp aste	suntan lotion	<i>p</i>	jeans	toothp aste	suntan lotion	<i>p</i>	jeans	toothp aste	suntan	<i>p</i>
Low	2.08 (.974)	2.63 (1.096)	2,83 (1.167)	.012	2.59 (1.228)	2.94 (1.088)	2.82 (1.286)	.535	2.33 (1.234)	2.67 (.976)	2.73 (1.100)	.480
High	2.18 (1.035)	3.25 (1.104)	3.20 (1.137)	<.001	1.98 (1.129)	2.78 (1.037)	2.76 (1.090)	<.00 1	1.98 (1.025)	2.90 (1.105)	2.48 (1.198)	<.00 1

Appendix C – Statements to determine the consumer response

Attitude towards the advertisement

The statements and the Dutch translations of the statements that were used to measure the attitude towards the advertisement in the online questionnaire can be found in the table below:

English	Dutch translation
This advertisement is...	Deze advertentie is...
Unbelievable – believable	Ongeloofwaardig – geloofwaardig
Unappealing – appealing	Onaantrekkelijk – aantrekkelijk*
Unimpressive – impressive	Niet indrukwekkend – indrukwekkend
Unattractive – attractive	Onaantrekkelijk - aantrekkelijk
Not clear – clear	Onduidelijk – duidelijk
Non-eye-catching – eye-catching	Niet opvallend – opvallend
Overall disliked – overall liked	Over het algemeen niet leuk – over het algemeen leuk

Note. Items with the asterisk (*) have been left out due to being duplicates after translating to Dutch. Adapted from “A Cross-Country Investigation of Recall of and Attitude toward Comparative Advertising.” by N. Donthu, 1998, *Journal of Advertising*, 27(2), p. 116.

Attitude towards the product

The statements and the Dutch translations of the statements that were used to measure the attitude towards the product in the online questionnaire can be found in the table below:

English	Dutch translation
This product is...	Dit product is...
Bad – good	Slecht – goed
Boring – interesting	Saaï – interessant
Uninformative – informative	Niet informatief – informatief
Offensive – non-offensive	Aanstootgevend – niet-aanstootgevend
Not useful – useful	Niet nuttig – nuttig
Negative – positive	Negatief – positief
Irritating – not irritating	Irritant – niet irritant
Unbelievable – believable	Ongeloofwaardig – geloofwaardig
Unfavorable - favorable	Ongunstig – gunstig

Note. Adapted from “The effectiveness of comparative advertising in Korea and the United States: A cross-cultural and individual-level analysis” by Y. Choi and G. Miracle, 2004, *Journal of Advertising*, 33(4), p. 86.

Purchase intention

Purchase intention was measured with one five-point semantic differential scale comprising of ‘I would buy this product’ followed by ‘Absolutely – absolutely not’. As it is only one statement, no reliability analysis was necessary. The statement was adapted from Spears & Singh (2004). As the questionnaire was in Dutch, the statement was also translated to Dutch. The Dutch version of the statement can be found in the table below:

English	Dutch translation
I would buy this product	Ik zou dit product kopen
- Definitely not – definitely	- Absoluut niet – absoluut

Note. Adapted from “Measuring attitude toward the brand and purchase intentions.” by Spears, N., & S. Singh, 2004, *Journal of Current Issues and Research in Advertising*, 26(2), p. 60.

Appendix D – Tolerance of Ambiguity scale

This appendix presents the Tolerance of Ambiguity (TA) Scale, which was used to measure participants' levels of tolerance for ambiguity. The scale consists of twelve statements adapted from the Tolerance for Ambiguity Scale by Herman et al. (2010), and it was translated into Dutch for the purpose of this study. Participants were asked to rate their agreement with each statement on a five-point Likert scale, ranging from "strongly disagree" to "strongly agree." The scores for each statement were subsequently summed to calculate an overall TA score, with higher scores indicating greater tolerance for ambiguity. For clarity, the items are presented below, with a note on the recoding of certain items marked with an asterisk.

Table 5.

The Tolerance for Ambiguity Scale by Herman et al. (2010) with 12 statements measuring the level of tolerance of ambiguity by the participants and the translation to Dutch (in italics).

Statement	Strongly disagree – strongly agree				
1. I avoid settings where people don't share my values. * <i>Ik vermijd situaties waarin mensen mijn waarden niet delen</i>	1	2	3	4	5
2. I can enjoy being with people whose values are very different from mine. <i>Ik kan genieten van het samenzijn met mensen wiens waarden heel anders zijn dan de mijne.</i>	1	2	3	4	5
3. I would like to live in a foreign country for a while. <i>Ik zou graag een tijdje in het buitenland wonen.</i>	1	2	3	4	5
4. I like to surround myself with things that are familiar to me. * <i>Ik omring me graag met dingen die ik ken.</i>	1	2	3	4	5
5. The sooner we all acquire similar values and ideals the better. * <i>Hoe eerder we allemaal dezelfde waarden en idealen verwerven, hoe beter.</i>	1	2	3	4	5
6. I can be comfortable with nearly all kinds of people. <i>Ik kan me op mijn gemak voelen bij bijna alle soorten mensen.</i>	1	2	3	4	5
7. If given a choice, I will usually visit a foreign country rather than vacation at home. <i>Als ik de keuze heb, ga ik liever naar het buitenland op vakantie dan op vakantie in eigen land.</i>	1	2	3	4	5
8. A good teacher is one who makes you wonder about your way of looking at things. <i>Een goede leraar is iemand die je laat nadenken over je manier van kijken naar dingen.</i>	1	2	3	4	5
9. A good job is one where what is to be done and how it is to be done are always clear. * <i>Een goede baan is er een waarbij altijd duidelijk is wat er gedaan moet worden en hoe het gedaan moet worden.</i>	1	2	3	4	5

10. A person who leads an even, regular life in which few surprises or unexpected happenings arise really has a lot to be grateful for. *	1	2	3	4	5
<i>Iemand die een gelijkmatig, regelmatig leven leidt waarin weinig verrassingen of onverwachte gebeurtenissen voorkomen, heeft echt veel om dankbaar voor te zijn.</i>					
11. What we are used to is always preferable to what is unfamiliar. *	1	2	3	4	5
<i>Wat we gewend zijn, is altijd beter dan wat onbekend is.</i>					
12. I like parties where I know most of the people more than ones where all or most of the people are complete strangers. *	1	2	3	4	5
<i>Ik vind feestjes waar ik de meeste mensen ken leuker dan feestjes waar alle of de meeste mensen volslagen vreemden zijn.</i>					

* = reverse coded

Note. All items are scored on a 5-point Likert scale, ranging from “1 = strongly disagree” to “5 = strongly agree”. This scoring pattern is inverted for items followed by an asterisk. These are reverse coded. Adapted from “The Tolerance for Ambiguity Scale: Towards a more refined measure for international management research” by J. Herman, M. Stevens, A. Bird, M. Mendenhall and G. Oddou, 2010, *International Journal of Intercultural Relations*, 34(1). p. 63-64 (<http://doi.org/10.1016/j.ijintrel.2009.09.004>).