

Bachelor Thesis
International Business Communication

A study on the influence of English language use in institutional traffic safety campaigns in The Netherlands and Spain.

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Abstract

The use of mobile phones while driving has been the cause of increasingly more (lethal) traffic incidents every year. Therefore, it is of importance to optimize traffic safety campaigns to be utmost effective in order to decrease mobile phone use in traffic, and prevent incidents caused by it. This study investigates the influence of English language use in institutional traffic campaigns in Spain and the Netherlands, with an experiment based on attitude towards the advertisement, comprehensibility, intention to change behaviour and attitude towards the institution. The experiment consisted of a questionnaire in Spanish and in Dutch, concerning a traffic safety campaign with three language conditions (native language only, mix of native language and English & English only). The results seemed to imply that the language manipulation did not have a significant influence on the participants' perception of the advertisement based on the dependent variables. Moreover, Spanish and Dutch participants did not differ in terms of attitude towards the advertisement, intention to change behaviour or attitude towards the institution, however Dutch participants seemed to have a significantly higher comprehension of the advertisement than Spanish participants did. This study contributes to a higher understanding of young drivers' attitudes towards traffic safety campaigns, and it provides useful information on factors that could be important for future research. To deepen and broaden the understanding of the role of English language in traffic safety campaigns, future research could be conducted on a larger scale, with a wider variety of participants and a better representation of society. It could also take into consideration the notability of the English use in the advertisement and the impact on additional elements of the advertisement.

Introduction

According to the Public Prosecutor's Office in the Netherlands, the use of mobile devices, especially mobile phones, while taking part in traffic significantly increases the chance of causing an accident, thus posing a danger to fellow traffic participants (Openbaar Ministerie, 2022). The Dutch Road Safety Research Foundation states that 20-30% of all accidents are at least partially caused by mobile phone-related distractions, accounting for approximately 600 victims (hospitalizations as well as deadly) every year (Stichting Wetenschappelijk Onderzoek Verkeersveiligheid, 2022). In Spain, 31% of fatal traffic accidents was caused by distractions while driving (Dirección General de Tráfico, 2022). Evidently, the use of mobile phones while driving is a prevalent issue on the subject of public health. Besides from the official ban on mobile phone use while driving which is active in the Netherlands as well as in Spain, traffic safety campaigns can play an important role in preventing the use of mobile devices, and thus decreasing the amount of accidents caused by mobile distractions. Various factors can be of importance when designing advertisements for a campaign, such as imagery, message, and language choice. Therefore, the proposed study focuses on the analysis of language use in institutional traffic safety campaigns in The Netherlands and Spain. In particular, it is investigated what the effects are of English language use versus the use of native languages Dutch and Spanish on the way in which traffic safety advertisements are perceived by Dutch and Spanish participants. This is measured based on the dependent variables attitude towards the advertisement, perceived comprehensibility, intention to change behaviour and attitude towards the institution.

According to literature, drivers who are confident in their abilities and who believe themselves to be good at multitasking have a higher likeliness of engaging in distracted driving behaviour (Hill et al., 2015). Moreover, research suggests that young drivers are also more likely to use mobile devices while driving than older generations (Bergmark et al., 2016; Zhou et al., 2009; Sullman & Baas, 2004). People who have previously observed distracted driving behaviour in other drivers are more susceptible to engaging in it themselves as well. Even when drivers are aware of the dangers of distracted driving, this does not necessarily prevent them from using their phone while driving (Phuksuksakul, Kanitpong & Chantranuwathana, 2011). Factors that could influence this behaviour are law enforcement knowledge, expectations of others and attitude.

The increase in globalization in the modern society has caused a rise in the use of the English language in many different settings of communication, for example offline as well as

online, and in professional as well as personal communication (Christiansen, 2015). Accordingly, the English language is regularly used in professional communication in countries that do not have English as a native language (Gerritsen et al., 2007). Common reasons for this are optimization of communication through a lingua franca, and also because the language is often believed to provoke positive associations such as internationalism and modernization (Piller, 2003). Moreover, the Markedness model suggests that more uncommon or unexpected utterances (such as English in a Spanish-speaking country) are likely to receive more attention than common or expected utterances (Myers-Scotton, 1993). Markedness is explained as something that stands out as unusual or complicated compared to something that is more common. In the segment of health communication, it is particularly important that campaigns such as traffic safety campaigns are comprehensible, persuasive and memorable. Therefore, research on this subject can contribute to the optimization of traffic safety campaigns, by looking at the different elements that comprise an advertisement and analyzing how they can be optimized individually.

The Netherlands is currently the number 1 ranking country on the subject of English language skills worldwide (Education First, 2021). On the same ranking, Spain is occupying the 33rd spot, meaning there is a significant difference in English language proficiency between the Netherlands and Spain. In order to realize the abovementioned comprehensibility, persuasiveness and memorability of traffic safety campaigns, further research needs to be conducted on the effects of English in traffic safety communication in these countries. By investigating the effects of English language use in traffic campaigns on the perception of Dutch and Spanish drivers, knowledge on the effectiveness of these advertisements will expand. This could contribute to the prevention of distracted driving in the Netherlands and Spain, possibly reducing traffic casualties.

Effectiveness of traffic safety campaigns

The effectiveness of health communication has been investigated in previous research. A study by Whittam et al. (2006) indicated that young drivers caused 21.6% less accidents after being exposed to a traffic safety campaign over a period of 4.5 months. Moreover, a study by Lim, Lin, Chung & Ko (2021) provided an analysis of the effect of different message frames on the persuasion of young people to not use mobile devices while driving. The study expands the knowledge of the relationship between visual rhetoric style (concrete or abstract portrayal of the threats of distraction in traffic) and social distance framing, which is the extent to which the subject of the advertisement is socially close to the target group (young adults). The study

showed that a message that portrayed young adults had a positive effect on persuasion when the visuals accompanying the message were more concrete. Moreover, a message portraying another social group, such as the elderly, had a positive effect on persuasion when the visuals were more abstract. The appropriate fit between the two factors of the experiment was shown to increase the sensation of realistic threat for the participants, which then increased the effectiveness of the campaign. This literature provides evidence that young drivers are susceptible to traffic safety campaigns, and thus that research on traffic safety communication is relevant for optimizing road safety in the future.

Language use

Furthermore, the use of English language in advertising has been investigated previously. An experiment provided evidence that the visual attention of participants was higher when the message was shown in English, than when it was shown in the native language German (Thoma, 2013). The research focused on the influence of English in a non-English context, which was measured using eye-tracking. Nevertheless, the results showed a negative effect of the English language on comprehension. The intention to buy the product displayed in the ad was slightly higher when the ad was in English than when it was in German. Thoma suggested that the unfamiliarity with English could have caused the increase in visual attention for English advertisements, which would mean that this attention is more superficial than content-related. This can also be explained based on the previously mentioned Markedness model by Myers-Scotton (1993). The more common form is referred to as “unmarked”, and the unusual form is referred to as “marked”. In the research by Thoma, the English message would thus be marked, and the German message would be unmarked, which could explain the increase in visual attention for the English message.

Another study focused on the assumption that the English language evokes positive attitudes because of the prestige and symbolism that it is associated with, however this assumption was not confirmed (Van Hooft & Truong, 2012). In this experiment, the effect of English versus Cantonese was analyzed based on the product attitude, intention of buying and advertisement attitude of female participants from Hong Kong. An important difference between this study and the study by Thoma is that in Hong Kong, English is also an official language aside from Cantonese and Putonghua. The results showed that English versus Cantonese did not have a significant influence on the attitude towards the product, or on the attitude towards the advertisement. Only in the Just Diamond advertisement, the English version received a more positive attitude towards the message, however the Cantonese version

received positive attitudes towards the message as well. Moreover, no significant differences in language use were found for the intention to purchase the product. Additionally, it was mentioned that English and Cantonese might have the same status in Hong Kong, since they are both official languages and therefore, English is not perceived to be more special, attractive or notable. In addition, research found the English language to be associated with dynamism and youth (Gerritsen et al., 2000), and that it holds a symbolic value (Kelly-Holmes, 2000).

Furthermore, a study that also focused on the positive associations with the English language did find significant differences in attitude towards the product, attitude towards the advertisement and intention to purchase the product (Spierts, Van Hooft, & Van Meurs, 2017). This research explored the effect of English, Arabic, or a mix of both languages in advertisements on the native Egyptian participants' product image, attitude and intention to purchase the product. Additionally, the study investigated whether the participants were influenced by the symbolic value often associated with the English language and how this affected their attitude towards the ad. On the first aim, no significant differences were found between the advertisements that included only Arabic or only English language, however, it was found that the attitude towards the product and ad was lower when both Arabic and English were used in the ad. Furthermore, the intention to purchase the product was higher for ads that only included English than for ads that only included Arabic. On the second aim, the interpretation of English ads was indeed found to be positively influenced by a positive attitude towards English as a language and the positive associations that come with it. However, positive attitudes towards English did not reflect on the purchase intention after viewing an advertisement containing only English language, which was explained by the dependence of language attitudes on the context in which the language is shown. Lastly, in the limitations of this research it was mentioned that the majority of participants were young and highly educated which can influence comprehension and attitude towards English language use. Moreover, the differences in results between this study and the study by van Hooft & Truong can be explained by the context in which the experiment was conducted, namely English as an official language in Hong-Kong, in contrast with English as a second language in Egypt. This could imply why Egyptian participants showed a positive attitude towards the English language where the participants from Hong-Kong showed a similar attitude towards both languages.

Furthermore, in a previous research on the use of English in product advertising, no significant results were found for purchasing intention, attitude towards the advertisement and product or brand perception (Planken, Van Meurs & Radlinska, 2010). The research focused on English language use in Polish magazine advertisements and the effect it has on the

perception of the product and brand in question. No significant differences were found between the perception of English ads and the perception of the same ads in Polish. Even though it was not certain whether this finding was compromised by the way in which the question was asked, a finding that can be relevant for our current research is the significant difference that was found in comprehension, which implicated that the use of English in the ads caused issues in comprehension of the advertisement text. For the current research, this implies that it could be interesting to explore the level of comprehension, and to explore the effect of language proficiency on the effectiveness of the campaign. Contradictory to the outcome of the study by Planken, Van Meurs & Radlinska, a study conducted by Razzouk et al. (2021) suggested that a mix of both English and Spanish Language was more persuasive than only using Spanish or English in health communication. The experiment focused on the effect of English, the native language Spanish, or a mix of both languages on the persuasiveness of tobacco warnings, and especially e-cigarettes. However, this difference can be explained by the bilingualism of the Hispanic participants, which implies that they are likely to have a higher English language proficiency than the Polish participants in the research by Planken, Van Meurs & Radlinska. As mentioned in the discussion of the article, it is not certain whether this significant difference was more persuasive in itself due to reading the message twice, or if the use of both languages contributed to the comprehension and therefore was more effective.

In this proposed research, the uncertainty of bias cause is minimized by only providing the message once on every version of the advertisement, and then applying the language manipulation to the message as a whole. Thus for example, instead of including the same message twice (*the red apple & la manzana rojo*), the message is shown once and the language manipulation is applied to it (*the red manzana*). This way, the possibility that the participant can retrieve the meaning from the language that is easiest to them is eliminated because the participant will never be exposed to the same message in both languages.

Research Questions & relevance

Thus, previous research has been conducted on the effectiveness of traffic safety campaigns, as well as the language choice and use of English in advertising. However, on the subject of institutional health communication and traffic safety in particular, little research has been conducted on the effect of English language use on the effectiveness of traffic campaigns, and specifically on the use of mobile phones while driving the car. As mentioned previously, this issue is more prevalent now than ever before and it is important to conduct research in order to optimize the use of institutional health campaigns that will persuade drivers to stop using their

phones in traffic. Therefore, this study will explore the effects of English use in traffic safety campaigns in the Netherlands and Spain. By conducting this research, the research gap of English language in relation to traffic safety campaigning will converge. Consequently, this could be beneficial to optimize the effects of traffic safety campaigning in the future and hopefully reduce the number of yearly accidents and casualties caused by the use of mobile phones while driving. The experiment will be conducted to answer the following research questions:

1. To what extent does the use of English versus the native language Dutch or Spanish influence the way in which young Dutch and Spanish drivers perceive traffic safety campaigns?
2. Is it to be expected that Dutch and Spanish participants have different attitudes towards a traffic safety campaign that includes English language?
3. Do Spanish and Dutch speakers differ in terms of comprehension of a traffic safety campaign that includes English language?
4. Does the use of English versus the native language in an institutional traffic campaign influence the attitude towards the institution?
5. What are the effects of English use in an institutional traffic campaign in a non-English speaking country on the intention to conform to the desired behaviour?

Methodology

Materials

The independent variables in this experiment were language condition and nationality. The variable language included three levels namely native language, English, and a mix of the native language and English. The variable nationality included two levels namely Dutch and Spanish. This means that the same questionnaire was employed in two different languages (Dutch and Spanish) for the experiment to operationalize the dependent variables. The materials for the experiment consisted of an advertisement concerning traffic safety, and in particular the importance of not using mobile devices while driving the car. The advertisement that was used in the experiment was based on two existing institutional campaigns on traffic safety. One advertisement was used for the text “You can’t focus on two things at once. #KeepingTheNetherlands/SpainSafe” and was originally employed in Wales (Road Safety Wales, 2020). This text was translated from English into Dutch and Spanish, and for the mixed language level, the slogan was translated into the native language and the hashtag remained in English. The utterances were translated using communicative translation, meaning that the exact meaning is translated into the target language while taking grammar into account, to make sure the message remains fully understandable (Dorn, 1985). The other advertisement was used for the imagery and was originally employed in Italy (Comune di Legnano, 2017). Apart from image and text, the advertisement also included a logo of either the Dutch Ministry of Infrastructure and Water Management of the Central Government, or the Spanish General Direction of Traffic to increase authenticity. In the experiment, the attitude towards these institutions were measured. Because the campaigns were already previously employed by Dutch and Spanish institutions, the ecological validity of the experiment was increased. Moreover, the chance that Dutch or Spanish drivers could have been previously exposed to one of the advertisements was limited, which is important to reduce the effect of possible biases. Ultimately, the questionnaire for native Dutch speakers included either the advertisement only in Dutch, the advertisement with a mix of Dutch and English language or the advertisement only in English. Likewise, the questionnaire for native Spanish speakers included either the advertisement only in Spanish, the advertisement with a mix of Spanish and English language, or the advertisement only in English. This contributed to a total of six different versions (Appendices A & B).

Participants

A total of 150 participants (age: $M = 20.85$, $SD = 2.24$; range = 18-27) was selected to comprise the subjects group of this experiment, which was subdivided into two groups (50.7% native Spanish speakers & 49.3% native Dutch speakers). Initially, the questionnaire was started by a total of 219 participants. All unfinished entries were deleted, revealing that the questionnaire was initially completed by a total of 184 participants. This means that 34 data entries were deleted from the file for several reasons. Firstly, participants that were younger than 18 or older than 30 years old were deleted, people between 18-30 years old were the target group because previous research had shown that younger drivers are more likely to get distracted by their mobile phone while driving (Cazzulino et al., 2014; George et al., 2018; Walsh et al., 2008). Then, participants with a native language other than Spanish or Dutch were deselected. Some participants had indicated to have Valencian or Catalan as their first language and English or Spanish as their second language. These cases were individually examined to determine whether they had to be deleted or not. It was determined that if the participant spoke Spanish and the English proficiency was considered high enough to still understand the language manipulation, their entry was kept due to insufficient responses. Consequently, participants with an English competence lower than 2 were deselected. Initially, the aim was to only select participants who were in possession of a driver's license. However, this criteria was diminished after the data was gathered because it had proven to be difficult to find enough Spanish participants with a driver's license. Thus, participants without a driver's license ended up also being selected for the experiment.

The Spanish participant group counted 76 participants (7.9% male, 84.2% female, 4% non-binary & 4% would rather not say). The Dutch participant group counted 74 participants (25% male, 74% female). A Chi-square analysis showed that gender was not distributed evenly ($\chi^2(3) = 13.42$, $p = .004$), in both groups there were significantly more female than male, non-binary or non-disclosed participants. A one-way ANOVA showed that age was not distributed evenly across the nationality groups ($F(1, 147) = 39.29$, $p < .001$), Dutch participants ($M = 21.88$, $SD = 1.8$) were on average older than Spanish participants were ($M = 19.84$, $SD = 2.2$). Within the Spanish participant group, there were 5 high-school students (6.6%), 60 university Bachelor students (78.9%), 10 university Master students (13.2%), and 1 student indicated having an education that was not listed in the questionnaire (1.3%). Within the Dutch participant group, there was 1 high school student (1.5%), 1 student in secondary vocational education (1.5%), 29 students in higher vocational education (39.2%), 30 university Bachelor students (40.5%) and 13 university master students (17.6%). Moreover, a Chi-square analysis showed

that the division of participants were or were not in possession of a driver's license was not evenly distributed across the nationality groups ($\chi^2 (1) = 38.20, p < .001$).

Lastly, two control variables were analyzed namely self-assessed English proficiency and self-assessed driving safety to optimize the internal validity of our research by regulating the effect of confounding variables. A one-way ANOVA showed that self-assessed driving safety was distributed equally for Spanish ($F (6, 69) = 0.98, p = .969$) and Dutch participants ($F (9, 64) = 3.38, p = .873$) across the language conditions. Thus, keeping participants without a drivers license in the data file did not significantly influence the self-assessed driving safety. Likewise, a one-way ANOVA for self-assessed English proficiency showed that English proficiency was distributed equally for Spanish ($F (5, 70) = 2.30, p = .663$) and Dutch participants ($F (13, 60) = 5.85, p = .856$). Thus, English proficiency did not influence the experiment.

Design

The design of this experiment was a 3x2 between-subjects design; the three levels of language (native language, English language or a mix of both languages) x the two levels of nationality (Dutch and Spanish). This means that each participant was only exposed to one version of the advertisement.

Instruments

The dependent variables in this experiment were the attitude towards the advertisement, comprehensibility of the advertisement, intention to change behaviour, and attitude towards the institution. In order to operationalize these dependent variables, two questionnaires were employed in the native languages of the participants (one in Dutch and one in Spanish) to minimize the possibility of misunderstandings. All the scales that were used in the experiment are based on previous research, and were translated from English to Dutch and from English to Spanish using communicative translation. Appendix C contains the introduction to the questionnaire in both languages, as well as all questions including answer options, translated into English.

The dependent variable attitude towards the advertisement was operationalized with the use of seven 7-point semantic differential scales, based on Van Hooft & Truong (2012) (functional-dysfunctional, logical-illogical, bad-good, annoying-pleasant, disrespectful-respectful, superficial-authentic & touching-not touching). The participants were asked to indicate what level of the scale fit the advertisement best according to them. In order to increase

reliability for attitude towards the advertisement, the third item on the scale (repulsive-attractive) was deleted. After deleting this item, the reliability for all items on the scale in the questionnaire in Spanish was acceptable: $\alpha = .74$, and for the questionnaire in Dutch as well: $\alpha = .77$. Overall, the reliability for all items on the scale was acceptable: $\alpha = .75$.

The dependent variable comprehensibility was operationalized with one item on a 7-point semantic differential scale based on Van Enschoot & Hoeken (2015), ranging from “easy to understand” to “difficult to understand”.

The dependent variable intention to change behaviour was operationalized using three 7-point semantic differentials ranging from “unlikely” to “likely” (I intend, I plan & I will try to change behaviour), based on Amireault et al. (2020) and Hoeken et al. (2019). The reliability for all items on the scale in the questionnaire in Spanish was acceptable: $\alpha = .77$. For the questionnaire in Dutch, the reliability for all items on the scale was excellent: $\alpha = .94$. Overall, the reliability for all items on the scale was excellent: $\alpha = .92$.

Lastly, the dependent variable attitude towards the institution was operationalized using three items on a 7-point Likert scale ranging from “strongly disagree” to “strongly agree”, based on Bruner (2013). The different scales included the following statements: “I admire organizations such as...”, “I feel inspired by organizations such as...”, and “I like organizations such as...”. In order to increase reliability for attitude towards the institution, the third item on the scale (“I respect organizations such as...”) was deleted. After deleting this item, the reliability for all items on the scale in the questionnaire in Spanish was acceptable: $\alpha = .79$. For the questionnaire in Dutch, the reliability for all items on the scale was questionable: $\alpha = .67$. Overall, the reliability for all items on the scale was acceptable: $\alpha = .71$.

Relevant demographic information about the participants was collected with open questions or multiple choice questions for age, gender, level of education, nationality, native language, second foreign language and lastly bilingualism.

Procedure

Participants were invited to partake in the experiment online through social media platforms such as WhatsApp, Instagram and Facebook, as well as face-to-face for example at university or in a social setting with friends. Participants were reached by the snowball effect which can occur both online and offline. The participants were provided with a link that can be shared online, or with a QR code that can be scanned in a face-to-face setting, which both lead to the questionnaire on the platform Qualtrics. The experiment was conducted individually and online for all participants. Participants of both Dutch and Spanish nationality received the link/QR

code that leads to the questionnaire in their native language. Which of the three levels of language a participant was then exposed to, was automatically and randomly generated by Qualtrics. The first page of the questionnaire served as an introduction. Participants were provided with contact information of the researchers and it was mentioned that participants were free to stop the experiment when they wanted. At the end of the page, participants gave their consent to participate in the experiment. There was no extrinsic motivation or compensation for the participants, participation in the experiment was completely voluntary. Because the design of this experiment was a between-subjects design, participants were not informed in advance about the language manipulation in the effort to not disclose the objectives of the experiment. The participants were not debriefed at the end of the questionnaire. The aim was for the questionnaire to not take longer than 10 minutes in total, which ended up being feasible, in order to maintain concentration of the participants and to increase the motivation to partake in the experiment.

Statistical treatment

To process and analyze the data collected from the experiment, statistical tests were conducted with the use of the platform IBM SPSS Statistics 27. For the analysis of gender, education level and drivers license, separate Chi-square analyses were conducted in SPSS. Additionally, to analyze age and the control variables self-assessed driving safety and self-assessed English proficiency, separate one-way ANOVAs were conducted. Consequently, in order to answer the research questions, several two-way ANOVAs were employed to analyze the effect of the independent variables language level and nationality on the dependent variables attitude towards the advertisement, comprehensibility, intention to change behaviour and attitude towards the institution. In the case that a two-way ANOVA showed significant results, further analyses were conducted using one-way ANOVAs for the dependent variables, with the SPSS file split on nationality.

Results

The overall purpose of this study was to explore English versus native language use and the effect that it has on the perception of institutional campaigns in the Netherlands and Spain.

Attitude towards the advertisement

The variable Attitude towards the advertisement was analyzed for both nationality and level of language. A two-way ANOVA with nationality and language condition as factors showed no significant difference in attitude between Dutch and Spanish participants ($F(1, 144) = 0.45, p = .506$) or language condition ($F(2, 144) = 1.51, p = .225$). The interaction between nationality and language condition was not significant ($F(2, 144) = 0.24, p = .788$). The means and standard deviations for attitude can be found in table 1. Therefore, language condition did not significantly influence the attitude towards the advertisement, nor did it differ between nationalities.

Table 1. Means and standard deviations for attitude towards the advertisement in function of language condition and nationality ($n = 150$) (1 = low, 7 = high)

		attitude		
		<i>M</i>	<i>SD</i>	<i>n</i>
Spanish	Spanish	4.77	1.24	28
	Mixed	4.41	1.05	24
	English	4.31	0.97	24
Dutch	Dutch	4.49	1.25	27
	Mixed	4.42	0.74	22
	English	4.22	1.08	25
	total	4.45	1.08	150

Comprehensibility

Comprehensibility was evaluated for nationality and language condition. A two-way ANOVA revealed a significant relationship between Dutch and Spanish participants ($F(1, 144) = 1371.12, p < .001$). Dutch participants ($M = 6.35, SD = 1.05$) indicated the advertisement to be significantly more comprehensible than Spanish participants did ($M = 1.22, SD = .60$). No significance was found between the language conditions ($F(2, 144) = 0.03, p = .970$) or for the

interaction ($F(2, 144) = 0.92, p = .401$). Means and standard deviations can be found in Table 2.

Table 2. Means and standard deviations for comprehensibility in function of language condition and nationality ($n = 150$) (1 = low, 7 = high)

		comprehensibility		
		<i>M</i>	<i>SD</i>	<i>n</i>
Spanish	Spanish	1.14	0.45	28
	Mixed	1.21	0.42	24
	English	1.33	0.87	24
Dutch	Dutch	6.44	1.25	27
	Mixed	6.41	0.96	22
	English	6.20	0.82	25
total		3.75	2.71	150

Intention to change behaviour

A two-way ANOVA was used to analyze the effect of language condition and nationality on the intention to change behaviour. The two-way ANOVA did not show any significant effect for language condition ($F(2, 144) = 2.23, p = .112$) or for nationality ($F(1, 144) = 1.86, p = .175$). Yet, the two-way ANOVA did show a statistically significant relationship for the interaction between condition and nationality ($F(2, 144) = 3.36, p = .038$), means and standard deviations can be found in Table 3. To further explore the significance, a one-way ANOVA was conducted for intention to change behaviour with language condition as the factor and the output organized by nationality. However, the significant difference that was earlier indicated by the two-way ANOVA disappeared after this analysis was conducted. No significant differences were found in intention to change behaviour between the language conditions among Dutch participants ($F(2, 71) = 3.10, p = .051$), or among Spanish participants ($F(2, 73) < 1$). Thus, neither the language manipulation or the nationality influenced the degree to which participants felt an intention to change their behaviour after viewing the advertisement.

Table 3. Means and standard deviations for intention to change behaviour in function of language condition and nationality ($n = 150$) (1 = low, 7 = high)

		intention		
		<i>M</i>	<i>SD</i>	<i>n</i>
Spanish	Spanish	4.58	0.92	28
	Mixed	4.69	0.46	24
	English	4.74	0.45	24
Dutch	Dutch	5.41	1.39	27
	Mixed	5.27	2.14	22
	English	4.24	1.91	25
	total	4.82	1.40	150

Attitude towards the institution

The attitude towards the institution was analyzed for language condition and nationality. A two-way ANOVA showed no significant differences for the language conditions ($F(2, 144) = 0.98$, $p = .378$), nationality ($F(1, 144) = 1.16$, $p = .284$) or for the interaction between those factors ($F(2, 144) = 0.27$, $p = .761$). Means and standard deviations can be found in Table 4. Thus, it can be concluded that the nationality nor the language manipulation had an influence on the participants' attitude towards the institution.

Table 4. Means and standard deviations for attitude towards the institution in function of language condition and nationality ($n = 150$), (1 = low, 7 = high)

		intention		
		<i>M</i>	<i>SD</i>	<i>n</i>
Spanish	Spanish	3.53	0.93	28
	Mixed	3.49	0.80	24
	English	3.41	0.71	24
Dutch	Dutch	3.69	0.87	27
	Mixed	3.75	0.88	22
	English	3.42	0.67	25
	total	3.55	0.81	150

Conclusion & discussion

Conclusion

The purpose of this research was to analyze the way in which institutional traffic campaigns in Spanish and Dutch, English or a mix of English and the native language are perceived by native Spanish and Dutch speakers. This analysis was based on the attitude towards the advertisement, comprehensibility, intention to change behaviour, and attitude towards the institution. In order to evaluate this, an experiment with a valid response of 150 participants was conducted. The results seemed to imply that the language manipulation did not have any significant effect on the perception of institutional traffic campaigns.

The results showed no significant differences between the language conditions and nationality for attitude towards the advertisement, intention to change behaviour and attitude towards the institution. Initially, for the intention to change behaviour, a significant difference was found for the interaction between language condition and nationality. However, this difference did not show up on the further analyses, therefore it can be concluded that there was also no significant difference found for intention. These findings outline the answer to research questions 2, 4, and 5; It cannot not be expected that Spanish and Dutch participants would have had different attitudes towards a traffic safety campaign that includes English, the use of English versus Spanish or Dutch in an institutional campaign did not influence the attitude towards the institution, and the English language use in the advertisement had no effects on the intention of Spanish and Dutch participants to conform to the desired behaviour. This implies that Spanish and Dutch participants showed a similar attitude to seeing the advertisement, had a similar intention to change their behaviour and held a similar attitude towards the institutions after viewing the advertisement, regardless of the different levels of the language manipulation.

Nevertheless, the results for comprehensibility did show that Dutch participants had a significantly better comprehension of the advertisement than Spanish participants did. Thus, it could have been argued that this was due to Dutch participants having a higher language competence than Spanish participants, however no significant differences were found in the language conditions or in the interaction. Therefore, this difference in perceived comprehensibility cannot be attributed to English language competences. This result indicates that the language manipulation had no influence on the comprehension of the advertisement between Spanish and Dutch participants. Answering research question 3, it can indeed be concluded that Spanish and Dutch participants differed in terms of comprehension of this advertisement, however due to there being no difference between language conditions or in the interaction, it can be concluded that this difference was not caused by the English language use.

In conclusion, this research did not provide evidence for the expected influence that the language manipulation would have on the dependent variables attitude towards the advertisement, comprehensibility, intention to change behaviour and attitude towards the institution. This outcome can be used to answer research question 1; The use of English versus Spanish or Dutch did not influence the way in which young Spanish and Dutch participants perceived traffic safety campaigns. However, certain aspects of this research that will be mentioned in the discussion could be used to improve the effectiveness of possible further research. In the discussion, the findings from this research will be compared to the literature, limitations and practical implications of this study will be discussed, and suggestions for future research will be offered.

Discussion

The Markedness model by Myers-Scotton (1993) suggests that uncommon or unexpected utterances (such as English utterances in Spain or the Netherlands) are likely to receive more attention than common utterances. This theory is in line with a study by Thoma (2013) which provided evidence that the visual attention of participants was higher when a message was shown in English, than when it was shown in the native language (German). This study did, however, find a negative effect of the English use on comprehension, which is in contrast with the results from this present study. Literature implies that the English language often provokes positive associations such as modernity (Piller, 2003), dynamism and youth (Gerritsen et al., 2000), and in addition holds a certain symbolic value (Kelly-Holmes, 2000). Moreover, Spierts, Van Hooft, & Van Meurs conducted a study in 2017 which implied that the use of English had positively impacted the attitude towards the product, attitude towards the advertisement, and intention to purchase the product because of positive associations with the English language. The positive associations could positively impact the perception of an advertisement or campaign in which English is incorporated. Therefore, these theories have contributed to the expected relationship between English use in the advertisement and the dependent variables in this research. As previously stated in the conclusion, this research provided no evidence for the expected influence of the English language manipulation. In this discussion, the limitations of the research will be evaluated in order to gain possible important knowledge for future research.

In contrast with the abovementioned studies, the results of this experiment are in line with literature that also found no significant effect of English versus the native language on

attitude towards the advertisement (Van Hooft & Truong, 2012) however, it was mentioned in this study that English and the native language (Cantonese) might have had the same status in Hong Kong where the research was conducted, since they are both official languages and thus English would not be perceived as more special or notable. Therefore, different results could have been expected in the current research since English is not considered a first language in Spain or in the Netherlands. The study by Planken, Van Meurs and Radlinska (2010) also found no significant differences in attitude towards the advertisement, intention and product or brand perception, and it was argued whether the research had been compromised by the formulation of the question. Therefore, there was reason to assume that the current research could have shown a different outcome. Notwithstanding, the results for comprehension did show a significant difference between the two nationalities (Dutch participants showed higher comprehension than Spanish participants), however, this result could not be attributed to the English language use in the advertisement since there was no difference between language conditions. This raises the question of what caused the difference in comprehension between Spanish and Dutch participants, if not the language manipulation.

Possible explanations for the lack of influence that the language manipulation, and thus the English language use had on the perception of the advertisement could be that the manipulation may not have been apparent enough, that the text in the advertisement was easy enough for all participants to understand even though it was not in their native language, or that the imagery in the advertisement provided the participants with enough information to understand the advertisement, without having to understand the text completely. For example, in this experiment, the advertisements consisted of 50% text, and 50% imagery (Appendix A). Thus, it could be argued that the imagery used in the advertisement drew enough attention that it influenced the participants' evaluation of the advertisement, which was not taken into consideration before conducting the research.

Limitations & suggestions for future research

When comparing the study to previously conducted studies in this research field, it can be argued that an experiment with a sample size of 150 participants in total, and thus only around 75 participants per nationality and 25 participants per language condition is not sufficiently representative to draw clear conclusions on the influence of English use in institutional traffic campaigns. For example, age and gender were not evenly distributed between Spanish and Dutch participants, thus the majority of participants was female. Additionally, due to an insufficient amount of participants, the choice was made to keep data entries of participants

without a driver's license in the experiment, because otherwise there would have been much less Spanish participants. This resulted in the fact that many Spanish participants were not in possession of a driver's license, whereas almost all of the Dutch participants were. Thus, it is unclear to say to what extent this has influenced the results of the experiment, and it could be argued that it might have impacted the results for the attitude towards the advertisement and the intention to change behaviour. Naturally, it is difficult to analyze a participants' intention to stop using the mobile phone while driving if they have no previous experience driving a car.

Since this experiment only included the Spanish and the Dutch languages and culture, for future research it could be interesting to include more nationalities and cultures in the experiment, for example Portugal and France (Spain neighboring countries) and Belgium or Germany (the Netherlands neighboring countries), to discover whether different outcomes occur, or the result is similar. Additionally, this experiment only included students under the age of 30, and thus it could be interesting for future research to also include, for example, people between 30-50 years old who may also have more driving experience. This could be realized in an experiment with a larger sample, which would also increase the representativity of the study. Moreover, for future research it could be important to take into consideration the possible influence of all aspects of the materials. As mentioned above, the subtleness of the language manipulation in the advertisement could be seen as a factor that had an influence on the results. The imagery in the advertisement covers 50% of the advertisement, and it can be argued that the imagery could have been drawing attention, since it contained an image of a car that had just been in a severe crash. In comparison, the language manipulation consisted of two utterances, of which one is considerably large with a large font, yet the other is slightly smaller and might have been easier to overlook by participants, which would mean that the language manipulation would not have been complete. Another theory is that the imagery could have simply been more impactful than the utterances were, causing participants to only think of the image while completing the questionnaire, and forgetting about the utterances. Lastly, since the utterances that make up the language manipulation are rather short (12 words total) and do not contain difficult words or difficult grammatical structures, it could also be considered that the English language use in the advertisement was simple enough for all participants to understand easily and did not influence the experiment. Therefore, for future research on the effect of English language use in advertising and campaigns, it could be considered that the language manipulation is sufficiently apparent and notable, to prevent it from possibly being overruled by other aspects present in the advertisement.

General conclusion

To conclude, this research contributes to existing literature of the effectiveness of English language use in non-English speaking countries by providing insights on how communication in traffic safety campaigns can be optimized. This can be considered an important cause, and thus it is relevant to approach this research field from different perspectives to gain a broad understanding of the factors that can optimize traffic safety communication. Due to the inconclusive results of the language conditions for all dependent variables, based on this experiment only, no specific implications can be given for the effectiveness of English language use in institutional traffic campaigns in Spain and the Netherlands. However, this study can be seen as an instrument and a resource for future research, to accentuate possible important factors in traffic safety advertising, and offer a wider understanding of the subject. This study provides insight that could help traffic safety institutions with the design of traffic campaigns in the future. In addition, the research possibly helps institutions to understand the younger generations better, which can especially be important in the present day where the use of mobile devices has become the cause of many incidents.

References

- Amireault, S., Bélanger-Gravel, A., Gallani, M. C. B., Godin, G., Pérusse, L., & Vohl, M. C. (2010). Effect of implementation intentions to change behaviour: moderation by intention stability. *Psychological Reports, 106*(1), 147-159.
- Bergmark, R. W., Gliklich, E., Guo, R., & Gliklich, R. E. (2016). Texting while driving: the development and validation of the distracted driving survey and risk score among young adults. *Injury Epidemiology, 3*(7), <https://doi.org/10.1186/s40621-016-0073-8>
- Bruner, G. C. (2013). *Marketing Scales Handbook: Multi-Item Measures for Consumer Insight Research*. (Volume 7). GCBII Productions, LLC.
- Cazzulino, F., Burke, R. V., Muller, V., Arbogast, H., & Upperman, J. S. Cell phones and young drivers: a systematic review regarding the association between psychological factors and prevention. *Traffic Injury Prevention, 15*(3), 234-242. doi: 10.1080/15389588.2013.822075
- Christiansen, T. (2015). The rise of English as the global lingua franca. Is the world heading towards greater monolingualism or new forms of plurilingualism. *Lingue e Linguaggi, 15*. (129-154).
- Comune di Legnano. (2017). Campagna contro l'uso del cellulare mentre si guida. Retrieved from <https://www.comune.legnano.mi.it/news/71/4/8731/?channel=date&sezione=news&day=27&month=6&year=2021>
- Dorn, L. (1985). Approaches To Translation. *Studies in Second Language Acquisition, 7*(1), 114-115. doi:10.1017/S0272263100005222
- Education First. (2021). *The world's largest ranking of countries and regions by English skills*. EF. <https://www.ef.nl/epi/>
- Van Enschot, R., & Hoeken, H. (2015). The Occurrence and Effects of Verbal and Visual Anchoring of Tropes on the Perceived Comprehensibility and Liking of TV Commercials. *Journal of Advertising, 24*(1), 25-36. DOI:10.1080/00913367.2014.933688
- George, A. M., Brown, P. M., Scholz, B., Scott-Parker, B., & Rickwood, D. (2018). "I need to skip a song because it sucks": Exploring mobile phone use while driving among young adults. *Transportation Research Part F: Traffic Psychology and Behaviour, 58*, 382-391.

- 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. DOI:10.2501/JAR-40-4-17-31
- Gerritsen, M., Nickerson, C., van Hooft, A., van Meurs, F., Nederstigt, U., Starren, S., & Crijns, R. (2007). English in Product Advertisements in Belgium, France, Germany, the Netherlands and Spain. *World Englishes*, 26(3), 291–315.
- Hill, L., Rybar, J., Styer, T., Fram, E., Merchant, G., & Eastman, A. (2015). Prevalence of and Attitudes About Distracted Driving in College Students. *Traffic Injury Prevention*, 16(4), 362-367. <https://doi.org/10.1080/15389588.2014.949340>
- Hoeken, H., & Van Enschot, R., (2015). The occurrence and effects of verbal and visual anchoring of tropes on the perceived comprehensibility and liking of TV commercials. *Journal of Advertising*, 44(1), 25-36.
- Hoeken, H., Hornikx, J., & Hustinx, L. G. M. M. (2019). Persuasive texts: Research and design. Unpublished manuscript, Faculty of Arts, Radboud University, Nijmegen, The Netherlands
- 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. *International Journal of Business Communication*, 47(2), 169-188. <https://doi.org/10.1177/0021943610364524>
- Kelly-Holmes, H. (2000), Bier, Parfum, Kaas: Language Fetish in European Advertising. *European Journal of Cultural Studies*, 3(1), 67–82.
- Lim, D. J., Lin, J., Chung, U. C., Ko, Y. (2021). The role of construal fit in threat appeal to persuade young drivers not to text while driving. *Journal of Social Marketing*, 11(4), 406-423.
- Luna, D., Ringberg, T., & Peracchio, L. A. (2008). One Individual, Two Identities: Frame Switching Among Biculturals. *Journal of Consumer Research*, 35(2), 279-293. DOI:10.1086/586914
- From Codes and Consequences: Choosing Linguistic Varieties (18-32), by C. Myers-Scotton, 1993, Oxford University Press Inc.
- Openbaar Ministerie. (2022, March 10). *Afleiding in het verkeer*. OM. <https://www.om.nl/onderwerpen/verkeer/handhaving/afleiding#:~:text=Feit%3A%20jaarlijks%20vallen%20er%20honderden,anderen%20en%20uzelf%20in%20gevaar>
- Phuksuksakul, N., Kanitpong, K., & Chantranuwathana, S. (2021). Factors affecting behavior of mobile phone use while driving and effect of mobile phone use on driving

- performance. *Accident Analysis & Prevention*, 151.
<https://doi.org/10.1016/j.aap.2020.105945>
- Piller, I. (2003). Advertising as a Site of Language Contact. *Annual Review of Applied Linguistics*, 23, 170-183.
- Planken, B., van Meurs, F., & 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.
- Razzouk, J., Bilić, A., Wackowski, O. A., Ross, J. C., & Jensen, J. L. K. (2021). Does warning language impact perceptions? Results from an exploratory experiment comparing English, Spanish, and Dual language E-Cigarette warnings among Spanish speakers in the US. *Preventive medicine reports*, 24. 101656.
- Road Safety Wales. (2020). Mobile Phone Safety Campaign. Retrieved from
<https://www.roadsafetywales.org.uk/news/posts/2020/march/mobile-phone-safety-campaign/?Language=undefined>
- Spierts, D., Van Hooft, A., & Van Meurs, F. (2017). In Arabic, English, or a mix? Egyptian Consumers' Response to Language Choice in Product Advertisements, and the Role of Language Attitudes. *Advances in Advertising Research VIII*, 139-153.
- Sullman, M. J. M., & Baas, P. H. (2004). Mobile phone use amongst New Zealand drivers. *Transportation Research Part F: Traffic Psychology and Behaviour*, 7(2), 95-105.
 Doi: 10.1016/j.trf.2004.03.001
- SWOV. (2022, March 10). *Afleiding in het verkeer*. Stichting Wetenschappelijk Onderzoek Verkeersveiligheid. <https://www.swov.nl/feiten-cijfers/factsheet/afleiding-het-verkeer>
- Thoma, D. (2013). Effects of the Use of English in non-English Advertising Contexts: An eyetracking approach. 159-168.
- Truong, T., & Van Hooft, A. (2012). Language choice and persuasiveness. The effects of the use of English in product advertisements in Hong Kong. *The Language Factor in International Business Linguistic Insights*. 175-198.
- Walsh, S. P., White, K. M., Hyde, M. K., & Watson, B. (2008). Dialling and driving: Factors influencing intentions to use a mobile phone while driving. *Accident Analysis & Prevention*, 40(6), 1893-1900.
- Whittam, K. P., Dwyer, W. O., Simpson, P. W., & Leeming, F. C. (2006). Effectiveness of a Media Campaign to Reduce Traffic Crashes Involving Young Drivers. *Journal of Applied Social Psychology*, 36(3), 614-628. <https://doi.org/10.1111/j.0021-9029.2006.00021.x>

Zhou, R., Wu, C., Patrick Rau, P., & Zhang, W. (2009). Young driving learners' intention to use a handheld or hands-free mobile phone when driving. *Transportation Research Part F: Traffic Psychology and Behaviour*, 12(3), 208-217.

<https://doi.org/10.1016/j.trf.2008.11.003>

Appendix A

The three advertisement versions for Dutch level of nationality



Dutch

Dutch & English mixed

English

Appendix B

The three advertisement versions for Spanish level of nationality



Spanish

Spanish & English mixed

English

Appendix C

Questionnaire introductions, and all questions from the questionnaire (translated to English)

Introduction Spanish questionnaire

Estimada/Estimado participante:
Te invitamos a participar en un estudio sobre una campaña institucional sobre seguridad vial y los riesgos de distraerse en el tráfico en España. Responder al cuestionario te llevará unos 10 minutos. Esta investigación la lleva a cabo el departamento de Lengua y Comunicación de la Universidad Radboud de Nimega, Países Bajos. En el contexto de esta investigación, nos gustaría hacerte una serie de preguntas sobre tu percepción de una campaña institucional por sobre el riesgo de distracción durante la conducción y tráfico en España. Te garantizamos que tu participación en este estudio es anónima.

¿Qué ocurrirá con mis respuestas?

Tus respuestas a las preguntas son confidenciales y completamente anónimas. Los datos se almacenarán de forma segura y sólo estarán disponibles para los investigadores implicados en este estudio. No se realizarán informes escritos ni orales que puedan vincularte a este estudio.

Participación voluntaria

Tu participación en este experimento es voluntaria y puedes negarte a participar sin ningún tipo de consecuencia. Puedes dejar de participar en este experimento en cualquier momento. Si te retiras durante el experimento, todos los datos que hayamos recopilado sobre ti los eliminaremos de forma permanente. No recibirás ninguna recompensa por tu participación.

Instrucciones

En la siguiente página, verás el prototipo de un anuncio institucional sobre la seguridad vial y los riesgos de distraerse en el tráfico en España. A continuación te realizaremos una serie de preguntas sobre tu valoración de este anuncio institucional. Las últimas páginas contienen una serie de preguntas generales y demográficas. Antes de responder las preguntas, es importante mirar y leer con atención el anuncio institucional sobre el riesgo de distracción durante la participación en el tráfico. A continuación, elige la respuesta para cada pregunta que mejor refleje tu opinión. No existen respuestas correctas o incorrectas en este experimento. Lo que más importa es tu opinión genuina y sincera.

Contacto

Si quieres saber más sobre este estudio o si tiene alguna pregunta para los investigadores, puedes enviar un correo electrónico a la investigadora Emelie Koenen (Emelie.koenen@ru.nl). Si prefieres no comunicar con los investigadores responsables, puedes ponerte en contacto con nuestro supervisor, el profesor Dr. Andreu van Hooft (andreu.vanhooft@ru.nl), Departamento de Lengua y Comunicación, Facultad de Letras, Radboud University (Países Bajos).

En caso de que decida no participar en nuestra investigación, le agradecemos su tiempo.

Saludos cordiales,

Aicha Fgaïer
Peggy Heijmen
Dominique Gremmen
Sue-êdy Luciana
Emelie Koenen

Si clicas el botón "Aceptar" significa que has leído la información anterior y aceptas participar voluntariamente. Si no quieres participar en el experimento, haz clic en el botón "No quiero participar".

Introduction Dutch questionnaire

Geachte deelnemer,

Wij nodigen u uit deel te nemen aan een studie over institutionele campagnes en het risico van afleiding in het verkeer in Nederland. Het beantwoorden van de vragenlijst zal u ongeveer 10 minuten kosten. Dit onderzoek is uitgevoerd door de afdeling Taal en Communicatie van de Radboud Universiteit Nijmegen, Nederland. In het kader van dit onderzoek willen wij u een reeks vragen stellen over uw perceptie van een institutionele campagne over een risico van afgeleid rijden in Nederland. Wij garanderen dat uw deelname aan deze studie anoniem is.

Wat gebeurt er met mijn antwoorden?

Uw antwoorden op de vragen zijn vertrouwelijk en volledig anoniem. De gegevens worden veilig opgeslagen en zijn alleen beschikbaar voor de bij deze studie betrokken onderzoekers. Er zullen geen schriftelijke of mondelinge verslagen worden gemaakt die u in verband kunnen brengen met deze studie.

Vrijwillige deelname

Uw deelname aan dit experiment is vrijwillig en u kunt uw deelname zonder consequenties weigeren. U kunt op elk moment stoppen met uw deelname aan dit experiment. Als u zich tijdens het experiment terugtrekt, worden alle gegevens die wij over u hebben verzameld permanent gewist. U ontvangt geen beloning voor uw deelname.

Instructies

Op de volgende bladzijde ziet u een prototype van een institutionele advertentie over een risico op afleiding in het verkeer in Nederland. Vervolgens zullen wij u een reeks vragen stellen over uw beoordeling van deze institutionele advertentie. De laatste bladzijden bevatten een reeks algemene en demografische vragen. Alvorens de vragen te beantwoorden is het belangrijk de institutionele advertentie over het risico van afleiding in het verkeer te bekijken en aandachtig te lezen. Kies vervolgens het antwoord op elke vraag dat het best uw mening weergeeft. Er zijn geen goede of foute antwoorden in dit experiment. Het belangrijkste is uw oprechte en eerlijke mening.

Contact

Als u meer wilt weten over deze studie of als u vragen heeft voor de onderzoekers, kunt u een e-mail sturen naar de onderzoeker Emelie Koenen (Emelie.koenen@ru.nl). Als u liever niet communiceert met de verantwoordelijke onderzoekers, kunt u contact opnemen met onze begeleider, Dr. Andreu van Hooft (andreu.vanhooft@ru.nl), Afdeling Taal en Communicatie, Faculteit der Letteren, Radboud Universiteit (Nederland).

Mocht u besluiten niet aan ons onderzoek deel te nemen, dan danken wij u voor uw tijd.

Met vriendelijke groet,

Aicha Fgaïer
 Peggy Heijmen
 Dominique Gremmen
 Sue-êdy Luciana
 Emelie Koenen

Als u op de knop "Accepteren" klikt, betekent dit dat u de bovenstaande informatie hebt gelezen en dat u vrijwillig deelneemt. Indien u niet wenst deel te nemen aan het experiment, klik dan op de knop "Ik wil niet deelnemen".

Variable	Question & answer possibilities																								
Consent	<input type="radio"/> Accept <input type="radio"/> Decline																								
Attitude towards the advertisement	<p><i>This advertisement is...</i></p> <table border="0" style="width: 100%;"> <tr> <td>Functional</td> <td style="text-align: center;">○ ○ ○ ○ ○ ○ ○ ○</td> <td>dysfunctional</td> </tr> <tr> <td>Logical</td> <td style="text-align: center;">○ ○ ○ ○ ○ ○ ○ ○</td> <td>Illogical</td> </tr> <tr> <td>Repulsive</td> <td style="text-align: center;">○ ○ ○ ○ ○ ○ ○ ○</td> <td>Attractive</td> </tr> <tr> <td>Bad</td> <td style="text-align: center;">○ ○ ○ ○ ○ ○ ○ ○</td> <td>Good</td> </tr> <tr> <td>Annoying</td> <td style="text-align: center;">○ ○ ○ ○ ○ ○ ○ ○</td> <td>Nice</td> </tr> <tr> <td>Disrespectful</td> <td style="text-align: center;">○ ○ ○ ○ ○ ○ ○ ○</td> <td>Respectful</td> </tr> <tr> <td>Superficial</td> <td style="text-align: center;">○ ○ ○ ○ ○ ○ ○ ○</td> <td>Authentic</td> </tr> <tr> <td>Moving</td> <td style="text-align: center;">○ ○ ○ ○ ○ ○ ○ ○</td> <td>Emotionless</td> </tr> </table>	Functional	○ ○ ○ ○ ○ ○ ○ ○	dysfunctional	Logical	○ ○ ○ ○ ○ ○ ○ ○	Illogical	Repulsive	○ ○ ○ ○ ○ ○ ○ ○	Attractive	Bad	○ ○ ○ ○ ○ ○ ○ ○	Good	Annoying	○ ○ ○ ○ ○ ○ ○ ○	Nice	Disrespectful	○ ○ ○ ○ ○ ○ ○ ○	Respectful	Superficial	○ ○ ○ ○ ○ ○ ○ ○	Authentic	Moving	○ ○ ○ ○ ○ ○ ○ ○	Emotionless
Functional	○ ○ ○ ○ ○ ○ ○ ○	dysfunctional																							
Logical	○ ○ ○ ○ ○ ○ ○ ○	Illogical																							
Repulsive	○ ○ ○ ○ ○ ○ ○ ○	Attractive																							
Bad	○ ○ ○ ○ ○ ○ ○ ○	Good																							
Annoying	○ ○ ○ ○ ○ ○ ○ ○	Nice																							
Disrespectful	○ ○ ○ ○ ○ ○ ○ ○	Respectful																							
Superficial	○ ○ ○ ○ ○ ○ ○ ○	Authentic																							
Moving	○ ○ ○ ○ ○ ○ ○ ○	Emotionless																							
Comprehensibility	<p><i>This advertisement is...</i></p> <p>Difficult to understand ○ ○ ○ ○ ○ ○ ○ ○ Easy to understand</p>																								
Attitude towards the institution	<p><i>Indicate to what extent you agree with this statement:</i></p> <p>Completely disagree ○ ○ ○ ○ ○ ○ ○ ○ Completely agree</p> <p>I admire organizations such as *institution*</p> <p>I feel inspired by organizations such as *institution*</p> <p>I respect organizations such as *institution*</p> <p>I like organizations such as *institution*</p>																								
Intention to change behaviour	<p>Unlikely ○ ○ ○ ○ ○ ○ ○ ○ Very likely</p> <p>I am planning to use my phone less while driving</p> <p>I plan to use my phone less while driving</p>																								

	I will try to use my phone less while driving
Attitude towards the language	<p><i>The Dutch / Spanish language is...</i></p> <p>Pleasant <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Unpleasant</p> <p>Elegant <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Unelegant</p> <p>Beautiful <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Ugly</p> <p>Attractive <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Repulsive</p> <p>Awkward <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Elegant</p>
Attitude towards English	<p><i>The English language is...</i></p> <p>Pleasant <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Unpleasant</p> <p>Elegant <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Unelegant</p> <p>Beautiful <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Ugly</p> <p>Attractive <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Repulsive</p> <p>Awkward <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Elegant</p>
Self-assessed English proficiency	<p><i>Indicate the level of your English...</i></p> <p>Very bad <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Excellent</p> <p>Reading skills</p> <p>Writing skills</p> <p>Speaking skills</p> <p>Listening skills</p>
Drivers license	<p><i>Are you in possession of a drivers license?</i></p> <p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p>
Driving safety	<p><i>Do you use your phone while driving?</i></p> <p>Never <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Always</p> <p><i>How often do you commit a traffic violation?</i></p> <p>Never <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Always</p>
Age	<i>What is your age?</i>

	blank		
Gender	<p><i>What is your gender?</i></p> <ul style="list-style-type: none"> <input type="radio"/> Male <input type="radio"/> Female <input type="radio"/> Non-binary <input type="radio"/> Prefer not to say 		
Education level	<p><i>What is your level of education?</i></p> <ul style="list-style-type: none"> <input type="radio"/> No education <input type="radio"/> Pre-vocational secondary education <input type="radio"/> Senior general secondary education <input type="radio"/> Pre-university education. <input type="radio"/> Secondary vocational education <input type="radio"/> Higher professional education <input type="radio"/> University Bachelor <input type="radio"/> University master <input type="radio"/> Other 		
Nationality	<p><i>What is your nationality?</i></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>Dutch questionnaire:</p> <ul style="list-style-type: none"> <input type="radio"/> Dutch <input type="radio"/> German <input type="radio"/> Other </td> <td style="width: 50%; vertical-align: top;"> <p>Spanish questionnaire:</p> <ul style="list-style-type: none"> <input type="radio"/> Spanish <input type="radio"/> Portuguese <input type="radio"/> French <input type="radio"/> Moroccan <input type="radio"/> Other </td> </tr> </table>	<p>Dutch questionnaire:</p> <ul style="list-style-type: none"> <input type="radio"/> Dutch <input type="radio"/> German <input type="radio"/> Other 	<p>Spanish questionnaire:</p> <ul style="list-style-type: none"> <input type="radio"/> Spanish <input type="radio"/> Portuguese <input type="radio"/> French <input type="radio"/> Moroccan <input type="radio"/> Other
<p>Dutch questionnaire:</p> <ul style="list-style-type: none"> <input type="radio"/> Dutch <input type="radio"/> German <input type="radio"/> Other 	<p>Spanish questionnaire:</p> <ul style="list-style-type: none"> <input type="radio"/> Spanish <input type="radio"/> Portuguese <input type="radio"/> French <input type="radio"/> Moroccan <input type="radio"/> Other 		
First language	<p><i>What is your first language?</i></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>Dutch questionnaire</p> <ul style="list-style-type: none"> <input type="radio"/> Dutch <input type="radio"/> English <input type="radio"/> German <input type="radio"/> French <input type="radio"/> Other </td> <td style="width: 50%; vertical-align: top;"> <p>Spanish questionnaire</p> <ul style="list-style-type: none"> <input type="radio"/> Spanish <input type="radio"/> English <input type="radio"/> Portuguese <input type="radio"/> Moroccan <input type="radio"/> French <input type="radio"/> Other </td> </tr> </table>	<p>Dutch questionnaire</p> <ul style="list-style-type: none"> <input type="radio"/> Dutch <input type="radio"/> English <input type="radio"/> German <input type="radio"/> French <input type="radio"/> Other 	<p>Spanish questionnaire</p> <ul style="list-style-type: none"> <input type="radio"/> Spanish <input type="radio"/> English <input type="radio"/> Portuguese <input type="radio"/> Moroccan <input type="radio"/> French <input type="radio"/> Other
<p>Dutch questionnaire</p> <ul style="list-style-type: none"> <input type="radio"/> Dutch <input type="radio"/> English <input type="radio"/> German <input type="radio"/> French <input type="radio"/> Other 	<p>Spanish questionnaire</p> <ul style="list-style-type: none"> <input type="radio"/> Spanish <input type="radio"/> English <input type="radio"/> Portuguese <input type="radio"/> Moroccan <input type="radio"/> French <input type="radio"/> Other 		

Second language	<p><i>What is your second language?</i></p> <table border="0"> <tr> <td data-bbox="531 264 821 488"> Dutch questionnaire <input type="radio"/> Dutch <input type="radio"/> English <input type="radio"/> German <input type="radio"/> French <input type="radio"/> Other </td> <td data-bbox="911 264 1233 517"> Spanish questionnaire <input type="radio"/> Spanish <input type="radio"/> English <input type="radio"/> Portuguese <input type="radio"/> Moroccan <input type="radio"/> French <input type="radio"/> Other </td> </tr> </table>	Dutch questionnaire <input type="radio"/> Dutch <input type="radio"/> English <input type="radio"/> German <input type="radio"/> French <input type="radio"/> Other	Spanish questionnaire <input type="radio"/> Spanish <input type="radio"/> English <input type="radio"/> Portuguese <input type="radio"/> Moroccan <input type="radio"/> French <input type="radio"/> Other
Dutch questionnaire <input type="radio"/> Dutch <input type="radio"/> English <input type="radio"/> German <input type="radio"/> French <input type="radio"/> Other	Spanish questionnaire <input type="radio"/> Spanish <input type="radio"/> English <input type="radio"/> Portuguese <input type="radio"/> Moroccan <input type="radio"/> French <input type="radio"/> Other		
Bilingualism	<p><i>Are you bilingual?</i></p> <input type="radio"/> Yes <input type="radio"/> No		
<p><i>Thank you for taking the time to participate in this research Your answer has been registered</i></p>			

Appendix D
Ethics checklist

Checklist EACH (version 1.6, november 2020)

You fill in the questions by clicking on the square next to the chosen answer

After clicking, a cross will appear in this square

1. Is a health care institution involved in the research?

Explanation: A health care institution is involved if one of the following (A/B/C) is the case:

- A. One or more employees of a health care institution is/are involved in the research as principle or in the carrying out or execution of the research.
- B. The research takes place within the walls of the health care institution and should, following the nature of the research, generally not be carried out outside the institution.
- C. Patients / clients of the health care institution participate in the research (in the form of treatment).
 - No → continue with questionnaire
 - Yes → Did a Dutch Medical Institutional Review Board (MIRB) decide that the Wet Medisch Onderzoek (Medical Research Involving Human Subjects Act) is not applicable?
 - Yes → continue with questionnaire

No → This application should be reviewed by a Medical Institutional Review Board, for example, the Dutch [CMO Regio Arnhem Nijmegen](#) → end of checklist

2. Do grant providers wish the protocol to be assessed by a recognised MIRB?

No → continue with questionnaire

Yes → This application should be reviewed by a Medical Institutional Review Board, for example, the Dutch [CMO Regio Arnhem Nijmegen](#) → end of checklist

3. Does the research include [medical-scientific research](#) that might carry risks for the participant? No → continue with questionnaire

Yes → This application should be reviewed by a Medical Institutional Review Board, for example, the Dutch [CMO Regio Arnhem Nijmegen](#) → end of checklist

Standard research method

4. Does this research fall under one of the stated [standard research methods](#) of the Faculty of Arts or the Faculty of Philosophy, Theology and Religious Studies?

Yes → 1. Standard evaluation and attitude research (**fill in name and number of standard research method**) → continue with questionnaire

No → assessment necessary, end of checklist

Participants

5. Is the participant population a healthy one?

Yes → continue with questionnaire

No → assessment necessary, end of checklist → [go to assessment procedure](#)

6. Will the research be conducted amongst minors (<16 years of age) or amongst (legally) incapable persons?

Yes → assessment necessary, end of checklist → [go to assessment procedure](#)

No → continue with questionnaire

Method

7. Is a method used that makes it possible to produce a coincidental finding that the participant should be informed of?

Yes → assessment necessary, end of checklist → [go to assessment procedure](#)

No → continue with questionnaire

8. Will participants undergo treatment or are they asked to perform certain behaviours that can lead to discomfort?

- Yes → assessment necessary, end of checklist → [go to assessment procedure](#)
- No → continue with questionnaire

9. Are the estimated risks connected to the research minimal?

- No → assessment necessary, end of checklist → [go to assessment procedure](#)
- Yes → continue with questionnaire

10. Are the participants offered a different compensation than the usual one?

- Yes → assessment necessary, end of checklist → [go to assessment procedure](#)
- No → continue with questionnaire

11. Should [deception](#) take place, does the procedure meet the standard requirements?

- No → assessment necessary, end of checklist → [go to assessment procedure](#)
- Yes → continue with questionnaire

12. Are the standard regulations regarding [anonymity and privacy](#) met?

- No → assessment necessary, end of checklist → [go to assessment procedure](#)
- Yes → continue with questionnaire

Conducting the research

13. Will the research be carried out at an external location (such as a school, hospital)?

- No → continue with questionnaire
- Yes → Do you have/will you receive written permission from this institution?
 - No → assessment necessary, end of checklist → [go to assessment procedure](#)
 - Yes → continue with questionnaire

14. Is there a contact person to whom participants can turn to with questions regarding the research and are they informed of this?

- No → assessment necessary, end of checklist → [go to assessment procedure](#)
- Yes → continue with questionnaire

15. Is it clear for participants where they can file complaints with regard to participating in the research and how these complaints will be dealt with?

- No → assessment necessary, end of checklist → [go to assessment procedure](#)
- Yes → continue with questionnaire

16. Are the participants free to participate in the research, and to stop at any given point, whenever and for whatever reason they should wish to do so?

- No → assessment necessary, end of checklist → [go to assessment procedure](#)
- Yes → continue with questionnaire

17. Before participating, are participants informed by means of an information document about the aim, nature and risks and objections of the study? (zie [explanation on informed consent](#) and [sample documents](#)).

- No → assessment necessary, end of checklist → [go to assessment procedure](#)
- Yes → continue with questionnaire

18. Do participants and/or their representatives sign a consent form? (zie [explanation on informed consent](#) and [sample documents](#)).

- No → assessment necessary, end of checklist → [go to assessment procedure](#)
- Yes → checklist finished

If you want to record the results of this checklist, please save the completed file.

If you need approval from the EACH due to the requirement of a publisher or research grant provider, you will have to follow the formal assessment procedure of the EACH.

Appendix E

Statement of own work

Statement of own work

Sign this *Statement of own work* form and add it as the last appendix in the final version of the Bachelor's thesis that is submitted as to the first supervisor.

Student name: Dominique Gremmen

Student number: s1026464

NOTE: In this study, for the variable “intention to change behaviour”, my analyses failed to find a significant difference after conducting a one-way ANOVA with Tukey HSD correction that two other group members did manage to find. This difference in results was then analyzed in consultation with Dr. van Hooft, and it was concluded that the difference can be attributed to the fact that not all group members used the same data set. Thus, due to a difference in choices when selecting participants, not all group members’ data set contains the same amount of participants. Moreover, the distribution between the conditions is different which is what causes the different results. After comparing the results cautiously, it was concluded that the results were highly similar between group members, but for this variable specifically it caused a difference in significance or no significance.

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

DECLARATION:

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

Signature: D. Gremmen

Place and date: Nijmegen, June 12, 2022