# Radboud University



## Language choice in narrative persuasion

An experimental study into differences in persuasive effectiveness between a narrative in L1 (Spanish) or L2 (English) with Spanish-English-bilingual readers

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Master Thesis International Business Communication

June 2015

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Master Thesis International Business Communication Radboud University Nijmegen June 2015



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#### Abstract

Research has described several underlying mechanisms of narrative persuasion, such as transportation, identification and emotions, that have been shown to influence the extent to which narratives can alter audience members' beliefs and attitudes. However, the effect of language choice on narrative persuasion is relatively under-researched. Therefore, the current study addressed this topic and compared a story in an L1 and an L2 to see to what extent they differed in their persuasive effect. A between-subjects experiment was set up with in which 210 Spanish unbalanced bilinguals took part, who read either a narrative in their L1 (Spanish), in their L2 (English) or who did not read a narrative (control group). In the experimental groups, participants' language proficiency, comprehension, transportation, identification, emotions and adoption of story-consistent beliefs were measured with a questionnaire. Results showed that English proficiency significantly predicted participants' perceived comprehension in the English condition. Also, comprehension, transportation and identification were higher among participants who read the story in their L1 than for participants who read it in their L2, and comprehension was a significant predictor of transportation and identification. With regard to story-consistent beliefs, the participants in the experimental conditions showed more consistency with the story than the participants in the control condition for only one of the two belief measures, although the L1 and L2 conditions did not differ from each other. Identification was shown to be a significant predictor of the beliefs. These results would seem to lend support to the assumption that a narrative in an L1 is more effective than a narrative in an L2, because of the higher levels of transportation, identification and comprehension of the story in Spanish as compared to the story in English. Although no differences were found between the experimental conditions for story-consistent beliefs, this suggests that MNCs and organizations should opt for localization of narratives, i.e. using a language in which the target group is highly proficient. However, since this is the first study to investigate this topic, further research is needed with different stories and languages, to be able to generalize results.

**Keywords:** language choice, narrative persuasion, L1, L2, Spanish, English, bilinguals

#### Introduction

Several studies have shown that narratives can be used as a persuasive communication tool in organizations. For example, advertisements based on narratives lead to more favorable brand evaluations (Edson Escalas, 2004), and corporate storytelling can improve the reputation of a company through increased employee engagement (Gill, 2011). Also, the use of stories in the promotion mix is recommended because "stories create vivid memories that are likely to be repeated in social media, as well as traditional word-of-mouth" (Mangold & Faulds, 2009, p. 364). In addition, the use of narratives may be an effective tool in health communication, for example because Murphy, Frank, Chatterjee, and Baezconde- Garbanati (2013) showed that health information presented in a narrative format increased individuals' positive attitudes towards cervical cancer screening more than nonnarrative formats.

Against the backdrop of globalization, an issue that is often debated is whether to opt for standardization or localization of advertising messages (Okazaki & Mueller, 2007). Regarding standardization, the English language is often used as a corporate Lingua Franca (Nickerson, 2005). Organizations, such as governments and multinationals, might therefore opt to communicate (persuasive) narratives in a standardized language (usually English) or adapt the language of narratives to the language spoken in the countries in which they operate. However, to the best of my knowledge, it has not been investigated yet whether a narrative in a first language (L1) or a second language (L2) leads to different effects from a persuasive viewpoint. The current study addressed this question and aimed to compare narratives in L1 and L2 with regard to their effects on comprehension, transportation, identification, emotions, and storyconsistent beliefs.

#### Literature review

#### Narrative persuasion

Many researchers have highlighted the fact that narratives can be persuasive (e.g. Busselle & Bilandzic, 2009; De Graaf, Hoeken, Sanders, & Beentjes, 2012; Green & Brock, 2000; Murphy et al., 2013; Slater & Rouner, 2002). Narrative persuasion is assumed to be different from rhetorical persuasion (Green & Brock, 2000). Whereas rhetorical persuasion holds that aspects such as source credibility can be important in determining the persuasive effect of a message, narrative persuasion holds that the influence of these aspects becomes less important when

readers are transported into a story (Green & Brock, 2000). Also, more than involvement with the topic, mechanisms such as identification with the characters predict the persuasive effect of narratives (Slater & Rouner, 2002). In addition, whereas rhetorical persuasion focuses on the processing of explicitly persuasive messages such as advertisements, narrative persuasion refers to the change in attitudes or beliefs that are caused by narratives that do not necessarily have a persuasive intent (Beentjes, De Graaf, Hoeken, & Sanders, 2009).

Slater and Rouner (2002) claimed that sympathetic feelings towards a character in a narrative may lead to the acceptance of story-consistent beliefs, even when these beliefs are not in line with the original opinion of the reader, and that being absorbed by a narrative can reduce counterarguing. Murphy et al. (2013) showed that narrative formats of videos about cervical cancer were more effective than nonnarrative formats in changing audience members' knowledge, attitudes and behavioral intention. They distinguished between three separate, although related, underlying mechanisms of narrative persuasion: transportation, identification and emotions. Each of these mechanisms will be discussed in the following sections.

#### **Transportation**

An important construct in narrative persuasion is transportation. Murphy et al. (2013) showed in their experiment that higher levels of transportation led to an increase of knowledge about cervical cancer. Green and Brock (2000, p. 701) defined transportation as "an integrative melding of attention, imagery, and feelings." Attention means that a reader focuses on the narrative world and to some extent loses access to the real world. Imagery entails being able to mentally and visually represent the situation and characters described by a narrative. Feelings encompass the emotional experience of reading a story, such as sympathetic emotions towards the characters. In sum, transportation means entering a narrative world while leaving reality behind. According to Slater and Rouner (2002), transportation, engagement and absorption refer to the same phenomenon.

Green and Brock (2000) demonstrated that higher transportation leads to more story-consistent beliefs and a less critical attitude towards the text. The authors showed that the degree of transportation mediated the evaluation of characters and that, through transportation, audience members may develop (sympathetic) feelings towards characters. Therefore, they concluded that

"transportation is a mechanism whereby narratives may exert their power to change beliefs" (Green & Brock, 2000, p. 718).

#### **Identification**

Identification is another underlying mechanism in narrative persuasion. It can be related to vicarious learning, which means that audience members have the opportunity to experience things and different identities they have never experienced before, which will evoke certain thoughts and emotions (Cohen, 2001; Slater & Rouner, 2002). Cohen (2001) defined identification as follows:

While identifying with a character, an audience member imagines him- or herself being that character and replaces his or her personal identity and role as audience member with the identity and role of the character within the text. While strongly identifying, the audience member ceases to be aware of his or her social role as an audience member and temporarily (but usually repeatedly) adopts the perspective of the character with whom he or she identifies. (pp. 250 - 251)

De Graaf et al. (2012) claimed that identification is an important construct in narrative persuasion. With two experiments, they showed that participants identify more with a perspectivizing character than with an antagonizing character, and that identification mediated the effect on story- and character-consistent attitudes. Cohen (2001) stated that identification reduces critical attitudes of audience members because of loss of self-awareness. He distinguished between four dimensions of identification: empathy, sharing the perspective of the character, internalizing the goals of the character, and absorption in the narrative (loss of self-awareness). This last dimension is related to transportation (Green & Brock, 2000). Still, Tal-Or and Cohen (2010) showed with an experiment that identification and transportation can be analyzed and measured independently. They stated that "whereas transportation focuses on the degree of absorption (...), identification describes a strong attachment to a character indicated by seeing the character as positive and adopting his or her goals and perspective on the narrated events" (Tal-Or & Cohen, 2010, p. 406).

#### **Emotions**

Besides transportation and identification, it seems that there is also a relationship between emotions and the development of story-consistent beliefs. Sympathetic feelings towards and with

a character form a part of the constructs described earlier, but it has been shown that emotions also play a separate role in narrative persuasion (Busselle & Bilandzic, 2009; De Graaf, Hoeken, Sanders, & Beentjes, 2009; Hoeken & Sinkeldam, 2013).

Kneepkens and Zwaan (1995) described that in order to process and comprehend a text or a story, both cognition and emotions are important. With regard to emotions, they stated that these "are linked to the contents of the story, or more specifically, to the protagonists and the course of the narrative events" (Kneepkens & Zwaan, 1995, p. 132). Hoeken and Sinkeldam (2013) successfully manipulated participants' degree of experienced emotions in a story and showed that negative emotions mediated the effect of the story on story-consistent beliefs. Busselle and Bilandzic (2009) also highlighted the importance of emotions in narrative persuasion. The authors developed a 12-item scale to measure narrative engagement, in which emotional engagement was one of the four dimensions, and this dimension was strongly related to the adoption of story-consistent beliefs. The other dimensions are narrative understanding (comprehension of the narrative), attentional focus (becoming less distracted by oneself and surroundings) and narrative presence (entering a narrative world). De Graaf et al. (2009) investigated the dimensions of this scale and showed that only emotional engagement positively predicted participants' attitudes towards the topic of the story used in their experiment. Therefore, the emotions evoked by a story seem to be important for the persuasive effectiveness of a narrative.

#### Perceived relevance and reliability

Besides transportation, identification and emotions, there are also other aspects that should be taken into account with regard to the effectiveness of narrative persuasion. De Graaf et al. (2012) argued that identification might not lead to the adoption of story-consistent beliefs when audience members are not very familiar with the position and situation of the character, which implies that individuals should experience some degree of perceived relevance. In addition, Beentjes et al. (2009) replicated the study of Slater, Rouner and Long (2006), who found that American students changed their opinion about the American legal system after watching an episode of 'Law and Order'. Beentjes et al. (2009) investigated whether Dutch students would also change their opinion after watching this episode although the narrative took place in another country which has a legal system the participants were not familiar with. Their findings showed

that the Dutch participants did not change their opinion on the Dutch penal system, which was explained by referring to perceived relevance: "the story may in the viewers' eyes not be relevant to the Dutch situation" (Beentjes et al., 2009, pp. 252 - 253). Moreover, the narrative did not influence participants' opinion on the American penal system either, most probably because the Dutch participants did not know whether the story was reliable in describing the American legal system. Moreover, Hoeken and Sinkeldam (2013) found that the perceived reliability of the story mediated the effect of the narrative on story-consistent beliefs. Therefore, perceived relevance and reliability are important to take into account when choosing a narrative and measuring the effect of narrative persuasion.

However, it should be noted that the effect found by Beentjes et al. (2009) might also have been due to the fact that the 'Law and Order' episode was partially presented in English (with Dutch subtitles) while English is an L2 for the Dutch participants. Koolstra, Peeters, and Spinhof (2002) suggested that in the case of television programs where characters speak the same language as audience members, the audience members might not only perceive the story to be more relevant and reliable, but maybe also show stronger identification with the characters. This might apply to narratives in general, which implies that the language of a narrative might affect its persuasive effectiveness.

#### Language choice: L1 vs. L2

With regard to language choice in messages, Ahn and Ferle (2008) stated that "the origin of language (local versus foreign language) is one influencing factor that could impact people's attention and comprehension of incoming information" (p. 108). Regarding text comprehension, a reader must be able to construct a situational representation (vicarious experience) of the described events (Zwaan, 2003; Zwaan & Radvansky, 1998). Since readers apply, besides world knowledge, linguistic knowledge to create this representation (Kneepkens & Zwaan, 1995), a text in an L1 or an L2 may lead to different effects.

Duyck and Brysbaert (2004) distinguished between balanced bilinguals (individuals who have learned an L2 during childhood and have similar proficiency in both languages) and unbalanced bilinguals (individuals who have learned an L2 at a later stage in life and are therefore less proficient in this language than in their L1). Words in an L1 are not activated similarly by unbalanced bilinguals as words in an L2, which is explained by the Revised Hierarchical Model (RHM) (Dufour & Kroll, 1995). The RHM holds that individuals have a

separate lexical store in memory for words in an L1 or an L2, and another store for the concepts of these words (the semantic representation). Unbalanced bilinguals are able to access the meaning of L1 words directly via a conceptual link with the L1. However, they can only access the concepts of L2 words indirectly: the word first needs to be associated with its lexical L1 translation because the conceptual link with the L2 is too weak. Based on the RHM, Luna and Peracchio (1999) explained that "messages in the consumer's first language are easier to relate to the information stored in the semantic level than messages in the consumer's second language" (p. 307). Therefore, it is possible that the use of an L2 in a narrative has a negative effect on the comprehension of the story and the narrative understanding - one of the four dimensions distinguished by Busselle and Bilandzic (2009) - among unbalanced bilinguals, which leads to the following hypothesis:

H1: A narrative in an L1 will lead to a higher level of unbalanced-bilingual readers' comprehension of the story than a narrative in an L2.

Since second language reading comprehension is determined by both first language reading ability and language proficiency in the L2 (Carrell, 1991), and since a higher language proficiency leads to more ease in representing a described situation (Zwaan & Radvansky, 1998) and more ease in using conceptual mediation (Dufour & Kroll, 1995; Luna & Peracchio, 1999), it is assumed that a higher language proficiency will lead to a better comprehension of a narrative in that language. This leads to the following hypothesis:

H2: Language proficiency will predict the comprehension of a narrative in that language. The higher the language proficiency, the higher the comprehension.

#### Effect of language choice on identification, transportation and emotions

As described earlier, Koolstra et al. (2002) suggested that audience members might identify more strongly with a character in a television program that speaks the same language as they do. If this can be applied to narratives in general, narratives in an L1 might lead to more identification than narratives in an L2. In addition, the effect of language choice on comprehension could also influence the degree of readers' identification. Zwaan, Ericsson, Lally, and Hill (1998) showed that less-fluent bilinguals were not able to construct a representation of the described events, in contrast to more-fluent bilinguals (as cited in Zwaan & Radvansky, 1998). This implies that it could be more difficult for less-fluent bilinguals to vicariously experience a narrative in an L2, which might affect the degree of identification since this vicarious experience is, as described

earlier, an important aspect of the identification mechanism (Cohen, 2001; Slater & Rouner, 2002). Additionally, transportation might also be affected by language choice and comprehension because of this potential difficulty in visually representing a story in an L2, since visual and mental imagery is one component of this construct (Green & Brock, 2000). Also, since Green and Brock (2000) showed that participants were less transported when they were asked to look for difficult words in a text, it is possible that encountering complicated words in a narrative (in an L2) lowers the degree of transportation. Therefore, the following outcomes are hypothesized:

H3a: A narrative in an L1 will lead to a higher degree of unbalanced-bilingual readers' identification with characters than a narrative in an L2.

H3b: The comprehension of the narrative will predict the degree of unbalanced-bilingual readers' identification with characters. The higher the comprehension, the higher the degree of identification with characters.

H4a: A narrative in an L1 will lead to a higher degree of unbalanced-bilingual readers' transportation into the storyline than a narrative in an L2.

H4b: The comprehension of the narrative will predict the degree of unbalanced-bilingual readers' transportation in the storyline. The higher the comprehension, the higher the degree of transportation.

Language choice might also affect the experienced emotions when reading. Puntoni, De Langhe, and Van Osselaer (2009) showed that the perceived emotionality of marketing messages in consumers' L1 was larger than of an L2, and this effect depended on how often a word had been experienced in either the L1 or the L2 context. This higher emotionality of L1 compared to L2 was also confirmed by Pavlenko (2008). She stated that:

First languages or languages learned in early childhood are commonly perceived and experienced as more emotional than languages learned later in life (...) [because] the process of L2 learning in teenage years or in adulthood does not necessarily offer the same opportunities for affective linguistic conditioning as L1 learning in childhood. (p. 156 & 157)

This can be related to the *encoding specificity hypothesis* (Altarriba, 2003), which holds that when certain features that were present when storing information in memory, may enhance retrieving information from memory when present during the act of retrieval. Language is such a

feature that may enhance memory and could therefore lead to specific emotions (Altarriba, 2003). Therefore, it could be that the same narrative in an L1 or an L2 differs in the extent to which unbalanced bilinguals experience emotions in a story. Using an L2 may provide more emotional distance (Pavlenko, 2008), which could lower the experienced feelings due to reading a narrative. Moreover, comprehension might affect the degree of experienced emotions as well, since emotional experience is affected by the cognitive processing of a text (Kneepkens & Zwaan, 1995) and imagery is one of the content variables that may be related to character- and reader emotions (Dijkstra, Zwaan, Graesser, & Magliano, 1995). This leads to the following hypotheses:

H5a: A narrative in an L1 will lead to a higher degree of unbalanced-bilingual readers' experienced emotions than a narrative in an L2.

H5b: The comprehension of a narrative will predict the degree of unbalanced-bilingual readers' experienced emotions. The higher the comprehension, the higher the degree of experienced emotions.

#### Effect of language choice on story-consistent beliefs

Additionally, since identification, transportation and emotions are important underlying mechanisms in the narrative persuasion process (e.g. Cohen, 2001; De Graaf et al., 2012; Green & Brock, 2000; Murphy et al., 2013), and are expected to be influenced by the language of the narrative, in which comprehension could be a predicting factor, the following outcomes are hypothesized:

H6a: A narrative in an L1 will lead to a higher adoption of story-consistent beliefs among unbalanced-bilingual readers than a narrative in an L2.

H6b: The comprehension of a narrative will predict the adoption of story-consistent beliefs among unbalanced-bilingual readers. The higher the comprehension, the higher the adoption of story-consistent beliefs.

Based on these hypotheses, it is expected that a narrative in an L1 will have a greater persuasive impact than a narrative in an L2. However, to the best of my knowledge, there is a lack of research that investigates the effect of language choice in narrative persuasion. Therefore, to fill this scientific gap, the aim of this study was to compare narratives in an L1 and an L2 with regard to the degree of unbalanced-bilingual readers' comprehension, identification, transportation, emotions and the adoption of story-consistent beliefs. With the results of this

study, organizations will get more insight into the effect of language choice in narratives, which can be used to increase the effectiveness of narratives as a persuasive communication tool in a global context. Figure 1 shows the analytical model of this study.

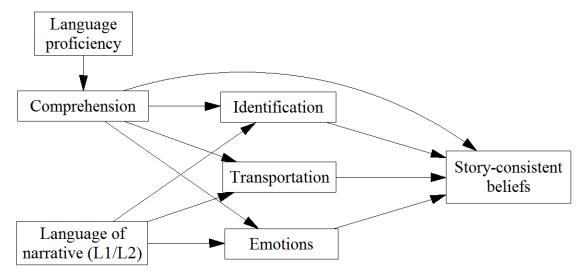


Figure 1. Analytical model of the relationship between language proficiency and comprehension, between language of narrative and identification, transportation and emotions, and between comprehension and identification, transportation, emotions and story consistent-beliefs.

#### Method

#### **Design**

A between-subjects experiment was set up in which Spanish-English unbalanced bilinguals read a narrative in either their L1 (Spanish) or L2 (English). Also, a control condition was used who filled out belief measures either without being exposed to the narrative, as in the study of Green and Brock (2000), or before reading the narrative, as in the study of De Graaf et al. (2012) and Beentjes et al. (2009) (see 'Procedure'). The scores of this control group served as a baseline of attitudes towards the topic of the narrative, to which the scores of the experimental groups were compared.

#### **Materials**

The independent variable was the language of the narrative, which had two levels: Spanish (L1) or English (L2). The story used in the experiment was adopted from De Graaf et al. (2012) (Appendix A), which is about a woman whose mother is in a coma. She discusses the situation

with her sister and they disagree on whether to consider euthanasia or to search for a nursing home. De Graaf et al. (2012) pretested and used this story successfully in an experiment with Dutch students. However, since euthanasia is illegal in Spain (De Benito, 2014, 19 February; ProCon.org, 2010), the story had to be adapted. That is, in the original Dutch story the protagonist was asked whether she knew her mother had a statement to end treatment if her situation were to become hopeless (which is possible in The Netherlands), and this was changed into a question to the protagonist about whether she knew if her mother would want to end treatment in such a situation. This way, it would be more realistic for the story to take place in Spain and participants would be able to experience a higher degree of perceived relevance and reliability. Also, because it was important that participants were motivated to read the story and fill out the questionnaire in their entirety, the original story was reduced with about 800 words, without altering the thread of the storyline.

In their experiment, De Graaf et al. (2012) created two versions of the story: one in which the protagonist was in favor of considering euthanasia and one in which the protagonist preferred searching for a good nursing home (against euthanasia). The latter version was chosen for the current study for several reasons. First, De Graaf et al. (2012) showed that participants' identification with the protagonist in this version of the story mediated the effect of the story on both the attitude towards considering a nursing home (positively) and the attitude towards considering euthanasia (negatively), while the story also directly influenced these two attitudes. Second, although euthanasia is prohibited by the Spanish law, it is possible that young Spanish individuals might be in favor of considering euthanasia. This might be due to, for example, resentment of authority, which may be common "among young people who rebel against conventional societal values or among those who question authority as part of the critical world view encouraged by higher education, or among young adults who struggle to gain independence from parents" (Jung & Kellaris, 2006, p. 736). In other words, the story that goes against the likely view of the majority of the participants was chosen, because the influence of the narrative on participants' beliefs might then be stronger.

The readability (or understandability) of a text is an aspect that influences the difficulty of reading a text in either an L1 or an L2 (Pilán, Volodina, & Johansson, 2014). To be able to have an idea of the readability of the story used in the experiment, several tests were conducted. First, according to the Accessibility Leesniveau Tool, the technical readability of the Dutch

version of the story was of a B1-level (Accessibility, n.d.). The Common European Framework of Reference for Languages distinguishes between six levels of language proficiency: A1, A2, B1, B2, C1 and C2 (Council of Europe, n.d.; Pilán et al., 2014) where C2 is the highest level. This implies that the text of the story was appropriate for readers with a moderate language proficiency. Second, a readability test of the program MS Word showed that the English version of the story had a Flesch Reading Ease of 86 and a Flesch-Kincaid Grade Level of 3.8, which implies that the story was easy to read (Office, n.d.). Third, the program Inflesz (Legibilidad.com, n.d.) showed that the Spanish version of the story had a Fernández Huerta score of 75.03. Therefore, the story should be appropriate for both L1 and L2 readers with a moderate proficiency. However, since the Accessibility Leesniveau Tool did not measure the content and structure of the text (Accessibility, n.d.; Kraf, Lentz, & Pander Maat, 2011), and the tests only analyze the average sentence length and the average number of syllabus per word, while there are many other factors that influence the readability of a text (Jansen & Boersma, 2013), the outcomes of the tests should be interpreted carefully and only used as a broad indication. Moreover, it should be taken into account that not only the readability of the text itself, but also readers' L2 proficiency influences the comprehension of a story in an L2 (Carrell, 1991). Therefore, participants' proficiency in English and Spanish was measured at an individual level as well.

A pilot study was conducted to pretest the English version of the story and the questionnaire. Five master students of the Radboud University in Nijmegen took part in the pretest: four of them had Spanish as an L1 and one had Spanish as an L2. The pretest showed that the story had an appropriate topic, was not too long or difficult and that it was engaging enough. Nevertheless, the participants indicated that the questionnaire was quite long, which could become annoying. Therefore, four items that showed least reliability with the other items of the variables perceived relevance (one item), perceived reliability (two items) and comprehension (one item) were removed. The reason to choose relevance and reliability was that these were only control questions and were not part of the main analyses. Comprehension was chosen because this variable already consisted of six items, whereas most of the other variables originally consisted of less than six items. Also, these scales were not adopted in their entirety from previous research, but were rather supplemented with items that were invented for the current study or were composed of a selection of items that were used by different authors.

The original Dutch story had to be translated to English and Spanish. In order to establish equivalence between the two versions of the story, translation and back-translation was done, as recommended by Craig and Douglas (2005). The Dutch version was first translated to English by two individuals separately. Then, these two versions were compared to create a final English version, which was checked by one native and one nonnative English speaker for idiomaticity. This version was in turn translated to Spanish by a native Spanish speaker. This Spanish version was checked by two native Spanish speakers, and one of them subsequently back-translated the story to English. The first English version was then compared with this new English version, to check if the Spanish and English story were equivalent. Any dissimilarities were discussed with native Spanish and native English speakers to create two final, equivalent versions of the story. It should be noted that the names of the characters in the Dutch version (Sonja and Marjan) were changed into names that were appropriate in both the English and Spanish language context. The names Laura and Andrea were chosen, because these are among the most popular names for girls in Spain, England and the United States (Behind the Name, n.d.). The final Spanish version of the story consisted of 960 words and the English version of 1024 words.

#### **Subjects**

In total, 210 valid questionnaires were collected (70 for each condition). A response was considered valid when the participant was born in Spain, had Spanish as a mother tongue, did not use a dictionary, had spent a realistic amount of time on the page with the story to be able to have read it in its entirety (online questionnaire) and was not older than 40 years. Of the valid responses, 62 were collected online (25 for Spanish, 10 for English, 27 for control) and 148 on paper. This low level of finished online questionnaires in the English condition as compared to the Spanish and control condition is noteworthy, since it shows that many potential participants might not have been confident enough of their English proficiency to continue the experiment. Also for the paper-based version, when participants were handed out the English version, many of them showed that they did not like the fact that the story was written in English, most probably because of a lack of confidence in their English language proficiency.

Since bilinguals can differ in their degree of proficiency and this might influence how the L1 and L2 are processed (e.g. Dufour & Kroll, 1995; Duyck & Brysbaert, 2004; Luna & Peracchio, 1999; Zhang & Schmitt, 2004; Zwaan & Radvansky, 1998), unbalanced Spanish-English bilinguals were involved in this study who were assumed to be more dominant in their

L1 than in their L2. Although the outcomes of the readability tests should be used only as a rough indication, these outcomes indicated that in order to be able to understand the story, a moderate proficiency was needed. According to the EF English Proficiency Index (n.d.), Spain is ranked 20<sup>th</sup> of 63 countries on the Proficiency Index, with a moderate level of proficiency. Therefore, Spanish unbalanced bilinguals were deemed suitable for the current study. Also, since people of the younger generation are assumed to have a better understanding of English than older age groups (Gerritsen, Korzilius, van Meurs, & Gijsbers, 2000), Spanish young people were used as participants. If it turns out that a story in English shows a different effect than one in Spanish among people in this age group, language choice might even have a bigger impact on people in other age groups. This way, as described by Ahn and Ferle (2008), the hypotheses were tested "in a more controlled condition than would be found with a pool of participants of varying ages" (p. 110).

Participants' language proficiency was measured at an individual level with a selfassessment scale. A paired-samples t-test showed a significant difference between Spanish and English proficiency (t(209) = 24.80, p < .001). Participants were shown to have a higher proficiency in the Spanish language (M = 6.72, SD = .54) than in the English language (M = 4.60, SD = 1.24). Therefore, it can be affirmed that the participants in the current study were Spanish-English unbalanced bilinguals. In addition, a one-way ANOVA with as factor condition (Spanish/English/Control) showed no significant effect of condition on Spanish proficiency (F (2, 207) < 1). A similar one-way ANOVA with as factor condition showed a significant effect of condition on English proficiency (F(2, 132.33) = 4.13, p = .018). Since the assumption of homogeneity of variance was violated, Welch's F was reported. Participants in the Spanish condition reported that they had a higher English proficiency (M = 4.87, SD = .90) than participants in the control condition (M = 4.27, SD = 1.50) (Bonferroni correction, p = .013). The English proficiency of the participants in the English condition (M = 4.65, SD = 1.19) did not differ from the Spanish condition and not from the control condition. See Table 1 for an overview of the means and standard deviations of participants' Spanish and English proficiency as a function of condition.

Table 1. Participants' Spanish and English proficiency (1 = very badly, 7= very well) as a function of condition (Spanish, English or Control)

Condition	Spanish proficiency		English pro	English proficiency		
	M	SD	M	SD	n	
Spanish	6.75	.48	4.87	.90	70	
English	6.74	.47	4.65	1.19	70	
Control	6.67	.66	4.27	1.50	70	
Total	6.72	.54	4.60	1.24	210	

A paired-samples t-test showed a significant difference between frequency of reading in Spanish and frequency of reading in English (t (209) = 22.33, p < .001). Participants read more often in the Spanish language (M = 6.42, SD = .98) than in the English language (M = 3.67, SD = 1.70). A one-way ANOVA with as factor condition on the frequency of reading in Spanish showed no significant effect of condition (F (2, 207) < 1). A similar one-way ANOVA showed no significant main effect of condition on frequency of reading in English (F (2, 207) = 1.83, p = .164). See Table 2 for an overview of the means and standard deviations of participants' frequency of reading in Spanish and English as a function of condition.

Table 2. Frequency of reading in either Spanish or English (1 = never, 7 = always) as a function of condition (Spanish, English or Control)

Condition	Frequency of reading Spanish		Frequency reading of English		lish
	M	SD	M	SD	n
Spanish	6.49	.94	3.93	1.65	70
English	6.41	1.00	3.70	1.70	70
Control	6.37	1.01	3.39	1.71	70
Total	6.42	.98	3.67	1.70	210

A one-way ANOVA with as factor condition showed no significant main effect of condition on the years that participants had been studying English (F(2,203) < 1). Table 3 presents an overview of the means and standard deviations of the years that participants had been studying English as a function of condition.

Table 3. Years of studying English (minimum: 0, maximum: 25) as a function of condition (Spanish, English or Control)

Condition	Years studying English			
	M	SD	n	
Spanish	11.19	3.61	68	
English	11.58	3.55	69	
Control	10.70	4.55	69	
Total	11.16	3.93	206	

All participants that were used for the study had the Spanish nationality, were born in Spain and had Spanish as their mother tongue. Also, one participant (0.5%) indicated that he had besides Spanish, French as a mother tongue. The participants were between 14 and 38 years old (M = 21.95, SD = 3.27). A one-way ANOVA with as factor condition showed no significant effect of condition on participants' age (F (2, 205) = 1.58, p = .209). The age of two participants (1%) was unknown. Most participants were female (114; 54.3%) and 65 were male (31%). The gender was of 31 participants (14.8%) unknown, because this question was included in the questionnaire after data-collection had already started. A Chi-square test showed a significant relation between condition and gender ( $\chi^2$  (4) = 13.75, p = .008). According to a Bonferroni correction, more male participants took part in the English condition (31; 44.3%) than in the Spanish (17; 24.3%) and control condition (17; 24.3%), and the number of participants whose gender was unknown was higher in the control condition (16; 22.9%) than in the English condition (4; 5.7%).

A Chi-square test showed no significant relation between condition and educational level  $(\chi^2(8) = 9.64, p = .291)$ . The majority of the participants (124; 59.3%) had finished the *bachillerato* (University Preparatory Studies). A Chi-square test showed no significant relation between condition and current occupation  $(\chi^2(6) = 1.84, p = .934)$ . Most of the participants were studying at the time they took part in the experiment (187; 89.5%), five participants were searching for a job (2.4%) and 15 participants were working (7.2%). The most frequent degree programs were communication studies (40; 20%), teaching/pedagogy (27; 13.5%), business administration (23; 11.5%) – of whom six participants (3%) had also studied law - and journalism (13; 6.5%). Of ten participants (5%) it was unknown what degree program they followed. Most participants (145) were born in Andalucía (69%), which can be explained by the fact that the paper-based questionnaires were distributed in Seville, the capital of this autonomous region. Most participants (202) indicated that they spoke the official Spanish

(Castilian) language at home (96.2%). A Chi-square test showed no significant relation between condition and whether the participant ever had a loved one in a coma ( $\chi^2$  (4) = 6.24, p = .182). Another Chi-square test showed no significant relation between condition and whether the participant ever had to consider euthanasia for a loved one or not ( $\chi^2$  (4) = 2.20, p = .699). Most of the participants never had a loved one in coma (173; 82.4%) and the majority never had to consider euthanasia for a loved one (190; 90.5%). See Appendix B for a table which presents an overview of participants' demographic characteristics as a function of condition.

With regard to the familiarity with the story, ten participants indicated that they knew the story before coming across it in the experiment (seven for the Spanish condition and three for the English condition). However, since the story was originally written in Dutch and only translated for this study, it is very unlikely that the participants already knew specifically the story used in the experiment. Therefore, it might be that they misinterpreted the question and thought it was about being familiar with this kind of storyline. Therefore, these participants were still included in the analyses.

#### **Instruments**

A questionnaire (Appendix C) was developed in which the dependent variables were operationalized. All items were measured on 7-point Likert scales (1= totally disagree and 7 = totally agree). For all scales with  $\alpha > .70$  composite means were calculated. When the Cronbach's  $\alpha$  was below .70, such as with the variable perceived reliability, the inter-item correlation was analyzed, and a score between .2 and .4 was deemed acceptable (Briggs & Cheek, 1986). The variables were:

Story-consistent beliefs. Story-consistent beliefs were measured with four items, adopted from De Graaf et al. (2012), that were introduced with the phrase: "When a loved one is in a coma that he or she will never wake up from..." Three items were about the attitude towards considering euthanasia for a comatose patient: "...I believe it is important to consider the pros and cons of euthanasia carefully", "... I believe it is good to carefully consider euthanasia" and "...I believe considering euthanasia is a way of showing compassion". The reliability of the variable considering euthanasia comprising three items was good ( $\alpha = .76$ ). In addition, one item was about the attitude towards considering a nursing home: "... I believe it is good to consider care in a nursing home", and this item was analyzed separately.

Comprehension. Perceived comprehension was measured with three items of the scale of Busselle and Bilandzic (2009) to measure narrative understanding: "At points, I had a hard time making sense of what was going on in the story", "My understanding of the characters is unclear" and "I had a hard time recognizing the thread of the story" (all reverse-coded). Two items were added: "I encountered many difficult words in the story" (reverse-coded) and "I would be able to easily retell to the story to someone else". The reliability of comprehension comprising five items was good ( $\alpha = .85$ ).

Identification. Although the original identification scale of Cohen (2001) consists of ten items, Tal-Or and Cohen (2010) argued that this scale was never empirically tested and might show overlap with the transportation scale. Therefore, these authors used the five items that captured most of the dimensions of the definition of identification, which were used in this study ("I think I understand Laura well", "While reading, I felt like Laura felt", "I tend to understand why Laura did what she did", "During reading, I felt I could really 'get inside' Laura's head", and "I understood the events in the story the way Laura understood them"). The items were adapted so that they would be relevant for the context of a written narrative, since the original scale focused on a movie. The reliability of identification comprising five items was good ( $\alpha = .75$ ).

Transportation. This variable was measured with six items of the Transportation Scale-Short Form (TS-SF) (Appel, Gnambs, Richter, & Green, submitted). This scale is shorter and therefore a more economical measure than the Transportation Scale of Green and Brock (2000), which contained 11 items. Appel et al. (submitted) showed that this scale was as effective, reliable and sensitive in measuring transportation as the original Transportation Scale. It includes two cognitive (attention), one emotional (feelings), two imaginative (imagery) and one general item, which is in line with the dimensions of which transportation is assumed to consist (Green & Brock, 2000): "I could picture myself in the scene of the events described in the story", "I was mentally involved in the story while reading it", "The story affected me emotionally", "I wanted to learn how the narrative ended", "While reading the story I had a vivid image of Laura" and "While reading I had a vivid image of Andrea." The reliability of transportation comprising six items was good ( $\alpha = .73$ ).

*Emotions.* To measure participants' experienced emotions, three of the four items that measured emotional reactions evoked by a story were adopted from De Graaf et al. (2009, 2012):

"I found the story moving", "The story stirred emotions in me" and "Because of the story, feelings arose in me". The fourth item of De Graaf et al. (2009, 2012) was adopted from the transportation scale of Green and Brock (2000) and (Appel et al., submitted), and was therefore excluded to avoid overlap with transportation ("The story affected me emotionally"). One item that belongs to the dimension emotional engagement was also used, adopted from Busselle and Bilandzic (2009): "I felt sorry for some of the characters in the story". The reliability of emotions comprising four items was good ( $\alpha = .79$ )

**Proficiency.** To assess participants' language proficiency, a self-assessment scale was included, adopted from the first part of the Language Proficiency Scale of Luna, Ringberg, and Peracchio (2008). Participants needed to indicate their skills in writing, speaking, listening and reading for both the Spanish and English language on 7-point Likert scales (1= very badly, 7 = very well). The reliability of Spanish proficiency comprising four items was good ( $\alpha$  = .88). The reliability of English proficiency was also good ( $\alpha$  = .87).

*Demographic characteristics*. Participants were asked to fill out questions about the following demographic characteristics: nationality, age, mother tongue, language spoken at home, country and region of birth, current occupation, gender and educational level. Moreover, they needed to indicate how often they read in English and Spanish (1= never, 7= always) and how long they had been learning and practicing English (in years).

#### **Control questions**

**Personal experience with story events.** Participants were asked whether they ever had a loved one in a coma or whether they ever had to consider euthanasia for a loved one, since this could influence their attitude towards the topic of the narrative. They were also given the option to keep this information to themselves, because these are very sensitive topics.

Familiarity with the story. In line with the study of on Tal-Or and Cohen (2010), participants were asked after reading whether they were familiar with the story. "Did you know the story you have just read before you came across it in this experiment?" (Yes/no).

*Perceived relevance.* This control variable was measured with three items ("The events in the story are relevant to my everyday life", "The topic that is discussed in the story is currently discussed in my society" and "It is possible that I will get in a situation as described in the story"). The first item was adopted from the Transportation Scale of Green and Brock (2000). However, the reliability of perceived relevance comprising three items was unacceptable ( $\alpha$ 

= .36). Therefore, when analyzing the perceived relevance of the story, these items were analyzed separately and named respectively: relevance to everyday life, topic of discussion in society and possibility of situation.

*Perceived reliability.* For this control variable three items were included that measured to what extent the participants perceived the story to be reliable and realistic: "The events in the story are realistic" (adopted from Beentjes et al., 2009), "The events in the story resemble ones in the real world" and "The story reflects problems people can face in life". These last two items were adopted from Tal-Or and Cohen (2010), who adopted the items from Buselle (2001). The reliability of perceived reliability comprising three items was weak ( $\alpha = .62$ ). However, the interitem correlation mean was .357, and since a value between .2 and .4 for scales of fewer than ten items is deemed acceptable (Briggs & Cheek, 1986), the reliability of the variable was still considered as adequate.

Since the original items were in English, the questionnaire was translated to Spanish by a native Spanish speaker, so that participants could fill it out in their mother tongue. Afterwards, the translated items were compared with the original items by a Spanish-English bilingual, to make sure they were equivalent.

#### Procedure

The questionnaires were distributed online and on paper. To check whether there were differences between the two modes of data collection, several one-way ANOVAs were conducted for the most important dependent variables (Appendix D). It was shown that only for comprehension, there was a difference between the two questionnaire modes: participants in the online mode showed higher levels of comprehension than participants who filled out the paper-based questionnaire.

The data were collected between the 17<sup>th</sup> of March and the 14<sup>th</sup> of April 2015. Participants were randomly divided into three groups: one group read the narrative in Spanish (experimental group 1), one group in English (experimental group 2) and one group was either not be exposed to the narrative or filled out the belief measures before reading the story (control group). When the experiment was conducted in a class where several participants took part in the experiment at the same time, participants in the control group also read the story, but filled out

the belief measures before reading the story. This was done to make sure that participants in the control group would need as much time as participants in the experimental groups to finish the experiment, to prevent participants in the experimental groups from rushing to complete the experiment when seeing that other participants would finish after only a few minutes. If a participant in the control condition was participating on his/her own (such as in the online questionnaire), only belief measures and demographic variables were included, because the length of the experiment would not be an issue.

Since it is important that participants were well informed about the experiment before participating – the so-called 'informed consent' (Hart, Boeije, & Hox, 2009) - the questionnaire was introduced with a description that made sure participants were aware they participated on a voluntary basis, that the data of the study would be kept confidential and that participants were able to decline participation without penalty.

An online version of the questionnaire was inserted into Qualtrics (which randomly and evenly assigned participants to one of the three conditions) and the link was sent personally by email (see Appendix E) to Spanish students, whose email addresses were provided by two Spanish teachers. A week after the first email, these students received a reminder email about the questionnaire. Some students were directly asked via a Facebook message to participate and to forward the questionnaire to their friends. At the end of the online questionnaire, participants were also asked to send the questionnaire to other people. Although this type of sampling hindered the calculation of a response rate, it increased the reach of obtaining participants, as described by e.g. Botero and Van Dyne (2009). The version on paper was handed out to students at different faculties of the University of Seville.

When participants agreed to take part in the experiment, they were informed about the experiment and then exposed to the story (except for the control condition). After reading the narrative, participants filled out the questionnaire with the items that measured the dependent variables and demographic variables. The items in the questionnaire that measured the dimensions identification, transportation, emotions, perceived comprehension, perceived reliability and perceived relevance were presented in a mixed order to prevent participants from guessing what variables were measured. The questions about story-consistent beliefs were asked

<sup>&</sup>lt;sup>1</sup> Note: only the belief measures and demographic data of participants in the control condition were used for data analysis.

at the end of the questionnaire, together with the demographic variables, so that participants would get less suspicious about the fact that these were dependent variables in the experiment. In the online version, a hidden timer was set to be able to track how long participants stayed in the page with the story, to check whether it was possible they read the entire story. After completing the questionnaire, participants were thanked for their participation. The experiment took about 10-15 minutes. The questionnaire for the control condition without the story took about five minutes.

When constructing the questionnaire, it was taken into account that instructions could influence the degree of transportation (Green & Brock, 2000). For example, in the introduction of the questionnaire it was not stated that participants should not use a dictionary to look up difficult words, because this problematizes the difficulty of the text, and it might even lower the degree of transportation, since Green and Brock (2000) found that participants who were asked to find difficult words in a text showed a lower degree of transportation. Therefore, at the end of the questionnaire, participants were asked whether they used any kind of dictionary during the reading. Participants who did use a dictionary were excluded from the analyses.

#### **Statistical treatment**

The statistical analyses were carried out with SPSS 22. One-way ANOVAs were conducted to compare the conditions in terms of participants' characteristics and the dependent variables. Also, linear (multiple) regression analyses were conducted to test the relationships between the variables of the analytical model.

#### **Results**

#### **Control questions**

In order to gain insight into the extent to which the story used in the experiment was perceived as reliable and relevant from the participants' viewpoint, several one-way ANOVAs were carried out. Since the reliability of the variable perceived relevance was not high enough, the items of this variable were analyzed separately.

First, a one-way ANOVA with as factor condition (Spanish/English) showed a significant main effect of condition on reliability (F (1, 138) = 5.66, p = .019,  $\eta^2$  = .04). Participants in the Spanish condition perceived the story to be more reliable (M = 6.34, SD = .78) than participants in the English condition (M = 6.02, SD = .83). Second, a one-way ANOVA with as factor condition showed a significant main effect of condition on topic of discussion in society (F (1,

130.37) = 16.08, p < .001). Since the assumption of homogeneity of variances was violated, Welch's F was reported. Participants in the Spanish condition perceived the story to be more currently discussed in society (M = 5.76, SD = 1.50) than participants in the English condition (M = 4.61, SD = 1.86). Third, a one-way ANOVAs with as factor condition (Spanish/English) showed no significant main effect of condition on relevance to everyday life (F(1, 138) < 1). Fourth, a one-way ANOVA with as factor condition showed no significant main effect of condition on possibility of situation (F(1, 138) < 1). See Table 4 for an overview of the means and standard deviations of participants' perceived relevance and reliability of the story as a function of condition.

Table 4. The perceived relevance (in terms of its relevance to everyday life, being a current topic of discussion in society and the possibility for participants to get in a situation described by the story) and reliability of the story as a function of condition (Spanish/English) (1 = totally disagree, 7 = totally agree)

Condition	Relevance everyday li	-	of discussion eiety	Possibility situation	of Perceived reliability	
	M $SD$	M	SD	M $SD$	M $S$	D
Spanish	3.80 1.50	5.76	1.50	4.67 1.8	6.34 .7	8 70
English	3.81 1.58	8 4.61a	1.86a	4.93 1.7	6.02 .8	3 70
Total	3.81 1.50	5.19b	1.78b	4.80 1.8	6.18 .8	2 140

a These cells are based on n = 69.

#### Effect of language choice on comprehension, identification, transportation and emotions

To test hypotheses 1, 3a, 4a and 5a, several one-way ANOVAs were conducted to compare differences between the Spanish and English condition on the dependent variables comprehension, identification, transportation and emotions. First, a one-way ANOVA with as factor condition (Spanish/English) showed a significant main effect of condition on comprehension (F (1, 96.64) = 42.87, p < .001). Since the assumption of homogeneity of variance was violated, Welch's F was reported. Participants in the Spanish condition reported a higher level of comprehension of the story (M = 6.30, SD = .69) than participants in the English condition (M = 5.00, SD = 1.51). Second, a one-way ANOVA with as factor condition (Spanish/English) showed a significant main effect of condition on transportation (F (1, 138) = 8.41, p = .004,  $\eta^2$  = .06). Participants in the Spanish condition indicated that they were more transported into the storyline (M = 5.24, SD = 1.00) than participants in the English condition (M

b Cells based on n = 139.

= 4.74, SD = 1.04). Third, a one-way ANOVA with as factor condition showed a significant main effect of condition on identification (F (1, 138) = 4.50, p = .036,  $\eta^2$  = .03). Participants in the Spanish condition showed a higher level of identification (M = 5.05, SD = 1.11) than participants in the English condition (M = 4.64, SD = 1.18). Fourth, a one-way ANOVA with as factor condition (Spanish/English) showed no significant main effect of condition on experienced emotions (F (1, 138) = 3.26, p = .073). See Table 5 for an overview of the means and standard deviation of participants' comprehension, transportation, identification and emotions as a function of condition.

Table 5. Comprehension, transportation, identification and emotions as a function of condition (Spanish/English story) (1= very low, 7 = very high)

Condition	Comp	orehension	Transp	ortation	Identi	fication	Emotio	ons	
	M	SD	M	SD	M	SD	M	SD	n
Spanish	6.30	.69	5.24	1.00	5.05	1.11	5.07	1.36	70
English	5.00	1.51	4.74	1.04	4.64	1.18	4.66	1.33	70
Total	5.65	1.34	4.99	1.05	4.85	1.16	4.87	1.36	140

## Differences between narrative in L1 or L2 or no narrative on adoption of story-consistent beliefs

In addition, two one-way ANOVAs were conducted to compare differences between the conditions in the adoption of story-consistent beliefs (hypothesis 6a). First, a one-way ANOVA with as factor condition (Spanish/ English/ Control) showed a significant main effect of condition on the attitude towards considering a nursing home (F (2, 207) = 6.80, p = .001,  $\eta^2$  = .06). Participants in the control condition agreed less with the belief that it would be good to consider care in a nursing home (M = 3.61, SD = 1.66) than participants in the Spanish condition (M = 4.30, SD = 1.67) (Bonferroni correction, p = .039) and in the English condition (M = 4.60, SD = 1.53) (Bonferroni correction, p = .001). The Spanish condition did not differ significantly from the English condition.

A one-way ANOVA with as factor condition showed no significant main effect of condition on the attitude towards considering euthanasia (F (2, 135.62) < 1). Since the assumption of homogeneity of variance was violated, Welch's F was reported. Table 6 presents an overview of participants' attitudes towards the story-consistent topics as a function of condition.

Table 6. Attitude towards considering a nursing home/ euthanasia as a function of condition (Spanish/English/Control) (1 = totally disagree, 7 = totally agree)

Condition	Attitude towards considering		Attitude towards			
	a nursing home		conside	considering euthanasia		
	M	SD	M	SD	n	
Spanish	4.30	1.67	4.97	1.68	70	
English	4.60	1.53	5.26	1.19	70	
Control	3.61	1.66	5.26	1.31	70	
Total	4.17	1.67	5.16	1.41	210	

#### Regression analyses to test the analytical model

#### Proficiency as a predictor of comprehension

To determine to what extent language fluency influenced participants' comprehension of the storyline (hypothesis 2), two regression analyses were conducted. First, a simple linear regression analysis on the subset of the sample that had to read the English version of the narrative showed that the variable entered explained 50% of the variance in comprehension (F (1, 68) = 67.13, p < .001). English proficiency was shown to be a significant predictor (B = .89, p < .001). This means that when participants' English proficiency goes up with one point on the scale used, the comprehension of the storyline goes up with .89 on the scale used. See Table 7.

Table 7. Regression analysis for the variable that predict comprehension of the English story (N = 70)

Variable	В	SE B	β	
English proficiency	.89	.11	.71*	
$R^2$	.50			
F	67.13*			

<sup>\*</sup> p < .001, adjusted  $R^2 = .49$ 

A simple linear regression analysis on the subset of the sample that read the Spanish version of the narrative showed that the model was not significant (F(1, 68) = 3.61, p = .062). Spanish proficiency was not a significant predictor of comprehension of the Spanish story (B = .32, p = .062).

#### Regressions on transportation, identification and emotions

To test hypotheses 3b, 4b, 5b, and 6b, several multiple regression analyses were conducted. First, comprehension and language of narrative were analyzed as predictors for transportation, identification and emotions as outcome variables. A multiple regression analysis for the outcome variable identification showed that the variables entered in the model explained 4.9% of the variance in identification (F (2,137) = 3.50, p = .033). However, both comprehension (B = .13, p = .119) and language of narrative (B = -.243, p = .273) were not shown to be significant predictors. When language of narrative was left out of the model as a predictor, the model explained 4% of the variance in identification (F (1, 138) = 5.78, p = .018), and in this case, comprehension was shown to be a significant predictor of identification (B = .17, P = .018). This means that when comprehension goes up with one point on the scale used, identification goes up with .17 on the scale used. See Table 8 for the regression analysis in which comprehension was a significant predictor.

Table 8. Regression analysis for the variables that predict identification (N = 140)

Variable	В	SE B	β
Comprehension	.17	.07	.20*
$R^2$	.04		
T.			
F	5.78*		

<sup>\*</sup> p < .05, adjusted  $R^2 = .03$ 

Second, a similar multiple regression analysis for the outcome variable transportation showed that the variables entered in the model explained 8.8% of the variance in transportation (F(2, 137) = 6.64, p = .002). Comprehension was shown to be a significant predictor of transportation (B = .16, p = .033), but language of narrative was not (B = -.30, p = .132). This means that when comprehension goes up with one point on the scale used, transportation goes up with .16. See Table 9.

Table 9. Regression analysis for the variables that predict transportation (N = 140)

Variable	В	SE B	β
Comprehension	.16	.07	.20*
Language of narrative	30	.20	14

$R^2$	.09
F	6.64*

<sup>\*</sup> p < .05, adjusted R<sup>2</sup> = .08

Third, a similar multiple regression analysis for the outcome variable emotions showed that the model was not significant (F (2, 137) = 1.85, p = .162). Neither comprehension (B = .07, p = .508), nor language of narrative (B = -.33, p = .213) were significant predictors of emotions.

#### **Regressions on belief measures**

In addition, several regression analyses were conducted to test the variables of the analytical model that predict the belief measures. A multiple regression analysis was conducted for attitude towards considering a nursing home. The analysis showed that the model was not significant (F (4, 135) = 2.28, p = .064). However, identification was shown to be a significant predictor of the attitude towards considering a nursing home (B = .43, p = .004). Transportation (B = -.29, p = .141), emotions (B = .03, p = .823) and comprehension (B = -.03, p = .797) were not significant predictors. When comprehension was left out of the model, a multiple regression analysis showed that the variables entered in the model explained 6.3% of the variance in the attitude towards considering a nursing home model and that the model was significant (F (3, 136) = 3.04, p = .031). Here again, only identification was shown to be a significant predictor (B = .43, p = .004). This means that if identification goes up with one point on the scale used, the attitude towards considering a nursing home is goes up with .43 on the scale used. Transportation (B = .30, D = .118) and emotions (D = .03, D = .808) were not shown to be significant predictors. See Table 10.

Table 10. Regression analysis for the variables that predict the attitude towards considering a nursing home (N = 140)

Variable	В	SE B	β	
Identification	.43	.15	.31*	
Transportation	30	.19	20	
Emotions	.03	.13	.03	
$R^2$	.06			
	2.044			
F	3.04*			

<sup>\*</sup> p < .05, adjusted R<sup>2</sup> = .04

A similar multiple regression analysis for the attitude towards considering euthanasia showed that the variables entered in the model explained 10.7% of the variance in the belief considering euthanasia (F (3.136) = 4.04, p = .004). Identification was shown to be a significant predictor of the attitude towards considering euthanasia (B = -.51, p < .001). This means that when identification goes up with one point on the scale used, the attitude towards considering euthanasia goes down with .51 on the scale used. Transportation (B = .23, p = .185), emotions (B = .12, p = .329) and comprehension (B = -.05, p = .564) were not significant predictors of the attitude towards considering euthanasia (see Table 11). Figure 2 shows the results of the regression analyses and displays the analytical model as tested.

Table 11. Regression analysis for the variables that predict the attitude towards considering euthanasia (N = 140)

Variable	В	SE B	β	
Identification	51	.13	40**	
Transportation	.23	.17	.17	
Emotions	.12	.12	.11	
Comprehension	05	.09	05	
$R^2$	.11			
F	4.04*			

<sup>\*</sup> p < .05, \*\* p < .001, adjusted R<sup>2</sup> = .08

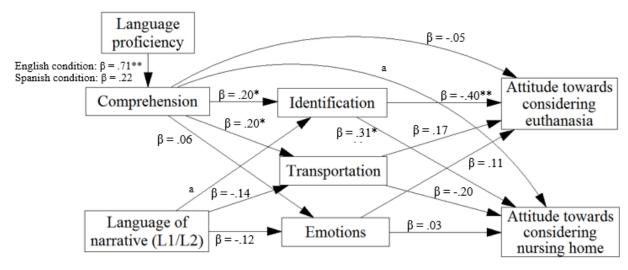


Figure 2. The analytical model of the study as tested with regression analyses. p < .05, \*\* p < .001, a this relationship was not included in the significant regression model.

#### **Conclusion and discussion**

Recently, many scholars have focused on language choice in advertising (e.g. Ahn & Ferle, 2008; Krishna & Ahluwalia, 2008; Luna & Peracchio, 1999), while studies that investigate the effect of language choice in narrative persuasion remain lacking. Therefore, this study has attempted to investigate the difference between a narrative in an L1 or an L2 in the degree of unbalanced-bilingual readers' comprehension, identification, transportation, emotions and the adoption of story-consistent beliefs, and to investigate to what extent comprehension predicted these variables. Therefore, an experiment was set up in which Spanish unbalanced bilinguals took part, who were exposed to a narrative in either their L1 (Spanish) or their L2 (English).

According to the first hypothesis, it was expected that a narrative in an L1 would lead to a higher degree of comprehension than a narrative in an L2. Based on the Revised Hierarchical Model (Dufour & Kroll, 1995), it has been argued that it is easier to process, and therefore easier to comprehend, a text in a first language than in a second language (e.g. Ahn & Ferle, 2008; Luna & Peracchio, 1999). This hypothesis was confirmed, since participants who read the story in Spanish showed higher levels of perceived comprehension than participants who read the story in English.

In addition, it was hypothesized that a higher language proficiency would lead to a higher comprehension of the story. Results seem to lend support for this second hypothesis for the English condition, but not for the Spanish condition. The English language proficiency of participants in the English condition was shown to be a very important predictor of comprehension, as it explained half of the variance in comprehension. The higher participants' self-assessment of English proficiency, the higher their perceived comprehension of the story. As stated by Carrell (1991), second language reading comprehension is influenced by both first language reading ability and second language proficiency. This latter aspect is related to the RHM (Dufour & Kroll, 1995), and the findings suggest that when becoming more fluent in English, the easier it is to use conceptual mediation (Dufour & Kroll, 1995; Luna & Peracchio, 1999) and understand a story in this language. However, for the participants in the Spanish condition, their Spanish proficiency was not a significant predictor of comprehension, which seems to imply that language proficiency does not influence comprehension with regard to first language reading. This can be explained by the 'language threshold', as described by Carrell (1991), which holds that readers need at least a certain proficiency threshold to be able to use

their first language reading strategies when reading a text in a second language. It is possible that above this threshold (such as with an L1), language proficiency does not predict reading comprehension anymore. Instead, language reading ability could become more important. However, this was not measured in the current study. Further research could therefore not only investigate bilinguals' language proficiency, but also include a measurement of reading ability when investigating the difference between narratives in an L1 and an L2, and its effect on reading comprehension.

With regard to the effect of language choice on the underlying mechanisms of narrative persuasion, participants that read the Spanish narrative showed higher levels of transportation and identification than participants who read the English version of the narrative. Therefore, hypothesis 3a and 4a were confirmed. An explanation for these results could be found in the regression analyses: it was shown that a higher level of comprehension of the narrative led to a higher degree of unbalanced-bilingual readers' identification with characters and transportation into the storyline (hypothesis 3b and 4b confirmed). These findings seem to lend support to the assumption that comprehension is important to be able to vicariously experience a narrative which is related to identification (Cohen, 2001; Slater & Rouner, 2002) - possibly because it is more difficult to construct a representation of the described events in a text when this text is not fully comprehended (Zwaan & Radvansky, 1998). Also, since visual and mental imagery is important for transportation (Green & Brock, 2000), it may be that a lower comprehension leads to a lower degree of transportation due to difficulties in mentally and visually representing the story. This could explain the differences between the Spanish and English story in identification and transportation, since it was shown that comprehension was lower for the English story than for the Spanish story. However, comprehension only predicted a small percentage of variance in transportation and identification (8.8% and 4%, respectively), and the proportion of variance in identification and transportation that can be explained by the language of the narrative is not high  $(n^2 = .03 \text{ and } .06, \text{ respectively})$ . Therefore, it can be assumed that there are other factors that predict and influence these constructs as well, such as e.g. realism and relevance, since Tal-Or and Cohen (2010) found that relevance and realism were both related to transportation, and relevance was related to identification. Also, other statistical analyses would be needed to investigate to what extent comprehension is a moderating factor in the relationship between language choice in narratives and these mechanisms, but these were beyond the scope of this

study. Therefore, further research is needed to investigate the influence of comprehension and other factors on the degree of transportation and identification with a narrative in either an L1 or an L2.

It seems that the mechanism emotions is different from transportation and identification in terms of narrative persuasion, since results are inconsistent with hypothesis 5a. It was anticipated that a narrative in an L1 would lead to a higher degree of emotions than a narrative in an L2, since first languages are assumed to be perceived as more emotional than second languages (Pavlenko, 2008; Puntoni et al., 2009). However, contrary to hypothesis 5a, in the current study, the experienced emotions were not affected by the language of the narrative. This might be due to the fact that the studies that confirmed the higher emotionality of first languages compared to second languages focused on words or slogans, but not on entire texts (Pavlenko, 2008; Puntoni et al., 2009). The findings of this study suggest that the difference in emotionality of an L1 versus an L2 disappear in the case of longer texts, such as narratives. However, it is not clear why this should be the case.

It was also shown that, contrary to the case of identification and transportation, comprehension was not a significant predictor of emotions (rejecting hypothesis 5b). Therefore, to experience emotions by reading a story, it seems to be less important to fully comprehend a story. A possible explanation for these findings is that emotions aroused by a story depend more on other characteristics of the story than on the language in which it is written. Hoeken and Sinkeldam (2013), for example, found that emotions experienced by readers differed between stories with a sympathetic or an unsympathetic character. However, the extent to which participants in the current experiment thought the protagonist was sympathetic was not controlled for. Further research into the factors that influence the emotions aroused by a story is therefore needed.

In addition, there were no differences between the Spanish and English condition in the adoption of story-consistent beliefs (rejecting hypothesis 6a). Participants in the Spanish and English condition showed the same attitude towards both considering a nursing home and considering euthanasia, and both showed the same attitude towards considering euthanasia as participants in the control condition. Still, there was a significant difference between the control condition and the experimental conditions with regard to attitude towards considering a nursing home. It was shown that participants in the control condition showed a more negative attitude

towards care in a nursing home when a loved one is in a coma than participants who read the narrative. This finding lends support to the assumption that the narrative did have a persuasive effect and was able to influence participants' opinion about this topic to some extent. These results are not in line with the findings of De Graaf et al. (2012), who did not find differences between the control group and the experimental conditions on attitude. However, it is not clear why the current study did find these differences, as opposed to De Graaf et al. (2012).

Still, since no differences were found between the Spanish and English condition, it can be concluded that the language of the narrative did not affect to what extent readers adopted the beliefs that were implied by the story. This might have been due to the fact that, although both transportation and identification have been shown to be important underlying mechanisms of narrative persuasion (e.g. Cohen, 2001; De Graaf et al., 2012; Green & Brock, 2000; Murphy et al., 2013) and differences were found between the story in L1 and L2 on these mechanisms, only identification was shown to be a significant predictor of both belief measures, whereas emotions and transportation were not. Therefore, the indirect effect of language choice on attitudes via the underlying mechanisms might have not been strong enough to also reveal an effect of language choice on beliefs.

Results showed that when identification was higher (lower), the attitude towards considering a nursing home was higher (lower), whereas the attitude towards considering euthanasia was lower (higher). These findings concur with the findings of De Graaf et al. (2012), who found a mediating and direct effect of identification on these attitudes. Also, the results are partially in line with the study of Murphy et al. (2013), who found that both identification and emotions predicted attitudes, whereas transportation did not. Therefore, these authors state that although these constructs are related, they "may produce different patterns of relationships with respect to knowledge, attitude and behavior" (p. 131). However, in the current study, emotions did not predict participants' attitudes, contrary to De Graaf et al. (2009), who found that emotions predicted the attitudes implied by the story, and Murphy et al. (2013), who showed that the higher the levels of experienced emotions, the lower the adoption of story-consistent attitudes. This seems to lend support to Murphy et al.'s (2013) assumption that emotions, transportation and emotions are not similarly related to the attitudes, knowledge or behavior implied by the story.

Moreover, it was shown that comprehension did not directly predict the attitudes towards considering euthanasia/ a nursing home (rejecting hypothesis 6b). Therefore, the lowered comprehension - which can be considered as a type of disruption - did not directly affect the extent to which participants adopted story-consistent beliefs. This is in line with the research of De Graaf et al. (2009), who found that disruption (selecting difficult words or encountering language errors) did affect different dimensions of narrative engagement, but not the adoption of story-consistent beliefs. Moreover, this is also in line with the research of Busselle and Bilandzic (2009), who found that narrative understanding was related to enjoyment, but not to the story-consistent attitudes. Since the models of the regression analyses, in which only identification was a significant predictor, only predicted 6.3% of the variance in the attitude towards considering a nursing home and 10.7% of the variance in the attitude towards considering euthanasia, and since the proportion of variance in the attitude towards considering a nursing home that is attributable to condition is not very high ( $\eta^2 = .06$ ), more research is needed into the factors that influence participants' attitude towards story-consistent topics, such as the other dimensions of Busselle and Bilandzic's (2009) narrative engagement scale (i.e. narrative presence and attentional focus).

With regard to the control variables, it was shown that the story was perceived as not very irrelevant nor very relevant for everyday life, and both groups indicated that they believed it would be possible they would get in a situation as described by the story. However, the participants in the Spanish condition perceived the story as being more discussed in society than the participants in the English condition, although both means were above neutral. Also, the story was perceived as reliable by both groups, but the perceived reliability was higher for the Spanish than for the English condition, although the variance proportion in reliability that can be explained by language of narrative was not very high ( $\eta^2 = .06$ ). These findings imply that the story was acceptable in terms of these control variables, and also show that language choice, and not only the location in which the narrative takes place - as discussed by Beentjes et al. (2009) -, might affect the degree of perceived reliability and the perceptions on whether the topic is discussed in society. Therefore, it is recommended that future studies also inquire into the effect of language choice on perceived reliability and relevance, and investigate how this might in turn affect transportation, identification, emotions and maybe even the adoption of story-consistent beliefs. Also, since the scales of these variables did not show high reliability, more reliable scales should be developed for further research.

Based on the findings of the current study, it is recommended to write stories in readers' first language, since it was shown that the narrative in the L1 led to a higher degree of identification and transportation than the narrative in the L2, and that comprehension predicted these mechanisms of narrative persuasion. However, no differences were found between the story in L1 and L2 with regard to the adoption of story-consistent beliefs. Still, in this study it was shown that the language of a story may also influence the extent to which audience members are willing read a story in its entirety. It has been argued that with regard to advertising, second language use may attract attention because it is unexpected, and therefore enhance the processing of an ad (e.g. Ahn & Ferle, 2008; Krishna & Ahluwalia, 2008), but with regard to longer texts (such as narratives), this unexpectedness might not lead to favorable outcomes. For a story to be able to have a persuasive effect, obviously, audience members should be willing to read. Sometimes, audience members may refuse to read a text in a second language (Morland, 2002). Luna and Peracchio (1999, p. 308) stated that "consumers who are presented with second language messages may divert their attention to less demanding tasks, for example, messages in their first language". Also, this unwillingness to read may be related to foreign language reading anxiety (Saito, Garza, & Horwitz, 1999), and this anxiety increases when reading in the foreign language is perceived as more difficult. In the current study, this anxiety/ unwillingness to read might be an explanation for the fact that less data were collected online for the English condition. Participants most probably were not confident enough about their English proficiency and therefore did not read the story or did not finish the questionnaire. Also on paper, some participants who were handed out the English version showed to be uncertain about their capabilities to read the story. Therefore, a story in an L2 may not be effective when members of the target group refuse to read the story.

#### Limitations and further research

Choices with regard to methodological issues were made carefully and ethical issues were thoroughly considered, for example by informing participants well about the fact that data would be processed anonymously and about their rights to decline participation without any penalty (informed consent). Still, inevitably, the current study had several limitations.

One limitation is that only two languages were investigated in this study. Also, this study involved unbalanced bilinguals (Duyck & Brysbaert, 2004), because participants learned, on average, the English language at a later stage in life and were more proficient in Spanish than in

English. Since comprehension directly affected the degree of transportation and identification, it seems likely that language choice in narratives may have a different effect among balanced bilinguals than among unbalanced bilinguals. Moreover, since only young people (mostly students) were involved in the experiment, it could be that results would be different with another age group. Peterson (2001) showed with a second-order meta-analysis that research results may differ between student or nonstudent samples. Therefore, the replication of this research with other samples, languages and stories is therefore recommended to be able to generalize results.

The participants in the experiment showed to have, on average, an English proficiency of 4.60, which seems to be a moderate proficiency. Since the readability tests showed that the story would be adequate for readers with a moderate language proficiency (Accessibility, n.d.; Legibilidad.com, n.d.; Office, n.d.), it was assumed that participants would be able to understand the story. Still, participants in the Spanish condition showed higher levels of comprehension than participants in the English condition. This lends more support to the notion that these the readability tests should be interpreted carefully and only be used as a rough indication (Accessibility, n.d.; Jansen & Boersma, 2013; Kraf et al., 2011), as they do not take into account, for example, the language of the story and the complexity of words. Further research could more specifically determine the readability of a story and also, instead of using self-assessment scales to measure participants' proficiency, use official language tests - as e.g. in the research of Zhang and Schmitt (2004) - , to be able to investigate to what extent language choice affects narrative persuasion among participants with different levels of language proficiency.

Additional analyses were carried out to see to what extent the two types of questionnaires (online and on paper) led to different results. It was shown that there were no differences between the two modes, except for comprehension. Participants in the online mode reported higher levels of comprehension than participants who filled out the paper-based questionnaire. This could be explained by the fact that online, more participants took part in the Spanish condition - where comprehension was higher - than in the English condition. Thus, it seems likely that the mode of the questionnaire did not influence the results found in the present study.

Since more male participants took part in the English condition than in the Spanish and control condition, and the proportion of participants whose gender was unknown was higher in the control condition than in the English condition, it might be that participants' gender

influenced the results of the current study. Therefore, more research is needed that controls for gender effects in investigating language choice in narrative persuasion.

The statistical analyses that are needed to be able to investigate to what extent the underlying mechanisms moderate or mediate the adoption of story-consistent beliefs were beyond the scope of this investigation. Further research into the effect of language choice on beliefs is therefore needed, in order to get more insights into the moderating or mediating role of identification, transportation, emotions and comprehension. It is also recommended to not only inquire into the effect on attitudes, but also on knowledge and behavioral intentions, as in the study of Murphy et al. (2013), to investigate to what extent language choice in narratives has an effect on participants' knowledge about the topic of the story and their intention to behave in a story-consistent way.

To conclude, the current investigation was the first to study the effect of language choice in narrative persuasion, and the results were in line with the expectations that identification (as described by e.g. Cohen, 2001) and transportation (as described by e.g. Green & Brock, 2000) would be lower when reading a narrative in an L2 than in an L1, since first and second languages are processed differently in bilinguals' minds, as explained by the Revised Hierarchical Model (Dufour & Kroll, 1995). The study also showed that comprehension predicts these constructs. Since these concepts are argued to be very important mechanisms of narrative persuasion (e.g. Cohen, 2001; Green & Brock, 2000; Murphy et al., 2013; Tal-Or & Cohen, 2010), it is recommended that this study will be replicated with other languages and narratives. The current study also has a number of practical implications. Based on the findings, it is recommended that MNCs or organizations that seek to persuade a certain public using narratives, should do so in the first language of their target group. Although no differences were found between the two languages in participants' attitudes towards the topic of the narrative, audience members may become less transported into the storyline and identify less with characters when the story is written in an L2 than in an L1. In addition, they might be more likely to refuse to read a narrative when it is presented in a second language, because of the extra effort needed to process the message (Luna & Peracchio, 1999). Therefore, when developing e.g. corporate stories (Gill, 2011), narrative advertisements (Edson Escalas, 2004) or narratives formats for health communication (Murphy et al., 2013), it is recommended to opt for localization of messages (Okazaki & Mueller, 2007). That is, to adapt the language of narratives to the language in which

readers are most fluent: their mother tongue. Still, since this study is one of the first to investigate the effect of language choice in narrative persuasion, more research is needed in order to be able to generalize results and provide more detailed recommendations about language choice in narratives for both academic research and practice.

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# Appendix A

### English version of story (1024 words)

#### She was not moving

It was quiet in the intensive care unit. Two female nurses were behind the long desk. I greeted them and asked: "Has my mother given a sign of life?" I knew that after five weeks in a coma it was unlikely, but I kept hoping. "No, no change," one nurse said. "Ok, thanks," I replied.

I walked on. We were allowed to visit her at any hour, because mum's condition could deteriorate in an instant. She was brought here right after the brain haemorrhage. In the beginning, neighbors and acquaintances visited her, but that soon ended. Now only me and my sister Andrea came to visit. There were no other family members left.

In mum's room, nothing could be heard but the beeps of the machines around her. The pistons of the respirator were pumping air into the tube in her mouth. "Hi mum," I greeted her after taking off my coat. "I'm a bit early today, because I need to shop for groceries before going into work." It was strange talking to a person who was not going to respond, but to say nothing at all was worse. Who knows, I thought, she might still be able to hear something.

It was as if mum was only asleep. Her eyes were closed and she had rosy cheeks. Only the tube in her mouth betrayed that she wasn't just sleeping. Her long, grey hair was arranged messily around her head. I took the comb from the nightstand and lifted her head a bit so that I could tidy her hair. Now she looked like a younger version of herself. She was still my mother, who used to put her hair up and wear nice clothes as if she were expecting visitors. If I came home unexpectedly, she always looked well dressed. And she always took good care of me and my sister.

Now she was not moving. I softly put her head back on the pillow. It was incredible to think that she would probably never be the same. The neurologist told us at the start of the week that there was a big chance she would never wake up. They were going to try to take her off the respirator. If she started breathing on her own, she would remain in a persistent vegetative state. She would be able to feel pain, and perhaps swallow liquids, but she would not regain consciousness or be able to communicate. Because she had been in a coma for so long, he just didn't expect her to wake up.

## Spanish version of story (960 words)

#### No se movía

Todo estaba en silencio en la unidad de cuidados intensivos. Dos enfermeras estaban detrás del largo mostrador. Las saludé y pregunté: "¿Ha dado mi madre alguna señal de vida?" Sabía que después de cinco semanas en coma era improbable, pero seguía teniendo esperanzas. "No, ningún cambio", dijo una de las enfermeras. "De acuerdo, gracias", respondí.

Seguí andando. Se nos permitía visitarla a cualquier hora, porque la condición de mamá podía deteriorarse en cualquier momento. Ella fue trasladada aquí después de la hemorragia cerebral. Al principio, vecinos y conocidos la visitaron, pero eso se acabó pronto. Ahora solo yo y mi hermana Andrea la visitábamos. No quedaban otros miembros de la familia.

En la habitación de mamá, no se podía oír nada más que el pitido de las máquinas que la rodeaban. Los émbolos del respirador bombeaban aire en el tubo colocado en su boca. "Hola mamá", la saludé después de quitarme mi abrigo. "Llego un poco temprano hoy, porque tengo que ir a la compra antes de ir al trabajo". Era extraño hablarle a alguien que no iba a responder, pero no decir nada en absoluto era peor. Quién sabe, pensaba, puede que siga siendo capaz de oír algo.

Era como si mamá solo estuviera dormida. Sus ojos estaban cerrados y tenía las mejillas sonrosadas. Solo el tubo en su boca revelaba que no estaba solo dormida. Su pelo largo y gris estaba colocado desordenadamente alrededor de su cabeza. Cogí el cepillo de la mesita de noche y levanté su cabeza un poco para poder arreglar su pelo. Ahora parecía la versión joven de sí misma. Todavía era mi madre, la que se solía recoger el pelo y vestirse como si estuviera esperando una visita. Si yo llegaba a casa inesperadamente, ella siempre estaba bien arreglada. Y siempre cuidó bien de mí y de mi hermana.

Ahora no se movía. Puse suavemente su cabeza sobre la almohada. Era increíble pensar que ella probablemente nunca volvería a ser la misma. El neurólogo nos dijo, al principio de la semana, que era muy probable que nunca se despertara. Iban a intentar quitarle el respirador. Si empezaba a respirar por sí misma, se quedaría permanentemente en estado vegetativo. Sería capaz de sentir dolor y quizás tragar líquidos, pero nunca recuperaría la consciencia ni sería

I would need some time to get used to the idea. If the neurologist was right, she would never talk to me again, and I would never hear her voice again. I felt tears forming in my eyes. At least, I would still be able to visit her and talk to her.

For now, just talking to her helped. "Hey mum", I said. "Andrea came by for a drink yesterday and we..." I stopped talking. I couldn't tell my mother what I had discussed with my sister. The neurologist's bad news had divided us. Of course, we would ask for a second opinion, and have more tests conducted if mum never woke up as this doctor predicted. But then what? What should we do if she really were to remain in this state?

To me, the obvious option would be to look for a nursing home. For some reason, Andrea did not agree. She argued that we had to consider what mum would have wanted. She asked me if mum had ever spoken to me about this - if I knew she would want to end treatment or end her life if her situation had become hopeless. I couldn't believe it. She was actually thinking about euthanasia! I was furious. We couldn't let mum die. She was still our mother. I couldn't talk to Andrea about it anymore, but knew it was important to change her mind. This was about our mother, who had always taken care of us. And now, she needed our care. If only I could make Andrea see this. I took my mother's hand and began to hum the lullaby she used to sing when we were children.

Suddenly, Andrea entered the room. I did not know she was coming as well. She greeted me and started talking to mum: "Hello mum. I came to visit you as well, just like Laura. What do you think, both of your daughters visiting? Just like the old days, right? When we were all still living at home and..." I ignored Andrea's ramblings. Here she was, happily chatting away, but meanwhile she was considering letting mum die. Like it was nothing. Unbelievable.

When Andrea was finished with her chatting with mum, she looked at me and asked: "Shall we go downstairs for a drink?" Perhaps it was indeed better to talk to her alone.

When we sat in the restaurant of the hospital, Andrea started: "Everytime I look at mum, I feel so sorry for her, that she has to just lie there. And to think that this might go on for years and years... It must be horrible for her." "But she is still our mum," I replied. "She always took care of us, and now she needs our care. We can find the best nursing home there is, right?" "But is that what she would've wanted? Do you think she would want to live out her life as a vegetable in a nursing home? Has she ever said anything to you about that?" She looked at me questioningly. "No! And she didn't have to. Of course she would want to live." I didn't

capaz de comunicarse. Debido a que había estado en coma tanto tiempo, el neurólogo simplemente no esperaba que ella volviera a despertarse.

Yo iba a necesitar algún tiempo para hacerme a la idea. Si el neurólogo tenía razón, ella nunca volvería a hablarme de nuevo y yo nunca volvería a escuchar su voz otra vez. Sentí lágrimas formándose en mis ojos. Al menos, todavía podría visitarla y hablar con ella.

Y por ahora, el simple hecho de hablar con ella me ayudaba. "Hola mamá" dije yo. "Andrea vino a tomar algo ayer y..." Dejé de hablar. No podía decirle a mi madre que había discutido con mi hermana. La mala noticia del neurólogo nos había dividido. Por supuesto, podíamos pedir una segunda opinión y hacer más pruebas, si mamá no se despertaba como el doctor había predicho. Pero después, ¿qué? ¿Qué debíamos hacer si no mejorara y se quedara en ese estado?

Para mí, la opción más obvia sería buscar un asilo. Por alguna razón, Andrea no estaba de acuerdo. Ella argumentaba que teníamos que considerar lo que mamá habría querido. Me preguntó si mamá me había hablado alguna vez sobre esto - si sabía que ella habría deseado que el tratamiento médico cesara o que cesaran su vida si la situación se volvía imposible. Yo no me lo podía creer. ¡Realmente estaba hablando de eutanasia! Yo estaba furiosa. No podíamos dejar morir a mamá. Todavía era nuestra madre. No podía hablar con Andrea sobre ello nunca más, pero sabía que era importante hacerla cambiar de opinión. Se trataba de nuestra madre, que siempre había cuidado de nosotras. Y ahora ella necesitaba nuestro cuidado. Ojalá pudiera hacerle ver eso a Andrea. Cogí la mano de mi madre y empecé a murmurar la nana que solía cantarnos cuando éramos niñas.

De repente, Andrea entró en la habitación. No sabía que ella también iba a visitarla. Me saludó y empezó a hablarle a mamá: "Hola mamá. He venido a visitarte, igual que Laura. ¿Qué te parece que tus dos hijas te visiten? Igual que antes, ¿verdad? Cuando todavía vivíamos en casa y..." Ignoré las divagaciones de Andrea. Allí estaba, charlando felizmente, pero mientras tanto estaba considerando dejar morir a mamá. Como si nada. Increíble.

Cuando Andrea terminó de charlar con mamá, me miró y preguntó: "¿Deberíamos ir abajo a beber algo?" Cierto, quizás era mejor hablar con ella a solas.

Cuando nos sentamos en el restaurante del hospital, Andrea comenzó: "Cada vez que miro a mamá, siento tanta pena por ella, viéndole ahí echada. Y pensar que esto puede seguir así durante años y años... Debe ser horrible para ella." "Pero sigue siendo nuestra mamá", contesté. "Ella siempre nos cuidó y ahora necesita nuestro

know what to say. Suddenly I got the undeniable urge to see mum.

I got up and walked away. "Laura wait!" Andrea called after me. Faster and faster I ran through the hallways. It was when I'd gotten to mum's room that I started to cry. They won't kill you off. I won't let them, it echoed my head. It felt as if the tears would never stop.

cuidado. Podemos encontrar el mejor asilo que haya, ¿verdad?" "Pero, ¿es eso lo que ella habría querido? ¿Crees que a ella le gustaría vivir su vida como un vegetal en un asilo? ¿Alguna vez te dijo ella algo sobre ello?" Me preguntó inquisitivamente. "¡No! Y no tenía por qué hacerlo. Por supuesto que querría vivir". No sabía qué decir. De repente me asaltó la terrible urgencia de ir a ver a mamá.

Me levanté y me alejé. "¡Laura espera!" me llamó Andrea. Corrí por los pasillos cada vez más rápido. Fue entonces cuando llegué a la habitación de mamá y empecé a llorar. No van a acabar contigo. No les dejaré, resonó en mi cabeza. Sentí que las lágrimas nunca se dejarían de caer.

# Appendix B

Table 12. Descriptive statistics of demographic characteristics of participants (age, gender, educational level, current occupation, type of study, region of birth and personal situation) as a function of condition (Spanish/English/Control). Percentages are based on valid percentages.

	` 1	•	C	1
	Spanish	English	Control	Total
	condition	condition	condition	
Age	<i>n</i> = 69	n = 69	n = 70	n = 208
range	18 - 36	18 - 36	14 - 38	14 - 38
M	21.43	21.99	22.41	21.95
SD	3.02	3.14	3.58	3.27
Gender	n = 70	n = 70	n = 70	n = 210
Male	17 (24.3%)	31 (44.3%)	17 (24.3%)	65 (31%)
Female	42 (60%)	35 (50%)	37 (52.9)	114 (54.3%)
Unknown	11 (15.7%)	4 (5.7%)	16 (22.9%)	31 (14.8%)
Educational level	n = 69	n = 70	n = 70	n = 209
E.S.O	2 (2.9%)	2 (2.9%)	5 (7.1%)	9 (4.3%)
Formación	0 (0%)	3 (4.3%)	2 (2.9%)	5 (2.4%)
Profesional de Grado Medio				
Bachillerato	41 (59.4%)	40 (57.1%)	43 (61.4%)	124 (59.3%)
Formación	2 (2.9%)	7 (10%)	4 (5.7%)	13 (6.2%)
Profesional de	_ (=:> /*)	, (10,70)	. (61,70)	10 (0.270)
Grado Superior				
Enseñanza	24 (34.8%)	18 (25.7%)	16 (22.9%)	58 (27.8%)
Universitaria <sup>2</sup>				
Current occupation	n = 69	n = 70	n = 70	n = 209
Studying	63 (91.3%)	63 (90%)	61 (87.1%)	187 (89.5%)
Searching for a	1 (1.4%)	2 (2.9%)	2 (2.9%)	5 (2.4%)
job				
Working	5 (7.2%)	4 (5.7%)	6 (8.6%)	15 (7.2%)
Other	0 (0%)	1 (1.4%)	1 (1.4%)	2 (1%)
Type of study	n = 67	n = 68	n = 65	n = 200
University	2 (3.0%)	6 (8.8%)	12 (18.5%)	20 (10%)
(not specified)				
Audiovisual	17 (25.4%)	17 (25%)	6 (9.2%)	40 (20%)
communication/				

<sup>&</sup>lt;sup>2</sup> E.S.O = Secondary Education, Formación Profesional de Grado Medio = Middle Grade Vocational Education, Bachillerato = University Preparatory School, Formación Profesional de Grado Superior = Advanced Vocational Education, Enseñanza Universitaria = University Studies.

Public relations/				
Advertising				
Pedagogy/	7 (10.4%)	10 (14.7%)	10 (15.4%)	27 (13.5%)
teaching	- /	0 (40 00)	0 (10 00)	<b>22</b> (44 <b>2</b> 2)
Business	5 (7.5%)	9 (13.2%)	9 (13.8%)	23 (11.5%)
administration/				
human resources/				
marketing/ finance				
Journalism	5 (7.5%)	1 (1 50/)	7 (10 90/)	12 (6 50/.)
Tourism	3 (7.3%) 8 (11.9%)	1 (1.5%) 0 (0%)	7 (10.8%) 3 (4.6%)	13 (6.5%)
Law	5 (7.5%)	4 (5.9%)	1 (1.5%)	11 (5.5%) 10 (5.0%)
Mathematics/	4 (6%)	1 (1.5%)	4 (6.2%)	9 (4.5%)
statistics	4 (070)	1 (1.570)	4 (0.2%)	9 (4.3%)
Psychology	3 (4.5%)	0 (0%)	4 (6.2%)	7 (3.5%)
English studies	1 (1.5%)	3 (4.4%)	2 (3.1%)	6 (3%)
Other (e.g.	10 (14.9%)	17 (25%)	7 (10.8%)	34 (17%)
biology,	10 (1 1.5 /0)	17 (2570)	7 (10.070)	31 (1770)
chemistry,				
history,				
economics,				
informatics)				
Autonomous				
region (birth)	n = 70	n = 70	n = 70	n = 210
Andalucía	44 (62.9%)	57 (81.4%)	44 (62.9%)	145 (69%)
Castilla-La	2 (2.9%)	1 (1.4%)	3 (4.3%)	6 (2.9%)
Mancha	= (=.>,0)	1 (11170)	e (e,e)	0 (=1,5 /0)
Castilla y León	0 (0%)	1 (1.4%)	1 (1.4%)	2 (1%)
Cataluña	2 (2.9%)	2 (2.9%)	1 (1.4%)	5 (2.4%)
Comunidad de	3 (4.3%)	1 (1.4%)	1 (1.4%)	5 (2.4%)
Madrid				
Extremadura	6 (8.6%)	1 (1.4%)	0 (0%)	7 (3.3%)
Islas Canarias	1 (1.4%)	1 (1.4%)	0 (0%)	2 (1%)
Comunidad	10 (14.3%)	6 (8.6%)	19 (27.1%)	35 (16.7%)
Valenciana				
Región de	2 (2.9%)	0 (0%)	0 (0%)	2 (1%)
Murcia	0 (0-1)	0.70513	a /a /=-:	4 (0 75)
Principado de	0 (0%)	0 (0%)	1 (1.4%)	1 (0.5%)
Asturias				
Language spoken	n = 70	n - 70	n - 70	n = 210
at home	n = 70	n = 70	n = 70	n = 210
Spanish	69 (98.6%)	67 (95.7%)	66 (94.3%)	202 (96.2%)
A co-official	1 (1.4%)	2 (2.9%)	3 (4.3%)	6 (2.9%)
Spanish language	0. (00)	4 (4 40)	4 /4 4	0 (10()
English	0 (0%)	1 (1.4%)	1 (1.4%)	2 (1%)

Ever had a loved one in a coma?	n = 70	n = 70	n = 70	n = 210
Yes	12 (17.1%)	8 (11.4%)	10 (14.3%)	30 (14.3%)
No	58 (82.9%)	57 (81.4%)	58 (82.9%)	173 (82.4%)
Not responded	0 (0%)	5 (7.1%)	2 (2.9%)	7 (3.3%)
Ever had to consider euthanasia?	n = 70	<i>n</i> = 70	n = 70	n = 210
Yes	3 (4.3%)	7 (10%)	5 (7.1%)	15 (7.1%)
No	66 (94.3%)	61 (87.1%)	63 (90%)	190 (90.5%)
Not responded	1 (1.4%)	2 (2.9%)	2 (2.9%)	5 (2.4%)

## Appendix C

## Questionnaire for experimental group

Estimado participante,

Estás a punto de participar en una investigación que he diseñado para mi tesis de máster en la Facultad de Arte de la Universidad Radboud en Nimega en los Países Bajos. ¡Muchas gracias por estar dispuesto/a a ayudarme!

En este experimento leerás la historia de dos hermanas que discuten sobre la situación de su madre. Me gustaría que lo leyeras detenidamente, como si leyeras un libro. No hay prisa, tómate tu tiempo para leer la historia. Cuando termines de leer, se te pedirá que contestes varias preguntas. No hay respuestas incorrectas: estoy interesada en tu propia opinión. Los datos serán procesados de manera anónima y solo para el presente estudio. El experimento tardará unos 10 a 15 minutos

La información en los registros del estudio se mantendrá confidencial. Los datos se almacenarán de forma segura y se harán disponible solo a las personas que llevan a cabo el estudio a menos que especificamente des permiso escrito para actuar de forma diferente. No se hará ninguna referencia ni de forma oral ni en informes escritos que puedan relacionarte con el estudio. Tu participación en este estudio es voluntaria y puedes elegir rechazar tu participación en él sin ninguna sanción y sin perder los beneficios que te correspondan de otra forma. Si abandonas el estudio antes de que la recogida de datos se haya completado, tus datos le serán devueltos o serán destruidos. La entrega del cuestionario completado constituye tu consentimiento para participar.

Encuentras la historia en la siguiente página y después encontrarás las preguntas.

¡Muchas gracias de antemano por participar!

Lotte Hobelman

Universidad Radboud, Nimega



# [Story in Spanish or English]

Por favor, m	_		rmación j i la histoi		irmar que	has leíd	o toda	la historia:
		ido toda	i ia ilistoi	ııa.				
Ahora que h	as leído la h	istoria, 1	ne gusta	ría que co	mpletara	s algunas	s pregu	ntas. Por favor, indica hasta qué punto
estás de acue	erdo con las	siguient	es afirma	aciones. I	os datos	serán pro	ocesado	os de manera anónima y solo para el
presente estu	ıdio. No vue	elvas atra	ás para le	eer la histo	oria de nu	ievo.		
Si te equivo	cas en una p	regunta	y quieres	corregir	la, puedes	s tachar t	u respu	esta anterior de la siguiente forma:
Totalmente en desacuero	o lo	0	×	0	•	0	О	Totalmente de acuerdo
A continuaci	ión encontra	ırás las p	oreguntas	i <b>.</b>				
1.	-			-	-			asaba en la historia.
Totalmente en desacuerd	o lo	0	0	0	0	0	0	Totalmente de acuerdo
2.	Interpreté l	los event	tos de la	historia c	omo Laui	ra los int	erpreta	ba.
Totalmente en desacuerd	O	0	0	0	0	O	0	Totalmente de acuerdo
3.	Podía imas	oinarme	a mí mis	mo/a en 1	a escena i	de los ev	entos d	escritos en la historia.
Totalmente en desacuerd	0	0	0	0	0	0	0	Totalmente de acuerdo
4.	La historia	me ha n	arecido (	emotiva				
Totalmente en desacuerd	О	0	0	0	0	0	0	Totalmente de acuerdo
5.	Los evento	se da la h	istoria se	on ralawa	ntac nara	mi vida (	liaria	
Totalmente en desacuero	0	0	0	0	0	o o	0	Totalmente de acuerdo
6.	Los evento	s de la h	istoria so	on realista	15			
Totalmente en desacuerd	0	0	0	0	0	О	0	Totalmente de acuerdo
7.	Mientras le	eía me s	entí com	o Laura s	e sentía			
Totalmente en desacuero	0	0	0	0	0	O	0	Totalmente de acuerdo
8.	Mi conocii	miento se	obre los	nersonaie	s es confi	180		
Totalmente en desacuerd	0	0	0	0	0	0	O	Totalmente de acuerdo

9.	Estaba	mentalmen	te involu	crado/a en	la histor	ria mientr	as la le	ía.
Totalmente en desacuerd	0	O	O	0	0	0	0	Totalmente de acuerdo
10. Totalmente en desacuerd	0	oria ha desp o			en mí. o	0	0	Totalmente de acuerdo
	0	stó reconoce o	er el hilo o	de la histo o	oria o	O	0	Totalmente de acuerdo
12. Totalmente en desacuerd	O	oria me afec o	ctó emoci o	ionalment o	e. 0	O	O	Totalmente de acuerdo
	0	endo las raz o	-	-		-	izo. o	Totalmente de acuerdo
14. Totalmente en desacuerd	0	a que se trat o	a en la hi o	storia es u o	ın tema c	comentado o		actualidad en mi sociedad. Totalmente de acuerdo
15. Totalmente en desacuerde	0	a de la histo o			entimien O	tos en mí. o	0	Totalmente de acuerdo
	0	saber cómo o			ria. O	O	0	Totalmente de acuerdo
17. Totalmente en desacuerd	О	entos de la l o		e parecen o	a otros d o	el mundo o	real. o	Totalmente de acuerdo
18. Totalmente en desacuerde	0	ue entiendo o	bien a La o	aura. O	O	O	O	Totalmente de acuerdo
19. Totalmente en desacuerde	О	sentido mal o		nos de los o	persona o		nistoria o	
20. Totalmente en desacuerd	О	as leía la his o	storia, tuv o	ve una clar o	ra image o	n de Laur o	a. o	Totalmente de acuerdo
21. Fotalmente en desacuerde	О	oria refleja o	problema o	s que la g o	ente pue	de afronta o	ar en la o	vida. Totalmente de acuerdo
22. Totalmente	0	ontrado mu o	chas pala o	bras difíc o	iles en la o	historia. o	0	Totalmente de acuerdo

23.	Durante la l	lectura, s	entí que 1	ealmente	"podía r	neterme"	en la	cabeza de Laura.
Totalmente en desacuerd	0	0	0	0	0	0	0	Totalmente de acuerdo
24.	Es posible d	que me o	curra una	situaciói	n parecid	a a la des	crita e	en la historia.
Totalmente en desacuerd	0	0	0	0	0	0	0	Totalmente de acuerdo
25	Mientras le	ía la histo	oria tuve	una clara	imagen	de Andre	<del>-</del> a	
Totalmente en desacuerd	О	0	0	0	0	0	0	Totalmente de acuerdo
26.	Podría cont	arle la hi	storia a o	tra perso	na con fa	cilidad.		
Totalmente en desacuerd	0	0	0	0	0	0	0	Totalmente de acuerdo
27. o Sí		ste la his	toria que	acabas de	e leer ant	es de leei	rla en	este experimento?
Ahora encon	trarás alguna	as pregur	ntas sobre	tu opinio	ón y algu	nos datos	s perso	onales.
Si un ser qu	erido está e	n un con	na del qu	ie nunca	se despi	erte		
28.	Creo que	es impo	rtante coi	nsiderar l	os pros y	los contr	as de	la eutanasia detenidamente.
Totalmente en desacuerd	0	0	0	0	0	0	0	Totalmente de acuerdo en desacuerdo
29.	Creo que	consider	ar la euta	nasia con	no una op	oción es ι	ına fo	rma de mostrar compasión.
Totalmente en desacuerd	0	0	0	0	0	0	0	Totalmente de acuerdo
30.	Creo que	es bueno	consider	ar el cuid	lado en u	n asilo.		
Totalmente en desacuerd	0	0	0	0	0	0	0	Totalmente de acuerdo
31.	Creo que	es bueno	consider	ar la euta	nasia.			
Totalmente en desacuerd	0	0	0	0	0	0	O	Totalmente de acuerdo
Por favor, in	dica tu nivel	de <b>espaí</b>	<b>ñol</b> en cu	anto a las	siguient	es habilio	lades:	
32.	Comprension	ón lectora	a					
Muy mal	0	0	0	0	0	0	0	Muy bien
33.	Comprension	ón oral						
Muy mal	0	0	0	0	0	0	0	Muy bien
	Expresión e							
Muy mal	О	0	0	0	0	0	0	Muy bien
	Expresión o	oral						
Muy mal	О	O	0	0	O	0	0	Muy bien

Por favor, indica tu nivel	de <b>inglés</b> en cuanto a	las siguientes	habilidades:
----------------------------	------------------------------	----------------	--------------

	36.	Comprension	ón lectora	a					
Muy ma	1	0	О	0	0	0	О	0	Muy bien
		Comprension							M 12.
Muy ma	1	0	0	0	0	0	0	0	Muy bien
		Expresión e							
Muy ma	1	0	0	0	0	0	0	0	Muy bien
		Expresión o							
Muy ma	1	0	0	0	0	0	0	0	Muy bien
	40.	¿Con qué fi	recuencia	ı lees en e	spañol?				
Nunca		0	0	0	0	0	0	0	Siempre
	41.	¿Con qué fi	recuencia	ı lees en iı	nglés?				
Nunca		0	0	0	0	0	0	0	Siempre
	43. o Es	¿En total, d números. ¿Cuál es tu spañola ¿Cuál es tu	nacional o Otra	idad?	ar:			-	cando inglés? Por favor, indícalo en
		¿Cuál es tu spañol		naterna? , mencion	ar:				
	46.	¿Qué lengu	a se habl	a más fre	cuenteme	ente en tu	casa?		
		spañol tra, mencion		•			llego, Ca	ıtalán	o Vasco) o Inglés
		¿En qué pa: spaña		? aís latino:	american	o o Otro,	mencior	nar:	

48. Si naciste en España, ¿en qué Comunidad Autónoma?

0	Andalucía
0	Aragón
0	Cantabria
0	Castilla y León
0	Castilla-La Mancha
0	Cataluña
0	Ceuta
0	Comunidad de Madrid
0	Extremadura
0	Galicia
0	Islas Baleares
0	Islas Canarias
0	La Rioja
0	Melilla
0	Navarra
0	País Vasco
0	Principado de Asturias
0	Región de Murcia
49.	¿Cuál es el nivel de educación más alto que has completado?
0	Educación Secundaria Obligatoria
0	Formación Profesional de Grado Medio
0	Bachillerato
0	Formación Profesional de Grado Superior
0	Enseñanza Universitaria
50.	¿A qué te dedicas actualmente?
οE	studiar o Buscar trabajo o Trabajar
o O	Otro, mencionar:
51.	En caso de que estés estudiando o hayas estudiado, por favor, indica qué clase de estudios realizas/has
	realizado:
	<del></del>
52	¿Cuál es tu género?
	Assculino o Femenino
O IV	rascumo o i ememio
53	¿Alguna vez has tenido a un ser querido en coma?
	í o No o Prefiero no contestar
0.0.	o 110 o 110 no concestar
54.	¿Alguna vez has tenido que considerar la eutanasia para un ser querido?
o Si	
0.0	
55.	¿Has hecho uso de algún tipo de diccionario o traductor durante la lectura?
o Si	
el fir	nal del cuestionario : Muchas gracias por participar en el experimento!



## Appendix D

To control for differences between the two modes of data collection (online/ on paper), several one-way ANOVAs were conducted for the most important dependent variables (identification, transportation, emotions, comprehension and the belief-measures) and the control variables perceived relevance and reliability. First, a one-way ANOVA showed a significant main effect of mode on comprehension (F (1, 100.03) = 12.25, p = .001). Since the homogeneity of variance assumption was violated, Welch's F was reported. Participants in the online mode (M = 6.17, SD = .84) showed a higher degree of comprehension than participants in the paper-based mode (M = 5.47, SD = 1.43). Second, a similar one-way ANOVA with as factor mode (online/ on paper) showed no significant main effect of mode on transportation (F (1, 138) = 1.15, P = .285). Third, a similar one-way ANOVA showed no significant main effect of mode on identification (F (1, 138) < 1). A similar one-way ANOVA showed no significant main effect of mode on emotions (F (1, 138) < 1). See Table 13 for an overview of participants' transportation, emotions, identification and comprehension as a function of questionnaire mode.

Table 13. Comprehension, transportation, identification and emotions as a function of questionnaire mode (online/ on paper) (1 = very low, 7 = very high)

Questionnaire	Comprehension		Transpo	ortation	Identi	fication	Emoti	Emotions		
mode	M	SD	M	SD	M	SD	M	SD	n	
Online	6.17	.84	5.16	1.01	4.93	1.16	4.99	1.50	35	
On paper	5.47	1.43	4.94	1.06	4.83	1.17	4.83	1.31	105	
Total	5.65	1.34	4.99	1.05	4.85	1.16	4.87	1.36	140	

A one-way ANOVA with as factor mode showed no significant main effect of mode on the attitude towards considering a nursing home (F(1, 208) < 1). A similar one-way ANOVA showed no significant main effect of mode on the attitude towards considering euthanasia (F(1, 94.89) < 1). Since the homogeneity of variance assumption was violated, Welch's F was reported. See Table 14 for an overview of participants' attitudes towards the story-consistent topics as a function of questionnaire mode.

Table 14. Attitude towards considering a nursing home/ euthanasia as a function of questionnaire mode (online/ on paper) (1 = totally disagree, 7 = totally agree).

Questionnaire mode		towards ring a nursing		Attitude towards considering			
	home	2 2		euthanasia			
	M	SD	M	SD	n		
Online	4.16	1.73	5.18	1.64	62		
On paper	4.18	1.64	5.15	1.31	148		
Total	4.17	1.67	5.16	1.41	210		

A one-way ANOVA with as factor mode showed no significant main effect of mode on perceived reliability (F(1, 138) < 1). A similar one-way ANOVA showed no significant main effect of mode on relevance for everyday life (F(1, 138) < 1). A similar one-way ANOVA showed no significant main effect of mode on topic of discussion in society (F(1, 137) < 1). A similar one-way ANOVA showed no significant main effect of mode on possibility of situation (F(1, 138) < 1). Table 15 presents an overview of participants' perceived relevance and reliability of the story as a function of questionnaire mode.

Table 15. Perceived reliability and relevance (in terms of its relevance to everyday life, being a topic of discussion in society and the possibility for participants to get in a situation as described by the story) as a function of questionnaire mode (online/on paper) (1 = totally disagree, 7 = totally agree)

Questionnaire mode	Perceiv reliabil			Relevance for everyday life		Topic of discussion in society		Possibility of situation	
	M	SD	M	SD	M	SD	M	SD	n
Online	6.24	.81	3.74	1.48	5.40	1.87	4.57	2.00	35
On paper	6.16	.82	3.83	1.60	5.12a	1.75a	4.88	1.73	105
Total	6.18	.82	3.81	1.56	5.19b	1.78b	4.80	1.80	140

a These cells are based on n = 104

b Cells are based on n = 139

### Appendix E

#### First email

Estimado/a estudiante,

¡Eres exactamente la persona a la que estoy buscando! Soy Lotte Hobelman y he diseñado una investigación para mi tesis de máster en la Facultad de Arte en la Universidad Radboud de Nimega, en los Países Bajos, para la que necesito participantes españoles.

Por ello, he preguntado a Tomás Mazón Martínez, mi ex-profesor/ Núria Dominguez Rodriguez, mi ex-profesora y coordinadora de Erasmus<sup>3</sup>, quien me ha facilitado una lista de estudiantes en la que se encontraban tus datos.

Apreciaría enormemente que tomaras parte en mi investigación, ya que necesito muchos participantes. Puedes participar en la investigación haciendo clic en el siguiente enlace: https://jfe.qualtrics.com/form/SV\_5iiQqcrFetJvsDH

Todos los datos serán procesados de forma anónima. ¡Espero que estés dispuesto a ayudarme y te estaré eternamente agradecida!

Muchas gracias de antemano.

Saludos,

Lotte Hobelman

Universidad Radboud, Nimega

## Reminder email

Estimado/a estudiante,

Hace una semana te envié un correo electrónico preguntándote si estás dispuesto/a a participar en la investigación que he diseñado para mi trabajo final de máster. No sé si ya has tenido tiempo para participar en ella, pero si no, apreciaría enormemente que me ayudaras. ¡Te estaré muy agradecida!

Encontrarás el cuestionario haciendo clic en el siguiente

enlace: https://radboudletteren.eu.qualtrics.com/SE/?SID=SV 5iiQqcrFetJvsDH

Si ya has participado, te lo agradezco muchísimo y puedes ignorar este mensaje.

Muchísimas gracias de antemano.

<sup>&</sup>lt;sup>3</sup> Each student received the e-mail with the name of the teacher that provided his/her e-mail address for this investigation.

Saludos,

Lotte Hobelman

## **English translation emails**

#### First email

Dear student,

You are exactly the one I am looking for! I am Lotte Hobelman and I have set up an investigation for my Master's Thesis at the Faculty of Arts at the Radboud University in Nijmegen, in the Netherlands, for which I am looking for Spanish participants.

Therefore, Tomás Mazón Martínez, my ex-teacher/ Núria Dominguez Rodriguez, my ex-teacher and Erasmus coordinator, provided me with a list of students in which I came across your data. I would really appreciate it if you take part in my research, since I need a lot of participants. You can participate in the investigation by clicking on the following link:

https://radboudletteren.eu.qualtrics.com/SE/?SID=SV 5iiQqcrFetJvsDH

All the data will be processed anonymously. I hope you are willing to help me and I will be forever grateful!

Thank you very much in advance.

Kind regards,

Lotte Hobelman

Radboud University Nijmegen

#### Reminder email

Dear student,

A week ago I sent you an email asking if you are willing to participate in the investigation I have set up for my Master's Thesis. I do not know if you have already had the time to participate, but if you have not, I would really appreciate your help. I would be really grateful!

You can find the questionnaire by clicking the following link:

https://radboudletteren.eu.gualtrics.com/SE/?SID=SV 5iiQqcrFetJvsDH

If you already have participated, I appreciate it very much and you can ignore this message.

Thank you very much in advance.

Kind regards,

Lotte Hobelman