

# Subtitles in English-only TV commercials: Are they still necessary or have they become superfluous?

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**Abstract** Previous studies on the effects of subtitles in cross-national English spoken commercials have yielded contradictory results regarding young and highly educated viewers' ad and brand attitudes. Most studies did not examine whether local-language subtitles are still necessary for older viewers to understand the English dialogues in the commercials. In a between-subjects experiment, we examined whether subtitles had a positive effect on (1) participants' understanding of what the actors in the commercials were saying to each other, and (2) participants' attitudes towards the commercials. Our sample ( $N = 188$ ) consisted of viewers over age forty with different educational backgrounds living in a typical subtitling region. Our study showed that subtitles did not affect viewers' attitudes towards the commercials. Local-language subtitles, however, increased participants' understanding of what was said in the commercials, regardless of their educational level. Subtitles in English spoken commercials intended for an older and broad audience are, therefore, certainly not superfluous.

**Keywords** subtitles, cross-national advertising, communicative effectiveness, English-only commercials

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## 1 Introduction

Multinationals that want to roll out an advertising campaign in multiple countries have to decide whether they use the same visual images, audio elements (e.g. background songs, voice-overs), and on-screen text messages (e.g. product slogans, taglines) in the separate local campaigns. Cross-national television campaigns with standardized visual elements are often centrally developed, usually with English-speaking actors and/or voice overs (De Mooij, 2004). These English-only commercials can be 'localized' through dubbing or subtitling. Empirical research into the added value of language localization of cross-national TV advertisements is scarce. Moreover, the studies have yielded contradictory results. Besides, researchers have focused on European viewers in typical dubbing regions (Spain, Italy, Germany, and the French-speaking part of Belgium). Most samples were limited to young and highly educated consumers, and the vast majority of the studies only included marketing variables, e.g. attitude towards the ad and attitude towards the brand (Cuykx & Smits, 2017; Pagani et al., 2015; Scarpi et al., 2020). Previous research has barely addressed the question whether language localization of English-

only commercials is (still) necessary to convey the advertising message to 21st-century audiences (Raedts et al., 2019). The benefits of local-language subtitles for an audience of older viewers of different educational levels in a typical subtitling region have, to the best of our knowledge, not been examined either. This study attempts to fill this knowledge gap.

## 2 Literature overview

### 2.1 Reasons for the widespread use of English in advertising

Different studies show that English is widely used in television advertising messages targeting consumers whose native language is not English (Gerritsen et al., 2000; Hsu, 2008; Kuppens, 2010; Lee, 2006; Martin, 2002, 2007; Pétery, 2011; Piller, 2000; Riaz, 2019; Ustinova & Bhatia, 2005). Raedts et al. (2015) found that almost two out of three prime-time television commercials in Belgium, France, Italy, the Netherlands, and Spain contain English songs and/or English words in spoken and/or written form.

Why is the use of English in (television) advertising so widespread? The first reason can be found in multinationals' belief that English product names and brand slogans, and by extension standardized English-only advertising messages, help them to globalize the image of their products (Akaka & Alden, 2010; Hornikx & van Meurs, 2020; Martin, 2002; Nelson & Paek, 2007). Second, advertisers also believe that the use of English increases the brand's competitiveness and/or evokes the idea that the brand behind the advertising message excels when it comes to the use of the latest technology (Hornikx & van Meurs, 2020; Martin, 2002). Third, a lot of advertising agencies think that the target audience has no problems understanding the English words and phrases in their advertising messages (de Mooij, 2004; Gerritsen et al., 2000).

However, a large-scale survey by the European Commission (2012) showed that Europeans' English proficiency level is not as high as advertising agencies might assume. Only 27% of the 15- to 24-year-olds in the EU member states rate their English skills as very good; among the over-55s that percentage drops to 15%. Gerritsen et al. (2010) found that a substantial part of university students in Belgium, Germany, France, the Netherlands, and Spain was not able to provide an accurate translation of English phrases used in print ads targeting their age group. A study by Gerritsen et al. (2000) highlighted that non-native English viewers overestimate how much they understand of the English words and phrases in television commercials. The Dutch research team showed fifteen- to eighteen-year-olds and people in their fifties six prime-time television commercials. All ads contained at least one spoken English sentence (e.g. 'The spirit of freshness' or 'One break is never enough'). Over 80% of participants claimed to understand these English sentences, and 76% thought they were able to translate the English phrases correctly. However, when they were asked to write down the English sentences correctly, and to

subsequently translate these English sentences into their native language (Dutch), the majority of participants failed to do so. Gerritsen et al. (2000) found striking age differences. Only 10% of the older participants (50- to 57-year-olds) were able to give a correct transcription of the English phrases that did not appear on the screen, and only 9% of the older participants were able to correctly describe the meaning of these English sentences in Dutch. The younger generation performed significantly better on both comprehension tasks: 37% of the teenagers correctly transcribed the English sentences, and 35% correctly translated or paraphrased the meaning of the English sentences in their mother tongue. Not only participants' age but also their educational level was a decisive factor. More than four out of ten (42%) participants who (had) attended an academic high school were able to explain what was meant by the spoken English sentences, whereas only 7 percent of the participants who (had) attended a vocational secondary school were able to paraphrase in Dutch what was said in English.

## 2.2 The role of comprehension of foreign language on ad effectiveness

Researchers on the use of foreign languages in advertising do not agree on the role of comprehension in the persuasion process (Hornikx & van Meurs, 2020). According to sociolinguists (e.g. Haarmann, 1989; Kelly-Holmes, 2005; Piller, 2003), it is of minor importance that readers or viewers understand the foreign language words in advertising messages because these words primarily have a symbolic function (Kelly-Holmes, 2005). Consequently, it is sufficient that they recognize the foreign language in an advertisement. The moment consumers recognize the foreign language, they activate positive associations about the (inhabitants of the) country where that language is spoken (Hornikx & van Meurs, 2017). These positive associations are subsequently transferred to the advertised product. Hence, foreign languages in advertising messages serve as an implicit country-of-origin cue (Hornikx & van Meurs, 2017). English is a special case, as this language is seldom used to evoke specific ethno-cultural associations (Hornikx et al., 2020). Instead, English is primarily used as a 'marker of globalness': "Ads with English are interpreted as projecting that the company operates internationally as a global player, and that the product is used by consumers worldwide" (Hornikx & van Meurs, 2020, p. 99).

From a psycholinguistic perspective, foreign language elements make an advertising message more difficult to process and understand than an advertising message in the consumer's own language (Domzal et al., 1995). The foreign language mental lexicon is smaller, less rich, and less extensive than the first language mental lexicon (Skehan, 2018). Advertisers seem to take this fact into account: they use relatively simple foreign language utterances (words belonging to basic vocabulary) and/or cognates (Hornikx & van Meurs, 2020, p. 79).

Several experimental studies have shown that understanding foreign language utterances in advertising messages matters for the effectiveness of the advertisement (Hornikx

& van Meurs, 2020). Raedts et al. (2016) found that consumers valued English slogans in a standardized advertising campaign more when they understood the English catchphrases. Participants who were able to translate the English slogans in their mother tongue also had higher purchase intentions compared to participants who did not or only partially understood the English catchphrases. Hornikx et al. (2010) and Hendriks et al. (2017) found that Dutch consumers appreciate easy to understand English language slogans more than difficult to understand English language slogans. Hendriks et al. (2017) also concluded that easy to understand English slogans resulted in a better attitude towards the ads and the advertised products, and in higher purchase intentions.

### 2.3 The effects of subtitling in cross-national English-only TV ads

Gerritsen et al. (2000, p. 28) showed that viewers' understanding of the written and especially the spoken English words in television ads "is not as rosy as the makers of the commercials suppose". Their findings raise the question of whether the language of standardized cross-national television advertising campaigns should be translated into the language of the local viewer.

Many European countries have either a subtitling or a dubbing tradition. In the Netherlands and in the Dutch-speaking part of Belgium, subtitling was and still is the standard (European Commission, 2011; Koolstra et al., 2002). Yet, even in typical dubbing countries (e.g. France, Germany and Spain), the trend is shifting towards subtitling (Riggio, 2010; Perego, 2018).

Research on the effectiveness of local-language subtitles in English-only commercials on European consumers is scarce. Moreover, the research results contradict each other. In addition, most of the participants were viewers from dubbing areas. Scarpi et al. (2020) found that dubbing works better than subtitling to increase Germans' and Italians' attitudes toward the ad, but only when the viewers find that English is very different from their own language. Pagani et al. (2015) observed that viewers of standardized English-only TV ads in Italy, Germany and Spain (all typical dubbing countries) had less positive attitudes towards the ad and towards the brand compared to viewers who saw the subtitled or dubbed version of the ads. No significant differences in attitude scores emerged between participants in the dubbing and in the subtitling condition. Cuykx and Smits (2017) replicated Pagani et al.'s (2015) experimental study in Belgium, a country with two different major language communities, and two different media landscapes. Flanders (where Dutch is the official language) is a typical subtitling region, whereas Wallonia (where French is the official language) has a dubbing tradition. Dubbing yielded lower attitude scores towards the ad and the brand within the group of Dutch-speaking participants. Dutch- and French-speaking participants had similar attitude scores for both the standardized and the subtitled versions of the ads. An experimental study by Raedts et al. (2019) among pupils in Flanders and Wallonia revealed that subtitles boost the communicative effectiveness of English-only ads, especially when the dialogues

in the commercials contain English words that exceed the viewer's English language proficiency level. Effects for marketing effectiveness, however, were only found for ads with English words above the level of basic English learners.

In the above-mentioned studies, participants were young and usually highly educated. Experimental studies on the added value of subtitles for viewers of Generation X, baby boomers and people over 75 of different educational levels are lacking (Raedts et al., 2015, 2019). The primary purpose of our study was to fill this research gap, all the more because Gerritsen et al.'s (2000) study showed that mostly elder and low-educated Dutch-speaking viewers overestimated their understanding of spoken English in TV ads. Gerritsen et al.'s (2000) study, however, is more than twenty years old. It is likely that the English proficiency level among viewers of Generation X, baby boomers and people of the silent generation has increased in the past two decades. Viewers of Generation X are born between 1965 and 1980, baby boomers are born between 1946 and 1964, and people of the silent generation are born between 1928 and 1945 (Dimock, 2019). In 21st century Europe, many people are frequently exposed to the English language, for instance when they surf on the Internet, or watch English-spoken movies and series on their smartphones and tablets (Seidlhofer, 2020).

Following on from the studies mentioned above, we formulated the following two research questions:

- RQ1* Do subtitles enhance Generation X and older viewers' understanding of English-only television commercials?
- RQ2* Does the effect of subtitles on Generation X and older viewers' understanding of English-only television commercials depends on their educational level?

Raedts et al. (2019) found that local-language subtitles have a positive effect on young consumers' attitudes towards the ad, provided that the complexity of the English used in the television commercial exceeds the knowledge level of the viewer. Based on the results of Gerritsen et al. (2000) and the results of the language survey of the European Commission (2012), we assumed that people aged 40 and over, i.e. people of Generation X (born 1965–1980), baby boomers (born 1946–1964) and people of the silent generation (born 1928–1945), are less proficient English language users than the millennials (born 1981–1996) and Generation Z (born 1997–2012). Therefore, we expected to find a positive effect of subtitles on these viewers' attitudes towards English-only ads. This leads us to our third research question:

- RQ3* Do subtitles in English-only television commercials have a positive effect on Generation X and older viewers' attitudes towards the ads?

Our study complements previous research into the effects of subtitles in television commercials in three important ways. First, we conducted an experiment with older viewers

of different educational levels. In addition, we examined the added value of subtitles for the communication effectiveness of English-only TV ads. Except for Raedts et al. (2019), previous researchers only measured the effects of subtitles on the marketing effectiveness of English-only commercials (i.e., consumers' attitude towards the ad and the brand). Third, previous researchers used commercials of different brands. As research has shown that consumers' prior brand attitudes are related to their attitudes towards advertisements of the brand (Lee, 2010; Muehling & McCann, 1993), we chose commercials from the same brand. Hence, we kept prior brand attitude equal and avoided brand bias in our research results. In addition, using commercials from the same brand allows clustered analyses. Previous studies analyzed the effects of subtitles on a commercial-by-commercial basis.

### 3 Methodology

#### 3.1 Description of the selected commercials

For our experiment, we chose four cross-national car commercials, since the use of English in advertising messages of multinationals manufacturing luxurious and sophisticated high-tech culture-free products is widespread (Hornikx & van Meurs, 2020, p. 111). The market share of this luxury car brand (less than 1%) is very low in Belgium (Marklines, 2020), which made it unlikely that a large part of our participants would own a car of the brand. Hence, we could exclude brand familiarity as a possible interference variable in our experiment.

All four commercials lasted 30 seconds and contained spoken English in the form of a monologue or dialogue between actors. The first two commercials ('Copilot' and 'Toy ride') belong to a pan-European campaign called *Performance obsessed*. In the first commercial (Copilot), a young girl wearing a red racing cap, is giving directions to a woman (probably her mother): "Turning into left, two. Turning, turning. Come on. Left, three. Do not cut." The images have been edited in such a way that the viewers get the impression they are watching a street rally. At the end of the commercial, however, it becomes clear that mother and daughter are in an outdoor garden center. In the second commercial, called 'Toy ride', a father picks up his son from a children's party. When they leave the house, the father hides a yellow robot in the vegetation next to the house. In the next scene, the father receives a phone call. He replies to the caller: "The yellow robot? Oh, we'll be right over." In the following scene, we see the father, his son and the yellow robot inside a SUV. In both commercials, the sounds of a racing car can be heard as a Jaguar driving in a residential area disappears from the screen. The third and fourth commercials, featuring the French actress Eva Green, were part of a global advertising campaign launched in 2018. The 'Electrical storm' commercial starts with images of a severe thunderstorm in a city late at night. In the next scene, Eva Green descends a giant staircase of a hotel. A

life-size (computer generated) jaguar walks by her side. When the night porter notices her, he says: “Evening ma’am, it’s a terrible night”. Eva replies: “It’s just a bit of electricity. Nothing to be afraid of”. Together with her pet, she walks out of the hotel, into the storm. The fourth ad is called ‘Popular choice’. In this commercial, Eva Green enters a hotel lobby, again accompanied by her unusual pet. When the assistant at the hotel counter sees her, he confirms he got her message and shows her a tablet, saying “This is our most popular choice”. The actress replies: “Thank you, but I don’t do popular choices”. Next, she confidently walks away from the hotel desk. The four commercials are published by Jaguar Belux on YouTube (<https://www.youtube.com/c/JaguarBELUX/videos>).

Both campaigns use different types of narratives. The ‘Copilot’ and ‘Toy ride’ commercials are so-called slice-of-life commercials in which the product is embedded in an everyday situation (Wahl, 2014). The ‘Popular choice’ and ‘Electric storm’ commercials, however, are so-called arthouse commercials, commercials in which the aesthetic quality seems more important than the advertised product itself (Wahl, 2014). We decided to run separate analyses for both campaigns because of their different narratives, but also because the participants in the study by Verlinden (2018) felt that the ‘Popular choice’ and ‘Electric storm’ commercials better represented the brand Jaguar than both slice-of-life commercials (‘Copilot’ and ‘Toy ride’).

### 3.2 Design

We used a between-subjects design. Each participant saw either the subtitled or the non-subtitled version of the four car commercials. Participants were randomly assigned to one of the experimental conditions. To avoid order effects, the four commercials were shown to the participants in random order.

### 3.3 The survey

We created a General Data Protection Regulation (GDPR) compliant online questionnaire in Qualtrics (an online survey tool). At the beginning of the questionnaire, participants were informed that they would see four commercials of the brand Jaguar. They were informed that their participation was voluntary, that their answers were anonymous, and that they could end their participation at any point. After they had given their consent, the questionnaire started.

We first checked participants’ familiarity with the car brand through three yes-no-questions: ‘Do you know the brand Jaguar?’ (n = 184 ‘yes’), ‘Do you own a Jaguar?’ (n = 2 ‘yes’), ‘Was one of your previous cars a Jaguar?’ (n = 4 ‘yes’). So, most participants knew the car brand, and only a very small proportion (had) owned a Jaguar. Therefore, we decided not to remove participants from the sample based on their familiarity with the car brand. These questions were followed by a seven-points four-item Likert scale measuring participants’ attitudes towards the brand: ‘I like Jaguar’, ‘Jaguar is a brand to

look out for', 'Jaguar fits in my life', and 'I would love to be seen driving a Jaguar'. The items were based on Aggarwal and McGill's scale (2012) for brand attitude. The scale's reliability score was .79.

Then, we measured participants' perceived English proficiency level with the following question: 'If the subtitles are missing when watching an English-language movie or series, how well can you continue to follow the story?'. Participants had to fill in a number from 0 (I cannot follow the film or episode at all) to 10 (I can follow the film or episode as good as a native speaker of English).

Next, participants saw the commercials one by one. Participants were instructed as follows: "In the rest of the questionnaire, we ask you to watch four commercials. You will be shown one clip each time. After each commercial we will ask you some questions about the commercial. It is the intention that you watch each commercial only once. Therefore, we have set a timer. The questionnaire automatically switches to the next page if you have not clicked through yourself."

*Previous exposure to the ad* was elicited by the following question: 'Have you seen this commercial prior to this viewing?'. Participants could check one of the following three response options: no, yes, or don't know. Subsequently, we measured participants' *attitudes towards the ad* with five seven-point semantic differentials: The commercial is (not) fun, boring/exciting, (not) original, (not) attractive, and (not) interesting (cf. Hendriks et al., 2017). The internal reliability of the scales was good: Cronbach's alpha was above .94 for all four commercials.

On the next page of the questionnaire, two multiple choice questions verified participants' *comprehension of spoken English in the commercial*. The comprehension questions were all recognition questions with five answer possibilities (see Table 1 for examples). For each correct answer, participants received one point. For each campaign, they could therefore score four points.

Next, we asked participants about their year of birth, gender and educational level. We also requested participants to indicate whether their data were suitable for the study, i.e. whether they had watched the commercials carefully, and had not looked up the answers to the comprehension questions on the internet. On the next page of the questionnaire, we showed a debriefing text in which we explained the design and the purpose of the study. At the end of this page, participants were given the opportunity to withdraw from the study. On the last page of the questionnaire, we thanked the respondents once again for their cooperation in the study.

### 3.4 Participants

All participants were residents of the Dutch-speaking part of Belgium. Our final sample comprised 188 participants (61.7% women) between 41 and 88 years old ( $M = 56.10$ ,  $SD = 9.01$ ); 58% of participants belonged to Generation X (born between 1965 and 1980), 38.3% were baby boomers (born between 1946 and 1964), the remaining 7 participants (3.7%)



**Table 1** Example items measuring participants' comprehension of the monologues/dialogues in the commercials

Commercial	Question	MC-options
Copilot	At the end of the ad the girl tells her mother to	<ul style="list-style-type: none"> <li>o wait before opening the car trunk</li> <li>o break</li> <li>o drive faster</li> <li>o shift down a gear</li> <li>o I don't know the answer</li> </ul>
Toy ride	What does the man reply to the phone caller?	<ul style="list-style-type: none"> <li>o We'll be right over.</li> <li>o We'll leave as soon as I have found my car keys.</li> <li>o That robot is indeed ours.</li> <li>o My son must have hidden the robot.</li> <li>o I don't know the answer</li> </ul>
Electric storm	What does the woman reply to the night porter?	<ul style="list-style-type: none"> <li>o It's only rain. Nothing to be afraid of.</li> <li>o It's just a bit of electricity. Nothing to be afraid of.</li> <li>o The electricity will not go out. You should not worry about that.</li> <li>o It's just a thunderstorm. It doesn't scare me.</li> <li>o I don't know the answer.</li> </ul>
Popular choice	What does the woman reply to the hotel employee?	<ul style="list-style-type: none"> <li>o Thanks, but I've already booked a table in a popular restaurant myself.</li> <li>o Thanks, but I don't like popular restaurants.</li> <li>o Thanks, but I've already checked out which restaurants are popular.</li> <li>o Thanks, but I don't do popular choices.</li> <li>o I don't know the answer.</li> </ul>

were born between 1933 and 1945 (silent generation). More than one out of four (26.6%) participants held a university degree (bachelor or master or Ph.D.), 36.7% held a degree of a professionally oriented bachelor programme, and 36.7% did not start or complete higher education. Participants' average score on the self-assessment question regarding their English listening skills was 6.99 out of 10 ( $SD = 2.12$ ). More than half of the participants (52%) estimated their English listening skills to be high: they rated themselves with an 8, 9 or 10. Respondents did not receive any incentive for their participation.

Only a small group of participants indicated that they had already seen the 'Copilot' commercial (1.1%), the 'Toy ride' commercial (3.7%), the 'Popular choice' commercial (16%) and the 'Electric storm' commercial (9%). Because of the small numbers, we decided not to exclude participants' data from further data analyses based on their familiarity with one or more commercials.

### 3.5 Procedure and analysis

Participants were recruited through social media messages (Facebook, Twitter, LinkedIn) and e-mail messages containing an anonymous link to the questionnaire. It took participants about 12 minutes on average to complete the survey.

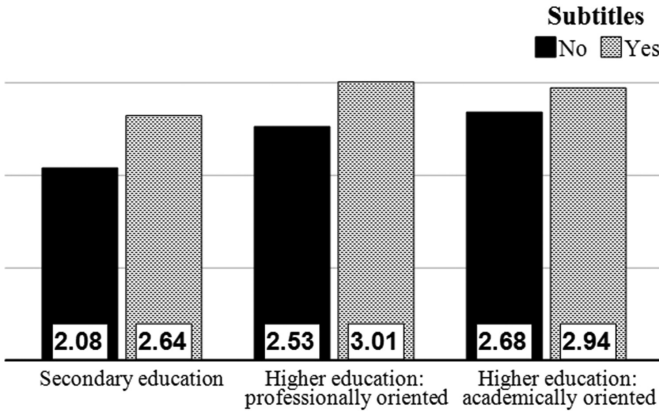
## 4 Results

First, we checked our data for possible differences in sociodemographic characteristics between the two experimental groups, i.e. participants who saw the original version of the ads without subtitles and participants who saw the commercials with subtitles. These analyses showed no differences for age ( $t(180.942) = 0.85, p = .395$ ), gender ( $\chi^2(1) = 1.05, p = .592$ ), and educational level ( $\chi^2(2) = 0.47, p = .793$ ). In addition, there was no significant difference in the self-assessed English proficiency listening skills of the two experimental groups:  $t(183.25) = 1.48, p = .140$ . Finally, we did not find a significant difference in brand attitude scores between the two experimental groups:  $t(186) = 0.19, p = .152$ .

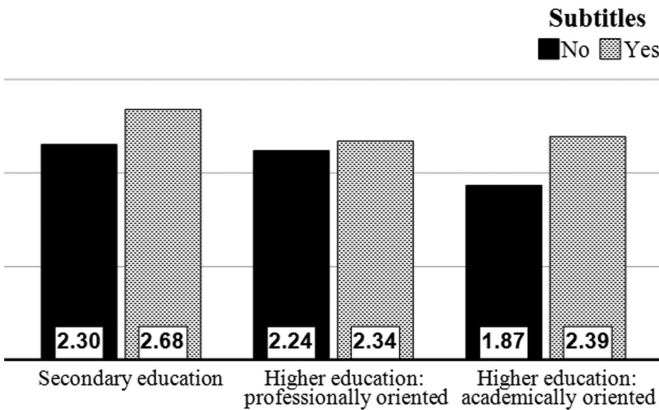
To answer research questions one and two, we performed two (one for each advertising campaign) two-way ANCOVAs. We entered *subtitles* and *educational level* as fixed factors in the model. Participants' comprehension scores for the 'Popular choice' commercial and the 'Electric storm' commercial (first analysis), and the comprehension scores for the 'Copilot' and 'Toy ride' commercial (second analysis) functioned as the dependent variable. Participants' self-assessed English listening proficiency scores were added as the covariate in both analyses. Preliminary checks were conducted to ensure that there was no violation of the assumptions of normality, linearity, homogeneity of regression slopes or reliable measurement of the covariate (cf. Pallant, 2020, p. 328).

We found a significant positive main effect of local-language subtitles on participants' comprehension scores after controlling for perceived English listening proficiency skills for the advertising campaign featuring the 'Electric storm' and 'Popular choice' commercials:  $F(1, 181) = 6.54, p < .05$ , partial eta squared = .035. Participants who saw the commercials with subtitles ( $M = 2.83, SD = 1.24$ ) scored better on the comprehension questions than participants who saw the version without subtitles ( $M = 2.43, SD = 1.20$ ). We found no significant main effect for *educational level*:  $F(2, 181) = 2.84, p = .06$ , partial eta squared = 0.03. There was no interaction effect between the absence/presence of subtitles and participants' educational level on their comprehension scores for both commercials:  $F(2, 181) < 1$ , partial eta square = .003.

We ran the same analysis for the campaign featuring the commercials 'Copilot' and 'Toy ride'. This ANCOVA yielded similar results. We found a main effect for *subtitles*:  $F(1, 181) = 5.17, p < .05$ , partial eta squared = .028. Participants who saw the commercials with subtitles ( $M = 2.44, SD = 1.02$ ) scored better on the comprehension questions than participants who saw the version without subtitles ( $M = 2.20, SD = 1.03$ ). Participants'



**Figure 1** Comprehension scores (minimum score = 0; maximum score = 4) for both advertising campaigns by educational level (N = 188). Campaign with arthouse commercials: Electric storm & Popular choice



**Figure 2** Comprehension scores (minimum score = 0; maximum score = 4) for both advertising campaigns by educational level (N = 188). Campaign with slice-of-life commercials: Copilot & Toy ride

educational level had no effect on their comprehension scores:  $F(2, 181) = 1.88, p = .156$ , partial eta squared = 0.02. Besides, there was no interaction effect between the absence/presence of subtitles and participants’ educational level on their comprehension scores for both commercials:  $F(2, 181) < 1$ , partial eta square = .008.

Thus, we observed a positive effect of subtitles on our participants’ comprehension scores (RQ1), however these effects were small (Pallant, 2020). As can be seen in Figures 1–2, participants’ educational level did not moderate the effect of the added subtitles on their comprehension of the English monologue/dialogues in the commercials (RQ2).

**Table 2** Descriptive statistics of the attitude scores towards the ads (minimum score = 1; maximum score = 7)

Campaign	Subtitles	
	No	Yes
Arthouse commercials Electric Storm & Popular choice	4.97 (1.27)	4.55 (1.45)
Slice-of-life commercials Copilot & Toy ride	4.35 (1.34)	4.13 (1.39)

**Note.** Standard deviations scores between brackets. Items were measured on a seven-point Likert scale with 1 = totally disagree and 7 = totally agree.

To answer research question 3, we conducted two one-way between-groups analyses of covariance. The independent variable in both analyses was the *absence/presence of local subtitles*. The dependent variables were the mean attitude scores for the ‘Popular choice’ commercial and the ‘Electric storm’ commercial on the one hand (first analysis), and the mean attitude scores for the ‘Copilot’ commercial and the ‘Toy ride’ commercial on the other hand (second analysis). Participants’ brand attitude scores were added as a covariate in the analyses. Preliminary checks were conducted to ensure that there was no violation of the assumptions of normality, linearity, homogeneity of regression slopes or reliable measurement of the covariate (cf. Pallant, 2020, p. 328).

After adjusting for brand attitude scores, we found no significant effect of subtitles on participants’ attitude scores for the advertising campaign with the commercials ‘Copilot’ and ‘Toy ride’:  $F(1, 185) < 1$ , partial eta squared = .002, nor for the advertising campaign with the commercials ‘Popular choice’ and ‘Electric storm’:  $F(1, 185) = 2.97$ ,  $p = .087$ , partial eta squared = .016. Table 2 contains an overview of the mean attitude scores for both conditions for each of the advertising campaigns.

## 5 Discussion and conclusion

In this study, we examined the effects of local language subtitles in English-only spoken TV-commercials on older viewers’ actual understanding of the ads on the one hand, and their attitudes towards the ads on the other hand. Our study was prompted by Gerritsen et al. (2000), who found that the vast majority of the older viewers in their sample did not understand or misunderstood what was being said in English. In the present

study, twenty years later, we observed that Dutch subtitles enhance understanding of English television advertising campaigns for viewers from the Dutch-speaking part of Belgium. These results are similar to those of Raedts et al. (2019) who found that subtitles improved Belgian teenagers' understanding of English-spoken television commercials. Our results are also consistent with those of Gerritsen et al. (2000). They showed that (older) Dutch-speaking viewers were significantly less successful in understanding the meaning of English words and phrases in television commercials when those words were not simultaneously displayed on the screen. Thus, comprehension aid in the form of visual information (i.e., an on-screen display of the spoken English words or a translation by means of subtitles) improves consumers understanding of the spoken English words and phrases significantly.

Gerritsen et al. (2000) found that lower educated people understood the English in the TV commercials less well than higher educated people. Our findings did not concur with those of the Dutch research team. Subtitles had no greater effect depending on the participants' educational level. The fact that English nowadays is used "by speakers from all levels of society in practically all walks of life" (Seidlhofer, 2018, p. 391) might explain our findings.

In line with Cuykx and Smits (2017), we observed that added subtitles in the local language had no effect on our participants' attitudes towards the ads. Our findings may be the result of the brand and the product we chose for our experiment. "Ads with English are interpreted as projecting that the company operates internationally as a global player, and that the product is used by consumers worldwide. Such companies and consumers are seen as successful and modern" (Hornikx & van Meurs, 2020, p. 99). These associations of globalness, success and modernity fit the Jaguar car brand perfectly. In addition, English is so widespread in today's society that "it may be felt to be as normal as the consumers' native language" (Hornikx & van Meurs, 2020, p. 116).

Pagani et al. (2015) and Raedts et al. (2019) found that English-spoken commercials without subtitles were less appreciated by teenagers and people in their twenties. The contradiction between their findings and our results may be due to the fact that the participants in Pagani et al. (2015) and the French-speaking participants in the experiment of Raedts et al. (2019) lived in typical dubbing regions. English-spoken commercials without any linguistic adaptation may have felt very unusual to the participants. Cuykx and Smits (2017) observed that Dutch-speaking students found dubbed commercials less attractive than subtitled and non-subtitled commercials. Thus, young consumers seem to adopt negative attitudes towards the format with which they are less or not familiar. Future research could examine whether also Generation X consumers and baby boomers in typical dubbing regions find English-spoken commercials without subtitles less attractive than subtitled commercials or dubbed commercials.

Another consideration for future studies is the amount of English spoken in the commercial. The number of spoken English words in the commercials in our study was quite limited: 22 (Electric storm), 13 (Popular choice), 16 (Toy ride), and 24 (Copi-

lot). English-only commercials with a high number of spoken words probably demand greater attention and cognitive effort to process (Domzal et al., 1995). Therefore, future researchers could examine the moderating role of number of spoken words on the effectiveness of subtitles on viewers' understanding of English-only commercials.

An important caveat to the study is that very few participants were able to answer all comprehension questions correctly, even those who had seen the commercials with subtitles. Only 29 percent of the participants correctly answered all four questions about the arthouse campaign commercials (Electric storm and Popular choice): 38 percent in the subtitle condition and 15 percent in the non-subtitle condition. For the slice-of-life commercials (Copilot and Toy ride), one out of five participants who saw the subtitled slice-of-life commercials and less than one out of ten participants who saw these commercials without subtitles obtained a score of four out of four. In our opinion, these low numbers can be attributed to the way we assessed 'comprehension'. We did not provide our participants with an incomplete script of what was said in the commercial (cf. Gerritsen et al., 2000). Our participants had to understand what was being said without any listening aid. Besides, they had to fit the English words into the story line or message of the commercial, which was cognitively more demanding than the transcription and translation task of Gerritsen et al. (2000). Second, our participants only saw the commercial once. Gerritsen et al. (2000) measured actual comprehension in a second round. In addition, most of our participants had not seen the ad before the experiment. Repeated exposure gives viewers more opportunities to absorb the message content (Newell & Henderson, 1998). Finally, the comprehension questions were displayed after the participants had completed several attitude items. It is plausible that some participants had already forgotten the answer to the comprehension questions at that time. Therefore, it would be interesting to explore the effects of both subtitling and television commercial repetition on viewers' understanding of English-only commercials in a follow-up research study.

A second limitation of our study concerns our measurement of participants' English language proficiency. We used a single item self-reported proficiency measure. Cuykx and Smits (2017) measured the actual English proficiency of their participants by means of the LexTALE. We chose not to use this vocabulary test because the LexTALE is intended for participants with an advanced L2 English proficiency level. We assumed that at least some of our participants would have basic or intermediate English skills only. Furthermore, Puig-Mayenco et al. (2023) determined that the LexTALE test is not a reliable measure of global L2 proficiency with intermediate learners. Nevertheless, follow-up research would ideally include a measurement of participants' actual English proficiency level and/or a multi-item scale covering the four language skills.

A third limitation of our study is the fact that we only measured actual comprehension. Follow-up research should also include a measurement of self-reported effort during viewing. Research (see e.g. Dragojevic and Giles, 2016) has demonstrated that perceived

difficulty can explain listeners' attitudes towards a spoken message. It can be expected that English-spoken commercials without subtitles are perceived as more difficult to process than English-spoken commercials with local-language subtitles. Future experiments could explore the relation between perceived processing fluency and the appreciation for subtitled and non-subtitled commercials.

Thus, we found that local-language subtitles in a typical subtitling region did not influence commercial appreciation, but significantly enhanced older viewers' understanding of what is said in the commercial. Hence, subtitles are certainly not yet superfluous.

### Author contributions

Mariet Raedts, investigation, methodology, data analyses, writing – original draft, writing – review and editing, visualisation; Irene Roozen, investigation, methodology, data analyses, writing – review and editing

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### Conflicting interests

We certify that there are no conflicts of interest.

### Statement of technology use

No AI-based generative technology was used in preparation of this manuscript and the execution of the research that the manuscript reports upon.

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