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Code-switching in online hotel reviews

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Abstract

Scant research can be found on code-switching in online written language. However, it is well-established that computer-mediated communication and the spread of the English language have grown exponentially over the past decade(s). The aim of this study is therefore, to determine in what way code-switching is present in online written discourse. This question was answered utilizing a corpus analysis, using a CMC corpus consisting of Dutch TripAdvisor reviews of men and women. Based on previous research on code-switching, emotional language use, and computer-mediated communication, several variables contributing to these topics have been analyzed. The following variables are addressed in this study: the emotional value of a review (i.e., terrible, neutral and excellent), forms of code-switching (i.e., intra-sentential, inter-sentential and word affixation), motivation of code-switching (i.e., quotation, emphasis, Anglicism, communicating irony, reiteration and other) and gender. Quantitative and qualitative analyses of how these factors influence the occurrence of code-switching have been performed. A total of 125 reviews were collected and analyzed by five different coders. The main findings of the analysis are that, first, more emotional reviews (i.e., positive or negative) do not contain significantly more code-switching than neutral reviews. Second, the intra-sentential type of code-switching is more common than the inter-sentential type or word-affixation type. Interestingly, positive reviews contained significantly more inter-sentential code-switching than neutral and negative reviews. And third, not many differences were found between the reviews written by men and women. Based on these results, it is suggested that the concept of code-switching should be taken into account, both by academia and business organizations.

Keywords: code-switching, emotional language use, gender differences, online hotel reviews, computer-mediated communication, corpus study

Introduction

When someone recently expressed his – rather positive - opinion about a story I told, my Dutch interlocutor did so with the words: “heel nice”, “hoe relaxed” and “vet chill”. Since my immediate environment consists of fellow thesis-writing students, I do not consider these comments as strange. However, for the non-students among us it is essential to note that my Dutch interlocutor used a combination of Dutch and English words to express his opinion. Switching (un)consciously from one language to another or multiple languages in a conversation is called “code-switching” in linguistics (Winford, 2003).

Although research has shown that globalization has and has had a significant effect on the spread of the English language (Steger, 2017), in fact, Johnson (2009) argues that it is crucial to research the English language spread adequately, as this greatly deepens our understanding of globalization. The omnipresence of today's digital media, which entails computer-mediated communication, should not be forgotten either. Given this relatively new source of communication and the fact that English is currently the most popular language online, accounting for 25.9 percent of global internet users (Statista, 2021), it is not surprising that more English is spoken.

Code-switching can occur in several forms; the two most common variants are intra-sentential and inter-sentential code-switching. Speaking one language and then switching to a different language for one or more words is called intra-sentential code-switching. When an entire sentence is uttered in another language, it is called inter-sentential code-switching (Winford 2003, Poplack 1980). The study by Zenner and Geeraerts (2015) examined these fixed expressions in spoken conversations, which, in the current study, are referred to as intra-sentential and inter-sentential code-switching, and found that most multi-word insertions belonged to the intra-sentential form of code-switching.

While it may seem that code-switching occurs unconsciously because of the Anglicized digital media around us, Holmes (2001) and Gumperz (1982) imply that code-switching has a clear purpose or function. Holmes (2001) explains that code-switching occurs to 1) show solidarity; 2) discuss a particular topic; 3) express certain emotions; 4) and for clarification and persuasion. This study is in addition to previous research by Gumperz (1982), who argued that code-switching is used as a conversational strategy to better express social meanings, such as quotation, repetition, interjection, and reiteration, as well as specifying, qualifying, or emphasizing something. Quotation is when a person reports the statement of another speaker. When it comes to repetition, the code-switching instance clarifies or emphasizes the message. Specification mainly has to do with the addressee, who plays an important role in sending a message and is often not directly involved in the conversation. In addition to defining an addressee, code-switching is also used as an interjection (i.e., sentence filler). The reiteration function of code-switching is to repeat a message from one language to another. When an issue is introduced in one language and made explicit in another language, this is called a qualifying motivation for code-switching. The degree of involvement of the writer also plays a role in code-switching occurrences (i.e., personalization versus objectivization), according to Gumperz (1982).

Several studies have examined Gumperz's (1982) classification of code-switching instances (Halim & Maros 2014; Rauf 2017; Duah & Marije, 2013), and all suggest that code-switching is indeed used to achieve communication goals. In addition to Gumperz's motivations for code-switching, Halim and Maros (2014) also used three of Zentella's (1997) motivations for code-switching: clarification, emphasis, and checking. The "checking" motivation of code-switching is often used when the speaker wants the approval or opinion of the listeners, e.g., in the form of a tag question. Halim and Maros' (2014) study was based on the Facebook interactions of five Malay-English bilingual users. Rauf's (2017) data analysis was based on a

questionnaire and interviews with and for international students. Moreover, Duah and Marije's study (2013) confirmed that code-switching does not only occur in speech but also in written form and is triggered by social factors and motivations. Furthermore, the authors explain that advertisers can also use code-switching, as this form of communication can identify with a general speech pattern among the target audience where they want to promote their product.

Additionally, to the motivation of code-switching, Holmes (2001) also suggests that bilingual speakers associate and experience emotions differently in their L1 language than in their L2 language. Pavlenko's (2005) findings are consistent with Holmes's assumption. The different emotional associations of languages affect the choice of language that an individual eventually uses. The study by Harris, Gleason and Aycicegi (2006) even suggests that L1 is the preferred language for emotional expression. Moreover, emotions do not only influence language choice; positive or negative experiences may also give quantitative differences. Rozin, Berman, and Royzman (2010) suggests that positive evaluations are more common than negative evaluations and that positive evaluations can contain more words, mainly in the form of adjectives. This raises the question to what extent different emotions affect code-switching.

Research by Williams, Srinivasan, Liu, Lee and Zhou (2020) examined the link between code-switching and emotions in parents and their children during a puzzle box task. The study looked at bilingual parents' language use (i.e., L1 Chinese or L2 English), CS behavior, and facial emotion behavior (i.e., positive or negative). The authors suggest that especially negative arousal reduces cognitive control and may trigger spontaneous code-switching. It should be noted that this study was based on an oral discourse only.

However, it is also known that emotions or emotional language are perceived differently between men and women. Earlier research has indicated that women have a stronger memory for emotional events than men (Davis, 1999). In the field of emotional perception and expressions, the study by Deng, Chang, Yang, Huo and Zhou (2016) already showed that men

often have more intense emotional experiences, while women have higher emotional expressiveness, especially with negative emotions (i.e., sadness, anger, horror). Concerning the use of English loanwords, the (spoken discourse) studies by Sharp (2001) and Poplack, Sankoff, and Miller (1988) have shown that women generally use fewer English loanwords. Although Poplack et al. (1988) point out that this may also be due to women's higher sensitivity to language norms, the corpus analysis by Zenner, Speelman and Geeraerts (2014) also indicates that men switch slightly more to English than women. This raises the question to what extent gender affects code-switching.

While it can be stated that the phenomenon of code-switching has not gone unnoticed, the link between code-switching and emotional language has only been explored in spoken discourse, and investigations on its use in digital environments are lacking. Interestingly, even studies examining the relationship between digital communication and English proficiency were mainly based on questionnaires or spoken language. However at the same time, Computer-Mediated Communication (CMC) is a means that is frequently researched and widely used by both educational institutions and the business community. CMC can be defined as all (a)synchronous communication (e.g., messages, webinars and websites) between people through computers (Thurlow, Lengel & Tomic, 2004, p. 83). Some examples of these communication channels are private channels such as WhatsApp and E-mail; social network websites such as Facebook and Instagram; and user review sites such as TripAdvisor.

As for the educational purposes of CMC, the study by Bermudez, Prasad, Alsadoon and Hourany (2016) and the study by Eren (2012) showed that social media platforms could contribute to students' English language skills. Female students in particular considered the social media platform Instagram as part of their learning process. However, both studies note that there are many computer-based programs (e.g., Facebook, Google Plus, Twitter), not all of which are considered professional by students. As a result, not all platforms contribute to

educational purposes. Nevertheless, in terms of business purposes, Constantinides (2014) study points out that incorporating social media as part of the marketing toolbox is a strategic necessity today. Social media is already considered the new form of word of mouth (WOM), which influences consumers' decision-making process (Hills & Cairncross, 2011). More specifically, literature from the hotel industry indicated that (favorable) social media marketing results positively affect the booking intention, trust, and loyalty of guests (Leung, Bai & Stahura, 2015; Tatar & Eren-Erdoğmus, 2016). Therefore, it is time and highly relevant to investigate to what extent code-switching occurs in written digital language.

In addition, although several authors (Poplack 1980, Pfaff 1979 & Myers-Scotton 1995) address the methods of code-switching (i.e., intra-sentential and inter-sentential CS) in their studies, scant research can be found on the frequency of inter-and intra-sentential code-switching. Nor has any research been conducted into the differences between men and women in code-switching, while it is already known that men and women experience emotions differently (Davis 1999 & Deng et al. 2016) and use the English language in a different way (Poplack et al. 1988 & Zenner et al. 2014).

Research into this phenomenon not only contributed to research into code-switching in written language, but it also leads to a better understanding of online language use and the motivation and differences behind it, which is relevant for both academia and corporate organizations. The study by Duah and Marije (2013) already suggested that knowing what type of code-switching to use is also highly relevant for advertising purposes, as it can identify with the target audience you want to reach.

Therefore, the following three research questions and hypothesis have been formulated:

1. To what extent is codeswitching present if the review is about an emotional topic?
2. What is the distribution of intra-sentential and inter-sentential code-switching in online reviews?
3. To what extent does motivation affect the number of code-switching instances?
4. Men are more likely to code-switch than women.

Method

Materials

This study examined the phenomenon of code-switching in written online language, with a specific focus on emotional value, the motivation behind the code-switching instances, and gender differences. This study was conducted through a corpus analysis based on online reviews. The reviews came from TripAdvisor, an international website where participants can add reviews of past – hotel - experiences (Wikipedia, 2017). To keep the corpus current and representative[1], only reviews that were written between 2015 and 2020 were selected. The reviews were collected in the year 2021. This is a secondary literature corpus as the material of this study was based on previously written reviews. As proposed earlier, code-switching is defined as (un)consciously switching from one language to another or multiple languages in a conversation. The reviews were selected using TripAdvisor's 5-star rating spectrum (1 star = terrible experience, 2 stars = mediocre experience, 3 stars = average experience, 4 stars = good experience and 5 stars = excellent experience). It has been assumed that a negative experience (1 star = dislike) or positive experience (5 stars = like) is seen as more emotional than an average experience (3 stars = neutral). Since the sorted collection only analyzed Dutch 1-star, 3-star, and 5-star reviews, stratified sampling was used.

Procedure

A group of five undergraduate students has collected and coded a total of 125 reviews. Code-switching was operationalized by detecting one or more words from a language other than the initial language of the review, i.e., English words in a Dutch review. By choosing to display only Dutch reviews on the TripAdvisor website, the coder could easily detect whether

[1] Because the COVID-19 pandemic gave exceptional results in hotel occupancy and therefore in hotel reviews, it was decided not to include both COVID-19 years (i.e., 2020 and 2021) in the analysis, as this could lead to a distorted view.

the reviews contained words other than the original language of the review. This selection makes Dutch the matrix language in this study and English the embedded language. Code-switching instances could be assigned one of three codes (1 = intra-sentential, 2 = inter-sentential and 3= word affixation e.g., “gecanceld”; nominal measurement level). Motivation was determined by the following codes 1 = quotation, 2 = emphasis, 3 = Anglicism (i.e., used if there were no – fitting - equivalents in Dutch) 4 = communicating irony (i.e., code-switching used as a joke), 5 = reiteration and 6 = other (nominal measurement level). Lastly, gender was determined by the following codes 1 = Male and 2 = Female (nominal measurement level). The reviewer's username determined gender. If it was not possible to determine whether the reviewer was male or female, the gender was coded with 0 = Unknown. After the students coded the reviews, the corpus was transferred to SPSS in order to perform the statistical analysis. The statistical tests provided insight at a quantitative (ratio measurement level) and qualitative (nominal measurement level) level into how code-switching occurs in customer reviews. In Figure 1, the variables mentioned above are conceptualized.

In order to establish a certain degree of reliability for the corpus, the Cohen's kappa coefficient (κ) was calculated. The coefficient showed that the interrater reliability between the two coders was fair for motivation; $\kappa = .37$, $p < 0.01$ and element type; $\kappa = .39$, $p < 0.01$. The interrater reliability was moderate for CS length; $\kappa = .60$, $p < 0.01$ and emotional judgment; $\kappa = .51$, $p < 0.01$.

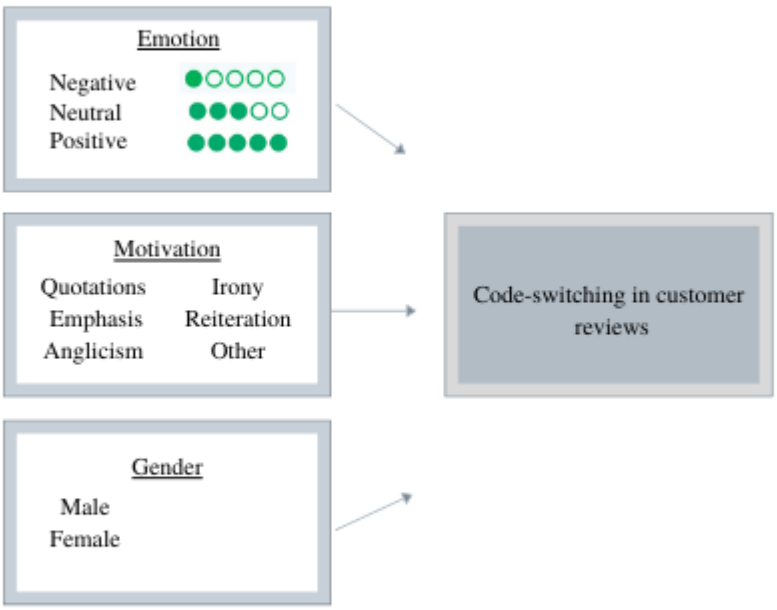

Figure 1. Analytical model.

Statistical treatment

Several statistic tests were performed to determine to which extent code-switching occurs in online customer reviews. Multiple descriptive statistical tests, frequency distributions, an independent t-test, and a one-way ANOVA were used to visualize the quantitative characteristics of the reviews. The first two tests showed the minimum, maximum, and average of code-switching instances and words per review, split by gender. The independent t-test and one-way ANOVA examined whether the results differed between the positive, negative, and neutral reviews. The Chi-square mainly provided insight into the qualitative characteristics of the reviews. The Chi-square examined whether the distribution of motivation and element types across the type of reviews (i.e., positive, neutral or negative reviews) led to different code-switching instances.

Results

Both sections below first explain the quantitative results, followed by the qualitative results. The first paragraph is devoted to the types of reviews and the second to the differences between men and women in the reviews.

Code-switching and emotions

Since the findings of Harris, Gleason and Aycicegi (2006) suggested that L1 is the preferred language for emotional expression, but Williams, Srinivasan, Liu, Lee and Zhou (2020) findings suggested that negative arousal actually stimulates code-switching (CS), a one-way ANOVA was first performed to map the quantitative differences of the reviews. In addition, Rozin, Berman & Royzman (2010) suggested that positive reviews are more frequent and contain more words than negative reviews. Therefore, the CS instances and word count per type of review were examined. The test showed that the type of review (i.e., positive, neutral and negative) had a significant effect on the number of words in a review (F (2, 115) = 3.77, p = .026). The negative reviews (M = 137.56, SD = 97.15) contained significantly more words than the positive reviews (p = .032, Bonferroni-correction; M = 92.34, SD = 59.49). There was no significant difference in word count between the neutral and positive reviews (p = .277, Bonferroni correction) or the neutral and negative reviews (p = 1.00, Bonferroni correction). Furthermore, the type of review did not affect the number of CS instances found in the reviews (F (2, 115) = 0.49, p = .615).

Table 1. Means, Standard Deviations and Sample Sizes of Number of Words & Number of CS Instances split per Type of Review

	Word count			**CS instances**		
	M	SD	*n*	M	SD	*n*
Positive review	92.34	59.49	59	2.08	1.22	59
Neutral review	120.25	79.23	32	1.88	1.60	32
Negative review	137.56	97.15	27	2.22	1.40	27
Total	110.25	76.66	118	2.06	1.37	118

Since little research has been done on the frequency of the element types to date, and the study by Zenner and Geeraerts (2015) was based on oral discourse, a Chi-square test was performed. This test was conducted to gain insight into the distribution of element types across written discourse. The test showed a significant relationship between the inter-sentential CS element type and positive reviews ($\chi 2$ (4) = 10.05, p = .040). The neutral (5%) and negative reviews (7%) with the inter-sentential element type did not differ significantly from each other, compared to the positive reviews (18%). The distribution of intra-sentential element types across positive (78%), neutral (91%), and negative (88%) reviews did not differ significantly from each other. Nor did the word-affixation element type differ in the positive (3%), neutral (5%), or negative reviews (5%). Table 2 presents these results.

Table 2. The Use and Distribution of the Element Types across the Type of Reviews

		Positive review	**Neutral review**	**Negative review**	**Total**
Intra-sentential CS	Count observed	98_{a}	60_{a}	52_{a}	210
	% within element type	78%	91%	88%	84%
Inter-sentential CS		23_{a}	3_{b}	$4_{a, b}$	30
		18%	5%	7%	12%
Word-affixation CS		4_{a}	3_{a}	3_{a}	10
		3%	5%	5%	4%
Total		125	66	59	250
		100%	100%	100%	100%

With regard to the distribution of motivation, there were no differences for the three types of reviews (χ^2 (10) = 11.18, p = .344). However, “Anglicism” was most often chosen as motivation in both the positive (39%), neutral (53%), and negative reviews (22%), followed by the motivation “other”. Further results can be found in Table 3.

Table 3. The Use and Distribution of Motivation across the Type of Reviews

Motivation		Positive review	Neutral review	Negative review	Total
Quotation	Count observed	6_a	2_a	4_a	12
	% within motivation	5%	3%	7%	5%
Emphasis		18_a	6_a	12_a	36
		14%	9%	20%	14%
Anglicism		49_a	35_a	22_a	106
		39%	53%	37%	42%
Communicating Irony		2_a	0_a	2_a	4
		2%	0%	4%	2%
Reiteration		3_a	1_a	3_a	7
		2%	2%	5%	3%
Other		47_a	22_a	16_a	85
		38%	33%	27%	34%
Total		125	66	59	250
		100%	100%	100%	100%

Code-switching and gender

Given the differences that several authors (Poplack, Sankoff, & Miller 1988, Sharp 2001 and Zenner, Speelman & Geeraerts 2014) have found between males and females, it can be hypothesized that men are more likely to code-switch (CS) than women. To further clarify the differences between men and women in customer reviews, in addition to the CS instances, the length of reviews was also examined.

Table 4. Means, Standard Deviations and Sample Sizes of Number of Words & Number of CS Split by Gender

	Male	**Female**
	M (SD)	M (SD)
	N[2] = 58	N[1] = 42
Word count	116.88 (86.44)	95.33 (57.15)
CS Instances	2.05 (1.18)	1.81 (1.25)

The t-tests that were performed to determine whether the number of words count and CS instances differed between males and females did not show significant results. The first independent t-test (t (97.30) = 1.50, p = 0.14) showed that reviews written by males (M = 116.88, SD = 86.44) did not include significant more words than reviews written by females (M = 95.33, SD = 57.15).

The second independent t-test showed (t (85.05) = 0.98, p = 0.33) that reviews written by males (M = 2.05, SD = 1.18) did not have significantly more CS instances per review than reviews written by females (M = 1.81, SD = 1.25).

[2] The sample size in this analysis no longer consisted of 118 reviews as the gender was unknown for 18 reviews.

In addition, the calculated word and CS instances ratio also did not show a significant difference. As the independent t-test (t (88.91) = 0.25, p = .80) showed that the male ratio (M= 0.03, SD= 0.02) did not differ from the female ratio (M= 0.03, SD= 0.02).

Deng, Chang, Yang, Huo and Zhou (2016) suggested in her study that men often have more intense emotional experiences, while women have higher emotional expressiveness. Therefore, it can be hypothesized that men are more extreme in their reviewing style, resulting in more positive and negative reviews than women. The Chi-square ($\chi 2$ (2) = 2.54, p = .28) tested whether there was a different distribution of type reviews among males and females. The distribution of positive reviews between males (24%) and females (14%) did not differ significantly. The distribution of neutral reviews between men (29%) and women (24%) differed even less. About half of all reviews were negative for both men (47%) and women (62%). Table 5 presents these results.

Table 5. Type of Review split by gender

		Male	**Female**	**Total**
Positive review	Count observed	14_a	6_a	20
	% within gender	24%	14%	20%
Neutral review		17_a	10_a	27
		29%	24%	27%
Negative review		27_a	26_a	53
		47%	62%	53%
Total		58	42	100
		100%	100%	100%

However, the Chi-square test that examined the relationship between the element types and gender did yield a significant result ($\chi 2$ (2) = 10.15, p = .006). Besides the fact that this test was conducted to gain insight into the distribution of element types in written discourse, it also provides insight into the differences between men and women. Although, more than two-thirds of the element types were of the inter-sentential element type, namely 86% for men and 76% for women, the significant difference was observed in the inter-sentential element type. In the reviews written by men, the inter-sentential element type was observed only ten times (8%), this was 17 times (23%) for women. The word affixation did not differ significantly between men (6%) and women (1%). Table 6 presents these results.

Table 6. The Use and Distribution of the Element Types across Gender

		Male	**Female**	**Total**
Intra-	Count observed	106_a	56_a	162
sentential CS	% within element type	86%	76%	82%
Inter-		10_a	17_b	27
sentential CS		8%	23%	14%
Word-		7_a	1_a	8
affixation CS		6%	1%	4%
Total		123	74	197
		100%	100%	100%

With regard to the distribution of motivation, the males differed significantly from the women (χ^2 (5) = 17.70, p = .003). Although anglicism was most often chosen as motivation by both men (47%) and women (34%), the significant difference was observed in the "reiteration motivation". This motivation was used by women (8%) but not by men (0%). Further results can be found in Table 7.

Table 7. The Use and Distribution of Motivation across the Type of Reviews

		Male	Female	Total
Motivation				
Quotation	Count observed	5_a	3_a	8
	% within motivation	4%	4%	4%
Emphasis		15_a	16_a	31
		12%	22%	16%
Anglicism		58_a	25_a	83
		47%	34%	42%
Communicating Irony		1_a	3_a	4
		1%	4%	2%
Reiteration		0_a	6_b	6
		0%	8%	3%
Other		44_a	21_a	65
		38%	33%	34%
Total		123	74	197
		100%	100%	100%

Discussion and Conclusion

Overall, this study provides insight into code-switching in - emotional - online written language. The first research question was: “To what extent is codeswitching present if the review is about an emotional topic?” Based on the findings of Rozin, Berman and Royzman (2010), it was suggested that positive evaluations are more likely to occur and contain more words than negative evaluations. However, the results show that negative reviews were significantly longer than positive reviews, which is not in line with Rozin et al.'s (2010) findings. There was no significant difference with regard to the code-switching instances by type of review. Positive or negative reviews did not contain significantly more code-switching instances than neutral reviews.

Based on the findings of Harris, Gleason and Aycicegi (2006), it was suggested that neutral reviews could contain more code-switching instances as positive and negative reviews have a higher emotional value, which causes people to cohere to their L1 language. However, the current results have shown that the type of review had no effect on the number of CS instances found in the reviews. In fact, neutral reviews had the least CS instances, which contradicts Harris et al. (2006) study. This finding also contradicts the study by Williams, Srinivasan, Liu, Lee & Zhou (2020), which suggested that negative arousal reduces cognitive control and triggers code-switching, leading to more code-switching in negative reviews. Yet, it could explain why negative reviews contain more words since reduced cognitive control may also cause people to need more words to explain something. However, this is an assumption and could be explored in further research.

The second research question was: “What is the distribution of intra-sentential and inter-sentential code-switching in online reviews?” Because the findings of Zenner and Geeraerts (2015) were based on spoken conversations, the different forms of code-switching in written language had to be reconsidered. Nevertheless, the results of this study were consistent with the

findings of Zenner and Geerarts (2015), the intra-sentential type of code-switching occurs more often than the inter-sentential type or word affixation type of code-switching. Remarkably, positive reviews contained significantly more inter-sentential code-switching than neutral and negative reviews. Poplack (1980) argues that one reason for the increased prevalence of the inter-sentential form of code-switching may have to do with sentence size. The author suggests that phrases, clauses, and sentences are more likely to be subject to code-switching than verbs, adjectives, adverbs. However, these syntactic differences have not been analyzed in the current study and therefore require further investigation.

The third research question was: "To what extent does motivation affect the number of code-switching instances?" Holmes (2001) and Gumperz (1982) implied that code-switching has a clear purpose or function and is used as a conversational strategy to better express social meanings. Thus, the motivation behind code-switching could reveal the intentions of customers or students, which can be valuable information for both academia and business organizations. Unfortunately, the Chi-square did not show a significantly different distribution of motivation between the type of reviews. Anglicism was most often chosen as motivation in both the positive (39%), neutral (53%), and negative reviews (22%).

Finally, given the differences that several authors (Poplack, Sankoff, & Miller 1988, Sharp 2001 and Zenner, Speelman & Geeraerts 2014) have found between males and females, it was hypothesized that men are more likely to code-switch than women. Furthermore, based on the suggestion by Deng, Chang, Yang, Huo and Zhou (2016) that men tend to have more intense emotional experiences, it was assumed that men are more extreme in their reviewing style, which could result in more positive and negative reviews than women. Yet, contrary to these assumptions, not many differences were observed between men and women. The reviews were roughly equal in length between males and females, nor did they include significantly more or fewer code-switching instances. Therefore, the hypothesis cannot be confirmed.

The element types divided between men and women did give a significant result. Women make more use of the inter-sentential element type than men. Which may be valuable information if the (target) audience consists of only men or women. As the study by Duah and Marije (2013) already suggested that knowing what type of code-switching to use is also highly relevant for advertising purposes, as it can identify with the target audience you want to reach. As for the motivation behind code-switching, none of the six functions significantly stood out. Although “Anglicism” was the greatest motivation for code-switching among both men and women, the significant difference was observed in the "reiteration motivation". This function was only used by women.

Limitations and further research

While this research has been carefully conducted, it should be acknowledged that there were a few limitations. One of those limitations was that the survey was based purely on reviews from the TripAdvisor website. The study contained no other data, which means that the sample group can be regarded as (too) homogeneous. Reviews about something other than hotels may have yielded different results. Moreover, having only Dutch reviewers in the sample size can be seen as a limitation, as Dutch people are known for their good English language skills. Cenoz & Jessner (2000) also mention this in their research. The authors suggest that the English language is very present in the daily life of the Dutch. Dutch children are exposed to English at a young age. Not only in primary and secondary school, but also in their spare time, Dutch people are surrounded by the English language. As a result, these results cannot be generalized to multiple countries and a suggestion for further research could be to analyze reviews in multiple languages.

In addition, as noted in the Discussion and Conclusion section, more research is needed on why negative reviews contain more words, rather than the assumption made by Rozin,

Berman & Royzam (2010). This may be related to the reduced cognitive control found in the study by Williams et al. (2020). In addition, Poplack (1980) argued that phrases, clauses, and sentences are more likely to be subject to code-switching than verbs, adjectives, adverbs. Since the syntactic differences of code-switching have not been investigated, further research is needed to confirm this assumption. However, the type of CS-instances were analyzed for this study, but added to the appendix as they were not of direct relevance to this study. Finally, it may be relevant for businesses and even academia to know why positive reviews include more inter-sentential-type code-switching, since knowing what type of code switching to use can identify with the audience that you want to reach (Duah & Marije, 2013).

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Appendix

Appendix 1. Statement of own work

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

Student name: Marthe Meijer

Student number: s1063570

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

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

Signature: 

Place and date: Nijmegen 07-06-21

Appendix 2. Important deadlines

Important deadlines	
Description	***Date***
First bachelor thesis meeting	01-02-2021 (14:00)
Group meeting about research proposal	24-02-2021 (12:30)
Group meeting about research proposal	03-03-2021 (13:30)
Deadline draft research proposal	09-03-2021 (18:00)
Individual feedback meeting	11-03-2021 (09:30)
Group meeting about research proposal	17-03-2021 (16:30)
Deadline research proposal	19-03-2021 (12:00)
Resit research proposal	06-04-2021 (12:00)
Deadline thesis draft	17-05-2021 (12:00)
Deadline thesis	07-06-2021 (12:00)
Resit thesis	05-07-2021 (12:00)

Appendix 3. Type of CS-instances

The first frequency table below shows the qualitative differences between the types of reviews. As can be seen, not the same code-switching words are used in the review types. More strikingly, words that can be perceived as positive or negative appear in neutral reviews, such as "trendy" and "a nogo". The second table below shows that the only similarity between men and women, in terms of CS-instances, is the word "basic". All other CS-instances are different from each other.

Table 8. Most Frequent CS instances per Type of Review

		Positive review	**Neutral review**	**Negative review**
Top 10	CS Instance	parking	basic	upgrade
	Times used (% of total)	4 (3%)	4 (6%)	3 (5%)
		roadtrip	double	basic
		4 (3%)	2 (3%)	2 (3%)
		staff	downgrade	customer service
		3 (2%)	2 (3%)	2 (3%)
		downtown	trendy	front desk
		3 (2%)	2 (3%)	2 (3%)
		citytrip	a nogo	laundry-bag
		2 (2%)	1 (2%)	2 (3%)
		escape	acces	never heard of
		2 (2%)	1 (2%)	2 (3%)
		housekeeping	breakfast/buffet	over rated
		2 (2%)	1 (2%)	2 (3%)
		rooftopbar	business	overpriced
		2 (2%)	1 (2%)	2 (3%)
		screens	business as usual	safe
		2 (2%)	1 (2%)	2 (3%)
		upgrade	check-out	thanks for your
		3 (2%)	1 (2%)	feedback
				1 (2%)

Table 9. Most Frequent CS instances, Split by Gender

		Male	**Female**
Top 10	CS Instance	basic	upgrade
	Times used (% of total)	4 (3%)	3 (4%)
		citytrip	basic
		3 (2%)	2 (3%)
		roadtrip	city
		3 (2%)	2 (3%)
		Customer servive	downtown
		2 (2%)	2 (3%)
		double	front desk
		2 (2%)	2 (3%)
		Laundry-bag	never heard of
		2 (2%)	2 (3%)
		overpriced	rooftopbar
		2 (2%)	2 (3%)
		parking	sign
		2 (2%)	2 (3%)
		rooftop bar	staff
		2 (2%)	2 (3%)
		screens	trendy
		2 (2%)	2 (3%)