This study examines the effects of code-switching attitudes in acceptability judgment tasks (AJTs) among early Spanish/English bilinguals. We explore whether negative/positive attitudes towards code-switching correlate with lower/higher ratings. Fifty Spanish/English bilinguals completed a survey that comprised a linguistic background questionnaire, a set of monolingual and code-switched sentences comprised of 4 conditions (Koronkiewicz(2014)&Sande(2015)) rated on a 1-7 Likert scale, and a questionnaire about speakers' code-switching attitudes. Results from a General Linear Mixed Model revealed that all participants distinguished between all Conditions. An effect for attitude was found for two of the Conditions, such that the more positive the attitude, the higher ratings on the AJT. These Conditions were composed of the code-switched structures that were rated higher by participants in Sande(2015)&Koronkiewicz(2014). This investigation suggests that bilingual speakers' code-switching attitudes play a role in the ratings that they provide in AJTs in a manner that highlights the rule-governed nature of code-switching.

Author Comments: We have incorporated the following article into our manuscript:

Parafita Couto, Deuchar & Fusser (2015)
Code-switching Attitudes and their Effects on Acceptability Judgment Tasks

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Abstract

The present study examines the effects of code-switching (CS) attitudes in Acceptability Judgment Tasks (AJTs) among early Spanish/English bilinguals in the United States. In doing so, we explore whether negative attitudes towards CS result in lower/degraded ratings, and, likewise, whether positive attitudes result in higher acceptability ratings. Fifty Spanish/English bilinguals completed a survey that comprised a linguistic background questionnaire and a set of monolingual and code-switched sentences featuring two sets of stimuli, *pro-drop* (Sande, 2015) and pronouns (Koronkiewicz, 2014), that they rated on a 1-7 Likert scale; additionally, the survey included a final component that gathered information about the speakers’ attitudes towards CS. The *pro-drop* and pronouns code-switched stimuli gave rise to a total of four conditions. Results from a Linear Mixed Model revealed that all participants, regardless of attitude, distinguished between all Conditions. Furthermore, an effect for attitude was found for two of the conditions, such that the more positive the attitude, the higher the rating given on the AJT. In fact, these two conditions were composed of the CS structures that were rated higher by participants in Sande (2015) and Koronkiewicz (2014). No effect for attitude was found for CS structures that were rated low in the original studies. Thus, this investigation suggests that the attitudes that bilingual speakers have towards CS play a role in the ratings that they provide in AJTs, but in a manner that highlights, rather than obscures, the rule-governed nature of CS.

*Keywords: code-switching, attitudes, acceptability judgment tasks, English/Spanish bilinguals*
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Introduction

In recent years, studies in experimental syntax have used code-switching (CS) as a tool to explore diverse syntactic phenomena that are otherwise opaque in monolingual data (see Ebert, 2014; González-Vilbazo, 2005; González-Vilbazo & Bartlett, 2010, 2013; González-Vilbazo & López, 2011; González-Vilbazo & Ramos, 2011; Koronkiewicz, 2014; Parafita-Couto, Munarriz, Epelde, Deuchar, & Oyharçacal, 2015). Through testing CS data and studying the competencies of bilingual speakers, researchers are able to build models of I-language. Nevertheless, the use of CS as a tool for linguistic inquiry poses many empirical challenges as there is no established methodology that unifies the field (see González-Vilbazo, Bartlett, Downey, Ebert, Heil, Hoot, Koronkiewicz, & Ramos, 2013, for discussion). This lack of consensus affects numerous experimental elements: participant selection, the tasks performed by the participants, or the experimental procedures carried out during data collection, to name a few.

In this paper, we focus on one very specific aspect in the participant selection process: attitudes towards CS. Montes Alcalá (2000) shows that, at least where Spanish/English bilinguals are concerned, CS is often viewed negatively. Not surprisingly, these negative attitudes are even held by CS speakers themselves (Toribio, 2001). This poses a potential problem for the linguist who uses Acceptability Judgment Tasks (AJTs) as a tool to access speakers’ I-language: could

1 Please note that we are employing the term acceptability purposely. While the terms Acceptability Judgment Tasks (AJTs) and Grammaticality Judgment Tasks (GJTs) have been used interchangeably, they are distinct. According to Sprouse et al. (2013), while grammaticality and acceptability are synonymous in some cases, “it is generally assumed that speakers do not have conscious access to the working of the mental grammar, therefore ‘grammaticality judgments’ are not possible” (p. 221).
Do these negative attitudes cloud the results of an AJT, thus providing data that do not reflect the linguistic competence of the subjects? This study seeks to submit this question to experimental inquiry. Our results show that, indeed, a negative attitude towards CS leads to low, flat judgments on a Likert scale. Interestingly, subjects with a positive attitude provide high-low judgments with sufficient consistency to give us confidence that, once attitude is controlled, AJTs do indeed provide access to speakers’ competence in the realm of CS.

The article is organized as follows: Section 2 focuses on how intra-sentential CS is frequently used as a tool in experimental syntax and also includes a relevant discussion of several issues concerning attitudes towards CS. This section also introduces our research questions. Section 3 deals with the experimental portion of the study; it includes a description of the participants, the experimental stimuli, the experimental procedure and the analysis. Section 4 presents the results of the study, which are then discussed with respect to our research questions in Section 5. Section 6 includes the limitations and concludes the article.

**Background**

*On the use of CS as a tool in experimental syntax*

CS can be defined as the use of two languages within the same discourse, sentence or constituent (Poplack, 1980). This article specifically focuses on intra-sentential CS, that is, CS that takes place within the sentence (i.e., in both simple and subordinate sentences), as we can observe in the following examples supplied by a Spanish/English bilingual consultant.

(1) *Mi familia* has a party almost every weekend.
   *my family* has a party almost every weekend
   ‘My family has a party almost every weekend’.

(2) I know that guy *porque* *fue* *a mi universidad*.
   I know that guy *because* 3SG-go-past to my university

...
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‘I know that guy because we went to the same university’.

For the purposes of this study, we are interested in CS as the expression of a bilingual's I-language. Chomsky (1986) defined I-language as the mentally represented linguistic knowledge of a native speaker, which is reflected in their competence. González-Vilbazo et al. (2013) argue that CS falls within the range of possible human languages, and thus “language models concerned with describing the human language faculty should also account for, and draw from, CS data” (p. 120). Moreover, “while historically these [language] models have been based on data gathered from monolingual speakers, bilingual speakers also have grammatical competence, i.e., they retain clear intuitions about the acceptability or unacceptability of code-switched utterances” (Toribio, 2001a, 2001b, as cited in González-Vilbazo et al., 2013, p. 120). Thus, we assume that in the same way that monolingual speakers have linguistic knowledge of their language, bilinguals have linguistic knowledge of CS. Furthermore, we believe that bilingual grammars can be accounted for in the same manner as monolingual speech. Bilingual speakers can form monolingual linguistic structures in any of their two languages or, alternatively, they can take lexical items from Language A and Language B and merge them in one syntactic derivation, mirroring the merging of exclusively monolingual lexical items into monolingual derivations. The latter would give rise to a code-switched structure.

González-Vilbazo et al. (2013) also indicate that “data from code-switching have the potential for a unique contribution to linguistics by giving us access to combinations of linguistic features that may be difficult (or impossible) to observe in monolingual data” (p. 119). As we pointed out in the Introduction, CS has assisted linguistic inquiry in the task of uncovering diverse language properties that are otherwise opaque in monolingual data. This can be observed in recent work in experimental syntax for different phenomena, such as gender agreement
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(González-Vilbazo, 2005; Parafita-Couto et al., 2015), the properties of light verbs (González-Vilbazo & López, 2011), classifiers (González-Vilbazo & Bartlett, 2010), pronouns (Koronkiewicz, 2014), wh-questions (Ebert, 2014), or sluicing (González-Vilbazo & Ramos, 2011).

Nonetheless, using CS as a tool for linguistic inquiry can be problematic since there is a lack of methodological standards. In their article, González-Vilbazo et al. (2013) aim to establish the foundation for the creation of methodological standards in studies in experimental syntax that use CS as a tool. In doing so, they focus on three different aspects: participant selection, project design and experimental procedure. Moreover, they describe the potential confounds that may arise in each one of these three aspects as well as possible solutions in order to mitigate them. According to these authors, one of the potential problems that may arise in the experimental procedure is that, since “CS is often a stigmatized form of communication”, this has the potential to affect participants’ acceptance ratings of code-switched sentences. The use of CS still carries a social stigma, especially in the context of Spanish/English CS in the US. As summarized by Montes-Alcalá (2000), “this phenomenon has been socially stigmatized by monolinguals and bilinguals alike, and has been given derogatory labels such as ‘Tex-Mex’ or ‘Spanglish’” (p. 218). She points out that the use of Spanish/English CS in the US is often attributed to illiteracy, a lack of formal education, or a lack of proficiency in one or both of the bilingual’s two languages. In fact, one way in which sociolinguists have attempted to counter this notion is by replacing the derogatory terms Tex-Mex and Spanglish with the linguistic description of code-switching (Alvarez, 199; Huerta, 1978; Lipski, 1985; McClure, 1977; Pfaff, 1976; Poplack, 1980; Sankoff & Poplack, 1981; Valdés, 1981; Woolford, 1983; Zentella 1981a, 1981b, 1982, 1997;, as cited in Zentella, 2003).
Language attitudes towards Spanish/English CS in the US

It is important to acknowledge that the term attitude is multidimensional and can encompass many different aspects of how Spanish/English bilinguals in the US perceive themselves as a group, as well as their language use. The broad definition of the term, offered by Anderson and Toribio (2007), defines language attitudes as “the way in which observers react towards language varieties and language use. ... [T]he definition also includes the ways in which these observers react to the users of language varieties” (p. 224). However, for the purposes of this study, we are adopting a more narrow view, that is, participants’ attitudes towards themselves and other bilinguals who code-switch.²

Not all communities perceive language in the same way and, in fact, even within members of the same community or among speakers of similar backgrounds differing attitudes may be found. For instance, in her study of language attitudes among Spanish/English bilinguals in the United States, Toribio (2002) looked at four native speakers of Spanish of Mexican heritage that had been living in Santa Barbara county for a minimum of 15 years at the time of the study. Toribio, through extensive sociolinguistic surveys and empirical measures of CS competence and performance, tested the CS attitudes of these four speakers with the intention of investigating whether this phenomenon was mitigating or increasing Spanish attrition in US

² We decided to narrow our definition of attitudes to only language attitudes towards CS because, although very interesting, we believe that capturing all of these dimensions would distract from the main focus of our study, which is to examine attitudes towards CS and how they affect our participants’ acceptance of code-switched sentences in AJTs.
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Latinos. For ease of exposition, we will focus on two of the participants, Yanira and Federico, who showed different attitudes towards CS.

Yanira reported that both Spanish and English together constitute her linguistic competence and she may draw upon one or the other or both in linguistic performance. She also pointed out that CS helps her maintain the minority language (i.e., Spanish). On the other hand, Federico reported that he code-switches at home, at school, at his work, and with his partner, but does not do so at family gatherings nor in writing. According to Toribio, this is to be expected as most bilinguals view writing as a more formal medium where CS is not permissible.

Nevertheless, even though he himself code-switches, Federico indicates decidedly negative attitudes towards the phenomenon. Indeed, not only does he believe that CS lacks any aesthetic merit—he finds it bothersome when someone code-switches—he also states that it is a catalyst for Spanish loss. In sum, Toribio’s (2002) study reflects how participants with similar linguistic profiles can indeed have very different attitudes, opinions, or relationships with CS. This has the potential to impact non-production experiments, not because Yanira’s and Federico’s intuitions are different, but because Federico’s negative attitudes towards CS could interfere in whatever task that he may be asked to complete.

Other studies have examined the impact of the speakers’ attitudes on the type of CS that they produce and on how frequently they CS. For instance, Montés Alcalá (2000) found that “attitudes towards code-switching are not a determining factor in the types of code-switching that bilingual individuals produce” (p. 226). In fact, she observed that people with negative attitudes still produced complex and elaborated intrasentential switches. In a similar vein, Dewaele and Wei (2014) examined a rather extensive group of multilingual speakers and found that higher degrees of multilingualism were not automatically linked to more positive attitudes.
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towards CS. However, they did find that participants with more positive attitudes towards CS reported using CS more frequently.

Nonetheless, we find a gap in the literature when it comes to participants’ attitudes towards CS and their potential effects in non-production experiments. As we have previously mentioned, there is no methodological consensus when it comes to using CS as a tool in experimental studies. Moreover, to the best of our knowledge, there are no studies that have examined the variable attitudes towards Spanish/English CS³ and its effects on these types of experimental tasks. Furthermore, as Pena Diaz (2004) argues “bilingual language attitudes is a key area in bilingual studies as it gives linguists an insight into what bilinguals actually think about their speech production, which could be utterly important for the analysis and interpretation of bilingual data” (p. 146). Thus, we believe that it is essential to explore this potential issue.

Even though there are many experimental procedures used in formal CS experiments, we will focus on Acceptability Judgment Tasks (AJTs) due to their wide use (see Grabowski, 2011; González-Vilbazo & Ramos, 2011; Koronkiewicz, 2014; Lederberg & Morales, 1984; Parafita-Couto et. al., 2015; among others). We are aware that there is a debate regarding the validity of using AJTs (see Sprouse, 2013, for discussion). However, the focus of this paper is not to

³ However Parafita-Couto, Deuchar and Fusser (2015) did study Welsh/English speakers’ attitudes towards CS in relation to their behavior in both production and grammaticality judgment tasks. On the one hand, they found correlations between attitude and language use in the picture-naming task. This is, speakers who believed that English and Welsh should be kept separate used fewer mixed determiner phrases. On the other hand, they found that there was no relationship between attitude and grammaticality rating.
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Comment upon this debate, but rather to comment on how the variable attitudes towards CS affects the acceptability judgments of the participants for those who are already employing AJTs in their research. In sum, the main goal of this study is to examine whether the positive or negative attitudes that Spanish/English bilinguals living in the US have towards CS have an effect on the acceptability judgments that they provide on code-switched sentences in AJTs.

Controlling for participants’ attitudes in experimental studies and especially AJTs is essential because, as we saw in Montes-Alcalá (2000), participants’ CS attitudes did not affect their production of code-switched structures. In other words, behavior and attitude are not necessarily correlated when it comes to production. However, the use of AJTs does not require participants to produce CS, rather it asks them to judge how acceptable a code-switched structure is. Recall Federico from Toribio’s (2002) study. Federico had negative attitudes towards CS, yet he still alternated between his two languages. In a study where he is being asked to provide judgments on code-switched sentences, it is possible that his negative attitudes are strong enough to affect his ratings. If a researcher then makes a claim about the acceptability of the tested code-switched structure, this claim could be compromised and actually reflect Federico’s negative attitudes instead of the acceptability or unacceptability of the CS structure itself. Bearing our previous discussion in mind, our research questions are as follows:

**RQ1:** Is there an effect for participants’ attitude towards CS on their ratings for code-switched sentences?

Assuming that there is indeed an effect for attitude, we need to determine what type of effect it is. Is it generalized such that a person with negative attitudes will reject all instances of CS regardless of their structure whereas a person with positive attitudes will accept all instances of CS regardless of their structure? Or will she make a distinction between types of CS
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structures, thus revealing the rule-governed nature of the phenomenon? In order to answer these questions we follow up with our second research question:

RQ2: Does this effect vary by CS structure?

If there is no effect for participants’ attitudes towards CS on their ratings of code-switched sentences, then we expect all participants to behave the same. If, however, there is an effect for participants’ attitudes towards CS on their acceptability judgments, then we expect participants to behave differently depending on their attitude; participants with more positive attitudes will rate code-switched sentences higher than those with more negative attitudes. As to whether this effect varies by CS structure, since there is no previous research on this topic, we will go with the null hypothesis, which is that any effect of attitudes on rating will not vary by CS structure.

Method

Participants

Fifty early Spanish/English bilinguals participated in the study, 18 men and 32 women. At the time of study, one participant was living in Los Angeles, two in Seattle, and the rest in the Chicagoland area. The average age of the participants was 22.5 years and the age range was 19-32. All participants acquired both English and Spanish before the age of seven and grew up in bilingual households. Of the 50 participants, nine reported to have been born in Mexico, three in Colombia, two in Venezuela, and one in Costa Rica. The rest were born in the USA. Nevertheless, they had all lived in the US for at least nine years. In terms of their educational level, five had a high school diploma, 17 were college graduates, and the rest reported to have some college education.
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Furthermore, the participants were asked to self-rate their overall ability in Spanish and English on a scale of 1-5, 1 being “understand but cannot speak” and 5 being “understand and speak fluently like a native”. The participants were then asked to rate their Spanish and English reading, writing, speaking, and understanding skills. The participants had to rate these skills on a 1-5 scale, with 1 being “poor” and 5 being “native speaker command”. In Table 1 we provide the average ratings for the overall and the separate skills.

Table 1

*Average proficiency for overall and individual skills based on self-reports*

<table>
<thead>
<tr>
<th></th>
<th>Spanish</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>3.97</td>
<td>4.68</td>
</tr>
<tr>
<td>Writing</td>
<td>3.40</td>
<td>4.47</td>
</tr>
<tr>
<td>Speaking</td>
<td>4.07</td>
<td>4.71</td>
</tr>
<tr>
<td>Understanding</td>
<td>4.25</td>
<td>4.63</td>
</tr>
<tr>
<td>Overall</td>
<td>4.28</td>
<td>4.84</td>
</tr>
</tbody>
</table>

*Experimental stimuli*

In order to construct a task that can achieve our goal, we employed code-switched stimuli from two different studies that had used AJTs as part of their methodology: Koronkiewicz (2014) and Sande (2015). Koronkiewicz (2014) analyzed code-switched sentences with switches between subject pronouns (both weak and strong) and the Verb Phrase (VP). He found that Spanish/English bilinguals gave higher ratings to code-switched sentences with a switch between a strong pronoun/full determiner phrase and the VP. Yet, they gave lower ratings to code-switched sentences that contained a switch between a weak pronoun and the VP. These are Conditions 3 and 4 in Table 2. Sande (2015) examined code-switched sentences that included a
switch between the complementizer and the verb of the embedded clause; a subset of the stimuli had an overt subject in the embedded clause and the other subset had an omitted subject. She found that Spanish/English bilinguals gave higher ratings to code-switched sentences where the subject of the embedded clause was overt but gave lower ratings to code-switched sentences where the subject of the embedded clause had been omitted. The use of two types of syntactic structures (i.e., pronouns and pro-drop), with two different types of stimuli each gave us four different CS conditions for our participants to rate. (See Table 2.)

Table 2

<table>
<thead>
<tr>
<th>Stimuli by Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pro-drop stimuli</strong> (Sande, 2015)</td>
</tr>
<tr>
<td>No sé por qué Lucía ate all those brownies.</td>
</tr>
<tr>
<td><strong>Pronoun stimuli</strong> (Koronkiewicz, 2014)</td>
</tr>
<tr>
<td>The other day those girls conocieron a nuestra abuela.</td>
</tr>
</tbody>
</table>

The use of these four conditions allowed us to do two things. First, it allowed us to adequately determine that the participants are behaving similarly on these stimuli with respect to previous research. We recruited participants that belonged to the same population as the participants in Koronkiewicz (2014) and Sande (2015), that is, proficient English/Spanish bilinguals living in the US. Furthermore, we employed the same stimuli as these two studies. If we assume that our participants should behave in a similar manner and have the same intuitions as those in Koronkiewicz (2014) and Sande (2015), then we can use their results as a baseline for how our participants should rate the code-switched sentences in each of these conditions.
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Second, it allowed us to isolate the factor of attitude and how it affects CS acceptability judgments. By employing two different syntactic structures we can make sure that any relationships found between CS attitudes and acceptability ratings are not structure dependent. We can then use our participant’s ratings in conjunction with their attitudes towards CS to see if said attitudes correlate with any deviance from the baseline.

Procedure

Participants completed a survey through Google forms. The survey was divided in four blocks. All participants completed each block of the survey in the same order. First, the participants completed a linguistic background questionnaire. This questionnaire included questions related to their level of education, their linguistic proficiency in both Spanish and English and questions related to their bilingual habits (i.e., when they use each of their languages, with whom, where, how often, etc.). Second, the participants completed an AJT in which they rated 43 English/Spanish CS items on a 1-7 Likert scale, 1 being “completely unacceptable” and 7 being “completely acceptable”.

Third, the participants completed a second AJT in which they rated a total of 32 (16 Spanish and 16 English) monolingual sentences on a 1-7 Likert scale, 1 being “completely unacceptable” and 7 being “completely acceptable” featuring structures parallel to those of the code-switched sentences. Following Gonzalez-Vilbazo et al. (2013), we did not mix code-switched and monolingual sentences. We administered code-switched sentences first in order to avoid degraded ratings as the participants can possibly compare them to the monolingual sentences, which tend to receive higher ratings in these types of experiments. Monolingual sentences in English and Spanish were included in order to use the participants’ ratings of these stimuli as their own controls for the code-switched sentences. If a bilingual speaker does not
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have the relevant structure in English and Spanish, then we would not expect them to use it when they code-switch either. Thus, we verified whether participants were accurately rejecting *pro-drop* sentences in English, but accepting both overt and null subjects in Spanish, and whether they were able to reject sentences with subject verb agreement mismatches in both English and Spanish. By including these acceptable and unacceptable sentences in both monolingual English and monolingual Spanish, we are able to see whether any deviations in judgments on code-switched sentences were due to a lack of the relevant features/structure in their Spanish and English grammars.

The fourth and final block of the study included two main questions regarding attitudes towards CS in order to classify our participants based on their responses. These questions were administered last in order to avoid compromising the data and giving away the purpose of the study right from the onset. The first question can be seen in (3a). The second question (i.e. 3b) was very similar to (3a), yet participants were asked to express their opinion about their own use of CS. Additionally, this second question included a sixth option (i.e., “I do not mix two languages in the same sentence”) so that participants could indicate whether they mixed both of their languages at all.

(3a) What do you think when you hear someone else mix two languages in the same sentence?

1. I find it horrible. It is an aberration to the two languages. It shows that she does not speak either of them well.

2. It does not seem right. It is better to talk using the same language when talking to a person.

3. I do not care. I never thought about it. I do not have a strong opinion.
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4. It's okay. It is as normal and as acceptable as speaking using the same language when talking to a person.

5. I think it's great. It shows that someone can speak well or is comfortable in both languages.

(3b) What do you think when you mix two languages in the same sentence?

6. I find it horrible. It is an aberration to the two languages. It shows that she does not speak either of them well.

7. It does not seem right. It is better to talk using the same language when talking to a person.

8. I do not care. I never thought about it. I do not have a strong opinion.

9. It's okay. It is as normal and as acceptable as speaking using the same language when talking to a person.

10. I think it's great. It shows that someone can speak well or is comfortable in both languages.

11. I do not mix two languages in the same sentence.

Analysis
First, we averaged the participants’ responses to questions (3a) and (3b) to get a single attitude score. Participants were divided into three categories based on this score: 1) Negative attitude, 2) Mildly Positive attitude, and 3) Very Positive attitude. Participants with an average score of 1-2.5 we assigned to group 1 (n = 16), 3.5-4 to group 2 (n = 14), and 4.5-5 to group 3 (n = 17).4

4 Three participants were removed from the analysis because their average attitude score fell directly in the middle of the scale with a 3 and, therefore, there were not enough participants in the group so as to come to solid conclusions.
Afterwards, the four conditions illustrated in Table 2 were coded separately for each participant, giving rise to a total of 43 tokens per participant. The results were then subject to a General Linear Mixed Model in SPSS.

Results

Our research questions asked whether there was an effect for a participant’s attitudes towards CS on their ratings of code-switched sentences and, if so, does that effect differ by Condition. Table 3 shows the average rating provided by participants for each of the four Conditions. In general, participants gave higher ratings to conditions 1 and 3, which were code-switched sentences with a switch between the complementizer and the embedded verb and an overt subject in the embedded clause, and code-switched sentences with a switch between a strong pronoun/full DP and the verb, respectively.

Table 3

Mean AJT by Condition

<table>
<thead>
<tr>
<th>Condition 1: Pro-drop overt subject</th>
<th>Condition 2: Pro-drop null subject</th>
<th>Condition 3: Pronouns Strong/Full DP</th>
<th>Condition 4: Pronouns Weak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average AJT</td>
<td>4.2 (SD = 2.2)</td>
<td>1.7 (SD = 1.3)</td>
<td>4.5 (SD = 2.1)</td>
</tr>
</tbody>
</table>

A General Linear Mixed Model was run in order to determine the effect of attitudes on acceptability ratings by condition. The dependent variable was AJT Rating on a scale of 1-7. The between-subjects effect was Attitude (Negative, Mildly Positive and Very Positive). The within-subjects effect was Condition (1- pro-drop overt, 2- pro-drop covert, 3- pronouns strong/Full DP, 4- pronouns weak). The Attitude*Condition interaction was included in the model and pairwise comparisons for the interaction were planned. Random intercepts were included at the
participant and item levels in order to control for individual variation as well as for any variation in the dependent variable across items. Significant main effects were found for Attitude \( (F(2, 44.39) = 9.45, \ p = .000) \) as well as for Condition \( (F(3, 66.14) = 54.27, \ p = .000) \). Considering the research questions that drive this study, the significant Attitude*Condition interaction \( (F(6, 140.15) = 5.48, \ p = .000) \) is our main interest.

Analysis of the pairwise comparisons for the Condition*Attitude interaction comparing condition (Table 4) revealed that, in all three attitude groups, Conditions 1 and 3 pattern the same such that they are not significantly different from each other, but both are individually significantly different from Conditions 2 and 4 respectively. The reverse holds true for Conditions 2 and 4 such that they are not significantly different from each other, but both are individually significant from Conditions 1 and 3 respectively.

Table 4

<table>
<thead>
<tr>
<th></th>
<th>Condition 1</th>
<th>Condition 2</th>
<th>Condition 3</th>
<th>Condition 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative Attitude</td>
<td></td>
<td>.001*</td>
<td>1.000</td>
<td>.006*</td>
</tr>
<tr>
<td>Condition 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condition 2</td>
<td>.001*</td>
<td></td>
<td>.000*</td>
<td>1.000</td>
</tr>
<tr>
<td>Condition 3</td>
<td>1.000</td>
<td>.000*</td>
<td></td>
<td>.000*</td>
</tr>
<tr>
<td>Condition 4</td>
<td>.006*</td>
<td>1.000</td>
<td>.000*</td>
<td></td>
</tr>
<tr>
<td>Mildly Positive Attitude</td>
<td></td>
<td>.000*</td>
<td>1.000</td>
<td>.000*</td>
</tr>
<tr>
<td>Condition 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condition 2</td>
<td>.000*</td>
<td></td>
<td>.000*</td>
<td>.889</td>
</tr>
<tr>
<td>Condition 3</td>
<td>1.000</td>
<td>.000*</td>
<td></td>
<td>.000*</td>
</tr>
<tr>
<td>Condition 4</td>
<td>.000*</td>
<td>.889</td>
<td>.000*</td>
<td></td>
</tr>
<tr>
<td>Very Positive Attitude</td>
<td></td>
<td>.000*</td>
<td>1.0000</td>
<td>.000*</td>
</tr>
<tr>
<td>Condition 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
This difference in conditions is that all three attitude groups provided significantly higher ratings in Conditions 1 and 3 than in Conditions 2 and 4. Additional analysis of the Attitude*Condition interaction comparing attitude (Table 5) indicated group differences in Conditions 1 and 3 but no group differences in Conditions 2 and 4.

Table 5

<table>
<thead>
<tr>
<th></th>
<th>Negative Attitude</th>
<th>Mildly Positive attitude</th>
<th>Very Positive attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Condition 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>---------------</td>
<td>.102</td>
<td>.000*</td>
</tr>
<tr>
<td>Mildly Positive</td>
<td>.102</td>
<td></td>
<td>.030*</td>
</tr>
<tr>
<td>Very Positive</td>
<td>.000*</td>
<td>.030*</td>
<td></td>
</tr>
<tr>
<td><strong>Condition 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>---------------</td>
<td>1.000</td>
<td>.655</td>
</tr>
<tr>
<td>Mildly Positive</td>
<td>1.000</td>
<td></td>
<td>1.000</td>
</tr>
<tr>
<td>Very Positive</td>
<td>.655</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td><strong>Condition 3</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>---------------</td>
<td>.028*</td>
<td>.000*</td>
</tr>
<tr>
<td>Mildly Positive</td>
<td>.028*</td>
<td></td>
<td>.011*</td>
</tr>
<tr>
<td>Very Positive</td>
<td>.000*</td>
<td>.011*</td>
<td></td>
</tr>
<tr>
<td><strong>Condition 4</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>---------------</td>
<td>1.000</td>
<td>.205</td>
</tr>
<tr>
<td>Mildly Positive</td>
<td>1.000</td>
<td></td>
<td>1.000</td>
</tr>
<tr>
<td>Very Positive</td>
<td>.205</td>
<td>1.000</td>
<td></td>
</tr>
</tbody>
</table>

*p < .05
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In Condition 1, participants in the Very Positive attitude group gave significantly higher ratings ($M = 5.3$) than participants with mildly positive ($M = 4.1$) or negative attitudes ($M = 3.1$). However, no significant differences in the ratings between participants in the Mildly Positive and Negative attitude groups were found. In Condition 3, a more defined relationship between attitude and AJT rating was found in which participants in the Very Positive attitude group gave significantly higher ratings ($M = 5.7$) than participants in the Mildly Positive attitude group ($M = 4.4$) who, in turn, gave significantly higher ratings than participants with negative attitudes ($M = 3.3$). In contrast to Conditions 1 and 3, there were no significant differences between attitude groups with respect to their AJT ratings in Conditions 2 and 4. Figure 1 illustrates the differences by Condition for each attitude group.

**Figure 1.** Differences by Condition for each attitude group

![Average AJT by Condition and Attitude](image.png)

Participants regardless of their attitude provided lower ratings in Conditions 2 and 4 than in Conditions 1 and 3.

**Discussion**

Our results are able to yield clear answers to all of our questions suggesting that there is an effect of attitude on acceptability judgments. More specifically, the first question investigates whether
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there is an effect for participant’s attitude towards CS on their ratings for code-switched sentences and we find that the results of the General Linear Mixed Model do, in fact, show a main effect for attitude when the code-switched sentences are collapsed across all four conditions. Participants belonging to the group Very Positive Attitudes gave significantly higher ratings than participants in either the Mildly Positive or Negative Attitudes groups. Confirming that there is an effect for attitude on acceptability ratings we can move on to the more pertinent research question, which asks whether the effect for attitude varies by CS structure. Contrary to our hypothesis, the results of the General Linear Mixed Model show an effect of bilinguals’ attitudes in the ratings of the AJTs for conditions 1 and 3, but not for conditions 2 and 4.

Before entering a discussion of the ratings by each Condition it is important to discuss the overall pattern between conditions. All participants, regardless of attitude distinguish between the two different pro-drop structures, i.e. conditions 1 and 2, and between the two different pronouns structures, (i.e. conditions 3 and 4). Further, distinctions are made across CS structure. Again, all participants, regardless of attitude distinguish between condition 1 (pro-drop overt subject) and 4 (pronouns weak) and between condition 2 (pro-drop covert subject and 3 (pronouns strong/Full DP). However, no distinctions across CS structure are made between conditions 1 and 3 or between conditions 2 and 4. Thus, instead of finding a result for attitude by syntactic structure (pro-drop vs. pronouns) what we see is that conditions 1 and 3 pattern in a similar manner that contrasts with conditions 2 and 4, that also pattern together in a similar manner.

In conditions 1 and 3 we see a clear pattern for the effect of attitude on acceptability rating. In essence the more positive a participant’s attitude, the higher ratings they provide on the code-switched sentences in these two conditions. In condition 3, participants in the Very Positive
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attitude group provided the highest ratings, followed by those in the Mildly Positive group and lastly by those in the Negative attitude group. The difference in ratings is significant between all three groups. In condition 1, however, the pattern is a little less clear. While the results reveal that participants in the Very Positive attitude give significantly higher ratings to the code-switched sentences compared to the other two groups, there is no significant difference in the ratings between the Negative and Mildly Positive attitude groups. This lack of a difference in the ratings between the Negative and Mildly Positive attitude groups in condition 1 in contrast to condition 3 could be due to various factors. It could be the case that as these two conditions employ syntactic structures that are inherently different, they are also rated differently. However, it must be noted that condition 1 only had five CS items and we might not be able to see the pattern as clearly as we did in condition 3 due to the small number of tokens. Since conditions 1 and 3 pattern in a similar manner in all other aspects, if we were to include more tokens in condition 1 we predict that this difference would come out significant.

Contrary to conditions 1 and 3, we find no significant differences in ratings between participants in the three attitudes groups in conditions 2 and 4. All three groups award very low ratings to these structures. Thus, we must ask what is the difference between conditions 1/3 and conditions 2/4 such that we see an effect for attitude in conditions 1/3 but no effect in conditions 2/4. Examine Table 2, repeated here as Table 6, and recall that we used the exact same CS stimuli from Koronkiewicz (2014) and Sande (2015). In those studies, a difference was found in the ratings of the Spanish/English bilingual participants such that participants rated conditions 1 and 3 higher than 2 and 4 respectively.

Table 6

*Stimuli by Condition*
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<table>
<thead>
<tr>
<th><strong>Pro-drop stimuli</strong> (Sande, 2015)</th>
<th><strong>CONDITION 1</strong></th>
<th><strong>CONDITION 2</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>No sé por qué</em> Lucía ate all those brownies.*</td>
<td><em>‘I don’t know why Lucía ate all those brownies.’</em></td>
<td><em>Me pregunto qué</em> discovered in his sister’s diary.</td>
</tr>
<tr>
<td><em>‘I wonder what discovered in his sister’s diary.’</em></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Pronoun stimuli</strong> (Koronkiewicz, 2014)</th>
<th><strong>CONDITION 3</strong></th>
<th><strong>CONDITION 4</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>The other day those girls conocieron a nuestra abuela.</em></td>
<td><em>‘The other day those girls met our grandmother.’</em></td>
<td><em>They compraron unas manzanas.</em></td>
</tr>
<tr>
<td><em>‘They bought some apples.’</em></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When we examine the average AJT by condition collapsed between attitude groups we find the same pattern, see Table 3. Thus, in general, our results fall in line with those of Koronkiewicz (2014) and Sande (2015). Bilinguals in these two studies gave very low ratings to the sentences in conditions 2 and 4 suggesting that these CS structures are not part of their I-language. That is, if a sentence contains a switch that is not part of a bilingual’s I-language, that sentence should receive a low rating regardless of the participant’s attitudes towards CS. Hence, it follows that all participants, regardless of their attitudes, do not behave differently with respect to conditions 2 and 4.

In sum, we only observe an effect for attitude in CS structures that are part of the bilinguals’ I-language. In our study these are conditions 1 and 3. We must note that the same holds true for monolingual speech; if a monolingual speaker is given a sentence containing an acceptable yet stigmatized dialectal feature (e.g., (4), a dialectal feature that is part of the I-language of Spanish speakers in Northern Spain), the rating that this speaker provides could vary depending on their attitude towards the dialect, their knowledge about its stigma and the like; this is true even if the sentence is part of their I-language.
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(4) Si tendría dinero, me compraría un coche.
   If 1SG-have-COND money, myself 1SG-buy-COND a car.
   ‘If I had money, I would buy a car’.

On the other hand, if a monolingual speaker is given an ungrammatical sentence as the one in (5), said sentence would be rejected on the basis of not being part of their I-language.

(5) *Nosotros caminaba por la calle.
    we 2SG-walk-PAST on the street.
    ‘We walked on the street’.

Thus, we believe that the same should happen in the case of bilingual speakers and code-switched sentences and this is indeed what we find.

Conclusions and Limitations

In this study, we have provided evidence that attitudes towards CS have an effect on acceptability judgments, at least in structures that are part of these bilinguals’ I-language (i.e., conditions 1 and 3). Positive attitudes towards CS resulted in higher acceptability judgments, while negative attitudes towards CS resulted in lower acceptability judgments. Conversely, when it came to structures that are not part of these bilinguals’ I-language, there was no effect of attitudes on AJTs; these sentences were given low ratings regardless of the attitudes of the participant. These results provide evidence that attitude is a variable that should be controlled for in future experiments on CS, as it might have a confounding effect on the data, thus rendering them unreliable. However, once you control for the variable attitude AJTs could be excellent tools to research bilinguals’ I-language. Therefore, future studies should incorporate methods of data collection that gather participants’ responses regarding their attitudes towards CS. Bearing

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5 In most dialects of Spanish, Past Subjunctive would be used in (4) in lieu of the Conditional.
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our findings in mind, the participant pool should ideally consist of bilingual speakers with positive attitudes towards the phenomenon in order to prevent participants with negative attitudes from potentially compromising the data.

Even though our study specifically focuses on AJTs, we contend that our results have the potential to open a new line of research, which investigates whether CS attitudes affect participant responses in other types of tasks. In continuing with this line of research it will be necessary to do at least three things: 1) Test CS attitudes using other syntactic structures. In our study, the CS structures involving pro-drop and pronouns yield similar findings, however, we might not find the same results with other syntactic structures. 2) Recruit more participants to have a larger sample that spans all different types of attitudes and 3) incorporate a more fine-tuned analysis of attitude. Our attitude score was obtained through an introspective method of data collection and self-reports. This type of data collection method may yield controversial results since participants could be altering their real opinion or feelings about the phenomenon. However, by having the participants answer these questions after providing their judgments on the CS sentences, we attempted to control for this factor as best as possible. Future studies should employ different measures of CS attitudes in order to get a more in-depth picture of how attitudes can affect acceptability judgments on code-switched sentences.

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Code-switching Attitudes and their Effects on Acceptability Judgment Tasks

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University of Illinois at Chicago
Abstract

The present study examines the effects of code-switching (CS) attitudes in Acceptability Judgment Tasks (AJTs) among early Spanish/English bilinguals in the United States. In doing so, we explore whether negative attitudes towards CS result in lower/degraded ratings, and, likewise, whether positive attitudes result in higher acceptability ratings. Fifty Spanish/English bilinguals completed a survey that comprised a linguistic background questionnaire and a set of monolingual and code-switched sentences featuring two sets of stimuli, *pro-drop* (Sande, 2015) and pronouns (Koronkiewicz, 2014), that they rated on a 1-7 Likert scale; additionally, the survey included a final component that gathered information about the speakers’ attitudes towards CS. The *pro-drop* and pronouns code-switched stimuli gave rise to a total of four conditions. Results from a Linear Mixed Model revealed that all participants, regardless of attitude, distinguished between all Conditions. Furthermore, an effect for attitude was found for two of the conditions, such that the more positive the attitude, the higher the rating given on the AJT. In fact, these two conditions were composed of the CS structures that were rated higher by participants in Sande (2015) and Koronkiewicz (2014). No effect for attitude was found for CS structures that were rated low in the original studies. Thus, this investigation suggests that the attitudes that bilingual speakers have towards CS play a role in the ratings that they provide in AJTs, but in a manner that highlights, rather than obscures, the rule-governed nature of CS.

Keywords: code-switching, attitudes, acceptability judgment tasks, English/Spanish bilinguals
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Introduction

In recent years, studies in experimental syntax have used code-switching (CS) as a tool to explore diverse syntactic phenomena that are otherwise opaque in monolingual data (see Ebert, 2014; González-Vilbazo, 2005; González-Vilbazo & Bartlett, 2010, 2013; González-Vilbazo & López, 2011; González-Vilbazo & Ramos, 2011; Koronkiewicz, 2014; Parafita-Couto, Munarriz, Epelde, Deuchar, & Oyharçacal, 2015). Through testing CS data and studying the competencies of bilingual speakers, researchers are able to build models of I-language. Nevertheless, the use of CS as a tool for linguistic inquiry poses many empirical challenges as there is no established methodology that unifies the field (see González-Vilbazo, Bartlett, Downey, Ebert, Heil, Hoot, Koronkiewicz, & Ramos, 2013, for discussion). This lack of consensus affects numerous experimental elements: participant selection, the tasks performed by the participants, or the experimental procedures carried out during data collection, to name a few.

In this paper, we focus on one very specific aspect in the participant selection process: attitudes towards CS. Montes Alcalá (2000) shows that, at least where Spanish/English bilinguals are concerned, CS is often viewed negatively. Not surprisingly, these negative attitudes are even held by CS speakers themselves (Toribio, 2001). This poses a potential problem for the linguist who uses Acceptability Judgment Tasks (AJTs)⁴ as a tool to access speakers’ I-language: could

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⁴ Please note that we are employing the term acceptability purposely. While the terms Acceptability Judgment Tasks (AJTs) and Grammaticality Judgment Tasks (GJT) have been used interchangeably, they are distinct. According to Sprouse et al. (2013), while grammaticality and acceptability are synonymous in some cases, “it is generally assumed that speakers do not have conscious access to the working of the mental grammar, therefore ‘grammaticality judgments’ are not possible” (p. 221).
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Do these negative attitudes cloud the results of an AJT, thus providing data that do not reflect the linguistic competence of the subjects? This study seeks to submit this question to experimental inquiry. Our results show that, indeed, a negative attitude towards CS leads to low, flat judgments on a *Likert* scale. Interestingly, subjects with a positive attitude provide high-low judgments with sufficient consistency to give us confidence that, once attitude is controlled, AJTs do indeed provide access to speakers’ competence in the realm of CS.

The article is organized as follows: Section 2 focuses on how intra-sentential CS is frequently used as a tool in experimental syntax and also includes a relevant discussion of several issues concerning attitudes towards CS. This section also introduces our research questions. Section 3 deals with the experimental portion of the study; it includes a description of the participants, the experimental stimuli, the experimental procedure and the analysis. Section 4 presents the results of the study, which are then discussed with respect to our research questions in Section 5. Section 6 includes the limitations and concludes the article.

Background

*On the use of CS as a tool in experimental syntax*

CS can be defined as the use of two languages within the same discourse, sentence or constituent (Poplack, 1980). This article specifically focuses on intra-sentential CS, that is, CS that takes place within the sentence (i.e., in both simple and subordinate sentences), as we can observe in the following examples supplied by a Spanish/English bilingual consultant.

(1) *Mi familia* has a party almost every weekend.
    *my family* has a party almost every weekend
    ‘My family has a party almost every weekend’.

(2) I know that guy *porque fue a mi universidad*.
    I know that guy *because 3SG-go-past to my university*
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‘I know that guy because we went to the same university’.
For the purposes of this study, we are interested in CS as the expression of a bilingual's I-language. Chomsky (1986) defined I-language as the mentally represented linguistic knowledge of a native speaker, which is reflected in their competence. González-Vilbazo et al. (2013) argue that CS falls within the range of possible human languages, and thus “language models concerned with describing the human language faculty should also account for, and draw from, CS data” (p. 120). Moreover, “while historically these [language] models have been based on data gathered from monolingual speakers, bilingual speakers also have grammatical competence, i.e., they retain clear intuitions about the acceptability or unacceptability of code-switched utterances” (Toribio, 2001a, 2001b, as cited in González-Vilbazo et al., 2013, p. 120). Thus, we assume that in the same way that monolingual speakers have linguistic knowledge of their language, bilinguals have linguistic knowledge of CS. Furthermore, we believe that bilingual grammars can be accounted for in the same manner as monolingual speech. Bilingual speakers can form monolingual linguistic structures in any of their two languages or, alternatively, they can take lexical items from Language A and Language B and merge them in one syntactic derivation, mirroring the merging of exclusively monolingual lexical items into monolingual derivations. The latter would give rise to a code-switched structure.

González-Vilbazo et al. (2013) also indicate that “data from code-switching have the potential for a unique contribution to linguistics by giving us access to combinations of linguistic features that may be difficult (or impossible) to observe in monolingual data” (p. 119). As we pointed out in the Introduction, CS has assisted linguistic inquiry in the task of uncovering diverse language properties that are otherwise opaque in monolingual data. This can be observed in recent work in experimental syntax for different phenomena, such as gender agreement.
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(González-Vilbazo, 2005; Parafita-Couto et al., 2015), the properties of light verbs (González-Vilbazo & López, 2011), classifiers (González-Vilbazo & Bartlett, 2010), pronouns (Koronkiewicz, 2014), wh-questions (Ebert, 2014), or sluicing (González-Vilbazo & Ramos, 2011).

Nonetheless, using CS as a tool for linguistic inquiry can be problematic since there is a lack of methodological standards. In their article, González-Vilbazo et al. (2013) aim to establish the foundation for the creation of methodological standards in studies in experimental syntax that use CS as a tool. In doing so, they focus on three different aspects: participant selection, project design and experimental procedure. Moreover, they describe the potential confounds that may arise in each one of these three aspects as well as possible solutions in order to mitigate them. According to these authors, one of the potential problems that may arise in the experimental procedure is that, since “CS is often a stigmatized form of communication”, this has the potential to affect participants’ acceptance ratings of code-switched sentences. The use of CS still carries a social stigma, especially in the context of Spanish/English CS in the US. As summarized by Montes-Alcalá (2000), “this phenomenon has been socially stigmatized by monolinguals and bilinguals alike, and has been given derogatory labels such as ‘Tex-Mex’ or ‘Spanglish’” (p. 218). She points out that the use of Spanish/English CS in the US is often attributed to illiteracy, a lack of formal education, or a lack of proficiency in one or both of the bilingual’s two languages. In fact, one way in which sociolinguists have attempted to counter this notion is by replacing the derogatory terms Tex-Mex and Spanglish with the linguistic description of code-switching (Alvarez, 199; Huerta, 1978; Lipski, 1985; McClure, 1977; Pfaff, 1976; Poplack, 1980; Sankoff & Poplack, 1981; Valdés, 1981; Woolford, 1983; Zentella 1981a, 1981b, 1982, 1997; as cited in Zentella, 2003).
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Language attitudes towards Spanish/English CS in the US

It is important to acknowledge that the term attitude is multidimensional and can encompass many different aspects of how Spanish/English bilinguals in the US perceive themselves as a group, as well as their language use. The broad definition of the term, offered by Anderson and Toribio (2007), defines language attitudes as “the way in which observers react towards language varieties and language use. ... [T]he definition also includes the ways in which these observers react to the users of language varieties” (p. 224). However, for the purposes of this study, we are adopting a more narrow view, that is, participants’ attitudes towards themselves and other bilinguals who code-switch.²

Not all communities perceive language in the same way and, in fact, even within members of the same community or among speakers of similar backgrounds differing attitudes may be found. For instance, in her study of language attitudes among Spanish/English bilinguals in the United States, Toribio (2002) looked at four native speakers of Spanish of Mexican heritage that had been living in Santa Barbara county for a minimum of 15 years at the time of the study. Toribio, through extensive sociolinguistic surveys and empirical measures of CS competence and performance, tested the CS attitudes of these four speakers with the intention of investigating whether this phenomenon was mitigating or increasing Spanish attrition in US

² We decided to narrow our definition of attitudes to only language attitudes towards CS because, although very interesting, we believe that capturing all of these dimensions would distract from the main focus of our study, which is to examine attitudes towards CS and how they affect our participants’ acceptance of code-switched sentences in AJTs.
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Latinos. For ease of exposition, we will focus on two of the participants, Yanira and Federico, who showed different attitudes towards CS.

Yanira reported that both Spanish and English together constitute her linguistic competence and she may draw upon one or the other or both in linguistic performance. She also pointed out that CS helps her maintain the minority language (i.e., Spanish). On the other hand, Federico reported that he code-switches at home, at school, at his work, and with his partner, but does not do so at family gatherings nor in writing. According to Toribio, this is to be expected as most bilinguals view writing as a more formal medium where CS is not permissible.

Nevertheless, even though he himself code-switches, Federico indicates decidedly negative attitudes towards the phenomenon. Indeed, not only does he believe that CS lacks any aesthetic merit—he finds it bothersome when someone code-switches—he also states that it is a catalyst for Spanish loss. In sum, Toribio’s (2002) study reflects how participants with similar linguistic profiles can indeed have very different attitudes, opinions, or relationships with CS. This has the potential to impact non-production experiments, not because Yanira’s and Federico’s intuitions are different, but because Federico’s negative attitudes towards CS could interfere in whatever task that he may be asked to complete.

Other studies have examined the impact of the speakers’ attitudes on the type of CS that they produce and on how frequently they CS. For instance, Montés Alcalá (2000) found that “attitudes towards code-switching are not a determining factor in the types of code-switching that bilingual individuals produce” (p. 226). In fact, she observed that people with negative attitudes still produced complex and elaborated intrasentential switches. In a similar vein, Dewaele and Wei (2014) examined a rather extensive group of multilingual speakers and found that higher degrees of multilingualism were not automatically linked to more positive attitudes
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Towards CS. However, they did find that participants with more positive attitudes towards CS reported using CS more frequently.

Nonetheless, we find a gap in the literature when it comes to participants’ attitudes towards CS and their potential effects in non-production experiments. As we have previously mentioned, there is no methodological consensus when it comes to using CS as a tool in experimental studies. Moreover, to the best of our knowledge, there are no studies that have examined the variable attitudes towards Spanish/English CS\(^3\) and its effects on these types of experimental tasks. Furthermore, as Pena Diaz (2004) argues “bilingual language attitudes is a key area in bilingual studies as it gives linguists an insight into what bilinguals actually think about their speech production, which could be utterly important for the analysis and interpretation of bilingual data” (p. 146). Thus, we believe that it is essential to explore this potential issue.

Even though there are many experimental procedures used in formal CS experiments, we will focus on Acceptability Judgment Tasks (AJTs) due to their wide use (see Grabowski, 2011; González-Vilbazo & Ramos, 2011; Koronkiewicz, 2014; Lederberg & Morales, 1984; Parafita-Couto et. al., 2015; among others). We are aware that there is a debate regarding the validity of using AJTs (see Sprouse, 2013, for discussion). However, the focus of this paper is not to

\(^3\) However Parafita-Couto, Deuchar and Fusser (2015) did study Welsh/English speakers’ attitudes towards CS in relation to their behavior in both production and grammaticality judgment tasks. On the one hand, they found correlations between attitude and language use in the picture-naming task. This is, speakers who believed that English and Welsh should be kept separate used fewer mixed determiner phrases. On the other hand, they found that there was no relationship between attitude and grammaticality rating.
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Comment upon this debate, but rather to comment on how the variable attitudes towards CS affects the acceptability judgments of the participants for those who are already employing AJTs in their research. In sum, the main goal of this study is to examine whether the positive or negative attitudes that Spanish/English bilinguals living in the US have towards CS have an effect on the acceptability judgments that they provide on code-switched sentences in AJTs.

Controlling for participants’ attitudes in experimental studies and especially AJTs is essential because, as we saw in Montes-Alcalá (2000), participants’ CS attitudes did not affect their production of code-switched structures. In other words, behavior and attitude are not necessarily correlated when it comes to production. However, the use of AJTs does not require participants to produce CS, rather it asks them to judge how acceptable a code-switched structure is. Recall Federico from Toribio’s (2002) study. Federico had negative attitudes towards CS, yet he still alternated between his two languages. In a study where he is being asked to provide judgments on code-switched sentences, it is possible that his negative attitudes are strong enough to affect his ratings. If a researcher then makes a claim about the acceptability of the tested code-switched structure, this claim could be compromised and actually reflect Federico’s negative attitudes instead of the acceptability or unacceptability of the CS structure itself. Bearing our previous discussion in mind, our research questions are as follows:

RQ1: Is there an effect for participants’ attitude towards CS on their ratings for code-switched sentences?

Assuming that there is indeed an effect for attitude, we need to determine what type of effect it is. Is it generalized such that a person with negative attitudes will reject all instances of CS regardless of their structure whereas a person with positive attitudes will accept all instances of CS regardless of their structure? Or will she make a distinction between types of CS
structures, thus revealing the rule-governed nature of the phenomenon? In order to answer these questions we follow up with our second research question:

**RQ2:** Does this effect vary by CS structure?

If there is no effect for participants’ attitudes towards CS on their ratings of code-switched sentences, then we expect all participants to behave the same. If, however, there is an effect for participants’ attitudes towards CS on their acceptability judgments, then we expect participants to behave differently depending on their attitude; participants with more positive attitudes will rate code-switched sentences higher than those with more negative attitudes. As to whether this effect varies by CS structure, since there is no previous research on this topic, we will go with the null hypothesis, which is that any effect of attitudes on rating will not vary by CS structure.

**Method**

**Participants**

Fifty early Spanish/English bilinguals participated in the study, 18 men and 32 women. At the time of study, one participant was living in Los Angeles, two in Seattle, and the rest in the Chicagoland area. The average age of the participants was 22.5 years and the age range was 19-32. All participants acquired both English and Spanish before the age of seven and grew up in bilingual households. Of the 50 participants, nine reported to have been born in Mexico, three in Colombia, two in Venezuela, and one in Costa Rica. The rest were born in the USA. Nevertheless, they had all lived in the US for at least nine years. In terms of their educational level, five had a high school diploma, 17 were college graduates, and the rest reported to have some college education.
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Furthermore, the participants were asked to self-rate their overall ability in Spanish and English on a scale of 1-5, 1 being “understand but cannot speak” and 5 being “understand and speak fluently like a native”. The participants were then asked to rate their Spanish and English reading, writing, speaking, and understanding skills. The participants had to rate these skills on a 1-5 scale, with 1 being “poor” and 5 being “native speaker command”. In Table 1 we provide the average ratings for the overall and the separate skills.

Table 1

<table>
<thead>
<tr>
<th></th>
<th>Spanish</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>3.97</td>
<td>4.68</td>
</tr>
<tr>
<td>Writing</td>
<td>3.40</td>
<td>4.47</td>
</tr>
<tr>
<td>Speaking</td>
<td>4.07</td>
<td>4.71</td>
</tr>
<tr>
<td>Understanding</td>
<td>4.25</td>
<td>4.63</td>
</tr>
<tr>
<td>Overall</td>
<td>4.28</td>
<td>4.84</td>
</tr>
</tbody>
</table>

Experimental stimuli

In order to construct a task that can achieve our goal, we employed code-switched stimuli from two different studies that had used AJTs as part of their methodology: Koronkiewicz (2014) and Sande (2015). Koronkiewicz (2014) analyzed code-switched sentences with switches between subject pronouns (both weak and strong) and the Verb Phrase (VP). He found that Spanish/English bilinguals gave higher ratings to code-switched sentences with a switch between a strong pronoun/full determiner phrase and the VP. Yet, they gave lower ratings to code-switched sentences that contained a switch between a weak pronoun and the VP. These are Conditions 3 and 4 in Table 2. Sande (2015) examined code-switched sentences that included a
switch between the complementizer and the verb of the embedded clause; a subset of the stimuli had an overt subject in the embedded clause and the other subset had an omitted subject. She found that Spanish/English bilinguals gave higher ratings to code-switched sentences where the subject of the embedded clause was overt but gave lower ratings to code-switched sentences where the subject of the embedded clause had been omitted. The use of two types of syntactic structures (i.e., pronouns and pro-drop), with two different types of stimuli each gave us four different CS conditions for our participants to rate. (See Table 2.)

Table 2

*Stimuli by Condition*

<table>
<thead>
<tr>
<th>Condition 1</th>
<th>Condition 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Pro-drop</em> stimuli (Sande, 2015)</td>
<td></td>
</tr>
<tr>
<td><em>No sé por qué</em> Lucía ate all those brownies.</td>
<td></td>
</tr>
<tr>
<td>‘I don’t know why Lucía ate all those brownies.’</td>
<td></td>
</tr>
<tr>
<td><em>Me pregunto qué</em> discovered in his sister's diary.</td>
<td></td>
</tr>
<tr>
<td>‘I wonder what discovered in his sister’s diary.’</td>
<td></td>
</tr>
</tbody>
</table>

| Pronoun stimuli (Koronkiewicz, 2014) |
| Condition 3 | Condition 4 |
| The other day those girls *conocieron a nuestra abuela*. |
| ‘The other day those girls met our grandmother.’ |
| They *compraron unas manzanas*. |
| ‘They bought some apples.’ |

The use of these four conditions allowed us to do two things. First, it allowed us to adequately determine that the participants are behaving similarly on these stimuli with respect to previous research. We recruited participants that belonged to the same population as the participants in Koronkiewicz (2014) and Sande (2015), that is, proficient English/Spanish bilinguals living in the US. Furthermore, we employed the same stimuli as these two studies. If we assume that our participants should behave in a similar manner and have the same intuitions as those in Koronkiewicz (2014) and Sande (2015), then we can use their results as a baseline for how our participants should rate the code-switched sentences in each of these conditions.
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Second, it allowed us to isolate the factor of attitude and how it affects CS acceptability judgments. By employing two different syntactic structures we can make sure that any relationships found between CS attitudes and acceptability ratings are not structure dependent. We can then use our participant’s ratings in conjunction with their attitudes towards CS to see if said attitudes correlate with any deviance from the baseline.

Procedure

Participants completed a survey through Google forms. The survey was divided in four blocks. All participants completed each block of the survey in the same order. First, the participants completed a linguistic background questionnaire. This questionnaire included questions related to their level of education, their linguistic proficiency in both Spanish and English and questions related to their bilingual habits (i.e., when they use each of their languages, with whom, where, how often, etc.). Second, the participants completed an AJT in which they rated 43 English/Spanish CS items on a 1-7 Likert scale, 1 being “completely unacceptable” and 7 being “completely acceptable”.

Third, the participants completed a second AJT in which they rated a total of 32 (16 Spanish and 16 English) monolingual sentences on a 1-7 Likert scale, 1 being “completely unacceptable” and 7 being “completely acceptable” featuring structures parallel to those of the code-switched sentences. Following Gonzalez-Vilbazo et al. (2013), we did not mix code-switched and monolingual sentences. We administered code-switched sentences first in order to avoid degraded ratings as the participants can possibly compare them to the monolingual sentences, which tend to receive higher ratings in these types of experiments. Monolingual sentences in English and Spanish were included in order to use the participants’ ratings of these stimuli as their own controls for the code-switched sentences. If a bilingual speaker does not
have the relevant structure in English and Spanish, then we would not expect them to use it when they code-switch either. Thus, we verified whether participants were accurately rejecting pro-drop sentences in English, but accepting both overt and null subjects in Spanish, and whether they were able to reject sentences with subject verb agreement mismatches in both English and Spanish. By including these acceptable and unacceptable sentences in both monolingual English and monolingual Spanish, we are able to see whether any deviations in judgments on code-switched sentences were due to a lack of the relevant features/structure in their Spanish and English grammars.

The fourth and final block of the study included two main questions regarding attitudes towards CS in order to classify our participants based on their responses. These questions were administered last in order to avoid compromising the data and giving away the purpose of the study right from the onset. The first question can be seen in (3a). The second question (i.e. 3b) was very similar to (3a), yet participants were asked to express their opinion about their own use of CS. Additionally, this second question included a sixth option (i.e., “I do not mix two languages in the same sentence”) so that participants could indicate whether they mixed both of their languages at all.

(3a) What do you think when you hear someone else mix two languages in the same sentence?

1. I find it horrible. It is an aberration to the two languages. It shows that she does not speak either of them well.

2. It does not seem right. It is better to talk using the same language when talking to a person.

3. I do not care. I never thought about it. I do not have a strong opinion.
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4. It's okay. It is as normal and as acceptable as speaking using the same
   language when talking to a person.

5. I think it's great. It shows that someone can speak well or is comfortable
   in both languages.

(3b) What do you think when you mix two languages in the same sentence?

6. I find it horrible. It is an aberration to the two languages. It shows that she
   does not speak either of them well.

7. It does not seem right. It is better to talk using the same language when
   talking to a person.

8. I do not care. I never thought about it. I do not have a strong opinion.

9. It's okay. It is as normal and as acceptable as speaking using the same
   language when talking to a person.

10. I think it's great. It shows that someone can speak well or is comfortable
    in both languages.

11. I do not mix two languages in the same sentence.

Analysis
First, we averaged the participants’ responses to questions (3a) and (3b) to get a single attitude
score. Participants were divided into three categories based on this score: 1) Negative attitude, 2)Mildly Positive attitude, and 3) Very Positive attitude. Participants with an average score of 1-2.5 we assigned to group 1 (n= 16), 3.5-4 to group 2 (n= 14), and 4.5-5 to group 3 (n= 17).4

__________________________
4 Three participants were removed from the analysis because their average attitude score fell
directly in the middle of the scale with a 3 and, therefore, there were not enough participants in
the group so as to come to solid conclusions.
Afterwards, the four conditions illustrated in Table 2 were coded separately for each participant, giving rise to a total of 43 tokens per participant. The results were then subject to a General Linear Mixed Model in SPSS.

Results

Our research questions asked whether there was an effect for a participant’s attitudes towards CS on their ratings of code-switched sentences and, if so, does that effect differ by Condition. Table 3 shows the average rating provided by participants for each of the four Conditions. In general, participants gave higher ratings to conditions 1 and 3, which were code-switched sentences with a switch between the complementizer and the embedded verb and an overt subject in the embedded clause, and code-switched sentences with a switch between a strong pronoun/full DP and the verb, respectively.

Table 3

<table>
<thead>
<tr>
<th>Condition 1: Pro-drop overt subject</th>
<th>Condition 2: Pro-drop null subject</th>
<th>Condition 3: Pronouns Strong/Full DP</th>
<th>Condition 4: Pronouns Weak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average AJT</td>
<td>4.2 ( (SD = 2.2) )</td>
<td>1.7 ( (SD = 1.3) )</td>
<td>4.5 ( (SD = 2.1) )</td>
</tr>
</tbody>
</table>

A General Linear Mixed Model was run in order to determine the effect of attitudes on acceptability ratings by condition. The dependent variable was AJT Rating on a scale of 1-7. The between-subjects effect was Attitude (Negative, Mildly Positive and Very Positive). The within-subjects effect was Condition (1- pro-drop overt, 2- pro-drop covert, 3- pronouns strong/Full DP, 4- pronouns weak). The Attitude*Condition interaction was included in the model and pairwise comparisons for the interaction were planned. Random intercepts were included at the
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participant and item levels in order to control for individual variation as well as for any variation in the dependent variable across items. Significant main effects were found for Attitude \((F(2, 44.39) = 9.45, \ p = .000)\) as well as for Condition \((F(3, 66.14) = 54.27, \ p = .000)\). Considering the research questions that drive this study, the significant Attitude*Condition interaction \((F(6, 140.15) = 5.48, \ p = .000)\) is our main interest.

Analysis of the pairwise comparisons for the Condition*Attitude interaction comparing condition (Table 4) revealed that, in all three attitude groups, Conditions 1 and 3 pattern the same such that they are not significantly different from each other, but both are individually significantly different from Conditions 2 and 4 respectively. The reverse holds true for Conditions 2 and 4 such that they are not significantly different from each other, but both are individually significant from Conditions 1 and 3 respectively.

Table 4

*Within-groups pairwise comparison p values from Bonferroni post hoc tests*

<table>
<thead>
<tr>
<th></th>
<th>Condition 1</th>
<th>Condition 2</th>
<th>Condition 3</th>
<th>Condition 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative Attitude</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condition 1</td>
<td></td>
<td>.001*</td>
<td>1.000</td>
<td>.006*</td>
</tr>
<tr>
<td>Condition 2</td>
<td>.001*</td>
<td></td>
<td>.000*</td>
<td>1.000</td>
</tr>
<tr>
<td>Condition 3</td>
<td>1.000</td>
<td>.000*</td>
<td></td>
<td>.000*</td>
</tr>
<tr>
<td>Condition 4</td>
<td>.006*</td>
<td>1.000</td>
<td>.000*</td>
<td></td>
</tr>
<tr>
<td>Mildly Positive Attitude</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condition 1</td>
<td></td>
<td>.000*</td>
<td>1.000</td>
<td>.000*</td>
</tr>
<tr>
<td>Condition 2</td>
<td>.000*</td>
<td></td>
<td>.000*</td>
<td>.889</td>
</tr>
<tr>
<td>Condition 3</td>
<td>1.000</td>
<td>.000*</td>
<td></td>
<td>.000*</td>
</tr>
<tr>
<td>Condition 4</td>
<td>.000*</td>
<td>.889</td>
<td>.000*</td>
<td></td>
</tr>
<tr>
<td>Very Positive Attitude</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condition 1</td>
<td></td>
<td>.000*</td>
<td>1.0000</td>
<td>.000*</td>
</tr>
</tbody>
</table>
This difference in conditions is that all three attitude groups provided significantly higher ratings in Conditions 1 and 3 than in Conditions 2 and 4. Additional analysis of the Attitude*Condition interaction comparing attitude (Table 5) indicated group differences in Conditions 1 and 3 but no group differences in Conditions 2 and 4.

Table 5

*Between-groups pairwise comparison p values from Bonferroni post hoc tests*

<table>
<thead>
<tr>
<th></th>
<th>Negative Attitude</th>
<th>Mildly Positive attitude</th>
<th>Very Positive attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition 1</td>
<td>Negative</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mildly Positive</td>
<td>0.102</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Very Positive</td>
<td>0.000*</td>
<td></td>
</tr>
<tr>
<td>Condition 2</td>
<td>Negative</td>
<td>---</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>Mildly Positive</td>
<td>1.000</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>Very Positive</td>
<td>0.655</td>
<td>---</td>
</tr>
<tr>
<td>Condition 3</td>
<td>Negative</td>
<td>---</td>
<td>0.028*</td>
</tr>
<tr>
<td></td>
<td>Mildly Positive</td>
<td>0.028*</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>Very Positive</td>
<td>0.000*</td>
<td>---</td>
</tr>
<tr>
<td>Condition 4</td>
<td>Negative</td>
<td>---</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>Mildly Positive</td>
<td>1.000</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>Very Positive</td>
<td>0.205</td>
<td>---</td>
</tr>
</tbody>
</table>

*p < .05
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In Condition 1, participants in the Very Positive attitude group gave significantly higher ratings ($M = 5.3$) than participants with mildly positive ($M = 4.1$) or negative attitudes ($M = 3.1$). However, no significant differences in the ratings between participants in the Mildly Positive and Negative attitude groups were found. In Condition 3, a more defined relationship between attitude and AJT rating was found in which participants in the Very Positive attitude group gave significantly higher ratings ($M = 5.7$) than participants in the Mildly Positive attitude group ($M = 4.4$) who, in turn, gave significantly higher ratings than participants with negative attitudes ($M = 3.3$). In contrast to Conditions 1 and 3, there were no significant differences between attitude groups with respect to their AJT ratings in Conditions 2 and 4. Figure 1 illustrates the differences by Condition for each attitude group.

**Figure 1.** Differences by Condition for each attitude group

![Average AJT by Condition and Attitude](image)

Participants regardless of their attitude provided lower ratings in Conditions 2 and 4 than in Conditions 1 and 3.

**Discussion**

Our results are able to yield clear answers to all of our questions suggesting that there is an effect of attitude on acceptability judgments. More specifically, the first question investigates whether
there is an effect for participant’s attitude towards CS on their ratings for code-switched
sentences and we find that the results of the General Linear Mixed Model do, in fact, show a
main effect for attitude when the code-switched sentences are collapsed across all four
conditions. Participants belonging to the group Very Positive Attitudes gave significantly higher
ratings than participants in either the Mildly Positive or Negative Attitudes groups. Confirming
that there is an effect for attitude on acceptability ratings we can move on to the more pertinent
research question, which asks whether the effect for attitude varies by CS structure. Contrary to
our hypothesis, the results of the General Linear Mixed Model show an effect of bilinguals’
attitudes in the ratings of the AJTs for conditions 1 and 3, but not for conditions 2 and 4.

Before entering a discussion of the ratings by each Condition it is important to discuss the
overall pattern between conditions. All participants, regardless of attitude distinguish between
the two different pro-drop structures, i.e. conditions 1 and 2, and between the two different
pronouns structures, (i.e. conditions 3 and 4). Further, distinctions are made across CS structure.
Again, all participants, regardless of attitude distinguish between condition 1 (pro-drop overt
subject) and 4 (pronouns weak) and between condition 2 (pro-drop covert subject and 3
(pronouns strong/Full DP). However, no distinctions across CS structure are made between
conditions 1 and 3 or between conditions 2 and 4. Thus, instead of finding a result for attitude by
syntactic structure (pro-drop vs. pronouns) what we see is that conditions 1 and 3 pattern in a
similar manner that contrasts with conditions 2 and 4, that also pattern together in a similar
manner.

In conditions 1 and 3 we see a clear pattern for the effect of attitude on acceptability
rating. In essence the more positive a participant’s attitude, the higher ratings they provide on the
code-switched sentences in these two conditions. In condition 3, participants in the Very Positive
attitude group provided the highest ratings, followed by those in the Mildly Positive group and lastly by those in the Negative attitude group. The difference in ratings is significant between all three groups. In condition 1, however, the pattern is a little less clear. While the results reveal that participants in the Very Positive attitude give significantly higher ratings to the code-switched sentences compared to the other two groups, there is no significant difference in the ratings between the Negative and Mildly Positive attitude groups. This lack of a difference in the ratings between the Negative and Mildly Positive attitude groups in condition 1 in contrast to condition 3 could be due to various factors. It could be the case that as these two conditions employ syntactic structures that are inherently different, they are also rated differently. However, it must be noted that condition 1 only had five CS items and we might not be able to see the pattern as clearly as we did in condition 3 due to the small number of tokens. Since conditions 1 and 3 pattern in a similar manner in all other aspects, if we were to include more tokens in condition 1 we predict that this difference would come out significant.

Contrary to conditions 1 and 3, we find no significant differences in ratings between participants in the three attitudes groups in conditions 2 and 4. All three groups award very low ratings to these structures. Thus, we must ask what is the difference between conditions 1/3 and conditions 2/4 such that we see an effect for attitude in conditions 1/3 but no effect in conditions 2/4. Examine Table 2, repeated here as Table 6, and recall that we used the exact same CS stimuli from Koronkiewicz (2014) and Sande (2015). In those studies, a difference was found in the ratings of the Spanish/English bilingual participants such that participants rated conditions 1 and 3 higher than 2 and 4 respectively.

Table 6

Stimuli by Condition
When we examine the average AJT by condition collapsed between attitude groups we find the same pattern, see Table 3. Thus, in general, our results fall in line with those of Koronkiewicz (2014) and Sande (2015). Bilinguals in these two studies gave very low ratings to the sentences in conditions 2 and 4 suggesting that these CS structures are not part of their I-language. That is, if a sentence contains a switch that is not part of a bilingual’s I-language, that sentence should receive a low rating regardless of the participant’s attitudes towards CS. Hence, it follows that all participants, regardless of their attitudes, do not behave differently with respect to conditions 2 and 4.

In sum, we only observe an effect for attitude in CS structures that are part of the bilinguals’ I-language. In our study these are conditions 1 and 3. We must note that the same holds true for monolingual speech; if a monolingual speaker is given a sentence containing an acceptable yet stigmatized dialectal feature (e.g., (4), a dialectal feature that is part of the I-language of Spanish speakers in Northern Spain), the rating that this speaker provides could vary depending on their attitude towards the dialect, their knowledge about its stigma and the like; this is true even if the sentence is part of their I-language.
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(4) Si tendría dinero, me compraría un coche.

If 1SG-have-COND money, myself 1SG-buy-COND a car.

‘If I had money, I would buy a car’.

On the other hand, if a monolingual speaker is given an ungrammatical sentence as the one in (5), said sentence would be rejected on the basis of not being part of their I-language.

(5) *Nosotros caminaba por la calle.

we 2SG-walk-PAST on the street.

‘We walked on the street’.

Thus, we believe that the same should happen in the case of bilingual speakers and code-switched sentences and this is indeed what we find.

Conclusions and Limitations

In this study, we have provided evidence that attitudes towards CS have an effect on acceptability judgments, at least in structures that are part of these bilinguals’ I-language (i.e., conditions 1 and 3). Positive attitudes towards CS resulted in higher acceptability judgments, while negative attitudes towards CS resulted in lower acceptability judgments. Conversely, when it came to structures that are not part of these bilinguals’ I-language, there was no effect of attitudes on AJTs; these sentences were given low ratings regardless of the attitudes of the participant. These results provide evidence that attitude is a variable that should be controlled for in future experiments on CS, as it might have a confounding effect on the data, thus rendering them unreliable. However, once you control for the variable attitude AJTs could be excellent tools to research bilinguals’ I-language. Therefore, future studies should incorporate methods of data collection that gather participants’ responses regarding their attitudes towards CS. Bearing

\[5\]

In most dialects of Spanish, Past Subjunctive would be used in (4) in lieu of the Conditional.
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our findings in mind, the participant pool should ideally consist of bilingual speakers with positive attitudes towards the phenomenon in order to prevent participants with negative attitudes from potentially compromising the data.

Even though our study specifically focuses on AJTs, we contend that our results have the potential to open a new line of research, which investigates whether CS attitudes affect participant responses in other types of tasks. In continuing with this line of research it will be necessary to do at least three things: 1) Test CS attitudes using other syntactic structures. In our study, the CS structures involving pro-drop and pronouns yield similar findings, however, we might not find the same results with other syntactic structures. 2) Recruit more participants to have a larger sample that spans all different types of attitudes and 3) incorporate a more fine-tuned analysis of attitude. Our attitude score was obtained through an introspective method of data collection and self-reports. This type of data collection method may yield controversial results since participants could be altering their real opinion or feelings about the phenomenon. However, by having the participants answer these questions after providing their judgments on the CS sentences, we attempted to control for this factor as best as possible. Future studies should employ different measures of CS attitudes in order to get a more in-depth picture of how attitudes can affect acceptability judgments on code-switched sentences.

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References


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