



Article Bilingual Texting in the Age of Emoji: Spanish–English Code-Switching in SMS

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Abstract: Technology and computer-mediated communication (CMC) have quickly transformed the means of interaction among monolingual and bilingual individuals alike, especially in the younger generations. While e-mail once replaced traditional "snail mail", today's youth networks mainly via social media and short message services (SMS). Digital communication has thus become a fertile ground for sociolinguistic research. The present study aims to contribute to the field of "electronic" code-switching, specifically in the emerging area of text messaging. To this end, I analyze The Bilingual Youth Texts Corpus, a collection of text messages among urban emergent Spanish–English bilinguals in New York City. The main findings indicate that (1) although it is not the most common practice, participants do engage in code-switching when texting each other; (2) their language mixing obeys most of the socio-pragmatic and communicative patterns attested in oral production (such as emphasis, elaboration, lexical need and, especially, tag switches) along with other functions (textisms) which are idiosyncratic to CMC; and (3) the language choices made by these bilinguals reveal a linguistic and a cultural belonging to two worlds where they may and must use both languages to fully express themselves online just like in real life.

Keywords: Spanish–English code-switching; text messages; textisms; computer-mediated communication; bilingualism; biculturalism

1. Introduction

Technology and, more specifically, computer-mediated communication (CMC) have rapidly altered how monolingual and bilingual individuals interrelate. This impact is particularly pronounced among the younger generations, who have experienced a paradigm shift in their interaction patterns within the last couple of decades. The late 20th century witnessed the advent of the Internet, bringing with it a faster and more convenient alternative to traditional postal, or "snail", mail—e-mail. This form of communication not only expedited the exchange of information but, in some instances, entirely supplanted the conventional postal system. As we stepped into the 21st century, however, the dynamics of interpersonal relationships among youths underwent a revolutionary transformation. The rise of social media platforms, direct messaging, chats, and short message services (SMS) has played a pivotal role in reshaping how young individuals engage with one another. These digital avenues not only facilitate instant communication but also foster new modes of expression and connection.

According to CTIA (the wireless industry association previously known as the Cellular Telephone Industries Association), US wireless customers exchanged more than 2.1 trillion text messages in 2022.¹ Furthermore, a 2023 study on teen smartphone usage reported that over half of their participants received 237 or more notifications per day, including social media apps and text messages.² These numbers prompt reflection on the profound impact technology has on shaping the communication landscape and its implications for sociolinguistic studies. Digital communication platforms serve as virtual laboratories where language choices, linguistic innovations, and communicative styles can be observed in real time. Moreover, the abbreviated and informal nature of interaction used in such platforms



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Copyright: © 2024 by the author. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https:// creativecommons.org/licenses/by/ 4.0/). often leads to the emergence of new linguistic features, including emojis, acronyms, and abbreviations. This phenomenon becomes particularly fascinating when two or more languages come into play. For instance, Verheijen et al. (2018) found that adolescents use more English in CMC "to distinguish themselves from older Dutch speakers and boost their youthful expressivity" (p. 66).

Understanding how these linguistic elements evolve in the younger generations adds another layer to studies on bi- and multilingualism. Consequentially, research on language choice and/or language mixing in CMC has experienced exponential growth since the late 1990s. Numerous works have delved into online language use among bilingual and multilingual communities—see, for instance, (Danet and Herring 2007; Dorleijn and Nortier 2009; Androutsopoulos 2013; Lee 2017; Verheijen et al. 2018; Leppänen and Peuronen 2020; or Verheijen and van Hout 2022; among others).

Some scholars have observed differences in code-switching patterns across CMC platforms. For instance, Paolillo (2011) noted a tendency for synchronous modes to favor this practice, while asynchronous modes tended to disfavor it. Moreover, Verheijen et al. (2018) found that MSN chats had the highest frequency of code-mixing, closely followed by WhatsApp, then Twitter (now known as X), and finally SMS.³ On the other hand, research has unanimously highlighted the role that code-switching plays in fulfilling specific discourse functions and expressing identity online, including "creative and playful uses of linguistic resources, which exploit available planning opportunities and are reflexively mobilized in discourses of cultural diversity or hybridity" (Androutsopoulos 2015, p. 187). Relevant contributions to the field over the last three decades encompassing a broad range of CMC formats—both synchronous and asynchronous—and involving different language pairs are briefly summarized hereafter.

One of the earliest studies on bilingual online forums was Paolillo's (1996), who found that Punjabi was used for marked discourse functions. Swiss–German code-switching in Internet Relay Chats (IRC) was explored by Siebenhaar (2006), while Androutsopoulos (2007) examined language choice and code-switching in German-based web forums and concluded that its discourse functions were comparable to those attested in conversational code-switching. Related works include Kytölä's (2013) research on multilingual web discussion forums and Leppänen's (2012) on Finnish–English fan fiction.

Language mixing in e-mail was first investigated by Georgakopoulou (1997) with Greek– English messages. Dascalu (1999) compared e-mail messages in three groups of bilinguals (Belarusian–English, Korean–English, and Romanian–English), while Warschauer et al. (2002) explored Egyptian Arabic–English code-switching in young professionals. Montes-Alcalá (2005) established that Spanish–English code-switching in e-mail served similar purposes to those observed in oral discourse. In his monograph, Hinrichs (2006) examined the discourse functions of English–Jamaican Creole code-switching and how they relate to identity issues. Similarly, Tsiplakou (2009) claimed that Greek–English code-switching in e-mail was an established and accepted practice with specific discourse functions. Finally, Negrón Goldbarg's study (Negrón Goldbarg 2009) on e-mail exchanges among Spanish–English bilinguals concluded that Spanish was used for intimate, informal exchanges, while English usage was mainly motivated by technical terms or to draw on American frames of reference.

Regarding social media, X (formerly known as Twitter) has been the object of numerous studies about bilingual or multilingual practices, such as Lanz Vallejo's (2011) on Spanish–English tweets, Novianti's (2013) exploring different language combinations, Jurgens et al.'s (2014) on multilingual hashtags, and Lavender's (2017) on Valencian Catalan and Spanish tweets. Likewise, different combinations of language mixing on Facebook have been examined by scholars such as (Halim and Maros 2014 (Malay-English), Androutsopoulos 2015 (German–Greek), Hinrichs 2016 (German–English), Ting and Yeo 2019 (English, Malay, and Chinese) and Fernández-Mallat 2020 (Spanish–English), among others).

Code-switching in blogs has been investigated by (Montes-Alcalá 2007) (Spanish– English blogging) and by Lienard and Penloup (2011), who argued that switching from French to English serves as an identity marker among youngsters. Additional research on bilingualism and language mixing across different CMC genres (including social networks such as MySpace, e-mail, chats, and instant messages) was undertaken by (Magaña 2013 and Montes-Alcalá 2015 (both focusing on Spanish–English) and Barasa 2016 (on English, Swahili, and vernacular languages in Kenya)).

However, a limited number of studies have specifically delved into bilingual texting. Lin (2005) conducted a pilot survey among Chinese–English bilingual college students in Hong Kong, revealing that a majority of them chose to write bilingual messages, especially the younger students. Despite the added complexity of inputting characters from both Chinese and English, mixing languages in text messages suggested an emerging pattern of bicultural identity among young Hongkongers. Al-Khatib and Sabbah (2008) explored language choice among Arabic–English university students in Jordan. Their findings indicated that code-switching served specific sociolinguistic functions, such as lexical gaps, greetings, euphemisms, and quotes. In a related domain, some scholars have investigated code-switching in WhatsApp groups. Wentker (2018) studied group identity and social meaning in English–German bilinguals, while Pérez-Sabater (2022) examined language choice in a trilingual (Catalan, English, and Spanish) community and concluded that code-switching served to construct in-group solidarity and identity.

As outlined, there exists a considerable and ever-growing body of research carried out on bi- and multilingual online practices. Yet, it appears that there is a noticeable lack of studies specifically focusing on code-switching in text messages, particularly involving Spanish and English. This is a surprising fact considering that Spanish boasts near 500 million native speakers. Furthermore, its presence online has surged by 1500% in the last 20 years, and, according to the Internet Society Foundation, it currently stands as the second most common language used on the Internet after English.⁴

In an attempt to address such a gap and better understand the nature of Spanish– English texting in young generations, the present study analyzes a corpus of SMS from emergent urban bilinguals in New York City. The research aims to investigate to what extent these young individuals engage in the practice of mixing Spanish and English in their text messages, whether their code-switching patterns adhere to those socio-pragmatic and communicative strategies typically attested in oral production, and whether there are any functions that seem to be idiosyncratic to bilingual texting among this demographic group.

The findings suggest that, although it is not the most frequent linguistic practice in this cohort, participants employ code-switching in their text messages. While most of their switching patterns closely mirror those observed in natural oral production, some others appear to be unique to this mode of digital communication. Additionally, their language choices align with a linguistic and cultural belonging to two worlds, where the use of both languages is not only optional but often necessary for full self-expression online, just like in real-life communication.

2. Materials and Methods

The material used for this study is the Spanish/English Bilingual Youth Texts (BYTs) Corpus. The corpus, collected as part of a project entitled "Literacies of Bilingual Youth: A profile of bilingual academic, social, and txt literacy", was compiled and developed in 2016 by Michelle A. McSweeney (2016) (Johnson) and the Second Language Acquisition Lab at the CUNY Graduate Center, who generously made it available and free to researchers interested in text messaging from any perspective or discipline.⁵

As described on their website (https://byts.commons.gc.cuny.edu/ accessed on 15 January 2024), the corpus consists of 44,597 text messages sent and received by young bilinguals in New York City. Participants signed two consent forms in order to allow their messages to be downloaded directly from their phones and to include fully intact conversations as well as metadata about their phones and messages. The SMS in the corpus included spam, automated messages, and mass messages from participants' cellphone carriers. Messages were categorized as Spanish, English, bilingual, or other (referring to messages such as emojis, proper nouns, or acronyms). Conversations were kept intact and

identified with a conversation number, the relationship type between the texters, and the gender of the receiver. When the timestamp was available, it was also included.

Out of the fifty participants who were enrolled in the broader project, fifteen donated their messages to the corpus (six females and nine males, self-reported). They shared many social and cultural norms, came from similar backgrounds, and most knew each other in a face-to-face setting. All were emergent Spanish–English bilinguals living in New York City and born in Latin America. The vast majority (nine) were born in the Dominican Republic, three were born in Ecuador, one in Costa Rica, one in Guatemala, and one in El Salvador. All but three of them arrived in the United States as teenagers. They spoke Spanish at home and English at school and/or work. At the time of the project, they were enrolled in Pathways to Graduation (a high school equivalency program) and were developing literacy skills in both languages. The ages for eight of them ranged from 17 to 19 years old while the remaining seven ranged from ages 20 to 22. Table 1 summarizes the demographics of the participants as presented in the BYTs corpus.

User ID	Gender	Age Range	Birthplace	Age of Arrival to the US
U01	F	17–19	Ecuador	17
U02	F	20-22	Dominican Republic	18
U03	F	20-22	Dominican Republic	9
U04	М	17-19	Ecuador	18
U05	F	20-22	Costa Rica	18
U06	F	20-22	Dominican Republic	12
U07	Μ	20-22	Dominican Republic	5
U08	М	20-22	Dominican Republic	15
U09	F	17-19	Dominican Republic	16
U10	М	17-19	Dominican Republic	19
U11	М	17-19	Guatemala	17
U12	Μ	17-19	Dominican Republic	14
U13	М	17-19	Dominican Republic	8
U14	М	20-22	El Salvador	18
U15	М	17–19	Ecuador	17

Table 1. Demographics of the BYTs corpus participants.

For the present study, 2855 bilingual SMS were manually extracted from the BYTs corpus, which represented 6.4% of the total. This bilingual subset yielded 3167 code-switching tokens. Each token was then classified according to the primary communicative function it appeared to fulfill. Given the absence of a methodology specifically designed to analyze SMS data, I followed the traditional sociolinguistic framework established by researchers in the field of Spanish–English code-switching (among others, Valdés-Fallis 1976; Jacobson 1977; Poplack 1980, 1981; McClure 1981; Gumperz 1982a; and Zentella 1997). These scholars have consistently identified a number of socio-pragmatic and communicative strategies accomplished by code-switching in natural production, such as quotations, emphasis, repetition, clarification, elaboration, topic shift, lexical gaps, and linguistic routines or crutches just to name a few.

Notwithstanding, assigning a specific function to each switch can prove challenging, and, as Zentella (1997, p. 99) once hinted, "pinpointing the purpose of each code switch is a task as fraught with difficulty as imputing the reasons for a monolingual's choice of one synonym over another, and no complete accounting may ever be possible". The implication, however, should not be that code-switching is haphazard but rather that a language switch may serve multiple functions at a given time, or, conversely, it may not appear to fulfill a specific function. For this reason, a small number of switches in the corpus were classified as "miscellaneous".

To ensure consistency and simplicity, functions that served a similar purpose were grouped together. For example, clarification and elaboration were combined into a single category, repetitions intended for emphasis were categorized as emphatic, while tags, vocatives, discourse markers, and linguistic crutches were all grouped under tag switching following Poplack's (1980) typology. This categorization approach aimed to streamline the analysis and enhance clarity in understanding the diverse functions observed in the text messages.

The hypothesis suggests that most of the communicative strategies traditionally associated with oral code-switching will manifest in the BYTs corpus. This assumption stems from the fact that, despite being a written mode of communication, texting shares numerous similarities with face-to-face interaction due to its rather informal and semi-synchronous nature (Dorleijn and Nortier 2009, p. 130; Androutsopoulos 2013, p. 676). As pointed out by McSweeney (2018, p. 162), "many of the communicative functions that code switching and language choice have in a spoken context are transferred to a texted context". Additionally, I speculate that bilingual texting reveals unique and idiosyncratic patterns not previously substantiated in oral or written communication.

3. Results

As explained, the bilingual subset of the BYTs corpus contained 3167 instances of code-switching, and each one was categorized according to the socio-pragmatic and communicative functions attested in natural bilingual discourse. Within these traditional functions, the most prevalent type, constituting more than a third of the switches, fell into the category of tag switching, encompassing linguistic routines, fillers, discourse markers, and vocatives. Approximately a quarter of the switches served emphatic, elaboration or clarification purposes, and culturally bound items, which included isolated lexical switches and idiomatic expressions.

However, and perhaps unsurprisingly, the largest number of switches overall were for what is commonly referred to as textisms, specifically abbreviations and acronyms. Textisms are exclusive to digital communication and not typically observed in oral (or other written) production. Figure 1 provides a summary of the overall results, indicating the percentage of switches for each category, while Figure 2 summarizes the results based on the number of tokens for each type. The subsequent discussion will delve into each communicative function individually, supported by relevant examples from the corpus.⁶

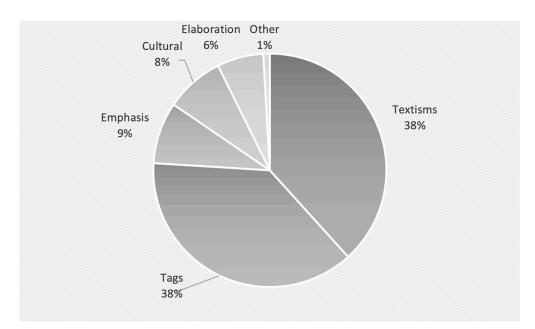


Figure 1. Summary of results by percentage for each function.

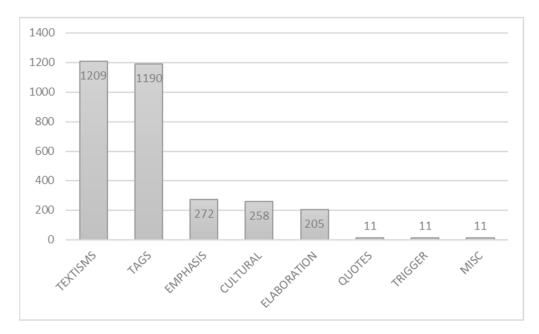


Figure 2. Summary of results by number of tokens for each function.

3.1. Textisms

Textism (also known as *textese* or *digitalk*) has been defined as "a digitally written language variant that is especially used by youths in informal communication via new media and is characterized, to a greater or lesser extent, by deviations from the standard language norms at different levels of writing, such as spelling, grammar, and punctuation" (Verheijen 2018, p. 144). This type of shorthand includes the use of abbreviations, acronyms, misspellings, emoticons, contractions, and other techniques employed to compose SMS and instant messages. Textism plays an important creative role in constructing meaning, relationship building, and identity performance (McSweeney 2018). It became popular because it saves time and space, particularly when text messages were originally limited to 160 characters and X (formerly known as Twitter) had an even stricter limit (140 characters).

Even though those character limits no longer apply, given its idiosyncrasy to CMC (especially text messages), textisms not surprisingly emerged as the most prolific category in the bilingual SMS corpus amounting for 1209 (or 38.1%) of the switches.⁷ While it could be argued that textisms are outliers in the analysis due to their extremely frequent occurrence, they were included in the discussion because, interestingly, all the switches were from Spanish to English. For instance, using LOL (*laughing out loud*) within a Spanish sentence was exceptionally common, but no examples of Spanish textisms (such as TQM for *te quiero mucho* "I love you very much" or XQ for *porque* "because") were found in the corpus despite being frequently used when texting in Spanish.

This finding is consistent with previous research in bilingual CMC. For example, in Verheijen and van Hout's (2022) study on Dutch–English code-mixing in informal online writing, LOL was by far the most frequent English textism, followed by OMG and WTF. They argue that "young CMC users regard these expressive resources as playful, informal, and cool stylistic strategies to profile a young identity" (p. 5). Some examples (1–7) from the bilingual SMS corpus follow, with the meaning of the abbreviations explained in parenthesis:

1. Wyd ancianita 🚱

"Wyd (What are you doing?) little old lady?"

Omg si que stas loco y te dolía?
 "Omg (oh, my God) you're crazy, and did it hurt?"

- Babe *mi telef esta en 2%. Lo voy a poner a cargar* ttyl ⁽²⁾
 "Babe my cell is at 2%. I am going to charge it ttyl" (Talk to you later)
- Idk! *Dime tu* "Idk! (I don't know) You tell me"
- 5. Asiendo brownies hbu
 - "Making brownies hbu" (how about you?)
- 6. Nooo baby *no ahora* plz
 - "Nooo baby not now plz" (please)
- 7. Toy muy busy ahora bby ()"I'm very busy now bby" (bye bye)
- 3.2. Tag Switches

Aligning with previous findings of socio-pragmatic functions in CMC (Lavender 2017), the second most productive type comprising 1,190 tokens (37.5% of the corpus) involved tag switching—following Poplack's (1980) classification and similar to what Zentella (1997) describes as "crutch-like" switches. This category included discourse markers, tags, fillers, vocatives, and other types of discourse-pragmatic elements that are highly borrowable and typically attested in language contact situations at the oral level. Within this group, there was an unusually high number of terms of endearment (such as *babe*). These could arguably be outliers since two of the participants in the BYTs study were a romantic couple in the first three months of their relationship, and, therefore, most, if not all, of their SMS included expressions of affection. However, plenty of instances of other linguistic routines, discourse, and identity markers were identified in the corpus, such as *so* (example 13), *bro* (example 10), *man/men* (example 12), or *bueno* "well" (example 14).

- Voy para la casa ahora baby "I'm going to the house now baby"
- 9. Babe *estas mirando las noticias?*
- "Babe, are you watching the news?"
- 10. *No hay dinero* bro "There is no money bro"
- 11. *Donde andas* brother
 - "Where are you brother?"
- 12. *Nada* men *ya boy a comer y vos* "Nothing man, I'm going to eat and you?"
- 13. Ohh so *tu sigues molesto conmigo???* ⁽²⁾"Oh, so are you still upset with me?"
- 14. *Bueno*, yeah by myself "Well, yeah by myself"
- 3.3. Emphasis

Code-switching for emphatic purposes, a function typically observed in bilingual oral production, was also present in the bilingual SMS corpus, recurring at a rate of 8.5% (272 tokens). While in writing emphasis can be achieved by simply capitalizing, underlining, or using bold font, bilinguals also have the option of switching languages to underscore a word or idea. As seen in (15), both capitalizing and code-switching are used in order to emphasize what is being said:

15. That's why I don't like cold cuz I'm always *SOLITA* lol 'That's why I don't like cold cuz I'm always ALONE lol'

This finding is consistent with Fernández-Mallat's (2020) study on Facebook posts, whose results indicated that emphasis accounted for up to 73% of language switches. Additionally, code-switching can be employed to highlight dismissive expressions, insults, expletives, or slurs in both languages, as illustrated in examples 16–19:

- 16. Whatever!!! *Cambiemos de tema por favor* "Whatever!!! Let's change the topic, please"
- 17. *Que* fucking *novia yo tengo??* "What fucking girlfriend do I have?"
- 18. *Pendejo*, we not togethherrr "Idiot, we not together"
- 19. *Diablo* no he's my twin 💿 🗞 🕰 "Damn, no he's my twin"

3.4. Cultural Switches

The phenomenon known as a lexical gap is frequently cited as a key factor in understanding oral code-switching, particularly when shifts occur at the word level, predominantly nouns. This also occurs in digital platforms. For example, in Novianti's (2013) study on Twitter (now called X), 60% of the switches were due to a lexical need. However, the issue of a lexical necessity has sparked controversy. Misinterpretations often arise, wrongly associating such gaps with a lack of proficiency in one language or, worse yet, attributing it to the speaker's laziness. It is crucial to note that, from a technical standpoint, every switch—whether involving a noun or an idiomatic expression—serves a specific need. However, it is important not to misconstrue this as a deficiency. Switching may happen due to the absence of an exact equivalent in the other language, a momentary lapse in the individual's lexicon, or simply a higher frequency of exposure to a particular item in a specific language or culture. (Magaña 2013) refers to these as "contextual switches", and, in her study, they comprised over a third of the switches of the MySpace messages analyzed.

In the bilingual SMS corpus, this category accounted for 8.1% of the switches (with a total of 252) aligning with previous research on CMC, such as Al-Khatib and Sabbah's (2008) and Verheijen et al.'s (2018). I define these types of switches as culturally bound since they are closely related to the bicultural environment of these individuals. As McSweeney (2018, p. 63) notes, "when texters use culturally marked expressions, they are confirming and asserting their membership in a group or speech community and expecting that the other person will understand both the message and the connotations". The ensuing examples show how most of the concepts are culturally specific to either the Spanish or the Anglo worlds and pose a need to switch languages. For example, English is the language used at work and school, so terms related to those environments (such as *homework* or *printer* in examples 21 and 24) are more likely appear in English, while food items (*sancocho* "stew" or *habichuelas* "beans" in examples 27 and 26) and family members (*abuelita* "grandma" in example 25) related to Hispanic culture are more easily expressed in Spanish.

- 20. *Hijita preciosa. Esta en* after school? "Pretty daughter. Is she in after school?"
- 21. *Estas haciendo tu* homework? "Are you doing your homework?"
- 22. *Yo no sabia que mi* average *era de 86.59* lol "I didn't know my average was 86.59 lol"
- 23. *Hable con ella y me dijo que necesita a alguien para* full time "I talked to her and she told me that she needs someone full time"
- 24. *Ese* printer *es el que mas se daña* lol

"That printer is the one that breaks the most lol"

- 25. Yeah lol!!! Hopefully I'll see *mi abuelita* tomorrow 😂 "Yeah lol!!! Hopefully I'll see my grandma tomorrow"
- 26. I'm going to TRY to do *las habichuelas* today "I'm going to TRY to do the beans today"
- 27. Eat breakfast then babe it'll probably be a while until the *sancocho* is ready "Eat breakfast then babe it'll probably be a while until the stew is ready"

Some authors propose the concept of "least effort" or linguistic economy to explain such lone switches, both in oral and written production (see, for instance, Gumperz 1982b; Halim and Maros 2014; or Lavender 2017). While it is true that typing a shorter word requires fewer characters, as Barasa (2016, p. 65) points out, considering the prevalence of automatic correctors on most phones nowadays, this does not seem to be the most plausible justification for switching languages. In fact, some of the examples presented above show that the English equivalent (*stew, grandma* or *beans*) would actually have fewer syllables than the Spanish word, but the texter chooses to use Spanish regardless, once again highlighting the cultural aspect behind this type of switching.

3.5. Elaboration and Clarification

Switching languages to further explain, clarify, or elaborate on previous statements is another prevalent communicative function commonly attested in bilingual oral production. In the SMS corpus, there were 205 instances of this category, constituting 6.4% of all switches. This indicates that bilingual individuals frequently employ code-switching for the purpose of providing additional explanation or clarification within the context of text messages. Below are a few examples (28–35):

- 28. That's ok, *pero quería que ella hablara contigo como sea* "That's ok, but I wanted her to talk to you anyhow"
- 29. I like night clubs *porque me gusta bailar* lol **2** "I like night clubs because I like to dance lol"
- 30. *Aquí estoy!* I was cleaning the bathroom "I'm here! I was cleaning the bathroom"
- 31. *Le tengo miedo a las alturas!* That's why I don't like planes lol "I'm scared of heights! That's why I don't like planes lol"
- 32. Not good! *Peor que ayer* (a)"Not good! Worse than yesterday"
- 33. I can't watch tv now lol... *Hay mucha bulla aquí*
- "I can't watch tv now lol... There is a lot of noise here" 34. I woke up to drink water! *Tenia una sed*
 - "I woke up to drink water! I was so thirsty"
- 35. *No voy a decir nada* cuz I don't wanna fight 🕹 😔
 - "I am not going to say anything because I don't wanna fight"

3.6. Other Findings

The bilingual SMS corpus also displayed a handful of other patterns that have typically been observed in oral code-switching, such as quoting someone else and triggering, as well as miscellaneous switches. However, all these categories had a much lower occurrence in the corpus with only 11 instances (or 0.3% of the total) for each type.

3.6.1. Quotes

Using the original language to reference someone else's words, whether in the form of a direct quotation or paraphrasing, has proved to be a primary function observed in oral code-switching. While not as widely used in the SMS corpus (and consistent with Al-Khatib and Sabbah 2008), various instances of both direct and indirect quotations were identified. In some cases (examples 38 and 39), Spanish served as the base language with the quotation in English, while in others (examples 36 and 37) English was the base language with the quoted words in Spanish.

- But then I was like: . . . No el no se acuerda was
 "But then I was like: No, he does not remember"
- 37. And I ask her why she think that & *dijo... Porque te estas riendo* "And I ask her why she think that and she said... because you are laughing"

- 38. *Es que tu me dijiste que tu* talk to another boy"It's that you told me that you talk to another boy"
- 39. Estoy de mal humor. Y no me digas "my love""I'm in a bad mood. And don't tell me "my love""

3.6.2. Triggered

An intriguing psycholinguistic (rather than sociolinguistic) phenomenon frequently observed in bilingual oral production happens when the utterance of a particular word in the other language unconsciously triggers a switch in what follows (or, in the case of anticipatory triggering, immediately precedes it). In fact, it is not uncommon for a proper name or a lexical switch to act as a catalyst for a subsequent switch (see, for instance, Valdés-Fallis 1976). This process was not overtly recurrent in the bilingual SMS corpus but several instances were found. In the examples shown, the triggering item(s) that induce switching the following words are underlined. Sometimes they are in English (example 41), and other times the trigger is in Spanish (examples 40 and 42).

- 40. Watching <u>Nuestra Belleza Latina</u> con mi pai "Watching Nuestra Belleza Latina with my dad"
- 41. *Voy en el* <u>train</u> going down "I'm on the train going down"
- 42. Ohhh I thought you were in *universita o algo*."Oh I thought you were in college or something"

3.6.3. Miscellaneous

A small number of unclassifiable switches were included in this category, namely those that, as described by Zentella's (1997, p. 99) disclaimer quoted earlier, did not seem to align with any of the traditional functions established in the field. Examples of this sort of free switching are shown in 43–45:

- 43. How much valen
 - "How much are they"
- 44. Le puedes tomar de new la foto a la 6 7 y 8"Can you take the picture again for 6, 7 and 8"
- 45. Lol *estoy* something then
 - "Lol I'm something then"

4. Discussion

The findings presented here provide valuable insights into the realm of digital codeswitching, particularly within the context of Spanish–English texting patterns. The initial research question aimed to explore the frequency of Spanish and English mixing among this cohort of young bilinguals in their text messages. It can be affirmed that, while it is not the predominant practice (only 6.4% of the BYTs corpus involved bilingual texts), participants indeed engage in code-switching when exchanging text messages. The mix of Spanish and English in oral communication may still be stigmatized in certain communities and social contexts, but it appears to be an accepted practice in CMC. This fact can be attributed to the democratic nature of texting (widely accessible and available to people from various backgrounds and social status) and the freedom it grants users to disregard established conventions, whether grammatical, orthographic, or otherwise. Regardless of their linguistic background or the type of bilingualism they exhibit, these emerging bilinguals seem to embrace a sense of freedom in expressing themselves when engaging in text conversations, and code-switching enables them to navigate the subtleties of both Spanish and English effectively.

The second question intended to examine the patterns of code-switching in SMS and whether they align with those socio-pragmatic and communicative strategies commonly observed in bilingual oral production. The bilingual texting patterns obtained in the corpus demonstrate adherence to many of the traditional functions, particularly switching for linguistic routines, emphasis, elaboration, and to convey culturally loaded concepts. Consequently, biculturalism, beyond mere bilingualism, lies at the core of language mixing in SMS, just like in natural speech production. To a lesser extent, code-switching in the bilingual SMS corpus was employed as a technique to quote someone else's words. Additionally, the triggering phenomenon frequently attested in bilingual oral production wherein a switched item prompts another switch in the preceding or succeeding words was also evident in the corpus, albeit to a slighter degree.

The final research question sought to identify any functions that might be unique to bilingual texting. The analysis corroborates McSweeney's (2018, p. 166) conclusion that while bilingual texters move between languages for many of the same reasons that bilingual speakers do, technology has an influence on their code-switching patterns. Consequently, the chief reason for switching from Spanish to English (but not the other way around) was the use of textisms, particularly acronyms—a pattern not commonly seen in oral production. This is a predictable outcome within CMC, a relatively informal and spontaneous mode of interaction that has often been placed at the middle of the continuum between spoken and written communication. In fact, consistent with Barasa's (2016) findings, it can be asserted that code-switching in CMC warrants recognition as a distinct entity, separate from spoken (or written) code-switching, in order to fully grasp its inherent characteristics.

Therefore, language mixing in SMS, akin to real-life scenarios, emerges as a nuanced strategy that can be perceived not as a limitation or lack of language skills but rather as a sophisticated expressive repertoire. It is crucial to note that the spontaneous data presented here predominantly represent an informal or colloquial register. Thus, it is reasonable to assume that the quantity and quality of code-switching produced by the participants would differ in a more formal context, both online and offline. Switching languages in text messages, then, is not a random occurrence but rather serves specific socio-pragmatic and communicative functions, aligning with those found in bilingual oral production.

Moreover, code-switching operates as a tool to express not only one's languages but also one's cultures. As Magaña (2013, p. 61) argues, "along with strategic communicative effects, a predominant reason for code-switching is rooted in the desire of bilinguals to identify as multicultural and not fully assimilated Americans". In this particular group of texters, McSweeney (2018, p. 156) points out that bilingual identity performance is a key aspect of their linguistic decisions, to the extent that one participant "had turned off his autocorrect completely because he felt he was unable to truly express himself if he had it on" (p. 120). Hence, while bilingualism is a prerequisite to code-switch, the role of biculturalism is evident behind the language choices of these emergent young bilinguals. Such choices manifest a dual linguistic and cultural belonging to both Hispanic and Anglo worlds where the use of Spanish and English is equally an option and a necessity to fully express themselves online, just like in real life.

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Notes

- See, https://www.ctia.org/the-wireless-industry/infographics-library#:~:text=In%202022%2C%20Americans%20spent%20 nearly,they%20exchanged%20the%20previous%20year (accessed on 15 January 2024).
- ² See, https://www.commonsensemedia.org/press-releases/teens-are-bombarded-with-hundreds-of-notifications-a-day (accessed on 15 January 2024).

- ³ These authors, as many others across diverse disciplines such as translation, bilingual education, and sociolinguistics, use the term code-mixing to refer to elements from one language used in another language, when mainly the grammar of the L1 is at work, while in code-switching both grammars would be active simultaneously. Other common terms used to describe language alternation are code-meshing and translanguaging. For the sake of simplicity, I henceforth use code-switching, language switching, and language mixing interchangeably to refer to the alternative use of two or more languages in bilingual or multilingual discourse. For further discussion on terminology, see Mabule (2015).
- ⁴ See, https://www.isocfoundation.org/2023/05/what-are-the-most-used-languages-on-the-internet/ (accessed on 15 January 2024).
- ⁵ Most of the information about the corpus and participants presented here is summarized from the BYTs corpus website, with some additional details extracted from McSweeney (2018). One anonymous reviewer points out that not having enough background information about the texters poses limitations to the analysis of the data. I acknowledge such limitations and refer the reader to McSweeney (2018) for more detailed background about her project's participants, data collection, methods, and message processing.
- ⁶ Messages are here transcribed as they originally appear in the BYTs corpus, including typos, spelling errors and emojis. I use regular font for English and italics for Spanish. All translations are my own.
- ⁷ For an in-depth discussion of textisms and the pragmatics of text messaging, see McSweeney (2018).

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