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SILVIA, KIM

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SILVIA KIM**


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* Full research article.

** Received her M.A. in Spanish Linguistics from Seoul National University and is currently a PhD student in Linguistics at the University of Southern California. Her research focus is sentence processing in psycholinguistics. Her recent work is mainly centered on Spanish-Korean code-switching, English-Korean code-switching, bilingualism, and second language acquisition. E-mail: silbiaki@usc.edu  <https://orcid.org/0000-0002-7720-6897>

Abstract

‘Code-switching’ (CS) refers to language-mixing where individuals who speak two or more languages switch from one to another, often mid-sentence. Several morpho-syntactic constraints governing when switches happen have been proposed in prior work, mostly on Spanish-English CS (e.g. Timm, 1975; Pfaff, 1979; Poplack, 1980). However, what happens when the languages are typologically different? This is the case with Spanish-Korean CS, which has not been systematically investigated. Korean and Spanish differ in many respects, including clause structure/word order, absence/presence of articles, and morphology (Korean: agglutinative, Spanish: fusional) (Kwon, 2012; Bosque, Demonte, Lázaro, Pavón & Española, 1999). For the present study, balanced Spanish-Korean bilinguals were interviewed to obtain a naturalistic corpus of CS. Strikingly, we find that many constraints proposed for Spanish-English CS do not hold for Spanish-Korean. Specifically, there are three main ways that Spanish-Korean CS violates the constraints proposed for Spanish-English: (i) in contexts involving word order/clause structure, (ii) on the level of nouns and (iii) on the level of morphemes. Crucially, the violations are not random: We suggest that they stem from the typological differences between Korean and Spanish. This work highlights the empirical and theoretical benefits of including typologically diverse language pairs when investigating CS.

Keywords: Spanish-Korean, code-switching, bilingualism, typology, Free Morpheme Constraint, Functional Head Constraint.

Español en contacto con coreano: nuevas apreciaciones en el cambio de idioma

Resumen

El cambio de código (‘code-switching’, CS) se refiere a la mezcla de idiomas donde las personas que hablan dos o más idiomas cambian de una a otra. Los trabajos sobre CS español-inglés han identificado varias restricciones morfosintácticas que gobiernan cuando ocurren los cambios (por ejemplo, Timm, 1975; Pfaff, 1979; Poplack, 1980; sin embargo, ¿qué sucede cuando los idiomas son tipológicamente diferentes? Este es el caso del CS español-coreano, que no se ha investigado sistemáticamente. Estos idiomas difieren en muchos aspectos, incluyendo (i) estructura de la cláusula/orden de las palabras, (ii) ausencia/presencia de artículos y (iii) morfología (coreano: aglutinante, español: fusional) (Kwon, 2012; Bosque et al., 1999). Para este estudio, entrevistamos a bilingües hispano-coreanos para obtener un corpus naturalista. Sorprendentemente, encontramos que muchas restricciones propuestas para el CS español-inglés no son válidas para el español-coreano. Hay tres maneras en que el CS español-coreano viola las restricciones:

(i) en contextos que involucran la estructura de cláusulas, (ii) uso de sustantivos y (iii) en el nivel de morfemas. Crucialmente, las violaciones no son aleatorias: sugerimos que provienen de las diferencias tipológicas. Este trabajo destaca los beneficios empíricos y teóricos de incluir pares de idiomas tipológicamente diversos al investigar el CS.

Palabras claves: español-coreano, cambio de código, bilingüismo, tipología, restricción del morfema libre, restricción del núcleo funcional.

Espagnol et coréen en contact: nouvelles perceptions sur le changement de code

Résumé

Le changement de code (CC) fait référence aux interférences de langue lorsque les personnes qui parlent deux langues ou plus passent de l'une à l'autre. Les travaux sur l'espagnol-anglais CC ont identifié plusieurs contraintes syntaxiques (morpho) qui guident les changements (par exemple, Timm, 1975; Pfaff, 1979; Poplack, 1980). Cependant, que se passe-t-il lorsque les langues en question sont typologiquement différentes? C'est le cas du CC hispano-coréen, qui n'a pas fait l'objet d'une recherche systématique. Ces langues diffèrent à bien des égards, notamment en ce qui concerne (i) la structure des clauses / l'ordre des mots, (ii) l'absence / la présence d'articles, et (iii) la morphologie (coréen: classeur, espagnol: fusionnel) (Kwon, 2012; Bosque y Demonte, 1999). Pour cette étude, nous avons interviewé des bilingues espagnol-coréen afin d'obtenir un corpus naturaliste. Nous avons constaté que de nombreuses restrictions proposées pour l'espagnol-anglais CC ne sont pas valables pour l'espagnol-coréen. Le CC hispano-coréen va au-delà des restrictions de trois manières: (i) dans des contextes impliquant la structure de la clause, (ii) l'utilisation de noms et (iii) au niveau des morphèmes. Les violations ne sont surtout pas aléatoires: nous suggérons qu'elles proviennent de différences typologiques. Cet article souligne les avantages empiriques et théoriques de l'inclusion de paires de langues typologiquement diverses lors de l'étude du CC.

Mots-clés: espagnol-coréen, changement de code (CC), bilinguisme, typologie

Espanhol e coreano em contato: novas percepções sobre mudança de código

Resumo

A troca de código ('code-switching', CS) refere-se à mistura de idiomas em que as pessoas que falam dois ou mais idiomas alternam de um para o outro. Trabalhos em CS espanhol-inglês identificaram várias restrições (morfo) sintáticas que governam quando ocorrem mudanças (por exemplo, Timm, 1975; Pfaff, 1979; Poplack, 1980). No entanto, o que acontece quando os idiomas são tipo logicamente diferentes? É o caso do CS espanhol-coreano, que não foi sistematicamente investigado. Esses idiomas diferem de várias maneiras, incluindo (i) estrutura da cláusula / ordem das palavras, (ii) ausência / presença de artigos e (iii) morfologia (coreano: fichário, espanhol: fusional) (Kwon, 2012; Bosque y Demonte, 1999). Para este estudo, entrevistamos bilíngues espanhol-coreanos para obter um corpus naturalista. Surpreendentemente, descobrimos que muitas restrições propostas para CS espanhol-inglês não são válidas para espanhol-coreano. Há três maneiras pelas quais o CS espanhol-coreano viola as restrições: (i) em contextos que envolvem a estrutura da cláusula, (ii) uso de substantivos e (iii) no nível dos morfemas. Fundamentalmente, as violações não são aleatórias: sugerimos que elas resultam de diferenças tipológicas. Este artigo destaca os benefícios empíricos e teóricos da inclusão de pares de idiomas tipologicamente diversos ao investigar a CS.

Palavras-chave: espanhol-coreano, alteração de código, bilinguismo, tipologia

Introduction

Today, more than half of the world's population is bilingual or multilingual (e.g. Simpson, 2019). Thus, theories of linguistic competence should strive to capture the linguistic behavior not only of monolingual but also of multilingual speakers. People sometimes switch from one language to another in the span of a conversation; this phenomenon is called code-switching (henceforth "CS"). Code-switching refers to language-mixing where someone who speaks two or more languages switches from one to another. How code-switching occurs changes depending on the location and social context. Although some early work regarded code-switching as syntactically unconstrained, more recent work has focused on identifying the grammatical constraints that determine when switches can happen.

Prior work on code-switching has been abundantly done on Spanish-English and has identified several morpho-syntactic constraints that govern the possibility of switching from one language to another (e.g. Timm, 1975; Pfaff, 1979; Poplack among many others). Indeed, Spanish-English code-switching is an important social phenomenon due to the large population of Spanish-English bilinguals in the United States. However, it is worth noting that Spanish and English are two related and typologically fairly similar languages. What happens when the two languages involved in code-switching are typologically unrelated and have different typological properties? This is the case with Spanish-Korean code-switching, which – to the best of our knowledge – has not previously been systematically investigated.

Spanish and Korean differ in many respects, including word order and morphology (Spanish: fusional, Korean: agglutinative) (e.g. Kwon, 2012; Bosque & Demonte, 1999). To better understand the grammatical constraints on code-switching, we investigate (a) whether the linguistic constraints proposed for Spanish-English code-switching extend to Spanish-Korean and (b) whether Spanish-Korean code-switching exhibits other kinds of constraints beyond those proposed for Spanish-English, and (c) if so, how they are related to the typological differences between the languages. Our empirical aim is to develop a corpus of code-switching for a language pair that has not been systematically investigated in prior code-switching work. This paper is organized as follows: Section 2 reviews definitions and different types of CS. Sections 3 and

4 present relevant previous work on CS and state our research questions. In Section 5, we present naturalistic Spanish-Korean CS examples and discuss what they tell us about the constraints at play in Spanish-Korean CS. Section 6 is the general discussion¹.

A Closer Look at Code-Switching

Code-switching is language-mixing where individuals who speak two languages switch from one to another, often mid-sentence: “Code-switching is the alternation of two languages within a single discourse, sentence or constituent” (Poplack 1980, p. 583): Code-switching typically happens in situations where both the speaker and the listener are highly bilingual in both of the languages. However, it is important to acknowledge that it can sometimes be hard to distinguish between code-switching and lexical borrowing. Lexical borrowing refers to a situation where a single word or frozen phrase from language X is used in language Y (the speaker’s native language), typically assimilates phonologically to language Y, and fully assimilates into the grammatical system of language Y (e.g. Poplack, 1980; Pfaff, 1979, Gumperz 1977). Unlike CS, lexical borrowing can happen in contexts where the speaker is *not* proficient in language Y.

Taipeo *las cartas*.

‘(I) type *the* -PL letters’. (English and Spanish; Pfaff, 1979, p. 296)

For example, according to Pfaff (1979), (1) involves lexical borrowing because the English word ‘type’ has been modified to fit the phonological and morphological properties of Spanish, becoming ‘*taipear*’. In the present study we only focus on data that can be analyzed as *code-switching*, *not lexical borrowing*, as indicated by the phonological and morphosyntactic behavior of the linguistic elements.

Relatedly, in the present paper we only consider data from speakers who have high proficiency/native-like proficiency in both languages (i.e. we view CS as requiring an advanced level of bilingualism, following Pfaff, 1979) and where the juxtaposition of two languages impacts the internal syntactic system. It is worthwhile noting here that bilingualism is a continuum: people may have different levels of proficiency in the two languages (e.g. Weinreich, 1953; Fishman, 1977; Cummins 1981, among others). Typically, CS research has focused on balanced bilinguals, mostly simultaneous bilinguals

1 I would like to thank the audience at the 27th Conference on Spanish in the US & 12 Conference on Spanish in Contact with Other Languages for comments and feedback. Thanks also to Elsi Kaiser for in-depth feedback on this paper, as well as many helpful suggestions regarding the data.

who learned both languages from birth – and this is also the population that we focus on in this paper.

Prior work has identified CS as a phenomenon that can occur on multiple levels (e.g. Poplack, 1980, Simpson 2019). In the current study, we focus on *intra-sentential* CS, i.e. switches that happen within clause boundaries. This type of CS allows us to gain insights into the interplay of two different grammatical systems.

Although there is an extensive literature regarding CS, most of this research has focused on Spanish-English switching, and most of the constraints that have been proposed regarding code-switching are largely based on these languages. This raises the question of whether these constraints are also relevant for Spanish-Korean CS, given how typologically different Korean (Koreanic) is from Spanish and English (both Indo-European). For example, on the level of word order, Korean is a head-final language, whereas Spanish and English are head-initial. Table 1 summarizes some of the typological differences between Spanish and Korean.

Table 1. Examples of some differences between Spanish and Korean

Spanish	Korean
<ul style="list-style-type: none"> • Indo-European language • Head initial • SVO order • Fusional in morphology • Presence of articles (e.g. <i>el, la</i>) • Latin script 	<ul style="list-style-type: none"> • Language isolate (Koreanic) • Head final • SOV order • Agglutinative in morphology • Articleless language • Korean script (Hangul)

Research on Code-Switching

Most of the early work in CS focused on sociolinguistic factors or morpho-syntactic restrictions (e.g., Fishman et al., 1971; Timm, 1975; Pfaff, 1979; Poplack, 1980; Sankoff & Poplack, 1981; Woolford, 1983; Joshi, 1985; Belazi, Rubin & Toribio, 1994, among many others). After this early period of sociolinguistic work on CS, the research focus broadened to also include investigation of structural constraints. These structural constraints were often explicitly or implicitly assumed to be universal (applicable to all language pairs) e.g. by Timm (1975). In the next sections, we review some of these proposed structural constraints in more detail, discuss some initial counterexamples already presented in the

literature, and discuss new data from our Spanish-Korean corpus that provides additional counter-examples for these constraints.

In this paper, we use data from a naturalistic corpus, in line with much of the earlier work on CS, but we broaden the domain of investigation to an under-researched language pair. Naturalistic data has the advantage of providing an indication of what kinds of structures code-switchers normally produce. However, naturalistic corpus work can be complemented by experimental research. Indeed, there has been an increase in experimental work on CS in recent years, including comparisons between different bilingual groups, including second language learners (L2 speakers) and heritage speakers (e.g. Potowski & Bolyanatz, 2012; Giancaspro, 2013; Alexiadou & Lohndal, 2018, among many others). Although we use naturalistic corpus data and focus on bilinguals who are highly proficient in both languages, we regard experimental work and work on other bilingual populations as important research avenues as well.

Research Questions

Taken together, previous studies have left a large number of open questions regarding how different bilingual groups code-switch and what the constraints are, if any. We investigate the following questions: (1) *Universality of code-switching constraints*: Do the linguistic constraints proposed for Spanish-English code-switching extend to Spanish-Korean code-switching? We may find differences in Spanish-Korean switching given that Spanish and Korean are typologically very different. (2) *Properties of Spanish-Korean CS*: Is Spanish-Korean CS subject to other kinds of constraints? If so, how do these constraints relate to the typological differences between the languages? Our empirical aim is to develop a corpus of Spanish-Korean CS because this pair of languages has not been systematically investigated in prior CS work.

Spanish-Korean Code-Switching Data

We may wonder what happens when two typologically different languages are involved in code-switching. In this section, we will analyze the collected data from Spanish-Korean bilinguals and compare it with previous studies from Spanish-English CS. The sections below are structured as follows: we first explain how we collected our corpus data and the participants' overall characteristics. We then provide definitions and examples of the linguistic constraints proposed for Spanish-English CS, followed by counterexamples from other language pairs. We then present examples of Spanish-Korean CS and discuss how these challenge and go beyond the constraints proposed in earlier work.

Methodology (Data Collection and Participants)

The data used in the investigation was naturalistic data, meaning that it was collected in natural contexts. All code-switchers were university students and native speakers of Spanish and Korean. Most of the participants ($n=46$) reported they had learned both languages since birth. Many were Korean descendants that had lived in Hispanic countries such as Spain, Costa Rica, Guatemala, Peru, Ecuador, Mexico, El Salvador, Dominican Republic, Venezuela, Colombia and Paraguay. (We collected data from different Spanish speaking countries to see if dialectal differences influence code-switching. However, no crucial differences were found for dialects.) Out of the 46 participants who were interviewed, we included explicit examples from 17 speakers in this paper. These 17 participants are from 9 different Hispanic countries (8 male and 9 female speakers). The average age of participants was 23.47 years (SD 3.43 yrs.). They had lived an average of 19.74 years in a Spanish-speaking country (SD 2.62 yrs.). Participants had lived in Korea for 3.74 years on average (SD 1.59 yrs.).

We took into consideration several criteria for all participants: preferably native bilinguals (from birth) or people who learned a second language from a very young age, people who have lived in both Spanish and Korean environments, and people with constant exposure to both languages, and continuous use of both languages. The majority were second generation speakers born and raised in a Latin American country or 1.5 generation immigrants who were born in Korea but raised in a Latin American country. All of participants had moved back to Korea for their university studies (in either undergraduate or graduate programs). The data was collected between January and April 2016. It includes audio recordings of natural conversations, text messages, in-person interviews, comments and posts from social networking sites, etc. Topics covered include attitudes towards Korean or foreign culture, school- or work-related topics, daily life and major issues in Korea at the time of the interview. We collected both spoken and written data. During the interviews, the interviewer also used code-switching to elicit natural CS.

In the subsequent sections, we consider whether two of the primary constraints proposed in prior work – (i) the Free Morpheme Constraint (FMC) and (ii) the Functional Head Constraint (FHC) – are followed in Spanish-Korean CS. As we will see, Spanish-Korean behaves differently from Spanish-English CS but has many similarities with Spanish-Náhuatl CS.

Free Morpheme Constraint (FMC): Definition and Counterexamples

One of the few theories argued to be universal is the Free Morpheme Constraint (FMC) by Poplack (1980). Indeed, the FMC was assumed to be universal for almost three decades until MacSwan (1999) provided evidence from Spanish-Náhuatl CS against the FMC. (Náhuatl is an Uta-Aztecan language spoken in Mexico.) According to the Free Morpheme Constraint (FMC), “Codes may be switched after any constituent in discourse provided that constituent is not a bound morpheme.” (Poplack, 1980, p. 585). E.g. switching from an English verb root to the Spanish gerund ending (‘-ing’) results in ungrammaticality (ex. 2-3).

(2) ***Eat**-iendo

(Poplack, 1980, p. 586) (3)

***Run**-eando

(Sankoff & Poplack, 1981, p. 5)

However, MacSwan (1999) shows that in Spanish-Náhuatl, the FMC does not apply: Word-internal switches are acceptable. As in (4), adding Náhuatl prefixes and suffixes to the Spanish infinitival *golpear* (hit) does not result in ungrammaticality – contrary to what is predicted by the FMC. In addition to verb-based switches involving bound morphemes, it is also possible to switch between nouns and bound morphemes, as shown in (5). (Náhuatl is italicized, Spanish is bolded.)

(4) Ne *onikgolpearoa tlakatl*.

I PAST-3S-3Os-hit-VSF IN man-NSF

*‘I **hit** the man.’*

(MacSwan, 1999, p. 133)

(5) *Nowelti okimak no**hermano***.

*My-sister PAST-3S-3Os-give my-**brother***

*‘My sister **hit** my **brother**.’* (MacSwan, 1999, pp. 133-134)

These violations of the Free Morpheme Constraint also happen in Spanish-Korean CS. In our spoken corpus (in-person interviews), participants naturally produced language switches involving bound morphemes. These switches often involved the Spanish plural marker ‘-s.’ For example, (6) and (7) show Korean nouns with the Spanish plural ‘-s’ (as well as a preceding Spanish plural possessive *mis* ‘myplural’). Note that the Korean words in the data reported here were pronounced following Korean phonology. This shows they can be categorized as codeswitching, *not* lexical borrowing (see e.g. Gumperz, 1977;

Pfaff, 1979; Poplack, 1980, on the fact that borrowings are adapted to the phonology of the matrix language, in this case Spanish). In the present discussion, all of the relevant examples can be classified as involving CS. We use Yale transcription for Korean (Martin, 1992). In addition to nouns in one language occurring with bound morphemes from the other language, participants also produced Korean verb roots with Spanish verbal endings. Switches between verb stem and bound morpheme happened frequently with the Spanish infinitival ending ‘*ear*’ as in (8), as well as the gerund ‘*ando*’ which yields progressive forms, e.g. (9) and (10). Throughout this paper, when reporting examples of Spanish-Korean CS, we use *italics* for Korean and regular font for Spanish.

- (6) Nadie de mis *chinkwu-s* ha chwicikhaysse [Costa Rica]

Nadie de mis [*ehingu*]*s* ha [*ehwicikhes**Λ] .

‘None of my *friends* have gotten a job.’

- (7) Mis *cenkong-s* son muy difíciles de ttalaka. [Costa Rica]

Mis [*εangon*]*s* son muy difíciles de [*t*araga*].

‘My major courses are very hard to follow.’

- (8) Necesito *olmkye-ear* mi cim al kiswuksa. [Costa Rica]

Necesito [*omgja*]*ear* mi [*cim*] al [*kisuks**a].

‘I need to move my belongings to the dormitory.’

- (9) Dice que todavía está *meke-eando*. [Peru]

Dice que todavía está [*magA*]*eando*.

‘He says that (he) is still eating.’

- (10) Ella pasa *nolta-ando* porque es ilhaknyen. [Peru]

Ella pasa [*nolda*]*ando* porque es [*irahnjan*].

‘She keeps *playing* because (she) is a *freshman*.’

Functional Head Constraint (FHC): Definition and Counterexamples

After Chomsky’s (1993) proposal of the Government-Binding Theory (GB Theory), linguists used the feature checking process to explain code-switching derivations as

well. Belazi, Rubin and Toribio (1994) suggest two universal syntactic constraints on intrasentential CS: (i) the Functional Head Constraint (FHC) that posits language as a feature and (ii) the Word-Grammar Integrity Corollary that requires all words of a language to obey that language's grammar in code-switching contexts. In principle, they adopt Abney's (1987) f-selection to explain that words/morphemes bear a language feature that needs to be checked.

Our focus here is on the Functional Head Constraint (FHC), which states that "The language feature of the complement f-selected by a functional head, like all other relevant features, must match the corresponding feature of that functional head" (Belazi et al., 1994, p. 228). Therefore, the feature language, for instance, [\pm Spanish], [\pm English], or [\pm Korean], must be the same in the functional head as its complement. Consider the following example:

(11) a. *The police officers have *visto un ladrón*.

b. **Los policías han* seen a thief. (Belazi et al., 1994, p. 230)

The switch between the auxiliary verb (e.g. *have*) and the main verb (e.g. *visto* 'seen') results in an ungrammatical structure for the following reason: Since Aux is the functional head, the main verb should follow its language feature, meaning that the auxiliary and main verb should be in the same language.

Nevertheless, prior work already identified counterexamples that violate the Functional Head Constraint, with language switches occurring in the boundary of the functional head and its complement (e.g. Mahootian & Santorini, 1996 on Farsi-English, and Nishimura 1985 on Japanese-English). In the following subsections, we show that Spanish-Korean CS also violates the FHC. We consider seven different structures that have been argued to involve the FHC, namely (i) aux verb/modal verb + main verb, (ii) verbal periphrasis, (iii) connectives, (iv) complementizers, (v) determiners + noun phrases, (vi) quantifiers, (vii) negation + verb. As we will see, Spanish-Korean CS seems to violate the FHC in all of these configurations.

Auxiliary/Modal Verb + Main Verb

According to the FHC, a language switch between an auxiliary or modal verb and the main verb should not be possible. This is shown by the ungrammaticality of ex. (12) (French-Tunisian Arabic) and ex. (13-14) (English-Spanish).

(12) *Je serai *sae:fir-t fi-l-*□*ašra*.

‘I will have **gone by ten o’clock**.’ (Belazi et al., 1994, p. 225)

(13) *Five of my cousins have *completado estudios universitarios*.

(Toribio, 2001, p. 206)

(14) **El candidato puede* prepare his remarks during the flight.

(Toribio, 2001, p. 209)

However, other researchers, including Pfaff (1979), Poplack (1981), and Mahootian (1993) presented counterexamples (ex. 15-16). MacSwan (1999) also argues against the full version of the FHC for Spanish-Náhuatl code-switching, though he does identify some more complex constraints at play.

(15) ... as they’re *ablandando*, *ya que está un poquito hirviendo*...

(Poplack, 1981, p. 177)

(16) *Estaba* training *para pelear*.

(Pfaff, 1979, p. 296)

Our corpus data shows that in Spanish-Korean code-switching, both modals and auxiliaries violate the FMC. As shown in (17) and (18), participants switch between modal and main verbs.

(17) ¿Puedes **ollye-ear** el documento?

[Peru]

‘Can you **upload** the document?’

(18) ¿Quién me **puede nolacwe** después de *swuep*?

[Ecuador]

‘Who **can play** with me after *class*?’

Data for auxiliaries is shown in (19-21). (We consider Korean ‘*hata*’² and its derivate forms as an equivalent of the verb ‘do’ in English.) Participants switched naturally between the auxiliary and the main verb. Ex. (19-20) use the auxiliary in the Korean form, ex. (21) uses the Spanish auxiliary ‘*estar*’.

(19) *Nalul* **aplaster-baysse**.

[Costa Rica]

2 Syntactically, *hata* is a light verb, and can function akin to auxiliaries in English and Spanish (e.g. Chan, 2008; Nishimura & Yoon, 1998). However, there is still debate among linguists about whether *hata* should be analyzed as an auxiliary/modal verb that selects a verb phrase (VP) or as an adjunct of a main verb.

‘He **crushed** *me*.’

(20) **Bañar-bako** después me dormí. [Costa Rica]

‘(I) **showered**, and then I fell asleep.

(21) ¿Estás **cwunpibay**? [Guatemala]

‘Are you **getting ready**?’

Verbal Periphrasis

Another area where there is debate regarding the FHC is in switches in verbal periphrasis constructions, for example between ‘to’ and its infinitival complement (e.g. [*has to*] [*read*]). Timm (1975) claims that these kinds of switches are not permitted, but Poplack (1981) disagrees, based on examples like (22) where there is a switch between ‘have to’ and ‘dar’ (give-INF). An equivalent form of this construction is not available in Korean, but we find that in our corpus, a language switch can occur between any verbal periphrasis, such as ‘have to’ + infinitive (in Spanish: expressed with the complementizer *que*, i.e. *tener que* + infinitive) or ‘go’ + infinitive (*ir a* + infinitive) (ex. 23-24).

(22) ...you have to *dar de l’ala pa’ comer de la pechuga*. (Poplack, 1981, p. 174)

(23) **Tengo que ceyponbay** los *kyocays*. [Colombia]

‘I have to **bind** my *teaching materials*.’

(24) **Vamos a kele**. [Mexico]

‘Let’s go for a **walk**.’

Connectives

Prior work disagrees about whether language switches can occur after a connective, before the next clause. According to Gumperz (1977), the language of the connective (e.g. *and*, *but*, *because*) should match the language of the following clause, as in (25). However, Sankoff and Poplack (1981) and MacSwan (1999) use examples like (26-27) to argue that it is not necessary for the connective to be in the same language as the following phrase:

(25) a. I was reading a book *y ella estaba trabajando*. (Gumperz, 1977, p. 25)

b. I wanted to stop smoking *pero no pude*.

c. John stayed at home **porque** *su esposa estaba en el trabajo*.

(26) I seen everything ‘**cause** *no cogí na*’. (Sankoff & Poplack, 1981, p. 6)

(27) *Onikita se ichpochtle*, **iwán** le pregunté dónde está la iglesia.

‘I saw a girl, **and** I asked her where the church is. (MacSwan, 1999, p. 110)

Our data shows the same pattern, as the Spanish-Korean bilinguals sometimes switch between the connective and the following clause: Ex. (28-29) are examples of the connective being in a different language than the following subordinate phrase.

(28) Si vamos en carro puede que *makbye* **porque** *achiminikka*. [Costa Rica]

‘If we go by car, there might be *traffic* **because** *it is morning*.’

(29) Tengo que hacerlo otra vez, **pero** *ceytaylo*. [Costa Rica]

‘I have to do it again, **but** *correctly*.’

Complementizers

Another domain where the Functional Head Constraint is claimed to rule out switches is between the complementizer (Comp, *that/que*) and a subordinate clause (Belazi, Rubin & Toribio, 1994). According to the FHC, the Comp should be in the same language as the subordinate clause, as in (30a) and (30b). However, MacSwan (1999)’s Spanish-Náhuatl CS data shows switches where the Comp is in Spanish while the subordinate clause is in Náhuatl, as well as switches where the Comp is in Náhuatl and the subordinate clause is in Spanish (ex. 31-32)

(30) a. The professor said *que el estudiante había recibido una A*.

b. *El profesor dijo* that the student had received an A.

c. *The professor said that *el estudiante había recibido una A*.

d. **El profesor dijo* que the student had received an A.

(Belazi et al., 1994, p. 224)

(31) Le dije que *kitlasojtla in Juan sikpanoah*.

‘I told him that *she loves Juan a lot*.’

(32) *Nikchia ke* compres ropa.

'*I want you to buy some clothes*'. (MacSwan, 1999, pp. 112-113)

Our Spanish-Korean CS data shows the same pattern. There seem to be no restrictions since the subordinate clause can be in either language after the Comp (see ex. 33-34). Even though Comp is a functional head, our data suggests it does not determine the language of the subsequent subordinate phrase.

(33) Ella le dijo **que *pyengwen kayatway***. [El Salvador]

'She told him **that *she has to go to the hospital***.'

(34) Fui al *caykemsá* y me di cuenta **que *manhi thullyesse***. [Costa Rica]

'I went to the *reexamination* and I realized **that *I made many mistakes***.'

Determiners + NP

The Functional Head Constraint also rules out switches between a determiner (article) and its noun. Thus, ex. (35) is considered ungrammatical because '*a*' is the head so the following noun should also be in English. However, many researchers have noticed that speakers make frequent switches at this boundary (Poplack, 1981; MacSwan, 1999; Choi, 1991; Yoon, 1992), as shown in ex. (36-38).

(35) *He is a *demonio*. (Belazi et al., 1994, p. 227)

(36) Where are they, *los* language things? (Poplack, 1981, p. 175)

(37) I command you to do the *nokum*!

'I command you to do the *recording*!' (Choi, 1991, p. 889)

(38) System-*i kantanbae*.

'(The) system is *simple*'. (Yoon, 1992, p. 439)

Ex. (36) shows a determiner in Spanish followed by a noun in English. Ex. (37-38) represent switches between English-Korean: example (37) has a determiner in English whereas the example (38) has a case marker in Korean and in postnominal position.³

³ Although Korean has no determiners that show definiteness, it uses case particles in postnominal position to indicate definiteness (Osawa, 1998). For this reason, Chan (2008) treats the nominative and accusative case particle of Korean and Japanese as determiners. We will follow this proposal.

MacSwan (1999) also shows that there are no restrictions between determiners and nouns using data from Spanish-Náhuatl:

(39) *Neka* hombre *kikoas se kalli*.

‘That man will buy a house.’

(40) Tengo un *konetl*.

‘I have a son.’ (MacSwan, 1999, p. 124)

Switches between determiners and nouns are also possible in Spanish-Korean (ex. 41-42). In fact, they are actually one of the most commonly occurring switches. We hypothesize that, because the Korean language has no articles, bilingual speakers have the tendency to add Spanish articles to Korean nouns. This can be seen as an influence from Spanish since determiners are always needed except in the case of a noun phrase modified by an adjective, a coordinated phrase, or a subject in post-verbal position. Therefore, the inclination to use determiners is very high:

(41) *El umsik* está muy *cca*. [Costa Rica]

‘The food is very salty’.

(42) *La acwumma del kakey* me dio *sepisu*. [Ecuador]

‘The lady from the store gave me free food’.

1.6 Quantifiers

Similar to what is claimed for articles, the FHC also predicts no switches to be possible between quantifiers and nouns (e.g. [*many*] [*students*]). This is because Belazi, Rubin, and Toribio (1994) consider quantifiers to be functional heads, thereby prohibiting a language switch of the type in (43). However, this restriction does not appear to hold in English-Farsi code-switching (Mahootian, 1993), as shown in (44).

(43) **Pocos* students finished the exam. (Belazi et al., 1994, p. 229)

(44) I’ll take some *naemaek*.

‘I’ll take some salt’. (Mahootian, 1993, p. 121)

With respect to Spanish-Korean CS data, we find that – as in English-Farsi CS – switches can occur between quantifiers and nouns (ex. 45-47). What is also interesting

is that bilinguals make use of number agreement; therefore, if it is plural, they add the suffix ‘-s’ to the Korean noun, also violating the FMC (ex. 45-47). In our corpus, we also find switches between cardinal numbers and nouns (ex. 47).

(45) **Muchos *baksayng*-s** no vinieron al *swuep*. [Venezuela]

‘**Many *students*** didn’t come to *class*’.

(46) **Varios *tongki*-s** se fueron al *kwuntay*. [Spain]

‘**Several *classmates*** went to the *military service*’.

(47) *I twu mesas-lul* pegar-*hamyen* todos se pueden sentar. [Colombia]

‘If we *put these two tables* together, everyone can seat down’.

Negation + V

Having considered several syntactic configurations where the FHC does not seem to hold crosslinguistically, let us turn to a final configuration that was believed to have no counterexamples in the crosslinguistic work on code-switching, namely the possibility of switching between negation and verb. According to Timm (1975), the verb and the negated word must be in the same language (ex. 48). Other researchers provide further evidence in favor of this restriction and claim that switches between negation and the main verb and between negation and an auxiliary verb are prohibited (ex. 49-50)

(48) *I don’t *quiero*. (Timm, 1975, p. 479)

(49) *I am *no terca*.

(50) **Yo estoy* not stubborn. (Woolford, 1983, p. 534)

However, yet again, both Spanish-Náhuatl CS and Spanish-Korean CS do allow switches between negation and verb. This is shown for Spanish-Náhuatl CS in (51), which has the Náhuatl negation followed by a Spanish verb. In Spanish-Korean CS, participants mixed the Spanish negation ‘*no*’ with Korean verbs and even Korean negation ‘*an*’ with Spanish verbs (ex. 52-53).

(51) *Amo* estoy *tekititoc*.

‘I’m not working.’ (MacSwan, 1999, p. 119)

(52) Hay que comer todo para **no *namkye*** porque *mianbanikka*. [Mexico]

‘We have to eat everything and **don’t leave** leftovers because I *feel bad*.’

(53) *Acik trotar an bako* estirar-man *baysse*. [Venezuela]

‘I *haven’t jogged* yet; I have only stretched.’

Summary of Spanish-Korean CS

The data presented so far shows that many of the constraints on code-switching that are (implicitly or explicitly) assumed to be universal are indeed not universal. In particular, it is interesting that our Spanish-Korean CS data have many similarities with MacSwan’s (1999) data on Spanish-Náhuatl CS. When Spanish is mixed with Korean or with Náhuatl, many of the constraints proposed for Spanish-English code-switching seem to no longer apply.

The focus of our paper is to present empirical data illustrating how previously proposed constraints are violated in Spanish-Korean CS. Although we do not provide an in-depth analysis of what licenses these violations, we would like to suggest that these differences may be attributed to language family membership and associated typological differences, such as head position. For instance, typologically, Korean is a head-final language that belongs to the Koreanic family, whereas Spanish and English are Indo-European languages and typically categorized as head-initial. When the languages being switched have the same head-initial syntax – like Spanish and English – the word order does not change drastically since they languages have the same head directionality. However, when a head-initial and head-final language like Spanish and Korean are mixed, the word order becomes more flexible in code-switched utterances, because both types of constructions can be formed: Spanish can adapt to the Korean phrase structure, or vice versa. It seems that these word order differences may be responsible for at least some of the apparent ‘violations’ for the previously proposed constraints that we observe in the Spanish-Korean CS corpus.

What is perhaps surprising is the similarity Spanish-Korean CS has with Spanish-Náhuatl CS. As a preliminary observation, we would like to suggest that this similarity arises because Náhuatl and Korean are both agglutinative languages with relatively free word order. Thus, they can combine easily with Spanish. The syntactic constraints on CS are ‘weakened’ in this situation, and both Korean and Náhuatl can combine different morphemes to novel roots (in this case Spanish words) allowing them to adopt better to Spanish grammar.

Constraints in Spanish-Korean CS

Having noted that many of the constraints that govern Spanish-English CS do not apply to Spanish-Korean CS, it is nevertheless important to note that Spanish-Korean CS is not entirely unconstrained. It is not an “anything goes” of situation; switches are constrained. In this section, we focus on one constraint that governs Spanish-Korean switching, namely case-marking on pronouns. Since it is essentially impossible to get information about ungrammatical sentences through our naturalistic corpus data, in this section we consider examples from Park’s (1990) study in English-Korean code-switching.

Pronouns with Case Markers in Korean

Park (1990) looked at English-Korean CS and used acceptability judgment tasks to complement naturally-produced examples. He found that when English pronouns occurred with Korean case marking, the resulting switch was judged unacceptable. Intriguingly, three occurrences of such types (ex. 54) were found in Park’s corpus data (Park 1990, p. 146).

(54) a. You-*ka* grammar teacher-*nya*?

‘Are you (a) grammar teacher?’

b. They-*tul-un* courtesy-*ka epseyo*.

‘They are not courteous.’

c. Him-*eykey nemwu* sorry-*haysseyo*.

‘I was very sorry for him.’

Park (1990) did not classify sentences like (54) as ungrammatical because a fully fluent bilingual produced this kind of switches. However, in the acceptability task, English pronouns with Korean case-marking obtained the lowest ratings. This is interesting in light of the other cases (discussed in sections 5.3.1-5.3.7) where Spanish-Korean CS violated the FHC: There appears to be something special about pronouns and case-marking. Park’s finding that pronoun-case-marker mixing is judged low in acceptability matches with other studies such as Berk-Seligson (1986), where the switch involving pronouns in Spanish-Hebrew was not frequent. Previously, McClure and Wentz (1975) had also proposed a prohibition on switches with pronouns, stating it as a universal theory in code-switching.

In our corpus data, we find no examples of Spanish pronouns occurring with Korean case-marking, suggesting that this combination is probably unacceptable/ungrammatical. Observe the following (constructed) examples of Spanish-Korean CS, where the Korean case marker is redundant. Perhaps the redundancy is what makes this switch unnatural:

(55) *¿Tú-*ka* bailaste con *nay chinkwu*?

‘You danced with my friend?’

(56) *Ustedes-*tuli nemwu sikkulewese* no me concentro.

‘I cannot concentrate because you people are very loud.’

There is still a great amount of work to do regarding data collection in Spanish-Korean CS. The linguistic constraints in Spanish-Korean CS are mainly based on the structure conformity towards the head language and the avoidance of switches between pronouns and Korean case markers.

Conclusions

As observed in Table 2, language typology influences the morphosyntactic nature of possible switches.

Table 2. Náhuatl and Korean Language Typology

Náhuatl	Korean
Uto-Aztecan language Free word order (VSO as basic order) Agglutinative morphology Use of particles	Language isolate (Koreanic) SOV order Agglutinative morphology Use of particles

In the present study, we investigated the bilingual speech phenomenon, code-switching, focusing on Spanish-Korean switches. We analyzed the linguistic constraints from the perspective of generative grammar and, to validate our data, we have shown counterexamples with the support of other language pairs as well. Our data suggests that, in comparison to Spanish-English CS, Spanish-Korean CS is subject to fewer constraints and seems to be more flexible. However, we would like to underline the importance of collecting more data from more participants and using a breadth of different methods of

data collection. There is also a need to further investigate the constraints that do guide Spanish-Korean CS, in order to reach a more uniform and generalized theory that will account Spanish-Korean code-switching. Overall, through this preliminary study about Spanish-Korean code-switching, we have reached the conclusion that constraints that have been implicitly or explicitly viewed as ‘universal’ characteristics of code-switching may not be as universal as has been assumed in some prior work.

Going back to our research questions, we find that at least two of the linguistic constraints proposed for Spanish-English code-switching do not extend to Spanish-Korean code-switching: the Free Morpheme Constraint (FMC) and the Functional Head Constraint (FHC) are violated in Spanish-Korean code-switching. It is hard to assume universality of code-switching constraints given the evidence from different language pairs. Although our corpus seems to provide counterevidence for the constraints that have been proposed in the literature, this does not mean Spanish-Korean CS allows all kinds of switches. More future work is needed to better understand the constraints at play in Spanish-Korean CS.

The similarities between Spanish-Korean CS and Spanish-Náhuatl CS show that typology matters. Korean and Náhuatl are both agglutinative languages, and both languages allow switches with bound morphemes. Perhaps CS constraints should be based on language typology and not specific language sets. Moreover, it does not seem plausible to argue for fully universal theories of CS because the question of what kinds of switches are allowed seems to be influenced by several factors depending on the languages involved. To further discuss typology, we want to briefly mention Quechua-Spanish CS (e.g. Muntendam, 2006; Sánchez, 2012, among others). Quechua is an indigenous language family spoken in the regions of central Andes Mountains. Like Korean, Quechua has SOV word order and agglutinative morphology. Previous works on Quechua-Spanish CS have also reported utterances where Quechuan case markers are added to Spanish words. The following examples shows code-switching between Spanish nouns and Quechuan case markers.

(84) *Aventaron en **agua-ta**.*

*Threw in **water-**_{ACC}*

‘(They) threw (them) in the water’ (Sánchez, 2012, p. 17)

(85) ***Chanta farol-sito-wan llojsi-mu-sqa dueña-n-qa.***

Then **lantern-DIM-INSTR** come out-DIR-PAST 3 SG **owner-POSS-TOP**.

‘Then her owner appeared with a small lantern’. (Muntendam, 2006, p. 2)

Though still speculative at this point, evidence from three typologically agglutinative languages – Korean, Náhuatl, and Quechua – seems to show that it is indeed important to take typology into consideration. If this speculation is correct, we would also expect code-switching between Aymara (another indigenous South American agglutinative language with SOV word order) and Spanish to yield similar patterns, where bilinguals mix Spanish nouns with Aymaran morphemes.

Additionally, Korean-English CS data have also been shown to allow switches inside a word by mixing English nouns with Korean case markers or Korean verbs with English verb endings like ‘-ing’ (e.g. Park, 1990; Park, 2016; Kim & Kaiser, 2019, among others). It is also important to look into phonology and language-specific phonotactic constraints, because bilinguals produce what is easily or comfortably pronounced, so certain structures are likely to be avoided due to phonotactics (e.g. Alexiadou, 2017; Kim & Kaiser, 2019).

As for future work, we need to take a closer look at the constraints in Spanish-Korean CS. We need to consider syntactic, morphological and phonological properties. Methodologically speaking, experimental work can help to corroborate observations based on corpus data.

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