Accessing bilingual code-switching competence*

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Acknowledgment*

Versions of this paper were presented at the 17th National Conference on Spanish in the United States at Florida International University in March, 1999 and at the City University of New York Graduate Center in October, 1999. A briefer version is to appear in a volume of selected papers from the former conference (Toribio 2000e). I am grateful to the audiences of these gatherings for helpful comments. I would also like to recognize the contributions of two anonymous readers for The International Journal of Bilingualism, whose constructive criticisms have led to considerable improvements in this final version. All errors and omissions are, of course, the sole responsibility of the author. This research was supported in part by a fellowship from the National Endowment for the Humanities (FA-34114-96).

Abstract Key words

The present work is inspired by an interest in the syntactic regularities that underlie language alternations in Spanish-English bilingual speech, and the methodologies that may prove most reliable and informative in this exploration. Accordingly, it attends to the conceptual and methodological issues that must be addressed and surmounted, and taking account of these concerns, presents new methodologies for gathering codeswitching data. The robust findings attest to the validity of the methodologies and of the elicited data, affording a valuable source of facts for further research.

codeswitching competence syntax

Introduction

The present work is inspired by an interest in the syntactic regularities that underlie language alternations in Spanish-English bilingual speech, and the methodologies that may prove most reliable and informative in this exploration. To that end, it critically surveys the research literature, attending to the conceptual and methodological issues that must be addressed and surmounted in the study of codeswitching competence. Taking account of these concerns, the work presents new methodologies for gathering codeswitching data, examining permissible and unacceptable language alternations in the reading, recounting, and writing of codeswitched narratives by 10 Spanish-English bilinguals, and the potential differential status of codeswitching across these controlled and naturalistic tasks. The findings attest to the validity of the methodologies and of the elicited data, which converge in revealing bilinguals' strong sensitivity to syntactic well-formedness in all three conditions. The study thus affords a valuable source of facts for further research into codeswitching, informing syntactictheoretical debates and elucidating models of bilingual language processing.

2 Preliminary overview

As a convenient point of departure, the discussion commences with a cursory overview of the language contact phenomenon of interest, and subsequently turns to survey the methodologies that subserve recent investigations into codeswitching. In so doing, the ensuing paragraphs make explicit the rationale and methodology for the investigation that is the kernel of the work.

2.1 Codeswitching as rule-governed bilingual behavior

Codeswitching refers to the ability on the part of bilinguals to alternate between their linguistic codes in the same conversational event.¹ With respect to its linguistic form, codeswitching in intraturn utterances may be intersentential or intrasentential, as exemplified in the Spanish-English sentences in (1a-b) respectively. (For ease of exposition, the Spanish-language forms in codeswitched examples are rendered in italics. Slashes indicate language switches in the translations.)

- (1)a. Érase una vez una linda princesita blanca como la nieve. Her stepmother, the queen, had a magic mirror on the wall.
 - 'Once upon a time there was a beautiful princess as white as the snow./Her stepmother, the queen, had a magic mirror on the wall.'
 - b. *Por la noche, los siete enanitos* found her on the ground, seemingly dead. 'At night, the seven dwards/found her on the ground, seemingly dead.'

The status of intrasentential codeswitching had been much disputed in the early literature. Some linguists viewed it as indicative of imperfect language acquisition, extreme cross-linguistic interference, or language erosion (but cf. Toribio, 2000d, 2000f), and numerous others despaired of finding any constraints on what Lance (1975) called a "willy-nilly" combination of language forms. However, subsequent studies have revealed that codeswitching is rule-governed and systematic (cf., Aguirre, 1977; Gingràs, 1974; Pfaff, 1979; Timm, 1975), demonstrating grammatical regularities that reflect the operation of underlying syntactic restrictions (cf., Lipski, 1985; McClure, 1981; Poplack, 1980; Zentella, 1981). For example, Spanish-English bilingual speakers will agree that the sentences in (2) represent possible codeswitches, whereas those in (3) do not, although they may be unable to articulate exactly what accounts for this differential judgment.²

(2)a. *Al cumplir ella los veinte años, el rey invitó* many neighboring princes to a party. 'On her 20th birthday, the king invited/many neighboring princes to a party.'

The term "codeswitching" was first employed to refer to the coexistence of more than one structural system in the speech of one individual by Jakobson, Fant, and Hallé (1952), who use "code" in the abstract information theoretical sense. In later writings, "code" has come to be synonymous with "language" or "speech variety." For a brief overview of codeswitching, consult Gumperz and Toribio (1999); see also the highly instructive chapters in Romaine (1995) and the edited anthologies of Jacobson (1990), Milroy and Muysken (1995), and Auer (1998) for in-depth cross-disciplinary studies.

In the notation common to generative linguistic research, an asterisk designates an infelicitous sentence.

- b. Since she was unmarried, he wanted her to choose *un buen esposo*. 'Since she was unmarried, he wanted her to choose/a good husband.'
- c. Princess Grace was sweet y cariñosa con todos. 'Princess Grace was sweet/and affectionate with everyone.'
- d. *Juro por Dios que te casaré con el primer hombre* that enters this room! 'I swear by God that I will marry you with the first man/that enters this room!'
- e. At that exact moment, a beggar arrived en el palacio. 'At that exact moment, a beggar arrived/in the palace.'
- (3)a. *Very envious and evil, the reina mandó a un criado que matara a la princesa. 'Very envious and evil, the/queen sent a houseboy to kill the princess.'
 - b. *Out of compassion the houseboy abandoned*la en el bosque*. 'Out of compassion the houseboy abandoned/her in the forest.'
 - c. *La reina le ofreció a Blancanieves una manzana que había laced with poison. 'The queen offered Snow White an apple that she had/laced with poison.'
 - d. *En la cabina vivían siete enanitos que returned to find Snow White asleep. 'In the cabin there lived seven dwarfs that/returned to find Snow White asleep.'
 - e. *Los enanitos intentaron pero no succeeded in awakening Snow White. 'The dwarfs tried but did not/succeed in awakening Snow White.'

Moreover, speakers furnish these judgments in the absence of overtinstruction—bilinguals are not instructed in how to codeswitch. And yet, just as monolingual native speakers of Spanish and English have an intuitive sense of linguistic well-formedness in their languages, Spanish-English bilinguals are able to rely on unconscious linguistic knowledge in distinguishing between permissible and unacceptable codeswitched forms.

As expressed by Bhatia and Ritchie (1996, p. 645), the challenge in contemporary research on codeswitching "is not whether or not it is subject to grammatical constraints but how best to capture these constraints and how to make deeper claims about human language in general and bilinguals' mixing competence and their language acquisition in particular." Accordingly, recent years have witnessed considerable effort devoted to examining codeswitching within the context of Chomsky's Principles and Parameters theory (Chomsky, 1981, 1986, 1993, 1995). These studies generally evaluate the extent to which codeswitching data can be predicted by, and in so doing support, particular linguistic constructs (cf., Belazi, Rubin, & Toribio, 1994; Di Sciullo, Muysken, & Singh, 1986; MacSwan, 1997; Rubin & Toribio, 1995; Toribio, 2000b, 2000c; Toribio & Rubin, 1996; Woolford, 1983). Our discussion will not be detained in the elaboration of such proposals at the moment, though we return in Section 4 to consider, albeit briefly, how the data to be presented herein may be couched within the generative syntactic framework. Our immediate concern is in the methodologies for the collection and selection of data on which syntactic generalizations are based.

2.2 Accessing codeswitching competence

Works addressing the grammar of codeswitching in bilingual speech have made use of a wide variety of methodologies, chief among these, interviews and naturalistic recordings.

Unfortunately, these approaches may be of limited value in the study of linguistic competence, as they yield data that reflect the speakers' competence only indirectly, at best. Interviews and self-reports about bilingual speech are unreliable. Bilinguals often find it difficult to remember which language was used in any particular speech exchange (cf., Gumperz, 1982). Moreover, the problem of self-reporting is exacerbated in situations of social stigma (cf., Gumperz, 1971, among numerous others), as a speaker may refrain from switching when being observed or recorded, owing to subjective factors such as the appropriateness of codeswitching to the interview situation and the esteem in which the practice is held (cf., Toribio, 2000a; Zentella, 1997). Recordings of naturalistic utterances are met with a more acute criticism: The linguistic performance of a speaker, in the form of natural data, may not be indicative of that speaker's underlying linguistic knowledge. Indeed, studies of codeswitching performance in diverse bilingual communities have revealed significant variability and yielded counterexamples to many of the constraints posited (cf., for example, Pfaff, 1976; Poplack, 1980, 1981); of course, this is to be expected, since there are likewise no exceptionless constraints on monolingual performance (cf., Poplack, 1983). Hence, we maintain with Jacobson (1977, p. 229) that since "utterances containing elements from two languages follow specific patterns of co-occurrence and display the same rule-governed behavior that we normally associate with unilingual code," the distinction between competence and performance is applicable to the study of codeswitching. But, given performance data alone, a researcher might erroneously conclude that there are no constraints on the form that Spanish-English language alternation takes.

The problem adduced here is endemic to almost all of the codeswitching research reported to date. Especially noteworthy in this respect is the work of Mahootian and Santorini (1996), who admit only recordings of spontaneous speech on the grounds that linguistic theory must account for natural occurrences of the data for which it has been constructed. This focus on natural codeswitching data is incompatible with syntactic-theoretical modes of inquiry, since the absence of violations of deep principles in spontaneous utterances cannot be unequivocally ascribed to a constraint that exists on the speaker's grammar. In assessing a speaker's competence, syntactic studies normally test his/her ability to judge a given sentence as a grammatical or ungrammatical string of the language; the assumption is that the correct response indicates that the speaker has applied the principle that licenses the structure of the intended form. Unfortunately, studies along these lines have been relatively uncommon in codeswitching research; this in spite of the fact that the early studies of the 1970s (cf., for example, Aguirre, 1977; Gingràs, 1974; Jacobson, 1977; Lipski, 1978; Timm, 1975) already indicated that there is a linguistic competence of codeswitching. As aptly noted by McClure (1981, p. 72),

without native speakers' judgments about the grammaticality of an utterance, it is often difficult to determine whether the utterance clearly reflects the speaker's competence and so should be included in the corpus for which rules must account or whether it has been affected by performance factors, such as lapses of attention, and hence should be excluded from consideration.

Thus, recordings of spontaneous speech must be complemented by elicitation of speakers' beliefs about ungrammatical sentences.

However, as remarked in Schütze (1996, p. xi), the problems of intuition "demand a careful examination of judgments, not as pure sources of data, but as instances of metalinguistic performance" (cf., Birdsong, 1989 for additional extended discussion on this point). Therefore, while judgments may offer insight into competence, we must concede that they are themselves subject to performance variables, and findings based on judgment data are susceptible to the same confounding factors that plague findings founded in production samples. Speaking to codeswitching data in particular, it can be readily observed that a speaker or researcher may accept or reject a codeswitched sentence or response for nonlinguistic reasons. We have already noted the problems inherent in soliciting norms of stigmatized behavior (cf., Toribio, 2000a, 2000b; Toribio & Rubin, 1996). And caution must additionally be taken in interpreting codeswitching judgments once obtained. In this light, we should reconsider MacSwan's (1997) dismissal of items such as that in (3a) which reference the ill-formedness of switching between a determiner and its complement. His assessment (contrary to the claims of e.g., Zentella, 1981 that the same language is normally maintained across such pairings) is founded on the informally elicited judgments of two bilinguals who report that a short pause before the codeswitch improves such forms considerably (1997, p. 247). Clearly this fact bears directly on the issue at hand—it may represent the speakers' attempt to comply with the injunction against switching at this site.³ Owing to mitigating factors such as those outlined here, these previous contradictory accounts must be acknowledged, but interpreted with caution: syntactic theorization must rely on and reflect data which are indicative of syntactic competence. We thus coincide in Schütze's conclusion that while grammaticality judgments are indispensable forms of data for linguistic theorizing, they require new ways of being collected and used.⁴

As made evident in the preceding discussion, then, methodological issues are at the core of current debates in the characterization of codeswitching competence. The ease with which counterexamples to any proposed generalization are found may be attributable not only to differences in the methods of data collection, but also to the subsequent selection of the data for which linguistic constraints are formulated (cf., Toribio & Rubin, 1996). While these and other challenges confronting researchers in codeswitching should not be understated (cf., Grosjean, 1998; Toribio, 2000a, 2000b), the present work undertakes to redress at least some of the aforementioned methodological shortcomings.

The present study: Methodologies

The objective of the present study is in accessing bilingual codeswitching competence, while circumventing some of the methodological difficulties that have compromised previous research findings. To that end, three instruments of codeswitching behavior were developed and deployed: a reading task, a recounting task, and a writing task, each described in (4). The election of fairy tale narratives as a methodological tool for these tasks is well-motivated, as such texts present familiar macrostructures. Of interest would be the patterns of language

Judgments similarly solicited from these two informants lead MacSwan to dismiss items such as those in (3d) which reference the ill-formedness of switching after a complementizer as "erroneous data" and conclude that "there is no ban on switches at this juncture" (1997, p. 241), contrary to the claims of for example, Gumperz (1976).

For thorough discussion of the role and use of grammaticality judgments in linguistic theory, consult Schütze (1996).

alternation that are sanctioned in narratives, and the potential differential status of codeswitched forms across the three conditions.

(4) Tasks

a. Reading Task

Participants are instructed to read aloud two fairy tale fragments — "Snow White and the Seven Dwarfs/Blancanieves y los Siete Enanitos," which includes grammatically unacceptable codeswitching, and "The Beggar Prince/El Príncipe Pordiosero," prepared in well-formed codeswitched sentences — and respond to questions that reference readability, comprehension, enjoyability, and grammatical form. The reading recital and responses to the questions that follow are recorded and subsequently transcribed.

b. Recounting Task

Participants are instructed to recount the ending of "Snow White and the Seven Dwarfs/ *Blancanieves y los Siete Enanitos*" or "The Beggar Prince/*El Príncipe Pordiosero*" in codeswitching; the narratives are recorded and subsequently transcribed.

c. Writing Task

Participants are instructed to retell, in writing, the tale of "Little Red Riding Hood/La Caperucita Roja," as depicted in a sequence of color drawings; the narrations are typed from the handwritten originals, faithfully reproducing the content and form.

These tasks were designed to combine characteristics of controlled and naturalistic language activities. The reading task required the bilingual participants to draw on their languages automatically, without forethought, while eliciting unconscious reactions and explicit judgments about acceptable and unacceptable language combinations; the recounting task was intended to engage the participants in bilingual speech production, offering a measure of codeswitching performance via a common monological narrative activity; and the writing task was devised to elicit texts that would be illustrative of the creativity of bilingual code-alternation, while at once revealing of the notions of grammatical well-formedness that modulate bilingual speakers' codeswitching expression. Of course, as these tasks represent the elicitation of codeswitching behavior, the linguistic forms obtained should not necessarily duplicate the forms observed in spontaneous speech. In this sense, the elicitation situation before the participants is artificial—the subject is being asked to demonstrate a behavior that may be very different from his/her everyday speech mode—raising the standard issues of ecological validity in linguistic research (cf., Schütze, 1996). Nevertheless, the language samples yielded by means of all of these tasks were assumed to provide important insights into speakers' sensitivity to codeswitching norms. More generally, the methodologies would advance the aim of compiling a valid data set, establishing the constraints that characterize Spanish-English codeswitching competence.

The objectives are accomplished by reference to the linguistic behavior of 10 speakers—Yanira, Federico, Guadalupe, Carlos, Carmen, Belinda, Emma, Sara, Noemí, and Lorenzo—on the three measures. These participants were randomly selected from a larger study of Spanish-English bilingualism.^{5,6} All were native Spanish speakers of Mexican heritage who had lived in Santa Barbara County for a minimum of 15 years at the time of observation. They were individually tested in the language center on a university campus. Each sat at a separate cubicle furbished with a tape-player and headset (earphones with attached microphone),

contributing to the desired privacy and silence. Concise written instructions (in English or Spanish, as requested) were presented for each task, and the sessions were untimed.⁷

Results

The ensuing discussion further expounds on the tasks and presents the data elicited. The section ends with an analysis and synthesis of the methodologies and results.

4.1 Reading task

In the first of the codeswitching narrative tasks, participants were instructed to read two fairy tales aloud and then respond to the questions that followed. The two narrative texts, presented in randomized order, were of similar length and incorporated a comparable number of switches, though they differed significantly in the type of codeswitching represented: "The Beggar Prince" included switches at those boundaries that are thought to serve as common switch sites in bilingual speech (e.g., between subject and predicate, between verb and object, between noun and subordinate clause), and "Snow White and the Seven Dwarfs" included switching at boundaries known to violate codeswitching norms (e.g., between auxiliary and main verb, between object pronoun and main or auxiliary verb, between noun and modifying adjective). Excerpts of each fairy tale appear in (5).8

- The study on which this work is based was carried out in 1997-98 at the University of California, Santa Barbara, in the context of a research group convened and directed by the author. The group was motivated by a broad interest in Spanish in the United States, and sought to explore questions pertaining to the historical and continued presence of Spanish and Spanish-English bilingualism in present-day cosmopolitan societies, with special attention focused on the City of Santa Barbara. The aim of the study was in identifying those factors, including linguistic, social, and psychological, which influence the form of the local language. The author gratefully acknowledges the support of the National Endowment for the Humanities and various intramural funding agencies, among these, the Interdisciplinary Humanities Center, UC Mexus, and the Academic Senate, and expresses sincere appreciation to seven student researchers for their commitment and effort in completing the project: Renée Basile, Mimi Beller, Cecilia Montes-Alcalá, Silvia Pérez-López, Christina Piranio, Guillermo Vásquez, and Patxi Zabaleta.
- A review of responses by all 50 participants in the present context would entail the management of a wealth of data, and require a concision in analysis or a synthesis of isolated linguistic features that would undermine the investigation. As the student collaborators were interested in diverse aspects of bilingual speech (e.g., attrition and innovation of morphosyntactic structures, written vs. oral codeswitching, etc.), we sought out for transcription and analysis the language samples of informants who produced large quantities of speech. Within those, however, subjects were not specially chosen for the linguistic behavior (although one informant was excluded here for her sociolinguistic attitudes—owing to her negative view of codeswitching behavior, she did not produce any intrasentential switches).
- This is but one of three components of the larger study referenced above. Also administered was an extensive sociolinguistic survey; this questionnaire was developed in 1994 – 95 in the context of a research focus group codirected with H.S. Gopal and Kimberly Noels. A second instrument tested participants' knowledge of diverse morphosyntactic properties of Spanish (cf., Zabaleta, 2000). All test instruments were prepared in English and Spanish to maximize participants' comfort. (A fourth narrative task is omitted from consideration here; this picture-telling task was intended to provide a base measure of speakers' Spanish language abilities (cf., Toribio, 2000a).)
- Note that it is not possible to assign a base/matrix and embedded language to these codeswitched texts; for discussion of such notions and distinctions, see Joshi (1981), Nishimura (1986), and Myers-Scotton (1993), among numerous others.

(5) Narrative reading texts

a." The Beggar Prince"/'El Príncipe Pordiosero'

El rey Arnulfo tenía una hija muy hermosa que se llamaba Graciela. Al cumplir ella los veinte años, el rey invitó many neighboring princes to a party. Since she was unmarried, he wanted her to choose un buen esposo. Princess Grace was sweet y cariñosa con todos. Tenía solamente un defecto: she was indecisive. Surrounded by twelve suitors, she could not decide and the king se enojó. Gritó, "¡Juro por Dios que te casaré con el primer hombre that enters this room!" At that exact moment, a beggar, who had evaded a los porteros, entró en la sala. Exclamó, "¡Acabo de oír lo que dijo usted! ¡Juró por Dios! The princess is mine!" There was no going back on such a solemn oath y el pordiosero se preparó para la boda. Everyone was surprised to see lo bien que se veía in his borrowed clothes. Después de algunas semanas, the beggar made an announcement to the princess. El nuevo esposo le dijo a la princesa that the time had come to leave the palace. They had to return to his meager work and a house que era muy humilde ...

King Arnold had a very beautiful daughter named Graciela. On her 20th birthday, the king invited/many neighboring princes to a party. Since she was unmarried, he wanted her to choose/a good husband./Princess Grace was sweet/and affectionate with everyone. She had only one defect:/she was indecisive. Surrounded by twelve suitors, she could not decide and the king/became angry. He cried, "I swear by God that I will marry you with the first man/that enters this room!" At that exact moment, a beggar, who had evaded/the doormen, entered into the room. He exclaimed, "I heard what you said! You swore by God!/The princess is mine!" There was no going back on such a solemn oath/and the beggar prepared for the wedding./Everyone was surprised to see/how well he looked in his borrowed clothes./After a few weeks,/the beggar made an announcement to the princess./The new husband told the princess/that the time had come to leave the palace. They had to return to his meager work and a house/that was very humble ...'

b. "Snow White and the Seven Dwarfs" / 'Blancanieves y los Siete Enanitos'

Érase una vez una linda princesita blanca como la nieve. Su madrastra, la reina, tenía un mágico mirror on the wall. The queen often asked, "Who is the más hermosa del valle?" Y un día el mirror answered, "Snow White is the fairest one of all!" Very envious and evil, the reina mandó a un criado que matara a la princesa. El criado la llevó al bosque y out of compassion abandoned la allí. A squirrel took pity on the princess and led her to a pequeña cabina en el monte. En la cabina, vivían siete enanitos que returned to find Snow White asleep in their beds. Back at the palace, the stepmother again asked the espejo: "Y ahora, ¿quién es la más bella?" El espejo otra vez le answered, without hesitation, "Snow White!" The queen was very angry and set out to find the casita de los enanitos. Disfrazada de vieja, la reina le ofreció a Blancanieves una manzana que había laced with poison. When Snow White bit into the apple, she calló desvanecida al suelo. Por la noche, los enanitos la found, seemingly dead ...

'There once was a beautiful princess as white as the snow. Her stepmother, the queen, had a magic/mirror on the wall. The queen often asked, "Who is the/most fair in the valley?" And one day the/mirror answered, "Snow White is the fairest one of all!" Very envious and evil, the/queen sent a houseboy to kill the princess. The houseboy took her to the forest and/out of compassion abandoned/her there./A squirrel took pity on the princess

and led her to a/small cabin in the forest. In the cabin, there lived seven dwarfs that/returned to find Snow White asleep in their beds. Back at the palace, the stepmother again asked the/mirror: "And now who is the most beautiful?" the mirror again answered/her, without hesitation, "Snow White!" The queen was very angry and set out to find the/house of the dwarfs. Disguised as an old lady, the queen offered Snow White an apple that she had/laced with poison. When Snow White bit into the apple, she/fell fainting to the floor. At night, the dwarfs found/her seemingly dead ...'

By their performance, as by their assertions, sampled below, all 10 participants read the well-formed codeswitched text, "The Beggar Prince," with little effort, but had consistent problems with the ill-formed codeswitched "Snow White and the Seven Dwarfs," demonstrating various types of disfluency, including pauses, false starts, breakdowns, even laughter. Some participants unknowingly corrected ill-formed switches in their reading, for example, by changing "she callô" to "se callô", and "el mirror" to "the mirror"; other attempts at selfcorrections included the rendering of "found la" as "la found her". And some stammered in producing phrases such as "the ... the ... the espejo", as if ensuring that a switch was intended at a particular inopportune juncture.⁹

Participants' actions, however inadvertent, were substantiated by their introspections on the two texts. As reported in (6), "The Beggar Prince" was judged to be easily read and understood. Several participants believed their reading fluency owed to their facility with English and Spanish, others reported their success due to the fact that the text reflected their own codeswitching practice. In contrast, "Snow White and the Seven Dwarfs" was deemed confusing, despite participants' acquaintance with the story. Some found the text unnatural and harsh, and several offered up ways of editing the language switching to make it "sound right."

(6) *Narrative reading task*

Sara:

Was the segment of the fairy tale easily read? Was it easily understood?

a. Comments referencing ease of readability and comprehension of "The Beggar Prince"

The segment was interesting; it was easily read and understood. Carlos:

Federico: Sí, siento que el fragmento del cuento fue fácil de leer y fácil de entender;

porque puedo leer en los dos idiomas, me imagino que al mismo nivel; no

me causó ninguna angustia leer este cuento....

'Yes, I feel that the fragment of the story was easy to read and easy to understand; because I can read both languages, I imagine that at the same level; it

did not cause me any anguish to read the story.'

No fue difícil; estoy impuesta a cambiar ... 'It was not difficult; I am accustomed to switching ...'

I think this one flowed a little bit better; it was easier to go from back to forth

in English and Spanish; [...] it was pretty well understood; there was no

harsh grammatical errors that made it hard to transition. [sic]

One reviewer suggests that a statistical analysis is warranted for these readily quantifiable miscues. However, the paper is not grounded in psycholinguistics or applied linguistics; it does not aim to present quantifiable data, but to attend instead to the description of language alternation and the demonstration of its rule-governed nature.

b. Comments referencing ease of readability and comprehension of "Snow White and the Seven Dwarfs"

Yanira: Too much switching made it confusing.

Carmen: It was harder to read ..., and, because it was so hard to read, it was harder to

understand.

Belinda: It was hard to shift from English to Spanish or vice versa.

Federico: Este fragmento del cuento de "Blancanieves" fue un poco más difícil de leer,

no fue difícil de entender, pero se me hizo un poco más difícil la lectura ... en el aspecto de que no llevaba un ritmo, o sea, que el ritmo de la lectura fue un poco interrumpida por el hecho que unas palabras las usaron en el cuento en una manera que yo no las uso generalmente en ocasiones que he mezclado el lenguaje.

'This fragment of the story of "Snow White" was a little more difficult to read, it was not difficult to understand, but the reading was a little more difficult for me... in the sense that it did not have a rhythm, that is, that the rhythm of the reading was a little interrupted by the fact that some words were used in the story in a way that I don't generally use them on occasions when I have mixed the language.'

Sara: ... había algunas oraciones que ... didn't make sense ...

"... there were sentences that ... didn't make sense ..."

Lorenzo: The segment of the fairy tale was somewhat easily read, although what it is is that some of the sentences could've changed from Spanish to English in a

better way; there are certain places that really weren't really right to break from English to Spanish or from Spanish to English. The story was easily understood because I understand English and Spanish, but I just think, like, for example the last sentence, "When Snow White bit into the apple, she *calló desvanecida al suelo*," that I wouldn't say it, it doesn't sound right. I would probably say, "When White bit into the apple, *ella se calló al suelo*." Or "she

fell desvanecida al suelo" ...

The participants were then asked to compare the two texts, again on measures of readability, comprehension, and enjoyability. Consistent with their reading and evaluations of the individual fragments, most expressed a preference for "The Beggar Prince," as articulated in (7a). There were exceptions: one participant, Lorenzo, stated that he just did not like the stories (7b), and two other participants indicated a preference for "Snow White and the Seven Dwarfs," though, as explained in (7c), they favored the text for the well-known plot and vocabulary, rather than for its grammatical form.

(7) Narrative reading task

In comparing the two texts, which one was more easily read? More easily understood? Which one did you enjoy best?

a. Comments indicating preference for "The Beggar Prince"

Yanira: "The Beggar Prince" flowed better. You didn't get stuck on the switches ... it didn't mix the languages so often.

Guadalupe: I enjoyed this one, "The Beggar Prince." I don't know why.

Carmen: The first one. Why? Because it was easier to read and I actually understood the story.

b. Comments indicating no preference

Lorenzo: I'd have to say that they're both the same; me dio igual los dos. I don't know, I guess I really don't like stories. 10

'I'd have to say that they're both the same;/it was the same to me./...'

c. Comments indicating preference for "Snow White and the Seven Dwarfs"

Federico: Se me afigura que el fragmento de 'Caperucita Roja' ["El Príncipe Pordiosero"] fue un poco más fácil y de entenderse también. ... Me gustó más el de "Blancanieves," pero eso es porque me gusta más ese cuento no necesariamente la manera en que está escrito, pero si tuviera yo que leerle el cuento a otra persona me gustaría leerle mejor de "Caperucita Roja" ["El Príncipe Pordiosero"].11

> 'I figure that the fragment of 'Little Red Riding Hood' ['The Beggar Prince'] was a little more easy and to read too. ... I like the "Snow White" one more, but that is because I like that story more not necessarily the way it is written, but if I had to read the story to someone else I would rather read "Little Read Riding Hood" ["The Beggar Prince"].'

I think the "Snow White" was more easy to read, because there was some words Emma: in "The Beggar Prince" that I didn't really know before ... so, I enjoyed the one about Snow White and the seven dwarfs more.

Finally, participants were asked to reflect and comment specifically on the codeswitching forms represented in the two texts. All 10 participants recognized the differentiating codeswitching patterns, which they perceived to be more abrupt, more frequent, and less patterned in "Snow White and the Seven Dwarfs" than in "The Beggar Prince." Sample comments are transcribed in (8):

Comments referencing codeswitching across the two texts (8)

Yanira: There is mixing in "The Beggar Prince," but it makes sense. "Snow White" changes without a pattern.

Federico: Como mencioné anteriormente la diferencia el tipo de mezcla es un poco más inadecuada de mi punto de vista el de "Blancanieves." Se me hizo un poco más difícil la manera en que se fragmentaron las frases del español al inglés.

> 'As I mentioned previously the difference in the type of mixing is a little bit more inadequate in 'Snow White' in my point of view. The manner in which

Lorenzo's expressed dislike of the stories may be attributed not to his aversion to the linguistic or grammatical form of the stories, but to their simplicity; he produced the most creative and lengthy "Beggar Prince" narrative in the study.

¹¹ Federico later corrected his "error" in misidentifying the fairy tale, saying, "Quiero hacer una corrección a lo que dije anteriormente. Me equivoqué con el título del cuento que había leído. Se llama 'El Príncipe Pordiosero', no 'Caperucita Roja'; estaba confundido." 'I want to make a correction to what I said previously. I made a mistake in the title of the story I had read. It's called "The Beggar Prince," not "Little Red Riding Hood"; I was confused'.

the sentences were fragmented from Spanish to English was a little more difficult for me.'

Guadalupe: I don't know, for some reason I liked "The Beggar Prince." It read more smoothly, I think.

Carmen: I don't know really what the difference is, but, the other one ["The Beggar Prince"] was half in Spanish and half in English, and so was this one ["Snow White"], but the other one was just easier to read, I don't know exactly if it's the way part of the sentence or which words you use Spanish and which you don't.

Belinda: The changes in "Snow White" were harder to understand.

Emma: There is more a mixing in the first one, "Snow White and the Seven Dwarfs"...

Sara: ... "Snow White" [...] that's not how I mix languages.

Lorenzo: "The Beggar Princess"... didn't have such breaks in between sentences, it didn't go where they wouldn't connect. *Blancanieves*... if it began in English and went into Spanish, it was a point where it shouldn't, or it just didn't sound right.

Thus, the reading task proved useful in accessing intuitions and judgments on distinct codeswitching forms. Specifically, all of the participants demonstrated fewer errors in producing the language forms in "The Beggar Prince," and admitted a more positive disposition towards this well-formed text, with respect to readability, comprehension, enjoyability, and patterns of language alternation. Taken together, the participants' responses revealed a marked sensitivity to specific codeswitching patterns. However, it was deemed important to include less controlled measures that would elicit more naturalistic bilingual behavior, and accordingly, two storytelling tasks were administered.

4.2 Recounting task

In the recounting component, participants were instructed to select one of the fairy tale fragments previously presented and recount the ending in Spanish-English codeswitching. ¹² The productions were recorded, and subsequently transcribed and analyzed for linguistic content. All but one of the 10 story-telling narratives produced in this condition were well-elaborated in codeswitched speech; a representative excerpt appears in (9). ¹³ Even a cursory overview of the oral narratives reveals a broad use of both languages, bringing into question the assumption that one language must be the base or matrix language in codeswitched speech.

(9) Por la noche los enanitos... they found uhhh Blancanieves seemingly dead. Se pusieron muy tristes y a llorar... and then one of them had an idea to bury her. Arriba en la

While it is unusual to divorce codeswitching production from its social context, such "isolated" tasks prove a necessary step in controlling for the variables that would otherwise confound the inferences drawn from the study. For instance, an extensive background questionnaire indicated that some participants seldom engaged in codeswitching in their natural speech productions, for lack of opportunity or inclination, and thus codeswitching had to be elicited (cf., Toribio, 2000a).

Pauses or breaks in the narration are marked with ellipses (...).

montaña donde estuviera rodeada por todos sus heridos queridos ... all the little birds, the little possums, all the little animals of the forest because she loved them so much ... Entonces se la llevaron, este ... in a procession they marched up there. Y como, como eran ... muy imaginativos ellos, muy ... este ... they, they built a casket of ahhh clear crystal casket. Y allí es donde la metieron y la velaron por un día, dos días, y todos los animalitos del bosque were there with them ... all sad because she was a very beautiful doncella ... Ya que habían pasado unos dos ... tres días ... pasó por allí a very handsome prince ... era alto, moreno ... de ojos grandes, nice long lashes ... he was just ... passing by because ... andaba buscando a su amor perdido ... y de repente he sees Blancanieves in the clear casket y él sabía, algo le dijo en su corazón que ella era ... ella era la persona soñada, la persona que andaba buscando toda su vida ... y su belleza took him by surprise ... he wanted to see her up close y se le acercó ... y la sacó del ataúd and without knowing why ... he kissed her on the lips. ... En eso Blancanieves despertó de un sueño tan profundo ... el príncipe la había sacado del abismo ... As she opened her eyes she saw the most handsome... beautiful prince... y entonces Blancanieves supo que también era el amor de su vida ... y se fueron ... a vivir una vida hermosa, llena de amor y pues, colorín, colorado este cuento se ha acabado. (Sara)

'At night the dwarfs .../they found uhhh Snow White seemingly dead. 14/They became very sad and began to cry .../and then one of them had an idea to bury her./Atop the mountain where she would be surrounded by her wounded loved ones .../and the little birds, the little possums, all the little animals of the forest because she loved them so much .../Then they took her, uhhh in a procession they marched up there./And as, as they were ... very imaginative, very ... uhhh .../they, they built a casket of ahhh clear crystal casket./And there is where they put her and they mourned her a day, two days, and all of the animals of the forest/were there with them ... all sad because she was a very beautiful/maid... When there had passed some two...three days...there passed by there/a very handsome prince .../he was tall, dark ... with big eyes,/nice long lashes ... he was just ... passing by because .../he was looking for his preferred love ... and suddenly/he sees Snow White in the clear casket/and he knew, something told him in his heart that she was ... she was the dream person, the person that he had been searching for all of his life... and her beauty/took him by surprise... he wanted to see her up close/and (he) got nearer to her ... and he took her out of the casket/and without knowing why ... he kissed her on the lips./... At once Snow White awoke from a deep sleep ... the prince had brought her out of an abyss .../As she opened her eyes she saw the most handsome ... beautiful prince .../and then Snow White knew that he too was the love of her life ... and they left ... to live a splendid life, filled with love and well, that's all folks.'

For all participants in this condition, the vast majority of language switches occurred at sentence boundaries, many preceded by pauses signaling principal discourse breaks required in recalling and reformulating the story. The narratives additionally included other stylistic features commonly marked by language alternations in bilingual speech; as outlined in (10), some of these stylistic strategies are especially germane to storytelling (cf., Gumperz, 1976, 1982; Montes-Alcalá, 2000; Valdés, 1976; Zentella, 1981, 1997).

Switch boundaries that border on the proper names of fairy tale characters have generally been excluded from analysis, as names could be more salient in one or the other language.

(10) Stylistic language alternations

a. Switching for reported speech

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Lorenzo: ... pero dijo ella, "I'll give it some time," ... '... but she said,/"I'll give it some time", ...'
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b. Switching for repetition or emphasis

```
Yanira: ... un príncipe, Prince Charming ... estaba pasando por el bosque ... '... a prince,/Prince Charming .../was passing through the forest ...'

Belinda: ... un gran palacio, a great palace, y allí entonces la princesa ...
```

c. Switching for qualification or elaboration

```
Sara: ... por todos sus heridos queridos ... all the little birds, the little possums, all the little animals of the forest ...
```

... a great palace,/a great palace,/and there the princess then ...'

'for all of her wounded loved ones ... all the little birds, the little possums, all the little animals of the forest ...'

```
Lorenzo: ... qué tipo de animales habían, what type of trees, flowers ...
```

"... what kinds of animals there were, what type of trees, flowers ..."

Lorenzo: ... she wanted to experiment, quería ver qué había allá fuera ... '... she wanted to experiment,/she wanted to see what was out there ...'

Lorenzo: *No había cuartos*, there was no living room, there was no, not even a bathroom. 'There were no rooms,/there was no living room, there was no, not even a bathroom.'

d. Switching for fixed or formulaic phrases

```
Belinda: Y así vivieron, they lived happily ever after.
```

'And they lived that way, they lived happily ever after.'

Belinda: ... she met this *lobo feroz* that asked where she was going.

... she met this/fierce wolf/that asked where she was going.'

Also attested in participants' oral productions were lexical insertions and tag-switches. Lexical insertions, exemplified in (11a), represent the introduction of individual items into a recipient language, as occasioned by unavailability or temporary lapses in memory; these insertions often trigger a language switch for ensuing material. Tag-switches, such as *okay*, *so*, *pues* 'well', and *verdad* 'right' function as sentence fillers or reveal a speaker's disposition towards the content of an utterance; they typically occur at phrase or clause boundaries, as in the Example (11b).¹⁵

(11) Other features common in bilingual speech

a. lexical insertions

Sara: ... because she was a very beautiful doncella... Ya que habían pasado unos días ...

"... because she was a very beautiful/maid... When there had passed some days..."

As expected, lexical insertions and tags may be evidenced in both monolingual and bilingual modes of interaction; in contrast, codeswitching, of interest here, is illustrative of a bilingual speech mode which requires a high degree of bilingual competence.

... ella estaba acostumbrada a todas las, umm, luxuries of her palace she was accustomed to all of the,/ummm, luxuries of her palace ...'

b. tag-switches

... se quedó unos, you know, ella dijo, "Me voy a quedar aquí un mes ... Lorenzo: ... she stayed some days,/you know,/she said, "I'm going to stay here a month"...'

Although intersentential switches predominated in the oral narratives, there were also attested numerous examples of intrasentential codeswitching, especially at major phrase boundaries. The excerpts shown in (12) illustrate switching between clauses (12a), between coordinated clausal conjuncts (12b), between coordinated conjuncts (12c), between subject and predicate (12d), between verb and complements (12e), between noun and relative clauses (12f), and between clause and sentential modifiers (12g).

(12) Codeswitching produced in narrative story-telling task

a. Between sentential clauses, with pause

They don't know what to do and they pick her up, y la llevan a la casa ... Yanira:

'They don't know what to do and they pick her up,/and they take her to the

house ...'

Guadalupe: They prepared for a funeral, y pusieron muchas flores ...

'They prepared for a funeral,/and they put many flowers ...'

He saw that she was very beautiful, y la besó. Emma:

'He saw that she was very beautiful, and he kissed her.'

Se pusieron muy tristes y a llorar... and then one of them had an idea to bury her. Sara:

'They became very sad and began to cry .../and then one of them had an idea

to bury her.'

b. Between coordinated clausal conjuncts¹⁶

Yanira: Se asomó a la casa de los enanitos and he saw that ...

'He got closer to the dwarfs' house/and he saw that ...'

Llegó un príncipe y vió a Blancanieves and he approached her and gave her a kiss. Noemí:

'The prince arrived and saw Snow White/and he approached her and gave her

a kiss.'

... y la sacó del ataúd and without knowing why ... he kissed her on the lips. Sara:

... and he took her out of the casket/and without knowing why ... he kissed

her on the lips.'

c. Between coordinated conjuncts

Carlos: Her mother le habló and sent her to make, to take ...

'Her mother/spoke to her/and sent her to make, to take ...'

Sara: He wanted to see her up close y se le acercó.

'He wanted to see her up close/and (he) got nearer to her.'

The possibility of null subjects in Spanish makes it difficult to distinguish between coordination of full clauses and coordination of predicates; the analysis here errs on the side of conservatism: coordination of clauses must include two distinct subjects, as indicated by overt content or by verbal morphology.

Lorenzo: ... accepted the decision that the husband had made y se fueron al bosque ...

"... accepted the decision that the husband had made/and they went to the forest ...'

d. Between subject and predicate

Emma: Ellos se enamoraron y el príncipe wanted to get married.

'They feel in love and the prince/wanted to get married.'

Sara: *Y todos los animalitos del bosqu*e were there with them.

'And all of the little animals of the forest/were there with them.'

Sara: ... pasó por allí a very handsome prince ...

... there passed by there/a very handsome prince ...'

Sara: ... y su belleza took him by surprise.

"... and her beauty/took him by surprise."

Noemí: Y Blancanieves y el príncipe y los siete enanitos were very happy.

'And Snow White and the prince and the seven dwarfs/were very happy.'

e. Between verb and complements

Carmen: Al fin, ella decidió to go back to her palace.

'In the end, she decided/to go back to her palace.'

Noemí: Blancanieves despertó y los enanitos estaban very happy.

'Snow White awoke and the seven dwarfs were /very happy.'

Lorenzo: She wanted to see la belleza que tenía ...

'She wanted to see/the beauty that it had ...'

Lorenzo: Nunca había salido out of the forest before.

'She had never gone/out of the forest before.'

f. Between noun and relative clause

Lorenzo: ... se fueron al bosque where they would both live in the little house.

... They went to the forest/where they would both live in the little house.'

Lorenzo: ... the beauty que el bosque le daba.

"... the beauty/that the forest offered her."

g. For sentential modifiers

Carlos: While on her way, se topó con el lobo ...

'While on her way,/she ran into the wolf ...'

Carlos: Al mismo tiempo, the wolf continued on the original path ...

'At the same time,/the wolf continued on the original path ...'

Carlos: When Caperucita arrived to her grandmother's le preguntó por qué tenía

dientes tan grandes.

'When/Little Red Riding Hood/arrived to her grandmother's/she asked her why

she had such big teeth.'

Lorenzo: Al llegar a la casita, she noted ...

'On arriving at the little house,/she noted ...'

Lorenzo: ... durante una semana, it started getting to her ...

"... within one week,/it started getting to her ..."

While the grammatically-sanctioned intrasentential switches illustrated in (12) proceeded smoothly, others, representing potential ill-formed intrasentential switches, gave rise to disfluencies. For example, as shown in (13), switching after a coordinating conjunction, subordinating complementizer, and determiner is preceded by pauses or prevented by an immediate reiteration.¹⁷ Moreover, there were no incidences of codeswitching at the boundary between auxiliary and main verb, or between negative marker and verb, or between demonstrative and noun, among other syntactic junctures where grammatical norms do not favor codeswitching (recall the discussion in Section 1). In fact, not one of the participants who elected to tell the ending to the "Snow White and the Seven Dwarfs" fairy tale replicated the ill-formed switching modeled in the exemplar; this finding is significant, as it suggests that the codeswitching in the fairy tale model was indeed incompatible with proficient bilingual production.¹⁸

(13) Circumventing ill-formed switches

a. Disfluency

Yanira: ... not frowns but ... un poco tristes ...

... not frowns but .../a little sad ...'

... they continued working and ... en eso iba pasando un príncipe ... Yanira:

... they continued working and .../at that time there was passing a prince ...'

... dijo que ... all of a sudden ... Belinda:

... he said that .../all of a sudden ...'

Sara: ... passing by because ... andaba buscando a su amor perdido ...

"... passing by because .../he was looking for his preferred love

... pensó que, Snow White was dead ... Noemí:

'... he thought that,/Snow White was dead....'

b. Repair

Guadalupe: el... the queen was not happy that she was still alive ... ¹⁹

'the (masc.) .../the queen was not happy that she was still alive ...'

Noemí: Ella se she came back to life ...

'She was/she came back to life ...'

... y umm he and he fought with her and he killed her. Noemí:

... and/umm he and he fought with her and he killed her.'

 $^{^{17}}$ The low incidence of such switching, reported in the early work of the $1970 \, \mathrm{s}$, has been tested with experimental measures by Toribio (2000b).

For discussion of the grammatical competence that is required for successful codeswitching, consult Toribio (2000b). Therein, I discuss several studies of child and adult bilingual populations which reveal that increased competence in the component languages is a prerequisite for rule-governed codeswitching (e.g., Bhatia & Ritchie, 1996; McClure, 1981; Meisel, 1989; Poplack, 1980; Rakowsky, 1989; Toribio, Roebuck, Lantolf, & Perrone, 1993).

This example does not represent a correction for misassignment of gender; the remainder of the oral text confirms that reina 'queen' is marked with the default masculine gender in the speaker's lexicon. Her uncertainty regarding grammatical gender in Spanish is verified in the written codeswitching task and in a separate Spanish-language narrative task, not reproduced here (cf., Toribio 2000a, 2000d, 2000f).

Lorenzo: ... con las, with the leaves of the trees.

"... with the,/with the leaves of the trees."

Lorenzo: *Y*, the house was just a one-room house.

'And,/the house was just a one-room house.'

The remaining participant, Federico, experienced difficulty in meeting the demands of the task, and gave verbal expression to his frustration. As shown in the transcript (14), he recounted the ending of "The Beggar Prince" fully in Spanish, and was apologetic in his resignation before the task. He made a second attempt to comply with the instructions, this time relating the segment fully in English, with a single insertion of an adverbial modifier.

(14) ... y ella se hizo una mujer muy humilde y muy buena de corazón. Nunca más quiso todas las riquezas que quería antes porque antes era una, una niña fresa, no trataba bien a sus compañeros, y ahora era más buena de corazón... como ven se me hizo un poco difícil mezclar el inglés con el español. No es que no lo puedo hacer pero casi siempre pienso o estoy pensando en español. No estoy pensando en inglés y ... y ... y a veces es más es más fácil terminarlo de una manera pero, y ... I guess I could do it both ways. I don't know. It's hard for me though, yeah, you know if I start talking in one language I keep talking in one language so it's kind of hard. I can't concentrate on doing that. Umm ... so I'm not gonna try to do it ... umm ... she lived happily ever after, humildemente, umm, without all the riches that the ... see, I can't, I don't know, for some reason I hold myself back sometimes. (Federico)

... and she became a very humble woman and very good at heart. She never wanted all of the riches that she wanted before because before she had been a spoiled child, she didn't treat her peers well, and now she was better at heart ... as you can see it was difficult for me to mix Spanish with English. It isn't that I cannot do it but I almost always think or am thinking in Spanish. I am not thinking in English ... and ... and sometimes it's more it's easier to finish it one way but, and .../I guess I could do it both ways. I don't know. It's hard for me though, yeah, you know if I start talking in one language I keep talking in one language so it's kind of hard. I can't concentrate on doing that. Umm ... so I'm not gonna try to do it ... umm ... she lived happily ever after,/humbly,/umm, without all the riches that the ... see, I can't, I don't know, for some reason I hold myself back sometimes.'

However, Federico's behavior does not impugn the validity of the storytelling task; rather, it makes evident that not all bilinguals possess the requisite communicative competence to engage in codeswitching. As often noted in the research literature (cf., for example, Aguirre, 1977; Valdés, 1976), competence in two languages is a necessary precondition, but insufficient prerequisite in determining successful codeswitching performance: membership in a community in which codeswitching is practiced may also be a required.²⁰ This mitigating factor was controlled for in the narrative writing task that ensued.

An extensive background questionnaire revealed that Federico does not belong to such a speech community; he participates in largely monolingual-speaking Spanish—and English-language communities, so it is not surprising that a codeswitching storytelling performance would prove arduous for him (cf., Toribio, 2000a).

4.3 Writing task

In the final narrative task, participants were asked to review a sequence of color pictures depicting the "Little Red Riding Hood" fairy tale and recount the story in mixed speech, but this time, in written form. To be sure, this task was not intended to render speech samples that would be equivalent to the oral narratives produced in the task preceding. Lipski (1985) has pointed to the "obvious limitations" inherent in the use of written samples of bilingual codeswitching as representative of speaker norms (cf., Montes-Alcalá, 2000). However, the task at hand did not elicit literary artifacts, but orthographic renditions of a renowned fairy tale narrative, and, as such, the texts were expected to more closely approximate unmarked verbal behavior than prose or poetry.²¹ Thus, while the task was designed to examine speakers' creative manipulation of two languages, its greater purpose was to evoke speakers' notions of codeswitching well-formedness, while abstracting away from the demands of performance and practice.

All participants successfully completed the task, producing comprehensive fairy tale narratives that were permeated by intrasentential switches. An excerpt of Lorenzo's writing sample is reproduced in (15), without editorial correction (save for the italics that identify the Spanish-language segments).

(15) Once upon a time, en un lugar lejano, there was a little girl que se llamaba Caperucita Roja. She liked walking through the forest, escuchando los pajaritos, oliendo las flores, y apreciando la belleza natural. One day, su mamá la mando a la casa de su abuelita. She told L.R.R.H. que su abuelita ocupaba some medicine for some sickness. Caperucita went to her grandmother's house, a llevarle medicina. On the way to the house, se topo con un lobo feo. The wolf gave her flowers and asked where she was heading. Ella le contesto que iba a la casa de su abuelita. The wolf then left her and headed to the grandmother's house, corriendo lo mas pronto posible par ganarle a Caperucita. When he arrived, se metio y persiguido a la abuelita. Caperucita luego llegó and began to knock. The wolf changed into the grandmother's clothes y se metio de bajo de las cobijas. L.R.R.H. went inside and noticed que su abuelita looked different. She began to ask questions about the wolf's nose, eyes, ears, and mouth. Cuando Caperucita asked the last question, el lobo brincó y la empeso a corretiar. At the same time, a little squirrel had warned a hunter in the forest about this big bad wolf. El hombre corrio en seguida, a la casa de la abuelita. There he found the wolf, persiguiendo a Caperucita. L.R.R.H. ran outside, y el lobo la siguio. Entonces el hombre levanto su rifle and fired it at the wolf, matandolo. Caperucita entonces empeso a llorar. The man asked her porque estaba llorando, y ella le dijo que porque el lobo se había comido a su abuelita. At that same time, the grandmother came out of the dog's house. Ella se había escondido el la casa del perro durante todo ese tiempo. Asi que feliz termina este cuento de Little Red Riding Hood. [sic] (Lorenzo)

'Once upon a time, in a far away place, there was a little girl/who was named Little Red Riding Hood./She liked walking through the forest,/listening to the little birds, smelling the flowers, and appreciating the natural beauty./One day,/her mother sent her to her grandmother's house./She told L.R.R.H./that her grandmother needed some medicine for

For relevant discussion on the narrative structure of codeswitching, the reader is referred to Lipski (1985), Montes-Alcalá (2000), Torres (1997), Valdés (1976), and the literature grounded in Keller (1979).

some sickness. Little Red Riding Hood went to her grandmother's house,/to take her medicine./On the way to the house,/she ran into an ugly wolf./The wolf gave her flowers and asked where she was heading./She answered him that she was going to her grandmother's house./The wolf then left her and headed to the grandmother's house,/running the fastest possible to beat Little Red Riding Hood./When he arrived, he got in and followed the grandmother. Little Red Riding Hood later arrived/and began to knock. The wolf changed into the grandmother's clothes/and got under the covers./L.R.RH. went inside and noticed/that her grandmother/looked different/She began to ask questions about the wolf's nose, eyes, ears, and mouth./When Little Red Riding Hood/asked the last question,/the wolf jumped and started to chase her./At that same time, a little squirrel had warned a hunter in the forest about this big bad wolf./The man ran at once, to the grandmother's house./There he found the wolf,/following Little Red Riding Hood./L.R.R.H. ran outside, and the wolf followed her. Then the man raised his rifle and fired it at the wolf,/killing it. Little Red Riding Hood then began to cry./The man asked her/why she was crying, and she told him that because the wolf had eaten her grandmother./At that same time, the grandmother came out of the dog's house./She had been hiding in the dog's house during all that time. So happily ends the story of/Little Red Riding Hood.'

As in the oral production task, the participants demonstrated a broad use of both languages in achieving a diversity of stylistic effects, for example, in signaling a change in roles (16a), marking direct or indirect speech (16b), shifting for declarative or interrogative (16c), attracting attention (16d), heightening an interjection or exclamation (16e), and inserting fixed or formulaic phrases (16f).

(16) Stylistic codeswitching

a. Switching for change in roles

Sara: "Oh grandma what a big nose you have" "Para olerte mejor mijita" ... [sic] "Oh grandma what a big nose you have" "The better to smell you my child"...'

b. Switching for reported speech

Noemí: El wolf le pregunto— where are you going Caperucita? And she told him "A la casa de mi abuelita ..." [sic]

"The/wolf/asked—/where are you going *Little Red Riding Hood?* And she told him/"To my grandmother's house. ... "

c. Switching for declarative or interrogative

Emma: El lobo le preguntó where did she live ...

'The wolf asked her/where did she lived ...'

d. Switching for attracting attention

Belinda: *Mira* so that you get to her house sooner *vete por este camino* ... 'Look/so that you get to her house sooner/take this path ...'

e. Switching for interjections or exclamation

Sara: "Oh que bien, where does she live?" [sic] "Oh good,/where does she live?'"

f. Switching for fixed or formulaic phrases

Carmen: Once upon a time había una niña llamada Caperucita Roja ...

'Once upon a time/there was a girl named Little Red Riding Hood ...'

Emma: Y la historia termina con un happy ending.

'And the story ends with a/happy ending.'

And just as the oral narratives, the written narratives incorporated lexical insertion of culturally salient nouns such as wolf, ardillita 'squirrel', hunter, mom, abuelita 'grandmother', grandma, and m'hija 'my child'; the example in (17) demonstrates two such lexical insertions in one sentence.²²

(17) Lexical insertion

Federico: On the way to abuela's house she runs into the lobo and he asks her where she is going. After she tells him they both go on their way.

> 'On the way to/grandmother's/house she runs into the/wolf/and he asks her where she is going. After she tells him they both go on their way.'

A longer view of the Spanish and English segments of discourse produced in these written narratives reveals that the participants generally possess an advanced degree of bilingual competence; this ability was invoked in producing texts that incorporated intersentential and intrasentential codeswitching. Interestingly, the intersentential alternations attested in the written narratives are significantly reduced when compared with those produced in the oral narratives; intrasentential codeswitching prevailed in this task, as evidenced in the examples in (18). (Note, again, that the written texts are faithfully reproduced, without editing.)

(18) *Codeswitching in written narratives*

a. Between coordinated clausal conjuncts

They both finish talking y el lobo camina en otra dirección ... Yanira:

'They both finish talking/and the wolf walks in another direction ...'

Yanira: Le dispara and the wolf dies.

'He shoots/and the wolf dies.'

Ella anda perdida so she asks him for directions ... Carmen:

'She is wandering lost/so she asks him for directions ...'

El lobo llega a la casa de la abuela and he hides her in the closet ... Carmen:

'The wolf arrives at the grandmother's house/and he hides in the closet ...'

Belinda: She was a very nice, and sweet child, y todos la querian mucho. [sic]

'She was a very nice, and sweet child, and everyone loved her very much.'

She thanked him for this advice y se despidieron. Belinda:

'She thanked him for this advice/and they took leave.'

... knew of a short cut y Caperucita se fue por ahi. [sic] Emma:

... knew of a short cut/and Little Red Riding Hood went that way.'

But unlike the oral narrative production task, this third task produced no tag switches, as expected, given their typical functions in oral discourse. More notably, unlike the previous condition, the written narrative task gave rise to various types of cross-linguistic transfers. Examples such as la house of the grandmother, modeled on 'la casa de la abuela', and hablar con estrangers modeled on 'talk to strangers', demonstrate the influence of the structure of one language on the other.

b. Between coordinated phrasal conjuncts

Yanira: ... with flowers in one hand y una canasta en el otro brazo.

... with flowers in one hand/and a basket in the other arm.'

Yanira: En eso llega la niña saludándola but points to her big teeth, ...

'At that moment the girl arrives greeting her/but points to her big teeth, ...'

Yanira: ... so frightened pero alegre de estar reunida con su grandma otra vez.

... so frightened/but happy to be reunited with her grandmother again.'

Federico: She suspects something y le hace muchas preguntas.

'She suspects something/and asks her lots of questions.'

Federico: Caperucita and her grandmother reunite y viven felices el resto de sus vidas.

'Little Red Riding Hood and her grandmother reunite/and they live happily the

rest of their lives.'

Carlos: Llego a la casa de la habuela and scared her off. [sic]

'He arrived at the grandmother's house/and scared her off.'

Carmen: ... he hides her in the closet y le quita su gorro y se mete en la cama ...

... he hides her in the closet/and takes off her cap and gets into the bed ...'

Emma: Caperucita lo encontro sospechoso and pointed out that ... [sic]

'Little Red Riding Hood finds him suspicious/and pointed out that ...'

Sara: El hombre lobo se le acerco a Caperucita and said where are you going

mija. [sic]

'The man wolf got nearer to Little Red Riding Hood/and said where are you

going my child.'

Lorenzo: Caperucita luego llegó and began to knock.

'Little Red Riding Hood later arrived/and began to knock.'

Lorenzo: The wolf changed into the grandmother's clothes y se metio debajo de las

cobijas. [sic]

'The wolf changed into the grandmother's clothes/and got under the covers.'

Lorenzo: ... el hombre levantó su rifle and fired it at the wolf ...

... the man raised his rifle/and fired it at the wolf ...'

c. Between subject and predicate

Federico: The story empieza en que su mamá le hace un encargo ...

'The story/begins with her mother making a request ...'

Emma: Un dia la mamá de Caperucita Roja asked Caperucita to take some food ...

'One day Little Red Riding Hood's mother/asked Little Red Riding Hood to

take some food ...'

Emma: When the wolf *she iba a comer a Caperucita* the hunter came ... [*sic*]

'When the wolf/was going to eat Little Red Riding Hood/the hunter came ...'

Sara: ... cada quien went on their own way.

... each one/went on their own way.'

Lorenzo: ... noticed que su abuelita looked different.

"... noticed/that her grandmother looked different."

Lorenzo: Cuando Caperucita asked the last question ...

'When Little Red Riding Hood/asked the last question ...'

d. Between verb and subordinate clause

Caperucita told him que iba a visitar a su grandmother. Emma:

'Little Red Riding Hood told him/that she was going to visit her/grandmother.'

Emma: El lobo le preguntó where did she live ...

'The wolf asked her/where did she live ...'

Sara: ... after telling him donde vive la grandma cada quien went on their own way.

... after telling him where the grandma lived each one/went on their own way.'

Lorenzo: She told L.R.R.H. que su abuelita ocupaba ...

'She told L.R.R.H./that her grandmother needed ...'

Lorenzo: ... noticed que su abuelita looked different.

... noticed/that her grandmother looked different.'

Lorenzo: The man asked her *porque estaba llorando*. [sic]

'The man asked her/why she was crying.'

e. Between verb and complements

Yanira: La madre de Caperucita le da a jar of honey.

'Little Red Riding Hood's mother gave her/a jar of honey.'

Federico: In the title frame we see Caperucita Roja en el bosque ...

'In the little frame we see/Little Red Riding Hood in the forest ...'

Guadalupe: ... pidió que ella lleva some food to her gradmother [sic] ...

... asked to take/some food to her grandmother ...'

Carmen: ... siempre traía a red cloth over her head.

... always wore/a red cloth over her head.'

Carmen: ... su abuelita que estaba sick.

... her grandmother who was/sick.'

The wolf asked *Caperucita a donde iva*. [sic] Emma:

'The wolf asked/Little Red Riding Hood where she was going.'

Sara: ... para que le llevara food to her grandmother.

... to take/food to her grandmother.'

Lorenzo: ... que su abuelita ocupaba some medicine for some sickness.

"... that her grandmother needed/some medicine for some sickness."

Lorenzo: Caperucita went to her grandmother's house a llevarle medicina.

'Little Red Riding Hood went to her grandmother's house/to take her medicine.'

f. Between preposition and objects

Yanira: El lobo platica con Little Red Riding Hood for a while.

'The wolf chatted with/Little Red RidingHood for a while.'

Federico: ... goes to la casa de la abuelita ...

... goes to/the grandmother's house ...'

... and sent her to take honey to su abuela. Carlos:

... and sent her to take honey to/her grandmother.'

Sara: ... recuerda no hables con strangers along the way ...

... remember don't talk with/strangers along the way ...'

g. Between noun and relative clause

Lorenzo: ... there was a little girl que se llamaba Caperucita Roja.

... there was a little girl/who was named Little Red RidingHood.'

h. For phrasal modifiers

... directions para llegar a la casa de su abuela.

... directions/to get to her grandmother's house.'

Esta es la historia of the "Little Red Riding Hood." Emma:

'This is the story/of the "Little Red Riding Hood".'

i. For sentential modifiers

Yanira: As Little Red Riding Hood is walking along the forest se encuentra con un lobo.

'As Little Red Riding Hood is walking along the forest/she encounters a wolf.'

Guadalupe: ... y llego when the wolf was chasing Little red riding Hood. [sic]

"... and he arrived/when the wolf was chasing Little Red Riding Hood."

... to take this path *por que era mas corto*. [sic] '... to take this path/because it was shorter.' Carlos:

At the same time *Caperucita encontro a su habuela*, [sic] Carlos:

'At the same time/Little Red Riding Hood found her grandmother.'

Her mom had given her some soup para que le llevara a su abuela ... Carmen:

'Her mom had given her some soup/to take to her grandmother ...'

... se mete en la cama to pretend that he is the grandmother ... Carmen:

"... he gets into the bed/to pretend that he is the grandmother ..."

... en el camino she met this lobo feroz that asked where she was going.

... on the path/she met this/fierce wolf/that asked where she was going.'

Belinda: ... so that you get to her house sooner vete por este camino ...

... so that you get to her house sooner/take this path ...'

... to her grandmother's house porque su abuelita estaba enferma. Emma:

"... to her grandmother's house/because her grandmother was sick."

Lorenzo: Once upon a time, en un lugar lejano, there was a little girl ...

'Once upon a time,/in a place far way,/there was a little girl ...'

Lorenzo: On the way to the house, se topo con un lobo feo. [sic]

'On the way to the house/she ran into an ugly wolf.'

Lorenzo: ... headed to the grandmother's house, corriendo lo más pronto posible ...

... headed to the grandmother's house,/running the fastest possible ...'

Thus, the written mode did not constrain but encourage switching at a diversity of syntactic junctures. Still, though the number and variety of switch sites increased, the written narratives were similar to the oral narratives in revealing a preference for switching at major syntactic boundaries.

4.4 Analysis and synthesis of the results

The findings for the reading, recounting, and writing components are robust across subjects and tasks. By their reading performance, as by their introspection on the differential codeswitching in the two model texts, the participants demonstrated a sensitivity to grammatical coherence in codeswitching patterns. While the language alternations in "The Beggar Prince" were thought to be systematic and more correct, the switches in "Snow White and the Seven Dwarfs" were rejected as affected and forced. Several participants involuntarily self-corrected the ill-formed switches in their readings of this fairy tale, and others proposed explicit editing recommendations for improving on the ill-formed combinations in the text. Since the participants would later demonstrate their ability at alternating easily and effortlessly between languages, the repeated performance "errors" that they evidenced in reading particular Spanish-English combinations could be argued to have their origin in grammatical violations.²³ And the participant, Federico, who was unable to produce an oral codeswitched narrative was nevertheless successful in identifying and articulating the differences between the texts in the reading task. These findings are telling of the unconscious knowledge that licenses permissible switches and disallows unacceptable alternations in bilingual speech.

The controlled reading task was complemented by two more "natural" activities in which participants were required to recount fairy tales in oral and written codeswitching. The productions in both conditions converged in reflecting a strict compliance to codeswitching norms. The oral narratives incorporated intersentential alternations and intrasentential codeswitching at major phrasal boundaries, in addition to the lexical insertions and formulaic expressions frequent in bilingual (and monolingual) speech. Significantly, language switches that would violate phrasal coherence were circumvented or repaired, such that there were no true violations of codeswitching norms attested. The preponderance of language alternations at sentence boundaries may be explained by the condition—a lone speaker directing speech into a microphone in an individual carrel — which precludes the casual interchange in which intrasentential codeswitching is favored.²⁴ The participants were able to more fully draw on their bilingual resources in the writing task. The quantity and types of intrasentential codeswitching were significantly increased in the writing activity. In fact, a careful consideration of the codeswitching produced in this condition, especially in view of the reduced codeswitching modeled for them in the "The Beggar Prince" fairy tale, attest to the participants' skillful interpolation of Spanish and English. The abundance of intrasentential codeswitching was likely fostered by the specifics of the task: the visual aids and lack of time constraints for formulating the story were certain to reduce anxiety. However, the task engendered reflection and self-correction, and as a consequence, codeswitching well-formedness

Consult Poulisse (1999) for informative discussion of recent developments in research on slips of the tongue, briefly noted in Section 4.2.

²⁴ This speaks directly to the need for complementing "natural" elicitation techniques with grammaticality judgments: Via elicitation of judgments, we can examine sentence types that might not be produced in spontaneous or controlled speech situations.

was maintained. These differential and at once convergent findings speak to the need for multiple measures in the study of codeswitching and to the reliability of the measures and the data reported herein.

5 Significance of the findings

Having established the reliability of the elicited data, we now turn to determine how these findings can be accommodated within generative syntactic theory, and end by presenting directions for further research in bilingual language processing.

5.1

The formalization of the attested coherence and co-occurrence constraints

As noted in Section 1, recent studies have explored codeswitching within syntactic-theoretical frameworks (Chomsky, 1981, 1986, 1993, 1995). These investigations have sought an explanatory adequacy that was lacking in earlier, more descriptive formulations, by exploiting universal principles and relations that are hypothesized to characterize monolingual competence (cf., Muysken, 1995). This line of inquiry into language contact was initiated by Woolford (1983). According to Woolford, though the lexicons of the two component grammars of the bilingual remain separate, thereby precluding word-internal switching (19a), in codeswitched speech each grammar contributes part of the sentences, that is, both lexicons have access to terminal nodes in syntactic constructions that are common to both languages (19b-d). In contrast, whenever a phrase structure rule unique to one language is used to expand a node, the terminal positions must be filled from the lexicon of that language, predicting the ill-formedness of examples such as those in (20), where the phrase structures of English and Spanish differ.²⁵

- (19) a. *I am read*iendo./*(Yo) estoy ley*ing. 'I am read/ing.'
 - b. I put the forks *en las mesas*. (McClure, 1977, cited in Woolford, 1983) 'I put the forks/on the tables.'
 - c. *Todos los mexicanos* were riled up. (Pfaff, 1979, cited in Woolford, 1983) 'All of the Mexicans/were riled up.'

A switch may occur at any point of the discourse at which it is possible to make a surface constituent cut and still retain a free morpheme.

(ii) Equivalence Constraint

Codes will tend to be switched at points where the surface structures of the languages map onto each other.

Woolford's model represents an early generative reformulation of two constraints previously proposed in the literature: Poplack's (1980) "Free Morpheme Constraint" and "Equivalence Constraint." The Free Morpheme Constraint accounts for the nonoccurrence of word-internal switching; and the Equivalence Constraint predicts that codeswitching will be permitted where the grammars of Spanish and English coincide, but not where they diverge. Lipski (1978) and Pfaff (1979) likewise conclude that surface structures common to both languages are favored sites for switching.

⁽i) Free Morpheme Constraint

- d. El hombre who saw the accident es cubano. (Gingràs, 1974, cited in Woolford, 1983) 'The man/who saw the accident is Cuban.'
- (20) a. *El man viejo está enojado. (Gingràs, 1974, cited in Woolford, 1983) 'The old/man/is angry.'
 - b. *El hombre old está enojado. (Gingràs, 1974, cited in Woolford, 1983) 'The old/man/is angry.'
 - c. *Yo lo bought. (Quintero, cited in Woolford, 1983) 'I bought/it.'
 - d. *Yo it compré. (Quintero, cited in Woolford, 1983) 'I bought/it.'

While Woolford's model goes a long way towards accounting for codeswitching data elicited in our study—no participant produced forms of the type represented in (19a) or (20)—a closer examination reveals that it is insufficiently restrictive, allowing the grammar to overgenerate. For example, as has been observed in the research literature (and corroborated in their omission in the texts reproduced here), switching is disallowed between auxiliaries and main verbs, although the grammars of English and Spanish share the same phrase structure rules in the switched components. Still, such counterexamples notwithstanding, we recognize the importance of Woolford's contribution in introducing codeswitching data into linguistic theorizing (cf., also Woolford, 1984).

Also working within the generative model, Di Sciullo et al. (1986) posit that codeswitching is restricted by the Government Constraint, drawing on this X-bar-theoretical hierarchical relation in disallowing codeswitching between particular elements in bilingual speech (cf., also D'Introno, 1996).²⁶ On this structural account, elements that stand in a government relation (the governor and governee) must share the same language index, that is, the government relation entails language coindexation. For example, the constraint predicts that verbs and prepositions and their complements will be in the same language. But, this prediction is contrary to what is in evidence in Spanish-English codeswitching: our participants accepted such switches in the reading task (21, drawn from 5), and they produced such switches in the oral storytelling (22, drawn from 12) and written storytelling tasks (23, drawn from 18).²⁷

The Government Constraint, as stated in DiSciullo et al. (1986):

If Lq carrier has index q, then Y^{max}q

b. In a maximal projection Y^{max}, the Lq carrier is the lexical element which asymmetrically c-commands the other lexical elements or terminal phrase nodes dominated by Ymaxq.

It merits pointing out that the systematic production of switching between prepositions and their complements in participants' writing samples confronts Joshi's (1985) Constraint on Closed Items with a formidable empirical challenge; this, in addition to the theoretical argument leveled by Belazi et al. (1994), who suggest that the open/closed-class distinction, an extragrammatical notion, should not impinge on the process of codeswitching, which is governed by properly grammatical principles.

- (21) a. Al cumplir ella los veinte años, el rey invitó many neighboring princes to a party. 'On her 20th birthday, the king invited/many neighboring princes to a party.'
 - b. Since she was unmarried, he wanted her to choose *un buen esposo*. 'Since she was unmarried, he wanted her to choose/a good husband.'
- (22) a. *Blancanieves despertó y los enanitos estaban* very happy. 'Snow White awoke and the darfs were/very happy.'
 - b. She wanted to see *la belleza que tenía* ... 'She wanted to see/the beauty that it had ...'
- (23) a. *La madre de Caperucita le da* a jar of honey. 'Little Red Riding Hood's mother gave her/a jar of honey.'
 - b. ... siempre traía a red cloth over her head. '... always wore/a red cloth over her head.'
 - c. ... para que le llevara food to her grandmother.
 - ... to take/food to her grandmother.'
 - d. ... que su abuelita ocupaba some medicine for some sickness. ... that her grandmother needed/some medicine for some sickness.'
 - e. *El lobo platica con* Little Red Riding Hood for a while. 'The wolf chatted with/Little Red RidingHood for a while.'
 - f. ...goes to *la casa de la abuelita* ... '...goes to/the grandmother's house ...'
 - g. ... and sent her to take honey to *su abuela*.
 - '... and sent her to make, to take honey to her/grandmother.'

Therefore, while Di Sciullo et al. may be correct in proposing that codeswitching is constrained by general principles that hold true of all natural languages, the formulation of this configurational constraint in terms of government is incorrect, as it proves overly restrictive, ruling out permissible switches.

Continuing in this generativist vein in their investigation of codeswitching, Belazi et al. (1994) argue that the coherence and co-occurrence restrictions attested in Spanish-English codeswitching may be captured by reference to the Functional Head Constraint.²⁸ In brief, the proposal holds that a functional element and its complement will be drawn from the same subclass of lexical items, precluding switching between functional elements—such as modals, auxiliaries, negation, determiners, and subordinating and coordinating conjunctions—and their complements.²⁹ In the words of one informant, "Algunas palabras dependen una de la

This constraint, grounded in the system of categories of Chomsky (1986) and the relations proposed in Abney (1987), dictates that the semantic and syntactic features of a functional element must match the corresponding features of its complement; the Functional Head Constraint merely extends the scope of f-selection to include language indexing. Thus, like all other relevant features (e.g., finiteness and mood in subordinate clauses, and number and gender in Noun Phrases), the [language] feature of a complement f-selected by a functional element, must match the corresponding [language] feature of that functional head.

The validity of the constraint has been supported with elicited imitation (Toribio et al., 1993) and grammaticality judgment tasks (Toribio, 2000b).

otra, y si están divididas suena mal" 'Some words depend on each other, and if they are divided it sounds bad' (Toribio, 2000b). Indeed, the predictions of the Functional Head Constraint are strongly supported by the findings here. All of the bilingual participants demonstrated a distinct pattern of responses to the text in which the same language was maintained across a functional element and its complement, versus the text in which this relationship was compromised by a language switch. Recall that "The Beggar Prince" incorporated switches at major category boundaries and between lexical elements and their complements (e.g., between subject and predicate, between verb and object, between noun and subordinate clause, etc.), whereas "Snow White and the Seven Dwarfs" included switches that are in violation of the constraint (e.g., between auxiliary and main verb, between object pronoun and main or auxiliary verb, etc.). The findings are strengthened by participants' introspection on their judgments, which reveal a sensitivity to the dependency relation of f-selection. Furthermore, the distinction between functional and lexical categories, which is implicated in our bilingual participants' reading performance, is also centrally implicated in their codeswitched narrative productions.³⁰ As amply illustrated in the storytelling task, speakers failed to incorporate into their oral narratives codeswitching that would result in a violation of the relation of f-selection.³¹ Thus, for example, there were attested no productions of switching between auxiliary and main verb; and in those few instances in which their productions led to utterances that would have violated the Functional Head Constraint, various types of disfluency, for example, lengthy pauses and self-repairs, served to circumvent the potentially offending switch. In contrast, switching in those contexts predicted to be permissible — between lexical elements (e.g., nouns, verbs, prepositions) and their complements, between subject and predicate, between adjunct modifiers and phrases modified—was smooth in oral performance and commonplace in the written samples (consider the numerous and diverse examples of intrasentential codeswitching presented in (12) and (18) above).³² Therefore, though not its principle aim, these findings can be interpreted as presenting forceful evidence of the extent to which the grammatical co-occurrence restrictions attested in Spanish-English codeswitching adhere to the Functional Head Constraint.³³

As elaborated by Belazi et al. 1994, the Functional Head Constraint is held to underlie linguistic competence; it is a universal principle that is operative in monolingual and bilingual modes alike, though it finds additional, more visible evidence in codeswitching.

³¹ One reviewer points out that determiner-noun pairings could be analyzed as counterexamples to the Functional Head Constraint. As nouns are the most frequently borrowed category of words, it proves difficult to determine whether such pairings are representative of insertional or alternational codeswitching, but consult Wentz and McClure (1976) and Zentella (1981, 1997) who suggest that such alternations are ungrammatical as codeswitches.

 $^{^{32}}$ There were, however, two ill-formed switches produced: switching between an indirect object clitic pronoun and a complex verb (i) and switching after a coordinating conjunction (ii). This number of counterexamples is remarkable, given the abundance of code-alternations attested in the study.

⁽i) Una ardilla que lo escucho le fue a tell a hunter and he went to look for the wolf. [sic] A squirrel that heard him IND.OBJ.CL. went to/tell ...

⁽ii) El hombre lobo beat Caperucita to abuelita's house and la asusto. [sic] The wolf man/beat Little Red Riding Hood to/grandmother's/house and/scared her.

For corroborating findings form second language bilingual codeswitching, consult Toribio (2000b).

5.2 Directions for further research

The findings of the present study also have implications for research in the cognate discipline of psycholinguistics. For instance, the findings could serve to elucidate issues surrounding bilingual speech processing (cf., De Bot, 1992; De Bot & Schreuder, 1993; Green, 1986; Levelt, 1989; Poulisse, 1999; Poulisse & Bongaerts, 1994). In particular, the attested co-occurrence requirements support recent models which take account of the facts of bilingual codeswitching by reference to language indexation, for example, the models advanced by researchers such as Poulisse and Bongaerts (1994), who argue that words must contain information that specifies the language to which they belong (cf., Green, 1986), and even models such as that proposed by De Bot (1992), in which the language-independent lexicon allows for words of one language to form a subset (Paradis, 1987) that can be separately activated (cf., De Bot & Schreuder, 1993). (Note that such models are consistent with the syntactic-theoretical constructs previously discussed: the Government Constraint and the Functional Head Constraint make reference to the labeling of lexical subclasses.³⁴)

One specific line of research that follows more directly from our findings relates to slips of the tongue, as analyzed in Poulisse (1999). Basing her work on the well-founded assumption that such "errors" in native and second language speech are motivated by performance variables (i.e., rather than problems with competence), Poulisse reasons that speakers should be able to repair them. This is observed in our elicitation tasks: the ungrammatical codeswitching sequences that gave rise to self-corrections demonstrated in the controlled reading task were not evidenced in the oral narrative productions (and the ill-formed combinations elicited in the reading task were not reproduced in the oral narrative or written narrative conditions). These data may additionally be understood as corroborating Poulisse's assertion that some elements (e.g., function words and their complements) are commonly used and then stored in combination and retrieved as units. However, it merits pointing out that while such units may be "less prone to error," their inviolability cannot be accredited solely to practice and frequency, as Poulisse suggests. Recall that even those bilinguals who do not normally engage in codeswitching as a social practice are nevertheless able to offer judgments on the wellformedness of specific combinations (cf., Toribio, 2000b).³⁵ To be sure, much insight into language processing is to be gained from further experimental investigation of codeswitched speech production.

As argued in Toribio (2000b), these considerations allow for a reformulation of the Functional Head Constraint as making reference to the labeling of lexical subclasses: a functional element and its complement will be activated from the same subclass of lexical items. This informal restatement may be further articulated in terms of abstract feature matching between functional structure and the lexical items that raise into them (cf., MacSwan, 1997; Rubin & Toribio, 1995; Toribio & Rubin, 1996), and may alternatively be understood in view of Grimshaw's (1991) notion of extended projections—IP is an extended projection of VERB, DP is an extended projection of NOUN, etc—as consistent with Minimalist assumptions (Chomsky, 1993, 1995). Taking the "bottom-up" Minimalist perspective, a lexical category creates the "language domain" for the projection. Still, irrespective of the specific analysis advocated for regulating intrasentential codeswitching, it should be clear that differences between languages reduce to lexical properties, and thus the patterns attested in bilingual productions must derive from the interaction between the two component lexicons (cf., MacSwan, 1997; Muysken, 1995).

This disparity could well be due to differences in the populations under study: Poulisse's interest is in the language productions of foreign language learners (as compared with native speakers), while the present study concerns the linguistic behavior of more fluent bilinguals.

5.3 **Conclusion**

To conclude, the present work has established several methodologies that are valid and informative in the study of the linguistic competence that underlies language alternations in Spanish-English bilingual speech. The reliability of the reading, recounting, and writing tasks is affirmed, as revealed by the uniform behaviors of the bilingual participants tested; in addition, the reliability of the data is confirmed by the recurrent patterns observed across tasks. Finally, the data were subjected to preliminary analysis, confronting and advancing syntactic theoretical proposals, and pointing to directions for further research into bilingual language processing.

Received: February, 2000; revised: October, 2000; accepted: January, 2001

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