Article

Spanish-English code-switching among low-fluency bilinguals:
Towards an expanded typology

John M. Lipski

Abstract

Spanish-English code-switching in the United States is not confined to the speech of fluent bilinguals, although the latter group exhibits the greatest consistency of structural patterns as well as the highest likelihood of conscious and voluntary control over language switching. Among less fluent bilinguals (including heritage speakers of Spanish as well as foreign language students producing the second language under duress) incursions from English may depart significantly from structural patterns characterizing fluent bilinguals, and may represent involuntary and/or unconscious insertion of English elements, ranging from tags such as you know *and* I mean *to larger discourse chunks. The present study compares data from a cluster of low-fluency Spanish heritage speakers and a group of fluent bilingual Spanish-English code-switchers in the United States, and proposes that the notion of congruent lexicalization (e.g. as proposed by Muysken, 2000) be expanded to include 'ragged' and possibly involuntary code-mixing among semi-fluent bilinguals.*

Affiliation

Pennsylvania State University, USA
email: jlipski@psu.edu

equinox
www.equinoxpub.com

equinoxonline

1 Introduction

The study of Spanish-English code-switching[1] has concentrated on the speech of fluent bilinguals, generally native or heritage speakers of Spanish with assumed high proficiency in both languages. Seeking to dispel popular notions that equate code-switching with confusion, 'alingualism', imperfect acquisition, and just plain laziness, linguists have since the early 1970s devoted considerable effort to demonstrating grammatical and pragmatic conditions favoring or constraining code-switching. Bilingual code-switching so analyzed is not regarded as a 'third' language but neither is it considered as a deficiency or anomaly. Whereas lexical insertion, taken as a limiting case of code-switching, can be triggered by momentary or permanent lack of availability of the item in one of the languages, intra- and inter-sentential code-mixing beyond the level of individual lexical items has generally been equated with high levels of fluency in both languages. From this perspective, fluent bilinguals code-switch *because they can,* and not because they cannot speak any other way. Thus Poplack (1980:615) declares that 'code-switching is a verbal skill requiring a large degree of linguistic competence in more than one language, rather than a defect arising from insufficient knowledge of one or the other'. Moreover it is widely acknowledged that bilingual speakers who engage in code-switching are generally aware of this behavior (although they may not always be able to retrospectively pinpoint the exact location of a switch nor give a cogent reason for having switched) and are able to voluntarily and consistently maintain a conversation in a single language when circumstances so demand.[2]

There are other forms of bilingual code-mixing that cannot be so easily reconciled with postulates of full fluency or the ability voluntarily to sustain a conversation in a single language. Extreme cases are familiar to foreign language teachers in the United States, whose nervous and overwrought students often blurt out words and entire phrases in English during classroom presentations and oral exams. Immigrants who have yet to master the language of their new home may exhibit similar behavior. International travelers often witness involuntary and infelicitous code-mixing from taxi drivers, market venders, street hustlers, hotel staff, and other purveyors of services (e.g. Cappelli, 2006).

The acknowledged existence of possibly involuntary intrasentential language-mixing among low-fluency bilinguals gives rise to the question of what quantitative and qualitative differences may separate fluent and low-fluency bilingual code-switching. For example Poplack (1980) suggests that inter-sentential code-switching may be the strategy favored by the least proficient bilinguals, followed by tag items, and eventually full intrasentential code-switching. To date, most research has been based on the dichotomy native bilingual (including heritage speakers) vs. L2 speaker (typically university students). For example in a study of

heritage Spanish-speaking school children and L2 Spanish-speaking school children, Potowski (2009) found that whereas both groups inserted approximately the same number of English lexemes in naturalistic speech, the heritage speakers inserted twice as many English islands (in the sense of Myers-Scotton, 1993) as the L2 learners.[3] Potowski and Bolyanatz (2012) found that heritage Spanish speakers showed greater sensitivity than L2 learners to deliberately manipulated 'infelicitous' code-switches (e.g. between subject pronoun and verb, between negative element and verb).

In the aforementioned studies the heritage speakers were assumed to have high proficiency in the heritage language as well as frequent interaction with native bilingual code-switchers. There is little available information on any sort of language mixing among low-fluency heritage speakers, e.g. those who do not use the heritage language frequently (and even who may not have spoken it for many years) and who are not in contact with native bilingual code-switchers. Nor is there much information on naturalistic language mixing by L2 speakers, due at least in part to the fact that most research on L2 speech – including code-switching – has been conducted in classroom environments (as noted e.g. by Potowski and Bolyanatz, 2012:117).

Inextricably linked to issues of proficiency during code-switching is the typological relatedness of the languages. As research on code-switching has expanded to include typologically diverse language pairs it has become clear that the types of constituents that can alternate in intrasentential code-switching depend crucially on the basic syntactic patterns of each language (e.g. Chan, 2009). Between languages with the most divergent syntactic structures, intra-sentential code-switching is usually confined to either individual lexemes or full clauses, while constituent-internal code-switching is facilitated between languages with more similar word order; Muysken (2000) has proposed a basic code-switching classification (to be discussed in section 3) that is correlated with typological relatedness.

The present study explores the interrelatedness of bilingual proficiency, typological relatedness, and intrasentential code-switching. Unintentional L1 incursions into L2 speech have been correlated with proficiency in L2 in a variety of cases (e.g. Cenoz, 2001; Dewaele, 1998, 2001; Færch and Kasper, 1986; Hermaans, Bongaerts, de Bot, and Schreuder, 1998; Murphy, 2003; Poulisse and Bongaerts, 1994; Selinker and Baumgartner-Cohen, 1995; van Hest, Poulisse, and Bongaerts, 1997; Williams and Hammarberg, 1998; also Bialystok, 1983), but most studies have not provided details on the switches themselves or on the correlation between language mixing and the typological relatedness of the languages. When closely-related languages are at stake, i.e. those sharing not only morphosyntactic similarities but also a large number of lexical cognates, quasi-stable hybrid forms may emerge.[4] Spanish-Italian *cocoliche* was once spoken by Italian immigrants in

Argentina and Uruguay, and Portuguese-Spanish *Fronterizo* is spoken natively in northern Uruguay.[5] The data to be presented in the following sections will demonstrate that given appropriate socio-pragmatic conditions, low fluency involuntary code-mixing can occur between languages that share few cognates and have more substantial morphosyntactic differences – in this case Spanish and English – in fashions that differ qualitatively and quantitatively from fluent code-switching. The data also indicate that configurations that superficially meet the criteria for congruent lexicalization may arise not only in fluent bilingual speech but also during attempts by low-fluency bilinguals to produce *monolingual* utterances.

The remainder of this study is organized as follows. Section 2 gives a preview of the corpora that provide the data; section 3 contains an overview of models of bilingual code-switching, followed in section 4 by the incorporation of second-language and low-fluency language mixing into the code-switching typologies. Sections 5 and 6 describe the Spanish-English data to be analyzed. Section 7 describes the process of componential analysis and section 8 offers a componential analysis of intrasentential code-switching by semi-fluent and fluent Spanish-English bilinguals. The results are compared in turn with representative data on Spanish-Italian and Spanish-Portuguese language mixing in section 9. This is followed in section 10 by an overall discussion of congruent lexicalization in fluent and low-fluency code-switching. The study concludes in section 11 with a suggestion for an expanded typology of bilingual code-switching.

2 Obtaining data

Obtaining examples of low-fluency intrasentential language-mixing. for example from second-language learners, requires opportunistically collecting sporadic examples from a broad cross-section of individuals in widely varying circumstances. Comparison with more widely studied manifestations of code-switching is complicated by the asystematic nature of low-fluency language mixing, which must necessarily result in heterogeneous, disparate, and scarcely replicable corpora. In order to attempt a qualitative and quantitative comparison with fluent bilingual code-switching, the present study presents data from a small speech community of semi-fluent Spanish-English bilinguals who fit widely circulated definitions of heritage Spanish speakers,[6] while at the same time exhibiting low fluency in Spanish. According to self-reporting as well as oral narratives by other community members, these speakers completely acquired Spanish in childhood, usually as a first language, but abandoned the language in adulthood for fifty years or more. They exhibit speech traits characteristic of heritage speakers such as native-like pronunciation and receptive competence as well as few agreement errors but struggle to maintain a full conversation in Spanish and show considera-

ble English lexical and morphosyntactic interference. The speech of these individuals includes (possibly involuntary) language switches, many of which depart from the more usually acknowledged configurations for fluent Spanish-English code-switching, and more closely resemble the sorts of spontaneous and often infelicitous language mixing found among second-language learners speaking the L2 under duress. These data in turn are compared with a corpus produced by fluent Spanish-English bilinguals who routinely engage in intra-sentential code-switching of the sort that has formed the basis for most research paradigms. A componential analysis of both corpora reveals significant differences; in particular many of the low-fluency intrasentential code-switches fall outside the normally observed morphosyntactic perimeters (e.g. not respecting constituent boundaries) and are most appropriately regarded as 'ragged mixing' (Muysken, 2000:129).[7] This type of language mixing is characteristic of *congruent lexicalization* as defined by Muysken (2000), which typically requires not only considerable morphosyntactic similarity but also substantially cognate lexicons, including 'homophonous diamorphs' (words that are phonetically similar in both languages). A comparison with corpora representing low-fluency Spanish-Italian and Spanish-Portuguese mixing as well as stable Portuguese-Spanish hybrid varieties reveals that much low-fluency Spanish-English intrasentential code-switching aligns closely with congruent lexicalization between typologically and lexically more similar dyads (Spanish-Portuguese and Spanish-Italian), despite the highly non-cognate nature of Spanish-English bilingualism. This in turn yields the suggestion that existent typologies of code-mixing be expanded to include 'ragged' code-switches as produced by low-fluency bilinguals.

3 Code-switching typologies

In a widely acknowledged typology, Muysken (2000) divides bilingual language-switching into three partially overlapping categories: alternation, insertion, and congruent lexicalization. Insertion presupposes a base or matrix language (e.g. in the sense of Myers-Scotton, 1992, 1993), in which appropriately configured lexical items from the other language are introduced. The phrase structure is determined by the base language, including the order and type of constituents. In cases of alternation each segment is produced in a language with its own constituent structure; switched elements generally are therefore constituent-sized (phrases, clauses, etc.). Congruent lexicalization requires that the languages in contact be structurally congruent to a very high degree. To the extent that they are lexically similar (especially when they share homophones), congruent lexicalization is facilitated even more. In congruent lexicalization, 'the grammatical structure is shared by languages A and B, and words from both languages *a* and *b* are inserted more or less randomly' (Muysken, 2000:8). Muysken offers several examples of

congruent lexicalization, mostly involving closely related language dyads such as standardized varieties vs. regional vernaculars, e.g. in the Netherlands and Italy. He also proposes a set of criteria satisfied by each of the three types of code-switching. The linguistic and extralinguistic factors that favor each switch type are summarized in Table 1.

Table 1. From Deuchar, Muysken, and Wang (2007:309).

Code-switching type	Linguistic factors favoring this type	Extralinguistic factors favoring this type
Insertion	Typological distance	Colonial settings; recent migrant communities; asymmetry in speaker's proficiency in two languages.
Alternation	Typological distance	Stable bilingual communities; tradition of language separation.
Congruent lexicalization	Typologically similar languages	Two languages have roughly equal prestige; no tradition of overt language separation.

4 Code-mixing vs. interference in low-fluency bilinguals

The above list of extralinguistic factors, while representative of typical situations, is by no means exhaustive. For instance, this typology does not directly address code-switching during second language acquisition. Implicit in Table 1 is the correlation between insertion and 'asymmetry in speaker's proficiency in two languages'. However, code-switching is not as frequently mentioned in the context of the speech of language learners. Eliasson (1995) proposes a set of criteria to distinguish code-switching among fluent bilinguals and interference (Table 2).

Table 2. Code-switching vs. interference, adopted from Eliasson (1995), with an added category.

	Interference	Code-switching
Overall intent	unintentional	often intentional
Separation of languages in speech chain	horizontal or vertical	usually vertical
Relation to primary language of discourse	intrusive	augmentative
Performance mode	production and perception	production
Most typically characterizes	second language learners	proficient bilinguals
Likely interlocutor	monolingual in speaker's L_2	bilingual

In order to accommodate a wider range of possibilities, including unconscious and/or involuntary language-switches by semi-fluent bilinguals, a category has been added to this typology: 'likely interlocutor'. Interference typifies the speech of individuals attempting without complete success to communicate with non-bilinguals in the latter's language. Code-switching as generally understood is performed with bilingual interlocutors. Under the proper circumstances, involuntary and unwanted code-mixing is also associated with second-language acquisition, both in intermediate stages of development and in fossilized interlanguage. In order for the most 'radical' types of intrusive code-mixing[8] to occur freely, two pragmatic conditions are in play. The first is the presence of an interlocutor capable of understanding at least some of the speaker's first or dominant language. The second condition includes a set of circumstances in which the speaker either feels no inhibition in producing an imperfect form of the target language and in mixing in the dominant language or is required by external forces to produce speech in the target language. The first situation is typical of informal exchanges in border communities, hotels, taxis, markets, youth hostels, and other venues in which maximum emphasis is placed on effective communication using all available resources. The second situation typifies foreign language classrooms and examinations, in which the pressure to perform in an only partially acquired language at times provokes uncontrollable outbursts in the first language. The amended typology essentially defines interference in phenomenological terms, as regards the speaker's intention, the linguistic profile of the interlocutor, and the pragmatic relationship between the two languages.[9]

The typologies offered by Deuchar, Muysken, and Wang (2007) and Eliasson (1995) distinguish – implicitly or explicitly – between code-switching among (fluent) bilinguals and interference (among low-fluency bilinguals, including language learners). There are, however, scenarios that result in configurations strongly resembling code-switching but which are more appropriately regarded as first-language intrusions from speakers attempting to speak a second language without having attained fluency in that language. Such situations occur, for example, when the two languages are cognate enough so that native speakers of the second language can readily process intrusions from their interlocutors' first language. A typical example is contact between Spanish and Portuguese in communities along the border with Brazil, where *portuñol* is routinely produced by Spanish speakers when communicating with Brazilians (who in turn do not usually attempt to speak Spanish).

A similar situation can arise when fluent speakers of the second language also possess competence in the (non-cognate) language spoken natively by their interlocutors, while the latter feel compelled to attempt communication in the second language, despite lack of fluency. This configuration is typified by the

foreign-language student struggling to speak in the target language with an instructor or classmate who is also fluent in the student's first language. Heritage language speakers who attempt to speak the heritage language while being more fluent in the dominant language may also produce atypical code-switching configurations. In all instances, shared knowledge of the two languages in contact provides a pragmatic underpinning that permits – although certainly does not require – high-density involuntary language mixing by speakers with limited bilingual competence.

5 Atypical language mixing among heritage Spanish speakers in NW Louisiana

Spanish-English switching does not usually involve switches in the middle of constituents of the 'ragged mixing' sort. Fluent Spanish-English bilinguals (e.g. in the United States) often practice code-switching, as has been documented in more than three decades of research, with alternation being a frequent type of code-mixing, as well as insertion of language- or culture-specific lexical items. Speakers for whom Spanish or English is a true L2 rarely engage systematically in alternation; found instead is the sort of opportunistic groping for words that typifies imperfect acquisition and lexical impoverishment. Insertion is the most common strategy for such speakers, although the need to insert lexical items may at times trigger more lengthy alternations.

There is another type of imbalanced bilingual competence, resulting from language erosion, particularly across the lifetime of individual speakers. Data collected among heritage Spanish speakers in an isolated speech community in Louisiana (reported in Lipski, 1987, 1988, 1990; also Pratt, 2004; Shoemaker, 1988; Stark, 1980; for a similar scenario Holloway, 1997) provide examples of fluid (and in this sense 'fluent') code-mixing by a group of heritage Spanish-English bilinguals attempting to speak entirely in Spanish.

The speakers in question are found in northwestern Louisiana (Sabine and Natchitoches Parishes), extending to a few areas on the other side of the Sabine River in east Texas (Nacogdoches County). The majority of the Spanish speakers are found near the towns of Zwolle and Noble (Sabine Parish) and in the Spanish Lake community near Robeline (Nachitoches Parish). The communities descend from Mexican soldiers resettled in this region in the 1730s to fortify the boundary between Spanish and French territories in North America. The Spanish language has nearly died out along the Sabine River; the total number of traditional speakers with significant active competence in Spanish was estimated in the late 1980s to be no greater than 50 on each side of the state border, with perhaps only

half being truly fluent. A generation later these numbers are even smaller, with a larger number of the community's oldest residents having a passive competence in the traditional Spanish dialect, recognizing words and phrases, but unable to sustain a conversation (Pratt, 2004).[10] In the Louisiana communities of Spanish Lake and Ebarb, where the data to be reported were collected, competence in Spanish ranged from rudimentary semi-speakers to 'vestigial' heritage speakers who had not spoken Spanish for several decades, but who were capable of sustained conversations in a fluid and spontaneous mixture of Spanish and English. The latter combinations were momentary strategies adopted by individuals attempting to resurrect fading recollections of a language once spoken with greater proficiency. The fragments actually produced in Spanish are reasonably accurate and contain no grammatical anomalies, but the insistent and unpredictable switching between languages is not typical of L2 Spanish speakers, nor of the fluent bilingual who code-switches for stylistic effect. In the work reported in Lipski (1987, 1988, 1990) only data from those few speakers able to converse entirely in Spanish were included. The same fieldwork also resulted in several interviews with individuals whose attempts to speak Spanish consisted of a densely interwoven mixture of very native-like Spanish and English, but impressionistically unlike anything ever heard reported for fluent Spanish-English bilinguals, while bearing a strong resemblance to the efforts of struggling second-language speakers.[11] All of the examples were produced with no hesitation, pauses, or obvious groping for words, and unlike the production of most second-language speakers, the fragments produced in each language were entirely grammatical, albeit highly vernacular in both Spanish and English. Although the speakers had not spoken Spanish on a regular basis for many years, they clearly felt no inhibition about mixing in whatever English elements were necessary in order to produce complete sentences. The author had specifically requested that they speak as much Spanish as possible (and spoke to the participants only in Spanish during the recorded interviews), but the fact that the author was obviously bilingual resulted in an environment in which these speakers could move effortlessly between the two languages. Also contributing to this unusually spontaneous code-switching was the speakers' unawareness of or indifference to prescriptivist notions of 'correct' grammar (perhaps the result of minimal formal education); they were equally uninhibited in speaking very non-standard dialects of English, which differed significantly from the author's own speech and from that of the volunteer worker (who spoke almost no Spanish) who had introduced the author to the participants. These interviews, originally rejected as useful specimens of Sabine River Spanish, constitute a small but cohesive corpus of atypical code-mixing among semi-fluent bilinguals. Although few members of this speech

community are still available at the time of this writing, the corpus provides a unique opportunity to study a variety of spontaneous language-mixing phenomena that are frequently unattainable in recorded interview settings or in a single speech community.

Although pragmatic factors can in principle override grammatical constraints, research on bilingual code-switching, especially involving Spanish and English, has demonstrated the robustness of several syntactic configurations in which code-switching is rarely observed.[12] In their fluid but frequently impaired attempts to speak only Spanish, the aforementioned Louisiana speakers produced numerous configurations that run contrary to the usually observed patterns and challenge putative constraints on intrasentential language-shifting. Some cases are as follows (English elements are in italics; the transition is indicated by // and the entire switched configuration is surrounded by brackets {}).

5.1 BETWEEN PRONOMINAL SUBJECT AND PREDICATE:
(1) lo que {*you* // tiraba} del labor, *healthy for you*
(2) había la hierba amargosa; {*they* // hervían} las
        ollas *they had water boilin'out there,* y bañaron
        los chiquelos que *would go in there*
(3) es duro pa creer *but we got two* muchacho pa la
        escuela cuando tenía siete años y diez, {*we* //
        no teníamos} dinero pa marcarles zapatos
(4) *well,* {*some* // vinieron} de Texas, de México
5.2 BETWEEN FRONTED INTERROGATIVE WORD AND REMAINDER OF SENTENCE:
(5) *about* cuatro cinco familias, *and* se jueron *nobody
        know* {*which way* // jueron}
(6) para dolor de costao, *you know* {*what* // dolor de
        costao} *is*?
5.3 BETWEEN ADVERBS:
(7) lo bajábamos {*way* // abajo} en la noria
5.4 BETWEEN COMPLEMENTIZER AND SUBORDINATE CLAUSE:
(8) Dios pague, había más que comer que lo {que //
        I} *can get ahold to now*
(9) *I don't think* {[Ø] // ellos} hacían queso
(10) *I believe* {[Ø] // le }llaman la sangre de los
        indios
5.5 BETWEEN SPANISH AND ENGLISH NOUN-ADJECTIVE ORDER:[13]
(11) con un *little* ollita
5.6 BETWEEN INFINITIVE MARKER AND INFINITIVE:
(12) *used*{*to* // sembrar} mais, *but no more*
(13) *I used* {*to* // andar} de noche, *but* las dos la
        mañana venía patrás la casa

(14) cuando se casaron, *they had {to //* parir} los
        chiquelitos, los muchachitos, *just like I did*
        with this hermano mío
(15) la Mom d'él {*used to //* decirle} que *up yonder I*
        don't know how far lo llamaban, ¿cómo llamaban
        eje lugar? Spanish Lake

5.7 BETWEEN NEGATIVE ELEMENT AND VERB:

(16) no tenían {*no //* calesas}, *nothin'*
(17) cortaron, no dejaron {*no //* madera} *at all*
(18) no hay muchos que hablamos en {español *// no mo'*}
(19) todos los viejos murieron *so* todos los nuevos *well*
        no saben y sus papis y mamis nunca los {'prendió
        // no way}
(20) si el papá y la mamá {no *// agreed*}; se lo
        robaron;
(21) había toda clase de hierbitas que se perdieron no
        {salen *// no more*} en ese pueblo

The same speakers also produced numerous 'ragged' code-switches (not adhering to constituent boundaries) similar to the 'infelicitous' stimuli used by Potowski and Bolyanatz (2012) as well as code-switched utterances that coincide with those regularly observed among Spanish-English bilinguals, for example before prepositional phrases, between articles and nouns, between subjects and verbs and between verbs and predicate nominatives, between adjectives and nouns, as tags, and as spontaneous translations of a previous utterance. A total of 160 code-switches, drawn from the speech of nine individuals, represents code-switching by the least fluent speakers from this community.

6 For purposes of comparison: a corpus of fluent Spanish-English code-switching

For purposes of comparison, data were extracted from a corpus of Spanish-English code-switching among fluent bilinguals. The corpus was collected for the research reported in Lipski (1985), and represents the speech of Mexican-American bilingual speakers in Houston, Texas. The data were obtained from a series of community encounters and radio programs on a local non-profit station, in which a broad spectrum of Chicano activists and volunteers freely produced code-switched discourse. The distilled corpus, containing only code-switched material, consists of approximately thirty hours of recording, from which all exemplars of code-switching for the first two hours were extracted for comparison with the Louisiana data.[14] A total of 324 switches were found in this extract, representing seventeen speakers, all Mexican-American bilinguals from Texas, and all speaking in informal contexts in which code-switching was accepted and frequently practiced.

7 The componential analysis of bilingual code-switches

In an application of the proposed three-way code-switching typology, Deuchar, Muysken, and Wang (2007) examined corpora from typologically diverse pairs of languages and suggest that in each code-switching environment, one of the three types predominates, although all three may be present. Whereas individual tokens of language switching can often be analyzed unambiguously as representing one of the three categories, bilingual speech in any particular speech community normally exhibits a combination of switch types. Preliminary analyses conducted on samples of code-switching from a selection of bilingual communities suggests that in most cases, one of the three switch types will emerge as predominant. In order to assign a predominant category to code-switching in a given speech community, the authors assign individual category scores to each switch token, based on the criteria in Table 3, taken from Muysken (2000:230). More specifically, for each category, if the observed feature in the occurring switch coincides with the expected value in the table, a score of 1 is assigned. If the opposite value is predicted by the table, a score of -1 is assigned, and if the value in the table is neutral or the feature in question does not occur in the switch, a score of 0 is assigned. The category receiving the highest score defines the predominant category for the switch, while the scores for the other two categories give some sense of the degree to which the given code-switch meets the criteria for a given classification. Adding up the individual category scores for all switches in a given corpus will yield composite figures that indicate the predominant switch type for the entire corpus. A detailed discussion of the application of these criteria to diverse language pairs is found in Deuchar, Muysken, and Wang (2007), and for Spanish-Portuguese, Spanish-Italian, and Spanish-English in Lipski (2008, 2009). A few of the less than obvious criteria are explained as follows:

- 'Nested' and 'non-nested' refer to switches that have other language material both before and after. In nested examples the material both before and after the switched portion belong to the same clause, while in non-nested switches the preceding and following elements belong to different clauses.
- Long constituents are those having more than a single word, while complex constituents have a hierarchical internal structure with more than one lexical head.
- 'Selected element' receives a positive value if the switched item serves as an object or complement.
- 'Embedding in discourse' refers to switches that come at the end of a turn; a positive value is assigned if the next turn begins in the same language, and a negative value if the following turn is in the other language.

- 'Flagging' refers to a switch marked by a discourse marker, pause, or repair.
- 'Dummy word insertion' refers to the insertion of semantically empty elements, e.g. *so, well, you know, este.*
- 'Telegraphic mixing' refers to the omission of elements that should have been present in one or both languages.
- 'Morphological integration' refers to cases where 'one of the languages determines the overall grammatical framework, and where items switched from the other language are morphologically integrated into the main or matrix language' (Deuchar, Muysken, and Wang, 2007: 316–317).[15]
- 'Doubling' occurs when 'the semantic value of the switch is the same as that of another morpheme in the original language also found in the utterance' (Deuchar, Muysken, and Wang, 2007:317).
- 'Triggering' (Clyne, 1967; Broersma, 2009) describes multi-word switches in which the choice of one of the words in the switch (e.g. as in a proper noun) may lead to the switching of a longer string.

Table 3. Code-switching types, from Muysken (2000:230).

	Insertion	Alternation	Congruent lexicalization
Constituency			
single constituent	+	0	0
several constituents	-	+	0
non-constituent	-	-	+
nested a b a	+	-	0
not nested a b a	-	+	+
Element switched			
diverse switches	-	0	+
long constituent	-	+	-
complex constituent	-	+	-
content word	+	-	-
function word	-	-	+
adverb, conjunction	-	+	-
selected element	+	-	+
emblematic or tag	-	+	0
Switch site			
major clause boundary	0	+	0
peripheral	0	+	0
embedding in discourse	0	+	0
flagging	-	+	-
dummy word insertion	+	0	-
bidirectional switching	-	+	+

Properties			
linear equivalence	0	+	+
telegraphic mixing	+	-	-
morphol. integration	+	-	+
doubling	-	+	-
homophonous diamorphs	0	-	+
triggering	0	0	+
mixed collocations	0	-	+
self-corrections	-	+	-

8 The two Spanish-English corpora compared

The criteria for componential analysis described in section 7 were applied to the Spanish-English intrasentential code-switches extracted from the NW Louisiana and Texas corpora. For a sample of the scoring procedure, consider the second switch in the following example, produced by a Sabine River heritage Spanish speaker:

> (22)
> *long time ago* cenamos de noche con un mechón **//** <u>*on*</u>
> <u>*top of the*</u> **//** mesa

An abbreviated sample scoring (eliminating non-applicable categories) is presented in Table 4, which shows the highest score for congruent lexicalization. This example can be compared with the following utterance, produced by a fluent Spanish-English Mexican-American bilingual from the Houston, Texas corpus:

> (23)
> *In Austin I imagine that he is very happy* **//** porque
> Austin es una buena ciudad

The abbreviated scoring, presented in Table 4, reveals this to be a clear case of alternation. Whereas examples like (23) predominate in the Mexican-American corpus while 'ragged' mixing examples like (22) are rare, the opposite holds for the heritage Sabine River Spanish speakers.

Table 4. Componential analysis of the second switch in example (22) and the switch in example (23).

	EXAMPLE (22)				EXAMPLE (23)			
	Value	Ins.	Alt.	CL	Value	Ins.	Alt.	CL
Constituency								
single constituent	no	-1	0	0	no	-1	0	0
several constituents	no	1	-1	0	yes	-1	1	0
non-constituent	yes	-1	-1	1	no	1	1	-1
nested a b a	yes	1	-1	0	...	...	...	...
not nested a b a	no	1	-1	-1	...	...	...	...
Element switched								
long constituent	yes	-1	0	1	yes	-1	1	-1
complex constituent	no	1	-1	1	yes	-1	1	-1
content word	no	1	-1	1	no	-1	1	1
function word	no	-1	1	1	no	1	1	-1
adverb, conjunction	no	1	1	-1	no	1	-1	1
selected element	no	1	-1	1	no	-1	1	-1
Switch site								
major clause boundary	no	0	-1	0	yes	0	1	0
peripheral	no	0	-1	0	yes	0	1	0
Properties								
linear equivalence	yes	0	1	1	yes	0	1	1
telegraphic mixing	no	-1	1	1	no	-1	1	1
doubling	no	1	-1	1	no	1	-1	1
triggering	no	0	0	-1	no	0	0	-1
mixed collocations	no	0	1	-1	no	0	1	-1
self-corrections	no	1	-1	1	no	1	-1	1
Total		**4**	**-6**	**8**		**-2**	**9**	**-1**

The results of the comparison between the low-fluency heritage speakers of the Sabine River area and fluent Mexican-American bilinguals are presented in Table 5. In the fluent bilingual code-switches, alternation predominates, with insertion running a distant second, and relatively few examples of congruent lexicalization. This distribution typifies the 'Sometimes I start a sentence in Spanish *y termino en español*' (Poplack, 1980) code-switching that has formed the basis for most research to date. Among the Louisiana speakers, however, congruent lexicalization accounts for the majority (60%) of instances of intrasentential code-switching, more than six times the rate found among fluent bilinguals who frequently engage in code-switching.

Table 5. A comparison of Spanish-English intrasentential code-switching patterns.

		Texas Spanish-English bilinguals; N = 324		Louisiana Sabine River speakers' Spanish; N = 160	
Insertion	#/%	23	35/11%	90	24/15%
Alternation	#/%	**926**	**260/80%**	-186	40/25%
Congruent lexicalization	#/%	665	29/9%	**596**	**96/60%**
Dominant pattern		ALTERNATION		CONGRUENT LEXICALIZATION	

9 Comparison with Spanish-Portuguese and Spanish-Italian mixing

Congruent lexicalization is normally associated with languages that share considerable lexical similarity as well as morphosyntactic structures. In such cases, both fluent and low-fluency language mixing often gravitates towards congruent lexicalization, as speakers freely oscillate between similar languages. For an additional comparison, the Spanish-English data were augmented by data from fluent and low-fluency Spanish-Portuguese and Spanish-Italian mixing, as reported in Lipski (2008, 2009), and presented in Table 6.[16] Briefly, the data were obtained as follows:[17]

- L2 Portuguese obtained from Spanish speakers compelled to speak Portuguese to Brazilians in communities bordering on Brazil: Paso de los Libres (Corrientes), Argentina; Bernardo de Irigoyen (Misiones), Argentina; Pedro Juan Caballero, Zanja Pytã, Capitán Bado, and Bella Vista Norte, Paraguay; Cobija and Guayarmerín, Bolivia; Leticia, Colombia; Santa Elena de Uiarén, Venezuela. All speakers work in establishments that have frequent contact with Brazilians and use at least some Portuguese on a daily basis.

- L2 Portuguese as spoken by natives of the Andean highlands (many speaking Quechua or Aymara) now living in Iñapari (Madre de Dios), Peru, on the triple border Peru-Brazil-Bolivia. All speakers are involved in small-scale commerce with Brazilians.

- Stable, Spanish-influenced vernacular Portuguese (known locally as *portuñol*) as spoken natively along the river and land border with Brazil in Misiones province, NE Argentina: Puerto Iguazú, Comandante Andresito, San Antonio, Bernardo de Irigoyen, El Soberbio, Santa Rita, Alba Posse, Panambí, San Javier, Colonia Alicia, 25 de Mayo (reported in Lipski, 2011a, 2011b). The speakers are small farmers or work in small businesses (carpentry shops, sawmills, blacksmith shops).

- Vernacular Spanish-influenced Portuguese spoken natively in Rivera, northern Uruguay (known locally as *portuñol* and to linguists as *Fronterizo* or *Dialectos portugueses del Uruguay*). Although nearly all natives of Rivera can speak Portuguese, this corpus was drawn from working-class residents, among whom use of *portuñol* is most characteristic.

- Italian-Spanish interlanguage as produced by Italian immigrants in Montevideo, Uruguay in the 1990s (extracted from recorded data graciously provided by Graciela Barrios). All were elderly working-class speakers at the time of the interviews, with little or no formal education in Spanish (and none in Italian).

The vernacular Portuguese-Spanish hybrids spoken in northern Uruguay evidently derive from a previous stage of bilingual language mixing, and were analyzed *as though they were* synchronically still a case of spontaneous language switching. The same approach was taken with the natively spoken vernacular Portuguese of Misiones, Argentina.

Of the speech communities where Portuguese is used as a second language when dealing with Brazilians, only in Iñapari, Peru, is the insertion score tied with congruent lexicalization. This may be due to the fact that Portuguese is principally used by shop-keepers who receive numerous Brazilian customers. Since most of the store owners have immigrated from other regions of Peru, their knowledge of Portuguese is minimal and their attempts to ingratiate themselves with their Brazilian clients are often limited to a sprinkling of key lexical items that differ between the two languages, such as *brincadeira* 'toy', *cadeia* 'chair', *lembrança* 'souvenir', and the subject pronouns *eu* 'I' and *você* 'you'. In addition, in conversations with young children (in the first grades of elementary school) from Portuguese-speaking households e.g. in Misiones, Argentina and Rivera, Uruguay, Spanish admixtures almost always involved insertion of individual Spanish-specific lexical items; older children and adults, being more balanced bilinguals, engage in frequent congruent lexicalizations.

Although the notion of congruent lexicalization has not usually been applied to second-language acquisition, in nearly all instances of Spanish-Portuguese mixing (with Portuguese as L1 or L2), congruent lexicalization is the most frequently observed type of switch, despite the differing sociolinguistic circumstances, as well as the status of Portuguese as first or second language. The same holds for Spanish-Italian mixing in Uruguay (for speakers with Italian as L1 and Spanish as L2). From these comparisons it can be seen that whereas fluent Spanish-English intrasentential code-switching follows the more usual pattern of constituent-bounded alternation, code-switching by semi-fluent bilinguals attempting to speak only in Spanish aligns more closely with congruent lexicalization as found among more closely related languages. It is only the shared knowledge of both languages by speakers and interlocutors that allows for effective communication to occur in the midst of grammatically ragged intra- and cross-constituent mixing.

Table 6. Composite scores for Spanish–Portuguese and Spanish–Italian language mixing.

	#/%	Spanish speakers' L2 Portuguese (Bolivia, Paraguay, Argentina, Colombia, Venezuela); N = 216		Iñapari, Peru, Spanish speakers' L2 Portuguese; N = 58		Misiones (Arg.) L1 Portuguese/Portuñol; N = 130		Uruguayan *Fronterizo*; N = 128		Italian speakers' Spanish (Montevideo); N = 160	
Insertion	#/%	1046	70/32%	466	32/55%	662	38/29%	528	24/19%	586	24/15%
Alternation	#/%	-1068	8/4%	-312	2/3%	-710	14/11%	-714	3/1%	-922	2/1%
Congruent lexicalization	#/%	1545	138/64%	466	24/41%	1120	80/61%	835	101/79%	1428	136/85%
Dominant pattern		CONGRUENT LEXICALIZATION		INSERTION (+ CONGRUENT LEX.)		CONGRUENT LEXICALIZATION		CONGRUENT LEXICALIZATION		CONGRUENT LEXICALIZATION	

10 Congruent lexicalization in fluent and low-fluency Spanish-English code-switching

The data presented in the previous sections appear to challenge some of the fundamental assumptions about code-switching. Congruent lexicalization, normally associated with full bilingual fluency, was shown to be the most frequent type of language mixing among several groups of non-balanced bilinguals: configurations that meet the structural criteria for congruent lexicalization – which heretofore has been postulated only for fluent bilinguals – may also arise during attempts by low-fluency bilinguals to produce *monolingual* utterances. A high rate of congruent lexicalization was even found in the low-fluency mixing of languages (Spanish and English) that share few lexical similarities while presenting not insignificant structural differences. A closer examination of these issues suggests that these apparent counterexamples may simply reflect the relative paucity of code-switching studies based on data from non-balanced or semi-fluent bilinguals (e.g. Chan, 2009:185; Kim, 2008).

In an emergent bilingual environment, e.g. in an immigrant community, code-switching begins with small insertions produced by non-balanced bilinguals and evolves to alternation and large insertions (e.g. Bentahila and Davies, 1992; Muysken, 2000:247; Poplack, 1980; Weston, 2013). Congruent lexicalization is a possible eventuality among the most fluent bilinguals. From this perspective, alternation is normally under speakers' control, insertion usually is, while congruent lexicalization – especially 'style shifting' between closely related languages or dialects – often occurs below the threshold of awareness (e.g. Treffers-Daller, 2009:68). In the case of low-fluency or semi-fluent bilinguals, however, not all language mixing may follow the 'canonical' code-switching trajectory. As noted, e.g. by Kim (2008), semi-fluent language switches may be produced erroneously, and may be corrected when detected – e.g. as online repairs, repetitions, etc. Such behavior can be observed, for example, in struggling L2 speakers' interjection of repair precursors such as 'sorry' and 'I mean'. The examples of low-fluency congruent lexicalization examined previously – including Spanish-English in Louisiana, Spanish-Italian in Uruguay, and Spanish-Portuguese at various points along the Brazilian border – were all produced during attempts to speak *only* in the second language. It is not known to what extent the speakers were conscious of oscillating between languages, but it is clear from the circumstances in which the examples were uttered that language mixing was not a fully voluntary decision.

Although congruent lexicalization by its very nature normally occurs between languages that share considerable lexical and/or structural similarities (with the limiting case being dialect- or style-shifting), it may also arise when the languages

equinoxonline

are 'perceived by speakers to be related' (Treffers-Daller, 2009:67). Backus (2005: 326) suggests that congruent lexicalization between languages that are not closely related may only occur 'after very intense or long contact has led to considerable convergence,[18] essentially reducing the typological distance that the language pair started out with'. In this regard, congruent lexicalization is often regarded as an indicator of ongoing convergence of two languages in contact (e.g. Gardner-Chloros and Edwards, 2004; Muysken, 2000:122; Treffers-Daller, 2009:67; Zabrodskaja, 2009a).[19] Within the context of congruent lexicalization, the degree of relatedness of Spanish and English and the consequent likelihood of congruent lexicalization in code-switching is somewhat ambiguous. Muysken (2000) exemplifies congruent lexicalization with several instances of Spanish-English code-switching, among New York Puerto Ricans (Poplack, 1980), Mexican-Americans in the U.S. Southwest (Pfaff, 1979) and in Gibraltar (Moyer, 1992). However Muysken (2000:149–150) acknowledges that non-constituent and multi-constituent mixes – the quintessential hallmarks of congruent lexicalization – are relatively infrequent in these cases. Shenk (2006:184) notes that many of Muysken's examples of congruent lexicalization also fit the definition of alternation, the difference being the notion of a collocation or lexical expression (which in turn requires detailed frequency-based analysis). Applying the componential analysis techniques described in Deuchar, Muysken, and Wang (2007), most of the Spanish-English examples used by Muysken would actually receive higher alternation scores than congruent lexicalization values. In any event the type of non-constituent fragments found in many of the low-fluency code-switching examples, together with switches involving only subject pronouns or functional categories (prepositions, complementizers), are scarcely ever found in the intra-sentential code-switching of fluent bilinguals, and when presented experimentally to such speakers are rarely judged acceptable (e.g. Aguirre, 1985; Azuma and Meier, 1997; Myers-Scotton, 2006). Although Spanish and English do share many similar structures, available data on fluent Spanish-English code-switching points to alternation and insertion as the most common configurations, with true congruent lexicalization running a distant third. In the instances of low-fluency Spanish-English mixing presented above congruent lexicalization predominates, followed by alternation (of the sort found among more fluent bilinguals), while in low-fluency Spanish-Portuguese and Spanish-Italian mixing congruent lexicalization is followed by insertion, with only a few cases of alternation. The highly cognate nature of the Spanish-Portuguese dyad and the considerable cognates shared by Spanish and Italian ultimately led to the stable *portuñol* varieties spoken in northern Uruguay and northeastern Argentina and which might have produced a stable Spanish-Italian *cocoliche* if the Italian speakers had not been demographically absorbed by the much larger Spanish-speaking population.

11 Expanding the typology of code-switching

The data presented in this study suggest that low-fluency code-switching of non-balanced bilinguals who are compelled to speak in their weaker language (with presumably bilingual interlocutors) may produce combinations that differ qualitatively and quantitatively from code-switches that occur in the speech of fluent balanced bilinguals. The three-way typology of code-switching proposed by Muysken can be amended to include the type of syntactically radical (i.e. disregarding morphosyntactic considerations) congruent lexicalization produced during 'fluid but low-fluency' (and often involuntary) bilingual language mixing. In effect this category '3+' combines extralinguistic factors previously associated only with insertion, the (un)intentionality normally correlated with interference, and the linguistic factors proposed for congruent lexicalization. A first approximation to such a refined typology is presented in Table 7, by means of the additional category: 'low-fluency congruent lexicalization'.[20]

Table 7. Revised code-switching typology.

Code-switching type	Linguistic factors favoring this type	Extralinguistic factors favoring this type
Insertion	Typological distance.	Colonial settings; recent migrant communities; asymmetry in speaker's proficiency in two languages.
Alternation	Typological distance.	Stable bilingual communities; tradition of language separation.
Congruent lexicalization (fluent)	Typologically similar languages.	Two languages have roughly equal prestige; no tradition of overt language separation.
Congruent lexicalization (low-fluency and possibly involuntary)	Only very broad constraints on language typologies; typologically similar languages increase likelihood; incomplete L2 acquisition or heritage (L1) speaker; attempts to speak only in weaker language.	L2 is dominant language of the venue; there may be a tradition of language separation; native L2-speaking interlocutors assumed to be competent in the low-fluency bilinguals' L1; low-fluency bilinguals speaking L2 under duress or in absence of social stricture against involuntary mixing.

Key factors providing for 'ragged' low-fluency congruent lexicalization are (1) incomplete fluency in the L2 coupled with a need to speak only in L2; (2) native L2-speaking interlocutor's assumed competence in the low-fluency bilinguals' L1; (3) either lack of social consequences for involuntary mixing or a stressful situation in which the low-fluency bilingual uses the L2 under duress (e.g. in foreign-language classrooms or confrontational environments). This combination of factors overrides requirements of typological similarity as well as specific linguistic constraints on language switching, whether they be morpho-syntactic or pragmatic.[21]

In summary, the present study has drawn attention to language mixing produced by semi-fluent bilinguals attempting to speak monolingually in their weaker/second language. While such situations often result only in structural interference from the first/stronger language or occasional lexical insertions, under the proper circumstances a broader range of language mixing phenomena can occur. Mixing languages 'more or less randomly' (Muysken, 2000:8) while attempting to speak in a single language does suggest that a single phrase struc-ture pattern is present in conjunction with lexical items from both languages. Even in low-fluency code-switching the fragments produced in each language usually do not violate language-specific syntactic constraints, which follows from models such as Minimalism in which syntactic structures are projected from the lexicon. In 'ragged' low-fluency code-switching, e.g. involving switches of func-tional categories such as conjunctions or prepositions, subject pronouns, or compound verbs, the 'more or less random' mixing may in fact reflect the dominance of one lexicon/language over the other. For example it may be that the functional categories of the dominant language prevail, e.g. as in the 'Dominant Language Hypothesis' of Petersen (1988), or that 'higher' portions of the syntactic structures come from the dominant language, as in the 'Ivy Hypothesis' of Bernardini and Schlyter (2004) and the 'Bilingual Bootstrapping Hypothesis' of Gawlitzek-Maiwald and Tracy (1996). These proposals have been used as diagnostics of language dominance in bilingual children, but may also prove to be useful in studying low-fluency code-switching in adult second-language learners or non-balanced heritage language bilinguals. Further research on low-fluency or unintended code-switching in adult non-balanced bilinguals is needed in order to determine the precise relationship between non-constituent congruent lexicaliza-tion and language dominance. Low-fluency code-switching of the sort described in the present study differs from the playfully interwoven combinations that delight scholars and creative artists, but given the frequent occurrence of situations in which such language mixing occurs, the topic offers the promise of additional insights into bilingual language production and processing.

About the author

John Lipski is Edwin Erle Sparks Professor of Spanish and Linguistics at the Pennsylvania State University. His research interests include language contact, the linguistic consequences of the African diaspora in Spanish America, the Spanish language in the United States, and models of bilingualism and creolization. His research is based on extensive fieldwork in Spain, Africa, the United States, the Philippines, and all nations of Latin America. His most recent books include *El habla de los Congos de Panamá*; *Varieties of Spanish in the United States*; *Afro-Bolivian Spanish*; *A history of Afro-Hispanic language*; *El español de América*. More information is available at <www.personal.psu.edu/jml34/>.

Notes

1   In the present study the term 'code-switching' is used to refer to the fluid incorporation of more than one language within the same expanse of discourse. Code-switching so defined is presumed to be under the conscious control of the speaker, and forms the basis for the large bibliography on the grammatical and socio-pragmatic factors that constrain or facilitate language mixing among bilinguals. 'Code-mixing' is used more generally in the present study, to refer to any use of more than one language within the same expanse of discourse, and includes involuntary language mixing by low-fluency speakers of a second language.

2   The only widely acknowledged exception to this implicit viewpoint is emblematic or tag code-switching, in which a small subset of lexical items or short phrases identified with a particular ethnicity is inserted into the speech of individuals not fully fluent in the ethnically circumscribed language.

3   Liebscher and Dailey-O'Cain (2004) found that advanced L2 speakers of German in a classroom situation produced code-switches that were qualitatively and quantitatively similar to those produced by native bilinguals.

4   The term 'hybrid' is used here in the broad sense of configurations that combine essential elements of each language. Hybrid forms differ from code-switches in that they appear to have stabilized and are not the result of momentary departures from monolingual speech. Such configurations can be morphosyntactic, e.g. *ello falam portuguéh* 'they speak Portuguese' (Santa Elena de Uairén, Venezuela), combining Spanish subject pronoun *ello(s)* 'they', Portuguese *falam* '[they] speak', and (Venezuelan) Spanish *portuguéh* 'Portuguese'. Lexically hybrid forms also occur, e.g. *façer* 'to make, do' (found in many Spanish-Portuguese contact environments), a blend of Spanish *hacer* [aˈseɾ] and Portuguese *fazer* [faˈzeɾ].

5   Uruguayan *fronterizo* varieties are described in Elizaincín (1973, 1976, 1979, 1992), Hensey (1972, 1982a, 1982b), Elizaincín, Behares, and Barrios (1987), Carvalho (2003a, 2003b, 2004a, 2004b), Douglas (2004), Rona (1960, 1969), Lipski (2008), among many others. Linguistic studies of Spanish-Italian mixing (not to be confused with literary *cocoliche* parodies) include Ascencio (2003), Barrios (1999, 2003), Barrios and Mazzolini (1994), Barrios, Mazzolini, and Orlando (1994), Lipski (2009), and Orlando (2003).

equinoxonline

6   E.g. Montrul (2009:239–240) ('adult early bilinguals who speak Spanish as a minority language [...]'), Polinsky (2011:306) ('a bilingual who grew up hearing and possibly speaking an immigrant or minority language in the family or home and who has been dominant in the majority language of the wider community since early childhood'), Pascual y Cabo and Rothman (2012:450) ('a bilingual who has acquired a family [...] and a majority societal language naturalistically in early childhood [...] acquisition crucially must take place in a situation where the home language is decisively not the language of the greater society'.).

7   The term 'ragged' was applied by Hasselmo (1970) and DiPietro (1977), among others.

8   A reviewer has posed the question of how such 'radical' code-switching might be related to the notion of 'foreigner talk' as a simplified register, e.g. in Ferguson (1971, 1975, 1981). Even the least proficient speakers analyzed for the present study do not exhibit systematically simplified L2 grammatical constructions, although they may at times fall short of native speaker targets.

9   Code-mixing, often involuntary or at least unwanted, is also associated with first-language attrition. Hamers and Blanc (2000:77) caution against confusing code-mixing and attrition: 'code-mixing in L1 is triggered by the social context, whereas in the case of attrition deterioration occurs even in an L1 monolingual context. Code-mixing might however be a precursor of attrition.'

10   These dialects have no lexical items which identify the ethnic Spanish-speaking group, although the term *Adaeseño* (a derivative of the traditional *Adaesano*) has been applied by Armistead and Gregory (1986) to the Spanish Lake dialect, derived from the Spanish settlement of Los Adaes, which was located nearby. In my own research on this dialect I have used the term 'Sabine River Spanish' to indicate the fact that the dialect extends to both sides of the Sabine River.

11   There is little available bibliography on the specific types of code-switching found among transitional or 'semi-speaker' bilinguals, except for general observations on the emblematic use of fragments in the weaker language as ethnic identity markers. Such examples as may be found must be extracted from more general studies of the linguistic structures produced during language erosion (e.g. for Spanish, Harris, 1994; Hill, 1978; Holloway, 1997; Lipski, 1993, 1996; Martínez, 1993; Silva-Corvalán, 1994; for general issues Dorian, 1981; Myers-Scotton, 2002:chap. 5, among many others).

12   Following early attempts at characterizing code-switching purely in terms of superficial transitions (e.g. between pronominal subjects and verbs) and overall constituent order (e.g. Lipski, 1982, 1985; Pfaff, 1979; Poplack, 1980; Timm, 1975), attention was directed at hierarchical syntactic relations (e.g. Belazi, Rubin, and Toribio, 1994; Bentahila and Davies, 1983; DiSciullo, Muysken, and Singh, 1986; Dussias, 2003; Halmari, 1997; Klavans, 1985; Toribio, 2001a, 2001b; Woolford, 1983). Within the Minimalist paradigm the discussion of possible code-switching sites has been further expanded (e.g. Jake, Myers-Scotton, and Gross, 2002; MacSwan, 1999, 2000, 2004, 2005; Myers-Scotton, 2002; van Gelderen and MacSwan, 2008).

13   Arnaus Gil, Eichler, Jansen, Patuto, and Müller (2012) examine many possible combinations.

14   In this corpus, tags such as *you know* were not coded as language switches, since they are de facto lexicalized in this bilingual speech community. The same holds for the English-derived conjunction *so*, fully integrated into the Spanish of these speakers (Aaron, 2004; Lipski, 2005; Torres and Potowski, 2008).

15   Although Deuchar, Muysken, and Wang (2007) assume a matrix language for all code-switched examples, congruent lexicalization can occur in configurations for which a matrix language cannot be reliably postulated (e.g. Zabrodskaja, 2009b).

16   The individuals whose speech is under analysis are both dysfluent in their second language and able to speak their second language with no hesitation or backtracking. Since the data were collected as approximations to spontaneous speech in a variety of circumstances, no formal measures of language proficiency were applied. The determination of speakers' abilities in their second or weaker language (Portuguese or Spanish) as well as their ability to speak continuously in that language was made on the basis of both self-reporting and external observation. Prior to collecting the language-mixing data, all speakers interviewed were asked to comment on their abilities in their weaker or second language, as well as the circumstances in which they normally used this language. These assertions were corroborated with the author's own observations, as well as with observations by other community members. Given the sociolinguistic circumstances in each community, fully balanced bilinguals were virtually non-existent. Among the Spanish-Portuguese contacts, only a few individuals in Cobija, Bolivia, and one individual in Guayamerín, Bolivia, all married to Brazilians, were able to converse in fully fluent Portuguese, and were excluded as interview subjects. No Brazilians in Cobija possessed more than the basic proficiency in Spanish required to attend the Bolivian university, while the Italian immigrants in Montevideo, Uruguay selected by Graciela Barrios were all late learners of Spanish who spoke that language with considerable difficulty. Among the vestigial Spanish speakers in northwestern Louisiana, none was able to speak Spanish without some grammatical and lexical errors. Among all the speakers interviewed by the author, as well as the Italian immigrants interviewed by Barrios, none was able fully to suppress their first language when attempting to speak entirely in their second (or in the case of the Sabine River speakers, weaker) language. Only those interviews were chosen for analysis in which the speakers' attempts at speaking entirely in the target language were not accompanied by hesitation, self-correction, metalinguistic commentary, groping for words, or other signs of linguistic insecurity.

17   I gratefully acknowledge the assistance of the following individuals during my field work: in Argentina (2008–2012): Liliam Prytz Nilsson (Ministerio de Educación, Posadas), Viviana Eich and Liliana Daviña (Universidad Nacional de Misiones, Posadas), Sergio Chajkowski (Panambí), Hugo Cámara Robles (Comandante Andresito), Sandra Grabe (Puerto Iguazú), Nélida Aguerre (Alba Posse), Norma Ramírez (El Soberbio), Darío Miranda and Manglio Vargas (Colonia Alicia), Elsa Rodríguez de Olivera (25 de Mayo), Daniel Ziemann and Carlos Knoll (Santa Rita), Fátima Zaragoza and Juan Carlos Morínigo (Bernardo de Irigoyen), Isabelino Fonseca (San Antonio), Roberto Pinto (San Javier),

María Silvia Chichizola de Ezama (Paso de los Libres). In Paraguay (2008–2009): Derlis Torres. In Uruguay (2002, 2008, 2012): Graciela Barrios, Selva Chiricó. In Bolivia (2005, 2007): Kelly Gamboa (Guayaramerín), Ingard Miauchi Nataly (Cobija). In Peru (2011): Celso Curi Paucarmaita, Alberto Cardozo, César Ochoa, Jorge Quispe, Narciso Paricahua (Iñapari). In Colombia (2010): Pedro González Segura (Leticia). In Venezuela (2012): Celia Cisneros and Elba Wolf (Santa Elena de Uiarén).

18   A reviewer has posed the question of why the rate of congruent lexicalization among Portuguese-Spanish *portuñol* speakers is lower than for Italian-Spanish mixing in Uruguay, given that Portuguese and Spanish have been in contact for longer. One possible factor is the way in which code-switching types are calculated. Since Spanish and Portuguese share more identical cognates than Spanish and Italian, the number of unambiguously calculable Spanish-Portuguese switches will necessarily be smaller. Additional sociodemographic factors may also be involved; this requires further investigation.

19   It is not necessarily the case, however, that code-switching will lead to convergence (e.g. Gardner-Chloros and Edwards, 2004; Torres Cacoullos and Travis, 2010; Backus, 2005). Toribio (2004) offers data that suggest otherwise. Congruent lexicalization may also be associated with transfer of a stronger language to a weaker one (e.g. Broersma, 2009).

20   Strictly speaking 'low-fluency congruent lexicalization' is not a separate category – since structurally it meets all the criteria for congruent lexicalization – but rather a proposed refinement that expands the criteria proposed by Muysken (2000). However since the present study has offered the suggestion that both the linguistic and the extra-linguistic criteria heretofore used to define congruent lexicalization be expanded to include a wide range of low-fluency language mixing phenomena, two different congruent lexicalization configurations are presented in Table 8.

21   Kim (2008) explores some of the environmental and situational factors that may result in low-fluency code-switching, regarded as 'bilingual speech errors'.

References

Aaron, J. (2004) So respetamos un tradición del uno al otro. *So* and *entonces* in New Mexican bilingual discourse. *Spanish in Context* 1: 161–179. Doi: http://dx.doi.org/10.1075/sic.1.2.02aar.

Aguirre, A. (1981) Toward an index of acceptability for code alternation: an experimental analysis. *Aztlán* 11: 297–322.

Armistead, S. and Gregory, H. (1986) French loan words in the Spanish dialect of Sabine and Natchitoches Parishes. *Louisiana Folklife* 10: 21–30.

Arnaus Gil, L., Eichler, N., Jansen, V., Patuto, M., and Müller, N. (2012) The syntax of mixed DPs containing an adjective: evidence from bilingual German-Romance (French, Italian, Spanish) children. In K. Geeslin and M. Díaz-Campos (eds) *Selected Proceedings of the 14th Hispanic Linguistics Symposium* 242–257. Somerville, MA: Cascadilla Proceedings Project <www.lingref.com, document #2669>.

Ascencio, P. (2003) La oración de relativo en lenguas de contacto: el cocoliche. In G. Barrios (ed.) *Aspectos de la cultura italiana en el Uruguay* 107–124. Montevideo: Ministerio de Educación y Cultura.

Azuma, S. and Meier, R. (1997) Open class and closed class: sentence-imitation experiments on intrasential code-switching. *Applied Psycholinguistics* 18: 257–276. Doi: http://dx.doi.org/10.1017/S014271640001047X.

Backus, A. (2005). Codeswitching and language change: one thing leads to another? *International Journal of Bilingualism* 9(3-4): 307–340. Doi: http://dx.doi.org/10.1177/13670069050090030101.

Barrios, G. (1999) *Etnicidad y lenguaje: la aculturación sociolingüística de los inmigrantes italianos en Montevideo.* Doctoral dissertation, Universidad Nacional del Sur, Bahia Blanca, Argentina.

Barrios, G. (2003) Mantenimiento y cambio de lengua en los inmigrantes italianos residentes en Montevideo. In G. Barrios (ed.) *Aspectos de la cultura italiana en el Uruguay* 43–87. Montevideo: Ministerio de Educación y Cultura.

Barrios, G. and Mazzolini, S. (1994) El proceso de acomodación lingüística en los migrantes italianos residentes en Montevideo. In A. Elizaincín and I. Madfes (eds) *Analis del discurso* 57–69. Montevideo: Facultad de Humanidades y Ciencias de la Educación.

Barrios, G., Mazzolini, S., and Orlando, V. (1994) Lengua, cultura e identidad: los italianos en el Uruguay actual. In S. Álvarez de Lasowski (ed.) *Presencia italiana en la cultura uruguaya* 97–115. Montevideo: Facultad de Humanidades y Ciencias de la Educación.

Belazi, H., Rubin, E., and Toribio, A. J. (1994) Code-switching and X-bar theory: the Functional Head Constraint. *Linguistic Inquiry* 25: 221–238.

Bentahila, A. and Davies, E. (1983) The syntax of Arabic-French code-switching. *Lingua* 59: 301–330. Doi: http://dx.doi.org/10.1016/0024-3841(83)90007-4.

Bentahila, A. and Davies, E. (1992) Code-switching and language dominance. *Advances in Psychology* 83: 443–468.

Bernardini, P. and Schlyter, S. (2004) Growing syntactic structure and code-mixing in the weaker language: the Ivy Hypothesis. *Bilingualism: Language and Cognition* 7(1): 49–69. Doi: http://dx.doi.org/10.1017/S1366728904001270.

Bialystok, E. (1983) Some factors in the selection and implementation of communication strategies. In C. Færch and G. Kasper (eds) *Strategies in interlanguage communication* 100–118. London and New York: Longman.

Broersma, M. (2009) Triggered codeswitching between cognate languages. *Bilingualism: Language and Cognition* 12(4): 447–462. Doi: http://dx.doi.org/10.1017/S1366728909990204.

Cappelli, G. (2006) Travelling words: *Languaging* in English tourism discourse. Retrieved on 13 August 2012 from: <www.gloriacappelli.it/wp-content/uploads/2006/09/Travelling-words.pdf>.

Carvalho, A. M. (2003a) Rumo a uma definição do Português Uruguaio. *Revista Internacional de Lingüística Iberoamericana* 1(2): 125–149.

Carvalho, A. M. (2003b) The sociolinguistic distribution of (lh) in Uruguayan Portuguese: a case of dialect diffusion. In S. Montrul and F. Ordóñez (eds) *Linguistic theory and language development in Hispanic languages* 30–44. Somereville, MA: Cascadilla Press.

Carvalho, A. M. (2004a) I speak like the guys on TV: palatalization and the urbanization of Uruguayan Portuguese. *Language Variation and Change* 16: 127–151. Doi: http://dx.doi.org/10.1017/S0954394504162030.

Carvalho, A. M. (2004b) Diagnóstico sociolingüístico de comunidades escolares fronterizas en el norte de Uruguay. In C. Brovetto and J. Geymonat (eds) *Portugués del Uruguay y educación bilingüe* 44–96. Montevideo: Administración Nacional de Educación Pública.

Cenoz, J. (2001) The effect of linguistic distance, L2 status and age on cross-linguistic influence in third language acquisition. In J. Cenoz, B. Hufeisen, and U. Jessner (eds) *Crosslinguistic influence in third language acquisition: psycholinguistic perspectives* 8–20. Clevedon, UK: Multilingual Matters.

Chan, B. H.-S. (2009) Code-switching between typologically distinct languages. In B. Bullock and A. J. Toribio (eds) *The Cambridge handbook of linguistic code-switching* 182–198. Cambridge: Cambridge University Press.

Clyne, M. (1967) *Transference and triggering.* The Hague: Nijhoff.

Deuchar, M., Muysken, P. and Wang, S.-L. (2007) Structured variation in codeswitching: towards an empirically based typology of bilingual speech patterns. *International Journal of Bilingual Education and Bilingualism* 10: 298–340. Doi: http://dx.doi.org/10.2167/beb445.0.

Dewaele, J.-M. (1998) Lexical inventions: French interlanguage as L2 vs. L3. *Applied Linguistics* 19: 471–490. Doi: http://dx.doi.org/10.1093/applin/19.4.471.

Dewaele, J.-M. (2001) Activation or inhibition? the interaction of L1, L2 and L3 on the language mode continuum. In J. Cenoz, B. Hufeisen and U. Jessner (eds) *Crosslinguistic influence in third language acquisition: psycholinguistic perspectives* 69–89. Clevedon, UK: Multilingual Matters.

DiPietro, R. (1977) Codeswitching as a verbal strategy among bilinguals. In F. Eckman (ed.) *Current themes in linguistics: bilingualism, experimental linguistics and language typologies*. Washington, DC: Hemisphere.

DiSciullo, A.-M., Muysken, P., and Singh, R. (1986) Government and code-mixing. *Journal of Linguistics* 22: 1–24. Doi: http://dx.doi.org/10.1017/S0022226700010537.

Dorian, N. (1981) *Language death: the life cycle of a Scottish Gaelic dialect.* Philadelphia: University of Pennsylvania.

Douglas, K. (2004) *Uruguayan Portuguese in Artigas: tri-dimensionality of transitional local varieties in contact with Spanish and Portuguese standards.* Doctoral dissertation, University of Wisconsin.

Dussias, P. (2003) Spanish-English code mixing at the Auxiliary Phrase: evidence from eye-movement data. *Revista Internacional de Lingüística Iberoamericana* 1(2): 7–34.

Eliasson, S. (1995) Grammatical and lexical switching in Maori 'grasshopper speech'. In *Summer school code-switching and language contact Ljouwert/Leeuwarden 14–17 September 1994* 45–57. Ljouwert/Leeuwarden: Fryske Academy.

Elizaincín, A. (1973) *Algunos aspectos de la sociolingüística del dialecto Fronterizo*. Montevideo: Universidad de la República.

Elizaincín, A. (1976) The emergence of bilingual dialects on the Brazilian-Uruguayan border. *International Journal of the Sociology of Language* 9: 123–134.

Elizaincín, A. (1979) *Algunas precisiones sobre los dialectos portugueses en el Uruguay*. Montevideo: Universidad de la República.

Elizaincín, A. (1992) *Dialectos en contacto: español y portugués en España y América*. Montevideo: Arca.

Elizaincín, A., Behares, L., and Barrios, G. (1987) *Nos falemo brasilero*. Montevideo: Editorial Amesur.

Færch, C. and Kasper, G. (1986) Cognitive dimensions of language transfer. In E. Kelleerman and M. Sharwood Smith (eds) *Crosslinguistic influence in second-language acquisition* 49–65. Oxford: Pergamon Press.

Ferguson, C. (1971) Absence of copula and the notion of simplicity: a study of normal speech, baby-talk, foreigner talk and pidgins. In D. Hymes (ed.) *Pidginization and creolization of languages* 141–151. Cambridge: Cambridge University Press.

Ferguson, C. (1975) Towards a characterization of English foreigner talk. *Anthropological Linguistics* 17: 1–14.

Ferguson, C. (1981) 'Foreigner talk' as the name of a simplified register. *International Journal of the Sociology of Language* 28: 9–18.

Gardner-Chloros, P. and Edwards, M. (2004) Assumptions behind grammatical approaches to codeswitching: when the blueprint is a red herring. *Transactions of the Philological Society* 102(1): 103–129. Doi: http://dx.doi.org/10.1111/j.0079-1636.2004.00131.x.

Gawlitzek-Maiwald, I. and Tracy, R. (1996) Bilingual bootstrapping. *Linguistics* 34: 901–926. Doi: http://dx.doi.org/10.1515/ling.1996.34.5.901.

Halmari, H. (1997) *Government and codeswitching: explaining American Finnish*. Amsterdam and Philadelphia: John Benjamins. Doi: http://dx.doi.org/10.1075/sibil.12.

Hamers, J. and Blanc, M. (2000) *Bilinguality and bilingualism*. Cambridge: Cambridge University Press. Doi: http://dx.doi.org/10.1017/CBO9780511605796.

Harris, T. (1994) *Death of a language: the history of Judeo-Spanish*. Newark, DE: University of Delaware Press/London and Toronto: Associated University Press.

Hasselmo, N. (1970) Code-switching and modes of speaking. In G. Gilbert (ed.) *Texas studies in bilingualism* 179–210. Berlin: De Gruyter.

Hensey, F. (1972) *The sociolinguistics of the Brazilian-Portuguese border*. The Hague: Mouton.

Hensey, F. (1982a) Uruguayan *fronterizo*: a linguistic sampler. *Word* 33: 193–198.

Hensey, F. (1982b) Spanish, Portuguese and Fronteriço: languages in contact in northern Uruguay. *International Journal of the Sociology of Language* 34: 9–23.

Hermaans, D., Bongaerts, T., de Bot, K., and Schreuder, R. (1998) Producing words in a foreign language: can speakers prevent interference from their first language? *Bilingualism: language and cognition*: 213–229. Doi: http://dx.doi.org/10.1017/S1366728998000364.

Hill, J. (1978) Language death, language contact and language evolution. In W. McCormack and S. Wurm (eds) *Approaches to languages: anthropological issues* 45–75. The Hague: Mouton.

Holloway, C. (1997) *Dialect death: the case of Brule Spanish*. Amsterdam and Philadelphia: John Benjamins.

Jake, J., Myers-Scotton, C., and Gross, S. (2002) Making a minimalist approach to codeswitching work: adding the Matrix Language. *Bilingualism: Language and Cognition* 5: 69–91. Doi: http://dx.doi.org/10.1017/S1366728902000147.

Kim, M. (2008) Are cases of unconventional code-switching useless? *Proceedings from the Annual Meeting of the Chicago Linguistic Society* 44(2): 139–149.

Klavans, J. (1985) The syntax of code-mixing: Spanish and English. In L. King and C. Maley (eds) *Selected papers from the XIIIth Linguistic Symposium on Romance Languages* 213–231. Amsterdam and Philadelphia: John Benjamins.

Liebscher, G. and Dailey-O'Cain, J. (2004) Learner code-switching in the content-based foreign language classroom. *Modern Language Journal* 89(2): 234–247. Doi: http://dx.doi.org/10.1111/j.1540-4781.2005.00277.x.

Lipski, J. (1982) Spanish-English language switching in speech and literature: theories and models. *Bilingual Review* 9: 191–212.

Lipski, J. (1985) *Linguistic aspects of Spanish-English language switching*. Tempe: Arizona State University, Center for Latin American Studies.

Lipski, J. (1987) El español del Río Sabinas: vestigios del español mexicano en Luisiana y Texas. *Nueva Revista de Filología Hispánica* 35: 111–128.

Lipski, J. (1988) Sabine River Spanish: vestigial 18th century Mexican Spanish in Texas and Louisiana. *Southwest Journal of Linguistics* 8: 5–24.

Lipski, J. (1990) Sabine River Spanish: a neglected chapter in Mexican-American dialectology. In J. Bergen (ed.) *Spanish in the United States: sociolinguistic issues* 1–13. Washington, DC: Georgetown University Press.

Lipski, J. (1993) Creoloid phenomena in the Spanish of transitional bilinguals. In A. Roca and J. Lipski (eds) *Spanish in the United States: linguistic contact and diversity* 155–182. Berlin: Mouton de Gruyter.

Lipski, J. (1996) Los dialectos vestigiales del español en los Estados Unidos: estado de la cuestión. *Signo y Seña* 6: 459–489.

Lipski, J. (2005) Code-switching or borrowing? No sé *so* no puedo decir, *you know*. In L. Sayahi and M. Westmoreland (eds) *Selected Proceedings of the Second Workshop on Spanish Sociolinguistics* 1–15. Somerville, MA: Cascadilla Press.

Lipski, J. (2008) Searching for the origins of Uruguayan *Fronterizo* dialects: radical code-mixing as 'fluent dysfluency'. *Journal of Portuguese Linguistics* 8: 5–46.

Lipski, J. (2009) 'Fluent dysfluency' as congruent lexicalization: a special case of radical code-mixing. *Journal of Language Contact* 2: 1–39. Doi: http://dx.doi.org/10.1163/000000009792497742.

Lipski, J. (2011a) Encontros fronteiriços espanhol-português. *Ideação* 13(2): 83–100.

Lipski, J (2011b) Um caso de contato de fronteira: o sudoeste. In H. Mello, C. Altenhofen, and T. Raso (eds) *Os contatos linguísticos no Brasil* 349–368. Belo Horizonte: Editora UFMG.

MacSwan, J. (1999) *A minimalist approach to intrasentential code switching.* New York: Garland Press.

MacSwan, J. (2000) The architecture of the bilingual language faculty: evidence from intrasentential code switching. *Bilingualism: Language and Cognition* 3: 37–54. Doi: http://dx.doi.org/10.1017/S1366728900000122.

MacSwan, J. (2004) Codeswitching and linguistic theory. In T. Bhatia and W. Ritchie (eds) *Handbook of bilingualism* 283–310. Malden, MA and Oxford: Blackwell.

MacSwan, J. (2005) Codeswitching and generative grammar: a critique of the MLF model and some remarks on 'modified minimalism'. *Bilingualism: Language and Cognition* 8: 1–22. Doi: http://dx.doi.org/10.1017/S1366728904002068.

Martínez, E. (1993) *Morpho-syntactic erosion between two generational groups of Spanish speakers in the U.S.* New York: Peter Lang.

Montrul, S. (2009) Incomplete acquisition of tense-aspect and mood in Spanish heritage speakers. *International Journal of Bilingualism* 13: 239–269. Doi: http://dx.doi.org/10.1177/1367006909339816.

Moyer, M. (1992) *Analysis of code-switching in Gibraltar.* Doctoral dissertation, Universitat Autònoma de Barcelona.

Murphy, S. (2003) Second language transfer during third language acquisition. *Working Papers in TESOL and Applied Linguistics* (Columbia University) 3(1): 1–21.

Muysken, P. (2000) *Bilingual speech: a typology of code-mixing.* Cambridge: Cambridge University Press.

Myers-Scotton, C. (1992) Comparing codeswitching and borrowing. In C. Eastman (ed.) *Codeswitching* 19–39. Clevedon: Multilingual Matters.

Myers-Scotton, C. (1993) *Dueling languages: grammatical structure in codeswitching.* Oxford: Clarendon Press.

Myers-Scotton, C. (2002) *Contact linguistics: bilingual encounters and grammatical outcomes.* Oxford: Oxford University Press. Doi: http://dx.doi.org/10.1093/acprof:oso/9780198299530.001.0001.

Myers-Scotton, C. (2006) Natural codeswitching knocks on the laboratory door. *Bilingualism: Language and Cognition* 9(2): 203–212. Doi: http://dx.doi.org/10.1017/S1366728906002549.

Orlando, V. (2003) Cambio de código, estrategia comunicativa y marcador sociolingüístico de identidad de los italianos residentes en Montevideo. In G. Barrios (ed.) *Aspectos de la cultura italiana en el Uruguay* 89–106. Montevideo: Ministerio de Educación y Cultura.

Pascual y Cabo, D. and Rothman, J. (2012) The (Il)logical problem of heritage speaker bilingualism and incomplete acquisition. *Applied Linguistics* 33: 450–455. Doi: http://dx.doi.org/10.1093/applin/ams037.

Petersen, J. (1988) Word-internal code-switching constraints in a bilingual child's grammar. *Linguistics* 26: 479–493. Doi: http://dx.doi.org/10.1515/ling.1988.26.3.479.

Pfaff, C. (1979) Constraints on language mixing: intrasentential code-switching and borrowing in Spanish/English. *Language* 55: 291–318. Doi: http://dx.doi.org/10.2307/412586.

Polinsky, M. (2011) Reanalysis in adult heritage language: a case for attrition. *Studies in Second Language Acquisition* 33: 305–328.

Poplack, S. (1980) Sometimes I'll start a sentence in Spanish *y termino en español*. *Linguistics* 18: 581–618. Doi: http://dx.doi.org/10.1515/ling.1980.18.7-8.581.

Potowski, K. (2009) Forms and functions of code-switching by dual immersion students: A comparison of heritage speaker and L2 children. In M. Turnbull and J. Dailey-O'Cain (eds) *First language use in second and foreign language learning* 87–114. Bristol, UK: Multilingual Matters.

Potowski, K. and Bolyanatz, M. (2012) Reactions to (in)felicitous codeswitching: heritage speakers vs. L2 learners. In K. Geeslin and M. Díaz-Campos (eds) *Selected Proceedings of the 14th Hispanic Linguistics Symposium* 116–129. Somerville, MA: Cascadilla Proceedings Project. <www.lingref.com, document #2660>.

Poulisse, N. and Bongaerts, T. (1994) First language use in second language production. *Applied Linguistics* 15: 36–57. Doi: http://dx.doi.org/10.1093/applin/15.1.36.

Pratt, C. (2004) *El español del noroeste de Luisiana: pervivencia de un dialecto amenazado*. Madrid: Editorial Verbum.

Rona, J. P. (1960) La frontera lingüística entre el portugués y el español en el norte del Uruguay. *Veritas* 8: 201–219

Rona, J. P. (1965) *El dialecto 'Fronterizo' del norte del Uruguay*. Montevideo: Adolfo Linardi.

Rona, J. P. (1969) *El dialecto "fronterizo" del norte del Uruguay*. Montevideo: Adolfo Linardi.

Selinker, L. and Baumgartner-Cohen, B. (1995) Multiple language acquisition: 'damn it, why can't I keep these two languages apart?'. *Language, Culture and Curriculum* 8: 115–121. Doi: http://dx.doi.org/10.1080/07908319509525195.

Shenk, P. S. (2006) The interactional and syntactic importance of prosody in Spanish-English bilingual discourse. *International Journal of Bilingualism* 10(2): 179–205. Doi: http://dx.doi.org/10.1177/13670069060100020401.

Shoemaker, J. (1988) *The 'broken' Spanish of Ebarb: a study in language death*. M. A. dissertation, Louisiana State University.

Silva-Corvalán, C. (1994) *Language contact and change: Spanish in Los Angeles*. Oxford: Clarendon Press.

Stark, L. (1980). Notes on a dialect of Spanish spoken in northern Louisiana. *Anthropological Linguistics* 22(4): 163–176.

Timm, L. (1975) Spanish-English code-switching: *el porqué y* how not to. *Romance Philology* 28: 473–482.

Toribio, A. J. (2001a) Accessing bilingual code-switching competence. *International Journal of Bilingualism* 5: 403–436. Doi: http://dx.doi.org/10.1177/13670069010050040201.

Toribio, A. J. (2001b) On the emergence of bilingual code-mixing competence. *Bilingualism: Language and Cognition* 4: 203–231. Doi: http://dx.doi.org/10.1017/S1366728901000414.

Toribio, A. J. (2004) Convergence as an optimization strategy in bilingual speech: evidence from code-switching. *Bilingualism: Language and Cognition* 7(2): 165–173. Doi: http://dx.doi.org/10.1017/S1366728904001476.

Torres, L. and Potowski, K. (2008) A comparative study of bilingual discourse markers in Chicago Mexican, Puerto Rican and MexiRican Spanish. *International Journal of Bilingualism* 12(4): 263–279. Doi: http://dx.doi.org/10.1177/1367006908098571.

Torres Cacoullos, R. and Travis, C. (2010) Testing convergence via code-switching: priming and the structure of variable subject expression. *International Journal of Bilingualism* 15(3): 241–267. Doi: http://dx.doi.org/10.1177/1367006910371025.

Treffers-Daller, J. (2009) Code-switching and transfer: an exploration of similarities and differences. In B. Bullock and A. J. Toribio (eds) *The Cambridge handbook of linguistic code-switching* 58–74. Cambridge: Cambridge University Press.

van Gelderen, E. and MacSwan, J. (2008) Interface conditions and code-switching: an F-movement analysis of pronouns and lexical DPs. *Lingua* 118: 765–776. Doi: http://dx.doi.org/10.1016/j.lingua.2007.05.003.

van Hest, E, Poulisse, N., and Bongaerts, T. (1997) Self-repair in L1 and L2 production: an overview. *I. T. L.* 117-118: 85–115.

Weston, D. (2013) Code-switching variation in Gibraltar. *International Journal of Bilingualism* 17(1): 3-22.

Williams, S. and Hammarberg, B. (1998) Language switches in L3 production: implications for a polyglot speaking model. *Applied Linguistics* 19: 295–333. Doi: http://dx.doi.org/10.1093/applin/19.3.295.

Woolford, E. (1983) Bilingual code-switching and syntactic theory. *Linguistic Inquiry* 13: 519–535.

Zabrodskaja, A. (2009a) *Russian-Estonian language contacts: grammatical aspects of language use and change.* Doctoral dissertation, Tallinn University.

Zabrodskaja, A. (2009b) Evaluating the Matrix Language Frame model on the basis of a Russian–Estonian codeswitching corpus. *International Journal of Bilingualism* 13(3): 357–377. Doi: http://dx.doi.org/10.1177/1367006908346629.