МЕЖКУЛЬТУРНАЯ КОММУНИКАЦИЯ И СОПОСТАВИТЕЛЬНОЕ ИЗУЧЕНИЕ ЯЗЫКОВ

STRUCTURAL ANALYSIS OF PERSIAN-ENGLISH REVERSE CODE-SWITCHING AND CODE-MIXING

Hamzeh Moradi

Nanfang College of Sun Yat-sen University, Guangzhou, China

Jianbo Chen

Sun Yat-sen University, Guangzhou, China

Abstract. Code-switching and code-mixing are considered dynamic conversational phenomena in interpersonal interactions, that is an alteration between two or more languages, dialectal variants, language registers, and it is an effective communicative strategy which Persian-English bilinguals consider a genuine thing in their ordinary speech practice. The focus of the present study is on the structural analysis of reverse code-switching between Persian and English that are known to be referred to two typologically different languages. Participants of the present research, all late bilinguals, reported on frequent use of code-switching (CS) and code-mixing (CM) in everyday language practice. CS/CM is quite normal and frequent among Iranian bilinguals, especially in informal settings where bilingual speakers can freely switch between their languages. Furthermore, the results revealed that Iranian bilinguals switch from English to Persian and in verso mostly at the lexical and the phrasal levels (intrasentential switching mode), but less frequently at the clausal or the sentence level (intersentential switching mode). The research states that there are some restrictions on inserting English verbs into the Persian syntactic frame: the Persian language is thought to be the matrix language and the preverbal part comes from English as the embedded language, such incongruity between the morphosyntactic structure and the verbal system of the Persian and English languages impose some constraints on the occurrence of switching codes between the pair of the languages under study.

Key words: code switching, intrasentential switching, intersentential switching, reverse switching, code-mixing, the Persian language, the English language.

СТРУКТУРНЫЙ АНАЛИЗ РЕВЕРСИВНОГО ПЕРЕКЛЮЧЕНИЯ И СМЕШЕНИЯ КОДОВ ПЕРСИДСКОГО И АНГЛИЙСКОГО ЯЗЫКОВ

Хамзех Моради

Университет им. Сунь Ятсена, г. Гуанчжоу, Китай

Жианбо Чен

Университет им. Сунь Ятсена, г. Гуанчжоу, Китай

Аннотация. Переключение и смешение языковых кодов как динамичная стратегия общения рассматривается в статье в качестве коммуникативной категории, представленной в речи билингвов, владеющих персидским и английским языками. В центре внимания находятся структурный и функциональный анализ реверсивного переключения языкового кода между персидским и английским языками, которые относятся к разным типам языков. Участниками проведенного эксперимента стали студенты вузов – билингвы, в речи которых наблюдается частое использование двух стратегий реверсивного переключения: переключение кода (CS) и смешение кодов (CM). Доказано, что эти стратегии построения речи воспринимаются иранскими билингвами как нормальные и часто применяемые (свободные переключения встречаются, в частности, в ситуациях неформального общения). При этом отмечается доминирование интрасентенциальной модели переключения на лексическом и фразеологическом уровнях (в том числе смешение именных, наречных, глагольных словоформ), а также незначительные изменения на уровне синтаксического моделирования предложения (интерсентенциальное переключение с доминированием матрицы родного языка). Указанные явления объясняются неконгруэнтностью между грамматическими и синтаксическими системами, а также расхождениями в системе глагольных форм персидского и английского языков.

Ключевые слова: переключение кода, интрасентенциальное переключение, интерсентенциальное переключение, обратное переключение, смешение кодов, персидский язык, английский язык.

The phenomenon of code-switching

As Lewis [Ethnologue…, 2009] asserts, there are about 7 000 recognized living languages spread over more than 200 countries. Therefore, it is not surprising that the number of multilingual speakers in the world is much more than the number of monolingual speakers [Gardner-Chloros, 2009]. To be proficient in more than one language is further encouraged by the growing impact of international new media and global communication through the Internet and new technologies. The number of multilingual speakers in the world, therefore, is growing [The handbook of bilingualism and multilingualism, 2012].

One of the most fascinating aspects of bilinguals' speech is their capability of separating and maintaining division between their two languages. In particular, when it comes to highly proficient bilingual speakers or in other words, bilinguals with a high level of competence in both languages, the two competing languages are in one mind and usually in overlapping brain territories [Kim et al., 1997].

Bilinguals generally are able to easily segregate and limit the interference between their two languages. This becomes more remarkable when it comes to the natural everyday bilingual practices, such as code-switching and code-mixing. Bilingual or multilingual speakers are not only able to separate or distinguish between their two or more languages while communicating, but also capable of switching back and forth between their languages in a systematic manner in appropriate settings.

The term 'code-switching' is referred to the alternation between two or more languages, dialects, or language registers in the course of discourse between people who have more than one language in common. Typically, one of two languages is dominant; the major language is often called the matrix language, while the minor language is the embedded language. Moradi [2014a] defines CS as "a change by a speaker (or writer) from one language or language variety to another one". According to Moradi [2014b], code-mixing (CM) is "the alternation of two or more languages within a sentence". In another recent study focusing on Persian-English CS and matrix language frame, Moradi [2018] defines CM as an intra-sentential switching that occurs within a clause or sentence boundary.

This research is about one of the most significant linguistic behaviors in multilingual setting, i. e. code-switching. Unfortunately, this communicative linguistic phenomenon has been socially stigmatized by individuals and labeled with derogatory terms such as "Spanglish" or "Tex-Mex".

Code-switching is usually attributed to the lack of proficiency in languages, illiteracy, or the lack of education. Over the last three decades, however, a large number of studies on code-switching (CS) have demonstrated special regularities at the pragmatic level [Code-switching in conversation…, 1998; Gumperz, 1976; Myers-Scotton, 1993] and the syntactic or grammatical level [Deuchar, 2006; Muysken, 2000; Poplack, 1980; 1981].

The study of code-switching has become a significant and intriguing research field in language contact studies and the second language acquisition research during the last few decades. It has attracted the attention of a large and diverse group of researchers throughout the world.

There are various reasons for studying code-switching (CS). First, due to the fact that CS is a pervasive communicative linguistic phenomenon in bilingual speech, it warrants scrutiny and analysis in itself [Gardner-Chloros, 2009]. Second, CS provides a test device to examine the cognitive mechanism of the language production in a bilingual context. That is, one of the main questions regarding cognitive processing in bilinguals or multilinguals is to what extent elements or constituents of the bilinguals' languages are co-activated during the language production and to what extent this co-activation can be examined in terms of cognitive theories and models of the bilingual language production [Costa, 2005; de Bot, 2004; Hartsuiker, Pickering, 2008; Kroll, Bobb, Wodniecka, 2006]. CS is a discourse phenomenon in which this co-activation of languages' constituents is overtly reflected; theories of bilingual language production should be able to describe various processes underlying CS. The third reason to study CS is that it involves various aspects of language using. The production of CS can be affected by various factors, viz: socio-psychological factors, sociolinguistic factors, the properties of the lexical items and sentences that are employed during interaction and the relative proficiency of bilingual speakers in both languages.

Therefore, CS can be regarded as a significant component of bilingual speech in all aspects [Appel, Muysken, 1987], as evidenced by a large number of studies in which CS is examined from the grammatical / syntactical perspective [e.g. Deuchar, 2006; Muysken, 2000;

Myers-Scotton, 2006; Poplack, 1980], the socio-pragmatic perspective [e.g. Blom, Gumperz, 2000; Code-switching in conversation…, 1998; Myers-Scotton, 1993], the neurocognitive perspective [e.g. Chauncey, Grainger, Holcomb, 2008; Fitzpatrick, 2011; Moreno, Federmeier, Kutas, 2002; Van Hell, Witteman, 2009; Verhoef, Roelofs, Chwilla, 2009; 2010] and the cognitive perspective [e.g. Altarriba et al., 1996; Costa, Santesteban, 2004; Gollan, Ferreira, 2009].

These various perspectives on the study of CS vary in terms of research objectives, the methodological and theoretical paradigm (see also [Gullberg, Indefrey, Muysken, 2009; Multidisciplinary approaches to code switching, 2009; Myers-Scotton, 2006]). According to Fricke and Kootstra [2016], "most research on code switching has centered around two types of outcome variables: the tendency to codeswitch proper, and the grammatical patterns internal to codeswitched sentences". The present research will be a structural based analysis of reverse code-switching between the Persian and the English language as two typological distinct languages.

Methods

As it was mentioned, the present study is aimed at structural analysis of reverse switching between Persian and English as two typologically different languages; i.e. switching to L2 while speaking L1 that is considered to be the dominant language of interaction. To reach this point of evaluation by collecting data, some procedures have been carried out by the researchers, which include recording of speech data of interviews and spontaneous conversations or interactions and group conversations in formal and also informal setting.

The data was collected from Iranian bilingual students, studying in three major universities in India, including Panjab University, English and Foreign Languages University, and Osmania University. Besides the recording of Iranian bilinguals' interactions in formal and informal settings, 36 students were selected for the interview and group conversation; they were the most fluent students among the participants and they had very good knowledge and background in the English language. According to Moradi [2014a]: *When speakers are highly*

proficient and fluent in both languages, they need less mental effort to talk in both their languages, in other words, the mental effort is lower and relatively more equal and switching between languages is easier and more expected among bilinguals who pose higher proficiency in both languages.

The participants were divided into six groups, each group participated in the group conversation on a specific day. The students were asked to take part in a two-hour group discussion. As all the informants were compatriots who studied in India as foreign students, the participants in each group knew each other very well and were friends. Gardner-Chloros demonstrates that code-switching and code-mixing occur significantly more when the interlocutors know each other and are not constrained and restricted by the overt norms which govern conversations [Gardner-Chloros, 1991, p. 79]. Since the researcher also knew the participants the discussion was held in a very friendly atmosphere in order to have a more natural talk.

Whenever the participants did not seem to code-switch (CS) or code-mix (CM) for a considerable length of time, either a new topic was initiated or the researcher himself frequently switched codes and carried further conversation initially. This also gives a clue and reveals if the motivation behind CS/CM is context sensitive or it depends on the comfort level developed during the interview or on linguistic factors.

The participants were sometimes asked to talk about their educational experience in India and cultural and social conditions for Iranians in India, similarities and differences between two societies, their difficulties, daily activities, etc. to control the topic. However, they were allowed to talk freely about whatever they liked. The topic was related to the students' everyday life to encourage them to get involved in a more active talk. It was assumed that these kinds of topics provide more opportunities for frequent CS/CM than other topics do; the topics in which the participants, as students, are expected to be familiar with a wide range of academic-related English words or expressions. To access the natural type of CS and CM, the researcher switched between languages for several times to stimulate them if they feel relaxed to switch freely.

As Poplack [1980] asserts, code-switching tends to take place in highly informal settings, it was taken into account that conversations should be carried out in informal gatherings and in a friendly atmosphere. According to Labov [1972], when people are aware that their speech is recorded, they incline to modify or alter their style of speech from casual to formal (*the Observer's Paradox*). Another factor, as Poplack [1980] depicts, is that the interlocutor's ethnicity is very crucial in a data-collecting situation. Therefore, the fact that the researcher and the participants belong to the same community was very helpful to casual recording sessions. The participants' conversations were recorded on a high-quality voice recorder for further analysis. However, the fact that they were being recorded led to some initial hesitations which were later overcome to some cases.

Since this research was aimed at investigating reverse CS/CM in Persian-English context, the recordings which were composed of monolingual Persian conversation were excluded and not used. These cases of merely monolingual utterances are the result of talking about specific topics in particular groups. For instance, it was observed that CS/CM did not occur when participants were telling jokes. It should be also mentioned that some sentences were excluded because they were unintelligible, not clearly expressed or they were only repetitions of other people's words and phrases. Proper names, technical terms, cultural and religious names and street names which were repeatedly used by both Iranian bilinguals and monolinguals were also excluded from CS/CM data, since many linguists and researchers in the field consider these as borrowings but not CS/CM. To make a better representation of Persian speech sounds and switches between the Persian and the English languages, the collected data was carefully transcribed according to International Phonetic Alphabet (IPA).

The objectives

In the structural perspective of the CS/CM data analysis, the focus is on grammatical or syntactic features of this communicative linguistic phenomenon. Discovering grammatical and syntactic constraints on Persian-English code-switching and code-mixing requires looking at the

linguistic performance of Iranian bilinguals in different social contexts.

In general, the discussion of the syntactic or structural aspects of CS and CM was considered to identify syntactic and morphosyntactic constraints on Persian-English CS/CM. Within this aspect of data analysis, the research looked carefully into the pattern of CS and CM in a Persian-English conversation to see what types of code-switching occurred and at which level the languages can be switched or mixed. The main objectives of the research can be classified into four major categories:

– To investigate Persian-English reverse code-switching and code-mixing and its peculiar characteristics.

– To give a clear description of types and patterns of switching of both languages, i.e. Persian and English in a Persian-English bilingual conversation with its peculiar features.

– To reveal the levels of switching between Persian and English as two typologically different languages.

– To find out the possible syntactic and morphosyntactic constraints of Persian-English CS and CM.

Research questions

The research questions to be explored in this research are as follows:

1. What are the peculiar features of reverse switching between Persian and English as two typologically different languages?

2. What are the types and patterns of Persian-English CS/CM in a Persian-English bilingual conversation?

3. At which levels do Iranian bilingual students switch Persian and English in their daily interactions?

4. What are the possible syntactic and morphosyntactic constraints of Persian-English CS/CM?

Persian-English code-switching and code-mixing

There are several types of code-switching (CS) and code-mixing in a Persian-English bilingual conversation, although they may occur with different frequencies. Switching may occur at the

word, phrase, or clause levels and may also occur in different grammatical positions which will be discussed with providing suitable examples from the collected data of Persian-English CS/CM in various social contexts.

Switching at the lexical level

Switching may occur at the word level (code-mixing). In our data, it was observed that nouns, verbs, adjectives, and adverbs are subject to switch to English, but for functional words such as prepositions code-mixing is not a normal process.

Code-mixing in nouns

Usually nouns are free to be switched to English, as it is shown in the following examples:

(1) zendegi hæmæʃ je *adventure*-e.
    life   all   a adventure-COP
    "All life is an adventure."
(2) *Chairperson* emruːz ɟælæse   dɒr-e.
    chairperson today meeting   has-3Sg
    "Chairperson has a meeting today."
(3) in   je *challenge*-e bærɒ-m….
    this a challenge-COP for-1Sg
    "This is a challenge for me…."
(4) *Lunch*! kæsi   lunch mi-xore?
    lunch! anybody lunch PROG-eat
    "Lunch! Is anybody going to have lunch?"
(5) bærɒ *interview* dævæt-æm kærd-æn.
    for   interview   invite-1Sg did-3Pl
    "They invited me for the interview."
(6) ʃomɑ *suggestion*   be-did …
    you   suggestion   Subj-give
    "You give suggestion…."

As it is observed in the above examples, mixing is at the word level with English nouns. Mixing with English nouns is one of the most frequent types of Persian-English code-mixing.

Code-mixing in adjectives

Code-mixing can occur at the adjective level where Persian native speakers use adjectives of English in their constant speech. The following examples clarify the point:

(7) mɒ ɒdæm-ɒ-je *talented*-i   hæst-im.
    we people PL-Ez talented-INDF be-1Pl
    "We are talented people."
(8) bæzi-ɒ xeɪli *smart*-æn.

some-PL very smart-3PL

"Some (people) are very smart".

(9) in emkɒn-ɒt hæme-ɟɒ *available* ni-st.

this facility-PL all-place available NEG-to be

"These facilities are not available everywhere."

(10) emruːz *busy*-æm, bebæxʃid.

today busy-1Sg, excuse me

"Today I am busy, sorry (excuse me)."

(11) je kæmi *nervous* hæst-æm emruːz.

a little nervous to be-1Sg today.

"I am a little nervous today."

As in the above examples show, mixing is at the word level with English adjectives. In examples (10 & 11) subjects have been omitted, since Persian is a pro-drop language, a subject is optional and can be omitted. Code-mixing in adjectives is restricted in some cases. For example, whenever there is an EZAFE, (Ezafe in Persian is a link between a noun and its modifying element), between a noun and its modifying adjective, mixing between Persian and English does not occur freely. This could be due to the difference in the noun / adjective structure of the two participating languages. In contrast to English with adjectives positioned before nouns, in the Persian language, adjectives come after nouns. Examples 12 and 13 clarify the point:

(12) [ɒsemɒn-e] N [ɒbi] A

Sky- Ez blue

"Blue sky"

(13) [medɒd-e] N [ɣermez]A

Pencil-Ez red

"Red pencil"

Code-mixing in adverbs

In a Persian-English bilingual conversation, code-mixing of adverbs is a normal phenomenon. It is shown in the following examples:

(14) in-o *totally* motævædʒe ne-mi-ʃ-æm.

this-OBJ totally understand NEG-HAB-become-1Sg

"I totally don't understand this."

(15) vɒɣeʔæn bæzi æz Hindi-hɑ xeili bɒ mɒ *friendly raftar* mi-kon-æn.

indeed some of Indian-PL very to us friendly behave PROG-do-3Pl

"Indeed, some of the Indians behave to us in a very friendly manner."

(16) mɒ bɒjæd *absolutely* in ciz-ɒ ro bedun-im…

we should absolutely this thing-PL know-1Pl

"Absolutely we should know these things…."

Code-mixing in compound verbs

Code-mixing of compound verbs also occurs in a Persian-English bilingual conversations among Iranian bilinguals in various social contexts. In Persian, compound verbs are one of the most productive structures. Compound verbs are composed of two parts, a noun and a verb. The verb is almost always a form of a limited number of infinitives such as *buːdæn* (to be), kærdæn (to do), ʃodæn (to become), and zædæn (hit); these types of verbs are known as light verbs. The following examples illustrate Persian-English code-mixing in compound verbs.

(17) tæmɒm etelɒːɒt ro je ɟɒ *save*-kærd-æm

all data OBJ a place save-do-1Sg

"I have saved all the data in one place."

(18) mæn ʃomɒ ro *force*-ne-mi-kon-æm…

I you OBJ force-NEG-PROG-do-1Sg

"I am not forcing you …."

(19) mæn ævæl bɒjæd *topic*-æm ro *define*-kon-æm bæd…

I first should topic-1Sg OBJ define-do-1Sg then

"I should first define my topic then…"

(20) *Try* ævæl-eʃ ke bɒjæd *free*-bɒʃ-e.

Try first-3Sg that should free-to be-COP

"Its first try should be free."

As it follows from the above examples, with the help of Persian light verbs, code-mixing occurs in a compound verb pattern (*save*-kærd-æm, *force*-ne-mi-kon-æm, *define*-kon-æm and *free*-bɒʃ-e). It also should be mentioned that in examples 19 and 20 code-mixing does not only occur in compound verbs, but can also occurr with English nouns (Topic & Try).

On the basis of the analysis of CS/CM data in this research, it should be mentioned that English finite verbs cannot occur in the Persian syntactic structure; or in other words, there are no examples of inserting English finite verbs in the Persian frame as ML. According to Myers-Scotton [2006], congruity or lack of congruity between two participating languages in CS can be one of the reasons for fewer occurrences of verbs compared to nouns. She argues that verbs are more difficult to be inserted from the EL than nouns, as verbs are [+thematic role assigner] and they, thus, carry more *"syntactic baggage"*. She asserts that congruency and lack of congruency across syntactic structures of participating

languages in CS are more significant with inserting verbs than nouns.

However, the only way to insert an English verb into Persian structure during the Persian-English CS is through light verb constructions (LVCs). Light verb constructions, as it was earlier mentioned, are composed of two parts, viz: (i) a verbal part and (ii) a nonverbal part. In Persian-English LVCs, the light verb that carries information on person, tense, agreement and aspect comes from the Persian language as the matrix language and the preverbal part comes from English as the embedded language.

Switching at the phrasal level

On the basis of the collected data of this research, it was observed that switching also occurred at the phrasal level in a Persian-English bilingual conversation among Iranian bilingual students, as it is illustrated in the following examples:

(21) neveʃtæn je mæɣɒle xeɪli *time consuming*-e
writing a paper very time consuming-COP
"Writing a paper is very time consuming."

(22) be je *cultural program* dævæt-ʃod-æm.
to a cultural program invite-was-1Sg
"I was invited to a cultural program."

(23) *General knowledge* xeɪli mohem-e.
general knowledge very important-COP
"General knowledge is very important."

(24) cuːn in do næfær *well experienced* hæst-ænd...
because this two person well experienced
to be- 3Pl…
"Because these two persons are well experienced..."

(25) mi-duːn-i in movɣeʔiæt mitun-e *a life time opportunity* bɒʃ-e bærɒ-t.
HAB-know-2Sg this condition can-COP a life time opportunity to be-COP-2Sg
"You know this condition can be a life time opportunity for you."

(26) un-ɟɒ-st be-bin *on the floor*.
that-place-is Subj-see on the floor
"See it is there on the floor."

Thus, switching at the phrasal level include the following word groups: 21 (*time consuming*), 22 (*cultural program*), 23 (*general knowledge*), 24 (*well experienced*), 25 (*a life time opportunity*), 26 (*on the floor*). In all these examples the matrix language is Persian and the English phrases were embedded into Persian sentence structure.

Code-switching at clausal level and sentence level

Switching sometimes occurs at the clausal level and sentence level, but with lower frequency in comparison with switching at the lexical and phrasal levels. In other words, Iranian bilingual students rarely switch Persian and English at the clausal and sentence levels. However, in a few cases, it was observed, even though with less frequency, among the most fluent bilingual students; i.e. in comparison to switching at the lexical level and phrasal level, switching at the clausal level and sentence level occur with a very low frequency among Iranian bilinguals and it occurs only among highly proficient and fluent Persian-English bilingual speakers; while less fluent bilinguals mostly switch at the lexical and phrasal levels.

This finding is the opposite of Poplack's [1980] *"size of constituent"* constraint, which asserts that major and main constituents such as sentences and clauses are likely to be switched more frequently than smaller constituents, for example, nouns, verbs, adverbs, and adjectives, determiners. Examples 27 and 28 illustrate switching at the clausal level and example 29 depicts switching at the sentence level:

(27) ɒre dorost-e, con *ELT is a branch of linguistics.*
yes right-COP because ELT is a branch of linguistics
"Yes, that is right, because ELT is a branch of linguistics."

(28) *Wow what a surprise to see you here!* to in-ɟɒ chi-kɒr mi-kon-i?
Wow what a surprise to see you here! you this-place what-work PROG-do-2Sg
"Wow what a surprise to see you here, what are you doing here?"

(29) a: ɑlmɑn xeɪli keʃvær-e xubi-e.
Germany very country-Ez good-COP
"German is a very good country."

b: *Yeah, it is one of the most developed country.*

Constrains of reverse Persian-English CS/CM

There are some constraints in the reverse Persian-English language contact which prevents CS/CM to occur freely, these constrains or restrictions are as follows:

– Switching of functional words does not occur as a normal process.

– Switching of finite verbs as a single element is not observed.

– Switching between a NEG and a verb is not observed.

– Switching between a verb stem and its inflection is not evidenced.

Based on the observations of Persian-English CS/CM data, these above-mentioned constraints are the results of typological differences between Persian, on one hand, and English, on the other hand. This idea is in line with the works on code-switching [Mahootian, 1993; Woolford, 1983], which state that any correct approach to code-switching should look to code-switching constraints within the relevant mixed grammars. However, further research is needed to explain how grammatical differences between the two languages lead to code-switching restrictions.

Conclusion

This research investigated structural or grammatical aspects of code-switching (CS) and code-mixing (CM) observed in Persian-English bilingual speech. The research shows that CS/CM is a normal process in Persian-English bilinguals' conversations; participants of this research, all late bilinguals, reported on using frequent switches in their everyday language use. On the basis of the collected data on Persian-English switching, it was observed that switching occurs at the lexical, phrasal, clausal, and sentence levels but with different frequency. It was observed that switching is usually just for a few words or mostly at the lexical and phrasal level, which is called intra-sentential switching (code-mixing) and less frequently it occurs at the clause or sentence level which is called inter-sentential switching (code-switching); this type of switching was observed only among the most fluent participants. Therefore, both types of switching, i.e. intersentential switching that is also called code-switching and intrasentential switching which is also known as code-mixing were employed by Persian-English bilingual speakers in their daily communication with differing frequency; nouns, verbs, adjectives and adverbs are frequently subject to switch to English.

Furthermore, the results showed that the direction of switching was mostly from Persian to English that is switching to their second language (L2), while the main language of interaction is their first language (L1), i.e. Persian; a linguistic phenomenon that is known as reverse code-switching. This finding is a supporting evidence for the recent study by Moradi [2018] that examined Persian-English CS/CM and the matrix language frame model in which he asserts that the Persian language is the dominant or the matrix language, since in a Persian-English bilingual clause the syntactic and morphosyntactic frame is provided by the Persian language, while English provides only content morphemes.

However, the incongruity between the morphosyntactic structures and the verbal systems of Persian and English imposes some constraints on the occurrence of switching between this pair of languages, for example: there is a restriction on inserting English verbs into the Persian frame; English verbs can only be inserted in the Persian language frame through the light verb constructions; the light verb that carries information on person, tense, agreement and aspect comes from the Persian language as the matrix language and the preverbal part comes from English as the embedded language. The results of the collected data analysis showed that these constraints are the results of typological differences between Persian and English.

REFERENCES

Altarriba J., Kroll J.F., Sholl A., Rayner K., 1996. The Influence of Lexical and Conceptual Constraints on Reading Mixed-Language Sentences: Evidence from Eye Fixations and Naming Times. *Memory & Cognition*, vol. 24, iss. 4, pp. 477-492.

Appel R., Muysken P., 1987. *Language Contact and Bilingualism*. London, Edward Arnold. 213 p.

Blom J.P., Gumperz J.J., 2000. Social Meaning in Linguistic Structure: Code-Switching in Norway. *Directions in Sociolinguistics: the Ethnography of Communication*. New York, Basil Blackwell, pp. 407-434.

Chauncey K., Grainger J., Holcomb P.J., 2008. Code-Switching Effects in Bilingual Word Recognition: A Masked Priming Study with Event-Related Potentials. *Brain and Language*, vol. 105, iss. 3, pp. 161-174.

Auer P. ed., 1998. *Code-switching in Conversation: Language, Interaction and Identity*. London, Routledge. 355 p.

Costa A., 2005. Lexical Access in Bilingual Production. *Handbook of Bilingualism: Psycholinguistic Approaches*. New York, Oxford, pp. 308-325.

Costa A., Santesteban M., 2004. Lexical Access in Bilingual Speech Production: Evidence from Language Switching in Highly Proficient Bilinguals and L2 Learners. *Journal of Memory and Language*, vol. 50, iss. 4, pp. 491-511.

De Bot K., 2004. The Multilingual Lexicon: Modelling Selection and Control. *International Journal of Multilingualism*, vol. 1, no. 1, pp. 17-32.

Deuchar M., 2006. Welsh-English Code Switching and the Matrix Language Frame Model. *Lingua,* vol. 116, iss. 11, pp. 1986-2011.

Lewis M.P., Simons G.F., Fennig C.D. eds., 2009. *Ethnologue: Languages of the World*. 16th edition. Dallas, Texas, SIL International. 1248 p.

Fitzpatrick I., 2011. *Lexical Interactions in Non-Native Speech Comprehension: Evidence from Electro-Encephalography, Eye-Tracking, and Functional Magnetic Resonance Imaging. Unpublished PhD thesis*. Radboud University Nijmegen. 182 p.

Fricke M., Kootstra G.J., 2016. Primed Codeswitching in Spontaneous Bilingual Dialogue. *Journal of Memory and Language*, vol. 91, pp. 181-201.

Gardner-Chloros P., 1991. *Language Selection and Switching in Strasbourg*. Oxford, Claredon Press. 218 p.

Gardner-Chloros P., 2009. *Code-Switching*. Cambridge, Cambridge University Press. 242 p.

Gollan T.H., Ferreira V.S., 2009. Should I Stay or Should I Switch? A Sost-Benefit Analysis of Voluntary Language Switching in Young and Aging Bilinguals. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, vol. 35, iss. 3, pp. 640-665.

Gullberg M., Indefrey P., Muysken P., 2009. *The Cambridge Handbook on Linguistic Code-Switching*. Cambridge University Press, pp. 21-39.

Gumperz J.J., 1976. The Sociolinguistic Significance of Conversational Code-Switching. *Working Papers of Language Behaviour Research Laboratory*. Berkeley, University of California, no. 46, pp. 1-46.

Hartsuiker R.J., Pickering M.J., 2008. Language Integration in Bilingual Sentence Production. *Acta Psychologica*, vol. 128, iss. 3, pp. 479-489.

Kim K.H., Relkin N.R., Lee K.M., Hirsch J., 1997. Distinct Cortical Areas Associated with Native and Second Languages. *Nature*, vol. 388, pp. 171-174.

Kroll J.F., Bobb S.C., Wodniecka Z., 2006. Language Selectivity is the Exception, Not the Rule: Arguments Against a Fixed Locus of Language Selection in Bilingual Speech. *Bilingualism: Language and Cognition*, vol. 9, iss. 2, pp. 119-135.

Labov W., 1972. *Sociolinguistic patterns*. Philadelphia, University of Pennsylvania Press. 344 p.

Mahootian S., 1993. *A Null Theory of Code-Switching. Doctoral Dissertation*. Chicago. Northwestern University.

Moradi H., 2014a. Structural Aspects of Persian-English Code-Mixing. *Asian Journal of Research in Social Sciences and Humanities*, vol. 4, no. 6, pp. 119-130.

Moradi H., 2014b. A Survey on Code-Mixing, Code-Switching, Language Alteration and Interference. *Indian Journal of Applied Research*, vol. 4, iss. 10, pp. 62-64.

Moradi H., 2018. An Investigation on Persian-English Code-Switching and the Matrix Language Frame (MLF) Model. *International Journal of Educational Sciences*, vol. 21, no. 1, pp. 202-213. DOI: 11.258359/KRE-20

Moreno E.M., Federmeier K.D., Kutas M., 2002. Switching Languages, Switching Palabras (Words): An Electrophysiological Study of Code Switching. *Brain and Language*, vol. 80, iss. 2, pp. 188-207.

Isurin L., Winford D., De Bot K. eds., 2009. Multidisciplinary Approaches to Code Switching. *Multidisciplinary Approaches to Code Switching*, vol. 41. 364 p.

Muysken P., 2000. *Bilingual Speech: A Typology of Code-Mixing*. Cambridge, Cambridge University Press. 306 p.

Myers-Scotton C., 1993. *Duelling Languages: Grammatical Structure in Code Switching*. Oxford, Clarendon. 263 p.

Myers-Scotton C., 2006. *Multiple Voices: An Introduction to Bilingualism*. Oxford, Blackwell. 473 p.

Poplack S., 1980. Sometimes I'll Start a Sentence in Spanish Y TERMINO EN ESPACOL: Toward a Typology of Code Switching. *Linguistics*, vol. 18, iss. 7-8, pp. 581-618.

Poplack S., 1981. Syntactic Structure and Social Function of Code Switching. *Latino Language and Communication Behaviour*. Norwood, Ablex Publishing Corporation, pp. 169-184.

Bhatia T.K., Ritchie W.C. eds., 2012. The Handbook of Bilingualism and Multilingualism. *The Handbook of Bilingualism and Multilingualism*. Oxford, UK, Wiley-Blackwell. 964 p.

Van Hell J.G., Witteman M.J., 2009. The Neurocognition of Switching Between Languages: A Review of Electrophysiological Studies. *Multidisciplinary Approaches to Code Switching*, vol. 41, pp. 53-84.

Verhoef K., Roelofs A., Chwilla D.J., 2009. Role of Inhibition in Language Switching: Evidence from Event-Related Brain Potentials in Overt Picture Naming. *Cognition*, vol. 110, iss. 1, pp. 84-99.

Verhoef K.M., Roelofs A., Chwilla D.J., 2010. Electrophysiological Evidence for Endogenous Control of Attention in Switching Between Languages in Overt Picture Naming. *Journal of Cognitive Neuroscience*, vol. 22, iss. 8, pp. 1832-1843.

Woolford E., 1983. Bilingual Code Switching and Syntactic Theory. *Linguistic Inquiry*, vol. 14, no. 3, pp. 520-536.

Information about the Authors

Hamzeh Moradi, PhD in Linguistics, Associate Professor, Nanfang College of Sun Yat-sen University, Venquan Avenue, Guangzhou, 510970 Guangdong Province, China, hamzeh.m701@yahoo.com, https://orcid.org/0000-0003-0612-8286

Jianbo Chen, PhD in Education, Associate Professor, Sun Yat-sen University, Xingang Xi Road, Guangzhou, 510275 Guangdong Province, China, 736.4281.2@qq.com, https://orcid.org/0000-0002-1328-9953

Информация об авторах

Хамзех Моради, доктор наук (филология), доцент, колледж Нанфанг, Университет им. Сунь Ят-сена, Венгуан Авеню, Гуанчжоу, 510275 Провинция Гуандун, Китай, hamzeh.m701@yahoo.com, https://orcid.org/0000-0003-0612-8286

Жианбо Чен, доктор наук (педагогика), доцент, Университет им. Сунь Ятсена, Хинганг Хи Роуд, Гуанчжоу, 510275 Провинция Гуандун, Китай, 736.4281.2@qq.com, https://orcid.org/0000-0002-1328-9953