

Challenging the Free Morpheme and the Equivalence Constraints Counter- Evidence from Algerian Arabic/French Code Switching

Taoufik Djennane *
Department of English, ESPT Lab.
Tlemcen University, Algeria
Email: raktou@yahoo.fr

Fatima Louati
Centre for Scientific and Technical
Research on Arabic Language
Development (CRSTDLA)
Email: altaoum@yahoo.fr

Received: 08/11/2023

Accepted: 28/04/2024

Abstract:

Within the structural approach to code switching scholarship, linguists' focus has always been on intra-sentential switching with the aim to formulate grammatical constraints, which govern switching between two different linguistic systems. This paper considered Arabic/French mixed sentences from a structural standpoint and with reference to the free morpheme constraint and the equivalence constraint. The corpus of the study included eighty-nine intra-sentential switches, extracted from different audio-recordings of eight bilingual students. The findings revealed that Arabic-French switching is licensed in different sites within the same sentence/word, and it partially obeys the two constraints. In some cases, the two constraints could perfectly hold. In some other cases, they were invalid nullifying thus universal validity assigned to them earlier by Sankoff and Poplack.

Keywords: Code switching - Grammatical constraints - Intrasentential switching - Morpheme - Syntactic violation.

*Corresponding author: Taoufik Djennane

تحدي المورفيم الحر وقيود التكافؤ: أدلة مضادة من التبديل اللغوي عربي جزائري/فرنسي

ملخص :

يركز اللسانيون، ضمن منهج المقاربة النحوية لدراسة ظاهرة التبديل اللغوي، على التبديل الذي يحدث داخل نفس الجملة بهدف صياغة قيود نحوية تحكم الانتقال بين نظامين لغويين مختلفين. تناولت هذه الورقة البحثية الجمل المختلطة بين العربية والفرنسية من وجهة نظر بنوية واستنادا إلى قيدين اثنين وهما قيد المورفيم الحر وقيد التكافؤ. تضمنت مادة الدراسة تسع وثمانين جملة مختلطة تم استنباطها من تسجيلات صوتية مختلفة لثمانية طلاب ثنائيي اللغة. أظهرت النتائج أن التبديل بين العربية والفرنسية يحدث في مواقع مختلفة ضمن نفس الجملة أو الكلمة. يحدث هذا مع خضوع جزئي للقيدين المشار إليهما آنفا. أثبتت بعض الحالات أن القيد البنويين يعملان تماما- إلا أن هناك حالات أخرى فندت مبدأ كلي القيدين وأبطلت صلاحيتهما العالمية التي ادعاها كل من سانكوف (Sankoff) وبوبلاك (Poplack) في وقت سابق.

الكلمات المفتاحية: التبديل اللغوي - القيود النحوية - التبديل داخل الجملة - الانتهاك النحوي.

Les contraintes du morphème libre et de l'équivalence : Contre-preuve de l'alternance codique arabe algérien/français

Résumé :

Dans le cadre de l'approche structurale de l'alternance codique, l'accent des linguistes a toujours été sur la commutation intra-phrastique dans le but d'élaborer des contraintes grammaticales qui régissent le passage entre deux systèmes linguistiques différents. Cet article examine les phrases mixtes arabe/français, en se référant à la contrainte du morphème libre et à la contrainte d'équivalence. Le corpus de l'étude comprenait quatre-vingt-neuf commutateurs intra-phrastiques, extraites de divers enregistrements audio réalisés avec huit étudiants bilingues. Les résultats ont mis en évidence que la commutation entre l'arabe et le français est autorisée sur différents sites au sein d'une même phrase/mot, et qu'elle obéit partiellement aux deux contraintes. Dans certains cas, les deux contraintes sont parfaitement respectées, tandis que dans d'autres cas elles étaient invalides, annulant ainsi la validité universelle qui leur avait été attribuée plus tôt par Sankoff et Poplack.

Mots clés : Alternance codique - Contraintes grammaticales - Commutation intra-phrastique - Morphème - Violation syntaxique

Introduction

It is common that bilingual speakers switch back and forth between the codes they have a control. Therefore, code switching is simply defined as a process of shifting from one linguistic code (a language or dialect) to another, depending on the social context or conversational context. Bilinguals have this ability to use linguistic elements from different grammar systems, and this process of swapping between codes occurs with a kind of rapidity to the extent that it is sometimes hard to decide what language they are speaking. Scholarship about code switching branches off into two main directions, summarized in ‘why?’ and ‘when?’

In fact, interest in code switching (CS) marked its beginning with circling motivations driving bilinguals to alternate codes (i.e., ‘why?’). The work of (Blom & Gumperz, 1972) is often regarded pioneering. Since then, a plethora of research have mushroomed here and there (Gumperz, 1982; Grosjean, 1982; Bhatia & Ritchi, 2004; Al-Rowais, 2012; Auer, 2013; Cooks-Campbell, 2022). By the early 1980s, research on code switching took a new drive when interest in the social functions of CS paralleled a novel track which concerned itself with the linguistic structure of CS (i.e., when to switch?). This new orientation is basically concerned with switching which takes place within the same conversation.

Poplack, a leading authority in the structural approach to code switching, identifies three grammatical types of code switching (hereafter CS): intersentential, intrasentential and tag (or extrasentential) switching (Poplack., 1980, pp. 581-618). The first occurs when a change of language happens at a clause or sentence boundary, i.e. where each clause/sentence is in one language or the other. The second type takes place *within* a clause/sentence boundary, including also word boundaries. It may be a process of inserting a bound morpheme, noun, verb, or even a phrase in a sentence. This is therefore an intermingling of lexical items and grammatical features from both languages within the same sentence (Muysken, 2000). Tag switching refers to cases where tags, exclamations, and ready-made expressions, from the donor language are inserted into the recipient language.

Scholarship on code switching grammar considers in essence intrasentential switching to the exclusion of the two other types. The point is that intrasentential switching exhibits linguistic elements from two grammars

within one sentence. This is not the case with intersentential switching which only entails linguistic elements that obey the syntax of one code or the other as the switch is made at sentence/clause boundary. The same fact applies to tag switching which is the easiest process for the reason that tags typically contain minimal syntactic restrictions, and therefore they do not break syntactic rules when inserted into a sentence that is given in another language (Hamers & Blanc, 2000). With focus on intrasentential switching, the structural approach aimed to explain the nature of the syntax governing mixed sentences. The question became, as (Poplack & Marjory, 1995, p. 199) observe, “do speakers operate with a single base grammar which is on occasion overlaid with lexical items from another language, or are different grammars activated at different times ? If the latter is the case, what structural principles govern the juxtaposition?”

In fact, various investigations (Sankoff & Poplack, 1981, pp. 3-45; McClure, 1981; Myers-Scotton, 1993; Fairchild & Van Hell, 2017, pp. 150-161) have proved that intrasentential switching is not random but rather a rule-governed linguistic behaviour. Sankoff & Poplack (Sankoff & Poplack, 1981)¹ were pioneers in the structural study of CS, and their work remains a touchstone as it constitutes the real beginning of the structural approach to CS. They proposed two major constraints: the *free morpheme constraint* and the *equivalence constraint*. The former entails the forbidding of CS “between a bound morpheme and a lexical form unless the latter has been phonologically integrated into the language of the bound morpheme” (Sankoff & Poplack, 1981, p. 5). Consequently, only free morphemes are permissible switches within a sentence. As far as the equivalence constraint is concerned, “the local co-grammaticality or equivalence of the two languages in the vicinity of the switch holds as long as the order of any two sentence elements, one before and one after the switch point, is not excluded in either language” (Sankoff & Poplack, 1981, p. 57).

Accordingly, CS may occur at points where the surface structures of the two languages map onto each other. The latter constraint concerned basically, though not exclusively, switching containing more than one linguistic constituent. Sankoff & Poplack raise the point that CS sentences have a separate grammar which builds on the two monolingual grammars.

(Sankoff & Poplack, 1981) pioneering work paved the way to other linguists to consider code switching from a structural standpoint. Many attempts were initiated to check the structural context in which intrasentential

switching is licensed. (Joshi, 1985), for example, suggested two syntactic constraints to account for agrammatical Marathi-English switching: *the Asymmetry Constraint* and *the Constraint on Closed Class Items*. The first states that switching a category of the matrix grammar to a category of the embedded grammar is permitted, but the reverse is not possible. The second constraint reports that certain closed class items (tenses, auxiliary, etc.) cannot be switched when they appear in main Verbal Phrase VP. However, Joshi's proposal lacks universality as it typically considers one language dyad, i.e., Marathi-English switching. (Belazi, Rubin, & Toribio, 1993, pp. 221-237) for instance, introduced The Functional Head Constraint. This stipulates that no code-switch is allowed between a functional head and its complement. Perhaps, the most influential suggestion came from (Myers-Scotton, 1993) in her Matrix Language Frame model (MLF). The MLF suggests that there is a matrix language and embedded language. Myers and Jake (Myers Scotton & Jake, 2000) observe that in bilingual speech, the participating languages never participate equally as the source of the Matrix Language. They add that "one, and only one, of the participating varieties is the source of the abstract grammatical frame of the constituents" (Myers.Scotton, 2001, p. 24). Although the MLF received approval on the part of many linguists, it stills remains a source of criticism.

1. Methodology Framework

The present paper approaches code switching from a structural standpoint. It considers in essence the syntactic structure of (Dialectal Algerian) Arabic-French switching. The aim is to investigate whether Arabic-French mixed sentences displaying intrasentential switching obey or not the *free morpheme* and *the equivalence constraints introduced by* (Sankoff & Poplack, 1981). As for data collection, it was opted for audio-recordings of spontaneous conversations. Being bilinguals, eight university students formed the main source for data collection. Data analysis, which is qualitative in nature, revealed many instances of code switching and mixed sentences. After grammatically classifying the different code-switched utterances, a total number of eighty nine (89) intrasentential switches could be identified.

2. Data analysis and discussion

Analysis of the relevant corpus revealed many instances of intra sentential switching. Some instances are listed below according to the related constraint upon which the mixed sentences were analyzed (Arabic in italics, displayed with phonetic representation).

2.1 Dialectal Arabic-French switching within the free morpheme constraint

(1) On a trouvé *ʔalfa:r* que t'as perdu la dernière fois.

(We have found the mouse that you lost last time)

(2) *taqdarddi:rkulwa:ħadfi*: flacon.

([You] can put each one in a flacon.)

While (1) involves the insertion of an Arabic item in a French sentence, (2) goes the other way round. Both /*ʔalfa:r*/ (mouse) in (1) and 'flacon' in (2) are permitted to **incorporate at** these switch points as they are **free morphemes** (nouns). Both examples echo the validity of the free morpheme constraint. However, in other data sets counter examples which refute the validity of such constraint were also present. Consider the following instances :

(3) Tu peux analyser-*hum* la façon que tu veux.

(You can analyse them the way you want)

(4) *ʔidathabitgardi:h ʔalli:h*

(If you want to keep it, keep it)

(5) *jabyij*-poser la recherche...

([He] wants to submit the research...)

The items 'analyser-*hum*', '*tgardi : h*' and '*j*-poser' in (3), (4) and (5), respectively consist of morphemes from both Arabic and French. In (3), the French verb stem 'analyser' (in its infinitival form) is inflected with the Arabic bound morpheme (suffix) '*hum*'. Such *intraword* switching is copiously attested in our data, such as in 'neutralisi:*h*' (neutralize it), 'pasteurisa : *whum*' ([they] pasteurized them), 'netoyeh*a*' (clean it), etc.

Then, in (5) the prefix /j/ (the 3rd person masculine singular marker used in the present tense in Arabic) is added to the French verb 'poser'. Here, the switch also occurred across internal morpheme boundaries involving an inflectional bound morpheme from Arabic and a free morpheme (root) from French. In our data, inflections always came from Arabic. Example (4) reflects bound morpheme switching attested in both (3) and (5). The French verb stem 'garder' begins with the Arabic bound morpheme '*t*' (present tense marker of

singular pronoun in Arabic) and ends with the suffix ‘*h*’ (indicator of the 3rd singular pronoun). Such examples represent strong counter evidence to the free morpheme constraint, making it only partly valid, being in some contexts applicable and in other impermissible.

2.2 Dialectal Arabic-French Switching within the Equivalence Constraint

This constraint posits that surface structures common to both languages are favoured for switches (Sankoff & Poplack, 1981). This is illustrated below where the lines indicate permissible switch points, and the arrows indicate the surface relationships of constituents in the two languages. Switches occur at the lines:

Arabic: <i>ʔana</i>	<i>ʃuft ha:d</i>	<i>ʔaʃʃari:t</i>	<i>mça</i>	<i>wa: had</i>	<i>ʃahbi</i>
↓	↓	↓	↓	↓	↓
French: <i>J' ai</i>	<i>vu ce</i>	<i>documentaire</i>	<i>avec</i>	<i>un</i>	<i>ami</i>

(I saw this documentary with a friend of mine)

According to this principle, switching only occurs between elements that are normally ordered in the same way by the monolingual grammar. This translates that switching is forbidden where there is a mismatch in constituency between the two languages. Our data yielded various instances of switches at different grammatical environments in Arabic or French. Sometimes the switching involves larger constituents (e.g. verb phrase (VP), noun phrase (NP), etc) and sometimes smaller constituents (e.g. verbs, adjectives, etc.). Within noun boundaries, switches occurred mainly between determiner and noun as in (6), and noun and adjective like in (7):

6) *ha:dla partiemʃamrabassawa:ʔil*

(This part is full of liquids)

(7) *fawtujjama:tdifficilesmin bda:w*

([They] passed through hard days when they started)

Within sentence boundary, switches were found between subject and verb (8), verb and object (9), verb and adverb (10), verb and prepositional object (11):

(8) *Les cours jbaddi:wbakribatni:n.*

(Lectures start early on Monday)

(9) *waʒʒat* les procédures nécessaires.

([I] prepared the necessary procedures)

(10) *tamʃipartoutʔanna:staççarfak*

(Anywhere you go people know you)

(11) *kuntà la bibliothèque centrale mçašha:bi*

([I] was in the central library with my friends)

There are also cases of switches where an Arabic prefix (bound morpheme) is followed by a French verb (free morpheme). For instance, in (12), the auxiliary [*ʔa:di*] (the periphrastic future in Dialectal Arabic) and the ‘n’ (the 1st person singular marker used in the present tense in Arabic) are used with the French verb ‘visiter’, as shown below :

(12) *ʔa:di nvisiterʒaddati*

([I] will visit my grandmother)

The findings exposed many instances where the grammar of the mixed sentences is in strict conformity with those of the monolingual grammars of either language. For instance, example (11) mentioned above and repeated here as (13) is representative of such cases:

(13) *kuntà la bibliothèque centrale mçašha:bi*(mixed sentence)

--- *fiʔalmaktabaʔalmarkazijah*----- (Arabic equivalent)

kuntà la bibliothèque central mçašha:bi(mixed sentence)

J’etais -----avecmes amis (French equivalent)

Note that the surface structures of Arabic and French align; the morpheme order in the mixed utterance respects that of Arabic and French alike. Thus, the code switch utterance ‘à la bibliothèque **centrale**’ is licensed in this context since the equivalence of structures holds (its Arabic counterpart ‘*fi ʔalmaktabaʔalmarkazijah*’ would be a possible Arabic switch inserted in the French sentence without violating morpheme order).

However, this is not the rule throughout our data. Various switching cases occurred even though the surface structures of the two languages do not coincide. Consider the following example:

(14) *jaklulesdeux en même temps man plat wa:ħad* (mixed sentence)

**jaklubzu: ʒfi:wa:ħadwaqtman šaħanwa:ħad* (Arabic sentence)

(The two eat at the same time from the same plate)

jaklules deux en même temps man plat wa:ħad (mixed sentence)

*Mangent les deux en même temps du plat même (French sentence)

Example (14) exposes a clash between Arabic and French word order within the mixed **Verbal Phrase (VP)** ‘*jaklu les deux*’ and the mixed **Noun Phrase (NP)** ‘*man plat wa:ħad*’. The constituents generate by a rule from one language (Arabic) which is not shared by the other language (French) as it will be explained below. In our data, the identified switching sites of Arabic and French where the equivalence structure did not hold are the following :

1. Switching between subject and verb: the norm in Arabic is that declarative sentences follow **Verb-Subject-Object (VSO)** word order. This is not the case in French declarative sentences where the subject precedes its verb, and therefore the word order is **Subject-Verb-Object (SVO)**. The mixed VPs in (8) (*Les coursjbaddi:w*) and in (14) (*jaklules deux*) violate this grammatical rule of Arabic and French, respectively.

2. Switching between an adjective and a noun: adjectives in Arabic must follow the noun they modify. The same rule applies to French. However, there are still some French adjectives which precede their noun (nouns?). This second case of French adjectives introduces an issue to the equivalence constraint which only allows, when valid, nouns followed by adjectives as this is the only shared order by Arabic and French. In fact, the data reveal some instances which violate this claim as the following example shows (the Arabic adjective in bold characters): (as shown by the following example)

(15) *da:rtannaune tache **kbi:rahna***(mixed sentence)

(It caused a big spot around here)

The mixed utterances ‘*unetachekbi:ra*’ is (are ?) the equivalent of the French expression ‘*une grande tache*’. It is clear that the adjective ‘*grande*’ precedes the noun it modifies (i.e. *tache*). This is not the case in the mixed sentence (15) where the Arabic adjective ‘*kbi:ra*’ follows the French noun ‘*tache*’. This infringes the required equivalent French word order, rendering the equivalence constraint invalid.

3. Another difference between French and Arabic structures is the use of the definite article before an adjective. In Arabic, adjectives within a defined NP call for the definite article ‘*ħal*’ (the). This rule does not apply to French adjectives within the same syntactic environment. Therefore, any switch in a definite mixed NP will disobey the syntactic structure of one language or the other. This is exemplified in the following utterances (the definite article in bold):

(16) a. *ʔalʒuzajçaʔalkabi:ra* (Arabic definite NP)

b. **la** grande molécule (French definite NP)

c. **la** molécule *ʔalkabi:ra*(mixed definiteNP)

Example (16) c shows that the mixed NP obeys Arabic grammar of adjectives within the definite NP structure. This, in parallel, violates the French morpho-syntax. This mixed sentence also flouts the equivalence constraint in terms of adjective-noun word order in Arabic vs. French (as discussed earlier).

3. Conclusion

Although Sankoff and Poplack (Sankoff & Poplack (1981) claimed earlier universal validity of the free morpheme constraint and the equivalence constraint, one can argue that such constraints fit in essence Spanish/English switching in the sense that the rules formulated by Sankoff and Poplack concerning possible switching sites apply better to this language dyad. When other languages come into play, such rules can only be partially valid at best. In fact, other investigations revolving around Spanish/English and other language dyads switching were generous enough to provide counter evidence, suffice it (it suffice?) to mention Berk and Seligson (Berk-Seligson, 1986) study of Spanish/Hebrew, Pandit's evidence from English/Hindi (Pandit, 1990), Myers-Scotton (Myers-Scotton, 1993) examples from Swahili/English, Turjoman's investigation (Turjoman, 2016) of Arabic/English, to name but a few. The present study considering Arabic/French switching at different sites could, in turn, refute universal validity of the two constraints proposed by Sankoff and Poplack (Sankoff & Poplack, 1981). Counter evidence to the free morpheme constraint also rejects the claim of Bentahila and Davies (Bentahila & Davies, 1983) who reported that Arabic/French intrasentential switching is possible at all syntactic sites, except at word-morpheme boundary.

References

Books

- Al-Rowais, H. Hawazen. (2012). *Code switching between Arabic and English, social motivations and structural constraints*. Indiana - USA: PhD diss., Ball State University.
- Auer, P. (2013). *Code-switching in Conversation: Language, Interaction and Identity*. Routledge - New York.
- Belazi, Hedi M., Rubin, Edward J., & Toribio, A. J. (1993). *Code-switching and X-bar Theory: The Functional Head Constraint*. *Linguistic Inquiry*25(2): 221-237.
- Bentahila, A. & Davies, Eirlys E. (1983). *The syntax of Arabic-French code-switching*. *Lingua*59: 301-330.
- Berk-Seligson, S. (1986). *Linguistic constraints on intra-sentential codeswitching: A study of Spanish/Hebrew bilingualism*. *Language in Society*15: 313-348.
- Bhatia, Tej. K., & Ritchie, William. C. (2004). *Social and Psychological Factors in Language Mixing*. In *Handbook of Bilingualism*. Ed. William C. Ritchie and Tej K. Bhatia. Blackwell Publishing.
- Blom, Jan P., & Gumperz, John J. (1972). *Social meaning in linguistic structures: Code-switching in Norway*. In *Directions in Sociolinguistics: The Ethnography of Communication*. New York: Holt, Rinehart, and Winston: Ed. John J. Gumperz & Dell Hymes.
- Cooks-Campbell, A. (2022). *Code-switching: More common than you think and hurting your team*. <https://www.betterup.com/blog/code-switching>.
- Fairchild, S. & Van Hell, Janet G. (2017). *Determiner-noun code-switching in Spanish heritage speakers*. *Bilingualism: Language and Cognition*20: 150-161.
- McClure, E. (1981). *Formal and functional aspects of the code-switched discourse of bilingual children*. In *Latino language and communicative behavior*. Ablex: Ed. Richard P. Duran. Norwood, N.J.
- Myers Scotton, C. & Jake, Janice L. (2000). Testing a Model of Morpheme Classification with Language Contact Data. *International Journal of Bilingualism*4: 1-8.
- Myers.Scotton, C. (2001). *The Matrix Language Frame Model: Developments and Responses*. In *Trends in Linguistics: Codeswitching Worldwide II*. Berlin: Mouton de Gruyter. Ed. Rodolfo Jacobson.
- Pandit, I. (1990). *Grammaticality in Code-Switching*. In *Code switching as a Worldwide Phenomenon*. New York: Ed. Rodolfo Jacobson. Peter Lang.
- Poplack., S. (1980). *Sometimes I'll start a sentence in English y terminoen español: Toward a typology of code-switching*. *Linguistics*18:581-618.

Challenging the Free Morpheme and the Equivalence Constraints: Counter- Evidence from Algerian Arabic/French Code Switching

Sankoff, D., & Poplack, S. (1981). *A formal grammar for code-switching*. *Papers in Linguistics* 14: 3-45.

Turjoman, M. O. (2016). *A New Phenomenon in Saudi Females' Code-switching: A Morphemic Analysis*. *Advances in Language and Literary Studies* 7: 91-96.

Journal articles

Grosjean, F. (1982). Life with two languages: An introduction to bilingualism. *Harvard University Press* .

Gumperz, John J. (1982). *Discourse Strategies*. *Cambridge University Press* .

Hamers, Josiane F., & Blanc, Michel H.A. (2000). *Bilinguality and Bilingualism*. *Cambridge University Press* .

Joshi, Aravind K. (1985). *Processing of sentences with intra-sentential code-switching*. In *Natural language processing: Psychological, computational and theoretical perspectives*. Cambridge, Cambridge University Press: Ed. David Dowty, Lauri Karttunen and Arnold M. Zwicky.

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

Myers-Scotton, C. (1993a). *Duelling Languages: Grammatical Structure in Codeswitching*. *Clarendon Press* .

Poplack, S., & Marjory, M. (1995). *Patterns of language mixture: Nominal structure in Wolof-French and Fongbe-French bilingual discourse*. In *One Speaker, Two Languages: Cross Disciplinary Perspectives on Code Switching*. Cambridge: Cambridge University Press. Ed. Lesley Milroy & Pieter Muysken.