



# Linguistics and Literature Review (LLR)

Volume 4, Issue 2, March 2018

Journal DOI: <https://doi.org/10.32350/llr>

Issue DOI: <https://doi.org/10.32350/llr.42>

ISSN: 2221-6510 (Print) 2409-109X (Online) Journal homepage: <http://journals.umt.edu.pk/llr/Home.aspx>

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**To cite to this article:** Muhammad Bashir & Ghulam Abass (2018): Evaluation of the Null Theory of Intra-Sentential Code-Switching: Evidence from Balti/English Code-Switching, *Linguistics and Literature Review* 4(2): 105- 118.

**To link to this article:** <https://doi.org/10.32350/llr.42.03>

**Published online:** October 31, 2018

**Article QR Code:**



A publication of the  
Department of English Language and Literature  
School of Social Sciences and Humanities  
University of Management and Technology  
Lahore, Pakistan

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## Evaluation of the Null Theory of Intra-Sentential Code-Switching: Evidence from Balti/English Code-Switching

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### ABSTRACT

The present study attempts to evaluate the empirical adequacy of the Null Theory of intra-sentential code-switching (CS) proposed by Mahootian and Santorini (1996) with evidence from Balti/English CS. The study exploits a naturalistic corpus of Balti/English CS. There are 40 'balanced' Balti/English bilinguals who participated in the corpus. The participants were divided into 6 groups in order to organise the conversation. The recorded data was transcribed in Roman Script. Mahootian (1993) and Mahootian and Santorini (1996) propose that there are no additional grammatical constraints on mixing of two independent grammatical systems and the lexical items being the head of their respective elementary trees determine the placement of their complements in 'pure' CS sentences in the same way. However, the analysis of the data reveals that N and V have no role in placement of respective complement projections. The data under examination indicates that the placement of complements does not follow the grammatical requirements of the language which happens to provide N and V. In spite of having an English V serving as the head of VP, object DPs in mixed Balti/English VPs. VPs are placed at pre-head position resulting on OV order. In the same way, the data under examination indicates that complement Post Ps are placed at pre-head position even though the tree is headed by English Ns which require post-head placement of complement PPs. The data provides multiple instances of projections in which the placement of complements violates the grammatical requirements of the language providing lexical head in violation of Mahootian's proposal. Thus, the naturalistic corpus of Balti/English CS provides multiple instances which demonstrate the empirical inadequacy of the proposals offered by Mahootian (1993) and Mahootian and Santorini (1996).

**Keywords:** lexical categories, complements, head-parameter, code-switching, parameter-value

## **Introduction**

### **Purpose of the study**

The present study attempts to evaluate the empirical adequacy of the Null Theory of intra-sentential code-switching (CS) proposed by Mahootian (1993), Mahootian and Santorini (1996) have positive evidence from Balti/English CS.

### **Background**

Contact between languages is becoming a prominent phenomenon as a result different experience seems emerging like code switching code mixing and code borrowing. What are the technicalities in these terms that remain triggering in the minds of researchers? A lot of studies have been done in this process and is proliferating vastly. Mostly, the three technical terms merely look similar, but the fact is far beyond that. However, they are different from each other; code switching is seen as a result of two languages coming in contact and used by a bilingual within a clause or out the boundaries of clause (cf. Kachru, 1983; Sridhar & Sridhar, 1980). However, to create distinction among Code switching, code mixing and code borrowing seem a very complicated task. Different scholars, tried to differentiate between CS and other contact in their own way. In short, the use of two languages in a single utterance, while shifting from one to another, generally has been investigated in sociolinguistic or syntactic perspective. Sociolinguistic focuses on social factors which motivate CS and its Speaker who adopts code switching. It primarily concerns with switching between two languages at class boundary i.e. inter sentential CS. While grammatical CS focuses on the formal aspects of CS and determines syntactic and morpho syntactic characteristics with the boundaries of a single code-switched sentence.

Moreover, CS is a grammatical aspect that follows definite grammatical patterns. In early studies, it was considered as un-systematical and ungrammatical practice (cf. Espinoza, 1917; Labov, 1971), later studies proved it to be grammatical and systematical practice. However, not a single agreement among the scholars regarding the grammatical patterns has been agreed upon. With the passage of time, many CS models have been proposed that lack theoretical and adequate counter examples. Similarly, due to different social, religious, economic and educational factors, Balti speakers come in contact with other communities. The interaction of Balti speakers with other language speakers results in the form of language contact. During the past few decades, a wide range of research has been done on the use of two languages within a same utterance.

The phenomena of Balti/English CS need exploration because there has been done no any linguistic studies in the past. This mechanism of CS can be studied in sociological and syntactical ways. However, in a single attempt both aspects cannot be touched. Therefore, the current research focuses on the syntactic aspect of intra-sentence CS patterns in Balti/English. Such a category further divides into other sub aspects. Conclusively, the main focus surrounds the placement of head and complements in Balti/English intra-sentence CS patterns.

### **Significance of the study**

This study aims to study the intra sentential CS patterns of Balti/English sentences. Although both Sociolinguistic and Syntactic aspects are important studies, yet this study deals with the syntactic aspects of intra-sentence Balti/English CS. Apart from theoretical adequacy and empirical importance in the literature on CS patterns, this study is also significant in the sense, that it is the first research on Balti/English on formal aspects of intra-sentential CS. This research will provide a way for the young generation or new researchers to work on the syntactic pattern of Balti bilinguals.

The present study of Balti/English makes a chief contribution on existing knowledge by providing an account of switching patterns found in Balti/English CS. There is no any appeal making to the postulates which are not found to be independently motivated by monolingual data. The proposal offered in the present study has many advantages over the existing CS-models and theories from both theoretical and empirical points of view. Theoretical strength of the study lies in this that it successfully links the issues of code-switching and bilingual capacity to the dominant linguistic theory of the day.

### **Objectives**

The present study aims to establish that:

- N and V being lexical heads do not play any role in determining the placement of their respective complements in Balti/English CS
- Contrary to Mahootian's claim that lexical categories being heads of elementary trees determine the position of their complement, N and V appear to play no role in determining grammatical structure of mixed sentences

### **Research Question**

The study aims to answer the following questions:

1. Do lexical heads determine the position of their complements in Balti/English CS?
2. Does Balti/English CS data support Mahootian (1993), Mahootian and Santorini (1996) proposal that lexical categories being heads of their respective elementary trees of CS account for the full range of CS patterns in Balti/English CS?

### **Delimitation**

The findings of the study must be taken with caution and must not be over generalized. This study is delimited to the evaluation of Null theory of Mahootian (1996). Data for the evaluation of the model will only be taken from Balti bilinguals belonging to Baltistan region.

## Literature Review

According to Bullock and Torbio (2009), the term CS has captured wide range of interest as contact phenomena in the field of linguistics. However, it is hard to distinguish in specific term due to wide reasons factually, “The existence of precise characterization of CS and Classified varieties of language contact notion provides sufficient literature.” (Bullock & Torbio (2009: 2).

Grammarians offers different perspectives; one major concern in CS research is the participation of two different rules in mixing two systems of grammar. During mixing of two grammatical systems the positioning of constituent element is essentially required in order to get the hierarchical structure within the language. Sankof and Poplack (1981), declared that grammatical system of each language takes crucial part in their mixing. Syntactic notions do not agree upon a single idea whether bilinguals CS are a random process or sequential process. Some studies in the last periods of third quarter of nineteenth century hypothesized that CS does not follow any grammar and base on random process. Labov (1971) concludes Code switching as an irregular combination of two different grammatical systems in addition, Lance (1975) says that possibility of no syntactic boundaries found to occur in CS. However, a sharp distinction has been proposed against the claim made by Labov (1971) and Lance (1975) that intra-sentential CS follows specific agreement structurally and rejects the irregularity in CS Phenomenon.

## Null Theory Hypothesis

The scholars have crafted various methods to confront with recurring CS pattern, and they have selected some specific structures to accumulate data. In this context, there come across many scholars who have illustrated grammatical postulates that are accessible to the bilinguals: in this way, they apply the “third” grammar – such a type of grammar which has come to light owing to the intermixing of two totally different languages and this is only in reference to those who have a complete grip on both of those independent languages. Through their inter mixing, a new grammar comes into existence that is what the “third grammar” is all about Poplack (1980), Meyer-Scotton (2002). Such a postulate is nullified by other people who talk about the use of CS in their set of rules on hand in the well-formedness pattern within a “pure” sentence; this strengthens the argument that no CS-specific constraints become mandatory for the collection of CS data (Mahootian and Santorini, 1996). Besides these handlings, one of the major topics of concern in the Null-theory relates to the intra-sentential CS explained by Mahootian and Santorini (1996). That is to say that there is coordination in its structure among the starting phrase and concluding ones, when one highlights the mixed components. To draw attention to some of the other perceptions, one can point out that the determination of types and heads and their respective complements find no room of consciences. The constraint-based models (CBM) looks into the head/complement order again taking into mind the fundamental ingredients, that is equivalence in word-order of the surface within those languages that become the part of discourse (Poplack (1980), (1981) or one of the two languages involved gets an upper hand to satisfy the morpho-syntactic frame that is described after the mixing of both languages in the single sentence Myers-Scotton (1993). The null theory viewpoint has been enunciated in the above discussion, whilst the

head/complement construction is destined to agree on the position in the monolingual scheme (Mahootian and Santorini (1996); MacSwan (2005); Chan (2008)). So, conclusively, Null theory according to these scholars Mahootian and Santorini (1996), MacSwan (2005) and Chan (1999) denounces the use of constraints in the case of bilingualism at the same time pushes forward the mono-linguists to overdo the bilingualism perspective.

### **Lexical Head and Complement**

Mahootian and Sanatorini (1996), presented a model on Bilingual CS patterns that is based on Josh's (1985) TAG (tree adjoining grammar). This model mainly claims sentences in the result of assembling partial trees. TAG formed a sentence using a set of lexical entities encoding partial tree formation; these trees are structured by putting different partial tree utilizing adjunction and replacement. It is understood that these partial trees are already structures encoded by lexical entries pre specified in the mental lexicon. Hence, the complement of lexical head pre determines in the lexicon through partial tree structure. Mahootian and Santorini (1996) declare that CS never contravenes the lexical placement rule of both languages. He further says that there is not any specific constraint to administer such interaction. Structures are encoded in the lexicons. Hence, no additional intervening control system is needed to form lexical insertion principle with the terminal nodes of phrase marker. They claim lexical heads control grammatical aspects and placement of complement in the tree assembled by bilinguals and in substitution. Furthermore, they note the assembled tree through substitution differ from the tree which is formed through adjunction. The fact, that if the partial tree formed through adjunction or substitution determines the control of head over its complement. Trees, assembled through substitution, are considered as complements. While trees assembled through adjunction are considered as adjuncts. According to Mahootian and Santorini (1996), the distinction between adjuncts and complements depends upon the level of control of head over its own complement.

Providing evidence from English/Farsi CS sentences, Mahootian and Santorini (1996) elaborate the function of the surface order of its constituents, and elucidate that specific potential mixing will not be possible because the different surface orders VO and OV of English and Farsi respectively disallow them for CS at these points. Look at this example which they find in the whole corpus of Farsi/English Code switching: they found neither a Farsi object preceding English V nor an English object preceding a Farsi V. On the basis of this lack of CS potential between Farsi and English, they argue that this is due to the differences in their basic phrase structure rules.

### **Material and Method**

The competency levels of bilinguals have certain level of control on both the languages. So, the kinds can be classified on the grounds of their grip and authority on both the languages. At this stage of duration and age limit, from which the exposure to other language counts adding the strength of grasp on both languages: these features distinguish CS and their contacting technique (Poplack, 1981). In most of the cases, it has been observed that the 'balanced' (bilingual speakers, switching from one language to another effortlessly, spontaneously and naturally) scheme for code switching is opted (Poplack, 1981, MacSwan, 2005). Therefore, this work also concentrates on the

‘Balanced’ Balti-English bilinguals in participations. In addition to that, the current task backs up MacSwan’s (2005) concept that those language learners who have learnt the second language in later times of life must be dealt with a great care or must not be made part of the discussion. So, this research surrounds around most of the young talented students who have comparatively same sense of control and grip on both the languages. In order to conduct the research, a group of participants has been selected with similar socio-economic background for brighter side of code switching. The participants comprise of the undergraduate students who are native speaker of Balti language and are balance bilingual of Balti English studying in different universities of Lahore.

In order to collect data, the groups of participants were taken, and they were given an opportunity to participate in the discussion whilst recording went on. The time spent on this was almost 2 hours with 6 different sessions of recordings. All of the members/participants were the close friends so it was ensured to have them behave in a natural way while the discourse was being recorded. This was the only best possible way to get an access to the natural way of CS among the Balti native speakers. The sampling has been done through the corpus in Balti/English CS. 500 sentences have been assembled from the corpus for this research study. Among them, there were more than 350 CS-sentences and nearly 150 were original Balti sentences. The corpus contains large number of mixed sentences that clearly indicate regarding the participants who are the almost balanced bilingual speakers, switching from one language to another effortlessly, spontaneously and naturally. From those combined or mixed data, every 5<sup>th</sup> of the sentences is focused further for analyzing the naturally occurring data for the sampling purpose. The statistical information regarding the corpus that is the number of interactions, participants’ number and interaction number have been enlisted in the table below:

**Table 1.** Number of interactions, participants’ number and interaction number

Total duration of recording	2hours
No of interactions	6
No of participants	40
Participant numbers in each interaction	5-7
No of total sentences in the corpus	500
No of mixed sentences in corpus	350
No of unmixed sentences in corpus	150

The gathered data is described orthographically for better understanding of the subject. Moreover, the Roman alphabetic method is adopted as that is considered the cornerstone with multi morphemic glosses and similar grammatical data tools from Balti. Following the rule, the sampling has been kept Bold-faced. First of all, the orthographically-transcribed tactic is utilized to comprehend the scheme and brought them in the form of list according to the naturally-occurring Balti/English CS-data.

## **Ethical Consideration**

The researcher has met the participants and through consent letter informed them about the purpose of recording their conversation before the process of recording. The data was collected by the Balti English bilinguals through the recording conversation after seeking prior approval to take part in the recording process for the corpus. The participants were asked the questions with the assurance that their conversations are being recorded purely for research purpose and after that their conversations were going to be disposed.

## **Evaluation of Mahootian and Santorini (1996) Proposal**

Mahootian and Santorini (1996) proposed this model regarding the lexical head and placement of complement in intra-sentential CS. It highlights the empirical challenges posed by Balti/English CS data to the proposal that lexical categories being the heads of elementary trees determine the placement of their complement projections.

## **Lexical Heads and Placement of Complement**

Mahootian and Santorini (1996) describe in connection with the statement of Joshe (1985) TAG that the parts are the resultant in the whole framework; adding that, the argument goes on saying that the sense formed by the lexis reflects a specific scheme. In their view, the lexicons are used as the determiners for positioning and pointing towards its complement. Moreover, it is stated that the mechanism of code switching, neither breaks the law during the lexical inclusion nor disturbs the sequence of the head complement. It can be said that the CS specific constraints have no role to play in the CS framework. It is further argued that the lexical head is already put in between the sentences. So, it is of no further use to bring them in a separate way. It is also made the statement that framework is predetermined in the lexical head. Therefore, it is useless to talk about the authorizing entities to insert lexicons in a phrase marker. From the point of views of Mahootian and Santorini (1996), the variation in complements and adjuncts depends upon the concerned heads. With the help taken from Farsi/English CS, they state that the surfacing of the parts and differentiation in both the languages have different schemes that are English with VO and Farsi with OV mechanism which hinders or stops code switching during the discussion. Through observation, it has been brought to light that in the entire discourse there is not a single utterance of a Farsi word before English V or vice versa. They focus on the phrase structure that ceases code switching in Farsi/English code switching.

However, these switching patterns between Balti/English CS-data have been analyzed in order to evaluate the claim made by Mahootian and Santorini (1996). The majority of CS patterns in Balti/English corpus create challenge to Mahootian and Santorin (1996). Proposal, that N and V being the heads define the position of complement in Balti/English patterns. Hence, according to Mahootian and Santorini (1996) English V in Balti/English CS should organize in post-head position of complement as encoded in lexicon of elementary tree in order to support with the empirical adequacy. However, the data from Balti/English CS examines that in this study, none of the English Vs determine pre-head placement of their respective complements.



(1) Diring nadang-ni taleem-i set up po bi kha discuss bain

[[[[[Today<sup>Adv</sup>][DPwe<sup>Det Erg</sup>][NPeducational<sup>Acc</sup>][DPthe of<sup>fAd</sup>][VP V do will]]]]]]

*Today we will discuss about the educational set up*

The token of English V in example No (1) as documented in naturally occurring data seems to be inactive root without any morphological properties. The mixed Complement [talem-i set up po] in example (1) is placed before the English V *discuss*. This placement of object DP runs contrary to Mahootian and Santorini (1996) propose. In example (1) the complement [talem-i set up po] has been placed at pre-head position in clear violation of the grammatical requirements of the English language. English, being the head-first language requires its object DP to follow the lexical head but the data (1) demonstrates the object DP preceding English V. Thus, the data (1) clearly shows that the placement of complement does not follow the grammatical requirements of the language which provides the head of an elementary tree in VP.

(2) Miong-ni si Merit-i khayal yaq-pa mad

[[[NP People<sup>Erg</sup>][NP of<sup>fAd</sup>][Adjpcare take do not]]]

*People do not take care of merit*

The token of English V in example No (2) as documented in naturally occurring data seems to be inactive root without any morphological properties. The mixed complement DP [I-khayal] in example (2) is placed before the English V *merit*. This placement of object DP runs contrary to Mahootian and Santorini (1996) propose. In example (2) the complement [I-khayal] has been placed at pre-head position is a clear violation of the grammatical requirements of the English language. English being the head-first language requires its object DP to follow the lexical head but the data (2) demonstrates the object DP preceding English V. Thus, the data (2) clearly shows that the placement of complement does not follow the grammatical requirements of the language which provides the head of an elementary tree in VP.

(3) Nadang-la Shargo student-kunn-i support bia rgos pin

[[[DPWe<sup>D-Dat</sup>][DP poor<sup>Adj</sup> of<sup>fAd</sup>][VP do<sup>V</sup> should<sup>T</sup>]]]

PL INF

*We should support the poor student*

The token of English V in example No (3) as documented in naturally occurring data seems to be inactive root without any morphological properties. The mixed complement DP [Shargo student-kun-ni] in example (3) is placed before the English V *Support*. This placement of object DP runs contrary to Mahootian and Santorini (1996) propose. In example (3) the complement [Shargo student-kun-ni] has been placed at pre-head position in clear violation of the grammatical requirements of the English language. English being the head-first language requires its object DP

to follow the lexical head but the data (3) demonstrates the object DP preceding English V. Thus, the data (3) clearly show that the placement of complement does not follow the grammatical requirements of the language which provides the head of an elementary tree in VP.

- (4) Daikha khong la basic health-i facililites-kun thoba mat ju  
 [[[[AdvP There<sup>Adv</sup>][DP they<sup>D</sup> -Dat ] [ DP of<sup>Ad</sup> ] [VP be<sup>V</sup> not ]]]]  
 PL/3 PL Pre/PL Neg

*In our society girls are deprived of their basic health facilities.*

The token of English V in example No (4) as documented in naturally occurring data seems to be inactive root without any morphological properties. The mixed complement DP [basic health-i] in example (4) is placed before the English V *Support*. This placement of object DP runs contrary to Mahootian and Santorini (1996) propose. In example (4) the complement [basic healt-i] has been placed at pre-head position in clear violation of the grammatical requirements of the English language. English being the head-first language requires its object DP to follow the lexical head but the data (4) demonstrate the object DP preceding English V. Thus, the data (4) clearly shows that the placement of complement does not follow the grammatical requirements of the language which provides the head of an elementary tree in VP.

The example 1-4 order of head and complement for tokens of English Vs from the natural occurring data of Balti/English Intra-Sentential CS Sentences the linear order vigorously violates the linear order rule of English language as English is the head initial language thus Example 1-4 violates the claim made by Mahootian and Santorini (1996). This proposal has also been rejected by (Malik, 2015) providing empirical example from Urdu/English CS sentences example

- (5) *Aap kis party ko support kar -rahay heyn?*

you D whichRP -Acc dov -ing beAux

3/PL SG Asp/PL/Mas Pre/PL/Mas

*Which (political) party are you supporting?*

(Malik, 2015: 1)

The token of English Vs in example 4 and 1 as documented in naturally occurring data seems to be inactive root exposed off all morphological properties, however, the complement stood after the verb. Example 4 and 5 from empirical data seems that Placement of complement is being controlled by the Lexical Heads “Vs”. As Vs are provided by English language and the linear order is in accordance with English language hence, example 4 and 5 of Balti/English CS Intra-sentential Sentence support the Model proposed by the Mahootian and Santorin (1996).

- (6) do-la nadang-la nizam-ay taleem-ing reform-kun khiong-ma rgosaid ju

[[[for that][ we<sup>Acc/dative</sup>][ system-of education in N Pl bring to need honor]]]

*for that we should bring in reforms in system of education*

The token of English N in example No (6) as documented in naturally occurring data seems to be inactive root without any morphological properties. The mixed complement Post P in Object NP [nizam-ay taleem-ing] in example (6) is placed before the English N *Reforms*. This placement of object DP runs contrary to Mahootian and Santorini (1996) propose. In example (6) the complement [nizam-ay taleem-ing] has been placed at pre-head position in clear violation of the grammatical requirements of the English language. English takes head-first language, requires its object DP to follow the lexical head but the data (6) demonstrates the object DP preceding English N. Thus, the data (6) clearly shows that the placement of complement does not follow the grammatical requirements of the language which provides the head of an elementary tree in NP.

- (7)            nadang- la teaching-ni method po thk bia rgospin  
                  we<sup>Alla/dat</sup>            N<sup>Erg</sup> of N +Det            Correct do need

*we must correct the method of teaching*

The complement PostP in the Object NP [teaching-ni method po] in (7) is placed before the switched English N *method*. This is also the head word in the sentence which clearly violates the grammatical requirement Of English N. Thus, example (7) documents in Null theories of Intra-sentential CS made by Mahootian and Santorni (1996) i.e., lexical category as the heads of partial elementary trees define positioning of their complements that can be on either left side or right side. Recurring evidences of pre-head positioning of complement PPs as selected by English Ns in the mixed NPs highlights the positioning of complement in a partial tree is not determined by lexical categories that which select these. Since, Ns also serve as heads of elementary trees PP/Post Ps are or substituted into, position of the complement PP/Post Ps should be determined by Ns. Furthermore, the positive data gives instances where pre-head placement of complement PP/Post Ps or not authenticated by Ns.

- (8)            nadang-la sabaq lxab-i new method kun-sa use bia rgospin  
                  [[[we<sup>Alla/dat</sup> [lecture teaching of new N-Pl -too][ V v    need to]]]

*We should have to use the new methods of teaching*

The token of English N in example No (8) as documented in naturally occurring data seems to be inactive root without any morphological properties. The mixed complement DP [sabaq lxabi] in example (8) is placed before the English N *new method*. This placement of object DP runs contrary to Mahootian and Santorini (1996) propose. In example (8) the complement [sabaq lxabi] has been placed at pre-head position in clear violation of the grammatical requirements of the English language. English being the head-first language requires its object DP to follow the lexical head but the data (8) demonstrates the object DP preceding English N. Thus, the data (8) clearly show that the placement of complement does not follow the grammatical requirements of the language which provides the head of an elementary tree in NP.

- (9) Dio policy fchokhun-kun-i zimadari in  
Distr P maker-N-Pl-Erg responsibility Aux-is

*This is the responsibility of Policy maker*

The token of English N in example No (9) as documented in naturally occurring data seems to be inactive root without any morphological properties. The mixed complement DP [zimadari in] in example (9) is placed before the English N *Policy maker*. This placement of object DP runs contrary to Mahootian and Santorini (1996) propose. In example (9) the complement [zimadari in] has been placed at pre-head position in clear violation of the grammatical requirements of the English language. English being the head-first language requires its object DP to follow the lexical head but the data (9) demonstrates the object DP preceding English N. Thus, the data (9) clearly shows that the placement of complement does not follow the grammatical requirements of the language which provides the head of an elementary tree in NP.

- (10) fees po- la hltasay sabag-i qualitative thek mad  
fee Det<sup>Alla/dat</sup> as compere to<sup>Erg</sup> N correct not

*The quality of education is not in accordance with fees-rate*

The token of English N in example No (10) as documented in naturally occurring data seems to be inactive root without any morphological properties. The mixed complement DP [sabag-i] in example (10) is placed before the English N *Quality*. This placement of object DP runs contrary to Mahootian and Santorini (1996) propose. In example (10) the complement [sabag-i] has been placed at pre-head position in clear violation of the grammatical requirements of the English language. English being the head-first language requires its object DP to follow the lexical head but the data (10) demonstrates the object DP preceding English N. Thus, the data (10) clearly shows that the placement of complement does not follow the grammatical requirements of the language which provides the head of an elementary tree in NP.

The example 6-10 order of head and complement for English Ns from the natural occurring data of Balti/English CS sentences vigorously violates the linear order rule of English language as English is the head initial language thus, this insertion of Complement of N in the above NP is also against the claim made by Mahootian and Santorini (1996). The claim says that placement of complement is determined by the language which provides Ns in CS sentences rejected by (Malik, 2016) providing counter example from Urdu/English CS sentences example:

- (11) oil ki puraani COMPANIYAAN

ofAd oldAdj companiesN Fem Old oil companies

- (12) Gas load-shedding ka MASLA

OfAd issue N Mas Issue of gas load-shedding

(Malik, 2015)

The example 11 and 12 from positive data that Placement of complement seems controlled by English Lexical Heads “Ns” from the natural occurring data of Balti/English CS sentences the linear order is in accordance with English language hence, example 11 and 12 of Balti/English CS sentences supports the Model proposed by Mahootian and Santorin (1996).

- (13) Nadang-la teaching-ni method po theak bia rgospin  
 We<sup>Allat/Dat</sup> N of N Det Correct do need

*We must correct the method of teaching*

The complement PostP in the Object NP [teaching-ni method po] in (13) is placed before the switched English N *method*. This is also the head word in the sentence which clearly violates the grammatical requirements Of English N. thus example (13) documents in this research, gives contradictory patterns and deny the claim made in Null theories of Intra-sentential CS made by Mahootian and Santorni (1996) i.e. lexical category as the heads of partial elementary trees defines positioning of their complements that can be on either left side or right side. Recurring evidences of pre-head positioning of complement PPs as selected by English Ns in the mixed NPs highlights the positioning of complement in a partial tree is not determined by lexical categories that which select theses. Since Ns also serve as heads of elementary trees PP/Post Ps is or substituted into, position of the complement PP/Post Ps should be determined by Ns. Furthermore, the positive data gives instances where pre-head placement of complement PP/Post Ps or not authenticated by Ns.

In addition to that, when it is describing the naturally occurring mixed Balti-English NPs in (13) the empirical evidence from naturally-occurring and elicited Urdu/English CS-data(1)-(13) presented by the task goes against the explanations of Mahootian and Santorini (1996) which states that lexical heads of partial trees determined placement of their complements. As mentioned in the works, the positioning, discussed by English Vs and Ns in both VPs and NPs respectively in positive data is not licensed by V or N. In Balti/English CS, mixed VPs may be headed by English or Balti V but placement of complements DPs in the data (1)-(13) stances independent of both Balti and English V. In accordance with that, the positioning of complement PPs in the given data is totally free from N.As reflected by the task that the liner order of constituents never follow the requirement of language which supplies lexical heads; they play no role in specifying grammatical characteristics included that the positioning of their respective complements as claimed by Mahootian and Santorini (1996).

## Conclusion

The present study attempts to evaluate the empirical adequacy of the Null Theory of intra-sentential code-switching proposed by Mahootian (1993) and Mahootian and Santorini (1996) with naturalistic corpus from Balti/English CS. This study deals with the syntactic aspects of intra-sentential CS with Balti/English corpus. The main objective of this study was to evaluate the claim made by Mahootian (1996) that N and V being lexical heads determining the placement of their respective complements in Balti/English CS. Contrary to Mahootian’s claim that lexical categories

being heads of elementary trees determine the position of their complement, N and V appear to play no role in determining grammatical structure of mixed sentences. However, a research has been conducted and 40 'balanced' Balti/English bilinguals who participated in this research study. The participants are divided into 4 groups in order to organize the conversation. The recorded data has been transcribed in Roman Script with proper multi Morphemic Isoglossing.

Mahootian (1993) and Mahootian and Santorini (1996) propose that there are no additional grammatical constraints on mixing of two independent grammatical systems and that lexical categories being heads of their respective *elementary trees* determine the placement of their complements in both 'pure' and mixed sentences in the same way. However, the analysis of the naturalistic Balti/English CS sentences from (1) to (6) as quoted in this research study as empirical evidence. Since (1) reveals that N being lexical head does not play any role in placing its complement projections. It is further stated, that the naturalistic data from Balti/English CS sentences as quoted (7) to (12) in this research study as empirical evidence. Hence, (7) to (12) reveal that V being lexical head does not play any role in placing their complement projections. The data under examination indicates that the placement of complements does not follow the grammatical requirements of the language which happens to provide N and V. In spite of having an English V serving as the head of VP, object DPs in mixed Balti/English VPs are placed at pre-head position resulting on OV order. In the same way, the data under examination indicates that complement PostPs are placed at pre-head position even though the tree is headed by English Ns which requires post-head placement of complement PPs. The data provides multiple instances of projections in which the placement of complements violates the grammatical requirements of the language providing lexical head in violation of Mahootian's proposal.

This research surrounds around the syntactic pattern with the placement of head and complements in Balti/English intra-sentence CS patterns. This research is the first and foremost formal work on intra-sentential CS among Balti/English. After proper assessment of the collected data, it can be described that lexical heads Ns and Vs have no role in placement of their respective complement. The current study poses' challenge to that postulate made by null theory of intra-sentential code-switching proposed by Mahootian and Santorini (1996) with empirical evidence from Balti/English CS. However, another claim that functional category being the head of elementary tree determines the position of respective complements in CS stands and which needs further studies to prove on empirical ground. Hence, this research study provides further research opportunities on the grey area if lexical head do not determine the position of its complement. Further, research need to be conducted whether the functional category being head of elementary tree plays any role in placement of its complement or what will be the other ways.

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