Lexical and Functional Categories in Intra-sentential Code-switching: A Minimalist Explanation

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Abstract

The study aims to account for differences in switching behavior of lexical and functional categories in intra-sentential code-switchingwithin the provisions of the Minimalist Program (Chosmky, 1995, 2000, 2001). It employs both negative and positive Urdu/English code-switching data to support the argument. The positive data examined consists of 58 sentences selected from a corpus of naturally-occurring interactions involving competent Urdu/English bilinguals. The negative data consist of judgments about the well-formedness of 88 different constructed versions of the positive data. Both positive and negative data examined demonstratethat switching of lexical categories is unconstrained whereas functional categories are not only not switched but are also invariably supplied byv-contributing lexicon; however, C, being the phase head itself, may be supplied by either of the lexicons. It is concluded that since lexical categories originate as unspecified lexical roots in the lexicon as proposed by Hale and Keyser (1993), Chomsky (1995), Marantz (1997) and Borer (2005), they may randomly be supplied by either of the lexicons involved but since functional categories carry crucial language-specific information i.e., parameters and define feature specifications and categorial status of unspecified lexical roots, switching of these categories must be highly constrained in order to avoid 'crash'.

Keywords: Intra-sentential code-switching, bilingual linguistic competence, the Minimalist Program, lexical categories, functional categories

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1. Introduction
1.1 Purpose of the study

The studyoffers a new perspective on why lexical and functional categories behave differently in code-switching (CS) without making appeal to any grammatical postulate specifically meant for CS. It proposesthat differences in switching behavior of lexical and functional categories observed in the CS data across different language-pairsshould be ascribed to different conception of these syntactic categories in *Chomsky's (1995, 2000, 2001)* Minimalist Program *(MP). It attempts to account for recurring switching patterns involving different lexical and functional categories found in the positive and negative Urdu-English CS data by invoking* 'root' view of syntactic categories as proposed by Hale and Keyser (1993), Chomsky (1995), Marantz (1997), and Borer (2005).

1.2 Background to the study

Switching behavior of different syntactic categories and their control over their respective complements has been the focus of a number of studies on formal aspects of CS. These studies consistently report that lexical and functional categories behave differently in CS (see, among others, Joshi 1985; Myers-Scotton, 1993).Difference in switching behavior of lexical and categories have been treated differently in different studies (see Joshi, 1985; *Di Sciullo, Muysken & Singh, 1986; Myers-Scotton, 1993;* Belazi, Rubin& Toribio, 1994; Mahootian & Santorini, 1996; *Myers-Scotton & Jake, 2009;* Chan,2003, 2008). Different generalizations regarding switching of these categories have been offered in the literature but none has been successful in offering a systematic and coherent account of these differenceswithout taking recourse to some grammatical postulates specifically meant for CS (see Malik, 2015).

The present study attempts to providean account of sharp differences in switching behavior of different syntactic categories with reference to the dominant linguistic theory of the day i.e., the MP. Assuming no essential differences between monolingual and bilingual linguistic competence, these differences are accounted for within the provisions of the MP which aims to model monolingual linguistic competence. In Section 2, a brief review of literature on grammatical aspects of CS and the advantages of employing the MP as theoretical framework to account for mixed data have been given. Section 3 briefly introduces the participants and the consultants along with the corpus of Urdu/English CS which serves as the source of primary data. The selected sample sentencesfrom the corpus are

analyzed in Section 4 with special emphasis on code-switching of different lexical and functional categories. In Section 5, the findings obtained from the positive and negative data are accounted for in minimalist terms without making appeal to any grammatical mechanisms which are external to monolingual linguistic competence.

2. Code-switching and the minimalist program
Contact among languages and the outcomes of such contact have attracted a lot of scholarly attention and a considerable amount of research has been dedicated to the study of different contact phenomena such as borrowing, code-mixing etc. Among all contact phenomena, CS has been the focus and has received more attention than any other contact phenomenon (Bullock & Toribio, 2009). The term CS is commonly used to refer to the phenomenon in which two or more languages are used by a bilingual alternately either at clause boundary or within a clause (Kachru 1983; Singh 1985). CS has generally been investigated from either a grammatical or a sociolinguistic perspective. Sociolinguistic perspective focuses upon the social factors which motivate CS and the speakers who code-switch,and is primarily concerned with code-switching between two languages at clause boundaries i.e., inter-sentential CS. In contrast, a grammatical approach focuses on formal aspects of CS and attempts to determine syntactic and morphological characteristics within the boundary of a single code-switched sentence, i.e., intra-sentential CS.

Some studies of the early 70s viewed CS as ungrammatical and random phenomenon. For example, Labov (1971) considered CS an irregular mixture of two distinct systems while Lance (1975) argued that there appear to be no syntactic restrictions on where switching can occur. However, in sharp contrast to what Labov (1971) and Lance (1975) propose, later studies on intra-sentential CS show agreement regarding grammaticality of CS and assert that CS is not an 'irregular' or ungrammatical phenomenon. These studies on grammatical aspects of CS have established that CS is indeed constrained by grammatical rules and hence is not just random collection of items of two languages (see Poplack, 1980, 1981; Di Sciullo et.al., 1986; Belazi et. al.,1994).

The problem for the research on grammatical aspects of CS "is not whether or not it [CS] is subject to grammatical constraints but how best to capture these constraints and how to make deeper claims about human language in general and bilinguals' mixing competence and their language

acquisition in particular" (Bhatia &Ritchie, 1996, p.645). All approaches to the study of grammatical aspects of CS are built upon fundamental premise that CS is a grammatical phenomenon; hence, there must be certain grammatical constraints to regulate the process of mixing of two independent grammatical systems (Gardener-Chloros, 2009). To deal with recurring CS patterns, scholars adopt different techniques and methodology, employing different grammatical frameworks to deal with such data. However, there appears to be no common agreement among scholars regarding the nature of constraints. On one hand, there are researchers who propose grammatical postulates which are available only to bilinguals, thereby implying a 'third'grammar which is the result of the mixing of two independent grammatical systems, available only to the speakers who have command ontwo independent grammatical systems (see, among others, Poplack, 1980, 1981; Joshi, 1985; Myers-Scotton, 1993; Jake, Myers-Scotton & Gross, 2002; Myers-Scotton & Jake, 2009). However, the constraint-based models have been found to suffer from empirical and theoretical inconsistencies. *Empirically, theyhave been found to be inadequate,making wrongpredictions regarding switches involving different syntactic categories*(see Malik, 2015; MacSwan, 1999, 2000, 2005).Theoretically, the proposals have been challenged for making appeal to mechanisms which have not been found to be independently motivated in monolingual context. Appeal to such grammatical postulates impliesessential differences in the design of monolingual and bilingual linguistic faculty (see McSwan, 2005).

However, there does not appear to be any valid reason for hypothesizing that monolingual and bilingual linguistic faculty should essentially differ from each other. Therefore, the other group of researchers assumes a Null theory perspective, and categorically rejects such proposals which are specifically meant for CS, arguing that the grammar of code-switched sentences should be accounted for through existing set of grammatical tools which are employed to account for 'pure' sentences; hence no CS-specific constraints are needed to account for the grammar of mixed sentences (see Mahootian &Santorini, 1996; MacSwan, 1999, 2000, 2005; Chan, 2003, 2008). The 'null' theories of CS attempt to establish that CS specific constraints need not be postulated; rather CS should be described in terms of grammatical principles relevant to particular monolingual grammars.MacSwan's (1999) minimalist approach to CS has been one of the mainstream approaches in the literature on formal aspects of CS. Although the MP has got nothing to do with the bilingual language faculty

itself, MacSwan (1999) extends the framework to account for CS within the provisions of a Null Theory of intra-sentential.

Based on the belief that a universal set of principles governs all languages and that differences among languages are the result of different lexically-encoded morphological features the MP attempts to model the 'competence' of a monolingual speaker with a minimal set of apparatus (Chomsky 1995),. The MP views language as consisting of two components: a Lexicon and a Computational System for Human Language (C_{HL}) with two interfaces LF and PF. All the crucial language-specific information in the form of lexically-encoded morphological features is restricted to lexicon while C_{HL} remains invariant across languages. Viewed from a minimalist point of view, CS, thus, should be viewed as an interaction of two sets of lexically-encoded features (the lexicons) through an invariant C_{HL} which computes the values of the features contributed by two lexicons indistinctly (MacSwan 1999). This interaction of two independent lexicons through an invariant C_{HL} may be explained in minimalist terms without introducing any CS-specific postulates. Employing the MP as theoretical framework, MacSwan (1999, p. 151) provides an "explanation of the code switching facts in terms of conflicts in the lexical requirements of words which are independent of code switching-specific mechanisms".MacSwan's (1999) PF Disjunction Theorem is claimed to have universal application, capable of making valid predictions regarding CS within word-boundary.He maintains that a minimalist explanation of CS data is crucially dependent upon language-specific differences in feature specifications of functional categories of the languages involved in CS.

Whereas MacSwan's (1999) approach is based upon a feature checking theory presented in Chomsky (1995) in which checking of features is delayed till all lexical resources are exhausted, Malik (2015) attempts to account for Urdu/English CS by invoking Chomsky's (2000, 2001) Phase Theoryin which features are valued in phases in c-command domain through Agree.By accounting for the grammatical complexities of negative and positive Urdu/English CS data within the provisions ofPhase Theory, Malik (2015) claims that both unmixed and mixed sentences are derived in two distinct derivational chunks i.e., *v*P and CP. Along with their role in determining syntactic dependencies as proposed by Chomsky (2008), C and *v* as phase heads also serve as the loci of switching activity. However, the role of *v* in mixing of two languages is far more crucial than

that of C. As phase head, *v* virtually controls every switch in a sentence exceptswitching between C and its complement TP and any other projections which serve as adjuncts. Since both phases remain inaccessible to each other due to Phase Impenetrability Condition (PIC) as proposed by Chomsky (2001), switching patterns in both phases are determined independent of each other and are subject to the restrictions imposed by feature specifications of their respective heads. All switching patterns within *v*P are determined through feature specifications of *v* while switching activity in CP is determined through feature specification of C. The notion of phase as an independent chunk of a derivation is pivotal to Malik's (2015) explanation of the switching patterns found in Urdu/English CS. This role of *v* is not specifically meant for CS; *v* plays the same crucial role in determining syntactic dependencies in a well-formed 'pure' sentence. Derivation of a well-formed code-switched sentence involves only those grammatical mechanisms and operations which are employed to derive well-formed unmixed sentences. Malik (2015) concludes that this is mutual compatibility of syntactic objects involved in a derivation which serves as pre-requisite for a convergent derivation to take place; a conflict in their feature specifications would lead to a 'crash' in monolingual and bilingual contexts alike as stipulated by the Principle of Full Interpretation (FI). Following Malik's (2015) account of the derivation of code-switched sentence by phases, this study attempts to account for differences in switching behavior of lexical and functional categories with reference to different conception of these categories in the MP.

3. Materials and methods

The studyemploys both negative and positive evidence from Urdu/English CS data to elaborate differences in switching behavior of lexical and functional categories. The positive data documented in the study have been selected from a corpus of Urdu/English CS. The participants in the naturally-occurring conversations recorded for the corpus are undergraduate students of University of Management and Technology (UMT), Lahore. Most of the students at UMT are Urdu/English bilinguals, with Punjabi as their native language. Almost all of them have a very positive attitude towards Urdu/English CS and view it as a symbol of good schooling and membership of an affluent social class. The participants have been selected on the basis of criteria pertaining to the schooling, age at which they were exposed to English, educational background and socio-economic status of their parents etc.Out of preliminary selection of 121

students made on the basis of researcher's personal acquaintance as faculty member of the University, 42 students were finally selected as participants of the conversation to be recorded on the basis of information collected through the questionnaires distributed among 121 students.

The corpus developed for the study consists of 29 interactions which took place within the premises of the University, each involving 4-7 participants, with a total recording time of 4.5 hours. A naturally-occurring conversation among the participants is recorded by one of the participants working as the researcher's associate. The associates are selected from the participants of the interactions recorded for the study. They are present on the spot and actively participated in the interaction. Their presence is instrumental in achieving the maximally natural conversation in natural setting. The statistical information regarding the corpus, the sample and the participants are given in Table 3.1 below:

Table 3.1: The corpus of naturalistic Urdu/English CS and the sample of the study

Total recording time	4.5 hours
Number of interactions	29
Number of participants	42
Number of Participants in each interaction	4-7
Number of sentences in the corpus	1767
Number of mixed sentences in the corpus	1487
Number of unmixed sentences in the corpus	280
Criterion for selection of sample sentences	Every 25th mixed sentence
Number of sentences selected and analysed	58

The elicited data are in the form of grammaticality judgments obtained from the competent Urdu/English bilinguals. Out of 42 participants of the corpus, 20 students with a positive attitude towards Urdu/English CS were selected as the consultants to provide grammatical judgments on the constructed data presented to them. The positive attitude of the consultants towards CS ensures maximally accurate responses from the consultants.The selected consultants were first debriefed about the task they were supposed to perform. The study employs 88 constructed versions of58 naturally-occurringsample sentences selected from the corpus. Each of the negative data is constructed by replacing a particular item with its closest counterpart from the other language in order to determine the grammaticality of different switches. The negative datawere

randomly arranged in the form of 10 different lists with each data receiving 10 judgements about their grammaticality. Each list of the negative data was randomly presented to 10 different consultants. First, the researcher read aloud each item in the list and then asked the consultant to mark it as either Grammatical or Ungrammatical on the list in front of him. Positive or negative judgment about each constructed sentencefurther reinforcesthe positive evidence obtained from the positive data.

4. Analysis and findings

As is the case with other language-pairs, a noticeable feature of naturally-occurring Urdu/English CS also is unconstrained switching of lexical categories including N, V, Adj and Adv. The data examined for the study indicate that lexical categories do not appear to be subject to any grammatical constraints. Consider the naturally-occurring CS data in (1)-(4) below:

(1) Pakistan mein   khaas-toar-per   ye social factors count kertay heyn.
PN^N in^{Ad} $specially^{Adv}$ $these^D$ do^{v+Asp} be^T
3/SG   PLMas/PL Pre/PL
'Especially in Pakistan, these social factors matter a lot'.

(2)Fashion dresses tak limited naheen   hey.
to^{Ad} not^{NEG} be^T
Pre/SG
'Fashion is not limited to dresses'.

(3) Iss   koshish   mein loagwrong sentenceusekertay   heyn.
$this^D$ $attempt^N$ in^{Ad} $people^N$ do^{v+Asp} be^T
SG   3/SG   3/PLMas/PL   Pre/PL
'In this attempt, people use wrong sentences'.

(4)Class mein easily understand naheen   kar   paata.
in^{Ad} not^{NEG} do^{vT+Asp}
Pre/SG/Mas
'(I) could not understand easily while in the class'.

The naturally-occurring data cited above offer multiple instances of switching of lexical categories. The mixed subject DP ye social factors (these social factors) in (1) consists of an Urdu D selecting an otherwise unmixed English NP as its complement, demonstrating switching of N and Adj. The mixed object DP fashion in (2) is headed by a null D selecting an NP headed by an English N. Another interesting case of mixing is the

mixed predicative AdjP dresses tak limited (limited only to dresses) in (2). This mixed AdjP is headed by an English past-participle Adj which selects an adpositional projection headed by an Urdu Post as its complement. In (3), the object DP wrong sentences contain a null D and an unmixed English NP as its complement. The evidence of switching of Adv is presented in (4).

Now consider the constructed versions of the positive data (1)-(4) as (5)-(8) below:

(5) Pakistan   mein   khaas-toar-per   yeSAMAJI   AWAMIL countkertay   heyn.
PN^N in^{Ad} $specially^{Adv}$ $these^D$ $social^{Adj}$ $factors^N$ do^{v+Asp} be^T
3/SG   PL3/PL/Mas   PL/Mas   Pre/PL
'Especially in Pakistan, political, economic and social factors count a lot'.

(6) Fashion dressestak   MEHDOOD naheen hey.
to^{Ad} $limited^{Adj}$ not^{Neg} be^T
3/PL SG/Pre
'Fashion is not limited to dresses'.

(7) Iss   koshish   mein   loagGALAT sentence use kertay heyn.
$This^D$ $attempt^N$ in^{Ad} $people^N$ $wrong^{Adj}$ do^{v+Asp} be^T
SG   3/SG3/PL/Mas   Mas/PLPre/PL
'In this attempt, people use wrong sentences'.

(8) ClassmeinASAANI-SE understand naheen   kar paata
in^{Ad} $easily^{Adv}$ not^{Neg} do^{vT+Asp}
Pre/SG/Mas
'(I) cannot easily understand while in the class'.

Replacement of English N, V, Adj and Adv with their capitalizedcounterparts from Urdu in the data (5)-(8) does not leave any negative impact upon the grammaticality of the constructed data and the consultants unanimously judged them to be grammatical.

For further empirical support, consider the naturally-occurring data in (9) and (10) below:

(9) Thechowkidaarof our hostel is very honest person.
$security-guard^N$
3/SG/Mas
'The security guard of our hostel is very honest person'.

(10) We like thenaansof university cafe.

bread^N
3/SG/Mas
    'We like the bread of university café'.

The mixed complement NP in subject DP in (9) is headed by an Urdu N. In a similar way, the complement NP of object DP in (10) is also headed by an Urdu N. The token of Urdu N in (10) provide further support to the finding that lexical categories are not subject to grammatical constraint and are freely switched between two lexicons. The constructed versions of (9) and (10) given as (11) and (12) which become 'pure' English sentences are readily found to be grammatical by the consultants without any sharp differences in their judgement.

        (11) TheSECURITY-GUARD of our hostel is very honest person.
            'The security-guard of our hostel is very honest person'.
        (12) We like theBREADof university cafe.
            'We like the bread of university café'.

The positive and negative data (1)-(12), thus, demonstrate that there does not appear to be any grammatical constraint on switching of lexical categories. However, there appears to be an important difference between switching behaviour of N and V. The data analysed provide multiple instances of English Ns inflecting with either their original morphology (counting as instances of CS) as is the case with (10) or with the morphology of host language as is the case with English N ticketain (tickets) inflecting with Urdu morphology in (14). Many of English Ns like ticket borrowed by Urdu are now fully integrated into Urdu and inflect with the morphology of Urdu; therefore, they should be considered cases of 'classic' borrowing. However, whether it is the case of borrowing or CS, the grammatical status of N remains identifiable and tends to inflect with either its original morphology in case of 'classic' CSor the morphology of host language in case of 'classic' borrowing. .

However, switching of V, as demonstrated by the data, differs from switching of N. Unlike N, V occurring as a switch in Urdu/English CS appears to be a pure root contributing only some semantic content but playing no role in grammatical operations as demonstrated by the positive data (1)-(4). However, when a V happens to co-occurwith v from the same lexicon, it is clearly identifiable as V and may inflect with its original morphology as demonstrated by the positive data (9) and (10) which contain tokens of English V. Thus the data demonstrate that N does not

appear to be subject to such condition and may inflect either withmorphology of either of language but V may inflect only when it is accompanied by v from the same lexicon; otherwise it remains a root with no grammatical role to play. The co-occurrence of vwith V from the same lexicon thus serves as a pre-requisite for a V to exist as a fully-inflected syntactic object while Ns may inflect even when not accompanied by D (or n) from the same lexicon as demonstrated by (10).

Unlike lexical categories, functional categories, however, appear to be highly constrained. There are two noticeable characteristics of switches involving functional categories. Firstly, although the data examined provide multiple instances of switching of lexical categories, there is not a single instance of switching involving any functional category except for C. Secondly, the data indicate that all functional heads except C are invariably contributed by a single lexicon. In the absence of positive evidence of switching of functional categories, constructed sentences are used to test the descriptive adequacy of this claim. Consider theelicited data (13) and (14) which are constructed by replacing English D with its equivalent Urdu D without any other change:

> (13) *Tumain pata I met TUMHARAY father last week.
> You^D know^{V+Asp}your^D
> 2/Dat   Pst2/Gen
> 'You know I met your father last week.'
> (14) *OURticketain kitni   sale   hui   heyn?
> tickets^N how many^{Q}be^{v+Asp}be^T
> 3/PL/Fem   Fem/InterFem   Pre/PL
> 'How many of our tickets are sold?'

The substitution of Urdu withEnglish D proves to be detrimental to the grammaticality of the constructed versions of the naturally-occurring sentences as the consultants unanimously rejected the constructed data (13) and (14). The data (13) and (14) indicate that (null) English v must be accompanied by English D whereas an Urdu vmust co-occur with Urdu D in a well-formed code-switched sentence.

While switching of English and Urdu D in argument DPs is judged to be ungrammatical as is the case with (13) and (14), the sentences constructed by switching of v and T are not only judged to be ungrammatical but are also reported to be humorous. Although the grammatical status of English do and Urdu ker is not the same and there are important differences in

their categorial status in both languages, (15) is constructed by adjoining a non-finite Urdu T with an English V. On the other hand, (16) is constructed by substituting Urdu vkerwith its best possible English equivalent be adjoined to a non-finite Urdu T. Elicited data (17) demonstrate switching of v.

(15) *Ye-hi time hota hey ENJOY-NAYka
this^D very^{Adv} be^{v+Asp} be^{TT} of^{Ad}
1/SG   SG/Mas Pre/SG INF   Mas
'This is the very time to enjoy'.

(16) * Walima kadress simple BE-NA chahaiye.
wedding^N of^{Ad} be^v should^T
3/SG/Mas Mas   SG/Mas   Pre
 'Wedding dress should be simple'.

(17)*Bhutto -nekuchlandlords apniparty meinADDED
PN$^{N\,Erg}$ some^D his^{D}in^{Ad}
3/SG   PL   3/SG/Fem
'Bhutto added some landlords to his party'.

The constructed data (15)-(17) are unanimously judged to be ill-formed by the consultants. The ungrammaticality of (15) and (16) stems from the substitution of Urdu ker(do) and ho (be) with their rough English equivalents. The use of English Vwith English verbal morphology in (17) leads to ungrammaticality and the consultants unanimously rejected the constructed sentence. Thus the data(13)-(17) suggest that functional heads D, T, v etc., cannot be switched and must be contributed by a single lexicon for a well-formed code-switched sentence.

However, switching behaviour of C radically differs from that of D, T and v. The positive data provide multiple instances offunctional head of CP beingcontributed by one lexicon whereas as all other functional heads are uniformlycontributed by the other lexicon involved in CS. Consider (18)-(20) below:

(18) He said that uss-ney   kuch   kiya   naheen   tha assignments mein.
he$^{D\,-Erg}$something^{D}do^{v+Asp}not^{Neg} be^{T}in^{Ad}
 3/SG   SG/Mas   Pst/SG/Mas
  `He said that he did nothing in the assignments'.

(19) Sub   ye   keh-tay   heyn   ke this is not possible.
Everyone^{D}this^D say^{V+Asp} be^{Aux} that^C
3/PL   SG   PL/Mas   Pre/PL Fin/Dec

'Everyone says that this is not possible.'

(20) I just want to say kebe confident ......
that^C
Fin/Dec
'I just want to say that be confident ....'

The heads of the embedded CPs in (18) and (19) offer an interesting contrast. In (18), an English C selects a mixed TP as its complement in which D, T and v are contributed by Urdu. On the other hand, (19) offers an instance of Urdu C selecting an unmixed English TP as its complement with v, T and D coming from English. Switching between English that and Urdu keas documented in otherwise unmixed (20) is a common characteristic of the speech of proficient Urdu/English bilinguals. The data (18)-(20) clearly indicate that the selection of D, T and v from a particular lexicon does not affect selection of C which may be supplied by either of the lexicons independently.

Further confirmation of switching of C comes from the negative data. Consider the negative data (21)-(23) which are constructed versions of (18)-(20).

(21) He saidKEuss -ney   kuch   kiyanaheen thaassignmentsmein.
That^C he^{D-Erg} something^D do^{V+Asp} not^{Neg} be^{T}in^{Ad}
Fin/Dec 3/SG   SG/Mas Pst/SG/Mas
'He said that he did nothing in the assignments'.

(22) Sub   ye   keh-tay   heyn   THATthis is not possible.
Everyone this^D say^{V+Asp}be^T
3/PL   SG PL/Mas Pre/PL
'Everyone says that this is not possible'.

(23) I just want to say THATbe confident ......
'I just want to say that be confident.......'

Each of the constructed data (21)-(23) is judged to be grammatical although C in each of the sentence is replaced with its counterpart from the other language. Replacing an English C with Urdu C or vice versa leaves no impact on the well-formedness of the code-switched sentences. Thus both negative and positive data (18)-(23)indicate that C, unlike v, T and D, may be switched. Although T and D are always supplied by v-contributing lexicon, C may be contributed by either of the lexicons.

5. Discussion

The switching patterns involving lexical and functional categories found in the data documented in preceding pose challenges for the existing constraint-based models of CS. For example, while the CCIC (Joshi, 1985) and the MLF Model (Myers-Scotton, 1993) predict that lexical categories are unconstrained and may be switched freely, they face challenges in dealing with switching of functional categories. Both of the models restrict switching of all functional categories but frequent C switching in Urdu/English CS data defies such generalization.In order to provide a coherent explanation, the present study attempts to account for the different switching behavior of lexical and functional categories, as demonstrated by the data examined, within the provisions of the MP. Employing Chomsky's (1995, 200, 2001) MP as theoretical framework to account for the systematic differences in switching behavior of lexical and functional categories in Urdu/English CS data ensures an economical and precise description of the intricacies of mixed data without assuming any CS-specific grammatical postulate.

Following Malik's (2015) proposal of derivation of mixed sentences by phases, it is proposed that the differences in switching behavior of lexical and functional categories are due to different conception of these categories in the MP. This is the nature of these syntactic categories which determines whether they will be switched or not. Thus howdifferent syntactic categories originate in the lexicon determines their switching behavior as noted in Section 4. In the MP, the lexicon is viewed as a collection of syntactic categories available to a speaker of a particular language, containing all idiosyncratic features of a language. Following Hale and Keyser (1993), Chomsky (1995), Marantz (1997) and Borer (2005), these syntactic categories are viewed as sets of features whichare broadly divided into two types; one type of sets of features (functional categories) determines categorial status of other sets of features (lexical roots). The categorial status of a lexical root itself is unspecified in the lexicon; neither it is +N (ominal) nor +V (erbal), and becomes verbal if it merges with a functional head like T, and nominal if it merges with a functional head like n or D (Boeckx, 2008). Thus lexical categories originate as pure roots which lack any mark of their categorial status; their categorial status is determined when they merge with functional categories which define the categorial status and feature specifications of lexical roots in terms of their own features.

Since these are functional categories which are associated to parameters(language-specific information) whereas lexical categories depend upon functional categories for their categorial status and feature specifications, the interaction of two independent grammatical systems must put heavy upon constraint on switching of functional categories to avoid 'chaos' whereas lexical categories being unspecified roots need not be constrained. Thus, viewed as category-neutral roots, lexical categoriesmay be switched freely as their categorial status may be defined by a relevant functional category of either of the lexicons. Alexical root, randomly supplied by either of the lexicons, becomes an N when it merges with a D (or n) of either of the lexicons involved in CS. In the same way, a lexical root from either of the lexicons becomes V when selected by a v from either of the lexicons and its features are defined in terms of the relevant functional head which selects it. The positive and negative data (1)-(12) documented in the study clearly indicate that switching of lexical categories is essentially unconstrained and are randomly supplied by either of the lexicons.

The negative and positive data (1)-(12) demonstrate that although V and N may be switched feely, there are important differences in switching behavior of N and V. As the data indicate, V never inflects with morphology of either of the lexicons if it is not accompanied by v from the same lexicon as demonstrated by the data (1)-(4) while N may inflect with morphology of either of the lexicons even if not accompanied by D (or n) from the same lexicon as demonstrated by inflected Urdu N in the positive data (10). Unspecified lexical roots from English selected by an Urdu D turns into a full N and may inflectwith its original morphology in case of CS as demonstrated by the data (1)-(4). Since it is v which serves as Probe and enters into Agree with object DP, all agreement features should be available only on v while V should remain syntactically inactive, with no inflections whatsoever, playing no role in syntactic operations except assigning theta-role to the internal argument. However, as found in the data, when an English root co-occurs with a token ofEnglish v from the same lexicon, it inflects with its original morphology because V gets adjoined to (null) affixal v through head-movement as demonstrated by the positive data (9) and (10) and consequently inflects with its original morphology. But if selected by an Urdu v, verbal root from English shows no morphological properties as demonstrated by tokens of English V co-occurring with tokens of Urdu v. Because of non-affixal nature of Urduv, the unspecified lexical root cannot adjoin to v and consequently cannot be

inflected with morphology of either of the languages.However, if a language does not possess an overt v as is the case with English, V coming from Urdu or any other language may be fully inflected as V gets adjoined to v through head-movement and consequently absorbs all the morphological properties associated to v of the host language (for detail, see Malik, forthcoming).

Since functional categories are associated to crucial language-specific information in the form of parameters, they cannot be switched randomly like lexical categories. As the data examined indicate, although lexical categories being unspecified roots may be supplied by either of the lexicons independently of v, feature specifications of v is very crucial in the selection of functional categories from the two lexicons involved in CS (Malik 2015). The feature specificationsv introduces into derivation require that other functional heads which relate to vat any stage of derivation must bear a compatible set of features in order to satisfy the FIwhich requires that the uninterpretable unvalued features must be eliminated from the derivation before sending material to the interfaces for interpretation. Therefore, functional heads of argument DPs and T of complement TP must be supplied bev-contributing lexicon if there are differences in feature specifications of functional heads of languages involved in CS (Malik 2015).The Φ-features available on Urdu v include number, gender and person while English (null) v lacks gender in its Φ-features; in the same way, D and T from Urdu also include gender in their Φ -features while English D and T lack gender in their feature specifications. Because of these differences in Φ-features and case feature of Urdu and English functional categories, switching of all functional categories except for C is categorically disallowed.

As the negative and data positive (13)-(23) indicate, whereas v, T and D are invariably supplied by a single lexicon, C may be supplied by either of the lexicons no matter which lexicon contributes v. This difference in switching behavior of C on one hand, and v, T and D on the other, is because v, T and D enter into checking relations with each other at different stages of derivation and therefore must possess mutually compatible sets of features for a derivation to converge as stipulated by the FI whereas C being phase head itself does not enter into any checking relation with v and therefore may be supplied by either of the lexicons provided its feature specifications are compatible with its complement TP. Thus feature specifications of v restrict switching of T and D due to the

differences in feature specifications of Urdu and English T and D but C as phase head may be selected from either of the lexicons independently of v as C is selected on the basis of its compatibility with already fixed complement TP (Malik 2015). Instead of being introduced into the derivation on the basis of Φ-features and case-feature, C is introduced into the derivation on the basis of 'propositional'content of the already fixed TP. Wherever the feature specifications of C of two languages are mutually compatible, switching is allowed. As the data (18)-(20) demonstrate, Urdu ke and English C that are consistently switched because both Urdu and English C have matching feature specifications. A mixed or unmixed finite declarative TP will merge with a C if both of them bear mutually compatible sets of features. This is precisely why a mixed or unmixed TP may be selected either by Urdu ke or English thatbecause both Urdu and English C merge with finite declarative TP. As demonstrated by the negative data (21)-(23), replacement of Urdu with English C does not leave any negative impact upon the well-formedness of the constructed data which are unanimously judged to be grammatical by the consultants.

6. Conclusion

The positive and negative Urdu/English CS data documented in the study provide multiple instances of switching of lexical categories but none involving any functional categories except C. Although all lexical categories may be switched, the data examined demonstrate differences in switching behavior of N and V. As demonstrated by the data, T and D of argument DPs are invariably supplied by v-contributing lexicon but C has been found supplied by either of the lexicon independently. These differences in switching behavior of lexical and functional categoriesare ascribed todifferent conception of these categories in the MP. Since lexical categories are viewed asunspecified roots whose status is defined in terms of Φ-features and case feature offunctional heads, category-neutral roots may be supplied by either of the lexicons. However,verbal and nominal roots exhibit different switching behavior in that switched verbal roots never inflect if not accompanied by v from the same lexicon but nominal roots inflect with the morphology of either of the languages as is evident from the data documented in the study. Unlike lexical categories, functional categories must correspond to feature specifications of v and therefore remain highly constrained.However, C exhibits different switching behavior and,being phase head itself has been found to be

supplied by either of the lexicons independently of v on the basis of its compatibility to its complement TP.

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