Oblique Case and Concord in Hindi Noun Phrases: Evidence from Language Acquisition

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Abstract

This paper argues that oblique inflections on a noun in the context of an overt case marker or Layer II postposition is the outcome of a distinct phenomenon than oblique concord, which manifests on modifying constituents on a Complex Noun Phrase (CNP). The paper argues that oblique morphology on a head noun (N^0) of a CNP is triggered by the presence of a postposition, whereas oblique morphology on modifying constituents are a result of concord with this N^0 . Empirical evidence from adult grammar shows that only after CNP internal agreement has taken place, does oblique appear on modifying constituents only if they belong to the inflecting declension class. In addition, empirical evidence from a corpus of Hindi acquisition data suggests that children take the overt appearance of oblique on N^0 as a clue for oblique concord on CNP internal constituents.

1 Introduction

Case morphology on nouns in Hindi-Urdu had traditionally been described in terms of three classes or layers, as Zograf (1976, cited in Masica 1991), and following him Masica (1991), as cited in Pareek (2018). Layer I case marking, also known as Oblique case "attach directly to the base, with morphophonemic adjustments which are occasionally complex" (Masica 1991). This form contrasts with the direct form of the noun and is obligatory in the context of Layer II postpositional clitics, subject to the declension class of the stem (Butt and King 2004, Spencer 2005, Kachru 2006, a.o).

(1) **is ache bacche** =ne **haathoN** =ko dhoyaa. this.OBL.SG good.OBL.M.SG child.OBL.M.SG =ERG hands.OBL =ACC wash.PFV 'This good child washed (his) hands.'

In (1), the noun baccaa 'child', the adjective acha_ 'good' and the demonstrative pronoun ye 'this' appear in their oblique forms, as the CNP in the subject is followed by the -ne ergative marker. The noun in the object of the clause haath 'hands' also appears in its oblique form as it is followed by the -ko accusative marker. This paper shows that oblique on the nouns, and oblique on the adjective and demonstrative pronoun are due to structurally different relations, where one precedes the other.

The paper is organized as follows: Section 2 describes the distribution of oblique morphology in the language. The declension classes of lexical and functional items, in the capacity of head noun as well as modifying constituents² in a CNP that inflect for oblique are described in some detail. Section 3 discusses why these comprise of two distinct structural phenomena, giving evidence from adult grammar. Section 4 provides a description of the study from which the corpus of acquisition data emerged, followed by a summary of the relevant data. This section then proceeds to discuss grammatical as well as ungrammatical applications of the rules characterizing oblique morphology in the acquisition data, and the evidence that emerges for the proposal in this paper. Section 5 provides a discussion and concludes the paper.

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²The term modifying constituents has been used loosely here to refer to any category that may contribute some modifying content in a CNP, including demonstrative and relative pronouns, wh-words, adjectives, particles denoting modification (the possessive marker and VAALA_).

2 The distribution of oblique morphology in HU

Oblique morphology is seen in HU in the form of inflections on -aa ending masculine singular nouns,³ and plural nouns of both masculine and feminine genders, in the context of case marking postpositions on the noun phrase, as can be seen in (2) and (3) below.

- (2) bacce =ne khaanaa khaayaa. child.obl.m.sg =erg food.m eat.pfv.m.sg 'The child ate food.'
- (3) **laRkiyoN** =ko bhuukh lagii. girls.OBL =DAT hunger feel.PFV 'The girls felt hungry.'

Suppletive forms are found in the grammar for marking oblique on functional categories such as wh-words and pronouns, as seen in (4) and (5), respectively, the latter of which consists of a demonstrative pronoun as well as a relative pronoun.

- (4) aaj khaanaa **kis** =ne banaayaa? today food who.OBL.SG =ERG make.PFV.M.SG 'Who made/cooked food today?'
- (5) **un** =ko **jin** =ko bhuukh lagii those.OBL.PL =DAT REL.OBL.PL =DAT hunger feel.PFV 'those girls who felt hungry'

Personal pronouns also appear in oblique forms in the context of postpositions. However, there are some exceptions with respect to how different postpositions trigger the oblique on first and second person personal pronouns. As can be seen in Table 1, in the context of ergative -ne marker, First and second person pronouns appear in direct forms, as does the respectful second person pronoun aap 'you' in the context of all postpositions.

The possessive marker and VAALA_5 particle, both postpositions that encode modification in a CNP, agree in gender and number with the N⁰ of the CNP. In the context of these two postpositions,

The oblique form in the complement of VAALA in (i) and (ii) is infelicitous, whereas the direct case forms are infelicitous in (iii) and (iv). A noteworthy anomaly that cannot be dismissed as speaker variation, this inconsistency is beyond the scope of this paper. Kidwai (2012) discusses in more detail the syntactic and semantic distribution of this particle in both the nominal and verbal (infinitival) domains. I thank Rajesh Bhatt for suggesting that there may be more to the restrictions on the use of this particle with respect to oblique morphology.

 $^{^3}$ Exceptions to this rule in the language include some lexical items such as raajaa, raajmaa, -aa ending kinship terms such as bhaiyaa 'brother' and maamaa 'maternal uncle/mother's brother'.

⁴This paper does not delve into the special nature of the ergative marker as a postposition, and the reasons for this differential behaviour with respect to oblique morphology, raising worthy questions beyond the scope of this paper.

⁵The ability of the VAALA_ particle to cause its complement to appear in its oblique form appears to be inconsistent, as can be seen in the following examples:

⁽i) meraa (?mere) vaalaa Dabbaa TuuT gayaa. my.M.SG (?myOBL) VAALA.M.SG box break go.PFV.M.SG 'My box broke.'

⁽ii) vo (*us) vaalaa darvaazaa khulaa hE. that (*that.OBL) VAALA.M.SG door open.M.SG be.PRS 'That door is open.'

⁽iii) dabbe (*Dabbaa) vaalii aurat aa gayii.
box.OBL (*box) VAALA.F woman come go.PFV.F
'The woman with the box has arrived.'

⁽iv) hasne (*hasnaa) vaalii laRkii has rahii hE. laugh.INF.OBL (*laugh.INF) VAALA.F girl laugh PROG.F.SG be.PRS 'The laughing girl is laughing.'

Direct form		Context of Oblique form										
Pronoun		-ne		-ko		-se/-me/-pe/ -par/-sa (comparative)		-ka_/-vaala_				
SG	PL	OBL.SG	OBL.PL	OBL.SG	OBL.PL	OBL.SG	OBL.PL	OBL.SG	OBL.PL			
ye 'she/he/ it/this' proximate	ye	is	inho	is	in	is	in	is	in			
vo 'she/he/ it/that' distant	vo	us	unho	us	un	us	un	us	un			
mE 'I'	ham	mE	ham	mujh/ mere/ mujhe	ham/ $hamaare$	mujh/ mere	ham/ hamaare	mer_{-}	$hamaar_{-}$			
tuu 'you' informal/ disrespectful	-	tuu	-	tujh/ tere/ tujhe	-	tujh/ tere	-	ter_{-}	-			
tum 'you' casual	tum	tum	tum	tum/ tumhaare/ tumhe	tum/ $tumhaare/$ $tumhe$	tum/ tumhaare	tum/ tumhaare	$tunhaar_{-}$	$tunhaar_{-}$			
aap 'you' respectful	aap	aap	aap	aap	aap	aap	aap	aap	aap			

Table 1: Oblique forms of personal pronouns in HU.

the first and second person (informal and casual forms) pronouns also appear with agreement inflections. The *merii* and *meraa* in (6) are contracted forms of the structure PRONOUN+OBLIQUE+POSS, where agreement on the possessive pronoun is the result of an uninterpretable feature bearing functional projection dominating the possessive marker. This understanding of the possessive marker is evolved from Baker's (2008) analysis of agreement in the nominal domain, as adopted by Pareek (to appear).

(6) merii kitaab / meraa juuta / mere juute
1.POSS.F book.F / 1.POSS.M.SG shoe.M.SG / 1.POSS.M.PL shoes.M.PL
'my book/my shoe/my shoes'

In (7), a non-finite participle marking a destination, goal or purpose also takes oblique marking, even though it may not be followed by overt case morphology. The nominalized characteristic of these participles (Baker 2008, Bhatt 2005) allows them to inflect for oblique like other -aa ending nouns.

(7) ME cake **khaane** aayii huuN.
I cake eat.INFI.OBL come.PFV. F be.PRS.1
'I have come to eat cake.'

As a modifying constituent in a CNP, each of these functional items described above, namely question words and pronouns, will also appear in oblique form, if the CNP is followed by a postposition, as seen on the demonstrative pronoun in (8). Oblique concord can also be seen on modifying constituents of a CNP on -aa ending adjectives in (8), the possessive marker and ordinal number in (9), even if the head noun is of a non-inflecting declension class.

- (8) is **gaNde** rumaal =ko phENk do. this.OBL.SG dirty.OBL.SG handkerchief =ACC throw give.IMP 'Throw this dirty handkerchief.'
- (9) laRkii **ke duusre** bhaai =ne kaam kiyaa. girl POSS.OBL.M.SG second.OBL.M.SG brother =ERG work do-PFV 'The girl's brother did the work.'

3 Oblique case versus oblique concord

This paper argues that two manifestations of oblique morphology, namely oblique case and oblique concord, are distinct, the latter being a purely morphological phenomenon, that occurs only after the narrow syntax has spelt out these constituents to the morpho-phonological component. As can be seen in the examples below, after the NP internal agreement for gender and number has taken place, oblique concord appears only on -aa ending modifying constituents, and those whose suppletive forms are available in the lexicon.

- (10) a. saaraa kapRaa gaNdaa hE. all.M.SG cloth.M.SG dirty.M.SG be.PRS 'All the cloth is dirty.'
 - b. saare kapRe gaNde hE. all.m.pl cloth.m.pl dirty.m.pl be.prs 'All the clothes are dirty.'
 - c. saare kapRe =pe raNg hE. all.OBL.M.SG cloth.OBL.M.SG =LOC colour be.PRS 'There is colour on the entire cloth.'

- d. saare **kapRoN** =ko dho. all.M.PL clothes.OBL.M.PL =ACC wash.IMP '(You) wash all the clothes.'
- e. **saaroN** =me miTTii hE. all.OBL.M.PL =LOC mud be.PRS 'There is mud/dust in all (the clothes).'

The quantifier saara 'all' does not mark oblique concord (10-d), even though the grammar does provide its oblique form for M.PL as seen in (10-e), where it functions as N⁰ of the NP/CNP. This is because after M.PL agreement, the resulting form (as seen in 10-b) is not -aa ending, and further concord for oblique is not allowed. However, when the same M.PL form is in the capacity of N⁰ in (10-e) and is followed by a postposition, the oblique form appears. The same observation can be seen for the VAALA_ particle in (11) and (12), and the vowel ending adjective acha 'good' in (13).

- (11) kal vaale axbaar =ko paDho. yesterday VAALA.M.PL newspapers =ACC read.IMP 'Read yesterday's newspaper.'
- (12) puraane **vaaloN** =ko phENko. old.M.PL VAALA.OBL.M.PL =ACC throw.IMP 'Throw the old ones.'
- (13) ache **achoN** =ko Dar lagaa. good.M.PL good.OBL.M.PL =DAT fear feel.PFV 'The best of the best felt fear.'

Additional evidence for this argument emerges when we look at complex postpositions in the language that denote spatial/temporal relations.

- (14) table ke uupar table.F.SG POSS.OBL.M.SG above 'above the table/on top of the table'
- (15) table kii taraf table.F.SG POSS.F direction 'towards the (direction of) table'

In Pareek (to appear), I have discussed that agreement on the possessive marker in these structures is with the constituent denoting the spatial/temporal orientation, that is, with *uupar* 'above' and *taraf* 'direction'. Since these Layer III postpositions have been suggested to have their origin from nouns (Masica 1991, Payne 1995, Svenonius 2006, a.o.), they come specified from the lexicon with gender values, which accounts for the different inflection on the Layer II postposition. The only reason the possessive appears in the oblique form in (14), but not in (15), is because after agreement with *uupar* in (14), it is *-aa* ending and thus allows oblique morphology.

4 Language Acquisition Data

Support for the observations made in the previous section emerges from a corpus of primary language acquisition data from 46 Hindi speaking children. The age range of the participants in this corpus is 23 to 71 months, with a mean age of 49.9 months. This corpus was collected using a combination of elicitation methods and stimulus materials, a part of which was adapted for use in the language, and the other part was created keeping the target language in view (Pareek 2018).

4.1 Methodology and data

The data used for this paper was collected employing a controlled production experiment called 'Case Task' (Ruigendijk 2015), a semi-structured elicitation technique called 'Bag Task' (Eisenbeiss 2009), and a semi-structured production task called 'Agreement Task' (Pareek 2018). The stimulus for the Case Task⁶ consisted of pairs of minimally contrastive pictures and was adapted for use in HU to elicit the use of overt case marking Layer II postpositions in the language through picture description. The stimulus for the Bag Task⁷ consisted of a set of animal toys, each in its own corresponding small bag, all placed in a large duffel bag, to be conducted in a game format with the participant. Stimulus for the Agreement Task consisted of sets of pictures to be conducted in a picture description and story-telling format with the participant.

The total number of analyzable utterances in the three sets of tasks was 13,804, of which approximately 53% were utterances with overt clause structure, while approximately 47% were fragment utterances without an overt clause structure. For the purpose of this paper, all these responses were included for analysis. A total of 14,637 overt NP/CNP arguments were there in this corpus, of which there were 2,521 obligatory contexts for oblique morphology. Obligatory contexts for oblique were those NP/CNPs that had either the head noun or a modifying constituent, or both, belonging to an inflecting declension class, and was followed by a postposition.

4.2 Analysis of Acquisition data

A very high rate of accuracy of approximately 97%, was seen in the application of oblique morphology in the child language data across the age groups in each of the inflecting lexical and functional nominal classes. Grammatical application of the rules for oblique morphology can be seen on the he M.SG noun laRkaa 'boy' in (16), the M.PL form for phuul 'flower' in (17), and F.PL form for ThanDii 'winters' in (18) in the context of different postpositions.⁸

(18) inho =ne **ThanDiyoN** =ke kapRe pehne hE. (62m) they.OBL.PL =ERG winter.OBL.F.PL =POSS.PL clothes.M.PL wear.PFV.M.PL be.PRS.3 'They have worn winter clothes.'

The 3sG pronouns appear in their oblique forms in (19) in the context of the ergative and dative postpositions, and the irregular oblique form of the 1sg pronoun in context of dative marker appears in (20). Similarly, the question word and relative pronoun also appear in the acquisition data in oblique forms in (21) and (22) respectively. Instances of oblique inflection appearing on the non-finite participles when followed by a postposition were also found in the data, as seen in (23).

⁶The Case Task and Bag Task were part of a study titles 'Acquisition of Hindi Case Marking', conducted under the guidance of Dr. Ayesha Kidwai and Dr. Sonja Eisenheiss, funded by JNU/Essex Development Fund.

⁷https://languagegamesforall.wordpress.com/examples-of-games/bag-game/

⁸Age of the participants is represented in months in parentheses along the instance from the corpus.

'I also (want) to play.'

- (21) **kis** =se nikaaleNge? (30m) which.OBL.SG =INS take-out.FUT.1PL 'From which will (we) take out?'
- (22) ... grass **jis** =me phull the. ... grass REL.OBL.SG =LOC flower be.PST.3 '... grass in which there were flowers.'
- (23) ye balloon **phulaane** =ko ... this balloon inflate.INFI.OBL =DAT ... 'This (is) for inflating a balloon ...'

Oblique concord on different categories of modifying constituents was also seen in the child language data with a high rate of accuracy. The adjective and the demonstrative pronoun in (24), the non-finite participle and the VAALA_ particle in (25) are all in their oblique morphological forms. Even in CNPs where N⁰ is of a non-inflecting class of nouns, grammatical appearance of oblique concord can be seen in (25) and (26).

- (24) **is choTe** baby =kaa (43m) this.OBL.SG small.OBL.M.SG baby =POSS.M.SG 'of this small baby'
- (25) shop calaane =vaale bhaiyaa =ne ... (62m) shop operate.INFI.OBL =VAALA_.OBL.M.SG brother =ERG ... 'The brother who operates the shop...'
- (26) laRkii =ne **us** raajaa =ko thank-you bola. (63m) girl =ERG that.OBL.M.SG king =DAT thank-you say.PFV.M.SG 'The girl said thank-you to that king.'

In order to scrutinize the small number of oblique omissions in the corpus, all obligatory contexts for oblique were broken down into categories or types of NP/CNPs into functional (pronouns and wh- words) and lexical items (refer to Table 2). NP/CNPs in the latter of these were further classified into instances of obligatory oblique only on the head noun N^0 with no or a non-inflecting modifying constituent (Type A), instances of obligatory oblique only on the modifying constituent with a non-inflecting Hindi or borrowed English N^0 (Type B), and instances of obligatory oblique on both the modifying constituent and the N^0 . Errors in the last of these was further broken down into omission (*) on both modifying constituent (mod) and N^0 (Type C), omission on modifying constituent but grammatically marked (\checkmark) on an inflecting N^0 (Type D), grammatically marked on modifying constituent with omission on an inflecting N^0 (Type E).

While grammatical instances of pronouns and wh- words in oblique forms were seen in (19) to (21), a noteworthy observation emerges when we look at the errors of omission of the types listed in Table 2.

The utterance in (27) represents an error of omission of Type A, where oblique in the context of a complex postposition is omitted on the lexical item laRkaa 'boy' (the errors of omission being underlined). Oblique morphology has been omitted on the adjective in (28), where N^0 is a non-inflecting noun, that is, it is an error of Type B. The utterance in (29) is an error of Type C, where oblique has been omitted from both the demonstrative pronoun and the noun laRkaa 'boy'. In (30), the oblique grammatically appears on the possessive marker, but is omitted on the N^0 maTkaa 'waterpot'.

Type of NP/CNP			✓	*	Omissions%
ne	Pronouns	1924	1922	2	0.10
Obligatory contexts for oblique (Inflecting NP/CNP + postpositional/Layer II)	wh-word	13	13	0	0.00
	\mathbf{A} : (Hindi) \mathbf{N}^0	232	197	35	15.09
	B: mod only & a non-inflecting				
	$(English/Hindi) N^0$	266	230	36	13.53
	(only OBL concord)				
	C: *on mod & * on inflecting (Hindi) N ⁰	86	75	6	6.98
	(*OBL case + *OBL concord)				0.30
	D: *on mod & \checkmark on inflecting (Hindi) N^0		-	0	
	(\checkmark OBL case + *OBL concord)				-
	E: \checkmark on mod & *on inflecting (Hindi) N ⁰			5	5.81
0	(*OBL case + \checkmark OBL concord)		_	9	5.61
Total		2521	2437	84	3.33

Table 2: Appearance of oblique in child language data

Other than omissions of these types, there were 4 instances of overextensions of oblique morphology to non-inflecting nouns in the context of a postposition. In (31), a F.SG lexical item *parii* 'fairy' has been over-extended to refer to a M.SG referent by changing the -ii ending to -aa ending,⁹ and subsequently applying the oblique marking rule to a M.SG novel noun. There are 2 more instances of the same in this participant's data. In (32) as well, there is an over-extension of oblique on a non-inflecting noun.

With respect to oblique concord, 13% omissions were seen on modifying constituents of CNPs where the head noun belonged to a non-inflecting class. In contexts of obligatory oblique case and concord both, the rate of error was 7% for omissions on both noun and modifier, and 6% where concord is accurate but oblique case is omitted on the head noun. There were no instances where oblique is correctly marked on the head noun, but omitted on the modifier. A majority of these errors were concentrated in the data of 7 participants, and looking at both grammatical and ungrammatical use of oblique marking in this subset of the data suggests the following: oblique morphology on the head

 $^{^{9}}$ The general rule in the language is that -ii ending nouns are of feminine gender and -aa ending nouns are of masculine gender. There are, of course, exceptions to this generalization as well.

nominal functions as a trigger for oblique concord on modifying constituents, which is indicated by errors of omission on modifying constituents of CNPs where the head noun is of a non-inflecting type, as well as zero errors where oblique has been omitted on the modifier of an oblique marked head noun. With respect to the postpositions' capacity to trigger oblique case, the participants appear to behave uniformly across all postpositions.¹⁰

5 Discussion

This paper argues that the two manifestations of oblique, namely oblique case and oblique concord, are distinct, the latter being a purely morphological phenomenon, that occurs after the narrow syntax has spelt out its constituents to the morpho-phonological component. Empirical evidence from fluent adult grammar as well as language acquisition data is presented. This analysis deviates from the term concord denoting NP internal agreement (Carstens 2000, a.o.), so as to differentiate the two, and instead suggests that after NP internal agreement has taken place, oblique concord appears only on -aa ending modifying constituents and those whose suppletive forms are available from the lexicon. While this paper makes no claim about the syntactic processes responsible for agreement in the NP/CNP internal structure, it does tease apart agreement morphology for gender and number on modifying constituents from oblique concord in this structure.

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¹⁰An exception to this finding was with respect to the ergative marker for two participants. For one participant, all instances of oblique omissions were limited to the ergative marked subject, and for the second participant the same observation was made for part of the data. However, no conclusion can be drawn with respect to the relation between ergative marking and its ability to trigger oblique, with the data of these two participants.

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