

1 The Phenomenon of Long Distance Agreement

1.1 The basics of agreement in Hindi-Urdu

Most prominent non-overtly case-marked argument triggers agreement:

- (1) a. Nominative subject, Accusative object, both non-overtly case-marked

Rahul kitaab **parh-taa** **thaa**
Rahul.M book.F read-Hab.MSg be.Pst.MSg

'Rahul used to read (a/the) book.'

- b. Ergative subject, Accusative object, only object is non-overtly case-marked

Rahul-ne **kitaab** **parh-ii** **thii**
Rahul-Erg book.F read-Pfv.F be.Pst.FSg

'Rahul had read the book.'

- c. Ergative Subject, Overtly marked accusative object

Rahul-ne kitaab-ko **parh-aa** **thaa**
Rahul-Erg book-Acc read-Pfv.MSg be.Pst.MSg

'Rahul had read the book.'

The main verb and associated auxiliaries all agree with the same argument.

- (2) **tum** har samay sigret **pii-te** **rah-te** **ho**
you.Pl every time cigarette drink-Hab.Pl 'stay'-Hab.Pl be.Prs.2Pl
'You keep smoking cigarettes all the time.'

Things that agree: Participles, Adjectives, Subjunctives, Futures, finite forms of *be*

Participles (Habitual, Progressive, Perfective), Adjectives that end in *-aa*, and *be* in the past agree only in number and gender.

Hab	M	F
Sg	-taa	-ti:
Pl	-te	-ti:/-tī:

Prog	M	F
Sg	rahaa	rahi:
Pl	rahe	rahi:/rahi:

Perfective	M	F
Sg	-(y)aa	-(y)i:
Pl	-(y)e	-(y)i:/-(y)i:

<i>lambaa</i> 'tall'	M	F
Sg	lambaa	lambi:
Pl	lambe	lambi:

be.Pst	M	F
Sg	thaa	thi:
Pl	the	thi:

be in the present tense and subjunctives only agree for Person and Number.

be.Prs	1	2	3
Sg	hū:	hE	hE
Pl	hĒ	ho	hĒ

Sbjv	1	2	3
Sg	-ū:	-e	-e
Pl	-ē	-o	-ē

The future is the only form that agrees in person, number, and gender. That it agrees in all three is not surprising because it is a morphologically complex form that consists of the subjunctive ending, which agrees in number and person, and a participial form, which agrees in number and gender.¹

Sbjv	1	2	3
MSg	-ū: gaa	-e gaa	-e gaa
MPl	-ē ge	-o ge	-ē ge
FSg	-ū: gii	-e gii	-e gii
FPl	-ē gii	-o gii	-ē gii

Bare verbs, and certain adjunct constructions (*-V kar* 'having V-ed') do not display any agreement.

- Diagnosing Finiteness, ϕ -completeness.

¹The subjunctive ending and the participial form in the Hindi future are very closely bound now and no element may intervene between them. According to Kellogg (1893), in an earlier stage, certain focus particles could intervene between the subjunctive ending and the participial form.

1.2 Long Distance Agreement

Long Distance Agreement (LDA):

- (3) Vivek-ne [kitaab parh-nii] chaah-ii
Vivek-Erg book.f read-Inf.f want-Pfv.f
'Vivek wanted to read the book.'

1.2.1 Environments

LDA is only possible with arguments of non-finite complements.

- (4) a. Nadia-ko [gaarii chalaanii] aa-tii hai
Nadia-Dat car.f drive-Inf.f come-Hab.f be.Prs
'Nadia knows how to drive a car.'
- b. Nadia-ne [per kaṭ-ne] di-ye
Nadia-Erg trees cut_{intr}-Inf.Obl let-Pfv.Pl
'Nadia let the trees get cut.'
- c. Nadia-ne [Sarosh-ko gaarii chala-ne] di-i
Nadia-Erg Sarosh-Acc car.f drive-Ger.Obl let-Pfv.F
'Nadia let Sarosh drive the car.'
- (5) a. Firoz-ne soch-aa ki [Mona ghazal gaa-tii hai]
Firoz-Erg think-Pfv.3MSg that Mona.f ghazal.f sing-Hab.f be.Prs
'Firoz thought that Mona sings ghazals.'
- b. *Firoz-ne soch-ii ki [Mona ghazal gaa-tii hai]
Firoz-Erg think-Pfv.3FSg that Mona.f ghazal.f sing-Hab.f be.Prs

Constraints on LDA: no internally licensed subjects:

- (6) a. Embedded infinitival clause can have a genitive subject:
Firoz-ne [Shabnam-kaa roṭii khaa-naa] chaah-aa thaa
Firoz-Erg Shabnam-Gen bread.f eat-Inf want-Pfv.3MSg be.Pst.MSg
'Firoz had wanted Shabnam's eating bread.'
- b. LDA not possible in presence of genitive subject of infinitival clause:
*Firoz-ne [Shabnam-kaa roṭii khaa-nii] chaah-ii thii
Firoz-Erg Shabnam-Gen bread.f eat-Inf.F want-Pfv.3FSg be.Pst.F
- c. LDA possible if there is no subject:
Firoz-ne [roṭii khaa-nii] chaah-ii thii
Firoz-Erg bread.f eat-Inf.F want-Pfv.3FSg be.Pst.F
'Firoz had wanted to eat bread.'

1.2.2 Optionality

It has been noted by several authors that LDA is optional (Hook (1979), Davison (1988), Mahajan (1989, 1990), Butt (1995)).

- (7) (from Mahajan 1989)
- a. LDA:
Ram-ne [roṭii khaa-nii] chaah-ii
Ram-Erg bread.F eat-Inf.F want-Pfv.F
'Ram wanted to eat bread.'
- b. no LDA:
Ram-ne [roṭii khaa-naa] chaah-aa
Ram-Erg bread.F eat-Inf.M want-Pfv.M
'Ram wanted to eat bread.'
- (8) (from Butt 1995)
- a. LDA:
Nadia-ko [gaarii chala-nii] aa-tii hai
Nadia-Dat car.F drive-Inf.F come-Hab.F be.Prs.Sg
'Nadia knows how to drive a car.'
- b. no LDA:
Nadia-ko [gaarii chala-naa] aa-taa hai
Nadia-Dat car.F drive-Inf.M come-Hab.M be.Prs.Sg
'Nadia knows how to drive a car.'

1.2.3 Directionality of LDA

LDA always goes bottom up.

- (9) (from Mahajan 1989)
- a. Infinitival verb shows default agreement:
Mona [kutte-ko dekh-naa] chaah-tii thii
Mona.f dog.M-Acc see-Inf.M.Sg want-Hab.f be.Pst.f
'Mona wanted to see the dog.'
- b. Infinitival verb agrees with matrix subject:
*Mona [kutte-ko dekh-nii] chaah-tii thii
Mona.f dog.M-Acc see-Inf.F.Sg want-Hab.f be.Pst.f

1.2.4 Parasitic Agreement

The infinitival verb agrees with its object only when there is LDA.

- (10) a. LDA + infinitival agreement:
 Shahrukh-ne [tehnii kaaṭ-nii] chaah-ii thii
 Shahrukh-Erg branch.F cut-Inf.F want-Pfv.F be.Pst.F
 'Shahrukh had wanted to cut the branch.'
- b. infinitival agreement but no LDA:
 *Shahrukh-ne [tehnii kaaṭ-nii] chaah-aa thaa
 Shahrukh-Erg branch.F cut-Inf.F want-Pfv.M=Def be.Pst.M=Def
 'Shahrukh wanted to cut the branch.'
- c. LDA but no infinitival agreement:
 *Shahrukh-ne [tehnii kaaṭ-naa] chaah-ii thii
 Shahrukh-Erg branch.F cut-Inf.M want-Pfv.F be.Pst.F
 'Shahrukh wanted to cut the branch.'
- d. no infinitival agreement, no LDA:
 Shahrukh-ne [tehnii kaaṭ-naa] chaah-aa thaa
 Shahrukh-Erg branch.F cut-Inf.M want-Pfv.M=Def be.Pst.M=Def
 'Shahrukh wanted to cut a/the branch.'
- (11) a. no LDA and no infinitival agreement:
 Shahrukh [tehnii kaaṭ-naa] chaah-taa thaa
 Shahrukh.M branch.F cut-Inf.M want-Pfv.MSg be.Pst.MSg
 'Shahrukh wants to cut the branch.'
- b. infinitival agreement but no LDA:
 *Shahrukh [tehnii kaaṭ-nii] chaah-taa thaa
 Shahrukh.M branch.F cut-Inf.F want-Pfv.MSg be.Pst.MSg

Infinitival agreement is parasitic on LDA. Further when LDA takes place, Infinitival Agreement must take place.

2 Previous Analyses

2.1 Mahajan (1989)'s Analysis

2.1.1 The Analysis

The central idea behind Mahajan's analysis of agreement in Hindi-Urdu:

- Imperfective Participle: assigns accusative
- Perfective Participle: cannot assign accusative
- Infinitival verb: optionally assigns accusative

Mahajan's system:

$$(12) [IP - [[AgrP - [[VP NP_{subj} [NP_{obj} V]] Agr^0]] I^0]]$$

Auxiliary verbs, of which there many be many, come with their own AgrP.

$$(13) NP_{subj} NP_{obj} V Aux \\ [IP - [[AgrP - [[AuxP - [[AgrP - [[VP NP_{subj} [NP_{obj} V]] Agr^0]] Aux^0]] Agr^0]] I^0]]$$

Each verb moves to its associated Agr⁰. The highest V+Agr head moves to I⁰.

- Moving through [Spec,AgrP] triggers agreement.
- The presence of overt case-markers blocks agreement.

Case 1: Nominative Subject, Non-Perfective Verb, Subject Agreement:

$$(14) [IP Ram_i [[AgrP t_i [[VP t_i rotii t_V] khaa-taa]] thaa]] \\ Ram.M bread.f eat-Hab.MSg be.Pst.MSg$$

'Ram used to eat bread.'

- Nominative is assigned in [Spec,IP] by finite I⁰.
- Imperfective Participles assign accusative *in-situ*.

Case 2: Ergative Subject, Perfective Verb, Object Agreement:

$$(15) [IP Ram-ne_i [[AgrP rotii_j [[VP t_i t_j t_V] khaa-ii]] thii]] \\ Ram-Erg bread.f eat-Pfv.f be.Pst.f$$

'Ram had eaten bread.'

- Ergative is inherent case, but needs to be licensed by finite I⁰.
- Perfective participles do not assign case.
- Object case is licensed in [Spec,AgrP] by Agr⁰ governed by finite I⁰.

Case 3: Ergative Subject, Perfective Verb, Long Distance Agreement:

- (16) [_{IP} Ram-ne_i [[_{AgrP} rotii_j [[_{VP} t_i [[_{CP} PRO t_j khaa-nii] t_V] chaah-ii]] thii]]
 Ram-Erg bread.f eat-Inf.f want-Pfv.f be.Pst.f
 'Ram wanted to eat bread.'

- Infinitival verb optionally does not assign case.
- Object case is licensed in the highest [Spec,AgrP] by Agr⁰ which is governed by finite I⁰.

Case 4: Ergative Subject, Perfective Verb, No Long Distance Agreement:

- (17) [_{IP} Ram-ne_i [[_{AgrP} - [[_{VP} t_i [[_{CP} PRO rotii khaa-naa] t_V] chaah-aa]]
 Ram-Erg bread.f eat-Inf.MSg want-Pfv.MSg
 thaa]]
 be.Pst.MSg
 'Ram wanted to eat bread.'

- Infinitival verb assigns case to the object *in-situ*.

2.1.2 The Assumption behind the Analysis

Mahajan's proposal that perfective participles do not assign case transposed to English is equivalent to the claim that in (18), the object does not receive case from the past participial verb.

- (18) John has eaten the apple.

Such a proposal has been made in Hoekstra (1984), where *have* seemingly re-transitivizes the past participle and assigns accusative to the object. Support for this idea comes from reduced relatives like (19).

- (19) a. I like the book [read by John].
 b. *I like the person [read the book].

The facts with Hindi reduced relatives based on the past participle are similar (but not identical, cf. Iatridou et al. (2000)).

- (20) transitive verbs:
 a. *[sabzi kaat-aa hu-aa] aadmii chatur hai
 vegetable cut-Pfv.MSg be-Pfv.MSg man smart be.Prs.Sg
 '*The man [cut vegetables] is smart.
 b. [Ashvin-dwaaraa kaat-ii hu-ii] sabzi mulaayam hai
 Ashvin-by cut-Pfv.F be-Pfv.F vegetable.f soft be.Psr.Sg
 'The vegetable [cut by Ashvin] is soft.'

- (21) unaccusative verbs:

- a. [Dubai-se aa-ii (hu-ii)] gaayikaa besurii hai
 Dubai-from come-Pfv.F be-Pfv.F singer.f tuneless.f be.Prs.Sg
 'The singer who has come from Dubai is tuneless.'
 (Lit. *The singer [come from Dubai] is tuneless.)
 b. [Dushmano-se mil-aa hu-aa] aadmii kaayar hai
 enemies-with mix-Pfv.MSg be-Pfv.MSg man.m coward be.Prs.MSg
 'The man who has joined with the enemy is a coward.'
 (Lit. *The man [joined with the enemy] is a coward.)

The above examples receive an explanation if we assume that the perfective participle in Hindi is unable to license accusative case.

2.1.3 Some Problems

Central to Mahajan's proposal is his assumption concerning the inability of perfective participles to assign accusative case and the optional inability of infinitives to assign accusative. It is not clear that this assumption is tenable.

It is easy to show that infinitival verbs *can* assign accusative case.

- (22) a. [viinaa bajaa-naa] aasaan nahī: hai
 vina play-Inf easy Neg be.Prs
 'It is not easy to play the vina.'
 b. [Salma-ko taash-mē haraa-naa] aasaan nahī: hai
 Salma-Acc card-in defeat-Inf easy Neg be.Prs
 'It is not easy to defeat Salma at cards.'

The **optional** inability of infinitives to assign accusative is hard to argue against, but it is also unclear what would constitute independent evidence for it.

It is easier to find environments which seem to show that perfective participles do assign accusative case.

- (23) a. Lataa-ji-ne yeh gaanaa gaa-yaa ho-gaa
 Lataa-Hon-Erg this song.MSg sing-Pfv.MSg be-Fut.MSg
 'Lataa-ji must have sung this song.'
 b. [Lataa-ji-kaa/*Lataa-ji-ne yeh gaanaa gaa-yaa ho-naa] namumkin
 Lataa-Hon-Gen/Lataa-Hon-Gen this song sing-Pfv be-Inf impossible
 hai
 be.Prs
 'Lataa-ji's having sung this song is impossible.'
 c. [Ashaa-ji-kaa yeh gaanaa gaa-yaa ho-naa] [Lataa-ji-ke yeh
 Ashaa-Hon-Gen this song sing-Pfv be-Inf Lataa-Hon-Gen.Obl this
 gaanaa gaa-ye ho-ne]-se zyaadaa mumkin hai
 song sing-Pfv.Obl be-Inf.Obl-than more possible be.Prs

'Ashaa-ji's having sung this song is more possible than Lataa-ji's having sung this song.'

In addition, there is a limited set of transitive verbs that permit nominative subjects.²

- (24) a. *laa* 'bring' (does not allow for Ergative subjects):

Madhu phal laa-ii thii
Madhu.f fruit.m bring-Pfv.F be.Pst.F

'Madhu had brought fruit.'

- b. *bol* 'speak' (marginally allows for Ergative subjects):

Nupur kuchh bol-ii thii
Npur.f something.m speak-Pfv.F be.Pst.F

'Nupur had said something.'

- c. *samajh* 'understand' (also allows for Ergative subjects):

mE vo baat nahii samjh-aa
I that thing Neg understand-Pfv.MSg

'I did not understand that thing.' (from Mahajan 1989)

More productively, transitive verbs that otherwise require ergative subjects in the perfective do not allow for ergative subjects when combined with certain Compound Verbs.

- (25) Mahesh phal khaa ga-yaa/baiith-aa
Mahesh fruit eat GO-Pfv/SIT-Pfv

'Mahesh ate up the fruit.'

There are two cases to be licensed in (24) and (25) - that of the subject and the object, and if the perfective participle is not assigning case, then we have only one case licenser.

In Mahajan's system, with ordinary transitive two things have to happen together:

(i) licensing of 'inherent' ergative,

(ii) non-assignment of accusative by the perfective participle

Conversely, with cases like (24) and (25), there has to be:

(i) non-licensing of 'inherent' ergative,

(ii) assignment of accusative by the perfective participle

This leaves unexplained (for Mahajan) why we do not find verbs with the following properties:

(i) licensing of 'inherent' ergative,

(ii) assignment of accusative by the perfective participle

Given Mahajan's system, such verbs would assign ergative case but we would not find any object agreement.

• It makes for a simpler system if we assume that the idiosyncrasy of the verbs in (24) is limited to their ability to license Ergative case on their subjects.

²A similar state of affairs is found in Marathi, and curiously with these very verbs. (pg. 132, Pandharipande (1997))

Participial Relatives: the main evidence for proposing that perfective participles do not assign accusative case came from past participial relatives. However, the force of this argument is undercut by the facts from Marathi. Marathi patterns with Hindi w.r.t. the case-agreement facts.

- (26) Marathi, from Pandharipande (1997)

a. rodz sandhyākālī ti gāṇa mhaṇat asāytSī
everyday evening-loc she song-3sn sing-imperf be-inf-hab-3sf
'Every evening, she used to be singing a song.'

b. muline gāṇī mhaṭli
girl-Erg song-3pl.n sing-pst-3pl.n
'The girl sang songs.'

c. tyāne mulilā pāhila
he-Erg girl-acc see-pst-3sn
'He saw the girl.'

However, past participial relative clauses in Marathi do allow for overt objects.

- (27) Marathi, from Pandharipande (1997)

[ty=ane āmāntraṇ patrikā dilelī] saglī māṇsa lagnā-lā
he-Erg invitation card give-pst.part-pl all-pl.n people-pl.m wedding-Dat
āli
come-pst-3pl.m

'All the people who he had sent (given) invitation cards had come to the wedding.'

A related issue is that extrapolating from past participial relatives to past participles in general requires an additional assumption that identifies the past participle with the passive participle. These have the same form in many (but not all) Indo-Aryan languages, but it not clear if we can identify them synchronically.

- (28) a. Active:

Parth-ne yeh mez **banaa-yii** thii
Parth-Erg this table.f make-Pfv.f be.pst.f

'Parth had made this table.'

- b. Passive:

yeh mez Parth-dwaaraa **banaa-yii** gayii thii
this table.f Parth-by make-Pfv.f PASS-Pfv.f be.pst.f

'This table had been made by Parth.'

The passive auxiliary as well as a *by*-phrase can appear in the past participial relative demonstrating that what we have is indeed a passive participle.

- (29) [Parth-dwaaraa banaa-yii (gayii)] mez terhii hai
 Parth-by make-Pfv.f PASS-Pfv.f table.f crooked.f be.Psr.Sg
 'The table made by Parth is crooked.'

Spurious Case Licensing

Long Distance Agreement for Mahajan involves the object of the embedded clause getting case in the highest [Spec,AgrP] of the matrix clause. There is no obvious reason why the embedded subject should not be able to do the same. However, this is not possible.

- (30) *Ram-ne [Mohan Dilli jaa-naa] chaah-aa
 Ram-Erg Mohan Delhi go-Inf want-Pfv

That the source of the ungrammaticality is case is shown by the grammaticality of (31).

- (31) Ram-ne [Mohan-kaa Dilli jaa-naa] chaah-aa
 Ram-Erg Mohan Delhi go-Inf want-Pfv
 'Ram wanted/desired Mohan's going to Delhi.'

Overt Movement

Mahajan suggests that the movement to [Spec,AgrP] is overt. There seems to be evidence against this (see also Davison (1991)).

- (32) picchle saal Adnaan-ne [roz Shehlaa-kii madad kar-nii] chaah-ii
 last year Adnaan-Erg everyday Shehlaa-Gen.f help.f do-Inf.f want-Pfv.f
 'Last year, Adnaan wanted to help Shehlaa every day.'

2.2 Butt (1995)'s Analysis

2.2.1 Infinitive Clauses as NP's

- Morphology

	Nom.MSg	Nom.MPl	Nom.F	Dat/Acc
Noun	larkaa	larke	larkii	larke-ko
Infinitive	kar-naa	kar-ne	kar-nii	karne-ko

- Ability to take on case endings and other modifiers that target nominals.

- (33) a. Accusative:
 Anjum-ne Saddaf-ko [haar banaa-ne]-ko kah-aa
 Anjum-Erg Saddaf-Dat necklace make-Inf.Obl-Acc say-Pfv
 'Anjum told Saddaf to make a necklace.'
- b. Genitive:
 [un-ke aa-ne]-kii baat mahatvapuurn hai
 they-Gen.Obl come-Inf.Obl-Gen.f matter.f important be.Prs.Sg
 'The matter of their coming is important.'

(33b) also shows that infinitival clauses can license genitive subjects.

- (34) -vaalaa modification
- a. -vaalaa can modify nouns and adjectives:
 sabzii-vaalaa aa-yaa hai
 vegetable.f VAALA.m come-Pfv.MSG be.Prs.Sg
 'The one associated with vegetables (i.e. the vegetable seller) has come.'
- b. -vaalaa cannot modify participle/finite verbs:
 larḱii haar banaa-tii-vaalii hai
 girl.f necklace.m make-Hab.F-VAALA.f be.Prs
 'The girl who made the necklace is not coming.'
- c. -vaalaa can modify infinitivals:
 larḱaa paḱh-ne-vaalaa hai
 boy.m study-Inf.Obl-VAALA.MSG be.Prs.Sg
 'The boy is the studious type./The boy is about to start studying.'

Absence of infinitival questions/relative clauses in Hindi:

- (35) a. Infinitival Complement, no embedded question reading:
 tum [kyaa kar-naa] jaan-te ho?
 you.Pl what do-Inf know-Hab.MSG be.Prs.2Pl
 'What do you know how to do?'
 (Embedded question reading unavailable: You know what to do.)
- b. Finite Complement, embedded question reading present:
 tum jaan-te ho [ki us-ne kyaa ki-yaa]
 you.Pl know-Hab.Pl be.Prs.2Pl that he-Erg what do-Pfv.MSG
 'You know what he did.'
- (36) *[gariibō-ko de-naa] paisaa punya kamaa-taa hai
 poor.Pl.Obl-dat give-Inf money good-deed earn-Hab be.Prs

Dayal (1996) takes the above to show that infinitival clauses lack CPs in Hindi. Butt (1995) takes them to show that infinitival clauses are NPs.

• It is clear that infinitival clauses in Hindi have many nominal properties. But does this mean that they **are** NPs? One possibility is that the gerund/infinitival distinction exists in Hindi despite the surface forms being the same. Potential evidence comes from the interpretation of infinitival clauses.

(37) a. infinitival in subject position:

[(Tina-kaa) Karachi jaa-naa] khatarnaak hai
Tina-Gen Karachi go-Inf dangerous be.Prs.Sg

'(Tina's) going to Karachi is dangerous.'

b. control infinitival:

Dhruva-ne [Karachi jaa-ne]-kii koshish ki-i
Dhruva-Erg Karachi go-Inf.Obl-Gen.f attempt.f do-Pfv.f

'Dhruva tried to go to Karachi.'

c. complement infinitival, with overt genitive subject:

?Dhruva-ne [meraa Karachi jaa-naa] chaah-aa
Dhruva-Erg my Karachi go-Inf want-Pfv

'Dhruva wanted my going to Karachi.'

While the facts are subtle, the intuition is pretty clear that control infinitivals feel semantically different from most other instances of infinitivals. As the glosses indicate, an English infinitival seems appropriate for control infinitivals, but not for the others.

2.2.2 The Basic Analysis

Butt (1995)'s analysis of LDA reduces LDA to two instances of local agreement.

(38) Ram-ne [rotii khaa-nii] chaah-ii
Ram-Erg bread.f eat-Ger.f want-Pfv.f
'Ram wanted to eat bread.'

1. infinitival agrees with its object, and comes to have the features of the object.
2. The matrix verb agrees with the infinitival, which is its object, and comes to have the features of the infinitival, and by transitivity the features of the embedded object.

2.2.3 Some Problems

Parasitic Nature of LDA

(39) ok_{MB}/*_{RB} Raam [rotii khaa-nii] chaah-taa hai
Ram.M bread.f eat-Inf.f want-Hab.MSG be.Prs.Sg
'Ram wants to eat the bread.'

Optionality of LDA and 'Noun Incorporation' (Mohanani (1995b), Wescoat (2000), Wescoat (2001))

(40) Anil-ne lar̥kiyā: dekh-ī:/ *dekh-aa
Anil-Erg girls.Pl see-Pfv.FPl/ see-Pfv.D
'Anil saw girls.'

'Noun Incorporation' does not actually block agreement in Hindi.

3 Handling Long Distance Agreement

3.1 Basic Proposal

Dissociation of Case and Agreement

Agreement within the clausal system is triggered by finite T⁰ with associated unvalued ϕ -features.

- (41) AGREE is the process by which a head X⁰ with a complete set of unvalued uninterpretable features (the Probe) identifies the closest Y⁰/YP in its c-command domain with the relevant set of visible matching (i.e. nondistinct) interpretable features (the Goal), and uses the interpretable features of Y⁰/YP to value its uninterpretable features.

Using AGREE, finite T⁰ identifies the nearest argument with visible ϕ -features and uses them to value its ϕ -features.

(42) a. subject agreement:

Mona amruud khaa-tii thii
Mona.f guava.m eat-Hab.F be.Pst.F

'Mona used to eat guavas.'

b. object agreement:

Ram-ne **imlīi khaa-yii thii**
Ram.m-Erg tamarind.f eat-Pfv.F be.Pst.F

'Ram had eaten tamarind.'

c. default agreement:

Mona-ne is kitaab-ko parh-aa thaa
Mon.f-Erg this.Obl book.f-Acc read-Pfv.MSG be.Pst.MSG

'Mona had read this book.'

Participial Agreement:

- (43) a. T⁰[uF] ... [PRT⁰[uF] ... [_{vP} SUBJ[ϕ F] v [_{VP} V OBJ[ϕ F]]]]
(PRT = Habitual, 42a)
- b. T⁰[uF] ... [PRT⁰[uF] ... [_{vP} SUBJ-Erg v [_{VP} V OBJ[ϕ F]]]]
(PRT = Perfective, v transitive, 42b)

- Covaluation (cf. López (2002))

- LDA:

- (44) Ram-ne [rotii khaa-nii] chaah-ii thii
 Ram-Erg bread.f eat-Inf.f want-Pfv.f be.Pst.f
 'Ram had wanted to eat (the) bread.'

LDA and Object Agreement:

- (45) T⁰[uF] [Subj-Erg V⁰ [Inf⁰[uF] ... OBJ[ϕ F]]]

- Inf⁰ is not a Probe (despite having unvalued features).

3.2 Working through the cases

The current proposal needs to make the following background assumptions. First, it is assumed that the ϕ -features of overtly case-marked NP's are not visible. The second assumption is that PRO has no visible ϕ -features. The analyses of Long Distance Agreement discussed earlier in this paper need to make comparable assumptions.

- (46) (Nepali, from Verma and Sharma (1979), pg. 47)
- a. Ergative Subject:
 maile gaiko aaitvaar dhairai raksi: kha:ē
 I-Erg gone Sunday a-lot alcohol eat-Pst.1Sg
 'I drank a lot last Sunday.'
- b. Nominative Subject:
 ma asti somvaar sku:lma: dhi:lo a:ē
 I-Nom last Monday school-in late come-Pst.1Sg
 'I was late to school last Monday.'

- (47) (Gujarati, from Cardona (1965), pg. 75)
- a. mEN tehmahri behEn-one bolawi
 I-Erg your sisters-Acc invited.F
 'I invited your sisters.'
- b. *pustek* 'book' is Neuter
 mEN a pustek-ne waNcyuN
 I-Erg this book-Acc read.N
 'I read this book.'

Subbarao (2001):

1. the effect of overt case-marking on agreement should be treated as an instance of parametric variation and not as a universal.
2. PRO in Hindi-Urdu must be 'overtly case-marked'. (cf. Sigurdsson (1991) for PRO in Icelandic)

3.2.1 Long Distance Agreement Environments

Minimality and AGREE: Long Distance Agreement can only involve arguments of infinitival clauses.

- (48) a. T⁰[D] A-Erg [T⁰[B] B ...
 Firoz-ne soch-aa ki [Mona ghazal gaa-tii hai]
 Firoz-Erg think-Pfv.3MSG that Mona.f ghazal.f sing-Hab.f be.Prs
 'Firoz thought that Mona sings ghazals.'
- b. *T⁰[B] A-Erg [T⁰[B] B ...
 *Firoz-ne soch-ii ki [Mona ghazal gaa-tii hai]
 Firoz-Erg think-Pfv.3FSg that Mona.f ghazal.f sing-Hab.f be.Prs

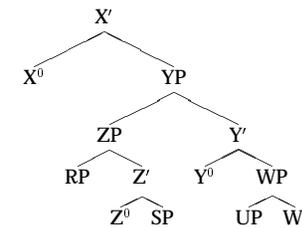
Because of the minimality condition on AGREE, the matrix T⁰ in (48a) cannot attract the features of B over the intervening finite T⁰ in the embedded clause. However, we also need to explain why the matrix T⁰ cannot attract the features from the embedded T⁰.

Two possible explanations:

(i) the Phase Impenetrability Condition (PIC) of Chomsky (1999) - finite CPs are strong phases.

(ii) a finite T⁰ with unvalued ϕ -features can only AGREE with 'real' ϕ -features i.e. interpretable ϕ -features associated with a nominal, and not the uninterpretable ϕ -features of another inflectional head.

In addition to obeying Minimality, AGREE is also subject to the following structural constraint. A head can AGREE with a complement, the specifier of a complement, the complement of a complement, the specifier of the complement of a complement, and so on. However, a head is not allowed to look inside specifiers for the purposes of AGREE.



Here X⁰ can AGREE with (the features of) YP, ZP, WP, and UP. However X⁰ cannot AGREE with (the features of) RP and SP.

This structural aspect of the AGREE operation helps to explain the impossibility of Long Distance Agreement in (49).

- (49) a. [mehnat kar-naa/ *kar-nii] achchhaa/*ii ho-taa/*ii hai
 hardwork.f do-Inf.D do-Inf.F good.D/F be-Hab.D/F be.Prs
 'It is good to work hard.'

- b. Ram-ko [imlīi khaa-naa/*khaa-nii] pasand thaa/*thii
 Ram-Dat tamarind.f eat-Inf.D/eat-Inf.F pleasing be.Pst.D/be.Pst.F
 ‘Ram liked to eat tamarind.’

Minimality effects on AGREE also surface in another direction. If a maximal projection is of the kind that potentially has ϕ -features, T^0 cannot AGREE with the ϕ -features of a maximal projection from inside it.

- (50) * $X^0[B] \dots [A \dots B \dots]$
 (Both A and B are the same kind of category)
- (51) a. Embedded infinitival clause can have a genitive subject:
 Firoz-ne [Shabnam-kaa roṭii khaa-naa] chaah-aa
 Firoz-Erg Shabnam-Gen bread.f eat-Inf want-Pfv.3MSg
 ‘Firoz wanted Shabnam’s eating bread.’
- b. LDA not possible in presence of genitive subject of infinitival clause:
 *Firoz-ne [Shabnam-kaa roṭii khaa-nii] chaah-ii
 Firoz-Erg Shabnam-Gen bread.f eat-Inf.F want-Pfv.3FSg
- c. LDA possible if there is no subject:
 Firoz-ne [roṭii khaa-nii] chaah-ii
 Firoz-Erg bread.f eat-Inf.F want-Pfv.3FSg
 ‘Firoz wanted to eat bread.’

3.2.2 Directionality

It was noted earlier that agreement always goes bottom-up, never top-down.

- (52) (from Mahajan 1989)
- a. Infinitival verb shows default agreement:
 Mona [kuttō-ko dekh-naa] chaah-tii thii
 Mona.f dog.MPI-Acc see-Inf.M.Sg want-Hab.f be.Pst.f
 ‘Mona wanted to see the dog.’
- b. Infinitival verb agrees with matrix subject:
 *Mona [kuttō-ko dekh-nii] chaah-tii thii
 Mona.f dog.MPI-Acc see-Inf.F.Sg want-Hab.f be.Pst.f

This feature of agreement follows from the way AGREE operates.

- (53) a. Long Distance Agreement:
 Before AGREE: $T^0[uF] \dots [Inf^0[uF] \dots DP[\phi F]]$
 After AGREE: $T^0[\phi F] \dots [Inf^0[\phi F] \dots DP[\phi F]]$
- b. ‘Downward’ Agreement:
 Before AGREE: $T^0[uF] \dots DP[\phi F] \dots [Inf^0[uF] \dots]$
 *After AGREE: $T^0[\phi F] \dots DP[\phi F] \dots [Inf^0[\phi F] \dots]$ (unattested)

3.2.3 Parasitic Agreement

The trigger for LDA (and agreement in general) is finite T^0 . All other categories with unvalued ϕ -features can only value their ϕ -features parasitically by entering into a relationship with a finite T^0 that is seeking a DP with interpretable features and then being potentially covaluated by T^0 . This is what derives the parasitic nature of agreement discussed earlier.

- (54) a. LDA + infinitival agreement:
 Shahrukh-ne [tehnii kaat-nii] chaah-ii
 Shahrukh-Erg branch.F cut-Inf.F want-Pfv.F
 ‘Shahrukh wanted to cut the branch.’
- b. infinitival agreement but no LDA:
 *Shahrukh-ne [tehnii kaat-nii] chaah-aa
 Shahrukh-Erg branch.F cut-Inf.F want-Pfv.M
 ‘Shahrukh wanted to cut the branch.’
- c. LDA but no infinitival agreement
 *Shahrukh-ne [tehnii kaat-naa] chaah-ii
 Shahrukh-Erg branch.F cut-Inf.M want-Pfv.F
 ‘Shahrukh wanted to cut the branch.’

Generating (54c) would require ‘skipping’ the intervening Inf^0 .

- (55) a. no LDA, no infinitival agreement
 Shahrukh [tehnii kaat-naa] chaah-taa hai
 Shahrukh.m branch.f cut-Inf.M want-Hab.MSg be.Prs
 ‘Shahrukh wants to cut a/the branch.’
- b. infinitival agreement but LDA
 *Shahrukh [tehnii kaat-nii] chaah-taa hai
 Shahrukh.m branch.f cut-Inf.F want-Hab.MSg be.Prs
 ‘Shahrukh wants to cut a/the branch.’

3.2.4 Agreement not Case

The current analysis dissociates Case from Agreement. Therefore it does not predict spurious case-licensings. As discussed earlier, this was a problem for Mahajan (1989).

- (56) *Ram-ne [Mohan jaa-naa] chaah-aa
 Ram-Erg Mohan go-Inf want-Pfv
- (57) Ram-ne [Mohan-kaa jaa-naa] chaah-aa
 Ram-Erg Mohan-Gen go-Inf want-Pfv
 ‘Ram wanted Mohan’s leaving.’

3.3 What about Optionality?

3.3.1 Optionality

LDA is optional. Local Agreement is not.

3.3.2 Deriving Optionality

To derive the optionality of Long Distance Agreement, we need an optional element somewhere. Mahajan (1989) had infinitives optionally assigning case and Butt (1995) had optional incorporation.

Long Distance Agreement can be reduced to the well-known optionality of Restructuring. The predicates that allow for Long Distance Agreement in Hindi-Urdu (e.g. *chaah* 'want', *de* 'permit') have been termed restructuring verbs in the literature on restructuring/clause union.

- (58) a. Restructuring Infinitive, LDA: T⁰[A].....[Inf⁰[A].....DP[A]]
 Ram-ne [mujhe **kahaanii sun-aa-nii**] **chaah-ii thii**
 Ram-Erg I.Dat story.f hear-CAUS-Inf.f want-Pfv.f be.Pst.f
 'Ram had wanted to tell me a story.'
- b. Non-restructuring Infinitive, no LDA: T⁰[Default].....[_{CP} C⁰ [Inf⁰[Default].....DP[A]]]
 Ram-ne [mujhe kahaanii sun-aa-naa] chaah-aa thaa
 Ram-Erg I.Dat story.f hear-CAUS-Inf.MSg want-Pfv.MSg be.Pst.MSg
 'Ram had wanted to tell me a story.'

- Wurmbrand's Proposal
- Another option: a categorial ambiguity analysis:
 'infinitival' clauses could be systematically ambiguous between infinitivals (which permit and require LDA when possible) and gerunds (without LDA).

3.3.3 The Interpretive Effects of Long Distance Agreement

The presence of Long Distance Agreement has been noted in the literature to have certain interpretive effects. The general claim is that embedded objects that agree long distance with the matrix predicate are more specific than embedded objects that do not. Mahajan (1989) provides a clearer proposal when he relates the presence of long distance agreement with wide scope over the matrix predicate. Consider the following contrast.

(59) (from Mahajan (1989))

- a. LDA
 Ram-ne [**rotii khaa-nii**] **chaah-ii**
 Ram-Erg bread.F eat-Inf.F want-Pfv.F
 'Ram wanted to eat bread.'
- b. no LDA:
 Ram-ne [rotii khaa-naa] chaah-aa
 Ram-Erg bread.F eat-Inf.M want-Pfv.M
 'Ram wanted to eat bread.'

Mahajan (1989) notes "(59a) has a clear interpretation in which *rotii* 'bread' is interpreted outside the intension of the matrix verb *chaah* 'want', i.e. there is a particular *rotii* 'bread' that Ram wants to eat. This interpretation is missing in (59b), the case which does not involve long distance agreement."

Long Distance Agreement favors wide scope of the object over the matrix predicate, but it does not force a wide scope reading.

- (60) a. Object of Verb of Creation:
 Usha-ne [potluck ke-liye **daal banaa-nii**] **chaah-ii thii**
 Usha-Erg potluck for lentils.f make-Inf.f want-Pfv.f be.Pst.f
 'Usha had wanted to prepare lentils for the potluck.'
- b. Nouns in Light Verb (N-V) Constructions:
 Akbar-ne [merii **madad kar-nii**] **chaah-ii thii**
 Akbar-Erg my.f help.f do-Inf.f want-Pfv.f be.Pst.f
 'Akbar had wanted to help me.'

The facts concerning the interpretive effects of Long Distance Agreement in Hindi-Urdu can now be spelled out as follows: the absence of Long Distance Agreement blocks a reading for the object where it takes wide scope over the matrix predicate. Long Distance Agreement makes such a reading available and even preferred but does not enforce it. This last point is also supported by the contrast in (61).

- (61) a. LDA:
 Naim-ne [**har kitaab parh-nii**] **chaah-ii thii**
 Naim-Erg every book.f read-Inf.f want-Pfv.f be.Pst.f
every > *want*: For every book, Naim wanted to read it.
want > *every*: Naim's desire: to read every book
- b. no LDA:
 Naim-ne [har kitaab parh-naa] chaah-aa thaa
 Naim-Erg every book.f read-Inf.f want-Pfv.f be.Pst.f
want > *every*: Naim's desire: to read every book
Unavailable: *every* > *want*: For every book, Naim wanted to read it.

The interpretive correlations can now be derived. Long Distance Agreement involves restructuring infinitives and restructuring infinitives allow for optional covert movement of the object out of the infinitival clause to a position above the matrix predicate. This leads to the observed ambiguities. The absence of Long Distance Agreement indicates a non-restructuring infinitive. Non-restructuring infinitives block covert movement of the object out of the infinitival. Consequently the wide scope reading is blocked.

We still need to explain why Long Distance Agreement makes the reading where the embedded object takes scope over the matrix predicate more salient:

a pragmatic explanation

3.4 (Non)-Interaction with Scrambling

It seems to be true of the Indo-Aryan languages that scrambling does not affect agreement.

(62) Scrambling out a finite clause:

Mina, Brian-ne mujh-se kah-aa/*kah-ii [ki t̄ kal biimaar
Mina.f Brian-Erg me-Instr say-Pfv.MSg/say-Pfv.F that yesterday ill
thii]
be.Pst.f

'Mina, Brian told me, was ill yesterday.'

This is also true of short-scrambling, albeit somewhat vacuously, in Hindi.

- (63) a. Mona-ne Shalu-ko **kitaab di-i**
Mona-Erg Shalu-Dat book.f give-Pfv.F
'Mona gave a book to Shalu.'
- b. Mona-ne kitaab, Shalu-ko t̄ **di-i**
Mona-Erg book.f Shalu-Dat give-Pfv.F
'Mona gave a book to Shalu.'

A less vacuous demonstration comes from Kashmiri.

- (64) Kashmiri
- a. (pg. 107, Hook and Koul (1984))
ma:ji **ca:v-Ino:vus** **bi** ko:ri dOd.3MSg
mother.Erg drink.Caus-Caus.1MSg I girl.Dat milk
'Mother had me give milk to the girl.'
- b. (Sadaf Munshi, p.c.)
dOd **ca:v-Ino:v-us** ma:ji **bi** ko:ri
milk.3MSg drink.Caus-Caus.1MSg mother-Erg I girl.Dat
'Mother had me give milk to the girl.'

- (65) Kashmiri
- a. (pg. 107, Hook and Koul (1984))
ma:ji **ca:v-InE:v** me-athi ku:r dOd
mother.Erg drink.Caus-Caus.3FSg I.dat-by girl milk.3MSg
'Mother had me give milk to the girl.'
- b. (Sadaf Munshi, p.c.)
dOd **ca:v-InE:v** ma:ji me-athi **ku:r**
milk.3MSg drink.Caus-Caus.3FSg mother-Erg I.dat-by girl
'Mother had the girl be given milk by me.'

- (66) (pg. 107, Hook and Koul (1984))
ma:ji **ca:v-Ino:v** me-athi ko:rI **dOd**
mother.Erg drink.Caus-Caus.3MSg I.dat-by girl.Dat milk.3MSg
'Mother had the milk given to the girl by me.'

- Scrambling is to positions that are invisible for scrambling (cf. Kidwai (2000), who argues that even short scrambling is to non-A positions).

OR

- The Goal is located not by structural prominence alone. Instead the search for the Goal examines successively more deeply embedded DP's that enter into a case-relationship with a head on the verbal spine.

4 Extensions and Implications

4.1 Long Distance Agreement in Kashmiri

An important aspect of the Hindi-Urdu dialect discussed here has been the parasitic nature of infinitival agreement. In Kashmiri, however, infinitival agreement is not parasitic on Long Distance Agreement (cf. Subbarao & Munshi 2000).

- (67) a. Infinitival Agreement, LDA
Raam-an **che** hameeSI **yatshImatsI** [panInis necivis khAAtrI **koori**
Ram-Erg be.Prs.F always wanted.FPI self.Dat son.Dat for girls
vuchini]
see-Inf.FPI
'Ram has always wanted to see girls for his son.'
- b. Infinitival Agreement, no LDA
Raam-an chu hameeSI **yotshImut** [panInis necivis khAAtrI **koori**
Ram-Erg be.Prs.MSg always wanted.MSg self.Dat son.Dat for girls
vuchini]
see-Inf.FPI

'Ram has always wanted to see girls for his son.'

Infinital agreement also takes place when Long Distance Agreement is not even a possibility.

(68) (Sadaf Munshi p.c.)

- a. Raam chu yatsaan [koo*ri* vuchini]
 Ram be.Prs.MSg want-Impfv girls see-Inf.FPl
 'Ram wants to see the girls.'
- b. Zoon che yatsaan [koo*ri* vuchini]
 Zoon.f be.Prs.F want-Impfv girls see-Inf.FPl
 'Zoon wants to see the girls.'

In Kashmiri, we find that infinitival verbs agree with their objects (if non-overtly case-marked) quite generally.

(69) (from Wali & Koul 2000)

- a. [mohnIn' yi philim vuchIn'] chu mumkin
 Mohan-Gen-FSg this film.FSg see-Inf.FSg be.Prs.MSg possible
 'Mohan's seeing this film is possible.'
- b. [mohnIn' kita:b tsu:ri nin'] chu ha:ra:nkun
 Mohan-Gen-FSg book.FSg steal-Inf.FSg be.Prs.MSg surprising
 'Mohan's stealing the book is surprising.'

(70) (Sadaf Munshi p.c.)

- a. *[mohnIn' yi philim vuchIn'] che mumkin
 Mohan-Gen-FSg this film.FSg see-Inf.FSg be.Prs.FSg possible
- b. *[mohnIn' kita:b tsu:ri nin'] che ha:ra:nkun
 Mohan-Gen-FSg book.FSg steal-Inf.FSg be.Prs.FSg surprising

- The difference between Hindi-Urdu and Kashmiri was reduced to the nature of infinitival agreement in the two languages. In Kashmiri infinitival agreement is obligatory while in Hindi-Urdu it is parasitic on Long Distance Agreement.
- Kashmiri Inf⁰ functions as a probe, Hindi Inf⁰ does not.
- Regardless of the language, agreement is only possible with an XP that has its own ϕ -features and not one that has itself acquired its ϕ -features by agreement.

4.2 Long Distance Agreement in Tsez

Polinsky and Potsdam (2001) discuss a case of Long Distance Agreement found in the Nakh-Daghestanian language Tsez.

(71) (ex. 48 from Polinsky and Potsdam (2001))

- a. Embedded object triggers agreement:
 eni-r [už-ā magalu b-āc'-ru-li] b-iy-xo
 mother-DAT boy-ERG bread.III.ABS III-eat-PSTPRT-NMLZ III-know-PRES
 'The mother knows the boy ate the bread.'
- b. Embedded subject triggers agreement:
 eni-r [uži ϕ -āy-ru-li] ϕ -iy-xo
 mother-DAT boy.I.ABS I-arrive-PSTPRT-NMLZ I-know-PRES
 'The mother knows the boy arrived.'

In addition, Polinsky and Potsdam (2001) demonstrate that the agreement trigger in Tsez has to be an embedded topic, which undergoes covert movement to the edge of a Topic Phrase as shown in (72).

(72) (ex. 94 from Polinsky and Potsdam (2001))

- eni-r [_{TopP} magalu_i [_{Top'} [IP už-ā t_i b-āc'-ru-li]
 mother-DAT bread.III.ABS boy-ERG III-eat-PSTPRT-NMLZ
 Top⁰]] b-iy-xo
 III-know-PRES

'The mother knows the boy ate the bread.'

The matrix predicate head-governs the embedded topic in (72) and Polinsky and Potsdam (2001) take this configuration to be the one relevant for Long Distance Agreement. LDA Triggers are embedded topics:

(73) (ex. 64 from Polinsky and Potsdam (2001))

- babi-r [kidb-ā eni-r kumek b-oy-xosi-li]
 father-DAT girl-ERG mother-DAT help.III.ABS III-make-PRSPRT-NMLZ.IV
 r-iyxo/*b-iyxo
 IV-knows/III.knows

'The father knows that the girl is helping the mother.'

The noun *kumek* 'help' that triggers local agreement is part of a light verb (N-V) construction. It does not refer and cannot serve as a topic. It does not move to [Spec,TopP] and consequently it is unable to trigger Long Distance Agreement.

4.3 AGREE and Agree

- AGREE and Agree diverge on the requirements they put on the Goal.

Why the activity condition on Goals seems necessary for Agree:

- (74) a. *John_i is certain [t_i will win].
b. *[John_i to seem [t_i is intelligent]] would be surprising.

In contrast to Agree, it is possible for a Probe to enter into an AGREE relationship with an inactive Goal (cf. Lavine and Freidin (2001), and López (2002)). This was the case for Long Distance Agreement in both Hindi-Urdu and Tsez. The case requirements of the agreement trigger are met in the embedded clause where it appears.

- A constraint against Internal Merge of Inactive Goals.

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