FOCUSING IN HINDI SYNTAX

A Thesis
submitted to the Faculty of the
Graduate School of Arts and Sciences
of Georgetown University
in partial fulfillment of the requirements for the
degree of
Master of Science
in Linguistics

By

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Washington, DC
April 4, 2014
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ABSTRACT

In this paper, I propose that focused elements in Hindi must scramble to the specifier of a Focus Phrase projected immediately above the vP, which is the default position for focus (Kidwai 1999). A focus phrase in the immediately preverbal position has also been proposed by Jayaseelan (2001) for Malayalam, Kiss (1998) for Hungarian, Tsimpli (1994) for Greek, and Ouhalla (1994) for Arabic. Although Hindi has previously been analyzed as a wh-insitu language, Manetta (2010, 2011) shows that Hindi has partial wh-movement, and I argue that wh-elements also obligatorily move to [Spec,FocP] when they are focused.

Movement to [Spec,FocP] accounts for the long-standing problem of optionality of Long Distance Agreement (LDA) (Mahajan 1989; Butt 1993; Bhatt 2005) and allows for a productive analysis of multiple word orders in wh-questions. I show that the least problematic way of accounting for LDA is by using the noun incorporation analysis proposed by Butt (1993) and the modified AGREE invoked in Bhatt (2005).

Following Butt (1993), I argue that embedded objects in constructions that fail to show LDA are incorporated into the verb and lack φ-features. Thus, LDA is blocked. The embedded object in constructions with LDA are interpreted as specific and have a [+FOCUS] feature, which causes it to undergo object shift. It has been attested cross-linguistically that only non-specific objects can be incorporated (Baker 1988; Farkas and De Swart 2003; Mithun 1984). The specific DP is shown to carry a [+FOCUS] feature as the answer to a wh-question with LDA is
necessarily focused. I also show that wh-questions can be focused only when they carry a focus feature. This opposes previous accounts of Hindi partial wh-movement (Kidwai 1999; Manetta 2010, 2011), which state that wh-questions are inherently focused and must obligatorily undergo movement. Finally, using data from prosodic studies of Hindi, I show that syntactic focus has different effects on the prosody than morphological or phonological focus.
ACKNOWLEDGEMENTS

Countless thanks are due to my advisor Ruth Kramer for her support and feedback in every step of the development of this thesis. Through our almost weekly meetings, her insights and comments not only nurtured the progress of analysis, but her influence and guidance have also been instrumental in my overall growth as a linguist, and more specifically, as a syntactician.

Many thanks to Dr. Elizabeth Zsiga for her comments and for reminding me the fundamentals of being a sound researcher. Much gratitude to my classmates in the thesis seminar Abigail Sherburne, Alanna Hulburd, Eleonora Israele, Haley Hirzel, and Hannah Sullivan for their insightful on the paper at its various stages.

For their continual moral support, many thanks to Alex Botti, Sam Musser, and Sylvia Sierra. My graduate school experience would not have been the same without you. Thanks are also due to my parents Merwan and Shehnaz Irani and my brother Sam Irani for their unwavering support. And most of all, thanks are due to Abby Pan for being a positive influence in my life for many years, and for always providing the motivation and encouragement whenever needed.
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1. Introduction

In this paper, I propose that focused elements in Hindi must scramble to the specifier of a Focus Phrase projected immediately above the vP, which is the default position for focus. I also argue that wh-elements must move to [Spec,FocP] when they are focused. This movement accounts for the optionality of Long Distance Agreement and also explains multiple word orders in wh-questions in Hindi.

Sections 2 and 3 provide a background on focus in the preverbal position crosslinguistically and focus in Hindi respectively. The background on Hindi focus presents an account of previous work that proposes a focus projection. The analysis described in this paper presents further evidence for the focus projection, and shows how scrambling in wh-questions and Long Distance Agreement can be analyzed as movement to [Spec,FocP]. These sections are followed by an overview of Long Distance Agreement in section 4. In section 5, I present evidence for a focus projection, and show how scrambling in Long Distance Agreement and wh-questions in Hindi can be productively analyzed as movement to [Spec,FocP] when the constituent that has undergone movement is focused. Finally, in section 6 I present evidence from studies in Hindi prosody, which show the presence and effects of the focus projection in the immediately preverbal position.

2. Focus in Preverbal Position

There has been significant research done on focus as a syntactic category cross linguistically. A focus phrase in the immediately preverbal position has been proposed by Jayaseelan (2001) for Malayalam, Kiss (1998) for Hungarian, Tsimpli (1994) for Greek, and
Ouhalla (1994) for Arabic. In this section, I lay out the facts in Hungarian and Malayalam that support a Focus projection immediately outside the vP, and in the following section, I review previous work in Hindi that calls for a Focus Phrase immediately preceding vP as well. I choose to discuss Hungarian as it is an example of a language that is very different from Hindi structurally, and Malayalam as it has an SOV word order like Hindi and shows scrambling.

Kiss (1998) distinguishes between two types of focus: identificational focus and informational focus. Identificational focus differs from informational focus in that identificational focus takes scope and expresses exhaustive information, whereas informational focus does not take scope and marks non-presupposed information. Exhaustive information is old information, and it is marked emphatically in focus constructions. Constituents with identificational focus must move to [Spec, FocP] position and are [+exhaustive]. The type of focus relevant for this paper is identificational focus, and Kiss argues that only identificational focus has semantic effects and forms the syntactic category of FocP. An example of identificational focus in Hungarian is presented below:

(1) *Mari egy kalapot nezett ki maganak*¹
   Mary a hat.ACC picked out herself.ACC
   ’It was a hat that Mary picked for herself.’ (Kiss 1998, p.249)

In (1), Mary has picked out a hat out of various other articles of clothing and the hat is within the domain of discourse. The object *kalapot* ‘hat’ has identificational focus in this example.

Jayaseelan (2001) proposes a focus phrase in Malayalam that selects for a vP as well. Malayalam, like Hindi, has a flexible word order. This can be seen in the examples below:

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¹ The abbreviations used in this paper are ACC-accusative, ABS-absolutive, Dat-dative, Erg-ergative, F-feminine, FOC-focus, Imp-imperfective, Inf-infinitive, M-masculine, Neg-negation, Perf-perfective, Pres-present, Pst-past.
The movement of focused constituents and questions words to the specifier of the focus phrase is used in order to derive the variable word order in the language. Moreover, the movement of focused constituents and question words is optional because the focus phrase above the vP is generated optionally. These facts are relevant for focused constituents in Hindi as well.

In order to develop the analysis of a focus projection in Hindi, some background is first necessary on focus in Hindi. The next section presents this background and argues that Hindi has a focus projection.

3. Position of Focus in Hindi

Hindi has relatively free word order. The examples\(^2\) in (2) show the possible word orders for the question “What did Connor give Chibu?”

\(^2\) Any examples that are lacking a citation are from the author’s own intuitions as a native Hindi speaker or from conducted fieldwork.
b. *chibu-ko connor-ne kyaa diyaa*

Chibu-Dat Connor-ERG what give.Perf
‘What did Connor give Chibu?’

c. *connor-ne kyaa diyaa chibu-ko*

Connor-ERG what give.Perf Chibu-Dat
‘What did Connor give Chibu?’

d. *kyaa diyaa connor.ne chibu-ko*

what give.Perf Connor-ERG Chibu-Dat
‘What did Connor give Chibu?’

e. *kyaa diyaa chibu.ko connor.ne*

what give.perf Chibu-Dat Connor-ERG
‘What did Connor give Chibu?’

However, previous research shows that there is an unmarked default3 word order for focused constituents (Butt 1996; Kidwai 1999; Manetta 2010). The default position for focused constituents is in the immediately preverbal position, which is represented in example (2a).

Kidwai (1999) talks about two kinds of relevant focus distinctions, Wide focus and Narrow focus, which correspond to Kiss’s informational and identificational focus respectively. Wide focus is seen in responses provided without context and answers to wh-questions such as “What happened?” Additionally, it is often unclear as to which constituent is focused in such sentences. Narrow focus on the other hand is unambiguous as to which constituent in the sentence is focused.

The following examples illustrate the difference between wide focus and narrow focus:

(3) a. *kitaab kon laaye-gaa*

book who bring-FUT
‘Who will bring the book?’

---

3 The words “unmarked” and “default” as used in this paper refer to the most natural way for a native speaker to frame the utterance.
b. kitaab raam laaye-gaa
   book Ram.Foc bring-FUT
   ‘It is Ram who will bring the book.’

c. # raam kitaab laaye-gaa
   Ram book bring-FUT
   ‘Ram will bring the book.’ (wide focus) (Kidwai 1999, p.218)

In the paradigm above, (3b) is the only acceptable response to the question in (3a). In (3a) and (3b), both the wh-element and the focused answer to the wh-question appear in the immediately preverbal position. Moreover, (3c) is not an acceptable response to (3a) as it consists of a neutral response where it is unclear as to which constituent is focused, which is not the case in (3b). Since (3c) has wide focus, it can be said to be the default word order, and that (3b) is derived from (3c). As only (3b) is an acceptable response to (3a), it also follows that it carries a different meaning from (3c). Thus, Ram in (3b) is an example of narrow focus.

Previous work on Hindi also shows that different word orders result in different interpretations of the sentence. Butt and King (1996) discuss how scrambling in Hindi occurs for semantic and discourse factors. For instance, the difference between specific vs. non-specific meanings would drive different word orders as specific meanings result from the object having scrambled out of the verb phrase. As seen for Kidwai (1999) as well, the object in example (3b) is specific and the sentence has a different word order than (3c) where the object has a non-specific interpretation. This analysis is in contrast to Mahajan (1989) who states that constituents in Hindi move for reasons related to case-licensing and agreement. However, Mahajan’s account does not explain the different interpretations associated with different word order in Hindi. According to Butt and King’s analysis, varied word order can result from semantic effects like specificity or for stylistic purposes of focus and topicalization. They reassert the idea that
focused constituents occur preverbally in languages that project focus syntactically. The following examples illustrate their claim:

(4) a. *Nadia-ne Hasan-ko xat di-yaa*
    Nadia-Erg Hasan-Dat letter give-Perf
    ‘Nadia gave Hasan a/the letter(NS/S).’

   b. *Nadia-ne xat Hasan-ko di-yaa*
    Nadia-Erg letter(s) Hasan-Dat give-Perf
    ‘Nadia gave Hasan the letter(S).’       (Butt & King 1996)

   It can be seen from example (4a) that the object can be either specific or non-specific in the immediate preverbal position; however, when the object has moved higher than the immediately preverbal position as in (4b), the object must obligatorily be interpreted as specific. It is important to note that the interpretation can be either non-specific or specific in the immediately preverbal position. Although the linear order remains the same, my analysis argues that when the object is in-situ, we get a non-specific reading, and when the object has scrambled out of the vP, we get a specific reading.

   Thus, as shown by Kidwai (1999) and Butt & King (1996), the syntactic location for Hindi focus is in the most immediate preverbal position. Kidwai also shows that wh-elements and the focused answers to a wh-question are also found to be immediately preverbal, and uses this fact as evidence for a focus projection in Hindi. Butt & King indicate that scrambled objects must be interpreted as specific, and that objects in the focus position can seemingly be interpreted as either specific or non-specific. Evidence for a focus projection is shown in further sections from facts in Long Distance Agreement, wh-questions, and Hindi prosody. However, before I demonstrate how the apparent optionality of LDA supports a preverbal focus phrase, some
background is necessary on LDA itself. This background in provided in section 4, and is followed by section 5 which explores the implications of the facts.

4. Long Distance Agreement

4.1. Introduction

Long Distance Agreement in Hindi occurs when a verb agrees with an object embedded within the verb’s infinitival complement\(^4\). This pattern could potentially lead to problems for theories that assume a strictly local view of agreement. This is exemplified in (5).

(5) John-\(\text{Erg}\) \(\text{bread.F eat-Inf.F want-Perf.FSG}\)

\(\text{John-Erg} \text{ bread.F eat-Inf.F want-Perf.FSG} \)

'John wanted to eat bread.'

In (5), we see that the embedded object \textit{rotii} ‘bread’ is feminine, and both the infinitival verb and the matrix verb show gender agreement with the object.

Section 4.2 presents the facts of Hindi Long Distance Agreement, and the following sections provide an overview of the previous analyses of LDA posited by Mahajan (1989), Butt (1993, 1995), and Bhatt (2005) in sections 4.2.1, 4.2.2, and 4.2.3 respectively. I argue here that the least problematic solution to account for this phenomenon is using the modified version of Chomsky’s (1998, 2001) Agree proposed by Bhatt (2005) and the noun incorporation analysis proposed by Butt (1993, 1995). These proposals along with the analysis of movement to \(\text{[Spec,FocP]}\) proposed in this paper make transparent the conditions for the occurrence of LDA and for when agreement is blocked. Following this discussion, I point out that none of these analyses adequately account for the apparent optionality of LDA.

\(^4\) LDA does not occur out of finite clauses (Bhatt 2005).
4.2. Facts of Long Distance Agreement in Hindi

4.2.1. Parasitic Agreement

The infinitival verb agrees with its object only when there is LDA. Moreover, when LDA takes place, infinitival agreement must also occur.

(6) a. LDA + infinitival agreement:

\[Shahrukh-ne \_{pov} tehni \_ kaat-nii \_ chaah-ii \_ thii\]
Shahrukh-Erg branch.F cut-Inf.F want-Perf.F be.Pst.FSg
‘Shahrukh had wanted to cut the branch.’

b. infinitival agreement, but no LDA:\footnote{As also pointed out in Bhatt (2005), some speakers find (6b) grammatical. This judgment does not match the author’s own intuitions, and is ungrammatical in the Standard variety of Hindi-Urdu spoken in North India.}

\[*Shahrukh-ne \_{pov} tehni \_ kaat-naa \_ chaah-ii \_ thii\]
Shahrukh-Erg branch.F cut-Inf.F want-Perf.MSg be.Pst.MSg
‘Shahrukh wanted to cut the branch.’

c. LDA, but no infinitival agreement:

\[*Shahrukh-ne \_{pov} tehni \_ kaat-naa \_ chaah-ii \_ thii\]
Shahrukh-Erg branch.F cut-Inf.F want-Perf.F be.Pst.FSg
‘Shahrukh wanted to cut the branch.’

d. no infinitival agreement, no LDA:

\[Shahrukh-ne \_{pov} tehni \_ kaat-naa \_ chaah-aa \_ thaa\]
Shahrukh-Erg branch.F cut-Inf.M want-Perf.MSg be.Pst.MSg
‘Shahrukh wanted to cut a/the branch.’ (Bhatt 2005, p.761)

Example (6b) shows that the infinitival verb and its complement cannot agree if there is no LDA, and in (6c) and (6d), we see that when LDA does occur, the object must agree with its infinitival complement. Thus, as can be seen from the data provided above, the infinitival verb agrees with its object only when there is LDA. Infinitival verb agreement is, therefore, said to be parasitic on LDA.
4.2.2. Optionality

Long Distance Agreement is optional, a fact which has been difficult for previous approaches to explain. When LDA occurs in (7a), the infinitival verb agrees with its object. The infinitival verb does not agree with its object when LDA does not occur:

(7) a. LDA:
Vivek-ne [or kitaab parh-nii] chaah-ii
Vivek-Erg book.F read-Inf.F want-Perf.FSg
'Vivek wanted to read the book.' (Bhatt 2005, p.760)

b. no LDA:
Vivek-ne [or kitaab parh-naa] chaah-aa
Vivek-Erg book.F read-Inf.M want-Perf.MSg
'Vivek wanted to read the book.'

The optionality of LDA seems to be in free variation; however, native speakers report certain interpretive effects from the presence or absence of LDA (Bhatt 2005; Butt 1995; Hook 1979; Mahajan 1989). Hook (1979) states that the embedded object becomes more emphasized when agreement is present. This observation is also reiterated in Mahajan (1989). These interpretive effects and the optionality of LDA are further explored in the analysis presented later on in the paper. I will first provide an account of three previous analyses of LDA, and then adopt Butt’s (1993) solution in my own analysis of the optionality of LDA.


The main point of Mahajan’s analysis is that the infinitival verb, the perfective participle, and the imperfective participle differ in their Case-assigning abilities. Perfective participles can
never assign accusative Case to their objects, imperfective participles always assign Case to their objects, and infinitival verbs optionally assign Case to their objects. This optionality of infinitival verbs to assign Case is what Mahajan claims to cause the optionality of LDA.

As Mahajan allows for infinitival verbs to optionally assign Case, in instances when the infinitival verb does not assign accusative Case, we get LDA because the object raises to the next highest Case position which is the [Spec, AgrP] of the matrix verb. On the way to the matrix [Spec, AgrP], the embedded object passes through the [Spec, AgrP] of the embedded clause. Hence, the embedded object agrees with both the infinitival verb and the matrix verb. When the infinitival verb assigns Case, we do not get LDA as there is no movement to [Spec, AgrP]. Consequently, the optionality of LDA also follows from the ability of the infinitival verb to optionally assign Case. The following trees of the sentences in (7) illustrate how LDA is accounted for under Mahajan’s analysis. The embedded object agrees with both the infinitival verb and the matrix verb as in (7a).
(7a) LDA

(7) a. *Vivek-ne [for kitaab parh-nii] chaah-ii*
    Vivek-Erg  book.F read-Inf.F want-Perf.FSg
    'Vivek wanted to read the book.' (Bhatt 2005, p.760)

The embedded object does not agree with the infinitival verb in (7b) as seen below:
Mahajan associates agreement with the assigning of Case, which leads to some empirical problems. The Case of the subject of the infinitival complement is expected to be licensed by the matrix verb in order to trigger LDA under this analysis:

(8) *Ram-ne Mohan jaa-naa chaah-aa
    Ram-Erg Mohan go-inf want-Perf
    ‘Ram wanted Mohan to leave.’ (Bhatt 2005, p.766)
In (8), the infinitive “go” is unaccusative and does not assign Case to its internal argument. Therefore, we expect Mohan to raise to the higher projection and be Case-licensed there, as it does not receive Case from the infinitive. However, it is not the case that the subject is licensed in this higher projection, and we get an ungrammatical sentence in (8) as a result. Thus, an analysis that does not disassociate Case from agreement is problematic for the Hindi data.

Finally, there is no independent empirical evidence for different case-assigning properties of perfective participles, imperfective participles, and infinitives. It is not clear why infinitival verbs have an optional assigning case ability.


Butt’s analysis of LDA in Hindi views the phenomenon as a series of successive local agreements. The infinitival clause is considered to be an NP which can function as an argument of predicates, which means that the embedded object can form a compound with the infinitival verbal complement. This phenomenon in which the infinitival verb and the object combine together to form a single morphological unit while still retaining their syntactic status is known as Noun Incorporation. When the object forms a compound with the infinitival verb, we do not get LDA. When the infinitival verb does not form a compound with the embedded object, LDA occurs.

There are two steps involved in Butt’s analysis of LDA. First, the infinitival complement agrees with the embedded object, and second, the main clause verb agrees with the infinitival

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6 See Butt (1993) for a more detailed account of Noun Incorporation.
verb. Thus, the facts of long distance agreement are accounted for in the same manner as local agreement.

Consider the following sentences:

(9) a. LDA:
naadyaa-kō gaarii calaa-nii aat-ii hai
Nadya.F-Dat car.f-Nom drive-Inf.F.Sg come-Impe.F.Sg is
‘Nadya knows how to drive a car.’

b. No LDA:
naadyaa-ko [wō gaarii calaa-naa] aat-aa hai
Nadya.F-Dat car.f-Nom drive-Inf.M.Sg come-Impe.M.Sg is
‘Nadya knows how to drive a car.’ (Butt 1993)

According to Butt, the embedded object in (b) forms a compound with the infinitive, but the embedded object fails to do so in (a).


Bhatt invokes the operation AGREE to account for this phenomenon in Hindi-Urdu. AGREE is different from Agree introduced in Chomsky (1998, 2000, 2001) as Agree requires Goals to be active, whereas AGREE allows the probe to value its ϕ features by targeting a Goal that is inactive.

Bhatt’s analysis is centered around the idea that a head can agree with a constituent that it does not Case-license. Thus, case and agreement are dissociated, which solves one of the problems with Mahajan’s analysis. For Bhatt, finite T does not license the Case of an object, but can enter into an AGREE relationship with it if the ϕ-features of the subject are not visible and there is a more local element, i.e. the object, with visible ϕ-features.
Consider the following sentences:

(10) *Mona kelaa khaa-tii thii*
    Mona.F banana.M eat-Hab.F be.Pst.FSg
    'Mona used to eat bananas.'

(11) *Ram-ne imlii khaa-yii thii*
    Ram.M-Erg tamarind.F eat-Perf.F be.Pst.FSg
    'Ram had eaten tamarind.' (Bhatt 2005, p. 768)

In (10), the nearest visible $\phi$-features are those of the subject, and they are used by $T$ to value its unvalued $\phi$-features. However, in (11), since the subject is overtly case-marked, its $\phi$-features are not visible, and the nearest $\phi$-features are those of the object.

The derivation provided below for the sentence in (12) illustrates how Bhatt accounts for LDA in his analysis:

(12) *John-ne kitaab parh-nii chaah-ii*
    ‘John wanted to read a book.’
In (12), we see that T probes down the tree and enters into an agreement relationship with the Inf head. Since the ϕ-features on both T and the Inf head are unvalued, they continue probing until they come across the embedded object. The ϕ-features on T and the Inf head are then covaluated by the object. Covaluation can be described as the process through which features on both T and the Inf head are valued together by the embedded object. Another possible alternative to covaluation is that both T and Inf function as separate probes; however, this alternative is ruled out as the ungrammaticality of (6b) and (6c) now repeated here in (13) is not accurately reflected if T and Inf are separate probes.
(13) a. infinitival agreement, but no LDA:

\[ *Shahrukh-ne [\text{tehni} \text{kaat-nii}] \text{chaah-aa} \text{thaa} \]

Shahrukh-Erg branch.F cut.Inf.F want-Perf.MSg be.Pst.MSg

‘Shahrukh wanted to cut the branch.’

b. LDA, but no infinitival agreement:

\[ *Shahrukh-ne [\text{tehni} \text{kaat-naa}] \text{chaah-ii} \text{thii} \]

Shahrukh-Erg branch.F cut.Inf.F want-Pfv.F be.Pst.FSg

‘Shahrukh wanted to cut the branch.’

If T and Inf probed the embedded object separately, we would expect the paradigm in (13) to be grammatical. The fact that infinitival agreement cannot occur without LDA, and that LDA occurs only if there is infinitival agreement is empirical evidence for the claim that the features on T and the Inf head are covaluated by the embedded object after they enter into an agreement relationship with each other. Therefore, we see that Bhatt’s analysis of LDA is not different from the analysis of local object agreement.

Bhatt also notes that LDA is not always possible out of infinitival clauses.

(14) Anjum-ne Saddaf-ko [\text{chitthii likh-ne}] ko \text{kah-aa/*ii} \text{thaa/*thii}

Anjum-Erg Saddaf-DAT letter.F write-Inf.Obl-Dat say-Perf.MSg/F be.Pst.MSg/F

'Anjum told Saddaf to write a letter.' (Bhatt 2005, p. 777)

The sentence in (14) can be contrasted with the sentence below:

(15) Nadia-ko [\text{gaarii chalaanii}] aa-tii \text{hai}

Nadia-Dat car.F drive-Inf.F come-Hab.F be.Pres.3Sg

'Nadia knows how to drive a car.' (Bhatt 2005, p. 778)

This difference between (14) and (15) is accounted for by analyzing (15) as involving a complex predicate formation involving restructuring verbs, which is not the case in (14).

Restructuring verbs like “want”, “let”, and “know” are common cross linguistically, and exhibit
similar behavior where certain ordinarily clause-bounded processes apply across the boundaries of infinitival clauses (Wurmbrand 1998).

The optionality of LDA, which Butt accounted for by noun incorporation, is attributed to the optionality of restructuring elements to project a PRO subject. When a PRO subject is projected, the infinitive is not a restructuring infinitive, and PRO blocks the AGREE relationship between the matrix T and the embedded object. Thus, the problem with Butt’s analysis, which was using noun incorporation to account for the optionality of LDA, is resolved in Bhatt’s solution by attributing it to the presence or absence of a PRO, which is a cross-linguistically motivated approach to optionality.

However, Bhatt’s analysis does not provide a reason for the paradigm seen below:

(16) a. [gaarii  chalaanii] [Nadia-ko] [aatii  hai]  
car.F-Nom drive.F-Inf  Nadia-Dat know.F-Imp is  
‘Nadia knows how to drive the car.’ (Butt 1993, p.57)

b. [gaarii] [Nadia-ko][chalaanii  aatii  hai]  
car.F-Nom  Nadia-Dat  drive.F-Inf  know.F-Imp is  
‘Nadia knows how to drive the car.’ (Butt 1993, p.58)

(17) a. [gaarii  chalaanaa] [Nadia-ko] [aataa  hai]  
car.F-Nom  drive.M-Inf  Nadia-Dat know.M-Imp is  
‘Nadia knows how to drive a car.’ (Butt 1993, p.58)

b. *[gaarii] [Nadia-ko][chalaanaa  aataa  hai]  
car.F-Nom  Nadia-Dat  drive.M-Inf  know.M-Imp is  
‘Nadia knows how to drive a car.’ (Butt 1993, p.58)

In the sentences above, we see that the infinitival clause can scramble to the left as a constituent, and that it is still possible for both LDA and non-LDA constructions to occur. In examples (16b) and (17b), it is the object alone that scrambles. The ungrammaticality of (17b) is unexpected. If there is an optional presence of additional structure that blocks agreement, it is expected that the
agreement in (17b) is simply blocked and that *gaarii* ‘car’ scrambles to the left. Bhatt’s analysis cannot explain the ungrammaticality of (17b) due to the scrambling of the object if the optionality of LDA is due to whether a predicate is restructuring or not. Therefore, it is possible that a crucial generalization is being missed. This ungrammaticality is accounted for by Butt (1993) by noun incorporation. In (17b), the object *gaarii* ‘car’ and the infinitive form an NP and the object cannot scramble to the left on its own.

Bhatt (2005) argues that the analysis by Butt (1993) does not capture the parasitic nature of LDA, i.e., T must agree with Inf in order for LDA to take place. This observation is correct for the dialect of Hindi Bhatt examines, but it is important to note that for not all dialects of Hindi/Urdu is LDA parasitic in nature. The analysis as presented in this paper captures the difference between both these dialects, and can also account for this asymmetry.

Hence, we see that there is no least problematic account for LDA in Hindi. I show that an account that works best for LDA is in need of the insights from both Butt (1993) and Bhatt (2005) as neither one of them alone can adequately explain all of the data. A unified account of these analyses can predict both the ungrammaticality that results from scrambling the embedded object in isolation when LDA is blocked and the parasitic nature of infinitival agreement on LDA.

5. Evidence for a Focus Projection in Hindi

As mentioned in previous sections, I argue for a focus projection immediately above the vP. A constituent showing narrow focus and identificational focus in terms of Kidwai (1999) and Kiss (1998) respectively is considered to show syntactic focus and must move to [Spec,FocP].
This type of focus does not include contrastive focus or the morphological Hindi focus marker -hi. An analysis of this morphological focus marker is beyond the scope of this paper.

Using evidence from negation, answers to wh-questions, and specificity effects in Long Distance Agreement and word order in wh-questions, I show that there is a focus projection above the vP in Hindi to which movement of focused constituents takes place.

5.1. Long Distance Agreement

Although previous accounts of LDA discuss the mechanisms of agreement in great detail, the problem of the optionality of LDA still remains. The discussion of the optionality of LDA in the previous accounts were as follows: the infinitive assigns case optionally to its complement for Mahajan (1989), there is an optional PRO between the restructuring verb and the object for Bhatt (2005), and noun incorporation can occur optionally for Butt (1993). None of these analyses successfully captures the generalization that blocks agreement or causes it to happen. Mahajan and Butt simply state the optionality of LDA, and Bhatt grounds this optionality in the optionality of restructuring verbs, which leads to problems as seen in (17b). Furthermore, the specificity and focus effects are not captured by the previous analyses. In the following sections, I show that when noun incorporation occurs, the object and the infinitive form a VP and the object has default masculine agreement. When the object is specific and has a [+FOCUS] feature, noun incorporation cannot take place and the object moves up to [Spec,FocP] to value its focus feature.

I show throughout this section that the object has scrambled to the specifier of the focus projection when LDA occurs. In section 5.1.1, I present the specificity effects that occur as a
result of LDA. Section 5.1.2 provides a detailed description of how the movement of the embedded object to the focus projection accounts for the optionality of LDA. Section 5.1.3 uses negation to illustrate that the embedded object has undergone movement in sentences where we see agreement. Following the section of LDA and negation, I show how the movement of the embedded object out of the infinitival clause is attributed to focus using evidence from answers to wh-questions.

5.1.1. Specificity

The following sentences illustrate that the embedded object in a construction with LDA as in (18b) is interpreted as specific, while the object in (18a) is interpreted as non-specific.

(18) a. Ram-ne kitaab pad-naa chaah-aa  
    ‘Ram wanted to read a book.’

   b. Ram-ne kitaab pad-nii chaah-ii  
    Ram-Erg book.F read-Inf.F want-Inf.F  
    ‘Ram wanted to read the book.’

The different interpretations in (18a) and (18b) indicate that the object is specific in LDA constructions and non-specific without LDA. This can be attributed to the fact that in (18a) the object and the infinitive incorporate, whereas incorporation is blocked in (18b). Incorporation in (18b) is blocked because the object is specific and has a focus feature; noun incorporation only occurs between infinitives and non-specific DPs. This fact has also been noted cross-linguistically for languages other than Hindi (Baker 1988, Farkas and De Swart 2003, Mithun 1984).
Furthermore, since the embedded object is specific in LDA constructions, it is necessarily the case that the object has scrambled out of the vP. This is shown by Butt and King (1996) for Hindi, and Diesing (1992) also notes for German that in order for an embedded object to receive a specific interpretation, it is necessary for it to scramble overtly out of the vP. Movement in this case occurs because the specific objects must vacate the original verbal position where they are merged in order to receive a specific interpretation. Hence, LDA only appears to be optional in (18). The movement of the embedded object to [Spec,FocP] in (18) has no effect on linear order, and the distinction between (18a) and (18b) lies in the different interpretations of the sentences.

Moreover, the discussion of LDA presented in Butt (1993) shows that LDA is obligatory with scrambling.

(19) a. [gaarii chalaanii] [Nadia-ko] [aatii hai]  
car.F-Nom drive.F-Inf Nadia-Dat know.F-Imp is  
‘Nadia knows how to drive the car.’ (Butt 1993, p.57)

b. [gaarii] [Nadia-ko][chalaanii aatii hai]  
car.F-Nom Nadia-Dat drive.F-Inf know.F-Imp is  
‘Nadia knows how to drive the car.’ (Butt 1993, p.58)

(20) a. [gaarii chalaanaa] [Nadia-ko] [aataa hai]  
car.F-Nom drive.M-Inf Nadia-Dat know.M-Imp is  
‘Nadia knows how to drive a car.’ (Butt 1993, p.58)

b. *[gaarii] [Nadia-ko][chalaanaa aataa hai]  
car.F-Nom Nadia-Dat drive.M-Inf know.M-Imp is  
‘Nadia knows how to drive a car.’ (Butt 1993, p.58)

Under Butt’s analysis, the ungrammaticality of (20b) is expected. The object gaarii ‘car’ and the infinitive form a compound, which shows the default masculine gender. Moreover, as per the analysis presented in this paper, specific and focused objects cannot be incorporated. When they are not incorporated, they trigger LDA and scramble out of the vP. Thus, since (20b) does not
show LDA, the sentence is ungrammatical. It should also be noted that when LDA occurs, the object gaarii ‘car’ is specific.

5.1.2. A Newer Analysis of LDA

The analysis of LDA put forth in this paper makes use of Butt’s (1993) noun incorporation and Bhatt’s (2005) modified Agree. Bhatt’s AGREE allows for T to agree with a goal that is inactive, which best accounts for the agreement of both T and Inf with the embedded object.

In analysing LDA in Hindi, I follow Butt in assuming that when the embedded object incorporates with the infinitive, agreement is blocked. Although Butt does not deal with φ-features, she does assume that the object is an N, and not a DP. Incorporated objects are also typically treated as Ns or NPs cross-linguistically (Baker 1988; Farkas and De Swart 2003). Therefore, when the embedded object undergoes noun incorporation, the object is not a DP and lacks φ-features. When the embedded object lacks φ-features, the infinitive cannot agree and LDA is blocked.

Noun incorporation does not take place when the embedded object is specific. Moreover, this specific object carries a focus feature. It is attested cross-linguistically that incorporated objects are non-specific, and this is seen in languages like Hungarian (Farkas and De Swart 2003). If the embedded object is specific, it cannot be incorporated. In addition, answers to wh-questions show that the embedded objects in LDA constructions are focused. Thus, the embedded objects in LDA constructions are both specific and focused, and consequently prevent noun incorporation.
I propose that when the embedded object is specific and focused, it must undergo object shift so that it can move higher up in the tree, and ultimately to the specifier of the focus projection where it can value its focus feature. If the object does not value its focus feature, the derivation crashes. In order to account for object shift in Hindi LDA, I propose that there is a VoiceP projected above the infinitival clause. This VoiceP results in causative formations, which can be seen in LDA constructions. Examples of causatives in Hindi are provided below:

(21) a. *John-ne [wsf kitaab parh-nii] chaah-ii*  
    John-Erg book.F read-Inf.F want-Perf.FSg  
    'John wanted to read the book.'

    b. *John-ne [wsf kitaab parhaa-nii] chaah-ii*  
    John-Erg book.F make-read-Inf.F want-Perf.FSg  
    'John wanted to teach the book.'

(22) a. *John.ne [ws pitchaar dekh-nii] chaahii*  
    John.ERG film.F watch-Inf.F want-Perf.F  
    'John wanted to watch the movie.'

    b. *John.ne [ws pitchaar dikhaa-nii] chaahii*  
    'John wanted to show the movie.'

The sentences above illustrate that the infinitives in Hindi LDA constructions can be made causative. The verb ‘read’ in Hindi is *parh-naa*, which can then be made causative into the verb *parhaa-naa* ‘make-read’. This is also seen with the verb *dekh-naa* ‘watch’, which can be made causative into the verb *dikhaa-nii* ‘show’. Such causative formations of verbs are robust in Hindi. Since the infinitives in LDA sentences can be made causative, then it must be the case that there is a VoiceP projection that selects for the infinitival clause. The VoiceP is responsible for the alternation between the causative and non-causative form of the verb.
The relation between object shift and specificity is not applicable to Hindi alone. It has been shown in the literature for Icelandic and Tagalog, two languages that display object shift, that shifted objects are necessarily interpreted as specific (Preminger 2013). The examples from Preminger (2013) provided below illustrate this relationship:

(23) a. Ég las, [prjár bækur] aldrei [w t, t, ]2
    I read(past) three books never
    ‘There are three books that I never read.’
    (specific reading of “three books” / *non-specific reading of “three books”)

b. Ég las, aldrei [w t, prjár bækur ]
    I read(past) never three books
    ‘I never read three books.’
    (non-specific reading of “three books” / ? specific reading of “three books”)

(Preminger 2013, p.278)

The examples from Icelandic in (23) illustrate that when the object is specific, it undergoes object shift. In (23a), object prjár bækur ‘three books’ has a specific interpretation, and a non-specific reading is unavailable. When the object is in-situ in (23b), the non-specific reading is vastly preferred. The fact that specificity triggers object shift is also seen in Tagalog.

(24) a. M-aglu-luto ang lalaki ng adobo
    nom-asp-cook ANG man CASE adobo
    ‘The man will cook adobo.’ (non-specific reading of adobo)
    (Preminger 2013, p.279)

The object in (24a) is has a non-specific reading. Therefore, object shift is not triggered, and as seen in (24a), the object remains in-situ and it does not control agreement on the verb. In contrast, the object in (24b) undergoes object shift.

(24) b. Lu-lutu-in ng lalaki ang adobo
    asp-cook-acc CASE man ANG adobo
    ‘The man will cook the adobo.’ (specific reading of adobo)
    (Preminger 2013, p.280)
The object *adobo* has shifted out of the VP in (24b), receives a specific interpretation, and it controls agreement on the verb (Preminger 2013).

I propose that this analysis extends to Hindi LDA, and that if the object has a specific reading, it must trigger object shift and move out of the infinitival phrase. If the object is non-specific and has a generic reading, it must remain in-situ in the infinitival clause. The remainder of this section provides step-by-step derivations of examples in order to clearly see how specificity, focus, object shift, and noun incorporation dissolve the optionality of LDA.

The following derivation of the sentence in (25a) below illustrates how LDA is blocked when the noun is incorporated.

(25) a. *John-ne kitaab pad-naa chaah-aa*  
‘John wanted to read a book.’
In the derivation above, the subject *John* originates in the specifier position of the outermost vP, and then raises to the specifier of the TP. Similarly, the matrix verb originates in the head of the VP, and then raises to T. Hindi verbs are generally analyzed as raising to T. These movements are shown in all subsequent trees. This paper does not discuss the ergative case marking on subjects as it is not directly relevant to the analysis.
The tree above shows that the embedded object kitaab ‘book’ is an N that is incorporated by the infinitive parhnaa ‘read’. kitaab lacks φ-features, and thus, the infinitive cannot agree with it. Moreover, the embedded object is non-specific and does not carry a focus feature that would cause it to move higher up in the tree. When the derivation reaches the outermost vP, the first VoiceP phase is spelled out as kitaab parhnaa. It is important to note that I am assuming the Phase Impenetrability Condition (PIC) as stated by Chomsky (2001), which is presented again below:

**PIC:** HP and ZP are strong phases. The domain of H is not accessible to operations at ZP; only H and its edge are accessible to such operations (Chomsky 2001).

Thus, the spell-out domain of the VoiceP is not spelled out until the next phase, which in this case is the vP. At this point, John moves to the specifier of the TP and the matrix verb chaah ‘want’ moves up to T. T needs to agree with a DP to value its φ-features. However, T cannot agree with the subject as it the φ-features of the subject are not visible out of the overt ergative case marking. T then tries to agree with the object, which is now inaccessible as the VoiceP phase is spelled out. Additionally, the object does not have φ-features regardless of whether or not it is visible to T for agreement. Hence, the final phase is spelled out with default agreement on T, and we get the sentence John-ne kitaab parhnaa chaahaa.

The following derivation illustrates how the current analysis deals with LDA constructions.
In contrast to the sentence in (25a), the embedded object kitaab ‘book’ cannot be incorporated by the infinitive in (25b) as it is specific and focused. Thus, the object is a full DP with φ-features. In order to value its focus feature, the DP must move up to [Spec,FocP]. It first undergoes object shift to the specifier of the VoiceP, and in doing so, it must agree with the infinitive. Under a minimalist conception of movement, the DP object must agree with each head before moving to the its specifier. This movement is driven by EPP features on the agreeing head. Hence, the
infinitive moves to the head of the VoiceP, and the object agrees with the infinitive before moving on to the specifier of the VoiceP. The DP then moves on the specifier of the vP. The DP movement is similar to that of wh-elements, where the elements must stop in intermediate projections before reaching the point in the tree where they can value their features to prevent the derivation from crashing. The DP must move to [Spec,FocP] across a phase boundary, and so it must move to the escape hatch position of the outermost vP. Following the movement to [Spec,vP], the DP must escape to the next phase through the specifier of the vP to value its focus feature. When the derivation reaches the outermost vP, the spell-out domain of the VoiceP phase is spelled out as parhnii. The subject John and the matrix verb chaah ‘want’ then raise to [Spec,TP] and T respectively. The object kitaab then moves to [Spec,FocP] where its focus feature is valued. Finally, T must agree in order to value its φ-features. Here I invoke Bhatt’s (2005) AGREE where a probe can agree with a goal that is inactive. T probes for a goal to value its φ-features, finds the object kitaab, and then agrees with it. The entire derivation is then spelled out as John-ne kitaab parhnii chaahii. It is essential to recall here that one of Bhatt’s main arguments against Butt’s noun incorporation proposal was that the parasitic nature of LDA, i.e., there can be no infinitival agreement without LDA, was not captured in the analysis. As can be seen from the derivation in (25b), since the embedded object moves to [Spec,FocP], there will never be infinitival agreement without T agreeing with the object as well. Thus, this analysis captures the parasitic nature of LDA by adopting Butt’s noun incorporation and Bhatt’s AGREE.

It is also possible for objects to be specific and non-focused. Although I argue that all embedded objects in LDA constructions are both specific and focused, it is at least theoretically possible to have objects that are non-focused, but specific. Based on the analysis presented in
this paper, it is then expected that the object will undergo object shift, but because it lacks a focus feature, it does not undergo focus-driven movement to [Spec,FocP]. The following derivation illustrates this movement:

(25) b. John-ne kitaab pad-nii chaah-aa
    ‘John wanted to read the book.’

As can be seen from the tree in (25b), the embedded object is specific, and thus, object shift is triggered. In order for the object to move out to the specifier of the VoiceP projection, it must first agree with its head. Hence, infinitival agreement occurs. When the derivation reaches the
outermost vP, the spell out domain of VoiceP is spelled-out, and _parhnii_ is derived. At this point, the φ-features on T are still unvalued, and T wants to agree. However, the DP has not moved out the VoiceP, and its φ-features are invisible to T as it is not within the domain visible to T. The φ-features on T then remain unvalued, and T is realized with default agreement when the entire sentence is spelled out.

The facts of LDA presented in this paper and by Bhatt (2005) analyse infinitival agreement as being parasitic on LDA. It is expected that there can be no infinitival agreement without T agreeing with the object as well. This was shown earlier by the example in (6b) provided again below:

(26) *[Shahrukh-ne [_.tehni kaat-nii] chaah-aa thaa
  Shahrukh-Erg branch.F cut.Inf.F want-Perf.MSg be.Pst.MSg
  ‘Shahrukh wanted to cut the branch.’

Although myself and Bhatt find the above sentence to be ungrammatical, Butt notes that this construction is perfectly acceptable in her dialect. The derivation of (25) shows that it is possible to account for infinitival agreement without LDA. When the object is specific and not focused, we do not see LDA, but infinitival agreement does occur. Moreover, the difference between the two dialects of Hindi becomes transparent in this analysis. The embedded object in LDA sentences must always be focused when specific in dialects where (26) is ungrammatical. Contrastively, dialects in which (26) is acceptable allow for the embedded objects to be specific without being focused.

In this section, I have shown that the apparent optionality of LDA results from the difference between the specific and focused reading of the embedded object and its non-specific
reading. When the object is non-specific, it is incorporated by the infinitive. The object is not a full DP, but an N that lacks φ-features. As a result, LDA does not occur as the φ-features of the object are unavailable for agreement. Contrastively, when the embedded DP is specific and focused, it has its full set of φ-features. The DP does not incorporate, and because it is specific, it undergoes object shift. It then undergoes movement to [Spec,FocP] to value its focus feature, and ultimately agrees with T.

5.1.3. Negation

In this section, using negation from Hindi, I show that movement of the object out of the infinitival clause is obligatory in LDA constructions. There are two types of negation in Hindi, phrasal negation and sentential negation (Mohanan 1995), both of which have some interesting consequences for LDA. Phrasal Negation can modify a constituent by adjoining a particle to its right, giving it a contrastive reading. The following examples illustrate LDA with phrasal negation:

(27) a. [John-ne nahii] kitaab parh-naa chaah-aa
    ‘John didn’t want to read a/any book (but Connor did).’

    b. [John-ne nahii] kitaab parh-nii chaah-ii
    ‘John didn’t want to read the book (but Connor did).’

    ‘John didn’t want to read a/any book (he wanted to read the magazine).’

7 Brackets here indicate constituents with phrasal negation.
b. \textit{John-ne kitaab nahii parh-nii chaah-ii}  
‘John didn’t want to read the book (he wanted to read a magazine).’

In (27) when \textit{nahii} attaches to \textit{John}, it gives the DP \textit{John} a contrastive meaning. Similarly, \textit{kitaab} ‘book’ receives a contrastive interpretation in (28), which can also be focused. A contrastive ‘interpretation’ is different from a constituent receiving contrastive focus. A constituent with contrastive focus is stressed for emphasis, whereas a constituent with phrasal negation may or may not be focused. The presence of phrasal negation does not always result in focus; the negated phrase must bear a focus feature in order to scramble to [Spec,FocP] as the focus projection is only reserved for narrow and identificational focus. Movement to the focus projection is vacuous in (27) and (28), and LDA appears to be optional.

It is unsurprising that LDA is not blocked with phrasal negation and that the noun can be incorporated. Phrasal negation in (27a) only modifies \textit{kitaab} ‘book’, and hence, it can be incorporated into the infinitive. The crucial part is that \textit{kitaab nahii} is still non-specific; the object does not receive an obligatorily specific interpretation under negation. The non-specific reading of the object is what allows for noun incorporation. As long as the generic reading is still available, the object incorporates into the infinitival phrase, and LDA is blocked. The fact that objects with phrasal negation are incorporated in Hindi is asserted by Mohanan (1995) and is predicted by the analysis put forth in this paper as well.

Additionally, we can turn to evidence from scrambling to confirm that phrasal negation does indeed incorporate into the infinitive.
(29) a. *[kitaab] John-ne nahii parh-naa chaah-aa
    ‘John didn’t want to read a/any book (he wanted to read a magazine).’

    b. [kitaab] John-ne parh-nii chaah-ii
    ‘John didn’t want to read a/any book (he wanted to read a magazine).’

(30) a. *[kitaab nahii] John-ne parh-naa chaah-aa
    ‘John didn’t want to read a/any book (he wanted to read a magazine).’

    b. [kitaab nahii] John-ne parh-nii chaah-ii
    ‘John didn’t want to read the book (he wanted to read the magazine).’

In both of the instances of scrambling seen in (29) and (30), it is ungrammatical for just the
object or the object and the negation particle alone to scramble to the left of the sentence. The
ungrammaticality results from the incorporation of the object and the negation particle with the
infinitive, which then forms a single item that cannot be separated. Noun incorporation does not
occur when the embedded object is focused and specific. Agreement is required in (30a) as the
object is in the agreement domain of T.

In contrast to phrasal negation, LDA is obligatory with some instances of sentential
negation. The most neutral way to negate the sentence “John wanted to read a book” would be to
have the negation particle modify either the infinitive or the matrix verb to its left. This is
illustrated by the sentences provided below:

    ‘John didn’t want to read any book.’

    b. John-ne kitaab [nahii ____ parh-nii] chaah-ii
    ‘John wanted to not read the book.’
In the sentences in (31) and (32), we see that noun incorporation is possible when the negation is to the left of the matrix verb, but not when it is to the left of the infinitive. LDA is obligatory in (31). It should be noted that there is no difference in interpretation between when the negation particle modifies the infinitival verb or the matrix verb. Both variations negate the sentence and do not vary in meaning. When the negation particle modifies the infinitival verb as in (31), the embedded object must have necessarily undergone object shift otherwise it would intervene between the infinitive and the negation particle. If the embedded object does intervene between the negation particle and the infinitive, then the negation particle would have to be interpreted as modifying the subject John with a contrastive interpretation. In order to have sentential negation the negation particle must modify the infinitive to its left, and therefore, the only way this interpretation becomes available is when the embedded object has moved out of the VoiceP. In vacating the VoiceP, the DP undergoes object shift. As established earlier, object shift only occurs when the DP is specific and focused. Hence, the non-specific meaning is unavailable in constructions as in (31). The following tree illustrates how LDA occurs in (31b).
In the derivation of (31), the negation particle adjoins to the VoiceP to modify the infinitive *parh* ‘read’. The object must necessarily move out of the infinitival phrase; hence, it is specific and focused.

If LDA is obligatory with sentential negation when the negation modifies the infinitive, it may appear curious at first glance that LDA can be blocked when the sentential negation modifies the matrix verb. However, as can be gathered from even the linear order of the sentence, the negation does not interfere with noun incorporation. The derivation of (32a) below illustrates this:
The structure of (32a) above shows that the noun can be incorporated with the infinitive consequently blocking LDA. The sentential negation does not affect noun incorporation as it does not enforce a specific interpretation of the object nor does it force the object to carry a focus feature. Thus, we see that LDA blocking is possible with sentential negation if the negation
particle modifies the matrix verb, but LDA blocking cannot occur when the negation particle modifies the infinitival verb.

LDA with sentential negation modifying the matrix verb as in (32b) takes place similarly to (31b) as shown below:

The tree above shows that LDA is permitted when sentential negation modifies the matrix verb, and occurs when the object is specific and focused. The negation in (32b) has no effect on noun incorporation.
This section shows that phrasal and sentential negation result in different conditions on LDA. We see that LDA is blocked when sentential negation modifies the infinitival verb and that a specific focused reading is enforced on the object.

5.1.4. Answer to a Wh-Question

The optionality of LDA also vanishes in response to wh-questions. It is widely accepted that the answer to a wh-question is focused, and Kidwai (1999) shows that the answer to a wh-question has narrow focus. Therefore, if the embedded object does in fact move to [Spec,FocP] when focused, it is expected that the response to a wh-question should be ungrammatical if LDA does not occur. This prediction is borne out in the examples in (33) and (34):

(33) Ram-ne kyaa pad-naa chaah-aa?
Ram-Erg what read-Inf.M want-Inf.M
‘What did Ram want to read?’

(34) a. Ram-ne kitaab pad-nii chaah-ii
Ram-Erg book.F read-Inf.F want-Inf.F
‘Ram wanted to read a/the book.’

b. *Ram-ne kitaab pad-naa chaah-aa
‘Ram wanted to read a/the book.’

(34a) is the only acceptable response to the question in (33). A construction without agreement as in (34b) is unacceptable as a response to (33). Thus, the sentences in (34) show that the focused constituent moves to the specifier of the focus phrase, and consequently triggers LDA. As seen earlier in the paper, movement to [Spec,FocP] enforces a specific reading on the embedded object in (34a). The fact that the embedded object has a specific reading shows that the DP has scrambled out of the vP.
5.2. Wh-Questions

Kidwai (1999) proposes a focus projection immediately outside the vP to account for the default position for focused elements. In this analysis, wh-elements are taken to be inherently focused, and must undergo obligatory movement to the specifier of the focus projection. Although this claim accounts for the preferred position of wh-elements in the immediately preverbal position, it does not account for the different word orders of wh-elements when there are modifiers present in verb phrase. The following sentences illustrate this issue:

(35) a. Elias-ne kyaa khul-ke bolaa
    Elias-Erg what openly say-Perf
    ‘What did Elias openly say?’

b. Elias-ne khul-ke kyaa bolaa
    Elias-Erg openly what say-Perf
    ‘What did Elias openly say?’

In (35), khul-ke ‘openly’ is a manner adverb that modifies the verb and is adjoined at vP. Kidwai’s analysis predicts the order in (35a), where the wh-element has raised to a focus projection outside the vP. In contrast, if wh-elements obligatorily raise to a projection higher than the vP, then (35b) is expected to be ungrammatical, which is not the case. However, both word orders can be derived from an analysis that treats wh-elements as constituents that may or may not carry a [Focus] feature. If wh-elements are focused and carry a focus feature, it must raise to [Spec,FocP] to value the focus feature.

Manetta (2010; 2011) also argues for obligatory movement of wh-phrases. The default position for the obligatory movement of wh-elements is claimed to be in the specifier of v, thus analyzing Hindi as a language with partial wh-movement. However, the sentences in (35) are evidence that the wh-movement does not always take place.
Manetta’s analysis works for (35a), but does not account for (35b). In (35a), the verb is no longer in-situ and is focused. Contrastively, the wh-element in (35b) remains in situ, and it is not focused in this question. Therefore, we cannot assume that the wh-element has a default position. There has to be an independent motivation for which the wh-element scrambles to a higher position in the tree. When this motivation is lacking, the wh-element remains in-situ as in (35b). This discrepancy is resolved if the wh-element is said to move to [Spec,FocP] as in (35a) in order to value the focus feature.

5.3. Prosody

5.3.1. Background on Hindi Prosody

In contrast to intonational languages like English, each individual content word is assigned an L-H contour in Hindi. This pattern is analyzed as a low tone followed by a high phrase boundary on each word. Féry and Kentner (2010) define it as phrasal language. Patil et. al. (2008) also propose an analysis of Hindi phrasing such that each content word is phrased separately. Each phrase is marked with a low tone (L) and a high phrase boundary (H). In addition, Moore (1965) investigates sentence level contours, which are intonational units that contain discourse level information, and identifies five distinct types. The contours are falling, falling-level, falling-rising, rising, and rising-falling.

5.3.2. Prosody and Focus in Hindi

The prosody of focus in Hindi is an interesting aspect to investigate as native speakers often have unclear judgments as to which element in the sentence has the most emphasis (Bhatt,
There has been very little experimental work conducted on the prosody of Hindi (Patil et al. 2008; Moore 1965; Harnsberger 1994); however, the results from these studies can be used to gain insight on effects of focus and word order on intonation.

In order to note the consequences of syntactic focus on Hindi prosody, I present an account of two experiments conducted by Harnsberger (1994) and Patil et al. (2008). Both of these studies show that the immediately preverbal position is the default position for focus in Hindi, and that focus in the sentence-initial position behaves differently from focus in the default position.

In analyzing sentences with narrow focus in Hindi, Harnsberger (1994) found that focus on a word was marked intonationally by blocking the assignment of LH to the following content word. The speaker’s register also expands over the focused word compared to the typical range for LH. This can be seen in the figures presented below:
Sentence with no focused constituents.

(Harnsberger 1994, p.30)
The utterance in figure 1.1. is the same as that in 1.2 with the difference that sita:r ‘sitar’ is emphasized in the second elicitation. As can be seen in 1.2, the focus on sita:r blocks the assignment of LH to the following content word baja: ‘playing’. Additionally, the f0 increases over the word sita:r from a 236 Hz to 306 Hz, which strengthens the prominence on the focused
word. It should also be noted here that the focused word is in the immediately preverbal position, therefore we expect syntactic focus to play a role. It also follows that if the focus on a word that is sentence-initial the effects on the prosody would be different than when the word is in the immediately preverbal position. This prediction is borne out and shown in the figures below:

**Figure 2.1**

*Without focus*

(Harnsberger 1994, p.34)
Figure 2.2 shows a compressed register following the sentence initial focused word. In figure 2.1, we see a gradual compression following the sentence initial word, which is not focused.

(Harnsberger 1994, p.35)
The effects of focus in the elicitations in figures 1.1. and 1.2 are different from those seen in figures 2.1 and 2.2. In 1.2, when a word in the immediately preverbal position is focused, we see deaccenting on the following content word. The content word following the focused constituent is not assigned an LH tone as seen in sentences without focus. However, when a word in sentence initial position is focused as in 2.2, we see register compression on the words following it.

Harnsberger also found that wh-words were focused in the elicitations as well. The focus on wh-words was marked by an upstepping of the LH tone and by shifting the absolute f0 higher in the speaker’s pitch range. The following figure shows the focus on wh-words:
Figure 3

Example of wh-word sentence.

(Harnsberger 1994, p.36)

Figure 3 shows the upstepping of the Ls and Hs on the wh-element. It should be noted that no examples similar to those in Figures 1 and 2 were tested; therefore, it cannot be determined whether register compression or deaccenting occurs after the wh-word.
The study also examines the intonation of yes/no questions. The question word in yes/no questions in Hindi is canonically in sentence-initial position. Unlike wh-words, these question words were not marked by a unique register. This is illustrated in Figure 4:
Figure 4

Example of a yes/no question

inhone miːnaː ko maːraː:
They (proximate) Mina hit
They hit Mina

(Harnsberger 1994, p.38)
The LH tone on the question word in Figure 4 *inhone* ‘they’ is not upstepped. Therefore, question words in yes/no questions are not focused. Moreover, a variant of yes/no questions containing a wh-word in sential-initial position is shown to lack focus marking as well. This can be seen in the figure below:

**Figure 5**

![Hz graph with LH, H, L, H% labels and waveform showing kya: Ramesh ghur par hae.](image)

Question word: Ramesh home at is?
Is Ramesh at home?

(Harnsberger 1994, p.39)
The wh-word *kya*: ‘what’ similar to the question word inhone in figure 4 is not marked for focus. This is unlike the wh-word seen in figure 3, which is marked for focus by a unique register. The reason for the lack of focus in yes/no questions is the position of the question word in the sentence. The question words in yes/no questions are sentence-initial whereas the wh-word in figure 3 is in the immediately preverbal position. Thus, the default position for focus has an impact on Hindi prosody.

A study of Hindi prosody conducted by Patil et. al. (2008) also indicates that the immediately preverbal position for focus has prosodic consequences. Patil et. al. investigate native speaker elicitations for the effects of word order and focus on intonation. Both SOV and OSV constructions are tested for subject focus, object focus, and wide focus. The results show similar patterns for both word orders as summarized in the figures below:
Figure 6

(Patil et. al. 2008, p.61)
The figure shows that SOV and OSV structures pattern similarly. However, we notice post-focal register compression when the subject is focused in SOV constructions, and a post-focal register compression when the object is focused in OSV sentences. Thus, post-focal constituents are affected when focus is sentence-initial. No difference is found when the immediately preverbal constituent is focused. If the default position for focus is immediately preverbal, any prosodic marking of focus in this position would be redundant. Finally, we also see that wide-focus patterns similarly to when the focus is on the immediately preverbal constituent.

6. Conclusion

From the evidence presented, we see that in order to account for the optionality of LDA and the generally variable word order in Hindi, a focus projection selecting for a vP must be exist. I have also shown that LDA is not truly optional and is obligatory when the embedded object moves to [Spec,FocP]. The object necessarily receives a specific and focused interpretation when it moves out of the infinitival clause. This analysis also accounts for the fact that focused constituents in Hindi are typically found in the immediately preverbal position. The default position for focus is also shown to have effects on Hindi prosody.

As mentioned early on in the paper, Hindi has a generally flexible word order. The movement to [Spec,FocP] analysis presented here investigates wh-movement and LDA. Focus-driven movement can be extended to further account for the scrambling seen in Hindi in various other constructions. Moreover, more work needs to be done regarding the different types of focus available in Hindi.
References


Hook, P. E. (1979). Hindi Structures: Intermediate Level, No. 16 in Michigan Papers on South and South-East Asia, Center for South and South-East Asian Studies, University of Michigan, Ann Arbor.


