Selective opacity

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This paper develops a general theory of *selective opacity effects,* configurations in which one and the same constituent is opaque for some operations but transparent for others. Classical observations of selective opacity lie in the realm of movement. Finite clauses, for instance, are opaque for A-movement but transparent for $\bar{\text{A}}$-extraction, a pattern that has been shown to generalize beyond the A/$\bar{\text{A}}$-distinction. This paper makes a number of interconnected claims: First, based on novel evidence from movement–agreement interactions in Hindi-Urdu, I argue that selective opacity also encompasses φ-agreement and I propose that the underlying constraint does not apply to movement itself, but to the operation AGREE. Second, I propose that selective opacity is the result of probe-relativized *AGREE-barriers.* Essentially a defective counterpart of the traditional A-over-A Principle, AGREE-barriers prevent particular probes from searching into them. Third, the account developed here derives an otherwise surprising property of selective opacity effects: The higher the structural position of a probe in the clausal spine, the more structures are transparent to it. I show how this connection follows from the proposed account and provide arguments against previous analyses of the connection.

Keywords: A/$\bar{\text{A}}$-movement · long-distance agreement · locality · superraising · improper movement · A-over-A Principle · extended projections · Hindi-Urdu

1 Introduction

Movement types differ in what structures are transparent or opaque for them. In other words, the same structure may allow one movement type to proceed out of it but at the same type block other types of extraction. I will refer to this descriptive fact as **selective opacity:**[1]

(1) **Selective Opacity**
A syntactic domain Δ is selectively opaque for α-extraction if Δ prohibits α-extraction but allows β-extraction out of it, where α and β are descriptive extraction types.

The most well-studied contrast of this sort is between A- and $\overline{\text{A}}$-extraction out of finite clauses. While $\overline{\text{A}}$-extraction is possible, as in (2a), A-extraction out of a finite clause (**superraising**) is not, as shown in (2b). Finite clauses are thus selectively opaque for A-extraction but not for $\overline{\text{A}}$-extraction.

(2) a. What$_i$ do you think [that John ate t_i for breakfast]?
b. *Oatmeal$_i$ seems [that John ate t_i for breakfast].

The standard account of this contrast (Chomsky 1973, 1977, 1981) involves a conjunction of two constraints: First, extraction out of a CP has to proceed through the specifier of that CP, an $\overline{\text{A}}$-position. Second, movement from an $\overline{\text{A}}$- to an A-position is impossible (*improper movement*).

More recent investigations have made it clear that selective opacity is not limited to the interactions of A- and $\overline{\text{A}}$-movement. In English, for instance, embedded questions are selectively opaque for *wh*-movement (3a) but not for topicalization (3b) or relativization (3c) (Williams 2013: 101):

(3) a. *Who$_i$ do you wonder [who likes t_i]?
b. ?the man who$_i$ I wonder [who likes t_i]
c. Bill$_i$, I wonder [who likes t_i].

Similarly, infinitival clauses are selectively opaque for extraposition (4) but not for regular A- or $\overline{\text{A}}$-movement (Ross 1967), illustrated by (4) from Baltin (1978: 144).

(4) *[John$_i$ is believed [t_i to be certain t_j] by everybody [that Fred is crazy]$_j$].

Other examples of selective opacity are easy to come by (see, e.g., Abels 2012b: 61). German provides a number of illustrative cases. First, embedded V2 clauses are opaque for *wh*-movement into a verb-final clause but not for *wh*-movement into a V2 clause (Tappe 1981, Haider 1984, Reis 1985):

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[1] The concept of selective opacity is related to the notion of a weak island (see, e.g., Szabolcsi 2006 for an overview of the latter). The term 'weak island' is usually applied to environments that allow argument extraction but not adjunct extraction (e.g. Lasnik & Saito 1992) or DP gaps but not PP gaps (e.g. Cinque 1990). In other words, the barrierhood is modulated by the type of the moving element. I reserve the term 'selective opacity' to refer to instances where it is the type of the movement itself that affects barrierhood.

(5) a. $[_{\text{CP}_{\text{V2}}}$ Wen$_i$ meinst du $[_{\text{CP}_{\text{V2}}}$ t_i hat sie t_i getroffen]]?
who think you has she met
'Who do you think that she met?'

b. *(Ich weiß nicht) $[_{\text{CP}_{\text{V-final}}}$ wen$_i$ du meinst $[_{\text{CP}_{\text{V2}}}$ t_i hat sie t_i getroffen]]?
I know not who you think has she met
'(I don't know) who you think that she met.'

Second, finite clauses are selectively opaque for scrambling (Bierwisch 1963, Ross 1967) and relativization (Bayer & Salzmann 2013), but not *wh*-movement or topicalization. Third, embedded clauses in which topicalization has taken place are opaque for *wh*-extraction but not for subsequent topicalization (Fanselow 1987, Müller & Sternefeld 1993). Fourth, speakers of northern varieties of German commonly disallow *wh*-extraction out of a CP but accept topicalization across CPs (Abels 2012b). Fifth, incoherent infinitives in German are opaque for scrambling (Bech 1955/1957), but do allow *wh*-movement and relativization out of them (e.g., Müller 1998, Bayer & Salzmann 2013).

Similarly, in Georgian topicalization can escape a clause whereas *wh*-movement cannot (Harris 1995). In Russian, scrambling can cross CPs while *wh*-movement cannot (Müller & Sternefeld 1993, 1994). In Italian, embedded clauses in which focus fronting has taken place are selectively opaque for modifier fronting but not for relativization (Abels 2012a).

Selective opacity poses problems for standard approaches to syntactic locality, which have historically tended to treat locality as a binary distinction: a given domain is either transparent or opaque, without sensitivity to the type of the extraction. This is true for the traditional notion of subjacency (Chomsky 1973, 1977, 1981), barriers (Chomsky 1986) or the more recent Phase Impenetrability Condition (Chomsky 2000, 2001 *et seq.*). While relative notions of phasehood have recently been explored in detail (Bobaljik & Wurmbrand 2005, Bošković 2005, 2014, den Dikken 2007, Gallego & Uriagereka 2007a,b, Takahashi 2011, 2012), these approaches treat the phasal status of a node as a function of its syntactic context. Crucially, however, if a node constitutes a phase, it does so irrespective of individual movement types. Selective opacity hence constitutes the same problem for these approaches as it does for traditional accounts.

As a consequence, type-specific restrictions have generally been handled by additional constraints on particular movement types. As already mentioned, the ban on improper movement (Chomsky 1973, 1977, 1981, May 1979) restricts the application of A- but not $\bar{\text{A}}$-movement. In a similar vein, Ross' (1967) *Right Roof Constraint* ensures the clause-boundedness of extraposition, and so on. From a current perspective, such constraints are dubious if all movement is established uniformly, via Internal Merge (Chomsky 2004). This raises the question of how empirical differences between movement types can be accounted for in a theory that eschews such a distinction.

Against this background, this paper makes a number of interconnected claims. First, I will argue that selective opacity does not only hold of movement itself but rather of the operation Agree. The evidence for this claim comes from novel evidence from long-distance agreement in Hindi-Urdu (henceforth Hindi) and its interaction with various movement types, which demonstrate that φ-agreement partakes in selective opacity, just like movement does. These interactions suggest a uniform principle that regulates both movement and φ-agreement. Assuming throughout that Agree is a component of both movement and φ-agreement Chomsky (2000, 2001, 2004), rationalizing selective opacity as a constraint on Agree provides the desired unification. With this reassessment in place, selective opacity can be recast as a property of probes: Probes can differ in what domains they can search into. This view allows us to maintain the strong view that movement is a uniform process (Internal Merge) and that selective opacity is a manifestation of the Agree relation movement is parasitic on. I will moreover suggest that selective opacity is a direct consequence of a defective version of the A-over-A principle, a constraint that prevents search for an element to access an element of the same type.

The second core part of this paper focuses on the recent literature on selective opacity effects, which has argued that opacity is not distributed at random across various movement types (Williams 2003, 2011, 2013, Abels 2007, 2009, 2012a, Müller 2014a,b). Instead, there appears to be a connection between the locality of a movement type and the height of that movement type's landing site in the clausal spine, with movement types targeting higher landing sites tending to be able to extract out of more domains. To give an example, that A-movement is not able to escape finite clauses while $\bar{\text{A}}$-movement is, is connected to the fact that A-movement lands in Spec,TP, a position lower than that targeted by $\bar{\text{A}}$-movement (Spec,CP). I will argue that given independent properties of extended projections, this connection between landing site and locality falls out from the Agree-based system developed here. I will then contrast the analysis presented here to previous approaches to the connection and argue that the present system is preferable on empirical grounds.

I will proceed as follows: Section 2 will lay out the crucial evidence from long-distance agreement and movement in Hindi and their interactions. Section 3 will then argue, based on evidence from Hindi and other languages, that the height of the structural position an operation targets is systematically connected to what domains this operation can access. In other words, it will motivate a restriction on selective opacity. Section 4 lays out my proposal for selective opacity effects in Hindi and beyond. Section 5 then demonstrates how the account developed in section 4 accounts for the connection between height and locality motivated in section 3. Section 6 address several issues that emerge from the account presented here and section 7 concludes.

2 Movement and long-distance agreement (LDA) in Hindi

This section presents the empirical evidence motivating the account proposed in this paper. Of central importance is the observation that the A-/$\bar{\text{A}}$-movement distinction interacts with long-distance agreement (LDA) and that these interactions apply at the level of the clause, instead of individual syntactic items. I will start out by providing some background on the A-/$\bar{\text{A}}$-distinction and LDA.

2.1 *Some background on Hindi LDA*

A general property of verbal agreement in Hindi is that it targets the hierarchically highest non-overtly case-marked nominal in the domain of the verb (Pandharipande & Kachru 1977).

As a consequence, nominals may not agree if they carry on overt case marker like the ergative marker *-ne* or the accusative/dative marker *-ko*. The underlying algorithm is stated in (6):[2]

(6) *Hindi φ-agreement algorithm*
If the subject does not bear a case marker → agree with the subject
Otherwise: If object does not bear a case marker → agree with the object
Otherwise: Use masculine singular default agreement.

Verbal agreement is reflected on the main verb as well as auxiliaries, which always agree with the same element. The algorithm in (6) is straightforwardly characterized in terms of obligatory operations (Preminger 2011): A φ-Agree probe situated higher than the subject probes within its c-command and obligatorily agrees with the closest bare DP. If no such DP exists, default agreement arises.

While the agreement trigger is normally an argument of the respective verb, verbs may also agree with arguments of infinitival clauses in object position if the matrix clause does not contain an eligible (i.e., non-overtly case-marked) nominal. Such cross-clausal agreement is commonly referred to as 'long-distance agreement' (see Mahajan 1989, Davison 1991, Butt 1993, Boeckx 2004, Frank 2004, Bhatt 2005, Chandra 2007, Keine 2013). Unlike local agreement, cross-clausal agreement is generally optional. To illustrate, consider the examples in (7), based on Mahajan (1989: 237).

(7) a. *Long-distance agreement*
Laṛkõ-ne [**roṭī** khā-$\boxed{\text{nī}}$] cāh-$\boxed{\text{ī}}$.
boy.PL-ERG bread.F eat-INF.F.SG want-PFV.F.SG
'The boys wanted to eat bread.'

b. *Default agreement*
Laṛkõ-ne [**roṭī** khā-$\boxed{\text{nā}}$] cāh-$\boxed{\text{ā}}$.
boy.PL-ERG bread.F eat-INF.M.SG want-PFV.M.SG
'The boys wanted to eat bread.'

In both sentences in (7) the matrix subject *laṛkõ-ne* is overtly case-marked and hence not a elegible agreement controller. In (7a) the matrix verb *cāh* 'want' agrees with the embedded object *roṭī* 'bread'. Matrix agreement is accompanied by agreement on the infinitival verb *khā* 'eat'. The minimally different example in (7b) employs masculine singular default agreement on both the matrix and the embedded verb. There are subtle scope differences between the two variants, which are addressed in section 2.3.2.

A general propery of LDA in Hindi is that the embedded verb shares the agreement of the matrix predicate. Thus, in (7a) the infinitival verb likewise agrees with *roṭī* 'bread' while it exhibits default agreement in (7b). Mismatches between the two verbs lead to ungrammatical-

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[2] I will remain agnostic here with respect to the question why overtly case-marked DPs are invisible to the agreement algorithm. One option is to assume that agreement is sensitive to case values (Bobaljik 2008, Preminger 2011). Another is to treat the Hindi case markers as postpositions (Spencer 2005) or K(ase) projections (Butt & King 2004), which, being phasal, block agreement into their complement. Either choice is compatible with the remainder of this paper.

ity in (7). There is good reason to believe that agreement on the infinitive is not established independently, but rather a side product of agreement with the matrix verb (Bhatt 2005). The evidence comes from configurations in which the matrix subject does not bear ergative case. By the agreement algorithm in (6), the matrix verb and auxiliary then have to obligatorily agree with this subject and LDA is impossible. In this case, the embedded verb cannot agree with the embedded object but has to carry default agreement:

(8)	Sītā	[ṭehnī	kāṭ-nā/-*nī]	cāh-tī	thī.
	Sita.F	branch.F	cut-INF.M.SG/-*INF.F.SG	want-IPFV.F.SG	be.PST.F.SG

‘Sita wants to cut the branch.’

The infinitive agrees with an embedded object if and only if the matrix verb does. Infinitival agreement is thus parasitic on matrix agreement and not established by an independent probe, as it crucially depends on the syntactic operations of a structurally higher probe. I will follow Bhatt’s (2005) conclusion that embedded agreement is a side product of agreement with a matrix probe. As my primary concern in this paper is the syntactic aspects of LDA, I will lay aside the proper treatment of embedded agreement in the interest of space (also see fn. 5).

Of particular relevance for the remainder of this paper is the fact that word order permutations do not impact agreement (Bhatt 2005). In (9), where the embedded object *kitāb* ‘book’ is moved into the matrix clause, both LDA and default agreement remain possible.

(9)	**Kitāb**$_i$	Rām-ne	[t_i paṛh-nī/-nā]	cāh-ī/-ā.
	book.F	Ram-ERG	read-INF.F.SG/-INF.M.SG	want-PFV.F.SG/-PFV.M.SG

‘Ram wanted to read a book.’

Upon closer scrutiny, however, interactions between LDA and movement become evidence once the movement type is controlled for. The next section will introduce a means of severing A- from $\bar{A}$-movement which will then be used to reassess the relation between movement and agreement.

2.2 *The A/$\bar{A}$-distinction in Hindi*

Mahajan (1990) argues that scrambling in Hindi is not a uniform phenomenon.[3] As (10) illustrates, movement within a clause and out of an infinitival clause is not subject to weak crossover while extraction out of a finite clause is.[4]

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[3] While Gurtu (1992), Dayal (1994) and Kidwai (2000) challenge Mahajan’s analysis of Hindi scrambling, the empirical facts he presents in support of this distinction are not contested. I will hence maintain the terms ‘A- vs. $\bar{A}$-movement’ as convenient descriptive labels.

[4] Unless indicated otherwise, Hindi judgments are due to my informants. Transcription have been unified. The following abbreviations are used in the glosses: ACC – accusative; DAT – dative; ERG – ergative; F – feminine; GEN – genitive; INF – infinitive; INSTR – instrumental; IPFV – imperfective; M – masculine; OBL – oblique; PASS – passive; PFV – perfective; PL – plural; PST – past; SG – singular.

(10) a. *Clause-internal A-scrambling → possible*

Har laṛke-ko$_1$ $\boxed{\text{us-kī}_1}$ bahin t_1 dekha-tī thī.
every boy-ACC 3SG-GEN sister see-IPFV.F be.PST.F.SG
'For every boy *x*, *x*'s sister saw *x*.'

b. *A-scrambling out of non-finite clause → possible*

Har laṛke-ko$_1$ $\boxed{\text{us-kī}_1}$ bahin [t_1 dekha-nā] cāh-tī thī.
every boy-ACC 3SG-GEN sister see-INF.M.SG want-IPFV.F be.PST.F.SG
'For every boy *x*, *x*'s sister wants to see *x*.'

c. *A-scrambling out of finite clause → impossible*

Har laṛke-ko$_1$ $\boxed{\text{us-kī}_{2/*1}}$ bahin soc-tī hai [ki Rām-ne
every boy-ACC 3SG-GEN sister think-IPFV.F.SG be.PRES.3.SG that Ram-ERG
t_1 dekh-ā].
see-PFV.M.SG
'His$_2$ sister thinks that Ram saw every boy$_1$.' (*bound reading impossible*)

A- and $\overline{\text{A}}$-movement are thus restricted in Hindi in a way that parallels the facts in English: Finite clauses are selectively opaque for A-movement but not $\overline{\text{A}}$-movement while nonfinite clauses are transparent for both. Once the A/$\overline{\text{A}}$-distinctions is taken in consideration, interactions between LDA and movement become evident. The next sections illustrate these interactions.

2.3 *A-movement and LDA*

This section will use weak crossover as well as quantifier scope to diagnose A-movement and demonstrate how it interacts with LDA.

2.3.1 *Weak crossover*

We will begin by investigating the effect of A-moving the embedded direct object, the very element that controls LDA. Consider the paradigm in (11):

(11) *Crossover and LDA: direct object*

a. $\boxed{\text{Us-ke}_1}$ mālik-ne [**har billī**$_{2/*1}$ ghumā-nī/-nā] cāh-ī/-ā.
3SG-GEN owner-ERG every cat.F walk-INF.F.SG/-INF.M.SG want-PFV.F.SG/-PFV.M.SG
'His/her$_1$ owner wanted to walk every cat$_2$.'

b. **Har billī**$_1$ $\boxed{\text{us-ke}_2}$ mālik-ne [t$_1$ ghumā-nī/-nā] cāh-ī/-ā.
every cat.F 3SG-GEN owner-ERG walk-INF.F.SG/-INF.M.SG want-PFV.F.SG/-PFV.M.SG
'Every cat$_1$, his/her$_2$ owner wanted to walk (it).'

c. **Har billī**$_1$ $\boxed{\text{us-ke}_1}$ mālik-ne [t$_1$ ghumā$\boxed{\text{-nī/*-nā}}$]
every cat.F 3SG-GEN owner-ERG walk-INF.F.SG/*-INF.M.SG
cāh$\boxed{\text{-ī/*-ā}}$.
want-PFV.F.SG/*-PFV.M.SG
'For every cat *x*, *x*'s owner wanted to walk *x*.'

(11a) constitutes the base line. The quantificational object *har billī* 'every cat' remains in its base position and, unsurprisingly, cannot bind the pronoun *us-ke* inside the matrix subject due to the lack of c-command. LDA is optional here. In (11b) *har billī* is moved into the matrix clause, to a position above the subject. Importantly, the pronoun retains a referential interpretation. This movement step does not have an effect on LDA, which remains optional. The crucial example is (11c). Here *har billī* is moved above the matrix subject, just as in (11b) but binds the pronoun. Under this interpretation, LDA is obligatory. While (11a) and (11b) are compatible with either A- or $\overline{\text{A}}$-movement, (11c) must be produced by A-movement as $\overline{\text{A}}$-movement would result in a crossover violation. The paradigm in (11) hence shows that A-movement of the embedded direct object into the matrix clause leads to obligatory LDA.

As it turns out, it is not only A-movement of the agreement trigger itself that renders LDA obligatory, but A-extraction of any embedded constituent. This is shown in (12) for indirect objects. This paradigm is entirely parallel to the one in (11), the only difference being that the embedded verb is the ditransitive *dikhā* 'show', which takes the dative-marked indirect object *har bacce-ko* 'every child-DAT' and the unmarked direct object *film* 'movie'. In the case of LDA, agreement is controlled by *film*.

(12) *Crossover and LDA: indirect object*

a.

Us-kī$_1$	mā̃-ne	[**har**	**bacce-ko$_2$**	*film*	dikhā-nī/-nā]
3SG-GEN	mother-ERG	every	child-DAT	movie.F	show-INF.F.SG/-INF.M.SG
cāh-ī/-ā.					
want-PFV.F.SG/-PFV.M.SG					

'His$_1$ mother wanted to show a movie to every child$_2$.'

b.

Har	**bacce-ko$_2$**	us-kī$_1$	mā̃-ne	[t_2	*film*	dikhā-nī/-nā]
every	child-DAT	3SG-GEN	mother-ERG		movie.F	show-INF.F.SG/-INF.M.SG
cāh-ī/-ā.						
want-PFV.F.SG/-PFV.M.SG						

'His$_1$ mother wanted to show a movie to every child$_2$.'

c.

Har	**bacce-ko$_1$**	us-kī$_1$	mā̃-ne	[t_1	*film*	dikhā-nī/*?-nā]
every	child-DAT	3SG-GEN	mother-ERG		movie.F	show-INF.F.SG/*?-INF.M.SG
cāh-ī/*?-ā.						
want-PFV.F.SG/*?-PFV.M.SG						

'For every child x, x's mother wanted to show x a movie.'

LDA is optional under the base word order in (12a), and if the indirect object is moved into the matrix clause without binding the pronoun (see (12b)), as before. Crucially, if the indirect object binds the pronoun *uskī* 'his/her', LDA with *film* 'movie' becomes obligatory, as in (12c). This is remarkable because there is no evidence that *film* itself has undergone any kind of movement in (12c). Notably, *film* can be interpreted as a weak indefinite ('do film-showing'), indicating that it remains in its base position (Diesing 1992), at least as an option. Nonetheless, it has to obligatorily control LDA if the indirect object is A-extracted into the matrix clause.[5]

This pattern is not restricted to indirect objects either. In Hindi, possessor DPs may be moved out of their host DP. In (13), the embedded verb *paṛh* 'read' takes *har lekhak-kī kitabẽ* 'every author's books' as an object. The possessor *har lekhak-kī* may then be subextracted. The paradigm in (13) is again parallel to the ones in (11) and (12).

(13) *Crossover and LDA: possessor*

a. Us-kī$_1$ patnī-ne [[**har lekhak-kī$_2$** *kitābẽ*] paṛh-nī/-nā]
3SG-GEN wife-ERG every author-GEN books.F read-INF.F.PL/-INF.M.SG
cāh-ī̃/-ā.
want-PFV.F.PL/-PFV.M.SG
'His$_1$ wife wanted to read the books of every author$_2$.'

b. **Har lekhak-kī$_2$** us-kī$_1$ patnī-ne [[t$_2$ *kitābẽ*] paṛh-nī/-nā]
every author-GEN 3SG-GEN wife-ERG books.F read-INF.F.PL/-INF.M.SG
cāh-ī̃/-ā.
want-PFV.F.PL/-PFV.M.SG
'His$_1$ wife wanted to read the books of every author$_2$.'

c. **Har lekhak-kī$_1$** us-kī$_1$ patnī-ne [[t$_1$ *kitābẽ*] paṛh-nī/*-nā]
every author-GEN 3SG-GEN wife-ERG books.F read-INF.F.PL/*-INF.M.SG
cāh-ī̃/*-ā.
want-PFV.F.PL/*-PFV.M.SG
'For every author *x*, *x*'s wife wanted to read *x*'s books.'

LDA with *kitabẽ* 'books' is optional if *har lekhak-kī* remains inside the lower clause (13a) or if *har lekhak-kī* is moved above the matrix subject but does not bind the pronoun, as shown in (13b). If the possessor does bind the pronoun, as in (13c), LDA becomes obligatory. Just as in (12c), the element that is moved is not the one that controls agreement. And there is again no indication that the agreement trigger *kitabẽ* has itself undergone movement.

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[5] A reviewer asks whether the infinitival agreement in (11c) and (12c) could reflect obligatory movement of the agreement controller into the matrix clause. There is reason to believe that this is not the case. First, as mentioned in the main text, there is no independent syntactic or semantic evidence that *film* has moved out of its base position in (12c). Second, A-raising of the embedded object does not always result in infinitival agreement. In (i), the matrix verb in (11c) has been switched to imperfective aspect and the matrix subject *uskā mālik* 'his/her owner' loses its case marker as a consequence. In line with the agreement algorithm in (6) and the example in (8), *cāh* 'want' has to obligatorily agree with *uskā mālik*. Crucially, the infinitival verb has to appear in its default form and cannot agree with the embedded object despite its overt movement.

(i) Har billī$_1$ us-kā$_1$ mālik [t$_1$ ghumā-**nā**/*-**nī**] cāh-tā.
every cat.F 3SG-GEN owner.M.SG walk-INF.M.SG/*-INF.F.SG want–IPFV.M.SG
'For every cat *x*, *x*'s owner wants to walk *x*.'

This provides further evidence that for the conclusion reached on p. 4 above: Infinitival agreement is a morphological side effect of LDA with the matrix verb and does not directly reflect independent properties of the syntactic structure.

Thus, obligatory LDA in (12c) and (13c) does not appear to be parasitic on movement of the agreement controller.

The conclusion that the embedded object does not have to move into the matrix clause to control LDA is further supported by idioms. Bhatt & Keine (to appear) note that the idiom *X-kī khūb marammat karnaa* 'give X a good beating' (lit. 'do X's many repairs') does not allow the object DP *X-kī marammat* to be moved.

(14) a. Rām-ne **Pratāp-kī khūb marammat** kī
Ram-ERG Pratap-GEN lot repair.F.SG do.PFV.F.SG
'Ram gave Pratap a good beating.' (lit. 'Ram did Pratap's many repairs.')
b. # **Pratāp-kī khūb marammat**$_1$ Rām-ne t_1 kī.
Pratap-GEN lot repair.F.SG Ram-ERG do.PFV.F.SG
(*idiomatic reading deviant*)

Moreover, Bhatt & Keine (to appear) observe that *marammat* may control LDA:

(15) Rām-ne Pratāp-kī khūb marammat kar-nī/-nā cāh-ī/-ā.
Ram-ERG Pratap-GEN lot repair.F.SG do-INF.F.SG/-INF.M.SG want-PFV.F.SG/-PFV.M.SG
'Ram wanted to give Pratap a good beating.'

What is particularly instructive for our present concerns is that A-movement of the possessor DP renders LDA with *marammat* obligatory:

(16) **Har bacce-kī**$_1$ uskī$_1$ mā̃-ne [t_1 khūb *marammat*] kar-nī/*-nā cāh-ī/*-ā.
every child-GEN 3.SG.GEN mother-ERG lot repair.F.SG do-INF.F.SG/*-INF.M.SG want-PFV.F.SG/*-PFV.F.SG
'For every child *x*, *x*'s mother wanted to give *x* a good beating.'

(16) falls under the same generalization as (11–13) above: A-movement out of the infinitival clause makes LDA into it obligatory. The fact that this implication also holds if the LDA controller resists movement, as in (16), provides direct evidence that no movement of the element triggering LDA is required.

2.3.2 *Quantifier scope*

A second, unrelated, diagnostic for A-movement in Hindi is quantifier scope. Like many other languages with free word order, an object can only take scope over a subject if the former moves above the latter (see, e.g., Kiss 1987 and Szabolcsi 1997 for Hungarian and Bayer & Kornfilt 1994 for Turkish). This is illustrated by (17):[6]

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[6] As Anand & Nevins (2006) note, the scope rigidity in the absence of scrambling is limited to cases where the subject bears ergative case. Anand & Nevins (2006) argue that the external argument raises to Spec,TP and that reconstruction is possible only if it does not receive case from T, thereby feeding inverse scope. This complication is irrelevant for the point made here.

(17) *Local scrambling and scope*

a. Kisī laṛkī-ne **har laṛke-ko** ḍā̃ṭ-ā.
some.F girl-ERG every boy-ACC scold-PFV.M.SG
'Some girl scolded every boy.' (∃ > ∀; *∀ > ∃)

b. **Har laṛke-ko**$_1$ kisī laṛkī-ne t_1 ḍā̃ṭ-ā.
every boy-ACC some.F girl-ERG scold-PFV.M.SG
'Some girl scolded every boy.' (∃ > ∀; ∀ > ∃)

Importantly, only A-movement has a scope-widening effect. Movement out of constructions that only allow $\overline{\text{A}}$-extraction—like finite clauses—does not extend the domain of scope taking. Thus, *har kek* 'every cake' in (18) cannot scope over *kisī laṛke-ne* 'some boy-ERG' despite the fact that it occupies a position above the latter.

(18) *$\overline{\text{A}}$-scrambling and scope*
Har kek$_1$ kisī laṛke-ne soc-ā [ki Pratāp-ne t_1 khā li-yā
every cake some boy-ERG think-PFV.M.SG that Pratap-ERG eat take-PFV.M.SG
hai].
be.3.SG
'Every cake, some boy thought that Pratap has eaten (it).' (∃ > ∀; *∀ > ∃)

If only A-movement can extend scope domains, scope provides another means of analytically separating A- from $\overline{\text{A}}$-movement. As Bhatt (2005) observes, scope and LDA do indeed interact. Consider the contrast in (19), taken from Bhatt (2005: 799). Under LDA, the embedded object *har kitāb* 'every book' can take scope either above the matrix verb *cāh* 'want' or under it, as (19a) shows. With default agreement, by contrast, only a low construal of *har kitāb* is possible, see (19b).[7]

(19) *Scope and LDA: direct object*

a. Naim-ne **har kitāb** paṛh-$\boxed{\text{nī}}$ cāh-$\boxed{\text{ī}}$ th-$\boxed{\text{ī}}$.
Naim-ERG every book.F read-INF.F want-PFV.F.SG be.PST-F.SG
'Naim wanted to read every book.' (*want* > ∀; ∀ > *want*)

b. Naim-ne **har kitāb** paṛh-$\boxed{\text{nā}}$ cāh-$\boxed{\text{ā}}$ th-$\boxed{\text{ā}}$.
Naim-ERG every book.F read-INF.M.SG want-PFV.M.SG be.PST-M.SG
'Naim wanted to read every book.' (*want* > ∀; *∀ > *want*)

Given the constraint that only A-movement may extend a nominal's scope domain, we can infer that high scope of *har kitāb* is possible only if that element undergoes (string-vacuous) A-movement into the matrix clause. In this case, LDA is forced. The contrast in (19) hence instantiates the same empirical pattern as the one in (11).

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[7] The two readings differ as follows: According to the '*want* > ∀' reading, Naim's goal is to read every book in the library, regardless of what these books are. On the '∀ > *want*' reading, Naim intends to read a particular set of books, which happens to be the set of all books in the library, a fact that he may be oblivious to.

We are now in the position to ask whether extending the scope of an element other than the direct object has an effect on LDA. As (20) demonstrates, the answer is yes. The indirect object *har laṛkī-ko* 'every girl-DAT' can take matrix scope only if the direct object *film* 'movie' controls LDA.

(20) *Scope and LDA: indirect object*

a. Naim-ne **har laṛkī-ko** *film* dikhā-$\boxed{\text{nī}}$ cāh-$\boxed{\text{ī}}$.
Naim-ERG every girl-DAT movie.F show-INF.F.SG want-PFV.F.SG
'Naim wanted to show a movie to every girl.' (*want* > ∀; ∀ > *want*)

b. Naim-ne **har laṛkī-ko** *film* dikhā-$\boxed{\text{nā}}$ cāh-$\boxed{\text{ā}}$.
Naim-ERG every girl-DAT movie.F show-INF.M.SG want-PFV.M.SG
'Naim wanted to show a movie to every girl.' (*want* > ∀; ??∀ > *want*)

To take wide scope, *har laṛkī-ko* has to A-raise into the matrix clause. As a result of this raising, the embedded direct object has to control LDA. This pattern is again entirely parallel to what we saw in (12), (13) and (16).

The data in (11), (12), (13), (16), (19) and (20) fall under the uniform generalization in (21). The convergence of unrelated tests for A-movement (weak crossover and scope) constitutes rather strong support for the generalization.

(21) **GENERALIZATION 1**
If A-movement out of an embedded clause has taken place, that lower clause is obligatorily transparent for φ-agreement.

The next section is devoted to the interaction between $\overline{\text{A}}$-scrambling and LDA. We will find that, in stark contrast to A-scrambling, $\overline{\text{A}}$-movement does not interact with LDA.

2.4 *Finite and case-marked clauses and their interaction with LDA*

We have already seen on the basis of (10c) and (18) that finite clauses only allow $\overline{\text{A}}$-extraction out of them, in contrast to infinitival clauses. Finite clauses are also opaque for φ-agreement (Davison 1991, Butt 1993). The matrix verb *soc* 'think' in (22) cannot agree with *ghazal* inside the embedded clause but must instead display default agreement.

(22) *No φ-agreement into finite clauses*
Firoz-ne soc$\boxed{\text{-ā/*-ī}}$ [ki Monā-ne **ghazal** gā-yī
Firoz-ERG think-PFV.M.SG/*-PFV.F.SG that Mona-ERG ghazal.F sing-PFV.F.SG
thī].
be.PST.F.SG
'Firoz thought that Mona had sung ghazal.' (Bhatt 2005: 776)

Case-marked infinitival clauses exhibit the same extraction and agreement properties as finite clauses. If selected by specific verbs like *kah* 'say', infinitival clauses in Hindi have to bear a regular case marker. As (23) attests, only $\overline{\text{A}}$-extraction is possible out of such clauses.

(23) *Only $\bar{A}$-extraction out of case-marked infinitival clauses*
Har kitāb$_1$(**-ko**) $\boxed{\text{us-ke}_{2/*1}}$ lekhak-ne Sītā-se [t_1 paṛh-ne]-$\boxed{\text{ko}}$
every book(-DAT) 3SG-GEN author-ERG Sita-INSTR [read-INF.OBL]-DAT
kah-ā.
say-PFV.M.SG
'Its$_2$ author told Sita to read every book$_1$.' (*bound reading impossible*)

Just like finite clauses, case-marked infinitival clauses do not allow LDA into them:

(24) *No φ-agreement into case-marked infinitival clauses*
Rām-ne Sītā-se [**kitāb** paṛh-ne]-ko kah$\boxed{\text{-ā/*-ī}}$.
Ram-ERG Sita-INSTR [book.F read-INF.OBL]-DAT say-PFV.M.SG/*-PFV.F.SG
'Ram told Sita to read a book.'

Finite clauses and case-marked non-finite clauses are thus selectively opaque not only for A-extraction out of them but also for φ-agreement into them.

(25) **GENERALIZATION 2**
If an embedded clause is opaque for A-movement, it is also opaque for φ-agreement.

2.5 *Selective opacity and agreement*

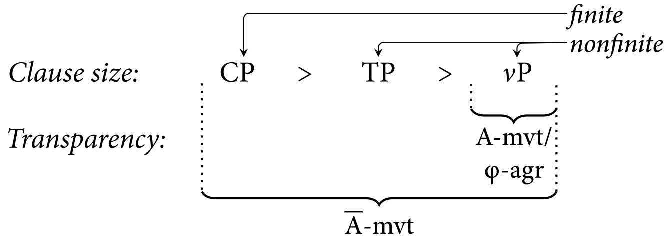
A crucial feature of the generalizations in (21) and (25) is that both apply to syntactic *domains* rather than to individual syntactic items. The implications just uncovered are of the following schematic form: If a domain is opaque/transparent for operation A, that domain is also opaque/transparent for operation B. Importantly, it is altogether irrelevant whether the two operations target the same element or different elements. This feature renders this generalization incompatible with previous accounts of LDA. Even those accounts that involve a connection between movement and agreement (Mahajan 1989, Bobaljik & Wurmbrand 2005, Chandra 2007, Keine 2013) are stated on the basis of individual items, and hence fail to extend to the domain-based generalizations in (21) and (25). To give an illustration, on these accounts, the agreement controller has to move into the matrix clause for LDA to result. That A-movement of *one* element can lead to obligatory LDA with *another* element is thus altogether unexpected on these approaches, for principled reasons.

The domain-based nature of the movement–agreement interaction suggests a restructuring approach, according to which embedded clauses differ in their structural size and their syntactic properties are a function of their size (see Evers 1975, Aissen & Perlmutter 1976 and Wurmbrand 2001 for restructuring in general, and Boeckx 2004 and Bhatt 2005 for restructuring approaches to Hindi LDA). First of all, there is good evidence that finite clauses contain more functional structure than nonfinite clauses in Hindi (and presumably universally): Finite clauses can contain the complementizer *ki* and provide a scope position for *wh*-elements, and I will henceforth treat them as CPs. Nonfinite clauses, on the other hand, obligatorily lack a complementizer and interrogative force, regardless of whether LDA takes place or not (Dayal 1996, Bhatt & Dayal 2007). This indicates that nonfinite clauses obligatory lack a CP layer, and thus have a structure smaller than a full CP.

Second, there is reason to believe that nonfinite clauses are structurally ambiguous. As noted above, φ-agreement is obligatory in simple clauses, following the algorithm in (6), itself derivable from the logic of obligatory operations (Preminger 2011). Across infinitival clauses, agreement is optional unless A-movement takes place. The optionality of LDA follows on the assumption that nonfinite clauses are ambiguous between a structure that is transparent for φ-Agree and one that is not. Bhatt (2005) offers converging evidence from NPI licensing for a structural ambiguity of nonfinite clauses. For the sake of concreteness, I will assume that infinitival clauses can be either TPs or *v*Ps, although the exact structural labels are irrelevant for what is to follow.[8]

Finally, we have seen that A-extraction out of an infinitival clause renders this clause obligatorily transparent to LDA. This interaction falls out on the view that that *v*Ps are transparent for A-extraction and φ-agreement, while TPs are not. This has the consequence that A-movement out of the infinitival clause disambiguates the clause in favor of a *v*P structure. This *v*P structure is necessarily transparent for φ-agreement and LDA is hence obligatory. Case-marking of a clause, on the other hand, by hypothesis presupposes the larger TP structure, and thereby renders the clause impenetrable to both φ-agreement and A-movement, but not Ā-movement, as we have seen in section 2.4. These findings are summarized in (26). (26) orders the functional size of the three clause structures and indicates for each what operations it is transparent to: Finite clauses are CPs and transparent to only Ā-movement; nonfinite clauses are ambiguous between a TP and a *v*P structure, where both structures are transparent to Ā-movement but only the *v*P structure is transparent to A-movement and φ-agreement.

(26)



The generalizations in (21) and (25) then fall out as special cases of the transparencies in (26): If the embedded clause is small enough to allow A-extraction (i.e., a *v*P), it is necessarily transparent for φ-agreement, giving rise to obligatory LDA (Generalization 1). No such entailment holds between Ā-extraction and LDA, because Ā-extraction is possible out of structures that disallow φ-agreement into them (CP, TP). Moreover, if a clause is large enough to block A-extraction out of it (CP, TP), then it will necessarily also block φ-agreement into it (Generalization 2).

The schema in (26) is strongly reminiscent of selective opacity: Structures of a certain size (e.g., finite clauses) only allow some extraction types out of them. The central insight afforded by (26) is that φ-agreement partakes in the selective opacity pattern in the same way that

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[8] Davison (2010) provides a number of arguments that infinitival clauses are not smaller than *v*P as they must contain a PRO (regardless of whether LDA takes place or not). This suggests that they cannot be bare VPs, a conclusion that I will tentatively adopt here.

A-movement does. This strongly suggests that the constraints underlying selective opacity are not particular to movement but must also encompass φ-agreement. To appreciate this point, consider May's (1979) classic account of improper movement, adopted in Chomsky (1981), according to which traces left by Ā-movement are variables, subject to Principle C. Assuming furthermore that extraction out of a finite clause requires a prior Ā-step to the edge of the clause, further A-movement is ruled out because the Ā-trace would be bound from an A-position, violating Principle C. The limitation of such an account is that it has nothing to say about φ-agreement: There would be no expectation that the landing site of an Ā-moved element should be invisible for φ-agreement. In other words, the fact that elements which are Ā-moved to the edge of a finite clause cannot control φ-agreement on a higher verb (recall (22)) must be the result of a stipulation separate from the one barring them from undergoing A-movement. On this account, then, the finding that A-movement and φ-agreement pattern alike in (26) would be a mere coincidence. Similar remarks apply to more recent accounts of improper movement, as virtually all of them are conceived of as constraints on movement proper (Müller & Sternefeld 1993, Svenonius 2004, Abels 2007, 2009, Neeleman & van de Koot 2010, Müller 2014a,b).[9]

In sum, the Hindi evidence reveals that selective opacity effects are not limited to movement, but also encompass φ-agreement in an entirely parallel way. This parallelism in turn suggests that both operations share some component which the relevant constraint applies to. While several ways of developing this unification are possible, I will follow here the view in Chomsky (2000, 2001, 2004) that movement is parasitic on the operation Agree. Because on this view Agree is a component of both movement and φ-agreement, constraints on Agree will restrict both in a uniform fashion, in line with the findings in (26).[10]

Before moving on to develop such an account, I will add an important additional piece to the puzzle. The previous literature on selective opacity effects has made it clear that selective opacity is not distributed arbitrarily across movement types (Williams 2003, 2011, 2013, Abels 2007, 2009, 2012a, Müller 2014a,b). Instead, there appears to be a connection between the locality properties of a movement type and the structural height of the position that this

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[9] Notable exceptions are Obata & Epstein (2011) and Williams (2003, 2011). Obata & Epstein (2011) attribute improper movement to the absence of φ-features in Ā-position and as such has the potential of extending to φ-agreement. There is, however, no reason to suspect that Ā-moved elements in Hindi are devoid of their φ-content, simply because these φ-features are morphologically expressed on these elements. Williams' (2003, 2011) account is discussed in section 5.2.

[10] As a reviewer correctly points out, the unification of agreement and movement for the purposes of the constraint could in principle also be achieved the other way around: On the view that agreement necessarily involves (feature) movement (e.g., Chomsky 1995, Koopman 2006), a constraint on movement would also constrain φ-agreement. There are several reasons I do not pursue this line of account here. First, there is, to my knowledge, no evidence that Hindi LDA involves movement of the agreement trigger, as evidenced by the scope and construal effects in section 2.3. Second, we have seen direct evidence from idioms in (16) that LDA does not require movement of the agreement trigger. A third concern is that this line of analysis would require tandem movement. We have seen on the basis of (12c), (13c), (16) and (20) that LDA with the direct object is obligatory if *any* element is A-extracted out of the embedded clause. This would require that movement of the direct object into the matrix clause becomes obligatory if *another* DP is A-extracted. A movement-based account is thus faced with a number of substantial obstacles that an Agree-based account avoids. For this reason, I will adopt the latter line of analysis instead.

movement types targets. The next section will present evidence for this conclusion and demonstrate that parallel facts hold for Hindi.

3 The height–locality connection

In this section I will provide evidence that A-movement, $\overline{\text{A}}$-movement and φ-agreement all involve different projections in the clausal spine. I will then demonstrate that these differences correlate with their respective locality profiles in (26). This finding corroborates a discovery in the previous literature on selective opacity that a movement type's locality is partially correlated with the height of its landing site.

Section 2.2 presented evidence that $\overline{\text{A}}$-extraction in Hindi is possible out of structures that are opaque for A-extraction. Closer scrutiny reveals this difference in locality to be correlated with a difference in the height of the landing site of the two movement types. Due to the extremely free word order in Hindi, the landing site of a movement step cannot be readily read off the surface string. Yet differences in the respective landing sites can be discerned using the paradigm in (27).[11] A restriction that (27) makes use of is Bhatt & Dayal's (2007) argument that only clausal constituents may undergo extraposition in Hindi while nominal ones may not. (27a) gives the base configuration in the absence of movement: It involves a double embedding structure, in which a finite clause is embedded within a non-finite clause, which in turn is embedded inside a matrix clause. (27b) is derived from (27a) by moving *kitāb* 'book' from the lowermost clause into the infinitival clause. Because nominal elements do not extrapose in Hindi, *kitāb* 'book' cannot reside in the matrix clause in (27b), or else it would appear to the left of the matrix verb. Instead, *kitāb* must have targeted a position inside the infinitival clause. As shown, the result is ungrammatical. In (27c), on the other hand, *kitāb* is moved all the way into the matrix clause and the result is grammatical.

(27) a. *Base configuration:* $^{\checkmark}[_{\text{matrix clause}}\ [_{\text{non-finite clause}}\ [_{\text{finite clause}}\ \text{DP}\ ]]]$

Mãĩ	cāh-tā	hū̃	[kah-nā	[ki	mãĩ-ne	**kitāb**	paṛh
I	want-IPFV.M.SG	be.1SG	say-INF.M.SG	that	I-ERG	book.F	read
l-ī	hai]].						
take-PFV.F.SG	is						

'I want to say that I read the book.'

b. *No $\overline{\text{A}}$-mvt into non-finite clauses:* $^{*}[_{\text{matrix clause}}\ [_{\text{non-finite clause}}\ \text{DP}\ [_{\text{finite clause}}\ t\ ]]]$

*Mãĩ	cāh-tā	hū̃	[**kitāb**$_1$	kah-nā	[ki	mãĩ-ne	t_1	paṛh
I	want-IPFV.M.SG	be.1SG	book	say-INF.M.SG	that	I-ERG		read
l-ī	hai]].							
take-PFV.F.SG	be							

c. *$\overline{\text{A}}$-mvt into finite clauses:* $^{\checkmark}[_{\text{matrix clause}}\ \text{DP}\ [_{\text{non-finite clause}}\ [_{\text{finite clause}}\ t\ ]]]$

Kitāb$_1$	mãĩ	cāh-tā	hū̃	[kah-nā	[ki	mãĩ-ne	t_1	paṛh
book	I	want-IPFV.M.SG	be.1SG	say-INF.M.SG	that	I-ERG		read
l-ī	hai]].							
take-PFV.F.SG	be							

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[11] I am indebted to Klaus Abels (p.c.), who suggested this test.

Because both (27b) and (27c) involve extraction out of a finite clause, both must involve $\overline{\text{A}}$-movement. The asymmetry between (27b) and (27c) entails that $\overline{\text{A}}$-movement *cannot* land within an infinitival clause but *can* target a finite clause. This contrast follows immediately if $\overline{\text{A}}$-movement targets CP in Hindi. Because only finite clauses contain a C projection, only these clauses will be able to provide a landing site for $\overline{\text{A}}$-extraction.

This patterns stands in a striking contrast to A-movement, which is possible into finite and non-finite clauses alike. Using crossover as a diagnostic for A-movement, we have already seen on the basis of (10a) that A-movement within a finite clause is possible. Similary, (28) demonstrates that A-movement within an infinitival clause is likewise licit. As in (27b), the infinitival clause is extraposed to ensure that the A-movement step does not leave the infinitival clause.

(28) *A-movement within infinitival clause*
Rām-ne cāh-ā [**har kuttā**$_1$ us-ke$_1$ baccõ-ko t_1 dikhā-nā].
Ram-ERG want-PFV.M.SG every dog 3SG.GEN owner-DAT show-IPFV.M.SG
'Ram wanted to show every dog x to x's owner.'

Since nonfinite clauses can thus provide a landing site for A-movement, we can conclude that A-movement targets a position lower than CP. Combining the insights from (27) and (28) then leads us to the conclusion that A- and $\overline{\text{A}}$-movement must target different structural positions in Hindi, a distinction that is disguised in the surface facts: A-movement must land in a lower position than $\overline{\text{A}}$-movement.

The location of the φ-probe in Hindi is harder to determine, for general reasons. Often, morphological perturbations lead to the morphological expression of agreement in a position distinct from its syntactic source (tense/agreement lowering in English is an example). Therefore, the locus of agreement morphology is an unreliable indicator of the syntactic position of a φ-probe. Yet the structural relation between the φ-probe and the landing sites of A- and $\overline{\text{A}}$-movement can be determined indirectly, by investigating the possibilities of feeding relationships. The general logic is that if a φ-probe searches its c-command domain for an accessible target, then movement that lands below the position of the φ-probe should be able to feed agreement with that φ-probe, whereas movement that lands higher than this φ-probe should not be able to feed agreement.

The example in (29) illustrates extraction out of a finite clause. As we have seen on the basis of weak crossover in (10c) and (23) above, finite clauses only allow $\overline{\text{A}}$-extraction out of them. As (29) demonstrates, the matrix verb cannot agree with the $\overline{\text{A}}$-moved element despite the fact that both are clausemates after movement. This is readily accounted for if $\overline{\text{A}}$-movement targets a position higher than the matrix φ-probe, thus placing it outside the c-command domain of this probe. The same is true for case-marked infinitival clauses, but not shown here for reasons of space.

(29) *No φ-agreement with $\overline{\text{A}}$-landing site*
Ghazal$_1$ Firoz-ne soc-ā/*-ī [ki Monā-ne t_1 gā-yī
ghazal.F Firoz-ERG think-PFV.M.SG/*-PFV.F.SG that Mona-ERG sing-PFV.F.SG
thī].
be.PST.F.SG
'Firoz thought that Mona had sung ghazal.'

A-movement differs in this regard. In (30) an infinitival clause is extraposed, a configuration parallel to (28). Regardless of whether A-movement takes place inside the embedded clause or not, LDA into this clause is degraded, a traditional freezing effect.

(30) Rām-ne t_3 cāh-ā/??-ī [har billī$_1$ us-ke$_{1/2}$ baccõ-ko
Ram-ERG want-PFV.M.SG/??-PFV.F.SG every cat.F its children-DAT
dikhā-nā/??-nī]$_3$
show-INF.M.SG/??-INF.F.SG
'Ram wanted to show every cat$_1$ to its$_{1/2}$ children.'

(31) *Extraposition constraint on LDA*
φ-agreement into extraposed infinitival clauses is degraded.

An investigation into the nature and cause of freezing of extraposed clauses would take us to far afield and so (31) is primarily intended as a descriptive generalization. For our present concerns, what is important is that elements which are A-moved out of an extraposed clause *do* control φ-agreement:[12]

(32) *A-movement feeds φ-agreement*
Har billī$_1$ us-ke$_1$ malik-ne t_2 cāh-ī/*-ā [t_1
every cat.F its owner-ERG want-PFV.F.SG/*-PFV.M.SG
ghumā-nī/*-nā]$_2$
walk-INF.F/*-INF.M.SG
'For every cat x, x's owner wanted to walk x.'

LDA in (32) is optional if *har billī* 'every cat' does not bind the pronoun (not shown here). Because of (31), LDA in (32) cannot be established with the trace of *har billī* inside the extraposed clause. Rather, the occurrence of *har billī* that controls agreement in (32) must be the landing site of the A-movement step in the matrix clause. This in turn entails that A-movement can feed φ-agreement. By the logic above, I conclude that A-movement in Hindi must land in a position within the c-command domain of the φ-probe and hence target a position that is structurally lower than the φ-probe.

Summarizing the core findings above, we have determined an ordering of the structural positions targeted by the three operations of interest: (i) A-movement can feed φ-agreement; (ii) $\overline{\text{A}}$-movement cannot feed φ-agreement; (iii) the landing site of $\overline{\text{A}}$-movement is higher

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[12] Not all speakers accept (A-)extraction out of an extraposed infinitival clause. For speakers that do not, extraposition provides no evidence as to whether A-movement can feed agreement.

than that of A-movement; and (iv) infinitival clauses contain a landing site for A-movement but not $\overline{\text{A}}$-movement. For concreteness, I will assume that the probe triggering A-movement resides on *v*, that the φ-probe is on T and that the $\overline{\text{A}}$-probe is located on C, an assignment that accounts for (i)–(iv). This ordering, along with an indication of which of the structures in (26) are penetrable by the respective operations, is presented in (33).

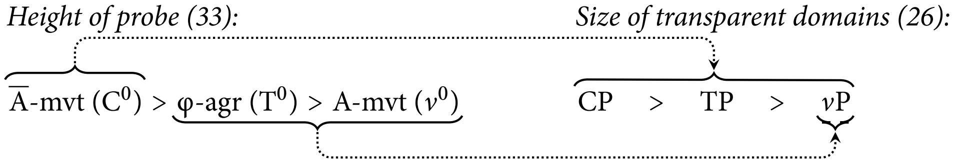
(33) *Height of probe:* / *Transparent structures:*

$$\underbrace{\underbrace{\overline{\text{A}}\text{-mvt }(\text{C}^0)}_{\text{CP, TP}} > \varphi\text{-agr }(\text{T}^0) > \text{A-mvt }(v^0)}_{v\text{P}}$$

We have thus arrived at two hierarchies: The hierarchy in (26) organizes the size of the embedded clause and which operation each size is transparent to. The second hierarchy in (33) gives the structural height of the probe initiating an operation, assuming, as before, that movement as well as φ-agreement involve an Agree operation.

Remarkably, these two hierarchies coincide: The higher the structural position of the Agree probe initiating an operation in (33), the more structures this operation is able to penetrate in (26). To see this connection more clearly, it is instructive to combine the two hierarchies, as in (34).

(34)



What (34) highlights is that the operation associated with the structurally highest probe ($\overline{\text{A}}$-movement) also enjoys the greatest search space (finite as well as non-finite clauses), while operations initiated by structurally lower probes (φ-agreement and A-movement) can only search into structurally small domains (*v*Ps). Equivalently, small domains (like *v*P) are transparent for structurally high as well as low probes, whereas larger domains (like TP or CP) are selectively opaque for operations triggered by structurally low heads but transparent for ones associated with high heads. In a nutshell, then, the higher the structural position of a probe, the more domains are transparent for this probe. This connection between the structural height of an operation and its locality is summarized in (35):

(35) **Height–Locality connection**
The higher the structural position of a probe π, the more structures π can search into.

There is good reason to believe that (35) is not just a coincidence of Hindi. Indeed, one of the main discoveries of the recent literature on selective opacity effects is the recognition that the height of a movement type's landing site and its locality constraints are related (Williams 2003, 2011, 2013, Abels 2007, 2009, 2012a, Müller 2014a,b). Take the classical case of selective opacity alluded to above: English superraising. While $\overline{\text{A}}$-extraction out of a finite clause is possible, A-extraction is not. This coincides with the height of their respective landing sites:

$\overline{\mathrm{A}}$-movement lands in a position higher than that of A-movement. The contrast between the movement types thus conforms to (35).[13]

The connection extends to movement types beyond the binary A/$\overline{\mathrm{A}}$-distinction. Abels (2007, 2009), for instance, contrasts scrambling, wh-movement and topicalization in German. While scrambling targets a low position in the clause and is unable to leave finite clauses, both wh-movement and topicalization land in higher positions and are able to proceed from within finite clauses. Williams (2011, 2013), extending ideas in Williams (2003), discusses a similar connection between the height of the landing site of a movement type and its locality for relativization, wh-movement and topicalization in English. Abels (2012a) provides a particularly striking illustration. Contrasting movement types targeting the Italian left periphery (relativization, topicalization, focus movement and modifier fronting), he shows that the relative height of their landing sites correlates with their locality profiles. For instance, relativization targets a position higher than fronted modifiers, a contrast that is mirrored in their locality: only relativization, but not modifier fronting, is able to escape clauses in which focus fronting has taken place. Finally, Müller (2014a,b) makes similar observations for German pronoun fronting, Icelandic object shift, Italian clitic movement and English extraposition: Each of these movement types targets a low position and is not able to cross a CP.

There is thus good evidence that (35) is not a mere coincidence in Hindi but reflects a systematic and fundamental property of selective opacity. The discussion of Hindi in this section contributes two important points to the existing literature. First, it demonstrates that the height–locality connection holds even in cases in which the surface evidence does not appear to support it. Second, it shows that the relevant generalization is not restricted to movement but also encompasses φ-agreement. This is fully in line with our conclusion regarding selective opacity in section 2.5: While the previous literature has exclusively focused on movement, Hindi provides compelling evidence that φ-agreement follows the same pattern. Consequently, an account of selective opacity and the height–locality connection thus has to be general enough to cover both movement as well as φ-agreement.

The next section will develop an analysis of selective opacity that builds on the conclusions drawn in the preceding sections: I propose that the relevant constraint is a constraint on the operation Agree. To derive selective opacity, I propose that just like different probes search for different elements, their search can be blocked by different elements. As a consequence, one probe may be able to search into a domain that another probe cannot. Furthermore, general investigations of the properties of extended projections will entail that barrierhood ascends: If a projection Π is a barrier for probe π, then every projection above Π within the same extended projection will also be a barrier to π. I will show that this will derive a version

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[13] A reviewer wonders about *tough*-constructions. On one family of accounts, *tough*-constructions involve A-movement from an $\overline{\mathrm{A}}$-position. Hartman (2011) provides an empirical argument for this A-movement step based on defective intervention by PP experiencers. The empirical generalization underlying this argument and the argument itself has, however, been called into question. Bruening (2014) demonstrates that the intervention facts also arise with elements that should not intervene for A-movement and concludes that they do not constitute an argument for A-movement in *tough*-constructions. Conversely, Keine & Poole (2015) note intervention in constructions that do not involve A-movement and argue for a base-generation analysis of *tough*-constructions, in which no movement from an $\overline{\mathrm{A}}$- to an A-position takes place.

of the height–locality connection (35) by imposing limits on the range of mismatches that can occur between a probe's height and locality.

Following the development of my own proposal, I will contrast this account with previous analyses of (35), which derive it in the stronger form of a correlation, in section 5.2. I will present evidence that this stronger form is empirically problematic.

4 Selective barrierhood and its ascension

4.1 *The proposal*

The phenomenon of selective opacity requires that at least some locality boundaries are relativized. That is, I propose that barrierhood is not necessarily a binary notion: One and the same node may be transparent to some processes but opaque for others. Because standard concepts of locality, like subjacency or phases, are strictly binary in nature, selective opacity has always required additional stipulations that are essentially construction-specific in nature. For example, the improper movement restriction that an element in Spec,CP can be moved to Spec,CP but not to Spec,TP (Chomsky 1973, 1977, 1981, May 1979) captures the restriction that finite clauses are transparent to $\overline{\text{A}}$- but not A-movement but remains fundamentally unconnected to more general constraints on movement and other instances of selective opacity.[14]

To approach the problem of selective opacity, it is instructive to consider Chomsky's (1964) **A-over-A Principle** (also see Chomsky 1973 and Bresnan 1976). While originally formulated on the basis of categorial features, the A-over-A Principle has been further revised and extended in subsequent work with particular attention to differences between movement types. Müller (1993, 1996, 1998), for instance, notes that extraction out of a remnant is impossible if this remnant itself undergoes the same extraction type and attributes this restriction to a revised version of the A-over-A Principle (also see Takano 1994, Kitahara 1997, Sauerland 1999, Fitzpatrick 2002, van Urk & Richards 2015). What is crucial for our purposes is that this revised A-over-A Principle discriminates between different movement types: While a constituent that undergoes scrambling is opaque for scrambling out of it, it is transparent for topicalization out of it, and so on.

As it stands, the A-over-A Principle unfortunately does not extend to the instances of selective opacity discussed here. To see this, consider what an A-over-A account of English superraising would amount to. To block A-extraction out of finite clause, the finite clause would have to count as a closer target for A-movement. Yet such A-movement of the finite clause itself is ungrammatical in at least some instances:

(36) * That Mary is sick seems.

Koster (1978), for instance, argues that CPs never occupy Spec,TP in English, and Iatridou & Embick (1997) argue that CPs lack the φ-features necessary for agreement with T. As a consequence, the CP in (36) does not qualify as a closer target for either EPP movement or

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[14] Another example is Ross' (1967) *Right Roof Constraint*, which blocks extraposition from crossing a clause boundary. As is the case of improper movement, the Right Roof Constraint is a solitary constraint in that it is unrelated to other instances of selective opacity as well as more general restrictions on movement.

φ-agreement. Yet it nonetheless blocks elements inside from undergoing these processes. The standard A-over-A Principle has nothing to say about this restriction.

Analogous considerations hold for Hindi. Because it is impossible to A- or $\overline{\mathrm{A}}$-move embedded finite clauses, their opacity for A-extraction cannot be attributed to a traditional A-over-A effect. The same can be shown for φ-agreement. I have argued above that infinitival clauses in Hindi come in two sizes, one of which is transparent for φ-agreement (*v*P), while the other is not (TP). Notably, infinitival clauses in Hindi never carry φ-features of their own. This is demonstrated in (37). Here the subject of the sentence is an infinitival clause while the object is a feminine DP. Given the general agreement algorithm in (6), we make the following prediction: If the infinitival clause has φ-features of its own, it should obligatorily control masculine singular agreement on the main predicate because subject agreement preempts object agreement. If, on the other hand, the infinitival clause does not comprise φ-features, then the matrix verb should exhibit feminine agreement with its object instead. As (37) shows, object agreement is obligatory.

(37) [Lekh paṛh-nā] acchī bāt thī / *thā.
article.M read-INF.M.SG good.F thing.F was.PST.F.SG / was.PST.M.SG
'Reading articles was a good thing.'

We can therefore conclude from (37) that infinitival clauses in Hindi obligatorily lack φ-features and that they are hence not licit goals for a φ-probe. That their larger TP variant blocks φ-agreement into it can hence not be the result of regular A-over-A intervention.[15]

In sum, some domains are opaque for operations into them even if they cannot themselves undergo this operation. I suggest that selective opacity is the result of a **defective** version of the A-over-A Principle, following the logic of Chomsky's (2000) defective intervention, whereby an element that cannot itself undergo an operation can still block this operation across it. Specifically, if a probing feature π defectively interacts with a projection Π, then π's search terminates at Π even if Π cannot itself satisfy π. A crucial insight that I carry over from the A-over-A Principle is that probes may differ in how they interact with Π. If a probe π_1 defectively interacts with Π whereas another probe π_2 does not, Π is an opaque domain for π_1, but not for π_2. To highlight that the relevant interaction is between a projection and a probe, I will call Π an Agree-barrier for π_1:

(38) **Agree-Barriers**
If a projection Π is an Agree-barrier for probe π (notated as '$\pi \dashv\mid \Pi$'), then a π-initated search terminates at Π. Π will thus (selectively) opaque for π.

For notational concreteness, I will indicate probes that trigger movement as 'bullet' features (Roberts & Roussou 2002, Adger 2003, Heck & Müller 2007, Müller 2010). I will notate the probes that gives rise to A-movement as [•A•] and the probe resulting in $\overline{\mathrm{A}}$-movement as [•$\overline{\mathrm{A}}$•]. This is primarily a notational choice and nothing crucial hinges on it. By contrast, probes that can be checked via pure Agree, i.e., without movement, are notated as 'star' features. The feature underlying verb agreement will be indicated as [⋆φ⋆].

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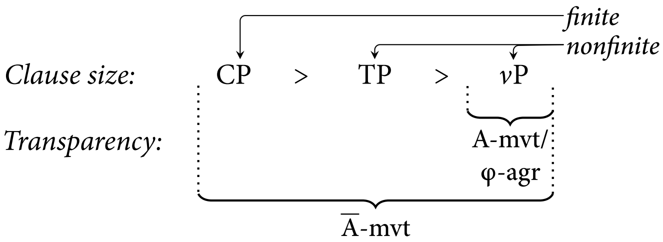
[15] An analogous pattern holds for finite clauses, but is harder to demonstrate due to confounding factors.

To illustrate, in English the [•A•]-probe on T defectively interacts with the category C ('[•A•] ⫣ C') while the [•$\overline{\text{A}}$•]-probe on C does not ('[•$\overline{\text{A}}$•] ⫣̸ C'). As a result, an [•A•]-initiated search terminates at the CP node of an embedded finite clause. A-extraction is hence impossible out of CP clauses. By contrast, because an [•$\overline{\text{A}}$•]-probe does not interact with C, its search may proceed into a finite clause (modulo C's phasehood, for which see section 6 below).

There are entailment relations between Agree-barriers. If a syntactic process cannot penetrate an embedded clause of a given size, then adding functional structure to this clause does not render it transparent for this process. This point is illustrated in (26), repeated here as (39).

(39)

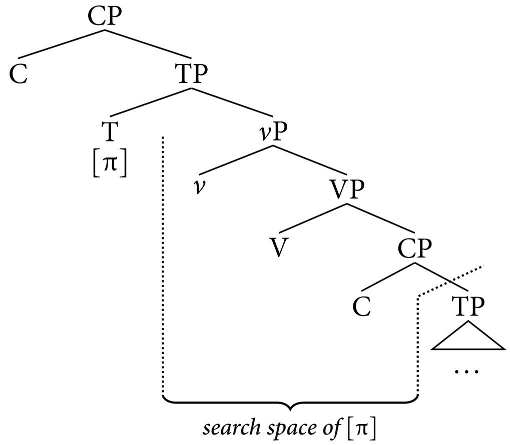


English extraposition provides another example. As demonstrated by (4) above, nonfinite clauses are opaque for extraposition. As is well-known, finite clauses are opaque as well. Both examples follow a general pattern: If some domain is opaque for an operation, then larger domains (i.e., ones that properly contain this domain) are likewise opaque for this operation. In other words, while reducing the number of functional projections in a clause renders this clause transparent to more operations, the inverse appears to never hold. There is, for instance, no movement that cannot extract an element out of infinitival TP clause but is able to extract an element out of a finite CP clause via the specifier of that CP, either in Hindi or beyond. In other words, if TPs are opaque to an operation, then CPs will likewise be, while the inverse does not hold. This empirical generalization is stated in (40).

(40) **Opacity Generalization**
If a clause is (selectively) opaque for an operation, then adding functional structure to that clause does not render it transparent to this operation.

Agree-barriers in and of themselves do not derive (40). To see this, consider a configuration with a probe π ⫣ T in the matrix clause and an embedded TP clause. π will not be able to search into the embedded clause because the TP node will constitute an Agree-barrier. Compare this configuration to one with an embedded CP clause. If only TP were an Agree-barrier to π, π's search space would include the CP domain of the embedded clause. π could hence agree with an element in Spec,CP, either base-generated or moved there. The search space of π ⫣ T is schematically represented in (41), surpressing specifier positions. For the sake of concreteness, I have placed π on a the matrix T head but this is not crucial.

(41) *Incorrect hypothetical search space of* π ⫣ T (to be revised)



The probe π in (41) would be able to agree with an element in the embedded Spec,CP because π's search domain is delimited only by TP nodes. The descriptive result would be that π can extract out of a finite clause, but not out of an infinitival clause. Yet such a situation would violate the generalization in (40), and should hence be excluded on principled grounds.

To approach (40) within the framework presented here, it is instructive to briefly consider other properties of the functional makeup of clauses. A classical observation made by van Riemsdijk (1988, 1998), Grimshaw (1991, 2000) and others is that the functional layers projected over a lexical projection form an unit – an **extended projection** in Grimshaw's (1991) terms. Grimshaw (1991, 2000) observes that selection requires access to information that is not necessarily present on the highest member of an extended projection. She gives the example of subjunctive selection. The verb *request* requires a subjunctive complement clause, while a verb like *think* is incompatible with it.

(42) a. We requested that he leave/?left at 6.
b. We thought that he left/*leave at 6. (Grimshaw 2000: 130)

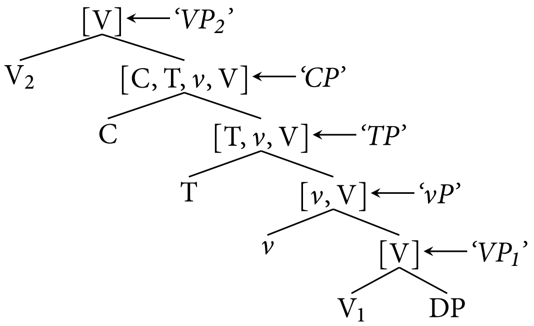
Crucially, both types of complement clauses are headed by the complementizer *that*. Grimshaw thus concludes that the relevant distinction is not present on the C head itself. This raises the question of how the matrix verb can select for the property of an embedded clause that is encoded more deeply than the highest projection of that clause. Grimshaw suggests that the features of a head percolate up within an extended projection. Because the TP forms an extended projection with the CP, the indicative/subjunctive feature will percolate to the CP level and can there be selected for by the matrix predicate.

I propose that the generalization (40) follows from this percolation mechanisms applied to Agree-barriers. A number of technical implementations are available to achieve this result. For the sake of concreteness, I will adopt the recursive formulation in (43). It states that within an extended projection (e.g., ⟨CP > TP > *v*P > VP⟩), at least the categorial features percolate up.

(43) **Category Percolation**
Given an extended projection $\Phi = \langle \Pi_n > \Pi_{n-1} > \ldots > \Pi_1 \rangle$, the (categorial) features of Π_m percolate to Π_{m+1}.

In other words, if a head takes a complement that is part of the same extended projection, the category of the result is a function of both the category of the head as well as its complement. The category of complex expression is hence determine bilaterally in this case. Across extended projections, on the other hand, only the category of the head projects.[16] This is illustrated in (44):

(44) *Example of (43)*



Within the extended projection spanning the lower V up to the C layer, category is cumulative: Following and extending Grimshaw's (1991, 2000) proposal, category features percolate up beyond the immediate projection of the head. Importantly, category percolation applies only to heads within a single extended projection. Returning to the schematized structure in (44), merging *v* and VP_1 ([V]) creates a complex mother label [*v*, V], which reflects the categories of both of its daughters because *v* and V are part of the same extended projection. On the other hand, V_2 and CP are not part of the same extended projection. Thus, at this juncture point between extended projections the category of the mother node is unilaterally determined by only V_2, thus creating VP_2 ([V]).

The two assumptions that (i) categorial features can be Agree-barriers in (38) and (ii) categorial features percolate within an extended projection in (43) together give rise to the following consequence. Suppose there is a probe $\pi \dashv\vert$ T. For this probe, CPs will be barriers as they are projected higher than TPs and hence contain a T specification in their complex category label (see (44)). Because, by assumption, a T category is a barrier for π, it necessarily follows that CP is a barrier for π as well. This consequence is stated recursively in general terms in (45).

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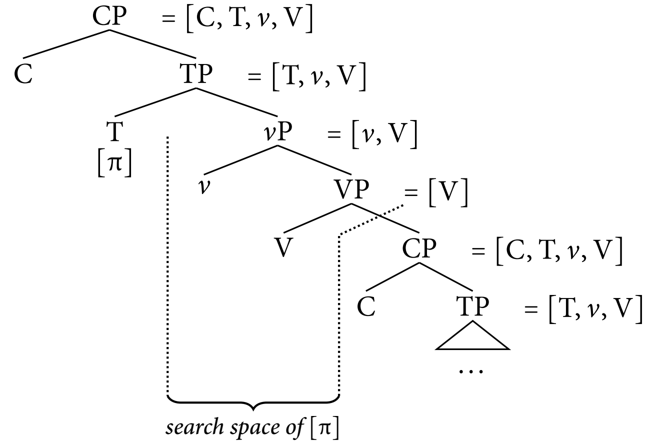
[16] As noted in the main text, alternatives are conceivable and little will hinge on the formulation adopted here. van Riemsdijk (1988, 1998) and Grimshaw (1991, 2000) propose that all heads within a functional projection have the same category. To differentiate between them, they employ a second feature that indicates the level of the head within the functional projection. Thus, *v* in (44) would be a V of level 2, T would be a V of level 3 and so on. Percolation can then be stated in terms of level features.

(45) **Barrier Ascension Theorem**
Given a probe π and an extended projection $\Phi = \langle \Pi_n \succ \Pi_{n-1} \succ \ldots \succ \Pi_1 \rangle$, if a projection $\Pi_m \in \Phi$ is an Agree-barrier to π, then Π_{m+1} is likewise an Agree-barrier for π.

Against the background of barrier ascension, consider again the schematic example considered above: Let there be a probe π ⫣ T, which itself sits on T and let the embedded clause be a CP. Because of category percolation, the barrierhood of TP for π ascends to the CP node, by (45). As a result, CPs and TPs are impenetrable to π, while *v*Ps and VPs are transparent. The embedded clause will thus be altogether impenetrable for π and any search of π into CP is ruled out. This derives the opacity generalization in (40): Addition of functional structure never leads to transparency.

(46) *Hypothetical search space of* π ⫣ T (revised from (41)):



To summarize this section, I have taken selective opacity at face value and proposed that probes can be blocked by different projections. Thus, barrierhood is not always a binary distinction: The same node can be a barrier for one probe but transparent for another. I have suggested that this selective barrierhood is an instance of defective A-over-A intervention, thus extending defective intervention to dominance relations between the intervener and the goal. Probes can interact with categorial features in a defective manner. In this case, the categorial specification will block Agree of the relevant probe into it. A second crucial ingredient of the analysis is that, following previous work on extended projections and their properties, I have proposed that categorial features percolate within an extended projection. As a result, if a probe defectively interacts with a category feature, it will also do so with all higher projections within the same extended projection. Extended projections are domains for barrierhood ascension.

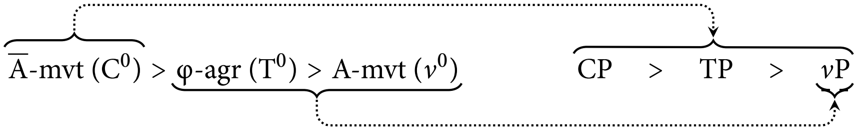
4.2 *Application*

Section 4.2.1 will illustrate the workings of this system on the basis of the intricate movement and agreement facts observed for Hindi in section 2. In section 4.2.2, I will move on to demonstrate how this system derives a ban on superraising and other selective opacity effects.

4.2.1 *Movement and agreement in Hindi*

The crucial generalizations regulating crossclausal movement and agreement in Hindi motivated in sections 2 and 3 are schematized in (47), repeated here from (34). In section 3, we have seen evidence that the probes for φ-agreement, A- and $\overline{\text{A}}$-movement are structurally ordered as shown on the left side of (47). $\overline{\text{A}}$-movement is able to search into all three embedded clause structures whereas A-movement and φ-agreement probes can only probe into *v*Ps.

(47) *Height of probe (33):* *Size of transparent domains (26):*



The core proposal of Agree-barriers is that the three probes differ in what projections they defectively interact with. The Agree-barriers for each probe are given in (48), where the subscript to the probe designates the syntactic position of that probe. The probes underlying A-movement ($[\bullet\text{A}\bullet]$) and φ-agreement ($[\star\varphi\star]$) defectively interact with T. Consequently, their search will terminate when they encounter a TP. The $\overline{\text{A}}$-probe ($[\bullet\overline{\text{A}}\bullet]$) does not defectively interact with anything, meaning that its search space is not delimited by Agree-barriers.

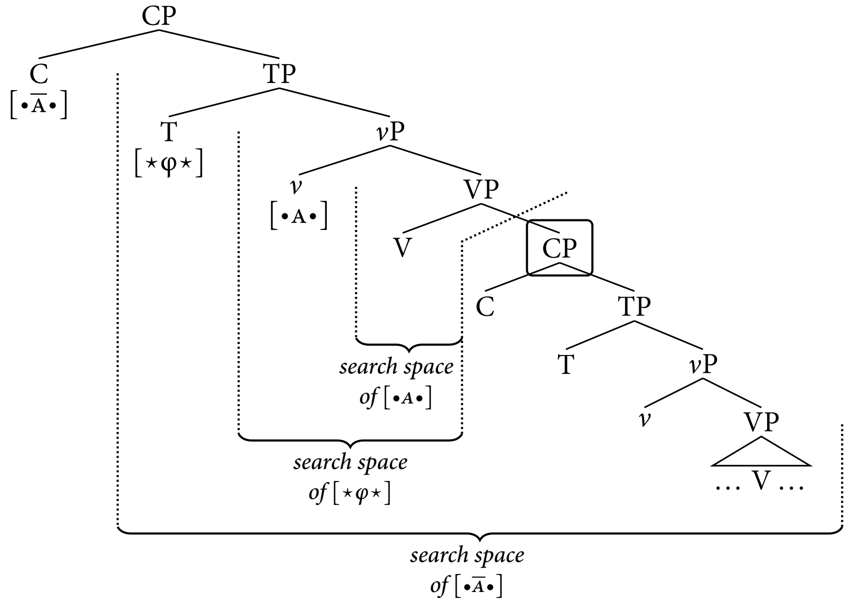
(48) *Hindi probes and their Agree-barriers*

a. $[\bullet\text{A}\bullet]_v$ ⫣ T
b. $[\star\varphi\star]_\text{T}$ ⫣ T
c. $[\bullet\overline{\text{A}}\bullet]_\text{C}$ ⫣ ∅

To illustrate, consider finite clause embedding. As discussed in section 2.4, the following generalizations need to be derived: (i) Finite clauses allow $\overline{\text{A}}$-extraction; (ii) they disallow both A-extraction out of them and φ-agreement into them; (iii) DPs moved out of them cannot control φ-agreement in the higher clause.

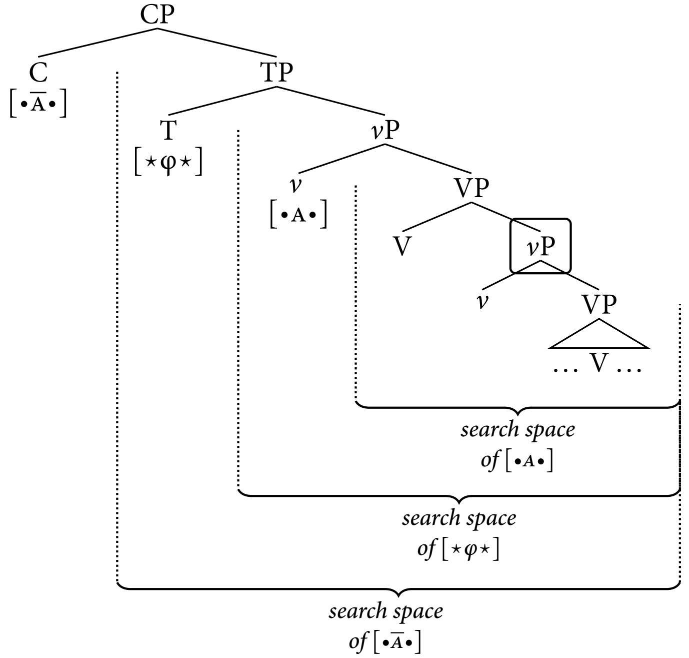
The schematic clause structure of a finite clause embedding and its interaction with matrix probes is provided in (49). The CP node corresponding to the embedded clause is boxed. Because $[\bullet\text{A}\bullet]$ ⫣ T and $[\star\varphi\star]$ ⫣ T, their search space terminates at the CP node of the embedded clause, as a consequence of barrier ascension (45): Because CP is an extended projection of TP, it preserves T's categorial specification and will hence block search of these probes past it. As a result, A-movement out of and φ-agreement into a finite clause is altogether impossible. $[\bullet\overline{\text{A}}\bullet]$, on the other hand, does not defectively interact with CP or any lower node and hence enjoys a search space that encompasses the embedded clause. $\overline{\text{A}}$-extraction out of finite clause is hence possible. Finally, because $\overline{\text{A}}$-extraction lands in Spec,CP, its landing site is outside the c-command domain of the matrix $[\star\varphi\star]$-probe. φ-agreement with an $\overline{\text{A}}$-moved element is hence impossible. Before moving on, it is worth pointing out that $[\bullet\overline{\text{A}}\bullet]$'s search space in (49) is indicated only with respect to Agree-barriers. It is conceivable, and in fact likely, that other non-relative constraints on movement like phases impose further restrictions on a probe's search space. This issue is addressed in section 6.

(49) *Finite clause (CP) embedding in Hindi*



Let us now turn to infinitival clauses, which are, by assumption, ambiguous between a TP and a *v*P structure in Hindi. On a TP structure, the opacity facts are distributed in a way parallel to (49): [•A•] and [⋆φ⋆] cannot access the embedded clause while [•A̅•] can. On a *v*P structure, on the other hand, all three probes are able to access the embedded clause, as no T projection intervenes. This is shown in (50), where the matrix [⋆φ⋆] can agree into the embedded clause and LDA is thus obligatory. The *v*P of the infinitival clause is boxed.

(50) *Small infinitival clause (vP) embedding in Hindi*

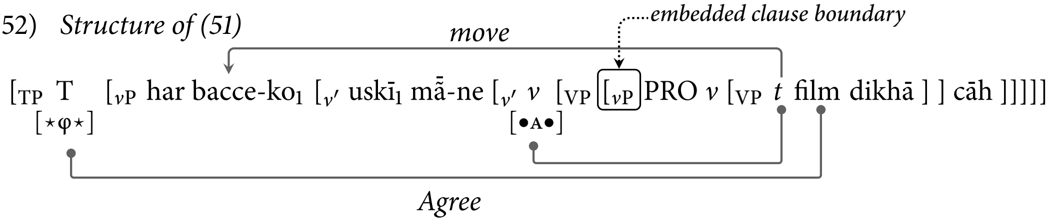


In a TP structure, LDA is impossible. Because the two structures are surface-idential, the superficial optionality of LDA is accounted for. Consider now a structure in which A-movement out of the infinitival clause takes place, as in (51), repeated from (12c).

(51) **Har bacce-ko$_1$** $\boxed{\text{us-kī}_1}$ mā̃-ne [t_1 film dikhā$\boxed{\text{-nī/*?-nā}}$]
every child-DAT 3SG-GEN mother-ERG movie.F show-INF.F.SG/*?-INF.M.SG
cāh$\boxed{\text{-ī/*?-ā}}$.
want-PFV.F.SG/*?-PFV.M.SG
'For every child *x*, *x*'s mother wanted to show *x* a movie.'

Because T is a barrier for [•A•], the A-movement in (51) reveals that the embedded clause must have a *v*P structure. This in turn entails that the lower clause is necessarily transparent for the matrix [⋆φ⋆]-probe. Because AGREE is obligatory if possible (Preminger 2011), LDA is obligatory in this case. The structure of (51) is given in (52). I will stay agnostic as to whether or not the external argument moves to Spec,TP in (52) (cf. Davison 2004, Anand & Nevins 2006). Because the ergative DP is altogether invisible to T's φ-probe, its exact structural position is irrelevant to the analysis of (51).[17]

(52) *Structure of (51)*



This account derives the generalization in (21) that A-movement of any element out of the embedded clause renders LDA obligatory: A-movement requires the embedded clause to be of a small size and this size has independent repercussions for agreement. Ā-movement has no such effect on LDA as it does not enforce a small clause size. Because [•Ā•] is not blocked by T, Ā-extraction out of a TP clause is possible. Because TPs clauses nonetheless block agreement into them, LDA emerges as obligatory only under A-extraction.

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[17] Notice that the PRO inside the embedded clause intervenes between the agreeing probe on T and the embedded object. For PRO not to act as an intervener, PRO has to lack φ-features. There is independent evidence that this is indeed the case. Some secondary predicates like *nangā* 'nude' have to obligatorily agree in φ-features with the subject (i.a). If these predicates modify a PRO, no such agreement is possible. Instead, they have to appear in their masculine singular form, irrespective of the φ-content of the controller of PRO, indicating that PRO does not contain φ-features. This is shown in (i.b). Because PRO lacks a φ-specification in Hindi, it will be invisible for a verbal φ-probe and hence not block AGREE over it.

(i) a. Mīnā nang-ī/*-ā nāc-tī hai.
Mina.F nude-F.SG/*-M.SG dance-IPFV.F.SG 3SG
'Mina dances nude.'

b. Mīnā [PRO nang-ā/*-ī nāc-nā] cāh-tī hai.
Mina.F nude-M.SG/*-F.SG dance-INF.M.SG want-IPFV.F.SG 3SG
'Mina wants to dance nude.'

4.2.2 *Superraising and related restrictions*

The analysis just proposed extends without further ado to superraising and other selective opacity effects. The account of why A-movement is impossible out of CPs in English is analogous to Hindi. T's $[\bullet\text{A}\bullet]$ probe defectively interacts with C ($[\bullet\text{A}\bullet] \dashv\!\mid \text{C}$) and can hence not probe into a CP.

(53) $\underset{[\bullet\text{A}\bullet]}{\text{T}}\ \underbrace{\text{seems}}_{\textit{search space}}\ [_{\text{CP}}$ that John ate oatmeal for breakfast].

A-extraction out of CP is thereby correctly ruled out. This account diverges from virtually all previous accounts of this restriction by attributing it to a constraint on Agree and not on movement itself. On the present account, improper movement is a manifestation of a much more general pattern, which might be called 'improper Agree'.

A second dimension in which the present account differs from classical analyses of improper movement is that it is *domain-based* rather than *item-based.* The classical analysis of improper movement is that an element cannot move from an $\overline{\text{A}}$- to an A-position (Chomsky 1973, 1977, 1981, May 1979) and many subsequent accounts have preserved this item-based view (Müller & Sternefeld 1993, Svenonius 2004, Obata & Epstein 2011, Müller 2014a). In contrast, the current analysis does not claim that particular items in $\overline{\text{A}}$-position are blocked from A-movement. Instead, certain domains are impenetrable by A-agreement. Thus, if an element is inside a CP, it is irrelevant whether this element itself occupies an A- or an $\overline{\text{A}}$-position. Recent work on improper movement has argued that a domain-based view is indeed empirically superior (van Riemsdijk & Williams 1981, Grewendorf 2003, Williams 2003, 2011, Abels 2007, 2009, Neeleman & van de Koot 2010). In the interest of space, I will not discuss the matter here. For our present concerns, it suffices to note that the account presented here falls into the group of domain-based analyses.

Selective opacity effects beyond traditional superraising are likewise accounted for. That extraposition in English is not able to extract an element even out of an infinitival clause follows if the probe underlying extraposition defectively interacts with a low verbal projection. As a result, non-finite as well as finite clauses will emerge as barriers for extraposition. Furthermore, it has been noted by Tappe (1981), Haider (1984), Reis (1985) and others that V2 clauses in German are barriers for movement into a V-final clause but not for movement into a V2 clause (see (5) above), whereas V-final clauses are transparent for movement into V-final as well as V2 clauses. This follows on the reasonable assumption that V2 clauses comprise more structure than V-final clauses: Let us treat V2 clauses as ForcePs, and V-final clauses are FocPs, where ForceP dominates FocP. As a result, movement into a V2 clause targets a higher position (Spec,ForceP) than movement into a V-final clause (Spec,FocP). If ForceP is an Agree-barrier for the movement-inducing probe on Foc ($[\bullet\pi\bullet]_{\text{Foc}} \dashv\!\mid \text{Force}$), but not for the probe triggering movement to Spec,ForceP ($[\bullet\pi_{\text{V2}}\bullet]_{\text{Force}} \dashv\!\mid \varnothing$), the pattern follows: V2 clauses (i.e., ForcePs) are transparent only for movement into a V2 clause ($[\bullet\pi_{\text{V2}}\bullet]_{\text{Force}}$). V-final clauses (FocPs), by contrast, are transparent for both probes, but not for certain other probes, e.g., scrambling. This line of account can be directly extended to the various selective opacity facts summarized in section 1.

In sum, this section has developed an account of the Hindi movement–agreement interactions in particular and selective opacity phenomena in general. Three components of the analysis are crucial. First, opacity, at least of the kind investigated here, is relativized. The same node can be a barrier for some probes, but not for others. As a consequence, opacity is not an all-or-nothing property. Second, the constraint is formulated on the basis of Agree. This allows it to regulate movement as well as agreement. That both exhibit selective opacity effects and moreover interact with each other then follows straightforwardly. Third, barrierhood ascends along the spine of an extended projection. Thus, if an Agree operation is blocked by a particular projection, adding structure beyond this projection does not alter the barrierhood of the extended projection. This correctly entails that there is no movement that, e.g., can escape a finite clause but not a non-finite clause.

5 Deriving the height–locality connection

A main insight of the recent literature on selective opacity effects is that it is not distributed arbitrarily across probes. Rather, a probe's locality is a function of its height in the functional structure (Williams 2003, 2011, Abels 2007, 2009, 2012a, Müller 2014a,b). Section 3 above has corroborated this conclusion by demonstrating that it also holds for movement and φ-agreement in Hindi.

(54) **Height–Locality Connection** = *(35)*
The higher the structural position of a probe π, the more structures are penetrable by π.

While it is of course possible in any theory to stipulate a connection to the effect of (54), it is noteworthy that the account developed in section 4 derives a connection between height and locality without actually imposing a designated restriction on the two. This consequence emerges because certain pairings of locality and height systematically deprive a probe of any search space, thus rendering the probe vacuous. For all non-vacuous probes, syntactic height imposes restrictions on locality and vice versa. This derives a version of (54). This section will first demonstrate this consequence of the present analysis. I will then compare the analysis with previous accounts of (54) and argue that these are too strong empirically.

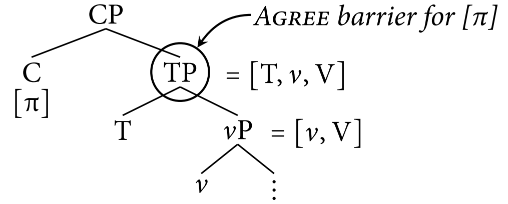
5.1 *Proposal*

Consider a probe π on some projection Π_m whose Agree-barrier is Π_{m-1} (i.e., $\pi \dashv\!\mid \Pi_{m-1}$), i.e., the projection immediate below it. It follows from the very logic of Agree-barriers that π's search space will be entirely empty in this case. This is because π's sister is a barrier for π and, as a consequence, π will have no search space at all. In other words, neither can π agree with any element nor is it able to trigger movement of any element. I will call such probes **vacuous.** Because vacuous probes as a matter of principle cannot agree, their existence will by necessity have no effect on the syntactic derivation and I will assume that they simply do not exist. There is no reason for a learner to postulate a probe that is vacuous. Crucially, this reasoning entails a restriction on pairings between height and locality that probes can exhibit: No probe can have as an Agree-barrier the projection immediately below the one the probe is itself located on. These restrictions generalize. Recall from the previous section the Barrier Ascension Theorem in (45), repeated here:

(55) **Barrier Ascension Theorem** *= (45)*
Given a probe π and an extended projection $\Phi = \langle \Pi_n > \Pi_{n-1} > \ldots > \Pi_1 \rangle$, if a projection $\Pi_m \in \Phi$ is an Agree-barrier to π, then Π_{m+1} is likewise an Agree-barrier for π.

For any extended projection (e.g., ⟨CP > TP > *v*P > VP⟩), barrierhood ascends up the spine of that extended projection. As a consequence, the restriction just discussed generalizes to *all* projections lower than the one the probe is located on. Consider, as an example, a probe π located on C and with *v* as an Agree-barrier ($\pi \dashv\mid v$). Because TP is higher than *v*P, TP will likewise be a barrier for π by (55). This in turn entails that π is a vacuous probe, as depicted in (56).

(56) *Example of a vacuous probe π on C with $\pi \dashv\mid v$*



The concept of Agree-barriers thus has as an immediate consequence the theorem in (57). The theorem has two effects, stated in (57a) and (57b), respectively. (57a) restricts what may constitute an Agree-barrier for a probe given the syntactic position of that probe. Conversely, (57b) states a restriction on the syntactic position a probe may occupy given its Agree-barrier specification. It is important to note that neither (57a) nor (57b) are stipulations. Rather, they follow as necessary consequences from the analysis developed in the previous section and thereby derive a connection between height and locality from the more basic architecture of Agree-barriers.

(57) **Height–Locality Theorem**
Given an extended projection $\Phi = \langle \Pi_n > \Pi_{n-1} > \ldots > \Pi_1 \rangle$,

a. For any probe π located on Π_m, no projection $\in \{\Pi_{m-1}, \ldots, \Pi_1\}$ can be an Agree barrier for π.
b. For any probe π for which a projection Π_m is an Agree barrier, π cannot be located on a projection $\in \{\Pi_n, \ldots, \Pi_{m+1}\}$.

(57a) states that a probe located on an arbitrary projection must have an Agree-barrier at least as high as this projection. (57b) states that if a probe has some projection as its barrier, this probe cannot be located on a projection higher than the one constituting the barrier.[18]

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[18] The exact number of height–locality pairings ruled out by (57) can be precisely quantified. It is a function of the number of projections that an extended projection is assumed to comprise. The greater the number of projections, the more pairings are ruled out The number of excluded pairings can be calculated as in (i):

To give a concrete example of the restrictions in (57), consider $\overline{\text{A}}$-extraction in Hindi. We have seen evidence in section 3 above that the [•$\overline{\text{A}}$•]-probe in Hindi is located as high as C (given that $\overline{\text{A}}$-movement cannot land in an infinitival clause). Given this fact, (57a) entails that neither T nor *v* nor V can be Agree-barriers for [•$\overline{\text{A}}$•]: It must have either C as an Agree-barrier or none at all. This crucially entails that non-finite clauses *cannot* be opaque to $\overline{\text{A}}$-extraction in the language. In other words, (57a) gives rise to an entailment: Because [•$\overline{\text{A}}$•] resides on C, it must necessarily be able to probe into TPs and *v*P. As we have seen, this is indeed the case in Hindi: $\overline{\text{A}}$-extraction is uniformly possible out of non-finite clauses. According to (57), this is not a coincidence. Structural height has direct repercussions for barrierhood.[19]

The restriction in (57b) can be illustrated with A-movement and φ-agreement in Hindi. We have seen that large infinitival clauses (TPs in the current analysis) are opaque for both processes. In other words, T is an Agree-barrier for both [•A•] and [⋆φ⋆]. This entails, by (57b), that these probes cannot reside on a projection higher than TP, as they would be vacuous otherwise. Put differently, both probes must be below C. We have seen empirical evidence that this is correct in section 3. (57b) derives this relation between height and locality as a necessary property of the system.

(57) similarly constrains the possible interactions between movement types. Consider English as an example. As (58), from Baltin (1982: 17), demonstrates, relativization and topicalization can co-occur within the same clause, in which case relativization (*rel*) targets a position higher than topicalization (*top*):

(58) He's a man [to whom$_{rel}$ liberty$_{top}$ we could never grant *t* *t*]

Based on this difference in height, Agree-barriers make an immediate prediction regarding the crossclausal locality of relativization. Because relativization targets a position higher than topicalization, it follows from (57a) that the relativization probe cannot have a Topic projection as its Agree-barrier. This leads to the prediction that relativization into a higher clause cannot be blocked by embedded topicalization. This prediction is indeed borne out, as shown in (59).

(*fn. cont'd*)

(i) Let *n* be the number of projections in an extended projections. The number of height–locality pairings of probes excluded by (57) equals: $\sum_{k=1}^{n-1} k = \frac{n^2 - n}{2}$

It is moreover possible to calculate the proportion of possible pairings that are ruled out with the equation in (ii):

(ii) Let *n* be the number of projections in an extended projection. The proportion of height–locality pairings of probes excluded by (57) equals: $\frac{\sum_{k=1}^{n-1} k}{n^2 + n} = \frac{\frac{n^2-n}{2}}{n^2 + n}$

The proportion increases the greater the number of projections. The limit of (ii) is .5, meaning that in the limit 50% of all a priori possible pairings are ruled out by (57).

[19] A reviewer points out that the entailment in (57a) differs from the system proposed by Abels (2007, 2009) in that scrambling from DP to Spec,*v*P followed by remnant movement of the DP to Spec,TP is necessarily predicted to be possible on (57a) but ruled out on Abels' (2007, 2009) account. Takano (2000) explicitly argues that such a derivation is possible.

(59) He's a man [to whom$_{rel}$ I believe [liberty$_{top}$ we could never grant *t* *t*]]

Incidentally, this line of reasoning is analogous to Abels' (2012a) investigation into the Italian left periphery. A comparison between the two accounts will be provided in section 5.2.2.

Agree-barriers and the theorem in (57) that they give rise to thus capture on a principled basis restrictions on possible height–locality pairings that instantiate a version of the empirical generalization in (54). As a result, it derives that selective opacity is not distributed randomly across probes but covaries with the structural height of that probe's position. I would like to stress that this outcome is not the result of an independent stipulation but emerges from the system itself. Crucially, the system does not impose designated restrictions on height–locality pairings. Instead, the theorem in (57) arises as an indirect consequence of barrier ascension. In this sense, the system advanced here derives the connection between a probe's height and locality from more basic theoretical primitives and thereby offers an explanation of why the connection in (54) should hold in the first place.

Notably, (57) gives rise to an asymmetry: The restrictions that hold for structurally high probes are stricter than those for structurally low probes. To see this point more clearly, consider a simple extended projection consisting of V, *v*, T and C and let us compare a probe π located on *v* with one residing on C. If π is on *v*, only V as an Agree-barrier will render the probe vacuous and hence be ruled out (see (60a)). By contrast, if π is on C, then V, *v* and T will be excluded (see (60b)). Structurally low probes thus enjoy a greater variability in the Agree-barriers than high probes. The next section will justify this asymmetry.

(60) a. *Non-vacuous Agree-barrier options for π on v:*
π ⫣ *v*; π ⫣ T; π ⫣ C; π ⫣ ∅
b. *Non-vacuous Agree-barrier options for π on C:*
π ⫣ C; π ⫣ ∅

5.2 *A comparison to previous approaches*

There are a few proposals in the literature that attempt to derive the height–locality connection in (54). Despite significant differences in execution, these approaches pursue a similar general strategy: They derive one half of the connection from the other. On the one hand, Williams (2003, 2011, 2013) and Müller (2014a,b) suggest that the locality restrictions of a movement type should follow from the height of its landing site given a general theory of locality. Abels (2012a) pursues the opposite route: He argues that the height of a movement type's landing site should be a consequence of its locality properties.

These approaches provide elegant accounts of the height–locality connection in (54) by essentially reducing one to the other. This in effect renders the connection a correlation: One side of the connection completely determines the other. This contrasts with the account advocated here. The theorem in (57) imposes restrictions on possible pairings of height and locality but differs from previous proposals in that it does not reduce one to the other. This section will argue that previous accounts are too restrictive empirically. Neither side of the height–locality connection fully determines the other. This provides empirical evidence in favor of the more flexible account proposed here.

5.2.1 *Reducing locality to height*

Focusing on movement dependencies, Williams (2003, 2011, 2013) and to some extent Müller (2014a,b) derive a movement type's locality from the height of its landing site: Given an extended projection, there is a general principle of grammar that establishes whether extraction from one projection into another is licit or not. For Williams (2003, 2011, 2013), this principle is the *Level Embedding Conjecture*. It is itself derived from deeper properties of his proposed syntactic architecture but these do not need to concern us here. The Level Embedding Conjecture has the effect that movement into some projection α cannot cross a projection that is higher than α in the hierarchy of projection. To take superraising as an example, movement into T cannot proceed out of a CP, because C is higher than T in its extended projection. By contrast, extraction out of a TP into a TP is possible. Thus, on this account a movement type's locality restrictions fall out from its syntactic position.

There are well-known problems with a reduction of locality to height.[20] Abels (2007, 2009) argues that the biclausal configuration in (61) creates insurmountable problems for an account that attempts to derive locality from height.

(61) $[_{\alpha\text{P}}\ \alpha \ldots \beta \ldots \overset{\substack{\textit{clause boundary}\\ \downarrow}}{\ } [_{\alpha\text{P}}\ \alpha \ldots t_{\beta} \ldots$

In this configuration, β has moved over an element α within an embedded clause into a position that is lower than α in a higher clause. Such a configuration is ruled out on Williams' (2003, 2011, 2013) account for the following reason: Because β lands to the right of α in the matrix clause, β's landing site must be lower than α in its extended projection. On Williams' account, this entails that this movement should not be able to pass α. The account therefore predicts that (61) should not exist. Yet this prediction is not borne out. Structures of the type in (61) are well-attested, as Williams (2003: 80) himself notes for the French L-*tous* construction. Abels (2007, 2009) brings to bear a host of other constructions that exemplify (61), including English subject-to-object raising, scrambling out of finite clauses in Russian and superraising in Bantu languages, a catalog to which Müller (2014a) adds superraising in Japanese and Greek. One may also add superraising in Brazilian Portuguese to the list (Nunes 2008), though see Williams (2011) for a critical assessment. An example from superraising in Bantu may serve to illustrate the problem. Halpert (2012) argues that in Zulu A-movement into Spec,TP may proceed out of embedded CP clauses, as illustrated in (62), where 'AUG' abbreviates 'augment' and 's' 'subject agreement'. Here *uZinhle* has moved from the embedded clause into the matrix subject position.

(62)	**uZinhle**	**u**-bonakala	[ukuthi	u-xova	ujeqe	manje].
	AUG.1Zinhle	1s-seem	that	1s-make	AUG.1steamed.bread	now

'Zinhle seems to be making steamed bread now.' (Halpert 2012: 247)

Williams' (2003, 2011, 2013) version of the height–locality connection is too strict to derive (62) and the various other examples just given: Movement over a CP should never be able

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[20] I am very grateful to Klaus Abels and two anonymous reviewers for very helpful discussion of these issues.

to land in any position lower than C as a matter of principle. While this result is correct for English subject raising, it is too strong crosslinguistically.

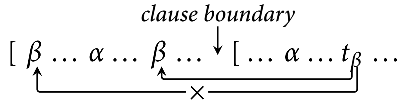
The present approach, on the other hand, accommodates (62). Suppose that in Zulu, the A-probe on T does not have C as an AGREE-barrier. It will hence be able to search into the embedded CP clause and A-extraction will be allowed. The other problematic cases just mentioned can be accounted for in an analogous manner. The present account thus allows us recast the difference between languages that do not allow superraising and ones that do as a simple parametric choice. If they do not allow superraising, [•A•] ⊣| C; and if they do, [•A•] ⊣| ∅. This variability is possible in the current approach precisely because a probe's syntactic height constrains its locality but does not completely determine it. Variation of the type we observe is thus expected.

5.2.2 *Reducing height to locality*

The opposite direction of elimination is explored by Abels (2012a), who likewise focuses on movement dependencies. In an intriguing investigation the Italian left periphery, he observes that constraints on locality that are observable *across clauses* make superfluous constraints on landing sites *within clauses*. To give just one example, Abels (2012a) observes that relativization can apply out of clause in which topicalization has taken place. Conversely, topicalization out of a clause containing relativization is impossible. Because this demonstrates that topicalization over a relativized element is impossible, it follows without further ado that within a single clause, topicalization has to land below relativization, making superfluous a cartographic stipulation to this effect. Ideally, Abels (2012a) reasons, restrictions on the height of a movement type are a direct consequence of its locality, i.e. what structures it cannot apply over. In other words, on a strong version of the approach a movement type's locality restrictions completely determine where this movement's landing site can be.

Yet it can be shown that reducing height to locality is not tenable in all cases. Structures that are problematic have the schematic biclausal structure in (63):

(63)



In (63), movement of β passes α in the embedded clause. This entails that α cannot be a barrier for this movement step. Yet in the higher clause, β may land only underneath α, not above it. Because α does not block β-movement over it, locality constraints alone to not determine the ordering of α and β relative to each other within the same clause. In other words, movement of β over α should be possible within one clause just as it is possible across clauses. That movement of β in (63) obligatorily lands lower than α can thus not be the result of locality restrictions on the movement type.

Abels (2012a: 251) himself notes one instance of (63): In Italian the complementizer *che* may be crossed by various movement types but has to appear to the left of displaced elements within the same clause. As Abels notes, restrictions on the height of a landing site are required that do not reduce to locality. Topicalization in English patterns similarly. The complementizer *that* is not a barrier for topicalization, yet a topicalized element cannot appear to the left of *that* in the same clause:[21]

(64) Sue said [(**Barriers*) that (*Barriers*) Tom believes [that everyone should read *t*]].

The complementizer *ki* in Hindi exhibits analogous behavior. Another example is raising-to-object in English, which may cross a negation in the lower clause but has to land below negation in the matrix clause. $\overline{\text{A}}$-movement in Hindi provides a final example. As we have seen on the basis of (27) above, this movement cannot land within an infinitival clause but may proceed out of an infinitival clause. This yet again shows that restrictions on the landing site of $\overline{\text{A}}$-movement are not a mere reflex of its locality constraint and consequently cannot be reduced to it.

In sum, while Abels (2012a) makes a compelling argument that locality restrictions impose restrictions on the height of a landing site in line with the height–locality connection, it is also clear that the two can mismatch in principle. It is hence not possible to completely reduce height to locality. Agree-barriers make sense of this fact because they allow height and locality to be specified independently (thus creating the possibility of mismatches between them), but at the same time impose restrictions on the range of possible mismatches in the form of the height–locality theorem (57). The finding that, e.g., topicalization in English lands lower than *that* while still being able to cross it follows straightforwardly: C is not an Agree probe for topicalization but occupies a higher spot in an extended projection.

5.2.3 *Summary*

The most appealing feature of the two alternative approaches just discussed is that they attempt to explain the height–locality connection in (35) by reducing one aspect of it to the other. This entails that there should never be any mismatch between the two. As I have just argued, this expectation is not borne out. What is required, then, is an approach that grants some potential for mismatch between height and locality and yet at the same time imposes a limit on the mismatch possibilities to capture the connection between the two. The account developed here does precisely that. The greater variability that it thereby affords allows it to be extended to cases where height and locality part ways.

As noted in section 5.1, the height–locality theorem (57) exhibits an asymmetry: (57a) states that a probe cannot have Agree-barriers smaller than the projection that it is located on. This in effect imposes more restrictions on structurally high probes than on low probes (recall (60)). In other words, while a probe on C cannot, as a matter of principle, have *v* or T as an Agree-barrier, the reverse does not hold. A probe on *v* or T can or cannot have C as an Agree-barrier. Comparing language that do not allow superraising – like English – and languages that do – like Zulu – provides crucial evidence for this indeterminacy. More generally, all instances height and locality mismatches involve a structurally low probe exhibiting a surprisingly non-local search space, never the other way around. This fact is in line with the account just

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[21] Note that (64) likewise constitutes a problem for Williams' (2003, 2011, 2013) system: Because topicalization has to land in a position lower than *that*, it is predicted not to be able to cross a complementizer in the case of crossclausal extraction, contrary to fact.

developed. The height–locality theorem (57) fixes the Agree-barrier status of projections lower than the one occupied by the probe but leaves open the choice for higher projections, as desired.

6 Some further issues

A question that arises from the concept of Agree-barriers is how they relate to more traditional notions of syntactic locality, such as phases. The two concepts are not only compatible with each other, they moreover have a very different empirical signature and therefore do not give rise to analytical redundancy. Standard phase theory (Chomsky 2000, 2001 et seq.) crucially assumes that the edge of a phase remains accessible after Spell-Out has taken place. This enforces that movement out of a phase is successive-cyclic but, as noted by Boeckx & Grohmann (2007) and Abels (2012b), among many others, it does not render domains entirely opaque for extraction. In other words, phases in and of themselves do not offer an account of why extraction is possible out of some domains, but impossible out of others, precisely because they are porous by design. Moreover, because phases involve cyclic Spell-Out of syntactic structure, they do not discriminate between operations and hence do not lend themselves to an account of selective opacity. Agree-barriers, on the other hand, determine whether a given operation into a domain is possible or not. This opens up the possibility that Agree-barriers coexist with phases as independent and complementary constraints on syntactic dependencies. Consider, for instance, the interplay between the Agree-barrier of English A- vs. Ā-extraction on the one hand and C as a traditional phase head on the other. Because a CP clause is an Agree-barrier for an A-probe ([•A•] ⫣ C), A-extraction is ruled out even if phases themselves would allow it. Conversely, because C is not a barrier for an Ā-probe ([•Ā•] ⫣ ∅), Agree-barriers do not limit its search space. C's phasehood, however, does and anything other than its edge is impenetrable, giving rise to successive-cyclic movement through Spec,CP. As a result, a combination of Agree-barriers and phases does not give rise to redundancy, and in addition both concepts have clearly distinguishable empirical effects: Agree-barriers render a domain opaque for some probes, but not others. Phases, on the other hand, determine that the complement of phase heads are absolutely impenetrable to all operations, but allow operations to target their edge. Thus, Agree-barriers regulate whether extraction out of a domain is possible or not, while phases ensure the successive-cyclic shape of possible extraction paths.

That said, it should be pointed out that the present account is incompatible with the view that all *v* projections are phasal (e.g., Legate 2003), a consequence that virtually all accounts of improper movement share. To illustrate the problem, the two schematic structures in (65) compare extraction out of finite and nonfinite clauses under the assumption that the higher *v* is phasal. In either case, extraction proceeds cyclically through this higher *v*P. The two structures differ in whether subsequent movement from this *v*P into TP is possible. If the embedded clause is a CP, *v*P-to-TP movement must be impossible to exclude superraising (65a), while the same movement step must be licit if the lower clause is a TP (65b). Crucially, this decision cannot be made locally, but must depend on properties of an already spelled-out phase: If the DP has moved through Spec,CP in the lower clause, *v*P-to-TP movement is impossible in the higher clause, otherwise it is licit. This problem is very closely related to what Müller (2014a,b) refers to as the *promiscuity problem* of improper movement.

(65) a. *Extraction out of finite clause*
→ vP-to-TP movement impossible
$[_{\text{TP}}$ ___ T $[_{v\text{P}}$ DP v $[_{\text{VP}}$ V $\underline{[_{\text{CP}}}$ t …

b. *Extraction out of nonfinite clause*
→ vP-to-TP movement possible
$[_{\text{TP}}$ ___ T $[_{v\text{P}}$ DP v $[_{\text{VP}}$ V $\underline{[_{\text{TP}}}$ t …

It should be clear that no parallel problem arises if *v* in (65) is not a phase: In this case, all that is required is that movement from CP to TP is ruled out, a result delivered by the present analysis. I conclude that an unequivocally phasal status of C as phasal is unproblematic, while the same does not hold for *v* (and other lower projections). Whether *v* is phasal in some but not all cases (Chomsky 2000, 2001) or never (Keine 2015) is beyond the scope of the present discussion.

A second point of interest is that the present account is able to extend to long-distance agreement facts in languages other than Hindi where movement and agreement are subject to distinct locality constraints. For example, Bobaljik & Wurmbrand's (2005) argue that in Itelmen, φ-agreement is subject to stricter locality domains than (A-)movement. Interestingly, the opposite conclusion is suggested by LDA in Tsez, as analyzed by Polinsky & Potsdam (2001). They argue that the edge of a Topic projection in the lower clause is accessible to a matrix φ-probe but not to movement, indicating that movement is subject to stricter locality restrictions than φ-agreement in Tsez. Comparing Itelmen and Tsez not only provides evidence that movement and agreement appear to be subject to different locality constraints, it furthermore leads to the conclusion that these differences are subject to crosslinguistic variation Agree-barriers allow us to rationalize this otherwise puzzling situation: In Itelmen, the embedded clause is an Agree-barrier for a φ-probe, while it is not for an A-probe. In Tsez, on the other hand, embedded clauses are barriers for movement, but not φ-agreement. Thus, Agree-barriers provide a general framework not only for analyzing differences between movement types, but also for investigating discrepancies between movement and agreement more generally.

A final question worth addressing is whether any associations between a probe's height and its locality are privileged over others. A natural view would be to treat projections higher than the one that the probe is located on as Agree-barriers. On this view, a probe on T, for instance, would have C as an Agree-barrier and could hence enter into a relation with an element inside a CP. As discussed above, this would yield the locality of English A-movement. If in a given language C is not an Agree-barrier for T (e.g., Zulu), this could be deduced from the existence of a well-formed syntactic relation between T and an element inside a lower CP. On this view, the absence of superraising would constitute the default setting and thus not require explicit stipulation. Because this default setting is restrictive, departures from it, and thus crosslinguistic differences in Agree-barriers, could be acquired on the basis of strictly positive evidence.

7 Conclusion

This paper has proposed an analysis of selective opacity effects, the phenomenon that certain domains are transparent to some operations, but opaque to others. I have argued for four interrelated claims: First, selective opacity is not limited to types of movement, but also encompasses φ-agreement. This indicates that the relevant constraint targets the operation AGREE. Second, probes not only differ with respect to what goals they can agree with, but likewise in what elements they interact defectively with. Such AGREE-barriers prevent a probe from searching into them and thus delimits that probe's search space, in a defective version of the A-over-A Principle. Because probes differ in what counts as an AGREE-barrier for them, selective opacity follows. The third claim is that barrierhood ascends through an extended projection. I have argued that this is a consequence of the endocentric nature of extended projection. Fourth, barrier ascension has the indirect effect of imposing restrictions on AGREE-barriers and derives a connection that holds between a probe's height and its locality. While this connection has been noticed in the previous literature, I have argued that the account presented here is more adequate on empirical grounds. On a general level, the analysis proposed here unifies, in a systematic and novel way, improper movement and related selective opacity restrictions, mismatches between the locality of movement and agreement, and intricate interactions between movement types and agreement.

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