RESEARCH

Case vs. positions in the locality of A-movement

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This paper contrasts two families of approaches to the ban on A-movement out of a finite clause (hyperraising). One line of approach attributes the constraint to the positions involved in the movement chain (e.g., improper movement), the other derives the constraint from the case properties of the moving element (e.g., Activity Condition). Based on novel evidence from Hindi-Urdu, this paper develops an argument in favor of position-based approaches. In a nutshell, I argue that (i) A- and Ā-movement in Hindi-Urdu exhibit the same locality contrast as in English, that (ii) both apply to already case-marked DPs, and that (iii) they differ in the position they target in the same way as in English. As a result, the locality difference between the two movement types in Hindi-Urdu can be attributed to the positions that these movement types target, but not to their case properties. These results indicate that when case and positions diverge, locality tracks positions, not case. This conclusion supports the view that a comprehensive account of the locality of A-movement requires reference to syntactic positions in some form. The results also raise the possibility that case can be eliminated as a constraint on the locality of A-movement.

Keywords: hyperraising; improper movement; Activity Condition; case; Hindi-Urdu

1 Introduction

One of the core differences between A- and Ā-movement is the locality properties that they exhibit (Chomsky 1973; 1977; 1981). While both A- and Ā-movement may leave a nonfinite clause (1), only Ā-movement is possible out of a finite clause (2). Illicit A-movement out of a finite clause as in (2b) is usually referred to as hyperraising, a term that I will use here as a convenient descriptive label.

(1) Nonfinite clause
a. Ā-movement
   What, does Mary seem [to like $t_1$]?
b. A-movement
   Mary$_i$ seems [ $t_1$ to like natto].

(2) Finite clause
a. Ā-movement
   Who$_i$ do you think [ $t_1$ likes natto]? 
b. A-movement
   *Mary$_i$ seems [ (that) $t_1$ likes natto].

The same contrast can be observed for subject-to-object raising:

(3) a. I believe Mary$_i$ with all my heart [ $t_1$ to be innocent].
b. *I believe Mary$_i$ will all my heart [ (that) $t_1$ is innocent].
Within the empirically and theoretically rich literature on this asymmetry between A- and Ā-movement, two basic families of approaches can be distinguished. The classical account of this contrast, originally proposed by Chomsky (1973; 1977; 1981), is based on the interaction of two constraints on movement. First, movement out of a finite clause is required to proceed through Spec,CP of the embedded clause, an Ā-position (this constraint follows from subjacency or, more recently, from the Phase Impenetrability Condition and CP being a phase). Second, movement from an Ā-position is required to land in an Ā-position. More specifically, movement from CP must land in CP (Chomsky 1973: 244, ex. (55b)). Movement from CP to a TP-internal A-position is consequently prohibited, the so-called Ban on Improper Movement:\footnote{As it stands, (4) is incompatible with vP phases, as it also rules out successive-cyclic movement from Spec,CP to Spec,vP. For the sake of exposition, the discussion will be based on the classical formulation of the ban and I will defer a discussion of its relationship to vP phases to section 4.3.}

\begin{enumerate}
  \item \textbf{Ban on Improper Movement}
    \begin{itemize}
      \item Movement from Spec,CP must land in Spec,CP. Movement from Spec,CP to a TP-internal position is ruled out.
    \end{itemize}
\end{enumerate}

A-movement out of a finite CP clause is then ruled out, as it would require movement from Spec,CP to a TP-internal position, violating (4):

\begin{enumerate}
  \item *\small{\textit{tp t} Mary \small{\textit{cp that} t Ā likes natto}}
\end{enumerate}

Because (4) allows movement from Spec,CP to Spec,CP, Ā-movement out of a finite clause is correctly ruled in. Furthermore, on the standard assumption that raising infinitives are TPs (Chomsky 1981), A-movement out of such infinitives is allowed because no intermediary Ā-movement takes place.

Various accounts have been proposed to derive (4). One very influential proposal is due to May (1979) and is adopted in Chomsky (1981), according to which the trace of Ā-movement is subject to Principle C of the Binding Theory and hence required to be globally A-free. A-movement of an Ā-moved element violates this requirement. Other proposals include locality conditions on A-chains (Lasnik & Saito 1992), constraints on trace binding (Müller & Sternefeld 1993), or constraints on operational ordering (Williams 2003; Abels 2007).

What all of these approaches have in common is that they restrict, in one way or another, the syntactic positions that licit movement paths may comprise. For this reason, I will refer to this line of account as position-based. A number of authors have argued that the Ban on Improper Movement in (4) should be generalized (e.g., Müller & Sternefeld 1993; Williams 2003; 2013; Abels 2007; 2009; 2012; Neeleman & van de Koot 2010; Müller 2014a; b; Keine 2016; to appear), but most of these generalizations likewise make crucial reference to syntactic positions and therefore preserve the position-based nature of the account.

An alternative line of approach that has been explored in the literature is to relate the availability of A-movement to case. Perhaps the most well-known example is the Activity Condition (Chomsky 2000: 123, 127 and Chomsky 2001: 6). On this account, only DPs whose case feature is unvalued are “active” and may undergo A-movement. Once a DP has received case, it becomes “inactive” and thereby unable to undergo further A-processes:

\begin{enumerate}
  \item \textbf{Activity Condition}
    \begin{itemize}
      \item DPs whose case feature is valued become inactive and thereby unable to undergo subsequent A-processes.
    \end{itemize}
\end{enumerate}
The hyperraising example in (2b) is ruled out by the Activity Condition because the moving element Mary receives nominative case in the subject position of the lower finite clause. This renders Mary inactive and prevents it from A-moving into the matrix subject position (see (7)). If the embedded clause is nonfinite, as in (1b), the embedded subject does not receive case in the embedded clause, and it hence remains active for matrix A-processes, allowing A-movement. Case thus acts as a “switch”, and case assignment bleeds further A-movement of a DP.²

(7) *Mary₁ seems [τ₁\textit{case assigned} likes natto]

The Activity Condition represents a substantial shift in perspective away from the positions involved in the movement chain and towards the internal properties of the moving element, specifically case. It therefore offers an account of the impossibility of hyperraising that is able to dispense with reference to A- vs. Ā-positions as such. In this sense, the Activity Condition is not position-based, but case-based.

Since its inception, the Activity Condition has been routinely employed in accounts of impossible instances of hyperraising, sometimes in slightly varying forms (e.g., Martins & Nunes 2005; 2010; Ferreira 2009; Nunes 2010; Zeller 2006; Carstens 2010; 2011; Diercks 2012; Halpert 2015). Interestingly, even several proposals that do not adopt the Activity Condition as such still invoke case in the account of the impossibility of hyperraising. For example, McGinnis (1998: 36, 60) proposes that case checking prevents subsequent movement to satisfy the EPP; and Bejar & Massam (1999: 68) and Nevins (2005: 291) propose that a DP cannot receive case more than once (also see Carstens 2010: 53).

Furthermore, there are approaches that do not directly stipulate that case assignment bleeds A-movement, but that still relate the possibility of A-movement to considerations of case indirectly. For example, Obata (2010) and Obata & Epstein (2011) develop an account in which case being assigned within a phase has the effect that a copy of that DP at the edge of this phase lacks ϕ-features, which renders it invisible to a higher A-probe. Safir (to appear) proposes that DPs in certain positions must get “insulated” to avoid double case assignment, after which they can no longer move to A-positions. Both approaches invoke an incompatibility between the moving element and the attracting head. Because this incompatibility is ultimately grounded in case assignment to the moving element, it is natural to group these accounts with case-based approaches for the purposes of the broad dichotomy of interest here.

Despite this fundamental analytical difference between the two families of accounts, it is difficult to distinguish between them empirically because positional and case-related properties are largely confounded with each other in English: Ā-movement does not feed case assignment and targets a structurally high position (Spec,CP), whereas A-movement does feed case assignment and targets a lower (i.e., TP-internal) position. It is therefore an open question whether the locality difference that exists between them is due to the difference in case or to the difference in landing site. In order to tease apart the effects of

² Note that the Activity Condition goes beyond a prohibition against a single DP receiving more than one case. As it turns out, A-movement out of a finite clause is also impossible if it does not land in a position in which case is assigned, e.g., the subject position of a nonfinite clause, as in (i):

(i) Lasnik & Boeckx (2006: 118); Nevins (2005: 292)
   a. *Mary’s belief [John, to be likely [t₁ will win]]
   b. *It is certain [Rhoda, to be likely [t₁ is intelligent]].

A simple ban on DPs moving through two case positions would not exclude (i). The Activity Condition, on the other hand, does exclude the sentences in (i) because A-movement of a case-marked DP is excluded regardless of whether such movement lands in a position in which case is assigned or not.
case and position, it would be necessary to manipulate one factor while holding the other constant. This is largely impossible in English.

In this paper, I present novel evidence from Hindi-Urdu (henceforth Hindi) that disentangles the effects of position and case and thereby allows us to subject the two lines of analysis to empirical scrutiny. I argue that this evidence favors a position-based account of hyperraising over a case-based one. The gist of the argument is as follows: Movement in Hindi manifests in two varieties, one that exhibits A-properties and one that exhibits Ā-properties. The locality of these two movement types is identical to their English counterparts: Ā-movement may leave finite as well as nonfinite clauses, whereas A-movement may only leave nonfinite clauses (section 2). This suggests that Hindi and English should receive a uniform account. I then argue that the locality difference between A- and Ā-movement in Hindi cannot be attributed to case because all crossclausal movement in Hindi applies to already case-marked elements (section 3). I then show that the positional properties of A- and Ā-movement in Hindi are identical to those in English (section 4), which enables a position-based account to extend to Hindi without further ado and hence results in a uniform account of English and Hindi. Hindi thus provides evidence that there are instances of illicit A-movement out of finite clause, which requires reference to positions and which is not amenable to a case-based account. Section 5 then considers languages that do allow hyperraising and argues that they provide additional evidence for this central conclusion.

The conclusion that the Hindi pattern requires a position-based account has a number of broader consequences. First, the Hindi evidence indicates that when case and positions part ways, locality correlates with positions, not case. Second, the need for a position-based account for Hindi then renders redundant, and hence superfluous, a case-based account of hyperraising for English. The most parsimonious account is therefore one that dispenses with case as a limiting constraint on A-movement in English as well. This conclusion then raises the possibility that case can be eliminated as a constraint on A-movement more generally. Third, the results suggest that the A/Ā-distinction cannot be reduced to case properties (at least not wholesale) because a theory of the locality of A-movement needs to be able to refer to syntactic positions in some way. Finally, the results are consistent with recent efforts in the literature to reduce, or even eliminate, the role of case in syntax.

2 A- and Ā-movement in Hindi

Hindi is an SOV language with very flexible word order. It has been well-established since at least Déprez (1989), Mahajan (1990; 1994), and Gurtu (1992) that scrambling in Hindi is not a uniform phenomenon and that Hindi scrambling can be of (at least) two types (also see Gambhir 1981; Dayal 1994a; and Kidwai 2000 for extensive studies of Hindi scrambling). These types differ in a number of respects, including weak crossover, binding of reciprocal pronouns, and their locality, and in these respects they align with A- and Ā-movement. One caveat is in order here. It is possible to construct configurations in which a caseless DP A-moves out of a finite CP clause and all else equal, the two lines of account make different predictions for such configurations. Examples are provided in (i):

(i) Chomsky (1981: 58); Lasnik & Saito (1992: 192)
   a. *John, seems [\textit{CP} that it is certain [\textit{TP} t, to like ice cream \]].
   b. *John, seems [\textit{CP} that it was told t, [\textit{CP} that Mary is a genius \]].

In both examples in (i), the moving element \textit{John} does not receive case inside the CP clause. The Activity Condition therefore does not rule out A-movement to the matrix subject position. All else equal, one might take (i) as evidence in favor of a position-based account like the Ban on Improper Movement (4). However, in both cases the A-movement step crosses the expletive subject \textit{it}. One may then plausibly attribute their ungrammaticality to Relativized Minimality (Rizzi 1990). If so, the force of this piece of evidence is greatly diminished.

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Ā-movement in English. As is well-known, only A-movement may obviate weak crossover and lead to binding of reciprocal pronouns, while Ā-movement may not (Postal 1971; Wasow 1972). This is illustrated for English in (8) and (9). Facts analogous to those in (8) also hold for A-movement to object position (Lasnik & Saito 1991).

(8)  
A-movement

a. _Weak crossover obviation_

Every girl₁ seems to her₁ mother [₁ to be industrious].

b. _Reciprocal binding_

The two children₁ seem to each other’s₁ parents [₁ to be industrious].

(9)  
Ā-movement

a. _Weak crossover_

*Which girl₁ did her₁ mother scold ₁?*

b. _No reciprocal binding_

*Which two children₁ did each other’s₁ parents scold ₁?*

In Hindi, movement is possible clause-internally, out of nonfinite clauses, and out of finite clauses, but it exhibits different properties in these configurations, which align with the contrast between A- and Ā-movement in (8) and (9).

A note on the terminology: The relevant movement in Hindi is generally optional in the sense that a version of the sentence without movement is also grammatical. While the term “scrambling” is common for such optional movement, it carries a number of connotations, e.g., that this movement lands in a structurally low position, akin to object shift. I will present evidence in section 4 that at least Ā-movement in Hindi lands in Spec,CP. In hopes of avoiding inadequate connotations, I will refrain from using the label “scrambling” here and simply refer to movement that exhibits the properties in (8) as “A-movement” and movement that patterns like (9) as “Ā-movement.” Nothing hinges on this choice.

I will discuss the properties of this movement in the three configurations in turn: clause-internal movement, movement out of nonfinite clauses, and movement out of finite clauses.

2.1 Clause-internal movement

Clause-internal movement in Hindi exhibits A-properties (Déprez 1989; Mahajan 1990; 1994; Gurtu 1992; Kidwai 2000). This is illustrated with weak crossover obviation in (10), where movement of the object _har bacce-ko_ ‘every child-acc’ over the subject _us-kii māā-ne_ ‘his/her mother-ERG’ enables binding of a subject-internal pronoun.⁴

(10)  
Weak crossover obviation

a. [**us-kii**₁/*₂ māā-ne ] har  bacce-ko₂ dekhaa.

s/he-GEN mother-ERG every child-ACC saw

‘His/her₁ mother saw every child₂.’

_(bound reading impossible)_

b. har  bacce-ko₁ [**us-kii**₁ māā-ne ] ₁ dekhaa.

every child-ACC s/he-GEN mother-ERG saw

‘For every child x, x’s mother saw x.’

⁴ All Hindi data not attributed otherwise are due to my consultants. The transcriptions have been unified across sources.
The same conclusion can be reached on the basis of reciprocal binding (Bhatt & Dayal 2007). The reciprocal pronoun ek-duusre ‘each other’ requires a c-commanding antecedent in an A-position. Clause-internal movement may provide such an antecedent (11).

(11) Reciprocal binding
   a. *[ek-duusre-kii₂ bahinō-ne₂] [raam aur prataap]-ko₁ maaraa. Each other’s sisters-ERG Ram and Pratap -ACC hit ‘Each other’s sisters hit [Ram and Pratap],’
   b. [raam aur prataap]-ko₁ [ek-duusre-kii₁ bahinō-ne ] t₁ maaraa. Ram and Pratap -ACC each other’s sisters-ERG hit ‘[Ram and Pratap], each other’s sisters hit t₁.’

Clause-internal movement can thus be A-movement in Hindi.⁵⁶ Whether it can also be Ā-movement is difficult to determine with certainty, but I will assume that it can be. First, as a reviewer mentions, clause-internal scrambling can reconstruct for variable binding:

(12) [ek-duusre-ke₂ bhaaiyō-ko₁] unhō-ne₂ t₁ maaraa. each other’s brothers-ACC they-ERG hit ‘They hit each other’s brothers.’

If A-movement resists such reconstruction, then (12) provides evidence that clause-internal movement may also be Ā-movement in Hindi (see Dayal 1994a: 241 and Bhatt 2003: 12). Interpreting (12) is made more difficult by mounting evidence that A-movement may in principle reconstruct (Barss 1986; Romero 1997; Fox 2000; Sportiche 2006; Lebeaux 2009). If so, then (12) is uninformative as to the movement type involved.

One other difference between A- and Ā-movement is that only Ā-movement is able to license parasitic gaps (Engdahl 1983). It is difficult to identify parasitic gaps in Hindi due to its free argument drop, but Manetta (2016) presents evidence in favor of parasitic gaps in Hindi, and she furthermore shows that such parasitic gaps can be licensed by clause-internal movement. If this is the case, then clause-internal movement not only exhibits

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⁵ The sentences in (10b) and (11b) are not passivized, i.e., the external argument does not lose its subject status. In other words, A-movement in Hindi does not advance the moved element to subjecthood (see fn. 6). There is, of course, no general requirement that A-movement leads to subjecthood even in English (see, e.g., the subject-to-object raising example in (3a)).

⁶ Mahajan (1990; 1994) discusses a third A-diagnostic in Hindi, which is based on binding of the reflexive pronoun apnaa. He provides the example in (i):

(i) Mahajan (1990: 33)
   ?mohan-ko₁ [apne, baccō-ne ] t₁ ghar se nikaal diyaan.
   Mohan-ACC self’s children-ERG house from throw gave
   ‘Mohan was thrown out of the house by her children.’

Reflexive binding thus converges on the same conclusion. However, as Dayal (1994a) has pointed out, many speakers do not accept sentences like (i), albeit for orthogonal reasons. For many speakers of Hindi, the reflexive pronoun is subject-oriented (see Bhatia & Poole 2016 for recent discussion and analysis). For example, in ditransitive constructions like (ii), the reflexive can only be bound by the subject raam-ne ‘Ram-ERG’ for these speakers, not by the indirect object mohan-ko ‘Mohan-DAT’:

(ii) Dayal (1994a: 250)
   raam-ne₁ mohan-ko₂ [apnii₁/*₂ kitaab ] dīi.
   Ram-ERG Mohan-DAT self’s book give.PFV.FSG
   ‘Ram, gave self’sbook to Mohan.’

The fact that the reflexive is subject-oriented for many speakers entails that movement of an object does not feed reflexive binding even if this movement is A-movement. For these speakers, reflexive binding is simply not a viable diagnostic for A-movement and I will put it aside here for this reason.
A-properties, but Ā-properties as well. Following the line of analysis in Mahajan (1990; 1994), I will assume that clause-internal movement in Hindi can in principle be either A- or Ā-movement; that is, it can target an A- or an Ā-position. On this account, examples like (10b) and (11b) are grammatical because this movement allows an A-movement parse, and hence no crossover violation results. Parasitic gaps are allowed because the movement dependency also allows an Ā-movement parse.

### 2.2 Movement out of nonfinite clauses

Movement out of nonfinite clauses has received less designated attention in the literature on Hindi, but seems to exhibit the same properties as clause-internal movement. It is not subject to weak crossover (13) (Keine 2016; to appear), and it may lead to binding of reciprocal pronouns (14). This makes it clear that this movement can be A-movement, and that nonfinite clauses are transparent for A-movement out of them. For notational convenience, I will label nonfinite clauses in Hindi as TPs, a claim that will be justified in section 4.1.

(13) **Weak crossover obviation**

a. \[ \text{[us-kii}_{1/2} \text{ māā-ne } ] [_{tp} \text{ har bacce-k}_{2} \text{ dekhnaa} ] \text{ caahaa.} \]

s/he-GEN mother-ERG every child-ACC see.INF wanted

‘His/her \text{ mother wanted to see every child.}’

* (bound reading impossible)

b. \[ \text{ har bacce-k}_{1} \text{ [us-kii} \text{ māā-ne } ] [_{tp} \text{ t}_{1} \text{ dekhnaa} ] \text{ caahaa.} \]

every child-ACC s/he-GEN mother-ERG see.INF wanted

‘For every child x, x’s mother wanted to see x.’

(14) **Reciprocal binding**

a. *\[ \text{[ ek-duusre-k}_{1} \text{ bahinō-ne } ] [_{tp} \text{ [raam aur prataap] -k}_{1} \text{ maarnaa} ] \]

each other’s sisters-ERG Ram and Pratap -ACC hit.INF wanted

‘*Each other’s sisters wanted to hit [Ram and Pratap].’

b. \[ \text{[raam aur prataap] -k}_{1} \text{ [ek-duusre-k}_{1} \text{ bahinō-ne } ] [_{tp} \text{ t}_{1} \text{ maarnaa} ] \]

Ram and Pratap -ACC each other’s sisters-ERG hit.INF wanted

‘[Ram and Pratap], each other’s sisters wanted to hit t.1’

### 2.3 Movement out of finite clauses

Movement out of a finite clause contrasts with the configurations presented so far in that it does not display any A-properties (Déprez 1989; Mahajan 1990; 1994; Gurtu 1992). The example in (15) demonstrates that extraction out of a finite clause is possible, but it does not enable binding of the subject-internal pronoun us-kii ‘his/her’ by the moved object har bacce-ko ‘every child-ACC’. Unlike movement out of nonfinite clauses, then, extraction out of a finite clause is subject to weak crossover and hence invariably Ā-movement. I will notate finite clauses as CPs, as will be justified in section 4.1.

(15) **Weak crossover**

\[ \text{ har bacce-k}_{1} \text{ [us-kii}_{2/1} \text{ māā-ne } ] \text{ socaa [_{cp} \text{ ki raam-ne } t_{1} \text{ dekhaa }]}. \]

every child-ACC s/he-GEN mother-ERG thought that Ram-ACC saw

‘His/her \text{ mother thought that Ram had seen every child.}’

* (bound reading impossible)
Reciprocal binding supports this conclusion. In (16), movement of \textit{raam aur prataap-ko} ‘Ram and Pratap-ACC’ cannot result in binding of the reciprocal. This also implies that the movement is necessarily Ā-movement.

\begin{equation}
\text{(16) No reciprocal binding}
\end{equation}

\textit{\texttt{* [raam aur prataap]-ko, [ek-duusre-kii, bahinö-ne ] socaa [_{CP} ki Ram and Pratap -ACC each other’s sisters-ERG thought that sangiitaa-ne t₁ maaraa ].}}

\text{Sangita-ERG hit}

\text{Intended: ‘[Ram and Pratap], each other’s, sisters thought that Sangita had hit t₁.’}

In sum, the locality facts in Hindi are identical to English:⁷

\begin{equation}
\text{(17) In Hindi, nonfinite clauses allow A-movement and Ā-movement out of them. Finite clauses allow Ā-movement out of them, but block A-movement.}
\end{equation}

A unified account of Hindi and English is therefore highly desirable. The question is whether a case-based or a position-based approach affords such a unified account. To address this question, the next two sections will investigate the case and positional properties of A- and Ā-movement in Hindi. On a case-based account, (17) should be correlated with the distribution of case, whereas a position-based account predicts that (17) should mirror the positions that are involved. The next section will investigate the distribution of case in the relevant constructions and argue that it does not correlate with the locality facts. A case-based account therefore fails to extend to Hindi and hence misses a generalization. Section 4 will then argue that positional properties do correlate with the locality facts, and that this provides the desired unification with English.

\section{3 The distribution of case}

This section presents evidence that clearly indicates that crossclausal movement in Hindi never feeds case assignment. In other words, I claim that movement out of finite as well as nonfinite clauses invariably applies to DPs whose case feature is already valued, a crucial difference to the situation in English. The evidence comes from case connectivity effects and possessor extraction.

\subsection{3.1 Case connectivity}

Crossclausal movement in Hindi can affect elements with a variety of different structural or lexical cases, but such movement must preserve the case of the moving element. This is illustrated in (18). As (18a) shows, a proper name in direct object position must be marked with the accusative case marker -\texttt{ko}; other cases are impossible. Significantly, this case marking must be preserved whether the element is moved out of a nonfinite clause (18b) or out of a finite clause (18c).

\begin{equation}
\text{(18) a. siitaa-ne raam-{(ko/*se/*kaa/*∅)} dekhaa.}
\end{equation}

\text{Sita-ERG Ram-{ACC/*INSTR/*GEN/*∅} saw}

\text{‘Sita saw Ram.’}

\begin{equation}
\text{b. Movement out of nonfinite clause}
\end{equation}

\text{raam-{(ko/*se/*kaa/*∅)}₁ siitaa-ne [_{TP} t₁ dekhnaa] caahaa.}

\text{Ram-{ACC/*INSTR/*GEN/*∅} Sita-ERG see-INF wanted}

\text{‘Sita wanted to see Ram.’}

⁷ Note that I have not explicitly shown Ā-movement out of a nonfinite clause, because the relevant configuration is fairly complex. One relevant example is provided in (40c) below.
c. Movement out of finite clause

\[ \text{raam-}\{\text{ko/}^{*}\text{se/}^{*}\text{kaa/}^{*}\emptyset\}_1 \text{ siita-ne socaa } [_{\text{cp}} \text{ki prataap-ne } t_1 \]

\[ \text{Ram-}\{\text{ACC/}^{*}\text{INSTR/}^{*}\text{GEN/}^{*}\emptyset\} \text{ Sita-ERG thought that Pratap-ERG}
\]

dekhaa ]

saw

‘Sita thought that Pratap saw Ram.’

The same holds for lexical cases like the instrumental -\text{se}. In (19), the verb \text{mil} ‘meet’ assigns instrumental case to its object and this case has to be preserved under crossclausal movement.\(^8\)

(19) a. prataap siita-\{se/\text{ko/}^{*}\text{kaa/}^{*}\emptyset\}_1 \text{ milaa hai.}

Pratap Sita-\{\text{INSTR/}^{*}\text{ACC/}^{*}\text{GEN/}^{*}\emptyset\} \text{ met AUX}

‘Pratap has met Sita.’

b. siita-\{se/\text{ko/}^{*}\text{kaa/}^{*}\emptyset\}_1 \text{ prataap-ne } [_{t_1} \text{ milnaa } ] \text{ caahaa.}

Sita-\{\text{INSTR/}^{*}\text{ACC/}^{*}\text{GEN/}^{*}\emptyset\} \text{ Pratap-ERG meet.INF wanted}

‘Pratap wanted to meet Sita.’

c. siita-\{se/\text{ko/}^{*}\text{kaa/}^{*}\emptyset\}_1 \text{ raam-ne socaa } [_{cp} \text{ ki prataap } t_1 \text{ milaa ] }

Sita-\{\text{INSTR/}^{*}\text{ACC/}^{*}\text{GEN/}^{*}\emptyset\} \text{ Ram-ERG thought that Pratap met}

hai ]

AUX

‘Ram thought that Pratap met Sita.’

This restriction generalizes to other cases. Furthermore, all case connectivity facts discussed here also hold if the movement is unambiguously A-movement. Two examples are provided in (20), where A-movement out of a nonfinite clause takes place (as evidenced by reciprocal binding) and again case connectivity is obligatory. This holds for structural as well as lexical cases.

(20) Case connectivity with A-movement out of nonfinite clause

a. \[ \text{[raam aur prataap]-}\{\text{ko/}^{*}\text{se/}^{*}\text{kaa/}^{*}\emptyset\}_1 \text{ [ ek-duusre-kii } \]

\[ \text{[Ram and Pratap ]-}\{\text{ACC/}^{*}\text{INSTR/}^{*}\text{GEN/}^{*}\emptyset\} \text{ each other’s}
\]

bahnī-ne ]\[_{t_1} \text{ dekhnaa ] caahaa.}

sisters-ERG see.INF want

‘[Ram and Pratap], each other’s sisters wanted to see \( t_1 \).’

b. \[ \text{[raam aur prataap]-}\{\text{se/}^{*}\text{ko/}^{*}\text{kaa/}^{*}\emptyset\}_1 \text{ [ ek-duusre-kii } \text{ bahnī-nee ]}

\[ \text{[Ram and Pratap ]-}\{\text{INSTR/}^{*}\text{ACC/}^{*}\text{GEN/}^{*}\emptyset\} \text{ each other’s sisters-ERG}
\]

\[ _{t_1} \text{ milnaa ] caahaa.}

meet.INF wanted

‘[Ram and Pratap], each other’s sisters wanted to meet \( t_1 \).’

Case connectivity provides evidence that the case of the moving element is assigned in the embedded clause, i.e., before crossclausal movement takes place. The fact that case connectivity is obligatory then implies that case must be assigned before such movement takes place. This conclusion holds for extraction out of both finite and nonfinite clauses and for both A- and A-movement.

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\(^8\) The accusative marker -\text{ko} is marginally possible in (19) under the reading ‘Sita found Pratap’. The possibility of -\text{ko} is not affected by movement, i.e., case connectivity holds in this case as well.
3.2 Possessor movement

Strong independent support for the conclusion in the preceding section comes from left-branch extraction of possessors out of their host DPs. Such movement is possible in Hindi, and it may be A- or Ā-movement, but it is subject to the locality constraints demonstrated in section 2, as (21) and (22) show. (21) demonstrates that a possessor may be A-extracted out of a nonfinite clause, illustrated with weak crossover obviation in (21a) and with reciprocal binding in (21b).

(21) A-movement of possessor out of nonfinite clause
a. har laṛke-kaar, [us-kii₁ bahin-ne ]_[tp₁ [dp₁ t₁ khat ] paṛhnaa ] caahaa. every boy-GEN s/he-GEN sister-ERG letter read.INF wanted
   ‘For every boy \( x \), \( x \)’s sister wanted to read \( x \)’s letter.’

b. [raam aur prataap]₁-[ek-duusre-kii₁ bahinõ-ne ]_[tp₁ [dp₁ t₁ khat ] ] [Ram and Pratap]-GEN each other’s sisters-ERG letters paṛhne ] caahe. read.INF wanted
   ‘[Ram and Pratap], each other’s sisters wanted to read their letters.’

Possessor extraction out of a finite clause is possible, but it must be Ā-movement, as shown in (22). It is subject to weak crossover (22a) and may not lead to reciprocal binding (22b).

(22) No A-movement of possessor out of finite clause
a. har laṛke-kaar, [us-kii₂/₁ bahin-ne ] kahaa [cp ki raam-ne [dp₁ t₁ khat ] ] every boy-GEN s/he-GEN sister-ERG said that Ram-ERG letter paṛhaa ). read
   ‘His/her \( 2/₁ \) sister said that Ram read every boy’s letter.’

   (bound reading impossible)

b. * [raam aur prataap]₁-[ek-duusre-kii₁ bahinõ-ne ] socaa [cp \( ki \) [Ram and Pratap]-GEN each other’s sisters-ERG thought that monaa-ne [dp₁ t₁ khat ] paṛhe ].
   Mona-ERG letters read
   Intended: ‘[Ram and Pratap], each other’s sister thought that Mona read their letters.’

Possessor extraction thus patterns exactly like extraction of verbal arguments with respect to the locality of A- and Ā-movement. Importantly, possessor movement exhibits obligatory case connectivity: moved possessors must retain their genitive case, whether they are moved out of nonfinite clauses (23a) or finite clauses (23b):

(23) Genitive case connectivity: Nonfinite clause
a. Genitive case connectivity: Nonfinite clause
siitaa-(kaa/*ko/*se/*∅)₁ raam-ne [tp₁ [dp₁ t₁ khat ] paṛhnaa ] caahaa. Sita-{GEN/*ACC/*INSTR/*∅} Ram-ERG letter read.INF wanted
   ‘Ram wanted to read Sita’s letter.’

b. Genitive case connectivity: Finite clause
siitaa-(kaa/*ko/*se/*∅)₁ raam-ne socaa [cp ki prataap [dp₁ t₁ khat ] ] Sita-{GEN/*ACC/*INSTR/*∅} Ram-ERG thought that Pratap letter paṛhtaa hai ).
   read AUX
   ‘Ram thought that Pratap reads Sita’s letter.’
As Bhatt (2005) emphasizes, genitive case in Hindi is only assigned by nominal structure. It therefore must be assigned to the possessor in (23) inside the container DP in the lower clause, i.e., before the left-branch extraction—and hence crossclausal movement—takes place.

Further evidence for this conclusion comes from genitive agreement. In Hindi, the morphological form of the genitive marker agrees in ϕ-features with the head noun of the container DP. This is illustrated in (24), using the two nearly synonymous words khat ‘letter’ and ciṭṭhii ‘letter’. The two words differ in their gender: while khat is masculine, ciṭṭhii is feminine. In (24a), the head noun is khat and the genitive marker on the possessor consequently bears the masculine singular form -kaa. In (24b), by contrast, the head noun is ciṭṭhii and the form of the genitive marker is correspondingly the feminine singular form -kii.

(24) **Genitive agreement**

a. raam [_{dp} siitaa-{kaa/*kii} khat ] paṛhtaa thaa.
   Ram Sita-{GEN.M.SG/*GEN.F.SG} letter.M reads AUX
   ‘Ram reads Sita’s letter.’

b. raam [_{dp} siitaa-{*kaa/kii} ciṭṭhii ] paṛhtaa thaa.
   Ram Sita-{*GEN.M.SG/GEN.F.SG} letter.F reads AUX
   ‘Ram reads Sita’s letter.’

Crucially, this agreement persists under crossclausal movement of the possessor, irrespective of whether the movement leaves a nonfinite clause (25) or a finite clause (26):

(25) **Genitive agreement: Movement out of nonfinite clauses**

a. siitaa-{kaa/*kii} raam [_{tp} t₁ khat ] parhnaa ] caahtaa hai.
   Sita-{GEN.M.SG/*GEN.F.SG} Ram letter.M read.INF wants AUX
   ‘Ram wants to read Sita’s letter.’

b. siitaa-{*kaa/kii} raam [_{tp} t₁ ciṭṭhii ] parhnaa ] caahtaa hai.
   Sita-{*GEN.M.SG/GEN.F.SG} Ram letter.F read.INF wants AUX
   ‘Ram wants to read Sita’s letter.’

(26) **Genitive agreement: Movement out of finite clauses**

a. siitaa-{kaa/*kii} raam soctaa hai [_{cp} ki prataap [_{tp} t₁ khat ]]
   Sita-{GEN.M.SG/*GEN.F.SG} Ram thinks AUX that Pratap letter.M
   reads AUX
   ‘Ram thinks that Pratap reads Sita’s letter.’

b. siitaa-{*kaa/kii} raam soctaa hai [_{cp} ki prataap [_{tp} t₁ ciṭṭhii ]]
   Sita-{*GEN.M.SG/GEN.F.SG} Ram thinks AUX that Pratap letter.F
   reads AUX
   ‘Ram thinks that Pratap reads Sita’s letter.’

Obligatory genitive agreement also obtains for possessor movement that is unambiguously A-movement. For agreement between the genitive marker and the head of the container DP (i.e., khat or ciṭṭhii in (25) and (26)) to be established, genitive case must be assigned inside the container DP, hence before left-branch extraction and crossclausal movement take place. The fact that agreement is obligatory implies that genitive case assignment

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9 There are, for instance, no verbs that take genitive objects, etc.
in fact must take place in the container DP, and hence before movement. This holds for movement out of finite and nonfinite clauses alike.

### 3.3 The challenge for case-based accounts

The previous sections have presented converging evidence for the conclusion in (27):

\[(27)\quad \text{All crossclausal movement (out of both finite and nonfinite clauses) in Hindi applies to already case-marked DPs. In other words, such movement never feeds case assignment in the higher clause.}\]

Combining the locality facts discussed in section 2 with the generalization in (27) yields the picture in (28): Both A- and Ā-movement are possible out of nonfinite clauses, but only Ā-movement may leave a finite clause, and in both configurations, case is obligatorily assigned to the moving element before the crossclausal extraction step takes place.

\[(28)\quad \begin{align*}
\text{a.} & \quad \sqrt{A}/\sqrt{\bar{A}} \\
& \quad \ldots [\text{nonfinite clause} \ldots \text{DP} \ldots] \\
& \quad \text{case} \\
\text{b.} & \quad \ast A/\sqrt{A} \\
& \quad \ldots [\text{finite clause} \ldots \text{DP} \ldots] \\
& \quad \text{case}
\end{align*}\]

This state of affairs is problematic for an account that attempts to attribute the availability of A-movement to the Activity Condition or to considerations of case more generally. The Activity Condition (6) prohibits A-movement of a DP after the DP has been assigned case. This would incorrectly preclude A-movement in both (28a) and (28b) and hence predict that all crossclausal movement in Hindi must be Ā-movement. The Activity Condition is thus overly restrictive.

One might then explore the view that the Activity Condition for some reason does not apply to Hindi, perhaps along the lines of recent work on Bantu where it has been argued that case never deactivates a DP or that the relevant languages simply lack case altogether (see Carstens 2010; 2011; Obata 2010; Obata & Epstein 2011; Diercks 2012; Carstens & Diercks 2013). But such an account would be too unrestrictive for Hindi, as it would leave a DP active for A-processes indefinitely. It is then the ban on A-movement out of finite clauses that would remain unaccounted for (precisely the configuration that is grammatical in Bantu).

In general, because the case properties of the moving element are identical in (28a) and (28b), considerations of case fail to distinguish between the two configurations. The observation that A-movement is possible in (28a) but not in (28b) therefore cannot be attributed to case. This indicates that it is some other factor that regulates the possibility of A-movement in the two configurations.

Before moving on to position-based accounts of hyperraising, it is instructive to consider a more abstract version of the Activity Condition, according to which Activity of a DP is determined on the basis of “abstract Case”. For instance, dative subjects in Icelandic undergo A-movement to Spec,TP despite their lexical-dative case marking (see,
e.g., Sigurðsson 2004 and references there). While Nevins (2005) takes this as evidence against the Activity Condition, another line of response, explored by Bejar & Massam (1999), Chomsky (2000; 2001), Bošković (2002), and Richards (2008), among others, is that dative subjects additionally bear an abstract structural Case feature and are correspondingly assigned nominative Case in Spec,TP. The apparent violation of the Activity Condition is then resolved. Let us consider how such an account fares with respect to the Hindi data discussed here.

One general concern about such an approach is that it severs the distribution of abstract Case from any morphological manifestation of case. Recall that possessors may be A-moved out of their host DPs, as in (21). On the abstract-Case account, this fact would entail that a possessor’s abstract Case does not have to be assigned within the host DP, but that it can be assigned in a higher clause, hence after possessor extraction has taken place. The evidence in sections 3.1 and 3.2—which argued that case in Hindi is invariably assigned before cross-clausal movement takes place—would then entail that the distribution of abstract Case is unrelated to that of morphological case. This would remove much of the predictive content of a case-based account. Unless there is some independent way of diagnosing the distribution of abstract Case, abstract Case conceived of in this way runs the risk of becoming an analytical diacritic whose sole purpose is to constrain the effects of the Activity Condition.

Second, the Hindi data also present an interesting empirical challenge for the abstract-Case account. Let us suppose, following the logic of the abstract-Case account, that possessor A-movement out of a nonfinite clauses such as in (21) indicates that abstract-Case assignment to the possessor can indeed be deferred until it reaches the higher clause. A problem arises because possessors are, of course, optional in Hindi, i.e., DPs may or may not contain a possessor DP. This in turn means that the purported abstract-Case assigner in the higher clause in (21) must be optional as well, because accounts involving abstract Case typically invoke the Inverse Case Filter, the requirement that a case feature on a functional head be assigned if it is present (e.g., Bošković 2002)—a requirement that may itself follow from the general need of uninterpretable features to be deleted by the end of the derivation (Richards 2008). But if the presence of the abstract-Case assigner is optional, this opens up the structural possibility in (29), which involves embedding of a finite clause. Here the possessor DP (Poss-DP) does not receive abstract Case in its containing DP and the embedded finite clause does not contain an abstract-Case assigner for it either; rather, the Case assigner is located in the higher finite clause (indicated as ‘H’ in (29)). In this case, the possessor’s abstract-Case feature remains unvalued until it enters the matrix clause. As far as Activity is concerned, then, A-movement into the matrix clause should be possible in (29). However, as we have seen on the basis of (22), this is not the case: only Ā-movement out of a finite clause is allowed.

(29) *Illicit A-movement out of finite clause conforming to Activity Condition

\[
\text{A-movement}
\]

\[
\text{abstract-Case assignment}
\]
The general problem here is that the very mechanism that allows for a delay in valuing a DP’s abstract Case if the embedded clause is nonfinite, hence allowing A-movement of possessors out of nonfinite clauses (as in (21)), would also allow such a delay if the embedded clause is finite, incorrectly allowing for ungrammatical A-movement out of finite clauses (as in (22)). In the absence of a principled explanation for why such a delay is possible in one configuration but not the other, it is hence difficult to see how the locality facts could be derived from abstract Case either. This again points to the conclusion that it must be some factor other than case that underlies the ban on A-movement out of finite clauses (28).

The discussion so far has focused on the Activity Condition, which stipulates a direct link between case and the ability to undergo A-movement. The challenge posed by the Hindi data also applies to approaches that link a DP’s ability to undergo A-movement to its case properties only indirectly. One example which was mentioned in section 1 is Obata (2010) and Obata & Epstein (2011), who develop an account on which case assignment to a DP has the consequence that the copy of that DP at the phase edge is devoid of \( \phi \)-features, which makes it invisible to a higher A-probe. Applied to the structures in (28), this approach does not make the desired cut, again because case assignment should have the same effect in finite and nonfinite clauses.

Another recent approach that ties together A-movement and case indirectly is Safir (to appear). In the context of a novel account of the A/\( \bar{A} \)-distinction, Safir (to appear) proposes a case-based account of scrambling in Japanese. He focuses on the fact that, like in Hindi, local scrambling in Japanese can be A-movement, but scrambling out of finite clauses must be \( \bar{A} \)-movement. His account is based on the assumption that a DP scrambled out of a lower clause must be “insulated” in order to shield it from double case assignment from the matrix \( v \) head. Insulated DPs are then unable to move to A-positions. While Safir (to appear) does not discuss scrambling out of nonfinite clauses, this account does not seem to carry over to the Hindi data presented here, because shielding from matrix \( v \)—and hence insulation—would also be required if the embedded clause is nonfinite. This would block A-movement out of nonfinite clauses as well. The crucial contrast in (28) would therefore remain underived.

In sum, I have argued that the locality contrast between A- and \( \bar{A} \)-movement with respect to finite and nonfinite clauses in Hindi does not correlate with the distribution of case in the language. As such, a case-based account of the locality of A-movement—be it direct or indirect—does not generalize to the Hindi facts. Note that this conclusion of course does not, in and of itself, invalidate case-based accounts of hyperraising in English. But it does show that there are instances of A-movement that display the same locality as in English—hence suggesting a unified treatment—, but which nonetheless fall outside the scope of a case-based approach. This indicates that a generalization is being missed on such an account.

The next section will argue that a position-based account does not encounter similar challenges to a case-based and that it makes available a principled account of the Hindi locality facts. A position-based account furthermore has the attractive consequence that it affords a unified analysis of Hindi and English. As such, it provides an explanation for why the locality properties of A- and \( \bar{A} \)-movement are identical.

4 Positional properties of Hindi movement

To assess the validity of a position-based account of the ban on A-movement out of a finite clause in Hindi, I will first investigate the structures of finite and nonfinite clauses and then turn to the landing sites targeted by A- and \( \bar{A} \)-movement. This investigation will lead

\[\text{Also see McFadden (2004) for a more general critique of abstract Case.}\]
to the conclusion that the positions involved in A- and Ā-movement in Hindi mirror the state of affairs in English.

### 4.1 The size of embedded clauses

There is good evidence that in Hindi nonfinite clauses are structurally smaller than finite clauses in that finite clauses are CPs whereas nonfinite clauses lack a CP layer, and this is indeed a common assumption in the relevant literature (see, e.g., Dayal 1996; Bhatt 2005; Chandra 2007; and Keine to appear). First, finite embedded clauses may contain the complementizer *ki* (30), but nonfinite clauses may not (31). Hindi has no equivalent of the English nonfinite complementizer *for*.

(30)  
\[ \text{siitaa soc\text{\text{\text{}ii hai}} (ki) raam-ne prataap-ko dekhaa }. \]

Sita think AUX that Ram-ERG Pratap-ACC saw
\[ \text{‘Sita thinks that Ram saw Pratap.’} \]

(31)  
\[ \text{siitaa (‘ki) prataap-ko dekhnaa caahtii thii. } \]

Sita that Pratap-ACC see.\text{INF want AUX}
\[ \text{‘Sita wants to see Pratap.’} \]

Second, finite clauses in Hindi provide an interrogative scope position, but nonfinite clauses do not (Mahajan 1990; Dayal 1994b; 1996). In (32), the *wh*-element *kyaa* ‘what’ must take *wh*-scope within the embedded finite clause.\(^{13}\) By contrast, in (33), a *wh*-element inside a nonfinite clause can only take matrix scope, and therefore an embedded-question reading is not available.

(32)  
\[ \text{Dayal (1996: 31) } \]
\[ \text{tum jaante ho (ki) us-ne kyaa kiyaa }. \]

you know AUX that he-ERG what did
\[ \text{‘You know what he did.’} \]

(33)  
\[ \text{Dayal (1996: 23) } \]
\[ \text{tum [ kyaa karnaa ] jaante ho? } \]

you what do.\text{INF know AUX}
\[ \text{‘What do you know to do?’} \]

\[ \text{not: ‘You know what to do.’} \]

On the standard assumption that interrogative scope is associated with C, its obligatory absence in nonfinite clauses like (33) follows straightforwardly on the assumption that these clauses lack a CP projection.

Evidence from the distribution of complementizers and *wh*-scope thus converges on the conclusion in (34). For the sake of concreteness, I will treat nonfinite clauses as TPs, but their exact structural size is not relevant for our present purposes as long as they are structurally smaller than finite clauses and lack a CP layer.\(^{14}\)

(34)  
\[ \text{a. Finite clauses in Hindi are CPs.} \]
\[ \text{b. Nonfinite clauses in Hindi lack a CP layer, i.e., they are TPs.} \]

---

\(^{13}\) Finite clauses are islands for *wh*-scope in Hindi (see Mahajan 1990; 2000; Srivastav 1991; Dayal 1996; 2017; Manetta 2010) and a matrix-question interpretation is consequently impossible in (32).

\(^{14}\) That is, they could potentially also be analyzed as, e.g., vPs, along the lines of restructuring analyses like Wurmbrand (2001).
4.2 The landing sites of A- and Ā-movement

Due to the head-final phrase structure and the optionality of movement in Hindi, determining the landing sites of A- and Ā-movement is difficult. Mahajan (1990) assumes that A- and Ā-movement in Hindi target different positions (L-related and non-L-related, respectively), but for theory-internal reasons. Keine (to appear) is, to my knowledge, the first attempt to provide empirical evidence for the positions involved. His arguments are indirect and based on the size of finite and nonfinite clauses in (34). Keine (to appear) argues that Ā-movement in Hindi lands in Spec,CP, whereas A-movement lands in a TP-internal position. I will present these arguments here and provide novel support for their conclusion.

Let us first consider the landing site of A-movement. Keine (to appear: (27)) presents the example in (35), in which the embedded nonfinite clause is extraposed to the right of the matrix verb in order to demarcate its left edge (see Bhatt & Dayal 2007 for evidence that auxiliaries in Hindi do not move leftward, i.e., all elements following an auxiliary are extraposed). The embedded direct object har larkii-ko ‘every girl-ACC’ undergoes movement over the adjunct us-kii shaadii ke dauraan ‘during her wedding’. Crucially, the moved element is able to bind the pronoun us-kii ‘her’ inside the adjunct from its landing site, making it clear that this movement step is A-movement. The extraposition of the nonfinite clause ensures that har larkii-ko is not extracted out of the nonfinite clause itself: if it were, it would surface to the left of the matrix verb.15 Consequently, the landing site of har larkii-ko in (35) must be inside the nonfinite clause. What (35) shows, then, is that it is possible for A-movement to target a position inside a nonfinite clause. The sentence in (36) provides a parallel example.

(35) A-movement within nonfinite clause
sita-ne caahaa thaa [_{TP} har  larkii-ko,  [ us-kii,  shaadii  ke dauraan ]]
Sita-ERG wanted AUX every girl-ACC s/he-GEN wedding during
'Every girl during her wedding.'

(36) Subject clauses are islands
sita-ne caahaa [_{TP} sab-se,  [ un-ke,  gharõ-mẽ ] t_{1} milnaa ]
Sita-ERG wanted everyone-INSTR they-GEN houses-LOC meet.INF
'Everyone in his house.'

In light of the evidence that nonfinite clauses in Hindi invariably lack a CP layer (see section 4.1), Keine (to appear) concludes from these considerations that Hindi A-movement does not land in Spec,CP (as the nonfinite clauses in (35) and (36) lack this position). Rather, A-movement must target a TP-internal position.

Converging evidence that is not considered by Keine (to appear) comes from nonfinite clauses in subject position. Such clauses are islands for extraction out of them, as shown in (37), where extraction of phal ‘fruit’ out of the subject clause in (37b) creates ungrammaticality.16

(37) Subject clauses are islands
a. sehat  ke-liye [ phal khaanaa ] acchaa hotaah hai.
   health for fruit eat.INF good is AUX
   ‘To eat fruits is good for health.’

15 Bhatt & Dayal (2007) argue that nominal constituents may not extrapose in Hindi.
16 The sentence in (37b) is grammatical under a reading in which sehat ke-liye ‘for health’ modifies the subject clause (‘Eating fruits for health is good.’) Under this reading no extraction has taken place and the grammaticality is expected.
b. *phal, sehat ke-lye [t₁ khaanaa] acchaa hotaa hai.  
fruit health for eat.INF good is AUX  
\(\text{Intended: ‘To eat fruits is good for health.’}\)

Against this background, A-movement within the subject clause (diagnosed again by the absence of weak crossover) is well-formed, as shown by (38) and (39). Because extraction of har larkii-ko ‘every girl-ACC’ and sab-se ‘everyone-INSTR’ out of the nonfinite subject clauses in (38) and (39), respectively, would induce an island violation, the A-movement step in the two structures must target a position inside the nonfinite subject clause.

(38) A-movement within nonfinite subject clause  
\[
\begin{array}{l}
\text{[TP har larkii-ko₁ [us-kii₁, shaadii ke dauraan ]t₁ dekhnaa ]acchii baat hai.}
\text{every girl-ACC s/he-GEN wedding during see.INF good thing is}
\end{array}
\]
‘To see every girl \(x\) during \(x\)’s wedding is a good thing.’

(39)  
\[
\begin{array}{l}
\text{[TP sab-se₁ [un-ke₁ gharõ-mẽ ]t₁ milnaa ]acchaa vicaar hai.}
\text{everyone-INSTR they-GEN houses-LOC meet.INF good idea is}
\end{array}
\]
‘To meet every person \(x\) in \(x\)’s house is a good idea.’

This observation provides clear support for the conclusion that A-movement must be able to land inside a TP clause. As a result, A-movement must target a TP-internal position.

Let us now turn to the landing site of Ā-movement. Keine (to appear) argues that Ā-movement lands in a TP-external position, in direct contrast to A-movement. The argument is based on paradigms like (40). All sentences in (40) involve a double embedding structure in which a finite clause is embedded inside a nonfinite clause that is in turn embedded inside a finite matrix clause. As in (35), the nonfinite clause is extraposed to demarcate its left edge. (40a) is the baseline structure. (40b) is then derived by moving the DP kitaab ‘book’ from the lowermost clause into the intermediate nonfinite clause. As shown, the result is ungrammatical. In (40c), on the other hand, the same DP kitaab is moved into the matrix clause and the resulting sentence is grammatical.

(40) Ā-movement cannot land inside a nonfinite clause  
\[
\begin{array}{l}
\text{a. Base configuration}
\text{[CP māi caahtaa hũu [TP kahnaa [CP ki māi-ne kitaab parh lī lī hai ]]].}
\text{I want AUX say.INF that I-ERG book read take AUX}
\text{‘I want to say that I read the book.’}
\end{array}
\]

\[
\begin{array}{l}
\text{b. No Ā-movement into nonfinite clauses}
\text{*[CP māi caahtaa hũu [TP kitaab₁ kahnaa [CP ki māi-ne t₁ parh lī lī hai ]]].}
\text{I want AUX book say.INF that I-ERG read take AUX}
\end{array}
\]

\[
\begin{array}{l}
\text{c. Ā-movement into finite clauses}
\text{[CP kitaab₁ māi caahtaa hũu [TP kahnaa [CP ki māi-ne t₁ parh lī lī hai ]]].}
\text{book I want AUX say.INF that I-ERG read take AUX}
\end{array}
\]

Keine (to appear) reasons as follows: The movement of kitaab in both (40b) and (40c) proceeds out of a finite clause and hence must be Ā-movement in both cases (given that finite clauses allow only Ā-movement out of them). The ungrammaticality of (40b) then demonstrates that Ā-movement cannot land inside a nonfinite clause. (40c) serves as a control: here kitaab is moved into the highest finite clause and the result is grammatical.
This demonstrates that it is not Ā-movement of kitaab itself that underlies the problem in (40b). Rather, the ungrammaticality of (40b) must be due to the fact that here the Ā-movement lands in a nonfinite clause.

Keine (to appear) proposes that the paradigm in (40) receives a principled explanation on the assumption that Ā-movement targets Spec,CP. Because nonfinite clauses obligatorily lack a CP layer in Hindi (recall (34)), they simply lack the functional structure necessary to provide a landing site for Ā-movement. The otherwise puzzling ungrammaticality of (40b) then follows, as does the contrast to (35) and (36).

I will now present novel evidence that corroborates this conclusion. First, the restriction exemplified by (40) holds more generally, e.g., independently of the case marking of the moving element. (41) shows that the same pattern obtains for overtly case-marked objects like raam-ko ‘Ram-ACC’:

(41)  

   a. **Base configuration**  
       
       \[
       \begin{array}{l}
       \text{[} \text{CP màĩ caahtaa hũũ [} \text{TP tum-se kahnaa [} \text{CP ki siitaa-ne raam-ko}
       
       \text{\quad I want \ AUX \ you-INSTR say.INF that Sita-ERG Ram-ACC}
       
       \text{\quad dekhaa thaa ]].}
       
       \text{\quad saw \ AUX}
       
       \text{\quad 'I want to tell you that Sita saw Ram.'}
       
       \end{array}
       \]

   b. **No Ā-movement into nonfinite clauses**
       
       (i) \*\[
       \begin{array}{l}
       \text{[} \text{CP màĩ caahtaa hũũ [} \text{TP raam-ko, tum-se kahnaa [} \text{CP ki siitaa-ne t,}
       
       \text{\quad I want \ AUX \ Ram-ACC you-INSTR say.INF that Sita-ERG}
       
       \text{\quad dekhaa thaa ]].}
       
       \text{\quad saw \ AUX}
       
       \text{\quad 'I want to say that Sita saw Ram.'}
       
       \end{array}
       \]

       (ii) \*\[
       \begin{array}{l}
       \text{[} \text{CP màĩ caahtaa hũũ [} \text{TP tum-se raam-ko, kahnaa [} \text{CP ki siitaa-ne t,}
       
       \text{\quad I want \ AUX \ you-INSTR Ram-ACC say.INF that Sita-ERG}
       
       \text{\quad dekhaa thaa ]].}
       
       \text{\quad saw \ AUX}
       
       \text{\quad 'I want to tell you that Sita saw Ram.'}
       
       \end{array}
       \]

   c. **Ā-movement into finite clauses**
       
       \[
       \begin{array}{l}
       \text{[} \text{CP raam-ko, màĩ caahtaa hũũ [} \text{TP tum-se kahnaa [} \text{CP ki siitaa-ne t,}
       
       \text{\quad Ram-ACC I want \ AUX \ you-INSTR say.INF that Sita-ERG}
       
       \text{\quad dekhaa thaa ]].}
       
       \text{\quad saw \ AUX}
       
       \text{\quad 'I want to say that Sita saw Ram.'}
       
       \end{array}
       \]

Similarly, (42) shows that the same restriction also holds for movement of locative phrases like dillii-mẽ ‘in Delhi’:

(42)  

   a. \*\[
       \begin{array}{l}
       \text{[} \text{CP màĩ caahtaa hũũ [} \text{TP dillii-mẽ, tum-se kahnaa [} \text{CP ki siitaa-ne t,}
       
       \text{\quad I want \ AUX \ Delhi-LOC you-INSTR say.INF that I live}
       
       \text{\quad Delhi-LOC I want \ AUX \ say.INF that I live}
       
       \text{\quad 'I want to say that I live in Delhi.'}
       
       \end{array}
       \]

   b. \[
       \begin{array}{l}
       \text{[} \text{CP दिल्ली-में, màĩ caahtaa hũũ [} \text{TP kahnaa [} \text{CP ki माई ती रहाता हूँ ]].}
       
       \text{\quad Delhi-LOC I want \ AUX \ say.INF that I live}
       
       \text{\quad 'I want to say that I live in Delhi.'}
       
       \end{array}
       \]

The generality of the restriction is precisely what is expected if it is a manifestation of a general constraint on where Ā-movement may land in Hindi.

Furthermore, there is no general ban against moving into intermediate clauses. If the intermediate clause is finite, hence a CP, Ā-movement into it is well-formed:

17 The surface string in (42a) is marginally acceptable under the interpretation I want to say in Delhi that I live there, that is, if the locative phrase modifies the intermediate clause. This is of course expected as no movement out of the innermost clause takes place in this case.
(43) \[ \text{CP} \; \text{māī} \; \text{soctaa} \; \text{hũũ} \; [\text{CP} \; \text{dillii-mē}_1 \; \text{siitaa-ne} \; \text{kahaa} \; \text{thaa} \; [\text{CP} \; \text{ki} \; \text{vo} \; t_1 \; \text{rahamii} \; \text{hai} \; ]]]. \\
\text{AUX} \\
\text{I think} \; \text{AUX} \; \text{Delhi-LOC Sita-ERG said} \; \text{AUX} \; \text{that she lives} \\
\text{AUX} \\
\text{‘I think that Sita said that she lives in Delhi.’} \\
\]

The contrast between (42) and (43) receives an immediate account if Ā-movement lands in Spec,CP. Subject clauses provide further novel evidence for this conclusion. In (44), a nonfinite subject clause contains a finite complement clause and the embedded object drugs is Ā-extracted out of the finite clause. In light of the fact that subject clauses are islands in Hindi (recall (37)), it follows that the landing site of drugs in (44) must be located inside the nonfinite clause. The ungrammaticality of the resulting structure can be given the same explanation as the ungrammaticality of (40b) above: Ā-movement must land in Spec,CP, a position that nonfinite clauses lack.

(44) ?*\[\text{TP} \; \text{drugs} \_1 \; \text{kahnaa} \; [\text{CP} \; \text{ki} \; \text{raam-ko} \; t_1 \; \text{pasand hāĩ} \; ]]
\text{burii baat hai.} \\
\text{drugs say.INF that Ram-DAT like AUX bad thing is} \\
\text{Intended: ‘To say that Ram likes drugs is bad.’} \\
\]

In sum, these considerations provide strong evidence that Ā-movement in Hindi lands in a position higher than the position targeted by A-movement in that only A-movement targets a position low enough to land in a nonfinite clause:

(45) a. Hindi A-movement lands in a TP-internal position (Spec,TP or lower).
   b. Hindi Ā-movement lands in Spec,CP.

The structural conclusions in (45) make an immediate prediction not noted by Keine (to appear). Recall from the discussion in section 2 that unlike finite clauses, nonfinite clauses do allow A-movement out of them in Hindi. If A-movement lands in a TP-internal position, we expect movement out of a nonfinite clause to be able to land inside another nonfinite clause, in direct contrast to what we saw for movement out of finite clauses in (40b), (41b), and (42a). The paradigm in (46) shows that this expectation is indeed borne out.\(^\text{18}\) This paradigm is analogous to the one in (40), the only relevant difference being that the innermost clause is nonfinite in (46). This nonfinite clause is embedded inside another nonfinite clause, which is itself embedded in a matrix clause. (46a) constitutes the baseline. In (46b), the object daal ‘lentils’ of the innermost finite clause is moved into the intermediate nonfinite clause and the resulting sentence is grammatical. In (46c), daal is moved into the matrix clause and the result is likewise grammatical.

(46) \textbf{A-movement can land inside a nonfinite clause} \\
   a. \textbf{Base configuration} \\
   \[ \text{CP} \; \text{māī} \; \text{cahtaah hũũ} \; [\text{TP} \; \text{phir-se} \; \text{shuruu karnaa} \; [\text{TP} \; \text{daal} \; \text{khaanaa} \; ]]]. \\
   \text{I want AUX again start do.INF lentils eat.INF} \\
   \text{‘I want to start to eat lentils again.’} \\
\]

\(^{18}\) The baseline sentence in (46a) is somewhat degraded to begin with because extraposition of nonfinite clauses is information-structurally marked and (46a) involves extraposition of a nonfinite clause inside another extraposed nonfinite clause. Nonetheless, the speakers I have consulted agree that the movement into the intermediate clause in (46b) is clearly better than the movement in (40b), (41b) and (42a), which is sharply ungrammatical.
b. **Movement into nonfinite clause**

\[
\left[ _{CP} \text{māĩ caahtaa hũũ } \left[ _{TP} \text{daal } \right. \text{phir-se shuruu karnaā } \left[ _{TP} t_1 \text{ khaanaā } \right] \right] \right]
\]

I want AUX lentils again begin do-INF eat-INF

c. **Movement into finite clause**

\[
\left[ _{CP} \text{daal } \left[ _{TP} \text{māĩ caahtaa hũũ } \left[ _{TP} \text{phir-se shuruu karnaā } \left[ _{TP} t_1 \text{ khaanaā } \right] \right] \right] \right]
\]

lentils I want AUX again begin do-INF eat-INF

The crucial contrast is between (40b)/(41b)/(42a) on the one hand and (46b) on the other. The former groups of examples demonstrate that movement out of a finite clause cannot land inside a nonfinite clause; (46b) shows that movement out of a nonfinite clause is not restricted in this way. This contrast is accounted for without further ado on the positional conclusions in (45). Because movement out of a finite clause is invariably Ā-movement, it must target Spec,CP, a position that nonfinite clauses lack. By contrast, movement out of a nonfinite clause may be A-movement and it may hence target a TP-internal position, which nonfinite clauses provide. The contrast between (40b)/(41b)/(42a) and (46b) therefore neatly converges with the conclusions in (45).

Note, incidentally, that a case-based approach does not lend itself to an account of the contrast between (40b)/(41b)/(42a) and (46b). This is because, as discussed in section 3, movement out finite and nonfinite clauses do not differ with respect to case. The differences in the availability of movement into a nonfinite clause in (40b)/(41b) and (46b) therefore cannot be due to case, further supporting the conclusion that the locality facts are conditioned by something other than case (viz. positions).

The conclusion that Ā-movement lands in Spec,CP in Hindi raises an interesting question with respect to the landing site of movement out of a finite clause with respect to the matrix subject.\(^{19}\) In many cases, such movement can land either above or below the subject (Déprez 1989: 134; Mahajan 1990: 38; Bhatt 2003: 18; Dayal 2017: 161), as illustrated in (47):

(47) a. \([ \text{is kitaab-ko } ]_1 \text{siitaaa-ne socaa } [ _{CP} k_i \text{sangiitaa-ne } t_1 \text{parhaa thaa }] \].

\[\text{this book-ACC Sita-ERG thought that Sangita-ERG read AUX} \]

‘This book, Sita thought that Sangita had read.’

b. \(\text{siitaaa-ne } [ \text{is kitaab-ko } ]_1 \text{socaa } [ _{CP} k_i \text{sangiitaa-ne } t_1 \text{parhaa thaa }] \).

\[\text{Sita-ERG this book-ACC thought that Sangita-ERG read AUX} \]

‘This book, Sita thought that Sangita had read.’

Because the movement in (47) leaves a finite clause, it must be an instance of Ā-movement. If Ā-movement lands in Spec,CP, then this poses the question of how it is able to target the position subject in (47b). I would like to suggest that (47b) is produced by movement of \text{is kitaab-ko} ‘this book-ACC’ to Spec,CP—hence above the matrix subject position—, followed by Ā-movement of \text{siitaaa-ne} ‘Sita-ERG’ to a second, outer Spec,CP, as shown in (48).

(48) \([ _{CP} \text{siitaaa-ne}_2 [ _{CP} \text{is kitaab-ko}_1 [ _{TP} t_2 \text{socaa } [ _{CP} \ldots t_1 \ldots ] ] ]]\)

\[\text{Sita-ERG this book-ACC thought} \]

On this view, (47b) involves Ā-movement of both the embedded object and the matrix subject, and hence a more complex syntactic derivation than (47a). Significantly, Bhatt (2003: 18) and Dayal (2017: 167–168) point out that crossclausal movement that lands

\(^{19}\) Thanks to a reviewer for bringing up this question.
below the subject, such as (47b), is usually degraded compared to movement that lands above the subject, and sometimes altogether ungrammatical. This contrast is consistent with the claim that these structures involve a more complicated syntax.

Having thus narrowed down the positions involved in A- and Ā-movement, the next section will show how a position-based account directly extends to Hindi.

### 4.3 A position-based account of A-movement locality in Hindi

Recall from section 2 the crucial locality contrast between finite and nonfinite clauses in Hindi that we are seeking to account for: Finite clauses allow Ā-movement out of them, but block A-movement; nonfinite clauses are transparent to both (see (17)). The previous sections have presented independent evidence that allows us to pinpoint the positions that are involved in the relevant movement dependencies. I argued on the basis of this evidence that (i) finite clauses in Hindi are CPs, whereas nonfinite clauses lack a CP layer, i.e., they are TPs (see (34)), and (ii) A-movement in Hindi lands in a TP-internal position, whereas Ā-movement lands in Spec,CP (see (45)).

Viewed through the lens of the positions involved, the locality facts can now be reformulated as follows: Movement out of a nonfinite (i.e., TP) clause can land in an A-position (i.e., Spec,TP or lower) or in an Ā-position (i.e., Spec,CP), as in (49a); movement out of a

---

20 Evidence that potentially supports this analysis comes from configurations in which the moved element and the matrix subject bear the same case. In such configurations, the contrast is particularly clear (Dayal 2017: 168). In (i), for example, both are marked with ergative case. Both (i.a) and (i.b) have the same surface string. In the structure in (i.a), the Ā-moved DP is sangita-ne, which lands in a position above the matrix subject; in (i.b), the moving DP is siitaa-ne, which lands below the subject. As indicated, only (i.a) is an acceptable parse of this string.

(i) a. sangita-ne, siitaa-ne socaa [ki t₂ is kitaab-ko parhaa thaa].
   Sangita-ERG Sita-ERG thought that this book-ACC read AUX
   ‘Sangita, Sita thought had read the book.’

   b. *sangita-ne, siitaa-ne socaa [ki t₂ is kitaab-ko parhaa thaa].
   Sangita-ERG Sita-ERG thought that this book-ACC read AUX
   Intended: ‘Sita, Sangita thought had read the book.’

The source of this restriction is not well-understood, but the proposal in the main text enables one line of analysis. I would like to suggest that the contrast in (i) is due to a parsing principle that requires that an input string be assigned a well-formed structure that has the fewest applications of optional movements. Such a principle is arguably motivated independently in order to rule out Duke-of-York derivations. Recall that it is not possible in Hindi for the object to bind a pronoun inside the subject in the SOV base order. One must therefore rule out a derivation of an SOV string in which object movement first produces an OSV order (an order that licenses pronominal binding, see (10)), followed by subject movement above the object to achieve a surface SOV order. Because a surface SOV order is compatible with no application of movement, a parsing principle that requires that an input string be assigned the grammatical structure with the fewest applications of optional movements correctly blocks a parse that involves a Duke-of-York derivation.

While (i) does not involve a Duke-of-York derivation, this general parsing principle might also offer a perspective on the contrast between (i.a) and (i.b), but crucially only if the structure for (i.b) is derivationally more complex than that of (i.a), as proposed in the main text. Assume that, as concluded above, Ā-movement lands in Spec,CP in Hindi. Given the surface string in (i), the parse in (i.a) requires the structure in (ii.a), which is produced by Ā-movement of the embedded subject to the matrix Spec,CP, hence above the matrix subject. By contrast, the parse in (i.b) would necessitate the structure in (ii.b), which involves Ā-movement of the embedded subject to the matrix Spec,CP, followed by movement of the matrix subject to a second Spec,CP. As a result, because the parse in (i.b) requires movement of both DPs whereas (ii.a) requires movement of only one, (i.b) is blocked by the availability of the parse in (ii.a). (i.b) is consequently ruled out, as desired:

(ii) a. [CP DP-ERG₃ [DP-ERG ... [CP ... t₁ ... ] ] ]
   [DP-ERG₃ [CP DP-ERG₃ ... [CP ... [CP t₁ ... ] ] ] ]

Crucially, this line of analysis is available only if an Ā-moved DP cannot directly land below the subject (so that (i.b) necessarily requires the more complex derivation in (ii.b)). If Ā-movement has to land in Spec,CP, this requirement is derived. An analysis along these lines also correctly predicts the coexistence of (47a, b), because here the case marking unambiguously identifies the location of the trace. If this account is on the right track, it would seem to support (45b).
finite (i.e., CP) clause may only target an Ā-position (i.e., Spec,CP), but not a TP-internal position, as in (49b). Assuming, as is standard, that extraction out of CP requires movement through the edge of that CP, we obtain:

\[
\text{(49) a. } \begin{array}{c}
\text{CP} \\
\text{TP} \\
\vdots \\
\text{TP} \\
\text{DP} \\
\end{array} \\
\text{b. } \begin{array}{c}
\text{CP} \\
\text{TP} \\
\vdots \\
\text{CP} \\
\text{DP} \\
\text{TP} \\
\text{t} \\
\end{array}
\]

This situation is of course precisely what the Ban on Improper Movement, repeated in (50), predicts. Due to CP being a phase, illicit hyperraising in Hindi would involve movement from Spec,CP to a TP-internal A-position, which is blocked by (50), just as it is in English. By contrast, Ā-extraction out of a CP is possible precisely because such movement lands in Spec,CP of the higher clause. Nonfinite clauses permit A-movement out of them because they lack a CP layer.

\[
\text{(50) Ban on Improper Movement} \\
\text{Movement from Spec,CP must land in Spec,CP. Movement from Spec,CP to a TP-internal A-position is ruled out.}
\]

The improper-movement account for English thus straightforwardly generalizes to Hindi because it is stated in terms of the positions involved and, as we have seen, the positional properties in Hindi mirror those in English. Note also that (50) is directly supported for Hindi by (40), (41), and (42). The locality facts in section 2 are then derived from the positional facts in sections 4.1 and 4.2 in a systematic manner.

Let us now consider the set of facts that were problematic for a case-based account. In particular, we saw in section 3.2 that Hindi allows left-branch extraction of possessors and that such extraction may be A-movement, but only as long as it does not cross a finite clause boundary (in which case it must be Ā-movement; see (21) and (22)). As argued in section 3, because the genitive case of the possessor is invariably assigned within the container DP—hence before crossclausal movement takes place—, an account in terms of case fails to distinguish between the two configurations. (51) illustrates that a position-based account captures this restriction: once a CP is crossed, a possessor DP (Poss-DP) cannot subsequently reach an A-position, irrespective of considerations of case.\(^{21}\)

\[
\text{(51) a. Possible A-extraction of possessor out of nonfinite clause (e.g., (21))} \\
\text{[TP Poss-DP ... [TP ... [DP (Poss-DP) ... ]]]} \\
\text{A} \\
\text{case assigned}
\]

\[
\text{b. Impossible A-extraction of possessor out of finite clause (e.g., (22))} \\
\text{[TP ... [CP Poss-DP [TP ... [DP (Poss-DP) ... ]]]]} \\
\text{A} \\
\text{Ā case assigned}
\]

\(^{21}\) One independent question that arises is why Hindi allows left-branch extraction, but English does not. Given the discussion in the text, it seems unlikely that the prohibition against left-branch extraction in English follows from improper movement. One account compatible with the conclusions reached here is that Hindi nominals lack a DP layer and that this enables left-branch extraction, following Bošković (2008).
Configurations like (51) provide the clearest argument for a position-based account because they demonstrate that it is movement to Spec,CP, not case assignment, that blocks subsequent A-movement.

The crucial property of (50) is that it draws a distinction between different types of positions. As noted in section 1, there are a number of proposals as to how types of positions and (50) can be characterized theoretically, and the matter is still under active investigation. Generally speaking, any characterization that has (50) as a result yields the desired outcome. But it is nonetheless instructive to briefly review some of the analytical options that are consistent with (50).

The classical way of differentiating between A- and Ā-positions for the purposes of (50) is to distinguish between the type of trace left behind by movement into them (May 1979; Chomsky 1981; Müller & Sternefeld 1993). Another possibility is to invoke an ordering relationship between movement into them (Abels 2007; 2009). Yet another possibility is to distinguish them in terms of their structural height (Williams 2003; 2013; Müller 2014a; b). Williams (2003; 2013) develops an intricate theory of locality that derives the condition in (52) as one of its consequences. In Williams’ system, this condition is not stipulated, but derives from a novel way of building syntactic structure. In the interest of space, I will not lay out the framework that gives rise to it here; see Hornstein & Nevins (2005) for an overview.

(52)  **Generalized Ban on Improper Movement** (Williams 2003: 72)

Given a Pollock/Cinque-style clausal structure $X_1 > \ldots > X_n$ (where $X_i$ takes $X_{i+1}$P as its complement), a movement operation that spans a matrix clause and an embedded clause cannot move an element from $X_j$ in the embedded clause to $X_i$ in the matrix, where $X_j > X_i$.

(52) blocks movement from a position $\alpha$ to a position $\beta$ in another clause if $\alpha$ is “higher” in the abstract clausal spine than $\beta$. This is illustrated in (53). For example, movement from Spec,CP is not allowed to land in a projection lower than CP in the clausal spine, i.e., it is blocked from targeting Spec,VP, Spec,vP, or Spec,TP, whereas movement from Spec,TP may target Spec,TP or Spec,CP in a higher clause. On this account, the crucial distinguishing property of A- and Ā-positions is that Ā-positions are structurally higher than A-positions.

(53)  **Effects of the Generalized Ban on Improper Movement** (52)

a. CP

```
  C'    T'  vP  V'  V0  CP  DP ...
   \   \   \   \   \   \   \ 
    x   x   x   x   x   x   x
```

b. CP

```
  C'    T'  vP  V'  V0  TP  DP ...
   \   \   \   \   \   \   \ 
    x   x   x   x   x   x   x
```
The effects of (52) are more stringent than those of the traditional Ban on Improper Movement in (50), which they comprise as a special case.\textsuperscript{22} I will not discuss here the relative merits and challenges of (52), for which see, e.g., Abels (2007), Müller (2014a), and Keine (2016). What matters for our concerns is that (52) likewise generalizes to the Hindi facts because A-movement demonstrably lands in a position lower than CP. Assuming, as before, that extraction out of CP proceeds through Spec,CP, A-movement out of a finite clause would therefore require a movement step that (52) blocks. Again, the positional properties discussed in the previous section immediately entail the locality facts.

One potentially problematic property shared by both the traditional and the Generalized Ban on Improper Movement is that they not only rule out movement from CP to TP, but also movement from CP to $vP$. This restriction is at odds with the widely held view that $vP$ is a phase and thus it deserves consideration.\textsuperscript{23} In recent work, Müller (2014a; b) suggests that it is possible to reconcile the desired locality consequences of these two principles with $vP$ phases if these principles are restricted to criterial movement (in the sense of Rizzi 2006). Müller’s (2014a; b) proposal is couched within a framework in which every phrase is a phase, but this assumption is not crucial. As a result of every phrase being a phase, an element moves successive-cyclically through the specifier of every projection on its way to its criterial position. Müller (2014a; b) proposes that a moving item has a \textit{buffer}, which keeps a record of the projections that this item has traversed. The Generalized Ban on Improper Movement (52) is then implemented as the requirement that an item’s buffer conform to the functional sequence when this item reaches a criterial position. As a result, this account delivers the same empirical effects as (52), but it allows for successive-cyclic movement through clause-internal phase edges. Like Williams’ (2003; 2013) approach, Müller’s (2014a; b) account distinguishes between A- and Ā-positions in terms of their height in the clausal spine. Because this account focuses on the positions involved, it likewise rules out CP-to-TP movement.\textsuperscript{24}

A further possibility might be to characterize the A/Ā-distinction in the domain of interest here in terms of phases. For example, Miyagawa (2010) suggests that A-movement does not cross a phase boundary, whereas Ā-movement may. Combined with the common assumption that Ā-positions are phase-edge positions and A-positions are phase-internal (e.g., Charnavel & Sportiche 2016), a version of the Ban on Improper Movement may then be stated as in (54), which among other things prohibits movement from Spec,CP to Spec,TP in the higher clause.

\begin{equation}
(54) \quad \text{Movement may not proceed from a phase edge to a phase-internal position.}
\end{equation}

On the assumption that A-movement does not cross phase boundaries, its application is consistent with (54). The position-based nature of (54) allows it to make the right cut with respect to the Hindi evidence presented here.\textsuperscript{25}

\textsuperscript{22} Another approach that extends the ban on improper movement (50) beyond the binary A/Ā-distinction is developed by Müller & Sternefeld (1993). They propose that (50) is part of a more general constraint that prohibits mixing of movement types in a chain (the \textit{Principle of Unambiguous Binding}), which extends beyond the A/Ā-distinction.

\textsuperscript{23} Neeleman & van de Koot (2010: 346–347) in fact conclude based on considerations of improper movement that movement does not proceed successive-cyclically through Spec,$vP$ or other clause-internal phases.

\textsuperscript{24} Additionally, Müller (2014a; b) proposes a parametrization of his account that accommodates languages in which hyperraising is possible, though see section 5.1 for a different line of approach to licit hyperraising.

\textsuperscript{25} (54) raises questions about the nature of $vP$, however. Given that it is possible for an object to A-scramble out of $vP$, this would require that $vP$ is not a phase in this case. One possible response to this problem is that $vP$ is in fact never a phase, and it hence does not require movement through its specifier, as argued by Keine (2016: 387–404; 417–467) on independent grounds, including $\phi$-agreement in Hindi.
Lastly, one might characterize the distinction between different positions not by making direct reference to different types of positions per se, but rather in terms of their syntactic context. For example, elements in Spec,CP are necessarily separated from higher syntactic material by the CP node that dominates them. If this CP node causes an intervention effect for syntactic operations initiated in the higher clause, it follows that such operations are unable to reach elements in Spec,CP. Versions of this general line of approach have been proposed, in varying forms, by van Urk (2015), Keine (2016; to appear), and Halpert (to appear).

In sum, position-based accounts of the locality of A-movement afford an immediate explanation of the Hindi facts, and this renders them empirically preferable to case-based accounts. Furthermore, because a position-based approach offers a unified account of Hindi and English, it thereby captures the generalization that the locality facts are identical in the two languages because the positions are. I have reviewed various ways in which the critical distinction between the different types of positions may be characterized analytically. To the extent that this conclusion is correct, it provides an argument that a position-based distinction between A- and Ā-movement is empirically necessary.

5 Summary and extensions

We saw at the outset of this paper that in English, the prohibition against hyperraising can be attributed either to the positions involved or to case properties of the moving element (be it directly or indirectly), corresponding to the two families of accounts identified in section 1. In English, the effects of case and position are largely confounded with each other. On the one hand, A-movement feeds case, whereas Ā-movement does not. On the other hand, A-movement targets a low position in the clausal spine and Ā-movement targets a high one. It is therefore difficult to determine empirically whether the locality difference between the two is due to case or position. The two families of accounts identified in section 1 differ in the analytical choice they make.

I have argued that A- and Ā-movement in Hindi provide a domain in which these two lines of approach can be empirically distinguished. The gist of the argument is summarized in (55). A- and Ā-movement in Hindi differ in their ability to leave a CP clause in precisely the same way as their English counterparts. I have shown that crossclausal A- and Ā-movement do not differ with respect to case in Hindi; therefore, the locality difference between them cannot be expressed in terms of case, a conclusion that I have argued holds for both morphological case and abstract Case. By contrast, I have shown that A- and Ā-movement in Hindi differ in the positions they target in the same way as they do in English. A position-based approach therefore naturally derives the locality facts. Put differently, the Hindi data provide an argument that when positions and case diverge, locality tracks positions, not case. This conclusion is readily accounted for on position-based accounts, but it is problematic for accounts that correlate the availability of A-movement with the distribution of case, either directly or indirectly.

(55) Summary: Crossclausal A- and Ā-movement in Hindi

|                  | A-movement | Ā-movement |
|------------------|------------|------------|
| §3: Feeds case assignment | ✗          | ✗          |
| §4: Landing site  | TP-internal Spec,CP |
| §2, 4: Can escape TPs | ✗          | ✗          |
| §2, 4: Can escape CPs | ✗         | ✓          |

Ban on Improper Movement
 Relatedly, the ability of A-movement out of a nonfinite clause in Hindi provides evidence against a strong version of the Activity Condition, according to which A-movement of case-marked elements is invariably prohibited.

What do these results entail for the proper analysis of hyperraising in English and more generally? First of all, they indicate that a general theory of the locality of A-movement must incorporate reference to syntactic positions in one way or another; reference to case is not enough. Furthermore, while the failure of case-based accounts is restricted to Hindi, considerations of parsimony disfavor invoking case in the account of English. Given that (i) a position-based account is necessary for Hindi and (ii) such an account also succeeds in prohibiting hyperraising in English, an additional appeal to a case-based account for English is unnecessary and hence redundant. The question that now arises is whether there are ever cases of hyperraising that can only be accounted for in terms of case. While it is not possible to answer this question with certainty at this point, the situation in Hindi and English does raise the possibility that the Activity Condition and case more generally can be eliminated as constraints on A-movement with no loss in empirical coverage.

The next section briefly considers languages that allow hyperraising and for which case-based accounts have been predominant. I will argue that the situation in such languages is compatible with the key conclusions reached here.

5.1 Proper improper movement? A look at licit hyperraising

The main line of argumentation here has focused on Hindi, which bans A-movement out of finite clauses. However, there is evidence that this ban is not universal, and that there are languages that do allow hyperraising out of finite or subjunctive clauses. Such instances of licit hyperraising have frequently been analyzed in terms of a case, which raises the questions of whether they are compatible with the key conclusion reached here. Examples of languages that allow hyperraising include Greek (Alexiadou & Anagnostopoulou 2002), Brazilian Portuguese (Martins & Nunes 2005; 2010; Nunes 2008; 2010; Ferreira 2009), and several Bantu languages (Zeller 2006; Carstens 2011; Diercks 2012; Carstens & Diercks 2013; Halpert 2015; to appear; Mountjoy-Venning & Diercks 2016). The example in (56) provides an illustrative example from Lubukusu. Here the embedded subject babaandu ‘people’ raises out of the embedded clause into the matrix subject position, where it triggers noun-class agreement on the matrix verb (see the references just cited for extensive discussion and motivation that this dependency indeed involves movement).

(56) **Lubukusu** (Carstens & Diercks 2013: 100)

babaandu ba-lolekhana (mbo) ba-kwa.

2people 2SA-seem (that) 2SA.PAST-fall

‘The people seem like they fell/The people seem to have fallen.’

As mentioned, the literature that investigates such licit instances of hyperraising commonly adopts a case-based approach and attempts to derive structures like (56) from differences in case and/or Activity. For example, Carstens (2011), Diercks (2012), and Carstens & Diercks (2013) develop a line of analysis according to which the relevant Bantu languages lack syntactic case, and DPs are rendered active through the presence of uninterpretable gender features. Because gender features on a DP are intrinsic and hence the situation

I am grateful to Michael Diercks and to an anonymous reviewer for helpful comments and discussions.
not subject to valuation, they render a DP continuously active. As a result, a DP may enter into more than one A-relation in these languages, yielding (among other things) hyperraising as in (56). In a similar vein, licit instances of hyperraising have been attributed to the absence of case assignment in the lower clause by Zeller (2006) for the Bantu language Nguni, by Martins & Nunes (2005; 2010), Ferreira (2009), and Nunes (2008; 2010) for Brazilian Portuguese, and by Alexiadou & Anagnostopoulou (2002) for Greek, among others.

It might thus appear that accounts along these lines provide motivation for a case-based approach to (the ban on) hyperraising. However, closer scrutiny suggests otherwise. Importantly, there is evidence that a position-based account is necessary even for languages that do allow hyperraising. As, e.g., Carstens & Diercks (2013) emphasize for Bantu, not all types of embedded clauses allow hyperraising out of them. To give an example, we saw on the basis of (56) above that Lubukusu allows hyperraising out of clauses headed by the complementizer *mbó. As it turns out, not all complementizers pattern in this way. If the embedded clause is headed by the agreeing complementizer *-li, hyperraising is impossible, as (57) shows.

(57) **Lubukusu** (Carstens & Diercks 2013: 109)

*Mikaeli a-olekhana a-li a-si-kona.*
Michael 1SA-seem that 1SA-PRES-sleep
‘Michael seems to be still sleeping.’

A second example comes from Luusamia, where hyperraising is possible only if the embedded clause does not contain a complementizer (58a).²⁷ (58b) shows that in the presence of a complementizer, a reconstructed-scope reading of the matrix subject is impossible, suggesting that the subject did not raise out of the embedded clause. Carstens & Diercks (2013) conclude from this contrast that (58b) involves a structure analogous to copy raising. Hyperraising is hence a possibility only in (58a).

(58) **Luusamia** (Carstens & Diercks 2013: 104)

a. **Eng’ombe** chi-bonekhana chi-ng’were amachi.
10cow 10SA-appear 10SA-drink 6water
‘The cows appear to have drunk the water.’
(reconstructed reading possible)

b. **Eng’ombe** chi-bonekhana koti chi-ng’were amachi.
10cow 10SA-appear that 10SA-drink 6water
‘The cows appears as if they have drunk the water.’
(reconstructed reading impossible)

Significantly, there seems to be no indication that clauses that allow hyperraising out of them and those that do not differ internally with respect to case or Activity. A case-based account by itself therefore does not distinguish between them. Carstens & Diercks (2013) suggest that a factor other than case underlies these contrasts, and I adopt this conclusion. They propose that it is not possible to A-move out of a phasal CP, and I will assume that this follows from a position-based constraint that prohibits movement from an Ā- to an A-position or the restriction in (54). For the Luusamia contrast in (58), they propose that complementizer-less finite clauses are in fact just TPs in the

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²⁷ Diercks (2012: 275n40) mentions that the same is true for some Lubukusu speakers, and apparently in Digo as well.
language. Extraction out of them therefore does not have to proceed through Spec,CP, and it may thus target an A-position in the higher clause, as schematized in (59a). For the Lubukusu contrast in (56) and (57), Carstens & Diercks (2013) propose an analysis in terms of the extended left periphery: by assumption, the complementizer mbo in (56) realizes a low head in the left periphery, which is not a phase; the complementizer -li in (57), on the other hand, realizes a higher, phasal C head. Extraction over mbo can therefore proceed in one fell swoop, as in (59a), and licitly target an A-position in the higher clause. By contrast, extraction over -li in (57) needs to proceed through the CP specifier. Assuming that this is an Ā-position, a position-based account then rules out subsequent movement to an A-position in the higher clause, see (59b).

\begin{tabular}{ll}
(59) & a. \([\text{TP} \text{DP}_1 \ldots [\text{non-phasal clause} \ldots t_1 \ldots]]\) \hspace{1cm} \textit{hyperraising possible} \\
& b. \(\ast[\text{TP} \text{DP}_1 \ldots [\text{phasal clause} t_1 [\text{TP} \ldots t_1 \ldots]]]\) \hspace{1cm} \textit{hyperraising impossible} \\
\end{tabular}

What the Bantu data above suggest, then, is that a case-based account alone is insufficient and that a position-based account is required even for languages in which hyperraising is in principle able to leave a finite clause. Given this need for a position-based account, we can now ask whether the evidence additionally requires a case-based constraint. As far as I can see, the answer is no. For Bantu, the literature cited above has argued that case or Activity does not limit A-movement in these constructions, which entails that case and Activity only wield their influence in English and other languages that do not allow hyperraising. But as argued above, in these languages, an independently needed position-based account is sufficient to rule out hyperraising structures, rendering superfluous a case-based restriction to the same effect.

If these considerations are on the right track, they suggest a perspective on the contrast between languages that allow hyperraising and those that do not that is rather different than what the previous literature on the topic has assumed. Rather than attributing the contrast to differences in how case assignment and/or Activity of DPs work in these languages, it is possible that what distinguishes languages that allow hyperraising from those that do not is that the former have access to embedded finite clauses that are non-phasal and hence do not require movement through their left edge, as in (59a). Extraction out of such clauses may then target an A-position without violating the Ban on Improper Movement. For the purposes of this ban, these clauses are thus equivalent to TP clauses. By contrast, in languages that do not allow hyperraising—like English and Hindi—, finite clauses are by assumption always phasal and hence require movement through their Ā-edge position, which rules out hyperraising, as in (59b).

If this line of analysis is tenable, it has a number of broader consequences. First, it provides further support for the need for a position-based account, which then renders unnecessary an additional case-based account of hyperraising, supporting the key conclusions I have argued for on the basis of Hindi and English above. Second, it raises the possibility that the crucial feature that distinguishes languages that allow hyperraising from those

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28 Halpert (to appear) develops an alternative account, on which ϕ-agreement with the lower clause can cancel the phasehood of that clause, enabling one-fell-swoop extraction out of it. The idea that licit instances hyperraising does not proceed through the edge of the lower clause is shared by Martins & Nunes’ (2005; 2010), Nunes’ (2008) and Ferreira’s (2009) account of Brazilian Portuguese and by Zeller’s (2006) and Halpert’s (to appear) accounts of Bantu. Notably, there are other accounts of licit instances of hyperraising that do involve movement from Spec,CP to Spec,TP, and for which the possibility of such movement is hence parametrized across languages (e.g., Obata & Epstein 2011; Müller 2014a; b; Keine 2016; to appear). I will not attempt to distinguish between the two approaches here.
that do not is unrelated to case after all (contra the literature cited above). Third, this line of analysis has the interesting consequence that it would potentially allow us to maintain the Ban on Improper Movement as a universal principle, in spite of the initial appearance to the contrary.

5.2 Implications for case

In addition to the central conclusion that a position-based account of possible and impossible instances of hyperraising is empirically necessary and that such an account makes a case-based approach unnecessary, the findings here also hold broader consequences for the role of case in syntax. First, they suggest that the A/Ā-distinction cannot be (at least entirely) reduced to case, because constraints on the locality of A-movement cannot exclusively refer to case. A second consequence concerns the relationship between case and movement. While in GB case played a central role in triggering and prohibiting movement, case has been largely abandoned as a trigger for movement, following Chomsky (2000; 2001). At least in the domain of hyperraising, case also does not seem to play a role in prohibiting movement. With the link between case and movement becoming more tenuous, an emerging issue is whether case ever prevents movement. More generally, while case has historically played a fundamental role in constraining syntactic structures and derivations (particularly through nominal licensing), the more recent literature has argued that case and licensing should be severed and that case plays much less of a role in constraining syntax (e.g., Preminger 2014) or even no role at all (e.g., McFadden 2004). The present paper has shown that in one domain in which case has been argued to play a crucial role (namely, constraining A-movement), case does not seem to be the determining factor after all. This conclusion is fully in line with the recent shift in the literature away from case-based explanations in syntax and it removes one potential obstacle to such a shift.

Lastly, the conclusion that A-movement is not constrained by case converges with the conclusion reached by Bhatt (2005) for ϕ-agreement in Hindi. Based on long-distance agreement across nonfinite clause boundaries in the language, Bhatt (2005) argues that DPs in Hindi can trigger ϕ-agreement in the matrix clause after they receive case in the embedded clause. Bhatt (2005) concludes that Agreement for ϕ-features is not limited to goals with unvalued case features and therefore is not subject to the Activity Condition. This suggests that the Activity Condition is too strong on multiple grounds, and that the conclusion that the locality of A-movement is not determined by case extends to other A-processes as well.

Abbreviations

AUX = auxiliary, DAT = dative, ERG = ergative, F = feminine, GEN = genitive, INF = infinitive, INSTR = instrumental, IPFV = imperfective, LOC = locative, M = masculine, PFV = perfective, PL = plural, PRES = present, PAST = past, SA = subject agreement, SG = singular

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The author has no competing interests to declare.

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