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 (superraising). 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 $\overline{\text{A}}$-movement in Hindi-Urdu exhibit the same locality difference 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 only be attributed to the positions that these movement types target, 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: superraising, improper movement, Activity Condition, case, Hindi-Urdu

1. Introduction

One of the core differences between A- and $\overline{\text{A}}$-movement is the locality properties that they exhibit (Chomsky 1973, 1977, 1981). As is well-known, while both A- and $\overline{\text{A}}$-movement may leave a nonfinite clause (1), only $\overline{\text{A}}$-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 *superraising* or *hyperraising,* terms that I will use here as convenient descriptive labels.

(1) *Nonfinite clause*

    a. $\overline{A}$-*movement*
       What$_1$ does Mary seem [to like t_1]?

    b. *A-movement*
       Mary$_1$ seems [t_1 to like natto].

(2) *Finite clause*

    a. $\overline{A}$-*movement*
       Who$_1$ do you think [t_1 likes natto]?

    b. *A-movement*
       *Mary$_1$ seems [(that) t_1 likes natto].

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

(3)   a.   I believe Mary$_1$ with all my heart [t_1 to be innocent].

   b.   *I believe Mary$_1$ will all my heart [(that) t_1 is innocent].

Within the empirically and theoretically rich literature on this asymmetry, 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 $\overline{\text{A}}$-position (this constraint follows from subjacency or, more recently, from the Phase Impenetrability Condition and CP being a phase). Second, movement from an $\overline{\text{A}}$-position is required to land in an $\overline{\text{A}}$-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*:[1]

(4)   *Ban on Improper Movement*
   Movement from Spec,CP must land in Spec,CP. Movement from Spec,CP to a TP-internal
   position is ruled out.

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):

(5)   *[$_{\text{TP}}$ Mary$_1$ seems [$_{\text{CP}}$ t_1 (that) t_1 likes natto]]

Because (4) allows movement from Spec,CP to Spec,CP, $\overline{\text{A}}$-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 $\overline{\text{A}}$-movement takes place.

Various accounts have been proposed to derive (4). One very influential proposal is due to May (1979) and adopted in Chomsky (1981), according to which the trace of $\overline{\text{A}}$-movement is a variable, subject to Principle C of the Binding Theory and hence required to be globally A-free. A-movement of an $\overline{\text{A}}$-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 orderings (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 2017), but these generalizations likewise make crucial reference to syntactic positions and therefore preserve the position-based nature of the account.

An alternative line of approach is proposed by Chomsky (2000:123, 127) and Chomsky (2001:6). This account dispenses with reference to A- vs. $\overline{\text{A}}$-positions as such. Instead, it is exclusively stated on

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[1]   As it stands, (4) is incompatible with *v*P phases, as it also rules out successive-cyclic movement from Spec,CP to Spec,*v*P. 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 *v*P phases to section 4.3.

the basis of the case properties of the moving element. 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:

(6) *Activity Condition*
     DPs whose case feature is valued become inactive and thereby unable to undergo subsequent A-processes.

The superraising 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 a 'switch' and case assignment bleeds further A-movement of a DP.[2]

(7) *Mary$_1$ seems [t_1 likes natto]

               A
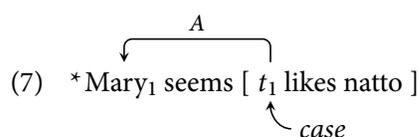
               case

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. 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 superraising, sometimes in slightly varying forms (e.g., Carstens 2010, 2011, Nunes 2010, Diercks 2012, Halpert 2012). Interestingly, even several proposals that do not adopt the Activity Condition as such still invoke case in the account of the impossibility of superraising. For example, McGinnis (1998:36,60) proposes that case checking prevents subsequent movement to satisfy the EPP; Bejar & Massam (1999:68) and Nevins (2005:291) propose that a DP cannot receive case more than once (also see Carstens 2010:53); Obata (2010) and Obata & Epstein (2011) develop an account in which case assignment to a DP within a phase has the effect that a copy of the DP at the edge of this phase lacks φ-features, hence being invisible to a higher A-probe; and 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. For the purposes of the dichotomy between position-based and case-based accounts of superraising here, these approaches fall into the latter group.

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. Thus, A̅-movement does not feed case assignment and

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[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) a. *Mary's belief [John$_1$ to be likely [t_1 will win]]   (Lasnik & Boeckx 2006:118)

    b. *It is certain [Rhoda$_1$ to be likely [t_1 is intelligent]].   (Nevins 2005:292)

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.

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 case and position, it would be necessary to manipulate one factor while holding the other constant. This is largely impossible in English.[3]

In this paper, I will present novel evidence from Hindi-Urdu (henceforth Hindi), which 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 superraising over a case-based one. The gist of the argument is as follows: Movement in Hindi manifests in two varieties, one of which exhibits A-properties, while the other one shows $\overline{\text{A}}$-behavior. The locality of these two movement types is identical to their English counterparts: $\overline{\text{A}}$-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 will then argue that the locality difference between A- and $\overline{\text{A}}$-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 $\overline{\text{A}}$-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 whose analysis crucially requires reference to positions and which are not amenable to a case-based account.

This conclusion 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 superraising 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/$\overline{\text{A}}$-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.

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[3] 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) a. *John$_1$ seems [$_{CP}$ that it is certain [$_{TP}$ t_1 to like ice cream]]   (Chomsky 1981:58)

    b. *John$_1$ seems [$_{CP}$ that it was told t_1 [$_{CP}$ that Mary is a genius]]   (Lasnik & Saito 1992:192)

In both examples in (i), the moving element *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 *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.

2. A- and $\overline{\text{A}}$-movement in Hindi

Hindi is an SOV language with very flexible word order. It is well-established since at least Gurtu (1985, 1992), Déprez (1989), and Mahajan (1990, 1994) that scrambling in Hindi is not a uniform phenomenon and that it may be A- or $\overline{\text{A}}$-movement (also see Gambhir 1981, Dayal 1994a, and Kidwai 2000 for extensive studies of Hindi scrambling). The two types of scrambling differ in a variety of respects, including weak crossover, binding of reciprocal pronouns, and their locality, and in these respects they pattern like their English counterparts. As is well-known, only A-movement may obviate weak crossover and lead to binding of reciprocal pronouns, while $\overline{\text{A}}$-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 girl$_1$ seems to her$_1$ mother [t_1 to be industrious].

    b. *Reciprocal binding*
       The two children$_1$ seem to each other's$_1$ parents [t_1 to be industrious].

(9) $\overline{\text{A}}$-*movement*

    a. *Weak crossover*
       *Which girl$_1$ did her$_1$ mother scold t_1?

    b. *No reciprocal binding*
       *Which two children$_1$ did each other's$_1$ parents scold t_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 $\overline{\text{A}}$-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 $\overline{\text{A}}$-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 '$\overline{\text{A}}$-movement.' Nothing hinges on this choice.

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

2.1. Clause-internal movement

It is well-established in the literature on Hindi that clause-internal movement in Hindi exhibits A-properties (Gurtu 1985, 1992, Déprez 1989, Mahajan 1990, 1994, 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 mãã-ne* 'his/her mother-ERG' enables binding of a subject-internal pronoun.[4]

(10)   *Weak crossover obviation*

    a. [*us-kii*$_{1/*2}$ mãã-ne   ] har   bacce-ko$_2$ dekhaa
          s/he-GEN mother-ERG every child-ACC saw
          'His/her$_{1/*2}$ mother saw every child$_2$.'   (*bound reading impossible*)

    b. har   bacce-ko$_1$ [*us-kii*$_1$ mãã-ne   ] t_1 dekhaa
          every child-ACC s/he-GEN mother-ERG   saw
          'For every child x, x's mother saw x.'

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)   *Reciprocal binding*

    a. *[*ek-duusre-kii*$_1$ bahinõ-ne] [raam aur prataap]-ko$_1$ maaraa
          each other's   sisters-ERG   Ram and Pratap -ACC hit
          '*Each other's$_1$ sisters hit [Ram and Pratap]$_1$.'

    b. [raam aur prataap]-ko$_1$ [*ek-duusre-kii*$_1$ bahinõ-ne] t_1 maaraa
          Ram and Pratap -ACC each other's   sisters-ERG   hit
          '[Ram and Pratap]$_1$, each other's$_1$ sisters hit t_1.'

Clause-internal movement may hence be A-movement in Hindi.[5,6]

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[4] All Hindi data not attributed otherwise are due to my consultants. The transcription has been unified across sources. The following abbreviations are used in the glosses: AUX – auxiliary, DAT – dative, ERG – ergative, F – feminine, GEN – genitive, INF – infinitive, INSTR – instrumental, IPFV– imperfective, LOC – locative, M – masculine, PFV– perfective, PL – plural, SG – singular

[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) ?mohan-ko$_1$ [*apne*$_1$ baccõ-ne   ] t_1 ghar   se   nikaal diyaa
        Mohan-ACC self's children-ERG   house from throw gave
        'Mohan$_1$ was thrown out of the house by her$_1$ children.'   (Mahajan 1990:33)

  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, including my consultants, the reflexive pronoun is subject-oriented (see Bhatia & Poole 2016 for recent discussion and analysis). For example, in double-object constructions like (i), 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':

2.2. Movement out of nonfinite clauses

Movement out of nonfinite clauses has received less designated attention in the literature on Hindi, but exhibits A-properties just like clause-internal movement. It is not subject to weak crossover (12) (Keine 2017) and it may lead to binding of reciprocal pronouns (13). For notational convenience, I will label nonfinite clauses as TPs in Hindi, a claim that will be justified in section 4.1.

(12) *Weak crossover obviation*

    a. [*us-kii*$_{1/*2}$ mãã-ne   ] [$_{TP}$ **har**   **bacce-ko$_2$** dekhnaa] caahaa
        s/he-GEN mother-ERG   every child-ACC see.INF   wanted
        'His/her$_{1/*2}$ mother wanted to see every child$_2$.'   (*bound reading impossible*)

    b. **har**   **bacce-ko$_1$** [*us-kii*$_1$ mãã-ne   ] [$_{TP}$ t_1 dekhnaa] caahaa
        every child-ACC s/he-GEN mother-ERG   see.INF   wanted
        'For every child *x*, *x*'s mother wanted to see *x*.'

(13) *Reciprocal binding*

    a. *[*ek-duusre-kii*$_1$ bahinõ-ne] [$_{TP}$ [**raam aur prataap**]**-ko$_1$**   maarnaa] caahaa
          each other's   sisters-ERG   Ram and Pratap -ACC hit.INF   wanted
        '*Each other's$_1$ sisters wanted to hit [Ram and Pratap]$_1$.'

    b. [**raam aur prataap**]**-ko$_1$** [*ek-duusre-kii*$_1$ bahinõ-ne] [$_{TP}$ t_1 maarnaa] caahaa
        Ram and Pratap -ACC each other's   sisters-ERG   hit.INF   wanted
        '[Ram and Pratap]$_1$, each other's$_1$ 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 A-behavior (Gurtu 1985, 1992, Déprez 1989, Mahajan 1990, 1994). The example in (14) 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 A̅-movement. I will notate finite clauses as CPs, as will be justified in section 4.1.

(14) *Weak crossover*
    har   **bacce-ko$_1$** [*us-kii*$_{2/*1}$ mãã-ne   ] socaa   [$_{CP}$ ki   raam-ne t_1 dekhaa]
    every child-ACC s/he-GEN mother-ERG   thought   that Ram-ERG   saw
    'His/her$_{2/*1}$ mother thought that Ram had seen every child$_1$.'   (*bound reading impossible*)

(ii)   raam-ne$_1$ mohan-ko$_2$ [apnii$_{1/*?2}$ kitaab] dii
        Ram-ERG Mohan-DAT self's   book   give.PFV.F.SG
        'Ram$_1$ gave self's$_{1/*2}$ book to Mohan$_2$.'   (Dayal 1994a:250)

    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.

Reciprocal binding supports this conclusion. In (15), movement of *raam aur prataap-ko* 'Ram and Pratap-ACC' cannot result in binding of the reciprocal. This again implies that the landing site is necessarily an $\overline{\text{A}}$-position.

(15) *No reciprocal binding*
   *[**raam aur prataap**]-**ko**$_1$ [*ek-duusre-kii*$_1$ bahinõ-ne] socaa   [$_{CP}$ ki   sangiitaa-ne
    Ram and Pratap -ACC   each other's   sisters-ERG   thought   that Sangita-ERG
    t_1 maaraa]
       hit
   Intended: '[Ram and Pratap]$_1$, each other's$_1$ sisters thought that Sangita had hit t_1.'

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

(16)   In Hindi, nonfinite clauses allow A-movement and $\overline{\text{A}}$-movement out of them. Finite clauses allow $\overline{\text{A}}$-movement out of them, but block A-movement.

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 $\overline{\text{A}}$-movement in Hindi. On a case-based account, (16) should be correlated with the distribution of case, whereas a position-based account predicts that (16) 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.

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.

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 (17). As (17a) shows, a proper name in direct object position must be marked with the accusative case marker *-ko*; other cases are impossible. Significantly, this case marking must be preserved if the element is moved out of a nonfinite clause (17b) or out of a finite clause (17c).

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[7]   An example in which what is unambiguously $\overline{\text{A}}$-movement leaves a nonfinite clause is given in (39c) below.

(17) a. siitaa-ne **raam-{ko/*se/*kaa/*∅}**   dekhaa
         Sita-ERG Ram-{ACC/*INSTR/*GEN/*∅} saw
         'Sita saw Ram.'

   b. *Movement out of nonfinite clause*
       raam-{ko/*se/*kaa/*∅}$_1$ siitaa-ne [$_{TP}$ t_1 dekhnaa] caahaa
       Ram-{ACC/*INSTR/*GEN/*∅} Sita-ERG   see.INF   wanted
       'Sita wanted to see Ram.'

   c. *Movement out of finite clause*
       raam-{ko/*se/*kaa/*∅}$_1$ siitaa-ne socaa   [$_{CP}$ ki   prataap-ne t_1 dekhaa]
       Ram-{ACC/*INSTR/*GEN/*∅} Sita-ERG thought   that Pratap-ERG   saw
       'Sita thought that Pratap saw Ram.'

The same holds for lexical cases like the instrumental *-se*. In (18), the verb *mil* 'meet' assigns instrumental case to its object and this case has to be preserved under crossclausal movement.[8]

(18) a. prataap **siitaa-{se/*ko/*kaa/*∅}**   milaa hai
         Pratap   Sita-{INSTR/*ACC/*GEN/*∅} met   AUX
         'Pratap has met Sita.'

   b. **siitaa-{se/*ko/*kaa/*∅}$_1$**   prataap-ne [$_{TP}$ t_1 milnaa   ] caahaa
       Sita-{INSTR/*ACC/*GEN/*∅} Pratap-ERG   meet.INF   wanted
       'Pratap wanted to meet Sita.'

   c. **siitaa-{se/*ko/*kaa/*∅}$_1$**   raam-ne socaa   [$_{CP}$ ki   prataap t_1 milaa hai]
       Sita-{INSTR/*ACC/*GEN/*∅} Ram-ERG thought   that Pratap   met   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 (19), where A-movement out of a nonfinite clause takes place (as evidenced by reciprocal binding) and case connectivity is again obligatory. This holds for structural as well as lexical cases.

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

   a. [**raam aur prataap**]-{ko/*se/*kaa/*∅}$_1$ [*ek-duusre-kii*$_1$ bahinõ-ne] [$_{TP}$ t_1
       [Ram and Pratap]-{ACC/*INSTR/*GEN/*∅} each other's sisters-ERG
       dekhnaa] caahaa
       see.INF   want
       '[Ram and Pratap]$_1$, each other's$_1$ sisters wanted to see t_1.'

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8 The accusative marker *-ko* is marginally possible in (18) under the reading 'Sita found Pratap'. The possibility of *-ko* is not affected by movement, i.e., case connectivity holds in this case as well.

b. [**raam aur prataap**]-{**se/*ko/*kaa/*Ø**}$_1$ [*ek-duusre-kii*$_1$ bahinõ-ne] [$_{\text{TP}}$ t_1
[Ram and Pratap]-{INSTR/*ACC/*GEN/*Ø} each other's sisters-ERG
milnaa] caahaa
met.INF wanted
'[Ram and Pratap]$_1$, each other's$_1$ 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 as well as for A- and $\overline{\text{A}}$-movement.

3.2. Possessor movement

Strong 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 $\overline{\text{A}}$-movement, but it is subject to the locality constraints demonstrated in section 2, as (20) and (21) show. (20) demonstrates that a possessor may be A-extracted out of a nonfinite clause, illustrated with weak crossover obviation in (20a) and with reciprocal binding in (20b).

(20)   *A-movement of possessor out of nonfinite clause*

a.   **har laṛke-kaa$_1$** *us-kii$_1$* bahin-ne [$_{\text{TP}}$ [$_{\text{DP}}$ t_1 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**]-**ke$_1$** *ek-duusre-kii$_1$* bahinõ-ne [$_{\text{TP}}$ [$_{\text{DP}}$ t_1 khat] paṛhne]
[Ram and Pratap]-GEN each other's sisters-ERG letters read.INF
caahe
wanted
'[Ram and Pratap]$_1$, each other's$_1$ sisters wanted to read their$_1$ letters.'

Possessor extraction out of a finite clause is possible, but it has to be $\overline{\text{A}}$-movement, as shown in (21). It is subject to weak crossover (21a) and may not lead to reciprocal binding (21b).

(21)   *No A-movement of possessor out of finite clause*

a.   **har laṛke-kaa$_1$** *us-kii$_{2/*1}$* bahin-ne kahaa [$_{\text{CP}}$ ki raam-ne [$_{\text{DP}}$ t_1 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$_1$ letter.'   (*bound reading impossible*)

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b. *[**raam aur prataap**]-**ke₁** *ek-duusre-kii₁* bahinõ-ne socaa [CP ki monaa-ne [DP *t₁*
[Ram and Pratap]-GEN each other's sisters-ERG thought   that Mona-ERG
khat] paṛhe]
letters read
Intended: '[Ram and Pratap]₁, each other's₁ sister thought that Mona read their₁ letters.'

Possessor extraction thus patterns exactly like extraction of verbal arguments with respect to the locality of A- and A̅-movement. Importantly, possessor movement exhibits obligatory case connectivity: moved possessors must retain their genitive case, whether they are moved out of nonfinite clauses (22a) or finite clauses (22b):

(22) a. *Genitive case connectivity: Nonfinite clause*
    siitaa-{**kaa**/*****ko**/*****se**/*****∅**}₁   raam-ne [TP [DP *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 [DP *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.[9] It therefore must be assigned to the possessor in (22) 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 (23), 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 (23a), the head noun is *khat* and the genitive marker on the possessor consequently bears the masculine singular form *-kaa*. In (23b), by contrast, the head noun is *ciṭṭhii* and the form of the genitive marker is correspondingly the feminine singular form *-kii*.

(23) *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.'

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9   There are, for instance, no verbs that take genitive objects, etc.

Crucially, this agreement has to persist under crossclausal movement of the possessor, irrespective of whether the movement leaves a nonfinite clause (24) or a finite clause (25):

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

    a. siitaa-{**kaa/*kii**}$_1$ raam [$_{TP}$ [$_{DP}$ t_1 *khat*   ] paṛhnaa] 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**}$_1$ raam [$_{TP}$ [$_{DP}$ t_1 *ciṭṭhii*] paṛhnaa] caahtaa hai
       Sita-{*GEN.M.SG/GEN.F.SG} Ram   letter.F read.INF wants   AUX
       'Ram wants to read Sita's letter.'

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

    a. siitaa-{**kaa/*kii**}$_1$ raam soctaa hai [$_{CP}$ ki   prataap [$_{DP}$ t_1 *khat*   ]
       Sita-{GEN.M.SG/*GEN.F.SG} Ram thinks AUX   that Pratap   letter.M
       paṛhtaa hai]
       reads   AUX
       'Ram thinks that Pratap reads Sita's letter.'

    b. siitaa-{***kaa/kii**}$_1$ raam soctaa hai [$_{CP}$ ki   prataap [$_{DP}$ t_1 *ciṭṭhii*]
       Sita-{*GEN.M.SG/GEN.F.SG} Ram thinks AUX   that Pratap   letter.F
       paṛhtaa hai]
       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 (24) and (25)) 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 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 (26):[10]

(26) All crossclausal movement (both out of 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 (26) yields the picture in (27): Both A- and A̅-movement are possible out of nonfinite clauses, but only A̅-movement may

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[10] Note that my claim here is not that there is no case-driven in movement in Hindi (see Bhatt & Anagnostopoulou 1996 for arguments that differential object marking is movement-driven). Rather, (26) claims that if a movement step crosses a finite or nonfinite clause boundary, then it never feeds case assignment in the landing site.

leave a finite clause, and in both configurations, case is obligatorily assigned to the moving element before the crossclausal extraction step takes place.

(27)   a. $\sqrt{A}/\sqrt{\overline{A}}$
       $\underline{\quad}$ ... [$_{\text{nonfinite clause}}$ ... DP ...
       case

       b. $*A/\sqrt{\overline{A}}$
       $\underline{\quad}$ ... [$_{\text{finite clause}}$ ... DP ...
       case
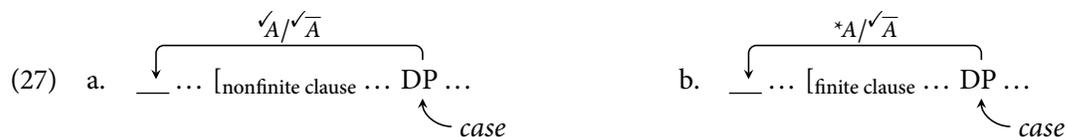
This state of affairs is problematic for an account that attempts to attribute the availability of A-movement to the Activity Condition or to considerations of case more generally. The Activity Condition (6) prohibits A-movement of a DP after the DP has been assigned case. This would incorrectly preclude A-movement in both (27a) and (27b) and hence predict that all crossclausal movement in Hindi must be $\overline{A}$-movement. As we have seen, this is not the case. The Activity Condition is thus overly restrictive.

One might 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). Yet 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).

The challenge that arises out of (27) is very general. Because the case properties of the moving element are identical in (27a) and (27b), considerations of case fail to distinguish between the two configurations. The observation that A-movement is possible in (27a) but not in (27b) therefore cannot be attributed to case.[11] 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 superraising, 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, it is well-known that 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.[12] The apparent violation of

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[11]   The properties of movement out of nonfinite clauses are crucial here. In the context of an intriguing account of the A/$\overline{A}$-distinction, Safir (to appear) proposes a case-based account of scrambling in Japanese. He focuses on the fact that, like in Hindi, local scrambling can be A-movement, but scrambling out of finite clauses must be $\overline{A}$-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, as far as I can see, 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. Case therefore makes the wrong cut with respect to nonfinite clauses.

[12]   Note that this concept of abstract Case differs from the more traditional notion, according to which languages like Chinese, which lack case morphology, nevertheless have a syntactic Case feature, which is simply not morphologically expressed (e.g., Li 1985). As noted below, because Hindi does have morphological case, the distribution of abstract Case would have to be entirely independent from that of morphologically observable case.

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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 potentially renders the Activity Condition very weak empirically because 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 (20). 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 crossclausal movement takes place—would then entail that the distribution of abstract Case is unrelated to that of empirically observable case. This would threaten to 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 (20) 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 (20) 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 (28), 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^0' in (28)). In this case, the possessor's abstract-Case feature remains unassigned until it enters the matrix clause. As far as Activity is concerned, then, A-movement into the matrix clause should be possible in (28). However, as we have seen on the basis of (21), this is not the case: only $\overline{\text{A}}$-movement out of a finite clause is allowed.

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

$$^{\star}[_{CP} \ldots \text{Poss-DP} \quad \text{H}^0 \ldots [_{CP} \langle \text{Poss-DP}\rangle \ldots [_{DP} \langle \text{Poss-DP}\rangle \ldots]]]$$

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 (20)), would also allow such a delay if the embedded clause is finite, giving rise to ungrammatical A-movement out of finite clauses (as in (21)). 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.[13] This again points to the conclusion that it is some factor other than case that underlies the locality facts.

In sum, I have argued that the locality contrast between A- and $\overline{\text{A}}$-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 does not generalize to the Hindi facts. Note that this conclusion of course does not, in and of itself, invalidate case-based accounts of superraising 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 a similar challenge and that it makes available a principled account of the Hindi locality facts. Such an 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 $\overline{\text{A}}$-movement are identical.

4.   Positional properties of Hindi movement

To assess the validity of a position-based account of the impossibility of 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 $\overline{\text{A}}$-movement. This investigation will lead to the conclusion that the positions involved in A- and $\overline{\text{A}}$-movement in Hindi mirror the state of affairs in English.

4.1.   *The size of embedded clauses*

There is good evidence that nonfinite clauses are structurally smaller than finite clauses in Hindi 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 2017). First, finite embedded clauses may contain the complementizer *ki* (29), but nonfinite clauses may not (30). Hindi furthermore has no equivalent of the English complementizer *for*.

(29)   siitaa soctii hai [**(ki)** raam-ne prataap-ko dekhaa]
         Sita   think AUX   that Ram-ERG Pratap-ACC saw
         'Sita thinks that Ram saw Pratap.'

(30)   siitaa [**(*ki)** prataap-ko dekhnaa] caahtii thii
         Sita   that Pratap-ACC see.INF   want   AUX
         '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 (31), it is possible for the *wh*-element *kyaa* 'what' to take

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[13]   Also see McFadden (2004) for a more general critique of abstract Case.

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wh-scope within the embedded finite clause.[14] By contrast, a *wh*-element inside a nonfinite clause can only take matrix scope in (32) and therefore an embedded-question reading is not available.

(31) tum jaante ho [[(ki) us-ne   kyaa kiyaa]
      you know   AUX   that he-ERG what did
      'You know what he did.'   (Dayal 1996:31)

(32) tum [kyaa karnaa] jaante ho
      you what do.INF   know AUX
      'What do you know to do?'
      not: 'You know what to do.'   (Dayal 1996:23)

On the standard assumption that interrogative scope is associated with C, its obligatory absence in nonfinite clauses like (32) 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 (33). For the sake of concreteness, I will treat nonfinite clauses as TPs, but their exact structural size of nonfinite clauses is not relevant for our present purposes as long as they are structurally smaller than finite clauses and lack a CP layer.[15]

(33) a. Finite clauses in Hindi are CPs.

      b. Nonfinite clauses in Hindi lack a CP layer, i.e. they are TPs.

4.2. The landing sites of A- and $\overline{\text{A}}$-movement

Due to the head-final phrase structure and the optionality of movement in Hindi, determining the landing sites of A- and $\overline{\text{A}}$-movement is difficult. Mahajan (1990) assumes that the two target different positions (L-related and non-L-related, respectively), but for theory-internal reasons. Keine (2017) 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 (33). Keine (2017) argues that $\overline{\text{A}}$-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 (2017) presents the example in (34), 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 laṛkii-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

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[14] And this is, in fact, the only interpretation available in (31). 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 (31).

[15] That is, they could potentially also be analyzed as, e.g., *v*Ps, along the lines of restructuring analyses like Wurmbrand (2001).

of the nonfinite clause ensures that *har laṛkii-ko* is not extracted out of the nonfinite clause itself: if it were, it would surface to the left of the matrix verb.[16] Consequently, the landing site of *har laṛkii-ko* in (34) must be inside the nonfinite clause. What (34) shows, then, is that it is possible for A-movement to target a position inside a nonfinite clause. The sentence in (35) provides a parallel example.

(34) *A-movement within nonfinite clause*

siitaa-ne caahaa thaa [$_{TP}$ **har laṛkii-ko$_1$** [*us-kii$_1$* shaadii ke dauraan] t_1
Sita-ERG wanted AUX every girl-ACC s/he-GEN wedding during
dekhnaa]
see.INF
'Sita wanted to see every girl x during x's wedding.'　　　　　　(Keine 2017:(27))

(35) siitaa-ne caahaa [$_{TP}$ **sab-se$_1$** [*un-ke$_1$* gharõ-mẽ] t_1 milnaa]
Sita-ERG wanted everyone-INSTR they-GEN houses-LOC meet.INF
'Sita wanted to meet every person x in x's house.'

In light of the evidence that nonfinite clauses in Hindi invariably lack a CP layer (see section 4.1), Keine (2017) concludes from these considerations that Hindi A-movement does not land in Spec,CP (as the nonfinite clauses in (34) and (35) lack this position). Rather, A-movement must target a TP-internal position.

Converging evidence that is not considered by Keine (2017) comes from nonfinite clauses in subject position. Such clauses are islands for extraction out of them, as shown in (36), where extraction of *phal* 'fruit' out of the subject clause in (36b) creates ungrammaticality.[17]

(36) *Subject clauses are islands*

a. sehat ke-liye [phal khaanaa] acchaa hotaa hai
   health for fruit eat.INF good is AUX
   'To eat fruits is good for health.'

b. *phal$_1$ sehat ke-liye [t_1 khaanaa] acchaa hotaa hai
   fruit health for eat.INF good is AUX
   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 notably well-formed, as shown by (37) and (38). Because extraction of *har laṛkii-ko* 'every girl-ACC' and *sab-se* 'everyone-INSTR' out of the nonfinite subject clauses in (37) and (38), respectively, would induce an island violation, the A-movement step in the two structures must target a position inside the nonfinite subject clause.

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[16] Bhatt & Dayal (2007) argue that nominal constituents may not extrapose in Hindi.

[17] The sentence in (36b) 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.

(37) *A-movement within nonfinite subject clause*

[$_{TP}$ **har** **laṛkii-ko$_1$** [*us-kii$_1$* shaadii ke dauraan] t_1 dekhnaa] acchii baat hai
      every girl-ACC   s/he-GEN wedding during   see.INF good thing is
'To see every girl x during x's wedding is a good thing.'

(38) [$_{TP}$ **sab-se$_1$**   [*un-ke$_1$* gharõ-mẽ] t_1 milnaa] acchaa vicaar hai
       everyone-INSTR they-GEN houses-LOC   meet.INF good idea is
'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 $\overline{\text{A}}$-movement. Keine (2017) argues that $\overline{\text{A}}$-movement lands in a TP-external position, in direct contrast to A-movement. The argument is based on the paradigm in (39). All sentences in (39) involve a double embedding structure in which a finite clause is embedded inside a nonfinite clause, which is in turn embedded inside a finite matrix clause. As in (34), the nonfinite clause is extraposed to demarcate its left edge. (39a) is the baseline structure. (39b) 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 (39c), on the other hand, the same DP *kitaab* is moved into the matrix clause and the resulting sentence is grammatical.

(39) a. *Base configuration:*   ✓[$_{matrix}$ … [$_{nonfinite}$ … [$_{finite}$ … DP …]]]
                                   clause   clause   clause

[$_{CP}$ mãi caahtaa hũũ [$_{TP}$ kahnaa [$_{CP}$ ki   mãĩ-ne **kitaab** paṛhii hai]]]
        I   want   AUX   say.INF   that I-ERG book   read AUX
'I want to say that I read the book.'

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

*[$_{CP}$ mãi caahtaa hũũ [$_{TP}$ **kitaab$_1$** kahnaa [$_{CP}$ ki   mãĩ-ne t_1 paṛhii hai]]]
         I   want   AUX   book   say.INF   that I-ERG   read AUX

      c. *$\overline{\text{A}}$-mvt into finite clauses:*   ✓[$_{matrix}$ DP … [$_{nonfinite}$ … [$_{finite}$ … t …]]]
                                              clause   clause   clause

[$_{CP}$ **kitaab$_1$** mãi caahtaa hũũ [$_{TP}$ kahnaa [$_{CP}$ ki   mãĩ-ne t_1 paṛhii hai]]]
         book   I   want   AUX   say.INF   that I-ERG   read AUX

(Keine 2017:(26))

Keine (2017) reasons as follows: The movement of *kitaab* in both (39b) and (39c) proceeds out of a finite clause and hence must be $\overline{\text{A}}$-movement in both cases (given that finite clauses allow only $\overline{\text{A}}$-movement out of them). The ungrammaticality of (39b) then demonstrates that $\overline{\text{A}}$-movement cannot land inside a nonfinite clause. (39c) serves as a control: here *kitaab* is moved into the highest

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finite clause and the result is grammatical. This demonstrates that it is not $\overline{\text{A}}$-movement of *kitaab* itself that underlies the problem in (39b). Rather, the ungrammaticality of (39b) must be due to the fact that here the $\overline{\text{A}}$-movement lands in a nonfinite clause.

Keine (2017) proposes that the paradigm in (39) receives an explanation on the assumption that $\overline{\text{A}}$-movement targets Spec,CP. Because nonfinite clauses obligatorily lack a CP layer in Hindi (recall (33)), they simply lack the functional structure necessary to provide a landing site for $\overline{\text{A}}$-movement. The otherwise puzzling ungrammaticality of (39b) then follows, as does the contrast to (34) and (35).

I will now present novel evidence that corroborates this conclusion. First, the restriction exemplified by (39) holds more generally, e.g., independently of the case marking of the moving element. (40) shows that the same pattern obtains for overtly case-marked objects like *raam-ko* 'Ram-ACC':

(40)   a.   *Base configuration:*   ✓[matrix … [nonfinite … [finite … DP …]]]
              clause   clause   clause

[CP mãĩ caahtaa hũũ [TP tum-se   kahnaa [CP ki siitaa-ne **raam-ko** dekhaa
     I   want   AUX   you-INSTR say.INF   that Sita-ERG Ram-ACC saw
thaa]]]
AUX
'I want to tell you that Sita saw Ram.'

       b.   *No $\overline{\text{A}}$-mvt into nonfinite clauses:*   *[matrix … [nonfinite DP … [finite … t …]]]
                                              clause   clause   clause   (with $\overline{\text{A}}$-mvt arc over nonfinite→finite)

           (i)   *[CP mãĩ caahtaa hũũ [TP **raam-ko$_1$** tum-se   kahnaa [CP ki siitaa-ne
                     I   want   AUX   Ram-ACC   you-INSTR say.INF   that Sita-ERG
                 t_1 dekhaa thaa]]]
                      saw   AUX

           (ii) *[CP mãĩ caahtaa hũũ [TP tum-se   **raam-ko$_1$** kahnaa [CP ki siitaa-ne
                     I   want   AUX   you-INSTR Ram-ACC   say.INF   that Sita-ERG
                 t_1 dekhaa thaa]]]
                      saw   AUX

       c.   *$\overline{\text{A}}$-mvt into finite clauses:*   ✓[matrix DP … [nonfinite … [finite … t …]]]
                                          clause   clause   clause   (with $\overline{\text{A}}$-mvt arc over matrix→finite)

[CP **raam-ko$_1$** mãĩ caahtaa hũũ [TP tum-se   kahnaa [CP ki siitaa-ne t_1
     Ram-ACC   I   want   AUX   you-INSTR say.INF   that Sita-ERG
dekhaa thaa]]]
saw   AUX

Similarly, (41) shows that the same restriction also holds for movement of locative phrases like *dillii-mẽ* 'in Delhi':[18]

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[18]   The surface string in (41a) 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.

(41) a. *[$_{CP}$ mãĩ caahtaa hũũ [$_{TP}$ **dillii-mẽ₁** kahnaa [$_{CP}$ ki mãĩ t_1 rahataa hũũ]]]
          I want AUX Delhi-LOC say.INF that I live AUX

   b. [$_{CP}$ **dillii-mẽ₁** mãĩ caahtaa hũũ [$_{TP}$ kahnaa [$_{CP}$ ki mãĩ t_1 rahataa hũũ]]]
          Delhi-LOC I want AUX say.INF that I live AUX
          'I want to say that I live in Delhi.'

The generality of the restriction is of course precisely what is expected if it is a manifestation of a general constraint on where $\overline{\text{A}}$-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, $\overline{\text{A}}$-movement into it is well-formed:

(42) [$_{CP}$ mãĩ soctaa hũũ [$_{CP}$ **dillii-mẽ₁** siitaa-ne kahaa thaa [$_{CP}$ ki vo t_1 rahatii hai]]]
       I think AUX Delhi-LOC Sita-ERG said AUX that she lives AUX
       'I think that Sita said that she lives in Delhi.'

The contrast between (41) and (42) receives an immediate account if $\overline{\text{A}}$-movement lands in Spec,CP.

    Subject clauses provide further novel evidence for this conclusion. In (43), a nonfinite subject clause contains a finite complement clause and the embedded object *drugs* is $\overline{\text{A}}$-extracted out of the finite clause. In light of the fact that subject clauses are islands in Hindi (recall (36)), it follows that the landing site of *drugs* in (43) must be located inside the nonfinite clause. The ungrammaticality of the resulting structure can be given the same explanation as the ungrammaticality of (39b) above: $\overline{\text{A}}$-movement must land in Spec,CP, a position that nonfinite clauses lack.

(43) ?*[$_{TP}$ **drugs₁** kahnaa [$_{CP}$ ki raam-ko t_1 pasand hãĩ]] burii baat hai
       drugs say.INF that Ram-DAT like AUX bad thing is
      Intended: 'To say that Ram likes drugs is bad.'

    In sum, these considerations provide strong evidence that $\overline{\text{A}}$-movement in Hindi lands in a position higher than that targeted by A-movement in that only A-movement targets a position low enough to land in a nonfinite clause:

(44) a. Hindi A-movement lands in a TP-internal position (Spec,TP or lower).

   b. Hindi $\overline{\text{A}}$-movement lands in Spec,CP.

    The structural conclusions in (44) make an immediate prediction not noted by Keine (2017). 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 (39b), (40b), and (41a). The paradigm in (45) shows that this expectation is indeed borne out.[19] This paradigm is analogous to the one in (39), the

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[19] The baseline sentence in (45a) is somewhat marked because extraposition of nonfinite clauses is information-structurally marked and (45a) 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 (45b) is clearly better than the movement in (39b), (40b) and (41a), which is sharply ungrammatical.

only relevant difference being that the innermost clause is nonfinite in (45). This nonfinite clause is embedded inside another nonfinite clause, which is itself embedded in a matrix clause. (45a) constitutes the baseline. In (45b), the object *daal* 'lentils' of the innermost finite clause is moved into the intermediate nonfinite clause and the resulting sentence is grammatical. In (45c), *daal* is moved into the matrix clause and the result is likewise grammatical.

(45) a. *Base configuration:* $\checkmark$[$_{\text{matrix}}$ … [$_{\text{nonfinite}}$ … [$_{\text{nonfinite}}$ … DP …]]]
                                                      clause   clause   clause

   [$_{\text{CP}}$ mãĩ caahtaa hũũ [$_{\text{TP}}$ phir-se shuruu karnaa [$_{\text{TP}}$ **daal** khaanaa]]]
       I   want   AUX   again   start   do.INF   lentils eat.INF
   'I want to start to eat lentils again.'

   b. *Movement into into nonfinite clause:* $\checkmark$[$_{\text{matrix}}$ … [$_{\text{nonfinite}}$ DP … [$_{\text{nonfinite}}$ … t …]]]
                                                                clause   clause   clause

   [$_{\text{CP}}$ mãĩ caahtaa hũũ [$_{\text{TP}}$ **daal₁** phir-se shuruu karnaa [$_{\text{TP}}$ t_1 khaanaa]]]
       I   want   AUX   lentils again   begin   do.INF   eat.INF

   c. *Movement into finite clause:* $\checkmark$[$_{\text{matrix}}$ DP … [$_{\text{nonfinite}}$ … [$_{\text{nonfinite}}$ … t …]]]
                                                      clause   clause   clause

   [$_{\text{CP}}$ **daal₁** mãĩ caahtaa hũũ [$_{\text{TP}}$ phir-se shuruu karnaa [$_{\text{TP}}$ t_1 khaanaa]]]
       lentils I   want   AUX   again   begin   do.INF   eat.INF

The crucial contrast is between (39b)/(40b)/(41a) on the one hand and (45b) on the other. The former groups of examples demonstrates that movement out of a finite clause cannot land inside a nonfinite clause; (45b) 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 (44). Because movement out of a finite clause is invariably A̅-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 (39b)/(40b)/(41a) and (45b) therefore neatly converges with the conclusions in (44).

Note, incidentally, that a case-based approach does not lend itself to an account of the contrast between (39b)/(40b)/(41a) and (45b). This is because, as discussed in section 3, movement out finite and nonfinite clauses do not differ with respect to case. The differential availability of movement into a nonfinite clause in (39b)/(40b) and (45b) therefore cannot be due to case, further supporting the conclusion that the locality facts are conditioned by something other than case.

Having thus narrowed down the positions involved in A- and A̅-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 A̅-movement out of them, but block A-movement; nonfinite clauses are transparent to both (16). 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 (33)), and (ii) A-movement in Hindi lands in a TP-internal position, whereas $\overline{\text{A}}$-movement lands in Spec,CP (see (44)).

Viewed through the lens of the positions involved, the locality facts can now be reformulated as follows: Movement out of a nonfinite (hence, TP) clause can land in an A-position (i.e., Spec,TP or lower) or in an $\overline{\text{A}}$-position (i.e., Spec,CP), as in (46a); movement out of a finite (hence, CP) clause may only target an $\overline{\text{A}}$-position (i.e., Spec,CP), but not a TP-internal position, as in (46b). Assuming, as is standard, that extraction out of CP requires movement through the edge of that CP, we obtain:

(46) a. $[_{CP}\ [_{TP}\ \ldots\ [_{TP}\ \text{DP}\ldots$ b. $[_{CP}\ [_{TP}\ \ldots\ [_{CP}\ \text{DP}\ [_{TP}\ t\ \ldots$

This situation is of course precisely what the Ban on Improper Movement, repeated in (47), predicts. Due to CP being a phase, illicit superraising in Hindi would involve movement from Spec,CP to a TP-internal A-position, which is blocked by (47), just as it is in English. By contrast, $\overline{\text{A}}$-extraction out of a CP is possible precisely because such movement demonstrably lands in Spec,CP of the higher clause. Nonfinite clauses permit A-movement out of them because they lack a CP layer.

(47)   *Ban on Improper Movement*
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. Furthermore, (47) is independently supported for Hindi by (39), (40), and (41). The locality facts in section 2 are then derived from the positional facts in sections 4.1 and 4.2 in a systematic manner. Note that (47) may itself be derived in a number of ways (see section 1), but any position-based account that has (47) as a consequence yields the desired results.

Let us now consider the set of facts that were problematic for a case-based account. 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 $\overline{\text{A}}$-movement; see (20) and (21)). 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. (48) 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.[20]

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[20] 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 Hindi 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).

(48) a. *Possible A-extraction of possessor out of nonfinite clause (e.g., (20))*
[$_{TP}$ Poss-DP ... [$_{TP}$ ... [$_{DP}$ ⟨Poss-DP⟩ ...]]]
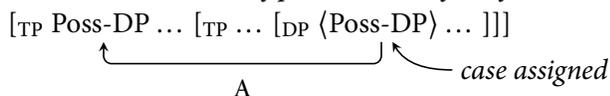
      A   — *case assigned*

   b. *Impossible A-extraction of possessor out of finite clause (e.g., (21))*
[$_{TP}$ ... [$_{CP}$ Poss-DP [$_{TP}$ ... [$_{DP}$ ⟨Poss-DP⟩ ...]]]]
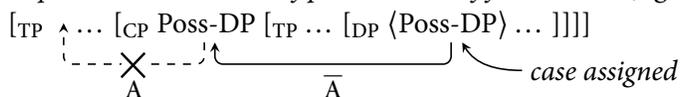
    ✗   — *case assigned*
    A $\overline{\text{A}}$

Configurations like (48) 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.

As mentioned in section 1, a number of recent accounts have generalized the Ban on Improper Movement in various ways. As long as these generalizations preserve the position-based nature of the account, they likewise extend to Hindi. For instance, Müller & Sternefeld (1993) propose that (47) is part of a more general constraint that prohibits mixing of movement types in a chain and that extends beyond the A/$\overline{\text{A}}$-distinction (the *Principle of Unambiguous Binding*).

A particularly strong account is developed by Williams (2003, 2013). Based on a novel way of building syntactic structures, Williams (2003, 2013) develops an intricate theory of locality that has as one of its derived consequences the condition in (49).[21]

(49) *Generalized Ban on Improper Movement*   (Williams 2003:72)
   Given a Pollock/Cinque-style clausal structure $X_1 > \cdots > X_n$ (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 $X_j > X_i$.

(49) blocks movement from a position α to a position β in another clause if α is 'higher' in the abstract clausal spine than β. This is illustrated in (50). 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.

(50) a. [$_{CP}$ [$_{TP}$ [$_{v}$P [$_{VP}$ [$_{CP}$ DP ...   b. [$_{CP}$ [$_{TP}$ [$_{v}$P [$_{VP}$ [$_{TP}$ DP ...
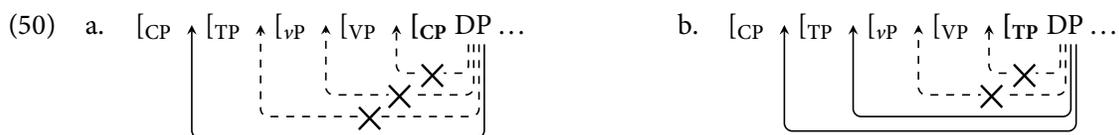
The effects of (49) are more stringent than those of the traditional Ban on Improper Movement in (47), which they comprise as a special case. I will not discuss here the relative merits and challenges of (49), for which see, e.g., Abels (2007) and Müller (2014a). What matters for our concerns is that (49) 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

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[21] (49) derives from a novel way of building syntactic structure and 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).

out of a finite clause would therefore require a movement step that (49) 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 variance with the widely held view that vP is a phase and hence deserves consideration.[22] In recent work, Müller (2014a,b) has suggested 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. Müller (2014a,b) proposes that a moving item contains a *buffer*, which keeps a record of the projections that this item has traversed. The Generalized Ban on Improper Movement (49) is then implemented as the requirement that an item's buffer has to conform to the functional sequence when this item reaches a criterial position. As a result, this account delivers the same empirical effects as (49), but it allows for successive-cyclic movement through clause-internal phases edges. Because Müller's (2014a,b) account, like Williams' (2003, 2013), focuses on the positions involved, it likewise rules out CP-to-TP movement.[23]

In sum, position-based accounts of the locality of A-movement afford an immediate explanation of the Hindi facts and this renders them empirically superior to approaches in terms of case. As a consequence, an account of A-movement locality in Hindi requires reference to syntactic positions in some form or other. Furthermore, 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.

5.   Summary and implications

We saw at the outset of this paper that in English, the prohibition against superraising can be attributed either to the positions involved or to case properties of the moving element, 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 $\overline{\text{A}}$-movement does not. On the other hand, A-movement targets a low position in the clausal spine and $\overline{\text{A}}$-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 $\overline{\text{A}}$-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 (51). A- and $\overline{\text{A}}$-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 $\overline{\text{A}}$-movement do not differ with respect to case in Hindi; therefore, the locality difference between them cannot be expressed in terms of case,

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[22]   Neeleman & van de Koot (2010:346–347) in fact conclude on the basis of considerations of improper movement that movement does not proceed successive-cyclically through Spec,vP or other clause-internal phases.

[23]   Additionally, Müller (2014a,b) proposes a parametrization of his account that also accommodates languages in which superraising is possible. Consequently, attested cases of superraising do not in and of themselves pose a problem for a position-based account.

a conclusion that I have argued holds for both morphological case and abstract Case. By contrast, I have shown that A- and $\overline{\text{A}}$-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 are based on case.

(51) *Summary: Crossclausal A- and $\overline{\text{A}}$-movement in Hindi*

		A-movement	$\overline{\text{A}}$-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 superraising 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 superraising 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 superraising 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. More generally, these results suggest that the A/$\overline{\text{A}}$-distinction cannot be (at least entirely) reduced to case.

Interestingly, this conclusion converges with that 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 Agree for ϕ-features is not limited to goals with unvalued case features and therefore not subject to the Activity Condition. If the conclusion I have reached here is on the right track, then the same holds of A-movement, suggesting that the Activity Condition is too strong on multiple grounds.

The findings here also hold consequences for the role of case in syntax more generally. One direct 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 superraising, 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 are to 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.

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