

Weak crossover obviation and Principle C amnesty have distinct sources

Stefan Keine, *University of Southern California* · keine@usc.edu

Introduction: It is well-known that A- and \bar{A} -movement differ in a number of properties, including weak crossover and Principle C amnesty: \bar{A} -movement is subject to weak crossover, whereas A-movement obviates it; and A-movement amnesties Principle C violations in the base position (1a), while \bar{A} -movement does not, at least with arguments (1b). With the abolition of A- and \bar{A} -movement as theoretical primitives in Minimalism, these distinctive properties have to be deduced from other syntactic properties.

- (1) a. [The claim that John_i was asleep] seems to him_i [*t* to be correct].
b. *[Which argument that John_i is a genius] did he_i believe *t*?

Claim: Based on a comparative investigation of A/ \bar{A} -movement in English and Hindi, I show that crossover obviation and Principle C amnesty have distinct syntactic sources. Crossover obviation tracks the landing site of movement, with at least a binary distinction between SpecTP and SpecCP. Principle C amnesty, on the other hand, tracks case properties, providing crucial evidence for Takahashi & Hulsey's (2009) account of such effects. While these properties are confounded in English, they part ways in Hindi.

A-scrambling in Hindi: Sentence-internal scrambling in Hindi exhibits a number of A-properties (Gurtu 1985, Mahajan 1989, Dayal 1994), including the obviation of weak crossover, as in (2), where *har aadmii-ko* can bind the subject-internal pronoun from its landing site, an interpretation unavailable without movement.

- (2) har aadmii-ko_i [us-kii_i behin-ne] *t_i* dekhaa
every man-ACC his-GEN sister-ERG saw
'For every man *x*, *x*'s sister saw *x*.' (A-scrambling not subject to crossover)

On the other hand, A-scrambling of the object over the subject is unable to amnesty a Principle C violation, as (3) shows, which is grammatical only on a non-coreferential interpretation.

- (3) *[mohan-kii_i behin-ko]_j us-ne_i *t_i* dekhaa
Mohan-GEN sister-ACC he-ERG saw
'*He_i saw Mohan_i's sister.' (no Principle C amnesty)

Clause-internal movement in Hindi is thus paradoxical: It reconstructs for Principle C, but not for binding.

A-scrambling in Hindi: Unlike clause-internal scrambling, scrambling out of a finite clause invariably exhibits \bar{A} -behavior in Hindi (Gurtu 1985, Mahajan 1990). It is subject to weak crossover and does not void Principle C violations. Binding is impossible in (4) and so is coreference in (5):

- (4) har aadmii-ko_i [uskii_{*ij} behin-ne] socaa [ki raam-ne *t_i* dekhaa]
every man-ACC his sister-ERG thought that Ram-ERG saw
'His_j sister thought that Ram saw every man_i.' (\bar{A} -scrambling subject to crossover)
- (5) *[mohan-kii_i behin-ko]_j us-ne_i socaa [ki raam-ne *t_j* dekhaa]
Mohan-GEN sister-ACC s/he-ERG thought that Ram-ERG saw
'*She_i thought that Ram saw Mohan's_i sister.' (no Principle C amnesty)

Scrambling and case: I show that neither A- nor \bar{A} -scrambling in Hindi feeds case assignment. Instead, both apply to already case-marked DPs. Evidence for this claim comes from obligatory case connectivity: A- and \bar{A} -scrambling can target DPs with a variety of cases, but the case in the landing site must match the case in the base position. In, e.g., (6), the verb *milaa* 'meet' assigns instrumental case to its object, which is preserved under A- and \bar{A} -movement (cf. *ko*-marking in (2)–(5)). Connectivity holds for all cases. These facts follow if case in Hindi is always assigned in the base position and never in the landing site of A/ \bar{A} -scrambling.

- (6) siitaa-{se/*ko}_i (raam-ne socaa ki) prataap *t_i* milaa hai
Sita-{INSTR/*ACC} Ram-ERG think that Pratap meet_{INSTR} is
'(Ram thought that) Pratap met Sita.' (instrumental case connectivity)

The landing site of scrambling: A- and \bar{A} -scrambling in Hindi differ in their landing sites, just like their English counterparts. Hindi's free word order makes it hard to directly determine the syntactic positions involved, but indirect evidence for the landing site of A-scrambling comes from (7), which shows that A-scrambling can land inside a nonfinite clause and obviate weak crossover in this configuration:

- (7) *siitaa-ne caahaa [har lar̥kii-ko_i [us-kii_i shaadii ke dauraan] t_i dekh-naa]*
 Sita-ERG wanted every girl-ACC her-GEN wedding during see-INF
 ‘Sita wanted to see every girl *x* at *x*’s wedding.’

Importantly, nonfinite clauses in Hindi show no evidence for a CP layer (Dayal 1996, Bhatt 2005): They cannot contain complementizers and they obligatorily lack interrogative force. Assuming thus that they are maximally TPs, the fact in (7) that \bar{A} -scrambling inside them is possible demonstrates that A-scrambling lands in SpecTP or even lower. Crucially, \bar{A} -scrambling *cannot* land inside a nonfinite clause: In (8), scrambling of *kitaab* leaves a finite clause. Because only \bar{A} -scrambling can escape finite clauses in Hindi (see Mahajan 1990 and (4) above), the movement of *kitaab* in (8) must be \bar{A} -scrambling. As shown, such \bar{A} -scrambling cannot land inside a higher nonfinite clause, but it can land in a higher finite clause.

- (8) [_{finite} { \checkmark *kitaab*_{*i*}} m \bar{a} ĩ caah \bar{t} aa h \bar{u} ũ [_{non-} {**kitaab*_{*i*}} kah-naa [_{finite} ki m \bar{a} ĩ-ne t_{*i*} pa \bar{r} h lii hai]]]
 \checkmark book I want be _{finite} *book say-INF that I-ERG read AUX is
 ‘I want to say that I read the book.’

This contrast is accounted for if \bar{A} -scrambling in Hindi lands in SpecCP. Because nonfinite clauses are TPs, they are too small to provide a landing site. In sum, (i) A-scrambling lands in SpecTP (7), (ii) \bar{A} -scrambling lands in SpecCP (8), (iii) both A- and \bar{A} -scrambling apply to already case-marked DPs (6).

Account: Recall that A-scrambling in Hindi obviates weak crossover but not Principle C violations ((2),(3)), while \bar{A} -scrambling obviates neither ((4),(5)). This provides direct evidence that crossover obviation and Principle C amnesty have distinct sources: I propose that crossover obviation is a function of the position targeted (CP vs. TP), whereas only movement that feeds case assignment amnesties Principle C effects. For crossover, I adopt a version of Sauerland (1998), according to which movement to SpecTP is interpreted via λ -abstraction over individuals, while movement to SpecCP involves abstraction over choice functions. Because pronouns denote individuals, only abstraction over individuals will produce a bound reading and obviate weak crossover. Because A-scrambling in Hindi lands in SpecTP (7), it involves abstraction over individuals, resulting in pronominal binding and obviating a crossover violation (9). Because \bar{A} -scrambling lands in SpecCP (8), it is interpreted via abstraction over choice function and binding of a pronoun is impossible for type reasons (10). These properties mirror their English counterparts, which share the landing sites:

- (9) *Structure of (2): Movement to SpecTP \rightarrow Abstraction over individuals \rightarrow Pronominal binding*

[_{TP} every man-ACC $\lambda x_{\langle e \rangle}$ [[*x*_{*e*}’s sister] saw *x*]]

- (10) *Structure of (4): Movement to SpecCP \rightarrow Abstraction over choice functions \rightarrow No pronominal binding*

[_{CP} every man-ACC $\lambda f_{\langle et, e \rangle}$ [[*x*_{*e*}’s sister] thought that Ram-ERG saw *f* [man]]]

For Principle C, I adopt Takahashi & Hulsey’s (2009) account. They propose that an NP complement to D can counter-cyclically merge with that D head, creating a DP, after that D head has undergone movement. Crucially, such late merge is possible only up until the position in which case is assigned to the DP, because the late-merged NP requires case. In English, \bar{A} -movement feeds case assignment, hence allowing late merger and the amnesty of Principle C violations. \bar{A} -movement applies to already case-marked DPs and late merger is hence impossible. As shown in (6), both A- and \bar{A} -scrambling in Hindi apply to already case-marked DPs. Late merger and Principle C obviation are consequently ruled out for both movement types.

Implications: The Hindi facts provide strong evidence that crossover and Principle C amnesty track different structural properties (position targeted vs. case assignment), in direct support of recent efforts to deconstruct A/ \bar{A} -movement. More generally, these facts argue against the view that A- and \bar{A} -movement properties form a cluster in the sense that one property entails the presence of the other, contra, e.g., Safir (2015). The English facts emerge as a special case. This conclusion provides strong support for the departure from A- and \bar{A} -movement as theoretical primitives in Minimalism and a deconstruction of movement types into component parts. The result also complements the findings in van Urk (2015), who argues that a movement type may have both both A- and \bar{A} -properties. Hindi shows that movement may have some A-properties, but lack others.