Deriving subject and antisubject orientation

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1   Introduction

- In Standard Binding Theory, the distribution of anaphors and pronouns is dictated by Condition A and Condition B:

  (1) a. **Condition A**
           Mary$_i$ showed Susan$_j$ **herself**$_{i/j/*k}$.

       b. **Condition B**
           Mary$_i$ showed Susan$_j$ **her**$_{*i/*j/k}$.

⇒ *The problem*
  Conditions A and B state the distribution of anaphors and pronouns in terms of c-command. However, in many languages, **c-command alone is insufficient** to account for the distribution of anaphors and pronouns.

- *The view from Hindi-Urdu*
  The case study in this presentation is anaphoric and pronominal possessors in Hindi-Urdu:

  – *Subject orientation*
    The anaphoric possessor *apnaa* must corefer with the subject and cannot corefer with, e.g., a goal. It is (descriptively) SUBJECT ORIENTED.

  – *Antisubject orientation*
    The pronominal possessor *uskaa*, however, cannot refer with the subject. It is (descriptively) ANTISUBJECT ORIENTED.

⇒ Subject and antisubject orientation do not fall under the purview of Conditions A and B. Deriving these two constraints is the goal of this talk.

∗ *Structure of this talk*

  1. We review subject and antisubject orientation in Hindi-Urdu. We give particular attention to dative–nominative structures, where the two constraints break down.

  2. Next, we propose that:
      – The locus of subject and antisubject orientation is Voice^0, the functional head responsible for binding the anaphoric possessor *apnaa*.

      – Subject orientation reduces to the locality of A-movement: only the highest DP, typically the external argument, is eligible for movement to [Spec, VoiceP].

      – Antisubject orientation results from the requirement to use *apnaa* whenever the derivation would allow. This requirement is in the spirit of Reinhart & Reuland (1993).

  3. Last, we examine a point of speaker variation. We argue that these speakers have access to an impoverished form of *uskaa-apnaa*, masquerading as *uskaa*.

2   Subject and antisubject orientation

- *Section outline*
  In this section, we review subject and antisubject orientation of anaphors and pronouns in Hindi-Urdu. We then show how these constraints break down in dative–nominative structures.

- *Standard Binding Theory still active*
  Conditions A, B, and C are active in Hindi-Urdu (Dayal 1994). Subject and antisubject orientation are *in addition* to the standard binding constraints.

2.1 Anaphors and pronouns

- *Anaphors → Subject oriented*
  Anaphors in Hindi-Urdu are SUBJECT ORIENTED. They must be bound by the subject (to use the term descriptively) of the clause:[1]

  (2) a. **Binding**
  anu-ne$_i$ **apne-aap-ko$_{i/*j}$** maar-aa
  Anu-ERG ANA -DOM hit-PFV
  'Anu$_i$ hit himself$_{i/*j}$'

  b. **Quantifier binding**
  [har laṛke-ne]$_i$ **apne-aap-ko$_{i/*j}$** maar-aa
  every boy-ERG ANA -DOM hit-PFV
  'Every boy$_i$ hit himself$_{i/*j}$'

- *Pronouns → Antisubject oriented*
  Pronouns, on the other hand, are antisubject oriented. They cannot corefer with the subject of the clause:

  (3) a. **Coreference**
  anu-ne$_i$ **us-ko$_{*i/j}$** maar-aa
  Anu-ERG PRON-DOM hit-PFV
  'Anu$_i$ hit him$_{*i/j}$'

  b. **Quantifier binding**
  [har laṛke-ne]$_i$ **us-ko$_{*i/j}$** maar-aa
  every boy-ERG PRON-DOM hit-PFV
  'Every boy$_i$ hit him$_{*i/j}$'

- Moreover, word order permutations do not affect the binding possibilities in either (2) or (3).

2.2 Anaphoric and pronominal possessors

- In addition, Hindi-Urdu has both an anaphoric possessor *apnaa* and a pronominal possessor *uskaa*. Their behaviour mirrors their nonpossessive counterparts.

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[1] Subject orientation holds for both the anaphors from the Persio-Arabic stock *khud* and the one from the Sanskrit stock *apne-aap*. We present data only for *apne-aap*.

- *Anaphor Agreement Effect, no problem!*
  - What makes the anaphoric and pronominal possessors an interesting empirical domain is that they can both in principle occur in a nominative argument. We will see this in dative–nominative structures.

  - This is not possible with the ordinary anaphor *apne-aap* because of the Anaphor Agreement Effect, which prohibits anaphors in positions construed with agreement (Rizzi 1990; Woolford 1999):[2]

  (4) a. **Transitive**
  * **apne-aap$_i$** anu-ko$_i$ maar-aa   (*cf.* 2a)
  ANA Anu-ERG hit-PFV
  Intended: 'Anu$_i$ hit himself$_i$'

  b. **Dative–nominative structure**
  * anu-ko$_i$ **apne-aap$_i$** pasand hɛ
  Anu-DAT ANA like be.PRS
  Intended: 'Anu$_i$ likes himself$_i$'

- *Anaphoric possessor → Subject oriented*
  Like the anaphor, the anaphoric possessor must corefer with the subject (for most speakers). It is subject oriented:

  (5) **Binding**
  a. **Transitive**
  raam-ne$_i$ [**apnii$_{i/*j}$** kitaab] paṛh-ii
  Ram-ERG ANA.GEN book read-PFV
  'Ram$_i$ read his$_{i/*j}$ book'

  b. **Ditransitive**
  raam-ne$_i$ anu-ko$_j$ [**apnii$_{i/\%j/*k}$** kitaab] dii
  Ram-ERG Anu-DOM ANA.GEN book give.PFV
  'Ram$_i$ gave Anu$_j$ his$_{i/\%j/*k}$ book'

  (6) **Quantifier binding**
  a. **Transitive**
  [har laṛke-ne]$_i$ [**apnii$_{i/*j}$** kitaab] paṛh-ii
  every boy-ERG ANA.GEN book read-PFV
  'Every boy$_i$ read his$_{i/*j}$ book'

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[2] We treat unmarked DPs as bearing nominative case.

b. **Ditransitive**

[har larke-ne]$_i$ anu-ko$_j$ [**apnii**$_{i/*j/*k}$ kitaab] dii
every boy-ERG Anu-DOM ANA.GEN book give-PFV
'Every boy$_i$ gave Anu$_j$ his$_{i/*j/*k}$ book'

- *Pronominal possessor → Antisubject oriented*
  Like the pronoun, the pronominal possessor *cannot* corefer with the subject.
  The pronominal possessor is antisubject oriented:

(7) **Coreference**

a. **Transitive**

raam-ne$_i$ [**us-kii**$_{*i/j}$ kitaab] parh-ii
Ram-ERG PRON-GEN book read-PFV
'Ram$_i$ read his$_{*i/j}$ book'

b. **Ditransitive**

raam-ne$_i$ anu-ko$_j$ [**us-kii**$_{*i/j/k}$ kitaab] dii
Ram-ERG Anu-DAT PRON-GEN book give.PFV
'Ram$_i$ gave Anu his$_{*i/j/k}$ book'

(8) **Quantifier binding**

a. **Transitive**

[har larke-ne]$_i$ [**us-kii**$_{*i/j}$ kitaab] parh-ii
every boy-ERG PRON-GEN book read-PFV
'Every boy$_i$ read his$_{*i/j}$ book'

b. **Ditransitive**

[har larke-ne]$_i$ anu-ko$_j$ [**us-kii**$_{*i/j/k}$ kitaab] dii
every boy-ERG Anu-DAT PRON-GEN book give.PFV
'Every boy$_i$ gave Anu$_j$ his$_{*i/j/k}$ book'

- *Nonsubject quantifiers → Only pronominal possessor*
  Quantifiers not in subject position can bind the pronominal possessor, but not
  the anaphoric possessor:

(9) a. **Pronominal possessor ✓**

raam-ne$_i$ [har larke-ko]$_j$ [**us-kii**$_{*i/j/k}$ kitaab] dii
Ram-ERG every boy-DAT PRON-GEN book give.PFV
'Ram$_i$ gave every boy$_j$ his$_{*i/j/k}$ book'

b. **Anaphoric possessor ✗**

raam-ne$_i$ [har larke-ko]$_j$ [**apnii**$_{i/\%j/*k}$ kitaab] dii
Ram-ERG every boy-DAT ANA.GEN book give.PFV
'Ram$_i$ gave every boy$_j$ his$_{i/\%j/*k}$ book'

- *Scrambling*

  – In general, like for their nonpossessive counterparts, word order permutations
    do not affect the binding possibilities of *apnaa* or *uskaa* in ordinary transitive
    and ditransitive structures (Dayal 1994).

(10) a. **Anaphoric possessor**
[**apnii**$_{i/*j}$ kitaab] raam-ne$_i$ t parh-ii   (*cf.* 5a)
ANA.GEN book Ram-ERG read-PFV
'Ram$_i$ read his$_{i/*j}$ book'

b. **Pronominal possessor**
[**us-kii**$_{*i/j}$ kitaab] raam-ne$_i$ t parh-ii   (*cf.* 7a)
PRON-GEN book Ram-ERG read-PFV
'Ram$_i$ read his$_{*i/j}$ book'

  – However, it is possible to scramble a DP above the subject in order to bind
    uskaa in the subject itself (Mahajan 1990; Dayal 1994). This is not possible
    with *apnaa*, however.

(11) a. **Anaphoric possessor**
*[har larke-ko]$_i$ [**apnii**$_i$ bɛhɛn-ne] t maar-aa
every boy-DOM ANA.GEN sister-ERG hit-PFV
Intended: 'For every boy x, x's sister hit x'

b. **Pronominal possessor**
[har larke-ko]$_i$ [**us-kii**$_i$ bɛhɛn-ne] t maar-aa
every boy-DOM PRON-GEN sister-ERG hit-PFV
'For every boy x, x's sister hit x'

⇒ Scrambling can feed binding *uskaa* (11b), but it cannot ameliorate antisubject
  orientation (10b).

The anaphoric possessor and pronominal possessor are in COMPLEMENTARY DISTRIBUTION in ordinary transitive and ditransitive structures.

(12) **Anaphoric and pronominal possessors in Hindi-Urdu**

	apnaa	*uskaa*
Condition A	✓	✗
Subject antecedent	✓	✗
Nonsubject antecedent	✗	✓
Quantifier binding	✓	✓

2.3 Dative–nominative structures

- In dative–nominative structures, the experiencer is dative and the theme is nominative:

(13) raam-ko   miiraa dikh-ii
   Ram-DAT Mira   appear-PFV
   'Ram saw Mira' (lit. Mira became visible to Ram)

- Standardly, the dative experiencer is considered the subject and the nominative theme is considered the object. However, we will see that this labelling is misleading.

- *Subject orientation breaks down*
  Crucially, the complementarity of *uskaa* and *apnaa*, which was discussed in the previous section, does not extend to dative-nominative structure.

  – *Dative argument*
  The dative can serve as the antecedent of either *uskaa* or *apnaa*:

  (14) a. **Anaphoric possessor**
      raam-ko$_i$ [**apnii**$_{i/*j}$ bɛhɛn] dikh-ii
      Ram-DAT ANA.GEN sister   appear-PFV
      'Ram$_i$ saw his$_{i/*j}$ sister'

    b. **Pronominal possessor**
      raam-ko$_i$ [**us-kii**$_{i/j}$ bɛhɛn] dikh-ii
      Ram-DAT PRON-GEN sister   appear-PFV
      'Ram$_i$ saw his$_{i/j}$ sister'

  – *Nominative argument*
  The nominative can also serve as the antecedent of either *uskaa* or *apnaa*:

  (15) a. **Anaphoric possessor**
      raam$_i$ [**apnii**$_{i/*j}$ bɛhɛn-ko] dikh-aa
      Ram   ANA.GEN sister-DAT appear-PFV
      'Ram$_i$ was seen by his$_{i/*j}$ sister'

    b. **Pronominal possessor**
      raam$_i$ [**us-kii**$_{i/j}$ bɛhɛn-ko] dikh-aa
      Ram   PRON-GEN sister-DAT appear-PFV
      'Ram$_i$ was seen by his$_{i/j}$ sister'

⇒ *Quantifier binding*
Although coreference with *uskaa* is possible, binding can only occur with *apnaa*, never with *uskaa* (Reese 2002):[3]

  (16) a. **Anaphoric possessor**
      [**har**   **laṛke-ko**]$_i$ [**apnii**$_{i/*j}$ bɛhɛn] dikh-ii
       every boy-DAT   ANA.GEN sister   appear-PFV
      'Every boy$_i$ saw his$_{i/*j}$ sister'

    b. **Pronominal possessor**
      [**har**   **laṛke-ko**]$_i$ [**us-kii**$_{*i/j}$ bɛhɛn] dikh-ii
       every boy-DAT   PRON-GEN sister   appear-PFV
      'Every boy$_i$ saw his$_{*i/j}$ sister'

- (16b) is surprising given that scrambling can otherwise feed binding *uskaa*.

✻ *Section summary*

(17) **Anaphoric and pronominal possessors in Hindi-Urdu**

	Elsewhere		Dative–nominative	
	apnaa	*uskaa*	*apnaa*	*uskaa*
Condition A	✓	✗	✓	✗
Subject antecedent	✓	✗	✓	✓
Nonsubject antecedent	✗	✓	✓	✓
Quantifier binding	✓	✓	✓	✗

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3 Example (16b) is the judgement reported in Reese (2002).

3 Proposal

- *In a nutshell*
  We argue that subject and antisubject orientation derive from (i) the binder of *apnaa* needing to move to [Spec, VoiceP] and (ii) the principle that such a derivation must be used whenever possible.

3.1 Subject orientation

✳ *Proposal*
  Binding the anaphor *apnaa* is facilitated by the functional head Voice^0.

- Following Kratzer (2009), Voice^0 may bear an INDEX FEATURE. This feature is interpreted as a λ-abstraction over that index at LF:

(18) $[_{\text{VoiceP}} \ \mathbf{XP}_r \ \text{Voice}^0_{[r]} \ [_{v\text{P}} \ \boldsymbol{t}_r \ v^0 \ [_{\text{VP}} \ [_{\text{DP}} \ \boldsymbol{apnaa}_r \ \text{NP} \ ] \ \text{V}^0 \ ]]]$

  $\rightsquigarrow$ LF: $[_{\text{VoiceP}} \ \mathbf{XP} \ \text{Voice}^0 \ \lambda r \ [_{v\text{P}} \ r \ v^0 \ [_{\text{VP}} \ [_{\text{DP}} \ r \ \text{NP} \ ] \ \text{V}^0 \ ]]]$

(19) **Semantic derivation of (18)**[4]

  a. $[\![\text{DP}]\!]^g = \text{POSS}(g(r))([\![\text{NP}]\!])$ *(where g is the assignment)*
      (the entity r's NP)

  b. $[\![\text{VP}]\!]^g = \lambda e \, . \, \text{V}\big(\text{POSS}(g(r))([\![\text{NP}]\!])\big)(e)$ *(via FA)*
      (an event of V-ing r's NP)

  c. $[\![v^0]\!]^g = \lambda x \lambda e \, . \, \text{AGENT}(x)(e)$
      (an event whose agent is x)

  d. $[\![v\text{P}]\!]^g = \lambda e \, . \, \text{AGENT}(g(r))(e) \wedge \text{V}\big(\text{POSS}(g(r))([\![\text{NP}]\!])\big)(e)$
      (an event of V-ing r's NP whose agent is r)   *(via EI)*

  e. $[\![\lambda r \, . \, v\text{P}]\!]^g = \lambda r \lambda e \, . \, \text{AGENT}(r)(e) \wedge \text{V}\big(\text{POSS}(r)([\![\text{NP}]\!])\big)(e)$
      (λr an event of V-ing r's NP whose agent is r)   *(via PA)*

  f. $[\![\text{VoiceP}]\!]^g = \lambda e \, . \, \text{AGENT}([\![\text{XP}]\!])(e) \wedge \text{V}\big(\text{POSS}([\![\text{XP}]\!])([\![\text{NP}]\!])\big)(e)$
      (an event of V-ing XP's NP whose agent is XP)   *(via FA)*

$\Rightarrow$ As a result, a DP must raise to [Spec, VoiceP] to bind *apnaa*.

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[4] Abbreviations: FA = Function Application, EI = Event Identification, PA = Predicate Abstraction

- *Locality of movement to [Spec, VoiceP]*
  Movement to [Spec, VoiceP] is standard A-movement such that only the highest DP in the structure, i.e. the subject, is eligible.

  – *In a transitive clause*
    Locality prevents the object from binding *apnaa* in the subject:

  (20) a. $[_{\text{VoiceP}} \ \_\_\_ \ \text{Voice}^0_{[r]} \ [_{v\text{P}} \ [_{\text{DP}} \ apnaa_r \ \text{NP} \ ] \ v^0 \ [_{\text{VP}} \ \text{Obj} \ \text{V}^0 \ ]]]$ ✗

      b. $[_{\text{VoiceP}} \ \_\_\_ \ \text{Voice}^0_{[r]} \ [_{v\text{P}} \ \text{Subj} \ v^0 \ [_{\text{VP}} \ [_{\text{DP}} \ apnaa_r \ \text{NP} \ ] \ \text{V}^0 \ ]]]$ ✓

  – *In a ditransitive clause*
    Locality prevents the indirect object from binding *apnaa*:

  (21) a. $[_{\text{VoiceP}} \ \_\_\_ \ \text{Voice}^0_{[r]} \ [_{v\text{P}} \ \text{Subj} \ v^0 \ [\ \text{IO} \ [_{\text{DP}} \ apnaa_r \ \text{NP} \ ] \dots]]]$ ✗

      b. $[_{\text{VoiceP}} \ \_\_\_ \ \text{Voice}^0_{[r]} \ [_{v\text{P}} \ \text{Subj} \ v^0 \ [\ \text{IO} \ [_{\text{DP}} \ apnaa_r \ \text{NP} \ ] \dots]]]$ ✓

  $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$

- *Why Voice^0?*
  In our proposal, Voice^0 does not assign a thematic role. But there is reason to believe that it is responsible for binding *apnaa*:[5]

  1. *Quirky (nonnominative) subjects*
     Poole (2015) argues that a DP acquires "subjecthood" properties (e.g. being PRO) by cyclically moving through a series of A-positions.

     – One of these subjecthood positions is [Spec, VoiceP] for binding subject oriented anaphora.

     – The crosslinguistic variation in the behaviour of quirky subjects follows from the possibility that they may not move to the highest subjecthood position—even though canonical nominative subjects do.

     $\rightsquigarrow$ This shows that functional heads are in part responsible for the distribution of subjecthood properties, which includes binding subject oriented anaphora.

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[5] Moving to [Spec, VoiceP] is a necessary condition for binding *apnaa*, but nothing rules out additional conditions being necessary. Thus, perhaps, moving to [Spec, VoiceP] is necessary, but not sufficient.

2. *Fake indexicals*

Kratzer (2009) documents instances of so-called "fake indexicals" where first-
and second-person pronouns can receive a bound-variable interpretation
only when the φ-features of the verb match those of the pronoun:

(22) Φ-agreement → **Bound reading possible**
    Wir sind die einzigen, die   **unseren**   Sohn
    we   are   the only.ones who.PL 1PL.POSS.ACC son

    versorg-**en**
    take.care.of-1/3PL

    'We are the only ones who are taking care of our son'

    [Kratzer 2009:191]

(23) **No φ-agreement → Bound reading not possible**
    Ich bin der einzige, der   **meinen**   Sohn versorg-**t**
    I   am   the only.one who.PL 1SG.POSS.ACC son   take.care.of-3SG
    'I am the only one who is taking care of my son'   [Kratzer 2009:191]

⤳ Because AGREE is involved, functional heads must be involved in binding
as well (see also Reuland 2011).

⇒ Accepting that a functional head is responsible for binding *apnaa*, Voice^0 is
the lowest possible head that could do so.

3.2 Antisubject orientation

✳ *Proposal*
The anaphor *apnaa* is used whenever the derivation would allow:

(24) ANAPHORIC PREFERENCE *(preliminary version)*
    Whenever the binder has moved to [Spec, VoiceP], use *apnaa*.

• In an ordinary transitive clause, the subject will have moved to [Spec, VoiceP].
Therefore, according to (24), this bleeds the ability to use a coreferring pronom-
inal possessor:

(25) a. [$_{\text{VoiceP}}$ ___ Voice$^0_{[r]}$ [$_{v\text{P}}$ DP v^0 [$_{\text{VP}}$ [$_{\text{DP}}$ *apnaa$_r$* NP] V^0]]]   ✓

    b. [$_{\text{VoiceP}}$ ___ Voice$^0_{[r]}$ [$_{v\text{P}}$ DP v^0 [$_{\text{VP}}$ [$_{\text{DP}}$ *uskaa$_r$* NP] V^0]]]   ✗

⇒ *No coreference restriction*
Thus, there is no general prohibition on coreference with a pronoun from a
c-commanding position, only a preference to bind using the anaphor *apnaa*
whenever possible.

• *Reinhart & Reuland*
The Anaphoric Preference in (24) is in the spirit of the idea in Reinhart &
Reuland (1993) that the complementarity of anaphors and pronouns is the result
of the requirement to use an anaphor whenever the predicate is reflexive and
vice versa.

• We will return later to an idea towards incorporating our proposal with Reinhart
& Reuland's (1993) proposal.

3.3 Dative–nominative structures

• *Reminder*
Recall that in dative–nominative structures, either the dative or the nominative
can corefer with *apnaa* and *uskaa*, but quantifier binding requires *apnaa*.

✳ *Structure of dative–nominative predicates*
We propose the following structure for dative–nominative predicates wherein
the dative is an external argument introduced by v^0_{EXP} and the nominative is an
internal argument of the verb itself:

(26) [$_{v\text{P}}$ DAT v^0_{EXP} [$_{\text{VP}}$ NOM V^0]]

• The evidence for treating the nominative as the internal argument of the verb
comes from instances where the nominative argument determines the particular
interpretation of the verb:

(27) a. **roumi-ko** *bhuukh* lag   rahii hɛ
        Roumi-DAT   hunger contact PROG be.PRS.SG
        'Roumi is feeling hungry'   [Bhatt 2003:6]

    b. **laṛke-ko** *coṭ*   lag-ii
        boy-DAT   wound contact-PFV
        'The boy was hurt'

- This criterion is the foremost employed in Kratzer (1996) (also Marantz 1984) to argue for syntactically and semantically distinguishing between internal and external arguments:

(28) a. throw **a baseball**

b. throw **support behind a candidate**

c. throw **a boxing match**

d. throw **a party**   [Marantz 1984]

∗ *Dative–nominative structures are reversible*
Davison (2004) argues that dative–nominative structures are REVERSIBLE:

– Either the nominative or the dative can A-move to the subject position, here [Spec, VoiceP].

– Subsequent $\overline{\text{A}}$-scrambling derives any deviations from the base-generated word order.

- *Reversibility → Subject orientation*
Reversibility allows either the nominative or the dative to raise to [Spec, VoiceP] and thus to bind the subject oriented anaphor *apnaa*.

(29) $[_{\text{VoiceP}}$ **DAT** Voice^0 $[_{vP}$ *t* **NOM** V^0 $]]$

(30) $[_{\text{VoiceP}}$ **NOM** Voice^0 $[_{vP}$ **DAT** *t* V^0 $]]$

- *Ability to use apnaa → Antisubject orientation*
We propose that binding requires the use of *apnaa* in dative–nominative structures because such a derivation is always available for either argument, given the reversibility.

⇒ Therefore, the inability to bind with *uskaa* in dative–nominative structures stems from a stronger version of the Anaphoric Preference:

(31) **ANAPHORIC PREFERENCE** *(final version)*
Whenever the binder has moved or **could have moved** to [Spec, VoiceP], use *apnaa*.

- (31) also rules out scrambling to bind *uskaa* in dative–nominative structures because either argument could have moved to [Spec, VoiceP].

3.4   Section summary

- *Subject orientation*
Binding the anaphor *apnaa* is facilitated by the functional head Voice^0.

- *Antisubject orientation*
Whenever the binder has moved or could have moved to [Spec, VoiceP], use *apnaa*.

- *Dative–nominative structures*
The reversibility of dative–nominative structures allows a derivation in which either the dative or the nominative has raised to [Spec, VoiceP]. This permits binding *apnaa* and bleeds the ability to bind *uskaa*.

4   Variation

- *Quick recap*
As discussed in section 2, the pronominal possessor *uskaa* does not allow quantifier binding in dative–nominative structures:

(32) a. **Dative binding into nominative**
*[**har**   **laṛke-ko**]$_i$ [**us-kii**$_i$ bɛhɛn] dikh-ii
    every boy-DAT   PRON-GEN sister   appear-PFV
    'Every boy$_i$ saw his$_i$ sister'

b. **Nominative binding into dative**
*[**har**   **laṛkaa**]$_i$ [**us-kii**$_i$ bɛhɛn-ko] dikh-aa
    every boy   PRON-GEN sister-DAT   appear-PFV
    'Every boy$_i$ was seen by his$_i$ sister'

- Again, (32) is surprising given that scrambling can generally feed binding *uskaa* outside of dative–nominative structures (Mahajan 1990; Dayal 1994):

(33) **Scrambling to bind** *uskaa*
[har   laṛke-ko]$_i$ [**us-kii**$_i$ bɛhɛn-ne] *t* maar-aa   (=11b)
 every boy-DOM   PRON-GEN sister-ERG   hit-PFV
 'For every boy *x*, *x*'s sister hit *x*'

⇒ *Speaker variation*
  Interestingly, some speakers do in fact allow a bound reading in dative–nominative structures with *uskaa*, contra (32). For these speakers, both (34a) and (34b) allow bound readings:

(34) a. **Dative binding into nominative**
      [**har   laṛke-ko**]$_i$ [**us-kii**$_i$ bɛhɛn] dikh-ii
       every boy-DAT   PRON-GEN sister   appear-PFV
       'Every boy$_i$ saw his$_i$ sister'

     b. **Nominative binding into dative**
      [**har   laṛkaa**]$_i$ [**us-kii**$_i$ bɛhɛn-ko] dikh-aa
       every boy   PRON-GEN sister-DAT   appear-PFV
       'Every boy$_i$ was seen by his$_i$ sister'

- This variation is summarised in the table below:

(35) **Speaker variation in dative–nominative structures**

	Group A		Group B	
	apnaa	*uskaa*	*apnaa*	*uskaa*
Condition A	✓	✗	✓	✗
Subject antecedent	✓	✓	✓	✓
Nonsubject antecedent	✓	✓	✓	✓
Quantifier binding	✓	✗	✓	✓

- Group A characterises the judgements that we have discussed thus far (32). Group B is the speaker variation that we are now introducing (34).

∗ *Proposal*
  We propose that speakers who allow binding of *uskaa* in (34a) and (34b) have access to an impoverished form of the complex anaphor *uskaa-apnaa*, which must be bound, but crucially is not subject oriented:

(36) **Underlying form of (34b)**
      [**har   laṛkaa**]$_i$ [**uskii-~~apnii~~**$_i$ bɛhɛn-ko] dikh-aa
       every boy   COMPLEX.GEN sister-DAT   appear-PFV
       'Every boy$_i$ was seen by his$_i$ sister'

- The derivation of (36) proceeds as follows:

  1. The dative moves to [Spec, VoiceP], precluding the use of *apnaa*.

  2. The nominative moves above [Spec, VoiceP] to bind *uskaa-apnaa*.

  3. *uskaa-apnaa* is impoverished as *uskaa* in the morphology.

- *Properties of uskaa-apnaa*
  In ordinary transitive (37) and ditransitive structures (38), *uskaa-apnaa* must be bound. However, crucially, it cannot be bound by the subject:

(37) *anu-ne$_i$ [**uskii-apnii**$_{i/j}$ kitaab] paṛh-ii
      Anu-ERG COMPLEX.GEN book read-PFV
      Intended: 'Anu$_i$ read his$_{i/j}$ book'

(38) ram-ne$_i$ mohan-ko$_j$ [**uskii-apnii**$_{*i/j/*k}$ kitaab] dii
      Ram-ERG Mohan-DAT COMPLEX.GEN book give.PFV
      'Ram$_i$ gave Mohan$_j$ his$_{*i/j/*k}$ book'

(39) **Anaphoric and pronominal possessors in Hindi-Urdu**

	apnaa	*uskaa*	*uskaa-apnaa*
Condition A	✓	✗	✓
Subject antecedent	✓	✗	✗
Nonsubject antecedent	✗	✓	✓
Quantifier binding	✓	✓	✓

- Under our analysis, *uskaa-apnaa* is unable to refer to the subject because the subject always moves to [Spec, VoiceP]. Unlike dative–nominative structures, this movement is deterministic because of locality and not reversible.

- Unlike *uskaa*, *uskaa-apnaa* is not in direct competition with *apnaa* in dative–nominative structures.

- Thus, although movement of the binder to [Spec, VoiceP] still requires using *apnaa*, it is also possible to move the DP containing *uskaa-apnaa* to [Spec, VoiceP] and then move its binder to some higher c-commanding position:

(40) [**NOM** … [$_{\text{VoiceP}}$ [*uskaa-apnaa*…]$_{\text{DAT}}$ Voice^0 [$_{vP}$ … t_{DAT} t_{NOM} V^0]]]

- For *uskaa*, this derivation would be ruled out because *uskaa* is in direct competition with *apnaa*:

(41) $\star$[**NOM** … [$_{\text{VoiceP}}$ [***uskaa***…]$_{\text{DAT}}$ Voice^0 [$_{v\text{P}}$ … t_{DAT} t_{NOM} V^0]]]
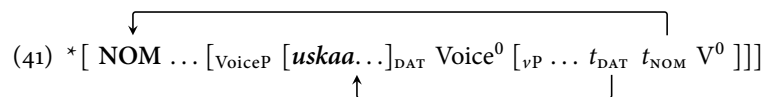
5 Conclusion

5.1 Summary

- We discussed subject and antisubject orientation of anaphoric and pronominal possessors respectively in Hindu-Urdu. Crucially, these two constraints do not fall under the purview of Standard Binding Theory (e.g. Chomsky 1981).

- We proposed that the locus of subject and antisubject orientation is Voice^0, the functional head responsible for binding the anaphoric possessor *apnaa* wherein the binder of *apnaa* must move to [Spec, VoiceP].

  - Subject orientation reduces to the locality of A-movement: only the highest DP, typically the external argument, is eligible for movement to [Spec, VoiceP].

  - Antisubject orientation is the result of the Anaphoric Preference to use *apnaa* whenever possible:

  (42) ᴀɴᴀᴘʜᴏʀɪᴄ Pʀᴇꜰᴇʀᴇɴᴄᴇ
       Whenever the binder has moved or could have moved to [Spec, VoiceP], use *apnaa*.

- Following Davison (2004), we argued that dative–nominative structures are *reversible*. This allows either argument to bind *apnaa* and, given (42), bleeds the ability to bind using the pronoun *uskaa*.

- We considered interspeaker variation: some Hindi-Urdu speakers allow a bound interpretation of *uskaa* in dative–nominative structures. We proposed that these speakers have access to an impoverished form of the complex anaphora *uskaa-apnaa*, which must be bound, but crucially is not subject oriented.

5.2 Further questions and extensions

- *Deriving the Anaphoric Preference*

  - Reinhart & Reuland (1993) define the requirement to use an anaphor in terms of coargumenthood: If the two arguments of a predicate are the same, the predicate is reflexive and thus must occur with an anaphor.

  - How can the anaphor requirement be relaxed from strict coargument to account for languages like Hindi-Urdu?

  - Ideally, this should be done without sacrificing the otherwise widespread empirical coverage of Reinhart & Reuland's (1993)'s theory.

  - The mobility of possessors in Hindi-Urdu might play a role:

  (43) [**kis   shɛhɛr-ki**]$_i$ raam [t$_i$ laṛkiyõ-se] mil-aa
       which city-ɢᴇɴ   Ram   girls-ᴄᴏᴍ   meet-ᴘꜰᴠ
       'Which city was it that Ram met the girls from?'   [Bhatia et al. 2011]

  - Bhatia et al. (2011) have shown that, with respect to the mobility of possessors in particular, Hindi-Urdu patterns as an NP language, according to Bošković's (2008) diagnostics.

  - The connection between being an NP language and having anaphoric possessors has been explored in Despić (2015), though not within the binding framework in Reinhart & Reuland (1993).

  - Therefore, this provide a promising direction for deriving the Anaphoric Preference.

- *A second point of speaker variation*

  - For some speakers, subject orientation is preferred, but not strictly required.

  - This raises the empirical question of whether this point of variation and the ability to bind using *uskaa* in dative–nominative structures correlate.

  - If the two covary, it would suggest that they have a common source.

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Appendix: Deriving reversibility

- *Two accounts of reversibility*
  There are two conceivable accounts of the reversibility of dative–nominative structures:

  1. *Base-generation*
     There are two base-generated orders: dative-over-nominative and nominative-over-dative. Whichever argument is highest moves to [Spec, VoiceP]:

     (44) $[_{VoiceP}$ **DAT** Voice^0 $[_{vP}$ t **NOM** V^0 $]]$ DAT–NOM

     (45) $[_{VoiceP}$ **NOM** Voice^0 $[_{vP}$ t **DAT** V^0 $]]$ NOM–DAT

  2. *Movement*
     There is only one base-generated order, dative-over-nominative, and the nominative argument is somehow able to A-raise over the dative argument:

     (46) $[_{VoiceP}$ **DAT** Voice^0 $[_{vP}$ t **NOM** V^0 $]]$

     (47) $[_{VoiceP}$ **NOM** Voice^0 $[_{vP}$ **DAT** t V^0 $]]$

  ↝ We assume some version of the movement account.

- *Equidistance analysis*
  Davison (2004) argues for a version of the movement account. She proposes that the dative and the nominative are EQUIDISTANT from Voice^0 (T^0 in her system) such that either one can raise to [Spec, VoiceP] without violating Minimality.

- *Remarks*
  – The base-generation analysis cannot account for the tight association between the nominative argument and the interpretation of the verb.

  – However, Davison's (2004) equidistance analysis requires both arguments to be base-generated in the same maximal projection, i.e. VP, in order for them to be equidistant from the relevant functional head. This cannot account for the external–internal argument distinction either.

⇒ Thus, the source of the reversibility of dative–nominative structures is a topic that warrants future research.