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:

(a) a. **Condition A**
Mary, showed Susan, *herself*

(b) b. **Condition B**
Mary, showed Susan, *her*

⇒ 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.

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.

• 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*.
2.1 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:

\[(2) \quad \text{Binding} \]

\[
\begin{align*}
\text{anu-ne}, & \quad \text{apne-aap} \cdot \text{ko}_{i/s} \cdot \text{maar} \cdot \text{aa} \\
\text{Anu} \cdot \text{erg} & \quad \text{ana} \quad \text{-dom} \quad \text{hit} \cdot \text{pfv}
\end{align*}
\]

‘Anu, hit himself’\[\text{or} \]

\[
\begin{align*}
\text{b. Quantifier binding} \\
[\text{har} \quad \text{larke-ne}] & \quad \text{apne-aap} \cdot \text{ko}_{i/s} \cdot \text{maar} \cdot \text{aa} \\
\text{every} \quad \text{boy} \cdot \text{erg} & \quad \text{ana} \quad \text{-dom} \quad \text{hit} \cdot \text{pfv}
\end{align*}
\]

‘Every boy, hit himself’

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

\[(3) \quad \text{Coreference} \]

\[
\begin{align*}
\text{anu-ne}, & \quad \text{us} \cdot \text{ko}_{s/i} \cdot \text{maar} \cdot \text{aa} \\
\text{Anu} \cdot \text{erg} & \quad \text{pron} \cdot \text{dom} \quad \text{hit} \cdot \text{pfv}
\end{align*}
\]

‘Anu, hit himself’

\[
\begin{align*}
\text{b. Quantifier binding} \\
[\text{har} \quad \text{larke-ne}] & \quad \text{us} \cdot \text{ko}_{s/i} \cdot \text{maar} \cdot \text{aa} \\
\text{every} \quad \text{boy} \cdot \text{erg} & \quad \text{pron} \cdot \text{dom} \quad \text{hit} \cdot \text{pfv}
\end{align*}
\]

‘Every boy, hit himself’

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.

\[\text{Anaphoric and pronominal possessors} \]

• **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 1996, Woolford 1999).

\[(4) \quad \text{a. Transitive} \]

\[
\begin{align*}
\text{* apne-aap}, & \quad \text{anu} \cdot \text{ko}_{i/s} \cdot \text{maar} \cdot \text{aa} \\
\text{Anu} \cdot \text{erg} & \quad \text{ana} \quad \text{-dom} \quad \text{hit} \cdot \text{pfv}
\end{align*}
\]

\[
\begin{align*}
\text{Intended:} & \quad \text{‘Anu, hit himself’}
\end{align*}
\]

\[\text{b. Dative–nominative structure} \]

\[
\begin{align*}
\text{* anu} \cdot \text{ko}_{i}, & \quad \text{apne-aap} \cdot \text{pasand} \cdot \text{he} \\
\text{Anu} \cdot \text{dat} & \quad \text{ana} \quad \text{like} \quad \text{be} \cdot \text{prs}
\end{align*}
\]

\[
\begin{align*}
\text{Intended:} & \quad \text{‘Anu, likes himself’}
\end{align*}
\]

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

\[(5) \quad \text{Binding} \]

\[
\begin{align*}
\text{a. Transitive} \\
\text{ram} \cdot \text{ne}_{i}, & \quad \text{[apni}_{i/s} \cdot \text{kitaab} \cdot \text{parh} - \text{ii}} \\
\text{Ram} \cdot \text{erg} & \quad \text{ana} \cdot \text{gen} \quad \text{book} \quad \text{read} \cdot \text{pfv}
\end{align*}
\]

\[
\begin{align*}
\text{‘Ram, read his book’}
\end{align*}
\]

\[
\begin{align*}
\text{b. Ditransitive} \\
\text{ram} \cdot \text{ne}_{i}, & \quad \text{anu} \cdot \text{ko}_{j} \cdot \text{[apni}_{i/s} \cdot \text{kitaab} \cdot \text{dii}} \\
\text{Ram} \cdot \text{erg} & \quad \text{anu} \cdot \text{dom} \quad \text{ana} \cdot \text{gen} \quad \text{book} \quad \text{give} \cdot \text{pfv}
\end{align*}
\]

\[
\begin{align*}
\text{‘Ram, gave Anu, his book’}
\end{align*}
\]

\[(6) \quad \text{Quantifier binding} \]

\[
\begin{align*}
\text{a. Transitive} \\
[\text{har} \quad \text{larke-ne}] & \quad \text{[apni}_{i/s} \cdot \text{kitaab} \cdot \text{parh} - \text{ii}} \\
\text{every} \quad \text{boy} \cdot \text{erg} & \quad \text{ana} \cdot \text{gen} \quad \text{book} \quad \text{read} \cdot \text{pfv}
\end{align*}
\]

\[
\begin{align*}
\text{‘Every boy, read his book’}
\end{align*}
\]

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

\[\text{Anaphoric possessor → Subject oriented} \]

\[\text{We treat unmarked DPs as bearing nominative case.} \]
b. **Ditransitive**

   [har larke-ne], anu-koj [apnii_{/i,j/s/k} kitaab] dii
   every boy-ERG ANU-DOM ANA.GEN book give-PFV
   'Every boy gave Anuj his_{i,j/s/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**

   [har larke-ne], [us-kiii_{i/j} kitaab] parh-ii
   Ram-ERG PRON-GEN book read-PFV
   'Ram read his_{i/j} book'

b. **Ditransitive**

   [har larke-ne], anu-koj [us-kiii_{i/j/j/k} kitaab] dii
   Ram-ERG ANU-DAT PRON-GEN book give.PFV
   'Ram gave Anuj his_{i,j/j/k} book'

(8) **Quantifier binding**

a. **Transitive**

   [har larke-ne], [us-kiii_{i,j} kitaab] parh-ii
   every boy-ERG PRON-GEN book read-PFV
   'Every boy read his_{i,j} book'

b. **Ditransitive**

   [har larke-ne], anu-koj [us-kiii_{i,j/j/k} kitaab] dii
   every boy-ERG ANU-DAT PRON-GEN book give.PFV
   'Every boy gave Anuj his_{i,j/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 ✓**

   [har larke-ko], [apnii_{i,j/s/k} kitaab] dii
   every boy-ERG PRON-GEN book give.PFV
   'Ram gave every boy_{i,j/s/k} book'

b. **Anaphoric possessor ✗**

   [har larke-ko], [apnii_{i,j/s/k} kitaab] dii
   Ram-ERG every boy-DAT ANA.GEN book give.PFV
   'Ram gave every boy_{i,j/s/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/s} kitaab] raam-nei, t parh-ii (cf. 5a)
   ANA.GEN book Ram-ERG read-PFV
   'Ram read his_{i,j/s} book'

b. **Pronominal possessor**

   [us-kiii_{i/j} kitaab] raam-nei, t parh-ii (cf. 7a)
   PRON-GEN book Ram-ERG read-PFV
   'Ram 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 1996, Dayal 1994). This is not possible with *apnaa*, however.

(11) a. **Anaphoric possessor**

   * [har larke-ko], [apnii, behen-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], [us-kiii, behen-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).
Interim summary
The anaphoric possessor and pronominal possessor are in complementary distribution in ordinary transitive and ditransitive structures.

(12) Anaphoric and pronominal possessors in Hindi-Urdu

<table>
<thead>
<tr>
<th>Condition A</th>
<th>apnaa</th>
<th>uskaa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject antecedent</td>
<td>✓</td>
<td>☑</td>
</tr>
<tr>
<td>Nonsubject antecedent</td>
<td>☑</td>
<td>✓</td>
</tr>
</tbody>
</table>

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.

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

      (15) a. Anaphoric possessor
        raam\_i \ [apnii\_i/sj behen-ko ] dikh-aa
        Ram \ ANA.GEN sister-DAT appear-PFV
        ‘Ram\_i was seen by his\_i/sj sister’

      b. Pronominal possessor
        raam\_i \ [us-kii\_i/j behen-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 larke-ko] \ [apnii\_i/sj behen] dikh-ii
        every boy-DAT ANA.GEN sister appear-PFV
        ‘Every boy\_i saw his\_i/sj sister’

      b. Pronominal possessor
        [har larke-ko] \ [us-kii\_i/l behen] dikh-ii
        every boy-DAT PRON-GEN sister appear-PFV
        ‘Every boy\_i saw his\_i/l sister’

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

  * Section summary

  (17) Anaphoric and pronominal possessors in Hindi-Urdu

<table>
<thead>
<tr>
<th></th>
<th>Elsewhere</th>
<th>Dative–nominative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>apnaa</td>
<td>uskaa</td>
</tr>
<tr>
<td>Condition A</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Subject antecedent</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Nonsubject antecedent</td>
<td>☑</td>
<td>✓</td>
</tr>
<tr>
<td>Quantifier binding</td>
<td>☑</td>
<td>✓</td>
</tr>
</tbody>
</table>

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:

\[
\begin{align*}
\text{(18)} & \quad [\text{VoiceP} \ \text{XP} \ \text{Voice}^0 \ {\lambda}_r \ [\text{VP} \ {\lambda}_r \ [\text{VP} \ {\lambda}_r \ [\text{VP} \ \text{apnaa}, \ \text{NP}] \ \text{V}^0]]] \\
\Rightarrow \text{LF:} & \quad [\text{VoiceP} \ \text{XP} \ \text{Voice}^0 \ {\lambda}_r \ [\text{VP} \ {\lambda}_r \ [\text{VP} \ \text{apnaa}, \ \text{NP}] \ \text{V}^0]]
\end{align*}
\]

- 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. \([\text{VP}]^g = {\lambda}e. \ V(\text{poss}(g(r))([\text{NP}]))(e)\) (via FA) (an event of V-ing \(r\)'s NP)
  c. \([\text{V}^0]^g = {\lambda}x \ {\lambda}e. \ \text{agent}(x)(e)\) (an event whose agent is \(x\))
  d. \([\text{VP}]^g = {\lambda}e. \ \text{agent}(g(r))(e) \land V(\text{poss}(g(r))([\text{NP}]))(e)\) (an event of V-ing \(r\)'s NP whose agent is \(r\)) (via EI)
  e. \([\text{VP}]^g = {\lambda}r \ {\lambda}e. \ \text{agent}(r)(e) \land V(\text{poss}(r)([\text{NP}]))(e)\) (an event of V-ing \(r\)'s NP whose agent is \(r\)) (via PA)
  f. \([\text{VoiceP}]^g = {\lambda}e. \ \text{agent}([\text{XP}](e) \land V(\text{poss}([\text{XP}])([\text{NP}]))(e)\) (an event of V-ing \(r\)'s NP whose agent is \(r\)) (via FA)

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

- 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:
    \[
    \begin{align*}
    \text{(20a)} & \quad [\text{VoiceP} \ {\lambda}_r \ [\text{VP} \ {\lambda}_r \ [\text{VP} \ {\lambda}_r \ [\text{VP} \ \text{apnaa}, \ \text{NP}] \ \text{V}^0]]] \ \times \\
    \text{(20b)} & \quad [\text{VoiceP} \ {\lambda}_r \ [\text{VP} \ {\lambda}_r \ [\text{VP} \ \text{apnaa}, \ \text{NP}] \ \text{V}^0]] \ \checkmark
    \end{align*}
    \]

  - In a ditransitive clause
    Locality prevents the indirect object from binding *apnaa*:
    \[
    \begin{align*}
    \text{(21a)} & \quad [\text{VoiceP} \ {\lambda}_r \ [\text{VP} \ {\lambda}_r \ [\text{VP} \ {\lambda}_r \ [\text{VP} \ \text{apnaa}, \ \text{NP}] \ \text{V}^0]]] \ \times \\
    \text{(21b)} & \quad [\text{VoiceP} \ {\lambda}_r \ [\text{VP} \ {\lambda}_r \ [\text{VP} \ \text{apnaa}, \ \text{NP}] \ \text{V}^0]] \ \checkmark
    \end{align*}
    \]

- 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 (nominative) 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.
   - This shows that functional heads are in part responsible for the distribution of subjecthood properties, which includes binding subject oriented anaphora.

---

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

^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*\textsuperscript{[1]} documents instances of so-called “fake indexicals” where first- and second-person pronouns can receive a bound-variable interpretation only when the $\varphi$-features of the verb match those of the pronoun:

\begin{align*}
(22) \varphi\text{-agreement} & \rightarrow \text{Bound reading possible} \\
\text{Wir sind die einzigen, die unseren Sohn versorgen.} & \quad \text{‘We are the only ones who are taking care of our son’}^\text{[Kratzer\,2009\,91]} \\
(23) \varphi\text{-agreement} & \rightarrow \text{Bound reading not possible} \\
\text{Ich bin der einzige, der meinen Sohn versorgt.} & \quad \text{‘I am the only one who is taking care of my son’}^\text{[Kratzer\,2009\,91]} \\
\rightarrow & \quad \text{Because Agree is involved, functional heads must be involved in binding as well (see also Reuland\,2011).} \\
\Rightarrow & \quad \text{Accepting that a functional head is responsible for binding apnaa, Voice}^0 \text{ is the lowest possible head that could do so.}
\end{align*}

3.2 Antisubject orientation

*$\star$ Proposal

The anaphor apnaa is used whenever the derivation would allow:

\begin{align*}
(24) \text{**Anaphoric Preference (preliminary version)**} \\
\text{Whenever the binder has moved to [Spec, VoiceP], use apnaa.}
\end{align*}

- 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 pronominal possessor:

\begin{align*}
(25) \text{a.} & \quad \left[\text{Voice}^0 \downarrow \text{Voice}^0\right] \left[v_P \text{ DP } v^0 \left[v_P \left[\text{DP apnaa}, \text{NP} \right] \text{ V}^0 \right] \right] \checkmark \\
\text{b.} & \quad \left[\text{Voice}^0 \downarrow \text{Voice}^0\right] \left[v_P \text{ DP } v^0 \left[v_P \left[\text{DP uskaa}, \text{NP} \right] \text{ V}^0 \right] \right] \times
\end{align*}

$\Rightarrow$ 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

*$\star$ 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:

\begin{align*}
(26) & \left[v_P \text{ DAT } v^0_{exp} \left[v_P \text{ NOM } V^0 \right] \right]
\end{align*}

- 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:

\begin{align*}
(27) \text{a.} & \quad \text{roumi-ko bhuukh lag rahii he} \quad \text{‘Roumi is feeling hungry’}^\text{[Bhatt\,2009\,6]} \\
(27) \text{b.} & \quad \text{larke-ko cot lag-ii} \quad \text{‘The boy was hurt’}
\end{align*}
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

* 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 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 apnāa.

(29) \[
\begin{array}{c}
\text{[VoiceP DAT Voice}^0 \,[ \_vP \_t \text{NOM V}^0 ] \] \\
\end{array}
\]

(30) \[
\begin{array}{c}
\text{[VoiceP NOM Voice}^0 \,[ \_vP \_t \text{DAT V}^0 ] \] \\
\end{array}
\]

- Ability to use apnāa → Antisubject orientation

We propose that binding requires the use of apnāa in dative–nominative structures because such a derivation is always available for either argument, given the reversibility.

⇒ Therefore, the inability to bind with uskāa 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 apnāa.

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

3.4 Section summary

- **Subject orientation**

  Binding the anaphor apnāa is facilitated by the functional head Voice$^0$.

- **Antisubject orientation**

  Whenever the binder has moved or could have moved to [Spec, VoiceP], use apnāa.

- **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 apnāa and bleeds the ability to bind uskāa.

4 Variation

- **Quick recap**

  As discussed in section 2, the pronominal possessor uskāa does not allow quantifier binding in dative–nominative structures:

(32) a. Dative binding into nominative

 * [ har larke-ko |i |us-kii | behen ] dikh-ii
 every boy-DAT pron-gen sister appear-PFV
 'Every boy, saw his sister'

 b. Nominative binding into dative

 * [ har larkaa |i |us-kii | behen-ko ] dikh-aa
 every boy pron-gen sister-DAT appear-PFV
 'Every boy was seen by his sister'

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

(33) Scrambling to bind uskāa

[ har larke-ko |i |us-kii | behen-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

\[ \text{har lark\-ke-k}\, [\text{us\-kii, behen}] \text{ dikh-ii} \]
\(\text{every boy} \text{ DAT PRON-GEN sister appear-PFV} \)
\(\text{‘Every boy, saw his, sister’} \)

b. Nominative binding into dative

\[ \text{har lark\-kaa}, \text{ [us\-kii, behen-k\-o] dikh-aa} \]
\(\text{every boy} \text{ PRON-GEN sister-DAT appear-PFV} \)
\(\text{‘Every boy, was seen by his, sister’} \)

• This variation is summarised in the table below:

<table>
<thead>
<tr>
<th></th>
<th>Group A</th>
<th>Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>apnaa</td>
<td>uskaa</td>
</tr>
<tr>
<td>Condition A</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Subject antecedent</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Nonsubject antecedent</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Quantifier binding</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

• 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:

(35) Underlying form of (34b)

\[ \text{har lark\-kaa}, \text{ [us\-kii\text{-apnii}, behen-k\-o] dikh-aa} \]
\(\text{every boy} \text{ COMPLEX-GEN sister-DAT appear-PFV} \)
\(\text{‘Every boy, was seen by his, sister’} \)
• The derivation of (36) proceeds as follows:
1. The dative moves to [Spec, VoiceP], precluding the use of 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 \text{[us\-kiii-apnii\text{-i\text{/i\text{/j}}} kitaab] parh-ii} \text{Anu-ERG COMPLEX-GEN book read-PFV}
\text{Intended: ‘Anu, read his\text{-}i\text{/i\text{/j} book’}

(38) ram-ne \text{[us\-kiii-apnii\text{-i\text{/i\text{/j}}} kitaab] dii} \text{Ram-ERG Mohan-DAT COMPLEX-GEN book give-PFV}
\text{‘Ram, gave Mohan his\text{-}i\text{/i\text{/j} book’}

(39) Anaphoric and pronominal possessors in Hindi–Urdu

<table>
<thead>
<tr>
<th></th>
<th>apnaa</th>
<th>uskaa</th>
<th>uskaa-apnaa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition A</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Subject antecedent</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Nonsubject antecedent</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Quantifier binding</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

• 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) \[ \text{NOM} \ldots \text{[VoiceP [uskaa-apnaa\ldots]} \text{DAT Voice}^0 \text{[VP \ldots t\text{-}DAT t\text{-}nom V}^0 \text{]}} \]
• For *uskaa*, this derivation would be ruled out because *uskaa* is in direct competition with *apnaa*:

\[
(41) \ *\left[\text{NOM} \ldots \left[\text{VoiceP} \left[\text{*uskaa} \ldots \right]_{\text{DAT}} \text{Voice}^0 \left[\text{VP} \ldots \left[\text{t}_{\text{D}} \text{t}_{\text{Nom}} \text{V}^0 \right]\right]\right]\right]
\]

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 Voice⁰, 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:

\[
(42) \ \text{Anaphoric Preference} \quad \text{Whenever the binder has moved or could have moved to [Spec, VoiceP], use *apnaa*}.
\]

• 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) theory.

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

\[
(43) \ \left[\text{kis sheher-ki}, \text{raam [t, laarkiyö-se] mil-aa} \quad \text{which city-GEN Ram girls-COM meet-PFV} \right]
\]

  ‘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.
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]:

\[
\begin{align*}
(44) & & [\text{VoiceP} \ DAT \ Voice^0 \ [\nu_p \ t \ NOM \ V^0 ]] & & \text{DAT–NOM} \\
(45) & & [\text{VoiceP} \ NOM \ Voice^0 \ [\nu_p \ t \ DAT \ V^0 ]] & & \text{NOM–DAT}
\end{align*}
\]

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:

\[
\begin{align*}
(46) & & [\text{VoiceP} \ DAT \ Voice^0 \ [\nu_p \ t \ NOM \ V^0 ]] \\
(47) & & [\text{VoiceP} \ NOM \ Voice^0 \ [\nu_p \ DAT \ V^0 ]]
\end{align*}
\]

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.

Acknowledgements:
Many thanks to Rajesh Bhatt and Gurmeet Kaur for help with the data, and to the Syntax–Semantics Reading Group at the University of Massachusetts Amherst for their helpful feedback. The second author is supported by the National Science Foundation Graduate Research Fellowship under NSF DGE-0907995.


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