Deriving subject and antisubject orientation

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Abstract

This paper investigates subject and antisubject orientation in Hindi-Urdu. We argue that the locus of these two binding constraints is Voice^0, the functional head responsible for binding the anaphoric possessor *apnaa*, wherein the binder of *apnaa* must raise to [Spec, VoiceP]. Subject orientation reduces to the locality of A-movement. Antisubject orientation is the result of a preference to use the anaphor *apnaa* whenever possible. We show that this proposal extends to dative–nominative structures, where the complementarity of subject and antisubject orientation for anaphors and pronouns breaks down. Finally, we examine speaker variation of quantifier binding with *uskaa* in dative–nominative structures.

1 Introduction

In Standard Binding Theory, the distribution of anaphors and pronouns is dictated by Conditions A and B, which state nominal distribution in terms of c-command. However, in many languages, **c-command alone is insufficient** to account for nominal distribution. In this paper, we investigate such a case in Hindi-Urdu: anaphoric and pronominal possessors. The anaphoric possessor *apnaa* must corefer with the subject; it is SUBJECT ORIENTED. The pronominal possessor *uskaa* cannot corefer with the subject; it is ANTISUBJECT ORIENTED. Subject and antisubject orientation do not fall under the purview of Conditions A and B. We will argue that the locus of these constraints is Voice^0, coupled with a preference to use the anaphor *apnaa* whenever possible. This will correctly predict the binding possibilities in simplex clauses, in addition to dative–nominative structures.

2 Subject and antisubject orientation

Binding Conditions A, B, and C are all active in Hindi-Urdu (Dayal 1994). Subject and antisubject orientation are *in addition* to the standard binding constraints. In this section, we review subject and antisubject orientation of anaphors and pronouns in Hindi-Urdu. We then show how the complementarity of these two constraints breaks down in dative–nominative structures.

2.1 Anaphors and pronouns

Anaphors in Hindi-Urdu are SUBJECT ORIENTED: they must be bound by the subject of the clause (1). Pronouns, on the other hand, are ANTISUBJECT ORIENTED: they cannot corefer with the subject (2). We use the term "subject" descriptively, as we will later see that it is a misnomer in light of dative–nominative structures. Moreover, in (1) and (2), note that both ordinary and quantifier binding are given and that word order permutations do not affect the binding possibilities.[2]

(1) {anu-ne$_i$ / har laṛke-ne$_i$} **apne-aap-ko**$_{i/*j}$ maar-aa *Anaphor*
Anu-ERG every boy-ERG ANA -DOM hit-PFV
'Anu$_i$ / Every boy$_i$ hit himself$_{i/*j}$'

(2) {anu-ne$_i$ / har laṛke-ne$_i$} **us-ko**$_{*i/j}$ maar-aa *Pronoun*
Anu-ERG every boy-ERG PRON-DOM hit-PFV
'Anu$_i$ / Every boy$_i$ hit him$_{*i/j}$'

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2.2 Anaphoric and pronominal possessors

Additionally, Hindi-Urdu has both an anaphoric possessor *apnaa* and a pronominal possessor *uskaa*, whose behaviour mirrors their nonpossessive counterparts, as outlined in section 2.1. 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 (3) (Rizzi 1990, Woolford 1999).

(3) *Anaphoric Agreement Effect*

a. ***apne-aap**$_i$ anu-ko$_i$ maar-ega
ANA Anu-DOM hit-FUT
Intended: 'Anu$_i$ will hit himself$_i$' (*cf.* 1)

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

Like the anaphor, the anaphoric possessor must corefer with the subject (for most speakers); it is subject oriented. This is shown for transitive and ditransitives in (4). The fact that we are dealing with binding and not simple coreference is illustrated through the availability of quantifier binding.

(4) *Anaphoric possessor is subject oriented*

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

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

In contrast to the anaphor and the anaphoric possessor, but like the pronoun, the pronominal possessor cannot corefer with the subject; it is antisubject oriented (5). In (5), the impossibility of quantifier binding from subject position shows that genuine binding is unavailable.

(5) *Pronominal possessor is antisubject oriented*

a. {raam-ne$_i$ / har laṛke-ne$_i$}
Ram-ERG every boy-ERG
[**us-kii**$_{*i/j}$ kitaab] paṛh-ii
PRON-GEN book read-PFV
'Ram$_i$ / Every boy$_i$ read his$_{*i/j}$ book'

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

Furthermore, quantifiers not in subject position can bind the pronominal possessor, but not the anaphoric possessor (6).[3]

(6) *Nonsubject quantifier requires pronominal possessor*
raam-ne$_i$ [har laṛke-ko]$_j$ [{**us-kii**$_{*i/j/k}$ / **apnii**$_{i/\%j/*k}$} kitaab] dii
Ram-ERG every boy-DAT PRON-GEN ANA.GEN book give.PFV
'Ram$_i$ gave every boy$_j$ USKAA$_{*i/j/k}$ / APNAA$_{i/\%j/*k}$ book'

In general, like their nonpossessive counterparts, word order permutations do not affect the binding possibilities of *apnaa* or *uskaa* in ordinary transitive and ditransitive structures (7)–(8) (Dayal 1994). However, even though scrambling cannot ameliorate antisubject orientation, it is possible to scramble a DP above the subject to bind *uskaa* in the subject itself (10) (Mahajan 1990, Dayal 1994). Such an option is not available with *apnaa* (9).

[3]We use USKAA and APNAA in the translation to disambiguate when necessary, as both are translated as 'him/her'.

(7) *Anaphoric possessor*
[**apnii**$_{i/*j}$ kitaab] raam-ne$_i$ t paṛh-ii
ANA.GEN book Ram-ERG read-PFV
'Ram$_i$ read his$_{i/*j}$ book' (*cf.* 4a)

(8) *Pronominal possessor*
[**us-kii**$_{*i/j}$ kitaab] raam-ne$_i$ t paṛh-ii
PRON-GEN book Ram-ERG read-PFV
'Ram$_i$ read his$_{*i/j}$ book' (*cf.* 5a)

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

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

Summarising the discussion thus far: The anaphoric possessor and the pronominal possessor are in COMPLEMENTARY DISTRIBUTION in ordinary transitive and ditransitive structures. However, we will see in the next section that this complementarity does not extend to dative–nominative structures in Hindi-Urdu.

2.3 Dative–nominative structures

In dative–nominative structures, the experiencer is marked with dative and the theme is marked with nominative (11). 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.

(11) [**raam-ko**]$_{\text{DAT}}$ [**miiraa**]$_{\text{NOM}}$ dikh-ii
Ram-DAT Mira appear-PFV
'Ram saw Mira' (lit. Mira became visible to Ram)

Crucially, the complementarity of *uskaa* and *apnaa*, as discussed in the previous section, does not extend to dative-nominative structures. The dative can serve as the antecedent of either *apnaa* or *uskaa* (12). Likewise, the nominative can also serve as the antecedent of either *apnaa* or *uskaa* (13).

(12) **raam-ko**$_i$ [{**apnii**$_{i/*j}$ / **us-kii**$_{i/j}$ } bɛhɛn] dikh-ii *Dative binding into nominative*
Ram-DAT ANA.GEN PRON-GEN sister appear-PFV
'Ram$_i$ saw APNAA$_{i/*j}$ / USKAA$_{i/j}$ sister'

(13) **raam**$_i$ [{**apnii**$_{i/*j}$ / **us-kii**$_{i/j}$ } bɛhɛn-ko] dikh-aa *Nominative binding into dative*
Ram ANA.GEN PRON-GEN sister-DAT appear-PFV
'Ram$_i$ was seen by APNAA$_{i/*j}$ / USKAA$_{i/j}$ sister'

As reported in Reese (2002), although coreference with *uskaa* is possible, quantifier binding can only occur with *apnaa*, never with *uskaa* (14). The judgment reported in (14) is surprising given that scrambling should be able to feed binding *uskaa*; see section 2.2.

(14) *Quantifier binding requires anaphoric possessor*
[**har laṛke-ko**]$_i$ [{**apnii**$_{i/*j}$ /**us-kii**$_{*i/j}$ } bɛhɛn] dikh-ii
every boy-DAT ANA.GEN PRON-GEN sister appear-PFV
'Every boy$_i$ saw APNAA$_{i/*j}$ / USKAA$_{*i/j}$ sister' [modelled after Reese 2002]

The data discussed so far are summarised in (15). In the next section, we present our proposal.

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

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

3 Proposal

In this section, we lay out our proposal that the binding of *apnaa* is facilitated by Voice^0, which requires the antecedent DP to raise to [Spec, VoiceP] in order for *apnaa* to obtain a bound interpretation. Sections 3.1 and 3.2 discuss subject orientation and antisubject orientation respectively. Section 3.3 then extends the proposal to dative–nominative structures.

3.1 Subject orientation

We propose that the binding of *apnaa* is facilitated by Voice^0, which requires the antecedent DP to raise to [Spec, VoiceP] to obtain a bound interpretation. The subject orientation of *apnaa* thus follows from the locality of this movement only being able to target the highest DP, i.e. the subject.

Following Kratzer (2009), we adopt the theory that binding is facilitated by verbal functional heads. These heads are what introduce semantic binders (λ-operators), as INDEX FEATURES, rather than the antecedent DPs themselves. In particular, we propose that Voice^0 may bear such an index feature. This feature matches the index borne by the antecedent DP and *apnaa*. Crucially, it attracts the antecedent DP to [Spec, VoiceP]. At LF, the index feature is interpreted as a λ-abstraction over that index. Thus, it abstracts over both the trace of the antecedent DP and the anaphor *apnaa*, yielding a "reflexive" predicate (Reinhart and Reuland 1993). The antecedent DP, occupying [Spec, VoiceP], then saturates the λ-abstraction. This proposal is schematised in (16).[4]

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

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

The semantic derivation of (16) proceeds as in (17).[5] First, the DP containing *apnaa* composes with the verb V^0 via Function Application (17b). The index r at this point in the derivation is dependent on the variable assignment function g. Second, the VP composes with v^0, which introduces the external argument, via Event Identification (17d) (following Kratzer 1996). Third, the index feature borne by Voice^0 is interpreted as a λ-abstraction over the index r (17e). Fourth, the XP in [Spec, VoiceP] saturates the λ-abstraction introduced by the index feature (17f).

(17) *Semantic derivation of (16)*

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

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

[4] To simplify exposition, we assume that Voice^0 does not assign a thematic role; rather, this is handled by v^0.
[5] FA = Function Application, EI = Event Identification, PA = Predicate Abstraction, POSS = Possessor

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

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

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

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

As a consequence of Voice^0 facilitating the binding of *apnaa*, its binder *must* raise to [Spec, VoiceP]. In (16)–(17), the actual semantic binding comes from the λ-abstraction that binds two variables corresponding to the antecedent DP's trace and the anaphor respectively. If the antecedent DP failed to raise to [Spec, VoiceP], then (i) the λ-abstraction corresponding to the index feature would not bind both positions, and hence the LF would not be a semantically bound configuration, and (ii) the antecedent DP would not saturate the variable corresponding to the anaphor.

Movement to [Spec, VoiceP] is standard A-movement such that only the highest DP in the structure is eligible. In ordinary circumstances, the highest DP will be the subject. For example, in a transitive clause, locality will block the object from raising over the subject to [Spec, VoiceP], thus correctly preventing the object from binding *apnaa* in the subject (18).

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

b. $[_{\text{VoiceP}}$ ___ $\text{Voice}^0_{[r]}$ $[_{v\text{P}}$ Subj v^0 $[_{\text{VP}}$ $[_{\text{DP}}$ $\textit{apnaa}_r$ NP] V^0]]]

In the same vein, locality blocks the indirect object in a ditransitive from raising over the subject to [Spec, VoiceP], thus correctly preventing the indirect object from binding *apnaa* (19).

(19) a. $*[_{\text{VoiceP}}$ ___ $\text{Voice}^0_{[r]}$ $[_{v\text{P}}$ Subj v^0 [IO $[_{\text{DP}}$ $\textit{apnaa}_r$ NP] V^0]]]

b. $[_{\text{VoiceP}}$ ___ $\text{Voice}^0_{[r]}$ $[_{v\text{P}}$ Subj v^0 [IO $[_{\text{DP}}$ $\textit{apnaa}_r$ NP] V^0]]]

Therefore, the standard locality of A-movement derives the subject orientation of *apnaa* under our proposal that its binding is facilitated by Voice^0.

There are two independent reasons to believe that Voice^0 is responsible for binding *apnaa*.[6] The first reason comes from 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 anaphors. He argues that the crosslinguistic variation in the behaviour of quirky subjects follows from the possibility that they may not move to the highest subjecthood position in a language, even when canonical nominative subjects do. First, this shows that functional heads are in part responsible for the distribution of subjecthood properties, including binding subject oriented anaphors. Second, because our proposal is compatible with his, this paper helps to situate Hindi-Urdu in the broader typology of subjecthood.

The second reason for identifying Voice^0 as the locus of binding in Hindi-Urdu comes from fake indexicals, which constitute the original evidence presented in Kratzer (2009) for functional heads handling binding (see also references therein). She documents instances in German of fake indexicals

[6] It is worth mentioning that moving to [Spec, VoiceP] is a necessary condition for binding *apnaa*, but nothing rules out additional conditions being necessary for its felicity.

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. Compare (20a) with (20b).

(20) a. *φ-agreement → Bound reading possible*
Wir sind die einzigen, die **unseren** Sohn versorg-**en**
we are the only.ones who.PL 1PL.POSS.ACC son take.care.of-1/3PL
'We are the only ones who are taking care of our son'

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

Under standard assumptions, because AGREE is involved in binding, functional heads must also be involved. Finally, accepting that a functional head is responsible for binding *apnaa*, Voice^0 is the lowest possible head in the functional sequence that could do so. This makes it a natural choice.

3.2 Antisubject orientation

We propose that antisubject orientation is the result of a preference to use the anaphor *apnaa* whenever the derivation would allow. We call this the Anaphoric Preference (21).

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

In an ordinary transitive clause, the subject will have moved to [Spec, VoiceP], as argued above. Therefore, according to (21), this bleeds the ability to use a coreferring pronominal possessor (22).

(22) $[_{\text{VoiceP}}$ ___ $\text{Voice}^0_{[r]}$ $[_{v\text{P}}$ DP v^0 $[_{\text{VP}}$ $[_{\text{DP}}$ {***apnaa***$_r$ / ****uskaa***$_r$} NP] V^0]]]

According to (21), there is no general prohibition on coreference with a pronoun from a c-commanding position in Hindi-Urdu. There is only a preference to bind using the anaphor *apnaa* whenever possible. This will be important in the next section for dative–nominative structures.

The Anaphoric Preference is in the spirit of the idea in Reinhart and 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. Although properly exploring how their proposal might be modified to account for Hindi-Urdu *apnaa* is beyond the scope of this paper, we will mention an idea in this direction at the end of the paper.

3.3 Dative–nominative structures

Recall from section 2.3 that in dative–nominative structures, either the dative or the nominative can corefer with the anaphor *apnaa* or the pronoun *uskaa*, but quantifier binding requires *apnaa*. We propose the following structure in (23) for dative–nominative predicates: the dative is an external argument introduced by v^0_{EXP} and the nominative is an internal argument of the verb itself.

(23) *Structure of a dative–nominative predicate*
$[_{\text{VoiceP}}$ Voice^0 $[_{v\text{P}}$ DAT v^0_{EXP} $[_{\text{VP}}$ NOM V^0]]]

The evidence for treating the nominative as an internal argument of the verb comes from instances where the nominative argument determines the particular interpretation of the verb (24)–(25).

(24) **raam-ko** *bhuukh* lag rahii hɛ
Ram-DAT hunger contact PROG be.PRS.SG
'Ram is feeling hungry' [Bhatt 2003:6]

(25) **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, as illustrated in (26).

(26) throw **a baseball**, throw **support behind a candidate**, throw **a party** [Marantz 1984]

The crucial property of dative–nominative structures that yields their special binding behaviour is that they are REVERSIBLE (Davison 2004). Davison argues that either the nominative or the dative argument can A-move to the subject position, which here is [Spec, VoiceP].[7] Subsequent $\overline{\text{A}}$-scrambling derives any deviations from the base-generated word order, obscuring the underlying structure. Reversibility crucially allows either the nominative or the dative to raise to [Spec, VoiceP] and thus allows either argument to bind the subject oriented anaphor *apnaa*, as schematised in (27).

(27) a. $[_{\text{VoiceP}}$ **DAT** Voice^0 $[_{v\text{P}}$ t **NOM** V^0 $]]$ b. $[_{\text{VoiceP}}$ **NOM** Voice^0 $[_{v\text{P}}$ **DAT** t V^0 $]]$

We propose that quantifier binding requires the use of *apnaa* in dative–nominative structures because such a derivation is in principle always available for either argument, given reversibility. In other words, the inability to bind with *uskaa* in dative–nominative structures stems from the Anaphoric Preference (21). The Anaphoric Preference also rules out scrambling to bind *uskaa* in dative–nominative structures because either argument could have moved to [Spec, VoiceP].

4 Variation

As discussed in section 2, the pronominal possessor *uskaa* does not allow quantifier binding in dative–nominative structures (28). This fact is surprising given that scrambling can otherwise feed binding *uskaa* outside of dative–nominative structures (29) (Mahajan 1990, Dayal 1994).

(28) a. *Dative binding into nominative*
*[**har** **laṛke-ko**]$_i$ [**us-kii**$_i$ bɛhɛn] dikh-ii
every boy-DAT PRON-GEN sister appear-PFV
Intended: '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
Intended: 'Every boy$_i$ was seen by his$_i$ sister' [modelled after Reese 2002]

(29) *Scrambling to bind uskaa*
[**har** **laṛke-ko**]$_i$ [**us-kii**$_i$ bɛhɛn-ne] t maar-aa (=10)
every boy-DOM PRON-GEN sister-ERG hit-PFV
'For every boy x, x's sister hit x'

However, interestingly, some speakers do in fact allow bound interpretations of *uskaa* in dative–nominative structures, contra (28). For these speakers, both (28a) and (28b) allow bound readings. This variation is summarised in the table in (30). Group A characterises the judgements that we have discussed thus far. Group B is the speaker variation that we are now introducing.

[7] Another conceivable way to achieve reversibility is to have two base-generated orders: dative-over-nominative and nominative-over-dative. Whichever argument is highest moves to [Spec, VoiceP]. However, this analysis cannot account for the tight association between the nominative argument and the interpretation of the verb. Thus, we follow Davison (2004) in assuming that the reversibility of dative–nominative structures must be achieved via movement.

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

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

We propose that Group B speakers, who allow binding of *uskaa* in (28a) and (28b), have access to an *impoverished* form of the complex anaphor *uskaa-apnaa*, which masquerades as *uskaa*. The complex anaphor *uskaa-apnaa* must be bound, but crucially is not subject oriented and thus cannot be bound by the subject (31). The behaviour of *uskaa-apnaa* is summarised in (32).

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

b. 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'

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

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

According to our impoverishment proposal, the sentence in (28b), where the nominative binds into the dative, has the underlying structure in (33) for Group B speakers.

(33) *Underlying form of (28b) for Group B speakers*
[**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 (33) proceeds as follows: First, the dative containing *uskaa-apnaa* moves to [Spec, VoiceP]. Second, the nominative moves above [Spec, VoiceP] to bind *uskaa-apnaa*. Finally, *uskaa-apnaa* is impoverished as *uskaa* in the morphology. This derivation is schematised in (34).

(34) [**NOM** … [$_{\text{VoiceP}}$ [***uskaa-apnaa*** NP]$_{\text{DAT}}$ Voice^0 [$_{v\text{P}}$ … t_{DAT} t_{NOM} V^0]]]

Under our analysis, and the proposals in section 3, the ability to use *uskaa-apnaa* requires one of the following two conditions to be satisfied: (i) its binder not be in [Spec, VoiceP], because this would force using *apnaa* given the Anaphoric Preference, or (ii) the DP containing *uskaa-apnaa* itself move to [Spec, VoiceP], from where it can subsequently be bound by a higher (scrambled) DP. The latter condition precludes the use of *apnaa* in place of *uskaa-apnaa*. Crucially, in ordinary transitive and ditransitive structures, movement to [Spec, VoiceP] is *deterministic* such that it is always the

highest argument that raises to [Spec, VoiceP]. This categorically prohibits the subject from binding *uskaa-apnaa* in either structure; hence the antisubject orientation of *uskaa-apnaa*. Thus, in transitive structures, *uskaa-apnaa* is ungrammatical in object position because there is no available binder (31a), and, in ditransitive structures, only the goal can bind *uskaa-apnaa* (31b). Moreover, it is possible for *uskaa-apnaa* to be in the subject itself and be bound by a scrambled object (35b) because the subject moves to [Spec, VoiceP] and hence satisfies the second condition.

(35) a. *[**uske-apne**$_i$ maalik-ne] [**har naukar-ko**]$_i$ bulaa-yaa
COMPLEX.GEN employer-ERG every servant-DOM call-PFV
Intended: 'His$_i$ employer called every servant$_i$'

b. [**har naukar-ko**]$_i$ [**uske-apne**$_i$ maalik-ne] t bulaa-yaa
every servant-DOM COMPLEX.GEN employer-ERG call-PFV
'For every servant x, x's employer called x'

(35b) is analogous to what happens in a dative–nominative structure. In dative–nominative structures, because movement to [Spec, Voice] is not deterministic due to reversibility, *uskaa-apnaa* in either the dative or nominative argument can move to [Spec, VoiceP]. This allows the other argument to scramble above [Spec, VoiceP] and bind *uskaa-apnaa*. This begets the question of why a similar derivation is not available for *uskaa* in dative–nominative structures.

We leave this question open for future research, but suggest an avenue of thinking: While *uskaa* and *apnaa* are in competition, *uskaa-apnaa* and *apnaa* are not. A derivation with *apnaa* is thus always preferred over one with bound *uskaa* in dative–nominative structures because such a derivation is always available, given reversibility. Coreference with *uskaa* is permitted, which does not require proper binding; see section 3.2. No such preference exists for *apnaa* over *uskaa-apnaa*, permitting a derivation like (34). Thus, the problem reduces to how one implements competition; see section 5.1.

5 Conclusion

We discussed subject and antisubject orientation of anaphoric and pronominal possessors respectively in Hindu-Urdu. Crucially, these two constraints on binding do not fall under the purview of Standard Binding Theory (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:

(36) Anaphoric Preference
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 (36), bleeds the ability to bind using the pronoun *uskaa*, thereby deriving the non-complementarity of anaphoric and pronominal possessors in dative–nominative structures. Finally, 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 anaphor *uskaa-apnaa*, which must be bound, but crucially is not subject oriented.

5.1 Further questions and extensions

Reinhart and 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. This raises the question of how the anaphor requirement ought to be relaxed from strict coargument to account for languages like Hindi-Urdu, where possessors (i.e. non-coarguments) fall

under the purview of the binding system as well. Ideally, this should be done without sacrificing the otherwise widespread empirical coverage of Reinhart and Reuland's (1993)'s theory. The mobility of possessors in Hindi-Urdu might play a role (37).

(37) [**kis** **shɛhɛr-kii**]$_i$ raam [t$_i$ laṛkiyõ-se] mil-aa
which city-GEN Ram girls-COM meet-PFV
'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 the diagnostics of Bošković (2008). Moreover, the connection between being an NP language and having anaphoric possessors has been explored in Despić (2015), though not within the binding framework of Reinhart and Reuland (1993). Therefore, this provides a promising direction for deriving the Anaphoric Preference in Hindi-Urdu.

Finally, a second point of speaker variation concerns the preference but not strict requirement of subject orientation for some Hindi-Urdu speakers. 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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