A Short Note on Wh-scope-marking

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Abstract

The Wh-scope marking strategy in natural language has been a lively issue in the syntactic and semantic literature for the last two decades, starting with the seminal work by McDaniel (1989) and followed by a number of equally influential analyses. Most accounts of Wh-scope marking constructions can be classified under three broad camps: (a) the direct dependency approach (McDaniel, 1989; Riemsdijk, 1982); (b) the indirect dependency approach (Dayal, 1996; Srivastava, 1991) and (c) the mixed dependency approach (Hovarth, 1997; Mahajan, 1990, 1996; Mahajan and Fanselow, 2000). This paper highlights the limitations of some of these studies and proposes yet another approach to Wh-scope marking – the overt movement approach. Our analysis centers on Hindi/Urdu Wh-scope marking constructions. In the course of our discussion, some interesting dialectal variations on the phenomenon are also brought into light.

Introduction

The phenomenon of wh-scope marking is attested in a wide variety of languages including Hindi-Urdu, German, Romani, Iraqi Arabic, Hungarian, Russian and Polish (cf. Dayal, 1994; McDaniel, 1998; Mahajan and Fanselow, 2000; Stepanov, 2000). The term *wh-scope marking* was first used by Riemsdijk (1982) for a specific type of construction, where a *wh*-element in the matrix clause marks the scope of another *wh*-element in the embedded finite clause. The matrix wh-element is called the *wh-scope marker*. Consider the following representative examples from Hindi-Urdu.

(1) raam kyaa maantaa hai ki siitaa kisko pyaar karti hai?
Ram what believes be that Sita who-acc love does be
Matrix Question: 'Who does Ram believe that Sita loves?'
*Embedded question: ‘Ram believes who Sita loves’

(2) raam maantaa hai ki siitaa kisko pyaar karti hai
Ram believes be that Sita who-acc love does be
*Matrix Question: 'Who does Ram believe that Sita loves?'
Embedded question: ‘Ram believes who Sita loves’

As we notice with the above examples, wh-phrases in finite complement clauses take matrix scope only when there is a wh-scope marker present in the matrix clause. In more concrete terms, only structures like (1) can elicit answers like (3).

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(3) raam maantaa hai ki sitaa bill-ko pyaar karti hai.
Ram believes is that Sita Bill-Acc love does be
'Ram believes that Sita loves Bill'

This phenomenon is very similar to what we observe in languages like English, where wide scope for the wh-phrase is possible only when the element undergoes overt movement to the matrix clause. This is illustrated in the contrast between (4) and (5).

(4) What does John know that Mary likes?

(5) John knows what Mary likes.

In the former, the wh-phrase moves overtly to a sentence-initial position and takes matrix scope, in direct contrast to the latter, where the wh-phrase undergoes partial movement (possibly to the edge of the embedded clause) and subsequently, fails to gain wide scope. In the case of (so-called) wh-in-situ languages like Hindi-Urdu, (1)-(2) show that the presence of a wh-scope marker in the matrix clause is crucial to derive wide scope for a wh-phrase embedded inside the finite complement clause. An in-situ wh-phrase is unable to gain wide scope otherwise.[1]

Hindi-Urdu wh-scope marking questions share many of their properties with wh-scope marking constructions from other languages (cf. Fanselow, 1997). These shared properties are listed below in (a)-(f), along with representative examples from Hindi-Urdu.

(a) A wh-phrase (of any morphological form) can appear in the embedded clause of a wh-scope marking question (see (6)).

(6) John-ne kyaa sochaa ki Mary kab/kyun/kahaan/kaise jaaye-gii
John-erg what thought that Mary when/why/where/how go-will
'When/Why/Where/How did John think that Mary will go?'

(b) The embedded clause can have more than one wh-phrase. This is shown in (7) which hosts multiple embedded wh-phrases.

(7) John-ne kyaa sochaa ki kaun kis-se mila
John-erg what thought that who whom met
'Who did John think met whom?'

[1] It is unclear if Hindi-Urdu is really a wh-in-situ language (as previously suggested by Dayal, 1994, 1996a, 1996b; Mahajan, 1990). If island-sensitivity serves as a diagnostic for overt movement, then there is reason to doubt the canonical categorization of the language as a wh-in-situ language. For more evidence of wh-movement in Indo-Aryan languages, see Yang (2006), Simpson and Bhattacharya (2003) and Chandra (2007, in prep).

(c) The wh-scope marker and the associated wh-word must not be in the same clause (cf. Mahajan, 1996). (8) is rendered unacceptable since the scope-marker and the actual wh-phrase surface in the same clause.

(8) *John-ne kyaa kis-se mila
John-erg what whom met
'Who did John meet?'

(d) Wh-scope marking structures in Hindi-Urdu mimic their counterparts in languages like German, Polish and Russian and do not allow clausal negation to separate the wh-scope marker and the matrix verb. This is illustrated with (9).

(9) *John-ne kyaa nahi sochaa ki Mary kis-se milegii
John-erg what not thought that Mary whom meet
'Who did John not think that Mary will meet?'

Importantly, there is no such constraint for yes-no questions. For a matrix verb like *ask*, which does not take an interrogative complement, this is an acceptable matrix yes-no question. See (10).

(10) John-ne kyaa (yeh) nahi puchaa ki Mary kis-se milegii
John-Erg what (this) not told that Mary whom met
'Didn't John ask who Mary met?'

(e) Every intermediate clause must have a wh-scope marker; the wh-phrase and the scope marker cannot be separated by more than one (CP) clause. Contrast (11) with (12).

(11) John-ne kyaa sochaa ki mary-ne kyaa maanaa ki Bill kis-se milaa
John-erg what thought that Mary-erg what believed that Bill whom met?
'Who did John think that Mary believed that bill met?

(12) *John-ne kyaa sochaa ki mary-ne maana ki Bill kis-se milaa
John-erg what thought that Mary-erg believed that Bill whom met?

(f) The second clause of a wh-scope marking interrogative can be a yes/no question rather than a wh-question, as the example in (13) shows.

(13) John-ne kyaa bolaa ki kyaa bill aaye-gaa
John-erg what said that what Bill come-will
'What did John say about whether Bill will come?'

We start with a brief discussion of the properties of wh-scope marking constructions in Hindi-Urdu in section 1. In section 2, we detail previous accounts

on the phenomenon and show how they fall short of accounting for all the facts of Hindi-Urdu wh-scope marking constructions. An alternative analysis is given in section 3. Next, in section 4, we discuss some remaining issues including multiple wh-scope marking sentences. Section 5 concludes the paper.[2]

In the next section, we present the main theses of the three major approaches to wh-scope marking structures and discuss how they do not suffice for languages like Hindi-Urdu.

1 Various approaches to wh-scope marking strategy

1.1 The Direct Dependency Approach (DDA) Riemsdijk (1982) and McDaniel (1989) start with the observation that wh-scope marking questions receive interpretations similar to long distance questions. The wh-scope marker plays the role of an expletive like element, which has the formal feature [+wh] but does not contribute to the meaning of the sentence. It is base generated in the matrix clause. At LF, the true wh-phrase moves to the higher clause and replaces the wh-scope marker, in accordance with the principle of Full Interpretation (Chomsky, 1986).

To account for multiple occurrences of the wh-expletive in case of several embeddings (see (11)), McDaniel (1989) uses the notion of "wh-chains". The idea is that the sequence of wh-scope markers, the true wh-phrase and its trace form a wh-chain at S-structure. At LF, the true wh-phrase replaces all the wh-scope markers and consequently takes wide scope.

One piece of counter evidence often cited in the literature (Dayal, 1996a; Stepanov, 2001) against DDA is that languages with wh-scope marking constructions also allow the second clause to be a yes-no question, as we saw with (13). The argument is that since there is no element in the embedded clause that can possibly raise at LF and replace the wh-expletive, it will lead to a non-existent interpretation. Not replacing the wh-expletive will in turn result in a violation of the principle of Full Interpretation. We believe that a possible solution to this problem is to assume that the wh-scope marker in case of yes-no questions is different from the wh-scope marker in wh-questions. This claim tallies well with the fact that the denotation of a yes-no question – unlike that of interrogatives - is not the set of its propositional answers. Hence, the yes-no *kyaa* in (13) does not need to be substituted at LF. Such sentences therefore do not violate Full Interpretation.

The second challenge to DDA comes from the fact that the lower clause can have more than one wh-phrase (as noted in example (6)). In these cases, there is only one wh-expletive in the matrix clause against two wh-phrases in the embedded clause. In DDA, it is not possible to figure out which wh-phrase is

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[2] Wh-phrases can be scrambled long-distance, as illustrated below.

(i) kis-ko raam-ne sochaa ki bill-ne t_i dekhaa
who-Acc Ram-erg thought that Bill-erg saw
'Who did Ram think Bill saw?

These structures are beyond the scope of this paper.

associated with the wh-expletive. This is a question that will also concern us and hence, we postpone its discussion till a later part of the paper.

Another problem that DDA may face, and one that has not received much attention in the literature is that it has no account for why wh-expletives obey strong island effects (CNPC, Adjunct islands etc).

(14) *raam-ne kyaa kahaa ki ravii-ko [$_{NP}$ye baat [$_{CP}$ki mira kyaa khaae-gii]] pataa hai
Ram-erg what said that Ravi-Dat this thing that Mira what eat- will know is
'What did Ram say that Ravi knows the fact that Mira will eat?'

(15) *raam-ne kyaa kahaa ki Sitaa bazaar jayegii [kyunki John-ne kyaa nahi diyaa]
Ram-erg what said that Sita market go-will because John-erg what not gave
'What did Ram say that Sita will go to the market because John didn't give?'

The assumption in DDA is that the wh-expletive is base generated in the matrix clause and it is only at LF that the true wh-phrase moves and replaces it. However the presence of strong island effects suggests that the wh-scope marker moves overtly in narrow syntax, contrary to what the adherents of DDA propose. Covert movement is generally insensitive to strong islands (Huang, 1982).

1.2 The Indirect Dependency Approach Dayal (1994, 1996) assumes that each clause in a wh-scope marking construction forms a separate question. Under this view, the wh-scope marker is a regular wh-phrase, and not an expletive. It originates as an XP in the complement position of the matrix predicate, just like in regular questions. This approach borrows its main insight from Hamblin (1973), where the denotation of a question is a set of its propositional answers. A wh-expression in this framework is interpreted as an existential quantifier and the wh-scope marker is said to quantify over propositions

(16) John-ne kyaa sochaa ki Mary kis-se mili.
John-erg what thought that Mary who-acc met
'Who did John think that Mary met?'
Paraphrase: For which proposition q, q is the answer to "who did Mary meet?", John thinks q?

Under this view, (16) denotes a set of propositions of the form "John thinks q", where q is limited to the set of answers to the question 'Mary met whom'. This excludes other possible propositions from the answer set.

This analysis posits no direct syntactic relation between the wh-scope marker and the wh-phrase in the embedded clause. The wh scope marker originates in the argument position of the matrix verb and the finite clause (within which the wh-phrase is base-generated) is adjoined to the matrix clause compositionally. However, the denotation of the entire wh-question is derived by function application, whereby the denotations of both CPs are combined.

The underlying assumption in this analysis is that the wh-scope marker and the wh-phrase are never part of the same constituent at any point of the derivation. Empirical support for this assumption are (a) the different morphological forms of the wh-scope marker and the wh-phrase and (b) the presence of multiple wh-phrases in the embedded clauses. It is nonetheless, not immediately evident if different morphological shapes of two elements must be taken as evidence for claiming that they do not form part of the same constituent (see Uriagereka, 1995, for clitic doubling structures in Romance languages and Chandra, 2003, for left dislocation in Hindi-Urdu). Second, multiple occurrences of wh-phrases do not necessarily entail the obligatory presence of multiple scope-markers. Indeed in English, we find that only one wh-phrase occupies the canonical wh-position, namely the specifier of CP, though co-occurring in-situ wh-phrases take wide scope simultaneously. The presence of a single scope marker in Hindi-Urdu could be for the same reasons that only one wh-phrase surfaces at the left periphery in English.

But the biggest challenge this approach faces is from the strong island effects visible with Hindi-Urdu wh-scope marking constructions. Dayal (1996) side-tracks this issue by proposing that Hindi-Urdu island effects are visible at LF. What she fails to answer though is why Hindi-Urdu, unlike other wh-in-situ languages like Chinese must impose subjacency effects on covert movement.

1.3 The Mixed Dependency Approach Mahajan (1996) comes up with a mixed dependency approach, under which the higher wh- phrase is an expletive associated with the embedded interrogative clause and is indirectly linked to the true wh-phrase. Later, Fanselow and Mahajan (2000) refine this approach and suggest that there is a direct link between the matrix wh-element and the embedded wh-expression (17). Under this view, the embedded question is the complement of the wh-element *kyaa*. The wh-expletive along with the embedded interrogative clause forms a complex DP, which forms the object of the matrix verb. The wh-expletive and the embedded CP are in an expletive-associate relation, and at LF the embedded CP replaces the expletive.

(17) $[_{VP}$ kyaa$_i$ sochaa $[_{DP}$ t$_i$ $[_{CP}$ ki $[_{IP}$ kaun aayeg-aa]]]
what thought that who come-will

The problem with the representation in (17) is that it predicts movement of the wh-scope marker out of a complex NP island (as *kyaa* originates outside the

CP boundary that may contain an island). If the scope marker is contained outside a DP-CP structure, we expect to see acceptable structures with islands separating the scope markers and their wh-phrases, contra fact. Mahajan and Fanselow's analysis therefore makes incorrect predictions about Hindi-Urdu wh-scope marking constructions.

In a nutshell, all hitherto proposed solutions are at a loss at the face of a more careful empirical investigation. In response, we propose an overt movement alternative that is more suited to the phenomenon at hand.

2 The movement alternative

As opposed to the dominant approaches, we argue for a movement account for the wh-scope marking strategy. We propose that the two wh-phrases base-generate as a single complex DP. In the course of the derivation, the wh-element *kyaa* moves to a position in the matrix clause while the other wh-phrase remains stranded inside the embedded CP. *kyaa* has a Q-feature that it checks against a matrix head (to be made more precise below). By virtue of being sister to the moved element, the in situ wh-phrase gains wide scope without undergoing movement itself. Evidence in support for our claim comes from two empirical facts, (a) multiple occurrences of wh-phrases in all intermediate clauses and, (b) strong island effects. Contrast the acceptable (18) with the unacceptable (19)-(21).

(18) raam-ne kyaa sochaa [ki ravii-ne kyaa kaha [ki siitaa-ne kyaa bolaa ki
Ram-erg what thought that Ravi-erg what said that Sita-erg what told that
kaun aaya]]]]
who came
'Who did Ram think that Ravi said that Sita told came?'

(19) *raam-ne sochaa [ki ravii-ne kyaa kaha [ki siitaa-ne kyaa bolaa [ki
Ram-erg thought that Ravi-erg what said that Sita-erg what told that
kaun aayaa]]]
who came

(20) *raam-ne kyaa sochaa [ki ravii-ne kaha [ki siitaa-ne kyaa bolaa [ki
Ram-erg what thought that Ravi-erg said that Sita-erg what told that
kaun aayaa]]]
who came

(21) *raam-ne kyaa sochaa ki ravii-ne kyaa kaha ki siitaa-ne bolaa ki kaun
Ram-erg what thought that Ravi-erg that said that Sita-erg told that who
aayaa
came

As we notice with the sentences above, though the wh-phrase remains inside the lowest clause, the wh scope marker must be visible in each intermediate

clause. We assume it to result from the successive cyclic movement of the wh-scope marker: *kyaa* base generates in the lowest clause and moves successive cyclically via each intermediary clause.

Secondly as we have already discussed, wh-scope marking cannot take place across islands. For instance, the following examples (22)-(23) are ill formed with embedded wh-phrases contained within complex NP-islands and adjuncts respectively. An account in terms of overt movement can provide the most natural explanation for why the following structures are bad. Overt movement is subject to subjacency; the wh-scope marker moves overtly and therefore its movement is sensitive to islands.

(22) *[raam-ne kyaa kahaa [ki ravii-ko [yeh baat [ki mira kyaa khaae-gii]
Ram-erg what said that Ravi-dat this fact that Mira what eat-will
pataa hai]][3]
know is
'What did Ram say that Ravi knows the fact that Mira will eat?'

(23) *raam-ne kyaa kahaa [ki sitaa bazaar jaayegii [kyunki mohan kyaa nahi
Ram-erg what said that Sita market go-will because Mohan what not
layaa]
bring
'What did Ram say that Sita will go to the market because Mohan didn't bring?"

The above examples bear testimony to our movement account. We unpack the analysis in the following sections.

2.1 The landing site We must first take into account the landing site of the moved element. As we demonstrate below, it is hard to locate it directly using standard diagnostics, as different dialects in Hindi-Urdu pattern differently in this regard. Let us begin with the following examples:

(24) raam-ne sharmate hue-se kyaa kahaa ki [kaun aaye-gaa]
Ram-erg coyly-with what said that who come-will
'Who did Ram coyly say would come'

[3] One could claim that the unacceptability of (22) arises from the absence of a wh-scope marker in the intermediate clause (after the subject *Ravi-ko*). However, a wh-scope marker in that position changes (22) to a yes-no question, suggesting that it is not a possible landing site for a scope marker. For (23) on the other hand, an intermediate wh-scope marker is implausible. Since these scope markers are otherwise possible in intermediate clauses (see section 1), these above-mentioned facts just strengthen our claim that their original position is within the most deeply embedded clause and they are disabled from moving to their surface positions when intervened by island boundaries.

(25) %raam-ne kyaa sharmate-hue kahaa ki [kaun aaye-gaa]
Ram-erg what coyle-with said that who come-will

(26) raam-ne mira-ko kyaa bataya ki [kaun aaye-gaa]
Ram-erg Mira-acc what told that who come-will
'Who did Ram tell Mira will come?

(27) %raam-ne kyaa mira-ko bataya ki kaun aayegaa.
Ram-erg what Mira-acc told that who come-will

In (24), we see the expletive *kyaa* following the matrix adverbial, which should be taken as indicating that the expletive hasn't moved beyond the edge of matrix vP.[4] This is of course under the assumption that the matrix adverbial is adjoined to main clause vP and not to I'. Similarly in (26), the expletive follows the indirect object. Once again assuming that the indirect object hasn't moved beyond vP, we may tentatively conclude from this sentence that the expletive is placed at the edge of vP. The picture becomes murky when we contrast these examples with structures like (25) and (27), where the wh-phrases precede the matrix adverbial and the indirect object respectively. These sentences are marked % depicting different grammaticality judgments amongst our informants regarding them. While some find these structures completely unacceptable, others find them degraded. This dialectal variation shows that at least for some speakers (i.e. those who find (25) and (27) acceptable), the wh-scope marker may move beyond the edge of vP. We return to discuss the dialectal variation again, but let us first consider some more data pertaining to the structural position of the scope marker.

Some more evidence for a vP-edge position for the scope marker comes from structures with clausal negation. In Hindi-Urdu, clausal negation must be strictly local to the lexical verb. However as we notice in (28) and (29), clausal negation cannot intervene between the matrix verb and *kyaa*[5]. Interestingly neither can *kyaa* intervene between the matrix verb and negation. The prohibition on their co-occurrence must rest on the fact that they both need to be adjacent to the verb. Let us assume for the sake of discussion that negation in Hindi-Urdu is positioned above vP. That suggests that the raised scope marker occupies a position between negation and the lexical verb, which disturbs the linear adjacency requirement imposed on the negative clitic and the verb.

[4] If our analysis is right, it further suggests that vP is a phase in Hindi-Urdu. Thanks to Ivan Ortega-Santos for directing our attention to this implication.

[5] Interestingly when the wh-phrase moves overtly, the sentence is still bad.

(i) Kaun Ram-ne nahii kahaa ki aaye-gaa
who Ram-Erg not said that come-will

(28) *raam-ne kyaa nahi bataya ki kaun aaye-gaa
Ram-erg what not told that who come-will
'Who didn't Ram tell will come?'

(29) *raam-ne nahi kyaa bataya ki kaun aaye-gaa
Ram-erg not what told that who come-will

Similar is the case with focus and contrastive focus particles in Hindi-Urdu, which must be adjacent to elements they focus. Consider the sentences below where the focus clitics *bhii* and *hi* is separated from the verb by the intervening scope marker. Linear adjacency requirement between the clitic and the verb is once again violated, which explains the unacceptability of the following structures.

(30) a. * raam-ne kyaa kahaa hi ki kaun aayegaa
Ram-Erg what said foc. that who come-will
'Who was it that John said will come'
b. * raam-ne kyaa kahaa bhii ki kaun aayega.
Ram-Erg what said also that who come-will
'What is it that John also said who will come'

(31) a. *raam-ne hi kyaa kahaa ki kaun aayegaa.
Ram-Erg only what said that who come-will.
b. *raam-ne kyaa hi kahaa ki kaun aayegaa
Ram-Erg what only said tht who come-will

It is also worth mentioning at this point that structures like (28) become felicitous for some speakers in the context where the speakers are aware that Ram knows something that he did not share with them. Once again, the fact that these sentences are acceptable to only some speakers indicates that there are dialectal variations on the structural position of the scope marker. (30)-(31) on the other hand, are unanimously ruled out by both sets of speakers consulted for this study. These structures point out that for some, the scope marker must use the domain of vP as its final landing site, whereas for others, this position is merely used as an escape hatch for further movement. The contrast we observed previously between structures like (24)/(26) and (25)/(27) is probably due to the ability of certain speakers to move the scope marker further up the tree.

Let us summarize the main observations here. We have presented some evidence suggesting that the scope marker must be adjacent to the verb for some speakers. Linear adjacency between the verb and the scope marker disturbs linear adjacency between the verb and negative clitics and focus particles. Note that the linear adjacency requirement on wh-phrases and the lexical verb is not unique to Hindi-Urdu. Basque for instance, shows a similar constraint on moved wh-phrases (cf. Uriagereka, 1999). Moved wh-scope markers in Hindi-Urdu pattern like

Basque in this regard. Scope markers target matrix vP-domain and consequently prohibit negation and focus elements from staying linearly adjacent to lexical verbs.

2.2 Is *Kyaa* an X-0 or an XP? A second important question to deal with here concerns the status of the scope marker. Is *kyaa* an X-0 or an XP? Consider the Hindi-Urdu examples in (28)-(31) again in this regard. The scope marker and the negative and focus particles are in complementary distribution. On the assumption that negation and focus particles constitute separate heads in Hindi-Urdu, we suggest that the scope marker is an X-0 that adjoins to the functional verbal head, a position that other clitics (including negatives and focused) elements also target. The following sentences however suggest otherwise. Consider the following examples.

(32) kis-ko raam-ne (*kyaa) sochaa ki bill-ne dekhaa
*who-Acc Ram-erg (*what) thought that Bill-erg saw*
'Who did Ram think Bill saw?'

(33) *Ram-ne kyaa kahaa ki bill-ko mary-ne kyaa kahaa ki kaun aayaa?
Ram-erg what said that Bill Mary-erg what said that who came
'Who did Ram say that Mary told Bill came?'

As we observe with (32), when the wh-phrase itself moves overtly, *kyaa* fails to appear. The incompatibility between a moved wh-phrase and a wh-scope marker in the matrix clause could be taken to indicate that they are both XPs, which explains why they block each other's path. The unacceptability of (33), where scrambled DPs and the scope marker cannot co-exist in the same sentence also point in the same direction. Both undergo A-bar movement and hence intervene each other's movement.

This is a rather interesting set of puzzles. On the one hand, we find wh-scope markers behaving like X-0's blocking other clitics from adjoining to the verbal head. On the other hand, these elements also seem to be sensitive to the presence of other A-bar elements in the same clause, indicating that they are XPs undergoing A-bar movement. We suggest that the answer to this puzzle lies in the fact that Hindi-Urdu scope markers are actually XPs that undergo A-bar movement but finally cliticize as X-0 onto the matrix verbal head. It is widely known that clitics have properties of both heads and phrases. Like clitics, wh-scope markers seem to retain both X-0 and XP properties in Hindi-Urdu.

Notice however that this analysis explains only part of the data. Something more needs to be said about the dialect that allows speakers to scramble the scope marker further. Recall that these speakers allow negation and scope marker to co-occur under certain contexts, but do not allow focus or negative clitics to co-exist with the scope marker. One tentative solution is that these speakers also adjoin the scope marker to the matrix verbal head. However in addition, they let the scope

marker to 'excorporate' from the verbal head that it adjoins to and move higher up the structure. We then predict these speakers to share their linguistic intuitions about negative clitics and focus particles with speakers from the other set. The prediction is borne out. These speakers also prohibit wh-scope markers from becoming clause-mates to other clitics. Once the scope marker is excorporated and moved further, its copy disturbs the linear adjacency requirement between the verb and other clitics. However for this option to work, Hindi-Urdu must allow excorporation, an option not commonly attested in natural language. We leave this question open to future research.

In summary, we propose that the scope marker constitutes a complex DP with the wh-phrase and is base-generated as sister to the embedded verb. This is shown in (34). The scope marker has a +Q feature that must be satisfied against a functional head, which propels it to move successive-cyclically via intermediate CP and vP-specifiers until it lands in the domain of matrix vP. It checks its Q feature against v by adjoining to it. Schematically (35):

(34) [VP-1 [DP kyaa-kisko] dekhaa]
what-whom saw

(35) [CP_1 [TP_1 raam-ne [vP_1 $kyaa_i$ sochaa [CP_2 $kyaa_i$ ki [TP_2 siitaa-ne kyaa
Ram-erg what thought what that sita-erg what
[vP_2 t_i khayaa]]]]]]
ate

2.3 A quick note on the absence of scope markers in infinitivals Non-finite clauses provide some interesting insights on wh-scope marking phenomenon. Let us explore this matter further and look at the distributional properties of non-finite clauses in Hindi-Urdu. We limit our attention to observations by those speakers who impose a strict linear adjacency requirement on wh-scope markers and verbs. Interestingly for these speakers, some of the properties noticed with wh-scope markers also extend to non-finite clauses. As for instance, they must put the infinitivals too in a pre-verbal position and immediately adjacent to the verb (see Chandra, 2005, 2007, on infinitivals that do not take case-markers like *ko* and their variant behavior). Consider the following:

(36) raam-ne suresh-ko [miira-se kyaa lene]-ko kahaa.
Ram-erg Suresh-Acc [Mira-with what take]-acc said
'What did Ram ask Suresh to take from Mira ?'

(37) *raam-ne [miira-se kyaa lene]-ko suresh-ko kahaa.
Ram-erg [Mira-with what take]-acc Suresh-Acc said

Notice that the non-finite clauses in the above examples (36)-(37) are case marked in Hindi-Urdu. Following Dayal (1996), we propose that non-finite

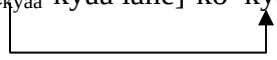
clauses in some dialects of Hindi-Urdu are nominalized IPs (also see Butt, 1997), which occur in a case position to the left of the verb. Assuming an universal SVO order for languages, we contend that these clauses move to the specifier of matrix vP to receive a case-value from the verbal head. Interestingly enough, case-marked non-finites fail to license wh-scope markers (38). Infinitivals may however contain in situ wh-elements that are not linked to scope markers, as (39) illustrates.

(38) *raam-ne [miraa-ko kyaa lane]-ko kyaa kahaa
Ram-erg [Mira-Acc what bring]-acc what told
'What did Ram tell Mira to bring?'

(39) raam-ne [miira-ko kyaa laane]-ko kahaa.
Ram-erg [Mira-acc what bring]-acc said

Under the movement approach that we have proposed here, there is an easy way to rule out (38). We assume that natural language disallows movement out of moved elements (the Chain Uniformity Condition à la Takahashi, 1994). Once the clause moves, it renders impossible overt movement for the wh-scope marker to v. Such a movement is also ruled out because it involves lowering; the scope marker moves out of the IP at the specifier of vP to adjoin to v. Lowering not being a preferred option in overt syntax, this movement is judged incorrect. Schematically:

(40) *[$_{IP}$raam-ne [$_{vP}$ [$_{IP}$miraa-ko t_{kyaa}-kyaa lane]-ko kyaa-kahaa t_{IP}



3 Some remaining issues

There are a couple of important issues to tackle before we conclude this paper. As already mentioned in section 2, though embedded clauses may bear multiple wh-phrases, the matrix clause must host only one wh-scope marker (an obvious problem faced by the DDA). This might seem a challenge for our account too since multiple wh-phrases in principle must be associated with multiple scope markers. However on closer inspection, this does not appear a real problem. We know that languages vary on whether they choose to overtly move their wh-phrases or prefer to keep them in situ. Moreover, even within languages where wh-movement is allowed, they have the option of moving either all or just one wh-phrase. Hindi-Urdu belongs to the set of languages that opts for wh-movement only under the wh-scope marking strategy. It is also one of those languages like English, which allows only one wh-phrase to move, or to be more precise, allows the scope marker associated to only one wh-phrase to move overtly. But then, how do the other in situ wh-phrases take scope if they lack scope-markers that could move overtly and assign them wide scope? Observe that this question is not

restricted to wh-scope marking constructions. It is equally relevant for simple clauses with multiple wh-phrases, such as the following:

(41) Raam-ne kisko kyaa diyaa?
Ram-erg. who what give
'What did Ram give to whom?'

Whatever is the mechanism via which multiple wh-phrases take scope in simple clauses, we can apply the same to bi-clausal structures. We will adopt the standard assumption in the literature that all in situ wh-phrases (other than those whose scope markers have overtly moved) move to scope at LF. In Hindi-Urdu structures like (41) as well as bi-clausal structures employing the scope marking strategy, all in situ wh-phrases move covertly. The final landing site is the domain of the head encoding the question feature in the language.

There is another interesting issue to tackle here. For structures with multiple in situ wh-phrases, we must also find out which wh-phrase has its scope-marking sister move overtly out to the main clause, i.e which wh-phrase out of multiple wh-phrases is linked to the scope marker in such sentences. To answer this, we appeal to the *Minimal Negative Structure constraint* (42) proposed by Beck (1996).

(42) Minimal Negative Structure Constraint (MNSC)
If an LF trace 'a' is dominated by a Negation-Induced Barrier (NIB) 'b', then the binder of 'a' must also be dominated by 'b'.

(43) Negation-Induced Barrier (NIB)
The first node that dominates a negative quantifier, its restriction, and its nuclear scope is a Negation-Induced Barrier (NIB).

Beck proposes (42)-(43) based on German structures like the following.

(44) ??Was glaubt niemand wen Karl gesehen hat?
what believes nobody whom Karl seen has
'Who does nobody believe that Karl saw?'

(45) Wer glaubt niemand daß Karl gesehen hat?
who believes nobody that Karl seen has
'Who does nobody believe that Karl saw?'

Structures like (44) are infelicitous with the wh-scope marker separated from its wh-phrase by a negative polarity item (NPI) *nobody*. If however, the wh-phrase overtly moves to a matrix clause position, the sentence is accepted even when it crosses the intervening NPI, as shown in (45). Beck takes this contrast to suggest that the NPI induces a barrier that prohibits a covert dependency between

the wh-scope marker and its in situ wh-phrase. The NPI-induced barrier 'b' dominates 'a', the in situ wh-phrase (or its trace) but not its binder, the scope-marker or the moved wh-phrase at LF in (44). Beck's theory can also be applied to overt movement, as we demonstrate below with Hindi-Urdu examples.

(46) John-ne kyaa sochaa ki kis-ne kisi-ko-bhi nahi dekhaa
John-erg what thought that who-Erg anyone not saw
'Who did John think didn't see anyone?'

(47) *John-ne kyaa sochaa ki kisi-ne-bhi kis-ko nahi dekhaa
John-erg what thought that anyone who-acc not saw
'Who did John think anyone didn't see?'

Hindi-Urdu allows the scope marker to move only when its base-generated position is higher than the NPI, as in (46). Moving the scope marker over an intervening NPI as in (47) generates infelicitous results. Therefore Hindi-Urdu wh-scope marker movement is also sensitive to negation-induced islands. We use this as a diagnostic to find out the wh-phrase that is linked to the scope marker in constructions like the following.

(48) raam-ne kyaa socaa kaun kisi-se-bhi kyaa nahii bolegaa.
Ram-erg what think who anyone what not say
'Who did Ram think will not say what to anyone?

This structure is felicitous with a reading where both wh-phrases are answered. However note that the second wh-phrase is c-commanded by an NPI. If we are right about (46)-(47) in claiming that wh-scope markers cannot overtly move across intervening NPIs, then it follows that in (48), it is the higher wh-phrase that is related to the scope marker. The lower wh-phrase cannot establish a dependency with the scope-marker across the negation-induced island.

4 Conclusion

To conclude, this paper proposes that a wh-scope marking construction in Hindi/Urdu is derived by overtly moving the scope marker from a base-generated embedded clause position to a matrix clause position. Scope markers initially form a complex DP with the in situ wh-phrase. The matrix verb in Hindi/Urdu has a Q-like feature, which provides a landing site for the embedded wh-element.

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