

1 The Basic Facts of *wh*-in-situ in Hindi

1.1 *wh*-phrases in Matrix Clauses

wh-phrases in matrix clauses can appear in-situ and produce ordinary question interpretations (cf. Mahajan (1990), Dayal (1996), i.a.).

- (1) Questioned element: Object
 - a. Base: S O V:
Ram-ne [yeh ciiz] khaa-ii
Ram-Erg this thing.f eat-Pfv.f
'Ram ate this thing.'
 - b. S *wh*-O V, **most natural**:
Ram-ne [kyaa ciiz] khaa-ii
Ram-Erg what thing.f eat-Pfv.f
'What thing did Ram eat?'
 - c. *wh*-O S V:
[kyaa ciiz] Ram-ne khaa-ii
Ram-Erg what thing.f eat-Pfv.f
'What thing did Ram eat?'
- (2) Questioned element: Subject
 - a. Base: S O V:
Ram-ne Billu-ko maar-aa
Ram-Erg Billu-Acc hit-Pfv
'Ram hit Billu.'
 - b. *wh*-S O V:
kis-ne Billu-ko maar-aa
who-Erg Billu-Acc hit-Pfv
'Who hit Billu?'

- c. O *wh*-S V, **most natural**:
Billu-ko **kis-ne** maar-aa
Billu-Acc who-Erg hit-Pfv
'Who hit Billu?'

- (3) Question element: Adjunct
 - a. Base: S O Adjunct V
Ram-ne Billu-ko kal dā:t-aa thaa
Ram-Erg Billu-Acc yesterday scold-Pfv be.Pst
'Ram had scolded Billu yesterday.'
 - b. S O *wh*-Adjunct V, **most natural**:
Ram-ne Billu-ko kab dā:t-aa thaa
Ram-Erg Billu-Acc when scold-Pfv be.Pst
'When had Ram scolded Billu?'
 - c. Possible: S *wh*-Adjunct O V
 - d. Possible: *wh*-Adjunct S O V

1.2 *wh*-phrases in Finite Complement Clauses

1.2.1 in-situ *wh*-phrases in Finite Complement Clauses

wh-phrases in finite complement clauses in Hindi cannot take matrix scope if they stay inside the complement clause in overt syntax.

Verbs that can take both interrogative and propositional complements:

- (4) *jaan* 'know'
Wajahat jaan-taa hai [ki Rima **kis-ko** pasand kar-tii
Wajahat.m know-Hab.MSg be.Prs.Sg that Rima.f who-Acc like do-Hab.f
hai]
be.Prs.Sg

Embedded Question: 'Wajahat knows who Rima likes.'

*Matrix Question: 'Who does Wajahat know Rima likes?'

Verbs that can only take propositional complements:

- (5) *maan* 'believe'

*Wajahat maan-taa hai [ki Rima **kis-ko** pasand kar-tii
Wajahat.m believe-Hab.MSg be.Prs.Sg that Rima.f who-Acc like do-Hab.f
hai]
be.Prs.Sg

*Embedded Question: '*Wajahat believes who Rima likes.'

*Matrix Question: 'Who does Wajahat believe Rima likes?'

Verbs that can only take interrogative complements:

- (6) *puuch* 'ask'

Wajahat puuch rahaa hai [ki Rima **kis-ko** pasand kar-tii
Wajahat.m ask Prog.MSg be.Prs.Sg that Rima.f who-Acc like do-Hab.f
hai]
be.Prs.Sg

Embedded Question: 'Wajahat is asking who Rima likes.'

*Matrix Question: '*Who_i is Wajahat asking [Rima likes t_i?'

- *wh*-in-situ in an embedded finite clause → no wide-scope question interpretation

1.2.2 Giving wide scope to *wh*-phrases in Finite Complement Clauses

Two Strategies:

Overt Movement of *wh*-phrase:

- (7) a. *jaan* 'know':

kis-ko_i Wajahat jaan-taa hai [ki Rima t_i pasand kar-tii
who-Acc Wajahat.m know-Hab.MSg be.Prs.Sg that Rima.f like do-Hab.f
hai]
be.Prs.Sg

Embedded Question: 'Wajahat knows who Rima likes.'

Matrix Question: 'Who does Wajahat know Rima likes?'

- b. *maan* 'believe'

kis-ko_i Wajahat maan-taa hai [ki Rima t_i pasand
who-Acc Wajahat.m believe-Hab.MSg be.Prs.Sg that Rima.f like
kar-tii hai]
do-Hab.f be.Prs.Sg

*Embedded Question: '*Wajahat believes who Rima likes.'

Matrix Question: 'Who does Wajahat believe Rima likes?'

- c. *puuch* 'ask':

kis-ko_i Wajahat puuch rahaa hai [ki Rima t_i pasand
who-Acc Wajahat.m ask Prog.MSg be.Prs.Sg that Rima.f like
kar-tii hai]
do-Hab.f be.Prs.Sg

Embedded Question: 'Wajahat is asking who Rima likes.'

*Matrix Question: '*Who is Wajahat asking Rima likes?'

Scope Marking (cf. Dayal (1994), Dayal (1996), Dayal (2002), Lahiri (2002), Mahajan (1990), Mahajan (2002)):

- (8) a. *jaan* 'know':

Wajahat **kyaa** jaan-taa hai [ki Rima **kis-ko** pasand
Wajahat.m what know-Hab.MSg be.Prs.Sg that Rima.f who-Acc like
kar-tii hai]
do-Hab.f be.Prs.Sg

Matrix Question: 'Who does Wajahat know Rima likes?'

(Literally: What does Wajahat know, who does Rima like?)

- b. *maan* 'believe'

Wajahat **kyaa** maan-taa hai [ki Rima **kis-ko** pasand
Wajahat.m what believe-Hab.MSg be.Prs.Sg that Rima.f who-Acc like
kar-tii hai]
do-Hab.f be.Prs.Sg

Matrix Question: 'Who does Wajahat believe Rima likes?'

(Literally: What does Wajahat believe, who does Rima like?)

- c. *puuch* 'ask'

Wajahat **kyaa** puuch rahaa hai [ki Rima **kis-ko** pasand
Wajahat.m what ask Prog.MSg be.Prs.Sg that Rima.f who-Acc like
kar-tii hai]
do-Hab.f be.Prs.Sg

*Matrix Question: '*Who is Wajahat asking Rima likes?'

(Literally: *What is Wajahat asking, who does Rima like?)

- All Indo-Aryan languages allow for the scope marking option, but for many Indo-Aryan language the overt movement is strongly dispreferred or restricted - Punjabi (cf. Bhatta (1993)), Kashmiri, Marathi (cf. Wali (1988)).

1.3 *wh*-phrases in Infinitival Complement Clauses

In-situ *wh*-phrases in infinitival complement clauses can take matrix scope.

- (9) in-situ argument (from Mahajan (1990):160)
- a. Base: $S [_{In\ infinitive} O V_2] V_1$
 Ram-ne [PRO **Sita-ko** dekh-naa] chaah-aa
 Ram-Erg Sita-Acc see-Inf want-Pfv
 'Ram wanted to see Sita.'
- b. $S [_{In\ infinitival\ Clause} wh-O V_2] V_1$
 Ram-ne [PRO **kis-ko** dekh-naa] chaah-aa
 Ram-Erg who-Acc see-Inf want-Pfv
 'Who did Ram want to see?'
- (10) in-situ adjunct (from Dayal (1996):29)
- tum [PRO bartan kaise dho-naa] chaah-te ho
 you.Pl dishes how wash-Inf want-Hab.MPl be.Prs.2Pl
 'How do you want to wash the dishes?'

In fact, infinitival clauses in Hindi do not constitute a domain for a question formation. There are no infinitival questions in Hindi.

- (11) (from Dayal (1996):29)
- tum [**kyaa** kar-naa] jaan-te ho
 you.Pl what do-Inf know-Hab.MPl be.Prs.2Pl
 Matrix Question: 'What do you know to do?'
 *Embedded Question: 'You know what to do.'

Dayal (1996), following Butt (1993), proposes that infinitival clauses in Hindi are nominal IP's i.e. a kind of gerund. Lacking a CP, they cannot be a domain for question formation.

Overt fronting of the *wh*-phrase is also an option though the in-situ option is preferred:

- (12) **kis-ko**_i Ram-ne [PRO _{t_i} dekh-naa] chaah-aa
 who-Acc Ram-Erg see-Inf want-Pfv
 'Who did Ram want to see?'

1.4 *wh*-phrases in Non-Finite Adjunct Clauses

In-situ *wh*-phrases in non-finite adjuncts can take matrix scope.

Argument *wh*-phrase in a non-finite adjunct

- (13) (from Dayal (1996):33)
- a. Base:
 vo [**Ram-ko** dekh-ne ke-baad] ghar ga-yii
 she Ram-Acc see-Inf.Obl after home go-Pfv.f
 'She went home after seeing Ram.'
- b. vo [**kis-ko** dekh-ne ke-baad] ghar ga-yii
 she who-Acc see-Inf.Obl after home go-Pfv.f
 'Who did she go home after seeing?'
- (14) a. Ram [**kis-ko** dāraa-ne ke-liye] chaku laa-yaa hai
 Ram.m who-Acc scare-Inf.Obl for knife bring-Pfv.MSg be.Prs.MSg
 'For which *x*, Ram has brought a knife [to scare *x*]?'
 b. Ram [**kyaa** khaa-te hue] ghar ga-yaa
 Ram.m what eating-while home go-Pfv.MSg
 'What did Ram go home while eating?'

Adjunct *wh*-phrase in an Infinitival Adjunct

- (15) (from Dayal (1996):33)
- a. Base:
 us-ne [**bas-se** jaa-te samay] us-ko dekh-aa
 she-Erg bus-Instr go-Impfv.Obl time she-Acc see-Pfv
 'She saw her while going by bus.'
- b. *us-ne [**kaise** jaa-te samay] us-ko dekh-aa
 she-Erg how go-Impfv.Obl time she-Acc see-Pfv
 'For what *x*, she saw her while going in manner *x*?'
 (16) a. Base:
 Ram [Billu-ko **kal** dāraa-ne ke-liye] aaj chaaku laa-yaa
 Ram Billu-Acc tomorrow scare-Inf.Obl for today knife bring-Pfv.MSg
 hai
 be.Prs.Sg
 'Ram has brought a knife today [to scare Billu tomorrow].'

- b. ???Ram [Billu-ko **kab** ḍāraa-ne ke-liye] aaj chaaku laa-yaa
 Ram Billu-Acc when scare-Inf.Obl for today knife bring-Pfv.MSg
 hai
 be.Prs.Sg
 *'For what time *t* Ram has brought a knife today [to scare Billu at *t*]?'

Overt fronting of the *wh*-phrase out of the non-finite adjunct is also an option, as long as the *wh*-phrase is an argument.

(17) Fronting of an Argument:

- a. **kis-ko**_i vo [t_i dekh-ne ke-baad] ghar ga-yii
 who-Acc she see-Inf.Obl after home go-Pfv.f
 'Who did she go home after seeing?'
- b. **kis-ko**_i Ram [t_i ḍāraa-ne ke-liye] chaku laa-yaa hai
 who-Acc Ram.m scare-Inf.Obl for knife bring-Pfv.MSg be.Prs.MSg
 'For which *x*, Ram has brought a knife [to scare *x*]?'
- c. ?**kyaa**_i Ram [t_i khaa-te hue] ghar ga-yaa
 what Ram.m eating-while home go-Pfv.MSg
 'What did Ram go home while eating?'

(18) Fronting of an Adjunct:

- a. ***kaise**_i us-ne [t_i jaa-te samay] us-ko dekh-aa
 how she-Erg go-Inf.Obl time she-Acc see-Pfv
 'For what *x*, she saw her while going in manner *x*?'
- b. ???**kab**_i Ram [Billu-ko t_i ḍāraa-ne ke-liye] aaj chaaku laa-yaa
 when Ram Billu-Acc scare-Inf.Obl for today knife bring-Pfv.MSg
 hai
 be.Prs.Sg
 *'For what time *t* Ram has brought a knife today [to scare Billu at *t*]?'

1.5 *wh*-phrases in Finite Adjunct Clauses

wh-phrases in finite adjunct clauses are ungrammatical.

- (19) a. base:
 [jab **Mala** aa jaa-egii] [tab mĒ tum-ko call kar-ūga:]
 when Mala come GO-Fut.3FSg then I you-Acc call do-Fut.1MSg
 'When Mala comes, I'll call you.'

- b. in-situ:
 *[jab **kaun** aa jaa-egii] [tab mĒ tum-ko call kar-ūga:]
 when who come GO-Fut.3FSg then I you-Acc call do-Fut.1MSg
 '*When who comes, I'll call you.'
- c. fronted:
 ***kaun**_i [jab t_i aa jaa-egii] [tab mĒ tum-ko call kar-ūga:]
 who when come GO-Fut.3FSg then I you-Acc call do-Fut.1MSg
 '*Who, when comes, I'll call you.'

2 The Role of Directionality

- Wide-scope possible:
wh-XP in non-finite clause, to the left of the verb
- Wide-scope not possible:
wh-XP in finite clause, to the right of the verb

Question: what is blocking wide-scope?

Option 1: Finiteness of the clause.

Option 2: Location of the clause (right of the verb = extraposed).

2.1 Location of Infinitival Clauses

Infinitival Clauses typically appear to the left of the matrix verb, but can also appear on the right.

- (20) a. Extraposed infinitival complement, complement:
 Ram-ne chaah-aa [PRO **Sita-ko** dekh-naa]
 Ram-Erg want-Pfv Sita-Acc see-Inf
 'Ram wanted to see Sita.'
- b. Extraposed infinitival adjunct:
 vo ghar ga-yii [**Ram-ko** dekh-ne ke-baad]
 she home go-Pfv.f Ram-Acc see-Inf.Obl after
 'She went home after seeing Ram.'

In-situ *wh*-XP's in extraposed infinitival complements cannot take wide-scope. Since narrow scope is not an option for *wh*-XP's in infinitival clauses this leads to ungrammaticality.

(21) *wh*-in-situ:

a. Extraposed infinitival complement, complement *wh*-XP:

*Ram-ne chaah-aa [PRO **kis-ko** dekh-naa]
Ram-Erg want-Pfv who-Acc see-Inf

'*Ram wanted to see who.'

b. Extraposed infinitival complement, adjunct *wh*-XP:

*Ram-ne chaah-aa [PRO gaarii **kaise** thiik kar-naa]
Ram-Erg want-Pfv car.f how correct do-Inf

'*Ram wanted to fix the car how.'

c. Extraposed infinitival adjunct:

*vo ghar ga-yii [**kis-ko** dekh-ne ke-baad]
she home go-Pfv.f who-Acc see-Inf.Obl after

'She went home after seeing who.'

Overt fronting of the *wh*-XP makes the above acceptable:

(22) Fronting of *wh*-XP:

a. Extraposed infinitival complement, complement *wh*-XP:

kis-ko_i Ram-ne chaah-aa [PRO t_i dekh-naa]?
who-Acc Ram-Erg want-Pfv see-Inf

'Who had Ram wanted to see?'

b. Extraposed infinitival complement, adjunct *wh*-XP:

?**kaise**_i Ram-ne chaah-aa [PRO gaarii t_i thiik kar-naa]
how Ram-Erg want-Pfv car.f correct do-Inf

'How had Ram wanted to fix the car?'

c. Extraposed infinitival adjunct:

?**kis-ko**_i vo ghar ga-yii [t_i dekh-ne ke-baad]
who-Acc she home go-Pfv.f see-Inf.Obl after

'Who did she go home after seeing?'

→ Location of the complement also plays a role.

2.2 Interpretation of Postverbal *wh*-Phrases

Arguments and adjuncts can typically appear in postverbal position.

(23) Subj DO V IO

Ram-ne kitaab di-i Sita-ko
Ram-Erg book.f give-Pfv.f Sita-Dat

'Ram gave a book to Sita.'

However, *wh*-phrases in postverbal positions do not yield a normal question interpretation.

(24) Echo Question:

Ram-ne kitaab di-i **kis-ko**
Ram-Erg book.f give-Pfv.f who-Dat

'Ram gave a book to WHO?'

(25) a. S IO *wh*-DO V: Normal Question:

us-ne tumhē **kyaa** di-yaa
he-Erg you.Dat what give-Pfv.MSg

'What did he give you?'

b. S IO V *wh*-DO: Rhetorical Question:

us-ne tumhē di-yaa **kyaa**
he-Erg you.Dat give-Pfv.MSg what

'What did he ever give you?'....

Parallel data are noted for Bengali in Bayer (1996):284-289.

• Phrases marked by emphatic clitics such as *-o* 'also, too' and *-i*, which is a focus marker, also do not like to be postverbal position in Bengali.

(26) (from Bayer (1996):285).

a. S O-Cl V

kriSno ta-ke-o bhalobaS-e
Krisha (s)he-Acc-too loves-3

'Krishna loves him/her too.'

b. *S V O-Cl

??/*kriSno bhalobaS-e ta-ke-o
Krisha loves-3 (s)he-Acc-too

2.3 Preverbal Finite Clauses

In Hindi, finite clause complements can only appear verb finally.

- (27) a. Postverbal finite complement:

Mona jaan-tii hai [?(ki) Rohit chant hai]
 Mona.f know-Hab.f be.Prs.Sg that Rohit.m cunning be.Prs.Sg

'Mona knows that Rohit is cunning.'

- b. *Preverbal finite complement:

*Mona [(ki) Rohit chant hai] jaan-tii hai
 Mona.f that Rohit.m cunning be.Prs.Sg know-Hab.f be.Prs.Sg

Bengali allows for finite clauses to appear both pre- and post-verbally, but with different complementizers.

- (28) (Bengali, from Bayer (1995), Bayer (1996))

- a. Preverbal finite complement, clause-final complementizer

chele-Ta [[or baba aS-be] **bole**] Sune-che
 boy-CL his father come-Fut Comp1 hear-Pst

'The boy has heard that his father will come.'

- b. Postverbal finite complement, clause-initial complementizer

chele-Ta Sune-che [je [or baba aS-be]]
 boy-CL hear-Pst Comp2 his father come-Fut

'The boy has heard that his father will come.'

Preverbal finite clauses allow *wh*-in-situ to have wide scope.

Postverbal finite clauses do not allow *wh*-in-situ to have wide scope.¹

- (29) (Bengali, from Bayer (1996):272-275)

- a. Preverbal Complement Clause: wide scope possible

ora [[ke aS-be] (bole)] Sune-che
 they who come-Fut.3 COMP hear-PTS3

¹Postverbal *wh*-clause with *wh*-in-situ do not allow for an overt complementizer.

- i. (Bengali, from Bayer (1996):306)

ami jani na [je bill kal **ka-ke** dekhe-che]
 I know not COMP Bill yesterday who saw

*I don't know who Bill saw yesterday.'

Narrow Scope: 'They have heard who will come.'

Wide Scope: 'Who have they heard will come?'

- b. Postverbal Complement: wide scope impossible

ora Sune-che [ke aS-be]
 they hear-PTS3 who come-Fut.3

Narrow Scope: They have heard who will come.'

*Wide Scope: 'Who have they heard will come?'

Similar facts obtain for Marathi (cf. Wali (1988)).

2.4 Some Patterns

2.4.1 *Wh* In-situ

	Wide-Scope	Wide-Scope	Narrow-Scope	Narrow-Scope
	Argument	Adjunct	Argument	Adjunct
Postverbal FC	No	No	Yes	Yes
Preverbal FC	Yes_B/NA_H	Yes_B/NA_H	Yes_B/NA_H	Yes_B/NA_H
Preverbal NFC	Yes	Yes	NA	NA
Postverbal NFC	No	No	NA	NA
Preverbal NFA	Yes	No	NA	NA
Postverbal NFA	No	No	NA	NA

FC = Finite Complement

NFC = Non-Finite Complement

NFA = Non-Finite Adjunct

2.4.2 Fronted *wh*-Phrase

	Wide-Scope	Wide-Scope	Narrow-Scope	Narrow-Scope
	Argument	Adjunct	Argument	Adjunct
Postverbal FC	Yes	Yes	Yes	Yes
Preverbal FC	Yes _B /NA _H	Yes _B /NA _H	Yes _B /NA _H	Yes _B /NA _H
Preverbal NFC	Yes	Yes	NA	NA
Postverbal NFC	Yes	Yes	NA	NA
Preverbal NFA	Yes	No	NA	NA
Postverbal NFA	Yes	No	NA	NA

3 *Wh*-Fronting

- (30) a. (Bengali, from Bayer (1996):297)
 tumi [ki OSukh-e]_i bhab-cho [_{CP}je ram t_i mara ge-che]?
 you which illness-Loc think-2 Comp Ram die GO-Pts3
 ‘Of which illness do you think that Ram died?’
- b. (Hindi, from Srivastav (1991))
kaun_i tum soch-te ho [ki t_i aa-egaa]?
 who you.Pl think-Hab.MPI be.Prs.2Pl that come-Fut.3MSg
 ‘Who do you think will come?’

3.1 The Role of Clausal Expletives

- (31) (from Mahajan (1990):144)
 Ram-ne (yah) soch-aa [ki Mohan chor hai]
 Ram-Erg this think-Pfv that Mohan thief be.Prs.Sg
 ‘Ram thought that Mohan is a thief.’

3.1.1 Clausal Expletives in English

- (32) Subject Expletives:
 a. It seems [that we are all going to be late].

- b. It was widely believed [that the earth was flat].
- (33) Object Expletives:
 a. I regretted (it) [that he was late].
 b. They never mentioned (it) to the candidate [that the job was poorly paid].
- (34) Presuppositional Effects:
 a. John and Mary have announced [that they have got married].
 (news could be old or new)
 b. John and Mary have announced it [that they have got married].
 (news has to be old)
- (35) Extraction is blocked/degraded:
 a. Who_i don’t you believe Jane will marry t_i?
 b. *Who_i don’t you believe it that Jane will marry t_i?
- (36) NPI-Licensing across a finite CP is blocked:
 a. I don’t believe (that) [John has been here in weeks].
 b. *I don’t believe it that [John has been here in weeks].

3.1.2 Clausal Expletives in Hindi

The presence of a clausal expletive makes *wh*-fronting of complements degraded, and the *wh*-fronting of adjuncts ungrammatical:

- (37) (from Mahajan (1990):146)
 a. no expletive: extraction of complement ok
kis-ko_i Ram-ne soch-aa [ki Mohan-ne t_i maar-aa]
 who-Acc Ram-Erg think-Pfv Comp Mohan-Erg hit-Pfv
 ‘Who did Ram think that Mohan hit?’
 b. expletive: extraction of complement degraded
 ???**kis-ko**_i Ram-ne **yeh** soch-aa [ki Mohan-ne t_i maar-aa]
 who-Acc Ram-Erg this think-Pfv Comp Mohan-Erg hit-Pfv
 ‘???Who did Ram think it that Mohan hit?’
- (38) (from Mahajan (1990):146)
 a. no expletive: extraction of adjunct ok
 ?**kaise_i** Ram-ne soch-aa [ki Mohan-ne t_i gaari_i thiik k-ii]
 how Ram-Erg think-Pfv Comp Mohan-Erg car.f correct do-Pfv.f
 ‘How did Ram think that Mohan fixed the car?’
 b. expletive: extraction of adjunct ungrammatical

***kaise**, Ram-ne **yeh** soch-aa [ki Mohan-ne t_i gaarīi thiik k-ii]
 how Ram-Erg this think-Pfv Comp Mohan-Erg car.f correct do-Pfv.f
 'How did Ram think that Mohan fixed the car?'

Clausal Expletives also block interclausal NPI-licensing:

- (39) a. no expletive: NPI licensed across finite CP boundary
 mujhe nahī: lag-taa [ki koi-bhii aa-egaa]
 me.Dat Neg seem-Hab that someone-PSI come-Fut.3MSg
 'I don't think anyone will come.'
- b. expletive: NPI not licensed across finite CP boundary
 *mujhe **yeh** nahī: lag-taa [ki koi-bhii aa-egaa]
 me.Dat this Neg seem-Hab that someone-PSI come-Fut.3MSg
 '*I don't think it that anyone will come.'

3.2 Island Effects

wh-fronting is subject to island effects such as the Complex NP constraints:

- (40) (from Mahajan (1990):148)
 ***kis-ko**_i Ram-ne soch-aa [ki [yah baat [ki Mohan-ne t_i maar-aa]] galat
 who-Acc Ram-Erg think-Pfv that this 'talk' that Mohan-Erg hit-Pfv wrong
 hai]
 be.Prs.Sg
 '*Who_i does Ram think [that [the fact that Mohan hit t_i] is wrong]?'

3.3 Scrambling or *wh*-movement?

Scrambling (before Extraposition): Mahajan (1990), Dayal (1996)

wh-Movement: Simpson and Bhattacharya (2003)

Something else, similar to scope-marking: Bayer (1996)

Arguments for treating *wh*-fronting as scrambling:

1. The same fronting options are available to non-*wh*-phrases and are formally indistinguishable from the options available to *wh*-phrases.
2. Movement seems to be to position below the C⁰.

- (41) a.V_{matrix} [C⁰ *wh*-XP....
 Ravi jaan-taa hai [ki **kis-ko**_i tum maan-tii ho
 Ravi know-Hab.MSG be.Prs.Sg that who-Acc you.Pl believe-Hab.f be.Prs.2Pl
 [ki Billu-ne t_i maar-aa]].
 that Billu-Erg hit-Pfv
 'Ravi knows [who_i you think that Billu hit t_i].'
- b. *....V_{matrix} [*wh*-XP C⁰....
 *Ravi jaan-taa hai [**kis-ko**_i ki tum maan-tii ho
 Ravi know-Hab.MSG be.Prs.Sg who-Acc ki you.Pl believe-Hab.f be.Prs.2Pl
 [ki Billu-ne t_i maar-aa]].
 that Billu-Erg hit-Pfv
 'Ravi knows [who_i you think that Billu hit t_i].'

- in this, it resembles scrambled non-*wh*-phrases.

More generally, there is no V-C adjacency requirement:

- (42) a. Rightward Scrambling of Matrix Material:
 Ram-ne kah-aa Sita-se [ki]
 Ram-Erg say-Pfv Sita-Instr that
 'Ram told Sita that....'
- b. Movement of the Relative Phrase:
 vo lar̥kii [jo_i (ki) t_i lambii hai]
 the girl who that standing.f be.Prs.3Sg
 'The girl who is standing....'

3.4 The Puzzle

- (43) Covert Movement
 a. **WH*-XP_i V [_{CP} **WH**-XP_i]
 b. **WH*-XP_i .. EXPL .. V [_{CP} **WH**-XP_i]
WH-XP - covert, **WH**-XP - overt
- (44) Overt Movement
 a. **WH**-XP_i V [_{CP} *WH*-XP_i]
 b. ???/***WH**-XP_i .. EXPL .. V [_{CP} *WH*-XP_i]
WH-XP - covert, **WH**-XP - overt

4 Overt *wh*-Movement

4.1 Background Assumptions

Assumptions made by Simpson and Bhattacharya (2003):

- (45) a. Bengali has obligatory overt *wh*-movement.
b. Bengali is an SVO language.
c. The target for *wh*-movement is the specifier of a Focus(-like) functional projection that is below the Topic projection.

Basic Architecture of the Bengali Clause:

- (46)Top⁰ [...Foc/C⁰ [_{IP} Subj Obj_i V t_i]]

• DP/Infinitival Clauses must be fronted for case reasons.
(but what about 'rightward scrambled' DP/Infinitival Clauses)

• Finite CPs do not need case so they stay in a postverbal position.

However, finite CPs can also appear preverbally in Bengali.
Perhaps a dual characterization as in Bayer (1999) is needed.

4.2 Deriving the Basic Puzzle

- (47) (Bengali, from Bayer (1996):272-275)
- a. Preverbal Complement Clause: wide scope possible
ora [[ke aS-be] (bole)] Sune-che
they who come-Fut.3 COMP hear-PTS3
Narrow Scope: 'They have heard who will come.'
Wide Scope: 'Who have they heard will come?'
- b. Postverbal Complement: wide scope impossible
ora Sune-che [ke aS-be]
they hear-PTS3 who come-Fut.3
Narrow Scope: They have heard who will come.'
*Wide Scope: 'Who have they heard will come?'
- (48) Derivation of wide scope reading of (47a)
- a. 'who came' is generated in a Post-VP position.
b. Embedded C⁰ is not [+wh].
c. *who* undergoes clause-internal *wh*-movement, making the entire clause +wh.

- d. The entire CP undergoes *wh*-movement to the matrix [Spec,CP]. (Pied-Piping)
e. The matrix subject is topicalized from [Spec,IP] to [Spec,TopP].

- (49) Derivation of narrow scope reading of (47a,b)
- a. 'who came' is generated in a Post-VP position.
b. Embedded C⁰ is [+wh].
c. *who* undergoes clause-internal *wh*-movement, checking its [+wh] features against the embedded C⁰.
d. If we stop here, we have (the narrow scope reading of) (47b).
e. The entire CP undergoes topicalization to the matrix [Spec,C/FocP].
f. The matrix subject is topicalized from [Spec,IP] to [Spec,TopP].
g. We now have (47a) with the narrow scope reading.

(47b) lacks a wide scope reading because the [+wh] feature of the embedded *wh*-phrase which can only be checked by overt *wh*-movement remains unchecked.

The impossibility of wide scope in (47b) is reduced to the unavailability of normal question interpretation for postverbal *wh*-phrases.

- (50) (bengali, from Bayer (1996):285)
- a. S *wh*-O V:
kriSno ka-ke bhalobaS-e
Krishna who-Acc love-3
'Who does Krishna love?'
- b. ??/*S V *wh*-O:
??/*kriSno bhalobaS-e ka-ke
Krishna love-3 who-Acc

Supporting Arguments:

• Long *wh*-CP Movement

- (51) You [who left]_i think [Mary said t_i]?
(= Who_i do you think Mary said [t_i left]?)

• Overt Movement of the *wh*-XP by itself is also possible:

- (52) a. John who_i said [t_i left]?
(=Who_i did John say [t_i left]?)
b. John [who left]_i said t_i?
(=Who_i did John say [t_i left]?)

Similar in most aspects to fronting of focussed material.

- Constraints on Topics (= Pre-*wh*-XP Material)

Beck & Kim style effects - indefinites, NPI's, only-phrases cannot happily appear before the *wh*-phrase.

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