SCOPE PARALLELISM IN HINDI-URDU SLUICING[*]

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1   OUTLINE

- In this talk, we compare WH in questions with WH in sluicing in Hindi-Urdu.
- While both WH in questions and WH in sluicing are subject to subjacency, differences are observed with respect to island-sensitivity and intervention effects.
- Focussing on Intervention Effects and their amelioration, we find that the well-formedness of sluicing is contingent on PARALLELISM between the antecedent and the sluice.
- Based on the unavailability of sluicing with low-scoping numerals, we argue for a parallelism constraint defined in terms of scope.
- SCOPE PARALLELISM: *Whatever scope is fixed for the antecedent, it is the only scope available for the sluice.*

2   WH-FRONTING IN HINDI-URDU

- Hindi-Urdu does not have *obligatory* WH-movement, but *allows* WH to move.
- We therefore use the term 'fronting' to refer to movement of WH to a clause-initial position.
- Base order in HU is SOV, but pronouncing the WH-phrase immediately before the verb is the most natural.
- There is wide scope construal of WH irrespective of whether it is pre-verbal (1b) or clause-initial (1c).

(1) a. giita-ne   anu-ko   saaRii   dilayii   *S IO   DO   V*
        Gita-ERG   Anu-DAT   sari   buy.PFV
        'Gita bought Anu a sari.'

     b. giita-ne   saaRii   kis-ko   dilayii?   *S DO   IO$_{WH}$ V*
        Gita-ERG   sari   who-DAT buy.PFV
        'Who did Gita buy a sari (for)?'

     c. **kis-ko$_i$**   giita-ne t$_i$ saaRii   dilayii?   *IO$_{WH}$ S DO V*
        who-DAT   Gita-ERG   sari   buy.PFV

- To form a question out of an embedded finite clause, fronting[1] the wh-phrase to the higher clause is required:

(2) **kis-ko**ᵢ   ram-ne   socaa   ki   mohan-ne   **t**ᵢ maaraa thaa?
     who-DOM Ram-ERG think.PFV COMP Mohan-ERG   hit.PFV be.PST
     'Who did Ram think Mohan had hit?'
     (Mahajan 1990:129)

- Thus, we can conclude that HU is not a *strictly* wh-in situ language.

2.1   PROPERTIES OF HINDI-URDU WH-FRONTING

Fronting a WH-phrase cannot cross over another WH-phrase, i.e. Subjacency

- This is illustrated in (3a) below. Its non-fronted counterpart is grammatical (3b).

(3)   a.* **kis-ko**ᵢ   ram   soc   rahaa   thaa   [ki   <u>kab</u>   giitaa-ne   **t**ᵢ dekhaa thaa]?
          who-DOM Ram think PROG be.PST COMP when Gita-ERG   see.PFV be.PST
          UNAVAILABLE: 'Who is such that Ram was wondering when Gita had seen them?'

       b. ram   soc   rahaa   thaa   [ki   <u>kab</u>   giitaa-ne   **kis-ko**   dekhaa thaa[2]]
          Ram think PROG be.PST COMP when Gita-ERG   who-DOM see.PFV be.PST
          'Ram was wondering when Gita had seen whom.'
          UNAVAILABLE: 'Who is such that Ram was wondering when Gita had seen them?'
          (Based on Mahajan 1990)

- This is a property typically observed in WH-movement languages like English as well.

(4)   *Who(m) was Ram wondering who had hit ___ ?

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[1] Or using the scope-marking wh-phrase *kyaa* in the higher clause.
[2] Mahajan (1990) reports that WH inside a non-question-embedding predicate like *soc* 'think' is ungrammatical, but this is not the case – it is only bad under a wide-scope construal.

Fronting a WH-phrase shows island effects (Dayal 1996, Malhotra 2009, a.o.)

- For example, a relative clause island blocks WH-fronting.[3]
- A baseline relative clause is in (5a), island effect in (5b):

(5) a. giita-ne   vo   saaRii [jo   aniisaa-ne   dekhii thii]   khariidii
        Gita-ERG   that   sari   [REL.PRON   Anisa-ERG   see.PFV be.PST] buy.PFV
        'Gita bought a sari that Anisa had seen.'

     b.*$\textbf{kis-ne}_i$ giita-ne vo   saaRii [jo $\textbf{t}_i$ dekhii thii]   khariidii
        who-ERG   Gita-ERG that sari   [REL.PRON   see.PFV be.PST] buy.PFV
        INTENDED: 'Who was such that Gita bought a sari that they had seen?'

- The same pattern obtains for non-fronted WH-phrases:

(6)   *giita-ne   vo   saaRii [jo   **kis-ne**   dekhii thii]   khariidii
       Gita-ERG   that   sari   [REL.PRON   who-ERG   see.PFV be.PST] buy.PFV
       INTENDED: 'Who was such that Gita bought a sari that they had seen?'

Fronting a WH-phrase ameliorates intervention effects (Malhotra 2009, Beck 2006, a.o.)

- The term "intervention effect" describes a situation in which a question is rendered ungrammatical because an in-situ WH-phrase is c-commanded by an offending intervener (quantification/negative/focus-sensitive elements) at LF (Kotek 2016).

(7)   The intervention configuration (Beck 2006):
      a. * [$_{CP}$ C … <u>intervener</u> … WH]
      b. √ [$_{CP}$ C … **WH**$_i$ … <u>intervener</u> … $\textbf{t}_i$]

- As we can see for HU below, a focus-marked element c-commands the pre-verbal WH – this is ungrammatical (8a)[4].
- If the WH-phrase is fronted, the sentence is now grammatical (8b).

(8)   a.*[giita-ne-hii]   kis-ko   tohfaa diyaa?
        Gita-ERG-ONLY who-DAT   gift   give.PFV
        INTENDED: 'Who did only Gita give a gift to?'   (Based on Malhotra 2009)

      b. **kis-ko**$_i$ [giita-ne-hii] $\textbf{t}_i$ tohfaa diyaa?
         who-DAT Gita-ERG-ONLY   gift   give.PFV
         'Who did only Gita give a gift to?'

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[3] Other islands in HU, like complex NPs and co-ordinate structures, also behave the same.

[4] Intervention effects do not occur with *all* focus-sensitive elements; absent with 'only'-like *sirf / keval*.

- With respect to intervention, HU presents a complex picture: pre-verbal WH does not behave exactly the same as fronted WH.

> *INTERIM SUMMARY:*
> WH-fronting
> o   is subject to subjacency
> o   is island sensitive
> o   ameliorates intervention effects

- We engage with two of these properties – *subjacency* and *intervention* – in the context of sluicing, a construction generally analysed as involving WH-movement.

3   HINDI-URDU SLUICING

- Sluicing is an elliptical construction in which the sentential part of a constituent question is elided, leaving only the wh-phrase (Merchant 2001).
- For (9), the corresponding structure would be (10), which involves WH-fronting followed by ellipsis of the remaining structure:

(9)   Gita ate something but I don't know what.
(10)   Gita ate something but I don't know [cp **what**i ~~Gita ate t~~i]

- HU has been observed to have sluicing (Bhattacharya & Simpson 2012, Bagasur 2014):

(11)   giita-ne   [koi   saaRii]   khariidii   lekin   mujhe   nahi   pata   kaunsii
        Gita-ERG   [some   sari]   buy.PFV   but   I-DAT   NEG   know   which
        'Gita bought some sari but I don't know which.'

- Sluicing in HU arguably involves isomorphic structure in the sluice (as opposed to a reduced copular clause.)
- Evidence for this comes from case connectivity (Bhattacharya & Simpson 2012): case on the wh-phrase in the sluice must match the case associated with the predicate in the antecedent.[5]

(12)   kisi-**ko**   vo   saaRii khariidnii caahiye lekin mujhe   nahi pata
        someone-DAT that   sari   buy.INF   should but   I-DAT   NEG know
        [cp ki   kis-**ko**   ~~vo   saaRii khariidnii caahiye~~]
        [cp COMP who-DAT   that   sari   buy.INF   should]
        'Someone should buy that sari but I don't know   [cp   who ~~should buy that sari~~].'

- If the underlying structure was a copular clause, the WH-remnant would be nominative.

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[5] For some cases/postpositions in HU, this match or 'Fit' (Abels 2014) is satisfied by a morphological exponent in the sluice that is a subset of the full case morphology (Bagasur 2014).

3.1 **PUZZLING PROPERTIES OF HINDI-URDU SLUICING**

- We now present the following puzzle: HU sluicing is subject to subjacency but fails to ameliorate intervention effects.

	SUBJECT TO SUBJACENCY	AMELIORATES INTERVENTION EFFECTS
WH-FRONTING	YES	YES
SLUICING	YES	*NO** ***conditions apply**

- This disparate behaviour[6] is surprising under a WH-fronting analysis of sluicing, under which we would expect uniformity in the properties of WH-fronting in questions and in sluicing.

3.1.1 **SUBJACENCY**

- Example (13) (repeated from (3a) above), is the baseline case illustrating subjacency.

(13) ***kis-ko$_i$** ram soc rahaa thaa [ki <u>kab</u> giitaa-ne **t**$_i$ bulaayaa thaa] ?
  who-DOM Ram think PROG be.PST COMP when Gita-ERG call.PFV be.PST
  INTENDED: 'When was Ram thinking Gita had invited whom?' [= (3a)]

- Subjacency in sluicing – a WH-remnant cannot cross over a WH-phrase in the ellipsis site.

(14) a. ram soc rahaa thaa ki kab giitaa-ne kisi-ko bulaaya thaa…
   Ram think PROG be.PST COMP when Gita-ERG someone-DOM call.PFV be.PST
   'Ram was wondering when Gita invited someone…

  b. *…par mujhe nahi pata **kis-ko$_i$** Δ
    but I-DAT NEG know who-DAT
   … but I don't know who.'

  c. Δ = ram soc rahaa thaa ki <u>kab</u> giitaa-ne **t**$_i$ bulaayaa thaa
    Ram think PROG be.PST COMP when Gita-ERG call.PFV be.PST

  d. **kis-ko$_i$** … [$_{CP}$ WH … **t**$_i$ …]

➔ *Subjacency observed both in wh-fronting and in sluicing.*

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[6] HU sluicing also shows the classic island-insensitivity property of sluicing (Bhattacharya & Simpson 2012, Bagasur 2014). This is another instance of disparate behaviour of WH in questions vs. in sluicing.

3.1.2 INTERVENTION EFFECTS

- Example (15a) is repeating the baseline intervention case ameliorated by wh-fronting (15b):

(15) a.*[giita-ne-hii]   kis-ko   tohfaa   diyaa?
        Gita-ERG-ONLY   who-DAT   gift   give.PFV
        INTENDED: 'Who did only Gita give a gift to?'   [= (7a)]

    b. **kis-ko**$_i$ [giita-ne-hii]   **t**$_i$ tohfaa   diyaa?
       who-DAT Gita-ERG-ONLY   gift   give.PFV
       'Who did only Gita give a gift to?'   [= (7b)]

- In contrast, sluicing – which ***also*** purportedly involves wh-fronting – does not appear to ameliorate intervention effects, as shown below.

(16)   CONTEXT: I know that Gita's office is organizing Secret Santa and that Gita has brought a gift to give, but no one else has brought a gift. Once the Secret Santa game is over, I report:

    a. giita-ne-hii[7]   kisii-ko   tohfaa   diyaa   thaa   …
       Gita-ERG-ONLY   someone-DAT   gift   give.PFV   be.PST …
       'Only Gita gave a gift to someone…

    b. … ??/* par   mujhe   nahi   pata   **kis-ko**$_i$ Δ
       …   but   I-DAT   NEG   know   who-DAT
       …   but I don't know to who.'

    c. Δ = giita-ne-hii   **t**$_i$ tohfaa   diyaa   thaa
            Gita-ERG-ONLY   gift   give.PFV   be.PST

    d. … * [**kis-ko**$_i$ [$_{=Δ}$ INTERVENER   **t**$_i$]]

➔ *Intervention effects ameliorated by wh-fronting but not by sluicing.**

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        *conditions apply
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[7] Unavailability of sluicing in (16) is most salient when compared with its counterpart *without* the focus-sensitive element *hii* in the antecedent, which allows sluicing:

(16') giita-ne kisii-ko   tohfaa diyaa   thaa   … par   mujhe nahi pata   kis-ko$_i$ Δ
        Gita-ERG someone-DAT   gift   give.PFV be.PST … but   I-DAT   NEG   know   who-DAT
            'Gita gave a gift to someone … but I don't know to who.'

3.2   CONDITIONS APPLY: INTERVENTION AMELIORATION VIA PARALLELISM

- Now we discuss a case where having both the correlate and the remnant fronted in their respective clauses makes sluicing available.
- In the example below, the indefinite is fronted in the antecedent (17a).
- Now, following (17a) with the sluice in (17b) is grammatical, (*cf.* (16b) above).
- Crucially, nothing in the sluice has changed from (16b) to (17b) – their structures are the same (16c, 17c).

(17)   a. **kisii-ko$_k$**   giita-ne-hii t_k tohfaa   diyaa…
               someone-DAT   Gita-ERG-ONLY   gift   give.PFV
               'There is someone to whom only Gita gave a gift…

         b. …   par   mujhe   nahi   pata   **kis-ko$_i$** Δ
             …   but   I-DAT   NEG   know   who-DAT
             …   but I don't know to who.'

         c. Δ = giita-ne-hii t_i tohfaa   diyaa
                 Gita-ERG-ONLY   gift   give.PFV

         d. …   [**kis-ko$_i$**   [$_{=Δ}$ INTERVENER t_i]]

- The contrast between (16) and (17) presents the following puzzle – *Why is the availability of sluicing affected by the fronting of the correlate in the antecedent?*

- The explanation of this puzzle builds on the following property of HU:
- In general, HU encodes relative scope in terms of linear order (Kidwai 2001, a.o.).

(18)   a. har   admi   kisi   aurat-ko   pyar   karta   hai   EACH ≫ SOME[8]
             each man   some woman   love   does   is
             'Every man loves some woman.'

         b. **kisi aurat-ko$_i$**   har admi t_i pyar   karta   hai   SOME ≫ EACH
             some woman   each man   love   does   is
             'Some woman, every man loves.'

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[8] Kidwai (2000) reports that (18a) is unambiguous in only allowing surface scope. However, to our intuition, wide scope of the indefinite (Some ≫ Every) is marginally available as well. This scope becomes more salient with a different prosody on the indefinite phrase *kisi aurat ko*. (18b) is unambiguous for us.

- Sluicing involves *fronting* the *wh-phrase*, which gives it *widest scope* in the sluice.
- In the intervention amelioration case (17), *fronting* the *indefinite* gives it *widest scope* in the antecedent.
- Thus, we have <u>parallel wide scope</u> of the correlate (in the antecedent) and the wh-remnant (in the sluice).

➔ ***Conditions Apply***: Intervention amelioration in sluicing requires parallel wide scope.

- In the next section, we spell out the nature of this parallel wide scope further.

4   SCOPE PARALLELISM

- The requirement for scope parallelism between the antecedent and the sluice has been used to explain the behaviour of English implicit arguments in sluicing contexts (Johnson 2001).
- It has been noted that implicit arguments in English take narrowest scope (Romero 1998; cited in Johnson 2001).
- Wh-remnants in a sluice, by contrast, take widest scope.

- The baseline case with an overt indefinite object permits sluicing, (19).
- Here, we have *parallel scope* between the sluice and the antecedent.

(19) a. To win some race is possible for Sally…   SOME >> POSSIBLE
      b. …even though I don't know exactly **which**$_i$ Δ.   WH >> POSSIBLE
      c. Δ = to win t_i is possible for Sally   SLUICING ☺

- In contrast, when the object argument is implicit, (20a), the corresponding sluice (20b), is ungrammatical.
- Here, we have ***non-parallel scope*** between the sluice and the antecedent.

(20) a. To win is possible for Sally…   POSSIBLE >> SOME
      b. …*even though I don't know (exactly) **what**$_i$ Δ.   WH >> POSSIBLE
      c. Δ = to win t_i is possible for Sally   SLUICING ☹

- Thus, sluicing is ***unavailable*** when the scope between the sluice and the antecedent is not parallel

4.1   SCOPE PARALLELISM IN HINDI-URDU

- *If scope parallelism is a necessary condition for sluicing in HU, we predict that we should be able to find other cases where they go hand in hand.*

- Below, we show you one such case, i.e. reduplicated numerals.
- Crucially, here even though the linear order is parallel, the scope is non-parallel.
- Consequently, sluicing is ungrammatical.

- The particular form of the generalization for HU is as follows:

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(21)   SCOPE PARALLELISM
Whatever scope is fixed for the antecedent, it is the only scope available for the sluice.

4.2   REDUPLICATED NUMERALS

- In HU, reduplicating a numeral gives it obligatory low scope (and a distributive reading).
- This holds irrespective of the linear order.

(22)   har   aadmii   [tiin-tiin   ciizen]-(to)   khariidegaa
        each   man   [three-three.DIST   things]-(TOP)   buy.FUT
        'Each man will buy three things.'
        UNAVAILABLE: 'There exist three *specific* things A, B, C, s.t each man will buy A, B, C.'
        EACH >> 3, *3 >> EACH

(23)   [tiin-tiin   ciizen]-(to)   [har   aadmii]   khariidegaa
        [three-three.DIST   things]-(TOP)   [each man]   buy.FUT
        EACH   >> 3, *3 >> EACH

- Following up either (22) or (23) with a sluice leads to ungrammaticality.

(24)   a. (22)… or (23)…   EACH >> 3 ⎫
                                                                              ⎬ SLUICING ☹
        b. … * par   mujhe   nahi   pata   [**kaunsi**]ᵢ   3 >> EACH ⎭
            … but   I-DAT   NEG   know   which
            … but I don't know which.'

- Therefore, to license a grammatical sluice, it is scope parallelism that counts (and not linear order parallelism).

5   CONCLUSION

- In this talk, we showed that WH in sluicing differs from WH in questions in some respects.
- Notably, WH in questions show intervention effects but in sluicing, intervention effects arise in some configurations but not in others
- The well-formedness of sluicing in intervention configurations is contingent on scope as defined in the antecedent
- Parallelism between the antecedent and the sluice is a necessary condition on Sluicing in Hindi-Urdu.

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