Polar Question Particles[1]

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1 Introduction

This paper has two inter-related foci, one specific to Hindi-Urdu[2] and the other more general. Its empirical focus is a particular lexical item in Hindi-Urdu that we refer to as polar *kya:*. We identify various syntactic restrictions on its occurrence and provide a descriptively adequate account of those restrictions. Its theoretical contribution is to leverage the account of polar *kya:* to draw a distinction between two types of interrogative particles that have often been grouped together. One type of interrogative particle is the one typically referred to as a Q-morpheme. We take this to be the overt realization of C[+Q]. The other we call a polar question particle (PQP), which occurs only in a subset of clause-types marked C[+Q]. The first class is well-established in the literature, with Japanese *-ka* and *-no* as prototypical examples. The second class is exemplified by Hindi-Urdu polar *kya:*, the new kid on the block.

In section 2, we begin by introducing the signature properties of the Hindi-Urdu polar question particle: its restriction to polar questions, its flexible syntactic positioning, and its selectiveness in appearing inside embedded polar questions. In section 3, we present an analysis distinguishing polar *kya:* from a Q-morpheme and locating it higher in the structure, a structure with the prosodic profile of matrix polar questions. In section 4 we discuss the possibility of its occurrence in alternative questions and show that, appearances notwithstanding, *kya:* only occurs within a polar disjunct. In section 6 we show the interaction between the

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syntactic position of polar *kya:* and the partition of the interrogative into a part that is at-issue in the discourse and open to challenge and a part that is not. We conclude by noting that Hindi-Urdu polar *kya:* belongs to a class of items that has not so far been given formal recognition, polar question particles, but for which there is cross-linguistic evidence in the literature.

2 Properties of the Polar Particle *kya:*

2.1 Hindi Yes/No questions and *kya:*

Yes/No questions in Hindi-Urdu are indicated prosodically – to an initial approximation, Y/N questions have rising intonation on the verbal complex while decalaratives have falling intonation.

(1) a. Y/N question: ↑ (L/H-H%, according to Butt, Bögel & Jabeen 2017; Biezma, Butt & Jabeen 2017)

anu=ne uma=ko kitaab [dii]↑
Anu-Erg Uma=Acc book.F give.Pfv.F

'Did Anu give a/the book to Uma?'

b. Declarative: ↓ (L-L%, according to Butt, Bögel & Jabeen 2017; Biezma, Butt & Jabeen 2017)

anu=ne uma=ko kitaab [dii]↓
Anu-Erg Uma=Acc book.F give.Pfv.F

'Anu gave a/the book to Uma.'

Unlike English, they do not involve obligatory inversion of the finite verb. The characteristic prosody noted above is, however, obligatory for a Y/N question interpretation. Y/N questions optionally co-occur with the *wh*-word *kya:*. It should be noted that even the presence of the polar particle *kya:* does not make the characteristic prosody optional. Note also that despite the presence of this prosody, Hindi-Urdu polar questions are neutral questions unlike English declarative questions (Bartels 1997, Gunlogson 2003).

(2) a. ↑, *kya:* → Y/N question

kya: anu=ne uma=ko kitaab [dii]↑
PQP Anu-Erg Uma=Acc book.F give.Pfv.F

'Did Anu give a/the book to Uma?'

b. ↓, *kya:* → ungrammatical

   *kya: anu=ne uma=ko   kitaab [dii]↓
   PQP   Anu-Erg Uma=Acc book.F give.Pfv.F

   intended: 'Did Anu give a/the book to Uma?'

In (2), *kya:* is not the argument of any predicate. But *kya:* can also function as an argument of a predicate with the meaning 'what'.

(3) *wh*-question:

   anu=ne   uma=ko   kya: [diya:]↓?
   Anu-Erg Uma=Acc what give.Pfv

   'What did Anu give to Uma?'

To distinguish these two cases, we dub the athematic *kya:* in (2) the polar question particle *kya:* and gloss it as 'PQP', short for 'Polar Question Particle'. The *kya:* in (3), we call thematic *kya:*. Butt, Bögel & Jabeen (2017) note that the polar particle *kya:* has a flat intonation while the thematic *kya:* has a H* pitch accent, which accent also appears more generally on *wh*-phrases in Hindi-Urdu.

Polar *kya:* does not appear in constituent questions.

(4) a. *kya: anu=ne   uma=ko   kya: diya:?
         PQP   Anu=Erg Uma=Acc what give.Pfv

         intended: 'What did Anu give to Uma?'

    b. *kya: kis=ne   uma=ko   kitaab dii?
        PQP   who=Erg Uma=Dat book.F give.Pfv.F

        intended: 'Who gave Uma a/the book?'

Polar *kya:* can appear in alternative questions; we will argue that its appearance there follows from its appearance in Y/N questions.

(5) (kya:) tum caai pi-yoge↑   ya: coffee?
     PQP   you tea drink-Fut.2MPl or   coffee

     'Will you drink tea or coffee?'

2.2 Distribution of Polar *kya:* in Matrix Clauses

The most unmarked location for polar *kya:* is the clause-initial position. But it can appear in almost any other position. It can be clause-medial or clause-final. It

is, however, not entirely natural in the immediately pre-verbal position.[3]

(6) distribution of polar *kya:*:

(kya:) anu=ne   (kya:) uma=ko   (kya:) kitaab (%kya:) [dii]↑
PQP   Anu-Erg PQP   Uma=Acc PQP   book.F PQP   give.Pfv.F
(kya:)?
PQP

'Did Anu give a/the book to Uma?'

In an almost mirror image pattern, thematic *kya:* is natural in the immediately pre-verbal position but odd/marked elsewhere.[4]

(7) *wh*-question:

(??kya:) anu=ne   (??kya:) uma=ko   (kya:) [diya:]↓ (??kya:)
what   Anu-Erg what   Uma=Acc what   give.Pfv what

'What did Anu give to Uma?'

There are, however, limits to where polar *kya:* can appear. A polar *kya:* in an embedded infinitival clause can and must be interpreted with the minimal finite clause as the locus of the Y/N question.

(8) a. restructuring infinitival:
        Ram-ne Sita-ko kya: tohfa: de-na: ca:h-a: tha:?
        Ram-Erg Sita-Dat PQP present give-Inf want-Pfv be.Pst

        'Had Ram wanted to give a present to Sita?'

     b. infinitival subject:
        gari:bõ-ko kya: paise de-naa acchi: ba:t   hai?
        poor-Dat   PQP money give-Inf good.F thing.F be.Prs.Sg

        'Is it a good thing to give money to the poor?'

But a polar *kya:* in an embedded finite clause is not acceptable unless the embedded finite clause is itself interpreted as a Y/N question. This is possible with a rogative predicate like *puuch* 'ask' which embeds questions but not with a predicate like *maan* 'believe', which cannot.

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[3]It is possible to have the PQP in a preverbal position, but only with a marked prosody.

[4]The *kya:* that appears in the Hindi-Urdu scope marking construction patterns with thematic *kya:* in its distribution and prosodic profile.

(9) a. *maan* 'believe':

     * Ram maantaa   hai↑   ki [kya: dhartii gol

       Ram believe.Hab.MSg be.Prs.Sg that PQP earth   spherical

     hai]?

     be.Prs.Sg

     intended: 'Does Ram believe that the earth is spherical?'

    b. rogative predicate *puuch* 'ask':

     Ram=ne puucha: ki [kya: dhartii gol   hai].

     Ram=Erg ask.Pfv.Def that PQP earth   spherical be.Prs.Sg

     'Ram asked whether the earth is spherical.'

This correlation between the finiteness of the embedded clause and Y/N interpretation can be related to an independent fact about *wh*-scope domains in Hindi-Urdu – infinitival clauses do not constitute domains for *wh*-scope (see Butt 1995, and Srivastav 1991/Dayal 1996).   So a *kya:* that appears inside an infinitival clause cannot be interpreted as making that clause into a Y/N question for the simple reason that there is no such thing in Hindi-Urdu as an infinitival question. That leaves us with the question of why the *kya:* in the embedded clause in (9a) requires the embedded clause to be a Y/N question; why is it not enough for it that the matrix clause is interpreted as a Y/N question. Our proposal for deriving the full distribution of polar *kya:* will answer these questions. [5]

2.3   Distribution of Polar Particle *kya:* in Embedded Clauses

All else being the same, one might expect that the distribution of polar *kya* in embedded clauses would simply track the distribution of embedded Y/N questions. However, this expectation is not borne out. To a first approximation, polar *kya:* can only appear in complements of rogative predicates, predicates that take only interrogative complements, but not in complements of responsive predicates,

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[5]We will, however, not address the link between polar question particle *kya:* and thematic *kya:* in this paper. These two elements seem to be homophonous not just in Hindi-Urdu but in a number of other Indo-Aryan languages as well as in Italian and Slovenian. We have not conducted a wider investigation but it is likely that there is a deeper connection. What such a connection could be though is not clear to us. There is also the fact that the two elements are not fully homophonous – thematic *kya:* has a pitch accent. This wouldn't eliminate an analysis where the two have a common core. Another factor to consider is that, as discussed in Syed & Dash (2017), in Bangla and Odia, the polar question particle (*ki*) cannot be sentence-initial while the homophonous thematic *ki* can be.

predicates that take interrogative as well as declarative complements. Note that the Hindi-Urdu complementizer *ki* tracks finiteness but is otherwise compatible with declarative, interrogatives and subjunctive clauses.

(10)   Polar particle *kya:* in complement of responsive predicate *ja:n* 'know': *

    *Anu jaan-tii   hai   [ki kya: tum cai piyoge].
    Anu.F know.Hab.F be.Prs.Sg that PQP you tea drink.Fut.2MPl

    intended: 'Anu knows whether you will drink tea.'

(11)   Polar particle *kya:* in the complement of rogative predicates: ok

  a. ṭi:car=ne   Anu=se   puuch-aa [ki kya: vo   caai piyegii]
      teacher=Erg Anu-from ask-Pfv   that PQP s/he tea drink.Fut.3FSg

      'The teacher asked Anu whether she would drink tea.'

  b. anu   jaan-naa caah-tii   hai   [ki kya: tum cai
      Anu.F know-Inf want.Hab.F be.Prs.Sg that PQP you tea
      piyoge].
      drink.Fut.2MPl

      'Anu wants to know whether you will drink tea.'

Note that in (11b), the predicate that takes the embedded question as a complement is *jaan* 'know', which is a responsive predicate but one that is embedded under a modal.

    We confirmed the unavailability of polar *kya:* in complements of the responsive predicate *ja:n* 'know' by searching the Corpus Of Spoken Hindi (COSH) using the COSH Conc [Software][6]. There was no shortage of embedded *kya:* questions in the corpus but we did not find cases like (10). We would like to emphasize that what we learn from the corpus is not that polar *kya:* cannot appear in the complement of a responsive. If that was the case, (11b) would be ungrammatical; it is not and it is also well represented in the corpus. What we do learn is that a responsive cannot embed polar *kya:* under certain conditions. We return to this point in the next section.

Polar *kya:* can also appear in question complements of nouns.

(12) savaal   ye hai [ki kya: nayii vyavasthaa   kaagar   saabit hogii]
      question this is   that PQP new   arrangement effective prove be.Fut.F
      'The question is whether the new arrangement will prove to be effective.'

We saw earlier that polar *kya:* in matrix Y/N questions can appear not just in the default clause-initial position but also in a clause-medial or clause-final position. The same freedom of position is available in embedded clauses as well.

(13) ṭi:car=ne   Anu=se   puuch-aa [ki vo   (kya:) caai (%kya:)
      teacher=Erg Anu-from ask-Pfv   that s/he PQP   tea PQP

      piyegi: (kya:)]
      drink.Fut.3FSg PQP

      'The teacher asked Anu whether she would drink tea.'

2.4 Embedded Inversion in English and Polar *kya:*

The responsive versus rogative distinction that we saw in the distribution of embedded polar *kya:* has been noted by McCloskey (2006) to play a role in the distribution of embedded inversion in English.

(14) rogatives vs. responsive:

      a. responsive: ... [$_{CP1}$ ...
          I found out how they got into the building.
          *I found out how did they get into the building.

      b. rogative: ... [$_{CP2}$ ... [$_{CP1}$ ...
          I asked him from what source the reprisals could come.
          I asked him from what source could the reprisals come.

As indicated in the schematic version of these examples, McCloskey takes the possibility of embedded inversion as indicating the presence of additional CP-structure but he goes on to note that the distribution of embedded inversion cannot be reduced to the choice of embedding predicate. As the following example shows, the responsive predicate *know* can combine with a embedded inversion clause if it is part of a larger structure *want to know*.

(15) Everybody wants to know [did I succeed in buying chocolate for Winifred].

McCloskey also notes that questioning or negating the responsive improves the acceptability of embedded inversion.

(16) a. *I remember was Henry a communist.

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    b. Do you remember was Henry a communist.

    c. ?I don't remember was Henry a Communist.

It is striking that in Hindi-Urdu some of the same features modulate the acceptability of embedded polar *kya:* with responsives. We have already seen an example with 'want to know' (=11b) and we found the following in the COSH corpus.

(17)   a. *jaan-naa ho-gaa* 'know-Inf be-Fut' (will have to find out)

      is=ke   liye yeh jaan-naa hogaa [ki kya: sacmuc koi   nahĩ:
      this=Gen for this know-Inf be.Fut that PQP really   someone Neg
      aa-ya:]
      come-Pfv

      'For this, one needs to determine whether it is really the case that no one came.'

   b. Neg + 'know'

      koi   nahĩ: jaan-taa   [ki kya: Tito Stalin=se
      someone Neg know-Hab.MSg that PQP Tito Stalin=with
      mil-e   the]
      met-Pfv.MPl be.Pst.MPl

      'Nobody knows whether Tito had met with Stalin.'

   c. Imperative + 'know'

      jaan-ẽ   [ki kya: aap=ke   bacce=ke paas email account
      know-2.Imp that PQP you$_{hon}$=Gen child=Gen near email account
      hai]
      is

      'Find out whether your child has an email account.'

The distribution of the Hindi PQP kya:, then, is not as arbitrary as it might seem at first glance. When seen in the broader perspective of what Dayal and Grimshaw (2009) label quasi-subordination, it appears quite systematic. It appears in matrix polar questions and in quasi-subordinated embedded polar questions.

3   Towards an analysis of Polar Particle *kya:*

In this section we work towards an account of polar particle *kya:*, focusing on its distributional properties. We first discuss the possibility that it functions as a clause-typing particle. We then offer an alternative in which it is a particle that

is situated higher in the left periphery than CP and which selects for singleton propositional sets. We also discuss how *kya:* can appear in different positions in the clause.

3.1 What Polar Particle *kya:* is not

A plausible first pass at analyzing polar particle *kya:* is to treat it as a Q-morpheme, that is optionally overt. Indeed, this is how Cheng (1991:21) characterizes its role. There is, however, good reason to doubt that *kya:* is a marker of the clause type interrogative. Consider the contrast between (18a) and (18b):

(18)　a.　bad with embedded Y/N reading:

　　　　　　*anu　jaan-tii　　　hai　　　[ki　kya: tum cai piyoge].
　　　　　　Anu.F know.Hab.F be.Prs.Sg that Q　　you tea drink.Fut.2MPl

　　　　　　intended: 'Anu knows whether you will drink tea.'

　　　b.　rogative predicates, good with embedded Y/N reading:

　　　　　　anu　　jaan-naa caah-tii　　hai　　　[ki　kya: tum cai
　　　　　　Anu.F know-Inf want.Hab.F be.Prs.Sg that Q　　you tea
　　　　　　piyoge].
　　　　　　drink.Fut.2MPl

　　　　　　'Anu wants to know whether you will drink tea.'

The contrast above represents a more general pattern. Polar particle *kya:* cannot be embedded under any responsive predicate. It can be embedded under any rogative predicate. We saw in section 2 that matrix polar questions do not differ syntactically from their declarative counterparts. Their status as interrogatives is signaled by a rising vs. a falling intonation. However, the situation is different in embedded positions, where prosody cannot play the same role. (19) shows that responsive predicates cannot take such a complement under an indirect question interpretation.

(19)　'know' + declarative: 'know that'

　　　　anu　　jaan-tii　　hai　　　[ki　tum cai piyoge.]
　　　　Anu.F know.Hab.F be.Prs.Sg that you tea drink.Fut

　　　　'Anu knows that you will drink tea.'

We note that in order to get an indirect question interpretation, the embedded clause must be a polar alternative question, with an overt disjunction plus negation

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ya: nahĩ: 'or not'. Interestingly, we cannot add *kya:* in this case, as shown in (20b):[7]

(20) a. 'know' + 'or not': 'know whether'

       anu   jaan-tii   hai   [ki tum cai piyoge   ya: nahĩ:].
       Anu.F know.Hab.F be.Prs.Sg that you tea drink.Fut or   not

       'Anu knows whether you will drink tea or not.'

    b. 'know': + *kya:* + 'or not' - bad

       *anu jaan-tii   hai   [ki kya: tum cai piyoge   ya: nahĩ:].
       Anu.F know.Hab.F be.Prs.Sg that PQP you tea drink.Fut or   not

       'Anu knows whether you will drink tea or not.'

The contrast between responsive and rogative predicates with respect to embeddability of *kya:* is replicated in Mandarin, with respect to the particle *ma*, which Cheng treats in the same terms as Hindi *kya:*.[8]

(21) a. know + *ma*-CP: *

       *John zhidao xiayu-le   ma zuotian
       John   know rain-PERF Q yesterday

       intended: 'John knows whether it rained yesterday.'

    b. want to know + *ma*-CP: ok

       John xiang zhidao xiayu-le   ma zuotian
       John want know rain-PERF Q yesterday

       'John wants to know whether it rained yesterday.'

The facts discussed here establish that Hindi-Urdu *kya:*, and Chinese *ma* by extension, is not the yes/no operator. If it were, it would be able to occur optionally or obligatorily in all embedded positions. It is also not a straightforward clause-typing particle, marking an interrogative clause. If it were, one would again expect it to occur in all cases of embedding. One could even argue that such a particle might be obligatory when embedded under responsive predicates where there may be more functional pressure to distinguish between declarative and interrogative structures.

One analysis that is compatible with the restricted distribution of polar particle *kya:* and may still qualify as a form of clause typing is to take *kya:* to occur

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[7]Overt disjunction is also an option in the complement of a rogative predicate. In such cases, *kya:* can be combined with the disjunction.

[8]We thank Mingming Liu, Beibei Xu, Hoi ki Law and Yi-Hsun Chen for these judgments.

in a projection above CP, let's call it ForceP. If responsive predicates are treated as taking CP complements and rogative predicates as being able to take ForceP complements, *kya:* would only be compatible with rogative predicates. [9] In fact, this account of polar *kya:* mirrors the analysis proposed by McCloskey (2006) to explain the parallel facts about inversion in English, discussed in section 2.4. McCloskey suggests that while responsive predicates take regular CP complements that denote questions, rogative complements take ForceP complements that denote the question speech act: [10] [11]

(22) a. rogatives (*wonder*): $[_{ForceP} [_{CP} C^0_{+Q} [_{TP}]]]$
      b. responsives (*know*): $[_{CP} C^0_{+Q} [_{TP}]]$

Our claim, then, is that *kya:* is only acceptable in the complements of predicates that can take ForceP. These are canonically the set of rogative predicates. However, as we have seen, there are some cases where *kya:* can occur in the complement of responsive predicates if those predicates are negated or questioned. We set aside the issue of why selection of a complement should be a fluid matter, and focus here on the fact that the fluidity is entirely systematic and in keeping with the proposal to treat *kya:* as occurring in a projection above CP, which we are taking to be ForceP.[12]

3.2 What Polar *kya:* is

The issue we will now address is the fact that polar particle *kya:* is acceptable in Y/N questions but not in *wh*-questions. In addressing this, we will assume that Y/N questions differ from *wh*-questions in denoting singleton sets of propositions:

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[9]We do not have evidence to suggest that rogative predicates **must** take ForceP complements. In fact, as we will see in the next section, there may be a prosodic difference between embedded complements of rogative predicates with *kya:* and those without *kya:*. Similarly, the complements of such verbs in English may or may not allow inversion, a duality that is compatible with the predicate taking both CP and/or ForceP complements.

[10]The idea that some embedding predicates can take complements with more structure is anticipated in discussions of Spanish. The connection between structural complexity and semantic type-distinctions is articulated most explicitly in Suner (1993). See Lahiri (2002) for relevant discussion.

[11]One could also argue that rogative predicates embed smaller structures than responsive predicates. This would be motivated by appealing to the fact that the former select questions/sets of propositions, defined at the CP level, while the latter select propositions that are extracted from the CP denotation by an answerhood operator that occurs above it (see Lahiri 2002, pg. 147 and Dayal 2016 pp. 144-7 for relevant discussion).

[12]The interested reader is referred to the discussion in Dayal (2016: 136-147).

(23) a. $[\![\text{who left}]\!] = \lambda p.\exists x[\text{person}(x) \wedge p = {}^{\wedge}x \text{ left}] =$
$\{\text{John left, Sue left, Kostas left, } \dots \}$

  b. $[\![\text{did John leave}]\!] = \lambda p.[p = {}^{\wedge}\text{John left}] = \{\text{John left}\}$

The view that *wh*-questions denote a set with more than one member is standard. It rests on the view that *wh*-phrases must range over a plural domain in order for the conditions for proper questioning to be satisfied. That is, a question like (23a) carries an existential presupposition that someone left and an uncertainty presupposition about who that person may be. An insight going back to Bolinger (1978), and recently revived in the literature, is that Y/N questions are fundamentally different in denoting a set with only the nucleus proposition (Gawron 2001, van Rooij and Šafářová 2003, Biezma 2009. Farkas and Bruce 2010, Biezma and Rawlins 2012, Krifka 2013 and Roelofsen and Farkas 2015). A *yes* answer or a *no* answer can then be treated as anchored to this proposition. In the case of (23b), for example, the denotation would be the singleton set $\{\text{John left}\}$.[13]
We now show how this independently motivated distinction can help explain the distribution of polar *kya:*, drawing on the account of similar restrictions discussed by Xu (2012) in connection with the Mandarin particle *nandao*. We define *kya:* as an expression that encodes a presupposition that its complement is a singleton set:[14]

(24) $[\![kya:]\!] = \lambda Q_{(st)t} : \exists p \in Q[\forall q \in Q \rightarrow q = p].Q$

Since *kya:* is defined on a set of propositions, it rules out *kya:* with declarative statements. It further restricts *kya:* to a subset of questions, namely those with just one proposition in it. *Wh*-questions, as we have just discussed, do not pass the requirement of singularity. Interestingly, neither do alternative questions. This poses a potential problem for our account as we have seen that *kya:* is fully acceptable in alternative questions like (5). We will return to this in sections 4 and 5, where we will see that appearances notwithstanding, the pattern falls well within the terms of our account.

Before concluding this section, we would like to clarify some assumptions and emphasize certain aspects of our proposal. The first is that we take $[_{CP}\, C_{\pm Q} \, \dots]$ to be the locus for distinguishing between a declarative (a proposition of type st) from an interrogative (a set of propositions of type (st)t). Additionally, we take there to be a higher projection where the rising intonation (↑) characteristic of polar questions is located. We are calling it ForceP, following McCloskey (2006).

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[13]We will elaborate further on this in §6.3.

[14]We thank Manfred Krifka and Maria Biezma for helpful comments in this connection.

We think this distinction is a useful way to characterize the differential embedding properties of rogative and responsive predicates: both responsives and rogatives can take [$_{CP}$ C$_{+Q}$ ...] complements; rogatives can also take interrogative ForceP complements but responsives, at least in their simplest form, cannot. However, it is worth noting that our analysis of polar question particles like Hindi-Urdu *kya:* is not dependent on this precise implementation. The crucial point for us is to distinguish *kya:* from straightforward Question Particles like Japanese *-ka/-no*. Polar question particles, as we have seen, behave like English embedded inversion with respect to the responsive/rogative distinction (a sort of root phenomenon), while the Q-particle is equally happy under both. Furthermore, polar question particles cannot turn declarative statements into polar questions, while the presence of the second is enough for the purpose. If Q-particles are taken to be an overt realization of C$_{+Q}$, it follows that polar question particles must be something else. We have suggested that it is a presuppositional expression located in a projection above [$_{CP}$ C$_{+Q}$ ...].

Our discussion of *kya:* touches upon a problem in the syntax and semantics of Hindi-Urdu that is independent of the issue of polar question particles. We present the paradigm in (25).

(25) Anu jaan-tii   hai   (ki)
      Anu know-Han.F be.Prs.sg that

      'Anu knows ..'

   a. *wh*-constituent question: ok
      kis=ne   kitaab khariid-ii
      who-Erg book.F buy-Pfv.F

      'who bought a/the book.'

   b. polar question: *
       *Ravi ghar=par hai
      Ravi   home-in be.Prs.Sg

      intended: whether Ravi is at home.'

   c. polar alternative question:
      Ram ghar=par hai ya: nahī̃:
      Ram home-in is   or   Neg

      'whether Ram is at home or not.'

   d. Alternative question:

Ravi ghar=par hai   ya: Ram
Ravi home=in be.Prs.Sg or   Ram

'whether Ravi is at home or Ram.'

The examples in (25a, c, and d) tell us that Hindi-Urdu has the same pattern of embedding questions as English. For this reason we allow Hindi-Urdu responsive predicates to take CP complements headed by C[+Q], where $[\![C[+Q]]\!] = \lambda q \lambda p[p = q]]$, as standardly assumed. The only point of cross-linguistic variation is the indirect question interpretation of the polar question (cf. 25b). We believe that in English the presence of the complementizer *if/whether* allows for an indirect question interpretation while Hindi-Urdu requires matrix clause intonation for this purpose. This makes embedding polar questions, in effect, a root phenomenon in Hindi-Urdu since the indirect question interpretation piggy-backs on rising intonation, which is cross-linguistically a root phenomenon. [15]

Here is a prediction that follows from our account. Consider the following sentence.

(26)   Anu puunch rahii   thii   ki (kya:) dhartii gol   hai
       Anu ask   Prog.FSg be.Pst.FSg that PQP   earth   round be.Prs.3Sg

'Anu was asking whether the Earth is round.

In principle, the complement in this sentence has two possible parses, as $[_{CP} C_{+Q} \ldots]$ and as $[_{ForcepP} \uparrow [_{CP} C_{+Q} \ldots]$. But with or without *kya:*, the first option (=CP) is ruled out analogously to (25b). The second option (=ForceP) saves the sentence but it brings with it a short prosodic break after the matrix clause and the prosody of matrix polar questions on the complement.

The final aspect of our proposal that we would like to clarify concerns the relationship between intonation and discourse. We know from declarative questions in English that rising intonation with declarative syntax leads to biased questions (Bartels 1997, Gunlogson 2004). As noted in Dayal (2016: 268-9, 279), however, this does not happen in Hindi-Urdu. Intonation simply shifts interpretation from

---

[15]We note, though, that there are other contexts, such as unconditionals, discussed by Rawlins (2013), where the presence of complementizers such as *whether* is insufficient for delivering a plurality of propositions and an explicit (polar) alternative question is needed even in English.

(1)   a.   *Whether Mary leaves, John will be disappoiinted.

       b.   Whether Mary leaves or not, John will be disappointed.

       c.   Whether Mary or Sue leaves, John will be disappointed.

an assertion to a question and this is all we intend the presence of ↑ to signal, regardless of whether it occurs in matrix or in embedded ForceP. [16]

3.3 Deriving non-initial *kya:*

We now come to the third part of the distributional puzzle, which has to do with the position of the polar question particle *kya:* within the clause it occurs in. The various possibilities for the occurrence of *kya:* can be derived by assuming the base structure in (27) followed by movement to the left of *kya:* as illustrated in (28).

(27)   [$_{ForceP}$ **kya:** [$_{CP}$ Y/N [$_{TP}$ anu-ne uma-ko kitaab dii]]]

(28)   distribution of polar *kya:*:
Subject *kya:* Object Verb
       ← [Subject$_i$ [ForceP kya: [CP ___ C^0 [+Q] [IP t$_i$ ...]]]]
Subject Object *kya:* Verb
       ← [Subject$_i$ Object$_j$ [ForceP kya: [CP ___ C^0 [+Q] [IP t$_i$ t$_j$ ...]]]]

Some support for the movement proposal comes from the fact that *kya:* is difficult after weak indefinites like *kuch* 'something' and idiomatic expressions, which are elements whose movement leads to deviance.[17]

(29)   a.   weak indefinite object:

(kya:) Ram=ne   (kya:) kuch   (*kya:) [khaaya:]↑?
PQP   Ram=Erg PQP   something PQP   eat.Pfv

'Did Ram eat something?'

b.   idiomatic object: *jhak maar* 'to kill time'

(kya:) tum (kya:) vahã: (kya:) jhak   (*kya:) ma:r rahe
PQP   you PQP   there PQP   JHAK PQP   kill Prog.MPl
the?
be.Pst.MPl

'Were you killing time there?'

---

[16]There may well be other constructions in Hindi-Urdu where the distinction between a +Q morpheme and ↑ may have further discourse effects, as has been claimed for Japanese (Davis 2011) and for Bangla (Bhadra 2017).

[17]Note that we are not claiming that there is a blanket ban on the movement of weak indefinites in Hindi-Urdu. It is, in fact, possible to move weak indefinites under appropriate conditions (Dayal 2011).

According to our proposal, the appearance of the polar question particle *kya:* in an immediately pre-verbal position in (29) indicates that the pre-*kya:* material has moved over *kya:*. In (29), we have direct objects that are resistant to movement, as shown by the following contrasts.

(30) a. *kuch* 'something' is in-situ

Ram=ne kal kuch khaa-ya: thaa
Ram=Erg yesterday something eat-Pfv.MSg be.Pst.MSg

'Ram had eaten something yesterday.'

b. *kuch* 'something' is scrambled: #

#Ram=ne kuch kal khaa-ya: thaa
Ram=Erg something yesterday eat-Pfv.MSg be.Pst.MSg

intended: 'Ram had eaten something yesterday.'

(31) a. non-referential object *jhak* is in-situ:

Ram vahã: jhak maar rahaa thaa
Ram there JHAK kill Prog.MSg be.Pst.MSg

'Ram was killing time there.'

b. *jhak* is scrambled: #

#Ram jhak vahã: maar rahaa thaa
Ram JHAK there kill Prog.MSg be.Pst.MSg

intended: 'Ram was killing time there.'

Since the direct objects in (29) are resistant to movement, it follows that the variants of (29a, b) where the polar particle *kya:* is immediately pre-verbal are deviant. That the deviance of immediately pre-verbal polar particle *kya:* is related to the movement potential of the direct object is shown below. Here we have an object that can move freely and we find that *kya:* can appear in an immediately pre-verbal position without deviance.

(32) a. in-situ:

Mina=ne kal Vina=ko ḍã:ṭ-aa thaa
Mina=Erg yesterday Vina=DOM scold-Pfv.Def be.Pst.Def

'Mina had scolded Vina yesterday.'

b. scrambling over object: ok

Mina=ne Vina=ko kal ḍã:ṭ-aa thaa
Mina=Erg yesterday Vina=DOM scold-Pfv.Def be.Pst.Def

16

'Mina had scolded Vina yesterday.'

c. immediately preverbal polar particle *kya:*: ok

Mina=ne   Vina=ko   kya: ḍã:ṭ-aa thaa
Mina=Erg yesterday Vina=DOM PQP   scold-Pfv.Def be.Pst.Def

'Had Mina scolded Vina?'

Following a similar logic as for the above examples, clause-final *kya:* is derived
by scrambling of the whole finite clause to the left of *kya:*.

(33) Subject Object Verb *kya:*
      derivation: [[Subject Object Verb]$_i$ [ForceP kya: t$_i$]]

      anu=ne   uma=ko   kitaab dii   kya:?
      Anu-Erg Uma=Acc book.F give.Pfv.F PQP

      'Did Anu give a/the book to Uma?'

This accounts for the attested word order variations observed with respect to *kya:*.
We will provide further justification for this analysis in section 5.

4   Polar *kya:* and Disjunction

4.1   Analyzing *kya:* with Alternative Questions

In section 3, we alluded to Bolinger in connection with the difference between
polar questions as singleton propositional sets and alternative questions as non-
singletons. Under current accounts of alternative questions as well, each alterna-
tive is included in the question denotation. For present purposes the precise way
in which these multi-membered sets are created is not directly relevant. For exam-
ple, they may arise through the same interpretive procedure as applies to focused
expressions within a single clause, or they may arise through the union of two
separate polar questions, each denoting a singleton set (see Alonso-Ovalle 2006,
Biezma and Rawlins 2012, Groenendijk and Roelofsen 2009, Han and Romero
2004a, Roelofsen and van Gool 2010 for different possibilities). If alternative
questions denote multi-membered sets, the Hindi-Urdu PQP *kya:*, as we have de-
fined it, should be incompatible with them but it is not.[18]

---

[18]As in English, alternative questions and polar questions in Hindi-Urdu have distinct prosodies
(Bartels 1997, Pruitt 2008, Pruitt and Roelefsen 2013, among others). We represent the intended

(34) (kya:) tum caai pi-yoge↑   ya: coffee?
      PQP   you tea drink-Fut.2MPl or coffee
      'Will you drink tea or$_{ALT}$ coffee?'

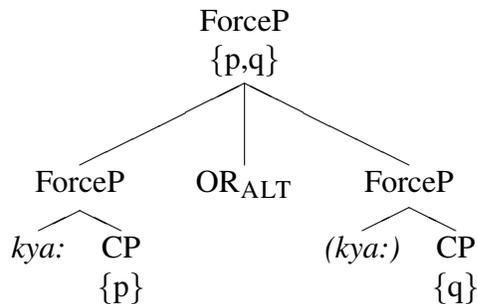Our solution to the problem of polar question particles in alternative questions rests on the view that it is possible to analyze an alternative question with *kya:* as (36) instead of (35), optionally followed by ellipsis of material in either CP1 or CP2 along the lines of Han & Romero (2004b).[19] For completeness, we add the structure with *kya:* and disjunction inside a polar question in (37).

(35) → Presupposition failure at ForceP, ForceP not singleton!

```
                 ForceP
                /      \
          kya:          CP
                        {p,q}
                       /  |  \
                     CP  OR_ALT  CP
                     {p}         {q}
```
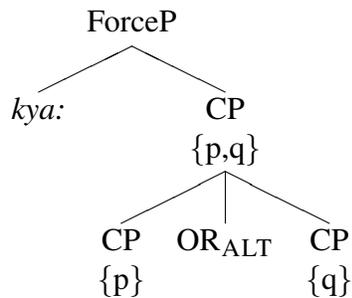
(36) Alternative Question: Possible Answers: p/q/*yes/*no

```
                      ForceP
                      {p,q}
                    /    |    \
              ForceP  OR_ALT   ForceP
              /   \            /     \
          kya:   CP       (kya:)     CP
                 {p}                 {q}
```

---

reading by annotating the disjunction as either OR$_{ALT}$ for alternative questions or OR$_{BOOL}$ for polar questions. In §4.4 we will see that Hindi-Urdu has a distinct lexical item that unambiguously signals Alternative Question readings.

  [19]The disjunction of questions is a controversial topic and has been discussed in the context of wh questions (see Groenendijk and Stokhof 1984, Szabolcsi 1997 and Krifka 2001, among others).

(37) Yes/No Question: Possible Answers: Yes, $p \vee q$/No, $\neg(p \vee q) = $ No, $\neg p \wedge \neg q$


```
         ForceP
         {p ∨ q}
        /       \
     kya:        CP
              {p ∨ q}
                 |
                TP
              p ∨ q
             /  |  \
          TP  or_BOOL  TP
          p           q
```

In support of our proposal, we note that in addition to the *Will you drink tea or coffee?* structure, alternative questions can also be conveyed by what looks like an explicit disjunction of two Yes/No questions. In Hindi-Urdu, we find that two *kya:* questions can be disjoined to yield an alternative question.

(38)   a. Will you drink coffee or will you drink tea?

     b. kya: tum ja:-oge   ya: kya: vo aa-ega:?
        PQP you go-Fut.2MPl or   PQP he come-Fut.3MSg
        'Will you go or will he come?'

This disjunction of two *kya:* questions seems to have the same meaning as the version with just one initial *kya:*. In fact, as far as we can tell, all the following four variants are acceptable and can be used to convey alternative question readings, of course with the appropriate prosody.

(39)   a. *kya:* p or *kya:* q?
               = (38b)

     b. *kya:* p or q?
        kya: tum ja:-oge   ya: vo aa-ega:?
        PQP you go-Fut.2MPl or   he come-Fut.3MSg
        'Will you go or will he come?'

     c. p or *kya:* q?
        tum ja:-oge   ya: kya: vo aa-ega:?
        you go-Fut.2MPl or   PQP he come-Fut.3MSg

'Will you go or will he come?'

d. p or q?

tum ja:-oge   ya: vo aa-ega:?
you go-Fut.2MPl or   he come-Fut.3MSg

'Will you go or will he come?'

We can interpret all these alternatives with our assumption concerning polar questions and *kya:* and an assumption about how to interpret disjoined polar questions. In our analysis, p and q individually combine with C[+Q] to form polar questions. By the semantics we have assumed, this means that each polar question denotes a singleton set, {p} and {q} respectively. *kya:*, if present, applies to the singleton set corresponding to one of the polar questions and as a result its requirement is met. The new component is that when we disjoin two Y/N questions, we end up with {p,q}, which corresponds to what the different options in (39) denote.[20]

4.2   Deriving Alternative Questions

This analysis of alternative questions allows us to retain the singleton set constraint of *kya:* and yet allow *kya:* to appear in alternative questions. But it requires a special disjunction operation (OR$_{ALT}$), which is distinct from the more familiar Boolean disjunction (OR$_{BOOL}$). Let us take it to be an operation that has the semantics of set union. We note that such an operation is part of the toolbox used to interpret alternative questions generally, not a special mechanism that is needed for our analysis of the polar question particle *kya:*.

(40)   a. $[\![OR_{ALT}]\!] = \lambda P_{(st)t}\lambda Q_{(st)t}.P \cup Q$
       b. $[\![OR_{BOOL}]\!] = \lambda p\lambda q.p \vee q$

In the remainder of this section, we examine the full set of analytical options available to us for the string '*kya:* p or q'. The disjunction can in principle take scope at three different levels and there are two disjunctions – alternative and boolean. This yields the following six options.

(41)   '*kya:* p or q'

---

[20]Maribel Romero (p.c.) has directed our attention to examples like *Are you or have you ever been a member of the Communist Party?*. Syntactically these are disjunctions of two polar questions and yet it is natural to respond to them as a Yes/No question i.e. the explicit disjunction of polar questions does not force an Alternative Question interpretation. We believe that for a Yes/No interpretation to be available the two polar questions have to be asking parts of a higher-level question – here this could be *Do you have an association with the Communist Party?*

kya: tum ja:-oge   ya: vo aa-ega:?
PQP you go-Fut.2MPl or he come-Fut.3MSg

'Will you go or will he come?'
unavailable: 'Is it the case that [you will go or he will come]?'

  a. scope: *kya:* $>$ CP[+Q] $>$ OR$_{\text{ALT}}$, **type-mismatch**
     [$_{\text{ForceP}}$ *kya:* [$_{CP}$ C^0[+Q] [p OR$_{\text{ALT}}$ q]]]

  b. scope: *kya:* $>$ OR$_{\text{ALT}}$ $>$ CP[+Q], **singleton needs of *kya:* unmet**
     [$_{\text{ForceP}}$ *kya:* [[$_{CP}$ C^0[+Q] p] OR$_{\text{ALT}}$ [$_{CP}$ C^0[+Q] q]]]

  c. scope: OR$_{\text{ALT}}$ $>$ *kya:* $>$ CP[+Q]
     [[$_{\text{ForceP}}$ *kya:* [$_{CP}$ C^0[+Q] p]] OR$_{\text{ALT}}$ [$_{\text{ForceP}}$ [$_{CP}$ C^0[+Q] q]]]

  d. scope: *kya:* $>$ CP[+Q] $>$ OR$_{\text{BOOL}}$
     [$_{\text{ForceP}}$ *kya:* [$_{CP}$ C^0[+Q] [p OR$_{\text{BOOL}}$ q]]]

  e. scope: *kya:* $>$ OR$_{\text{BOOL}}$ $>$ CP[+Q], **type-mismatch**
     [$_{\text{ForceP}}$ *kya:* [[$_{CP}$ C^0[+Q] p] OR$_{\text{BOOL}}$ [$_{CP}$ C^0[+Q] q]]]

  f. scope: OR$_{\text{BOOL}}$ $>$ *kya:* $>$ CP[+Q], **type-mismatch**
     [[$_{\text{ForceP}}$ *kya:* [$_{CP}$ C[+Q] p]] OR$_{\text{BOOL}}$ [$_{\text{ForceP}}$ [$_{CP}$ C[+Q] q]]]
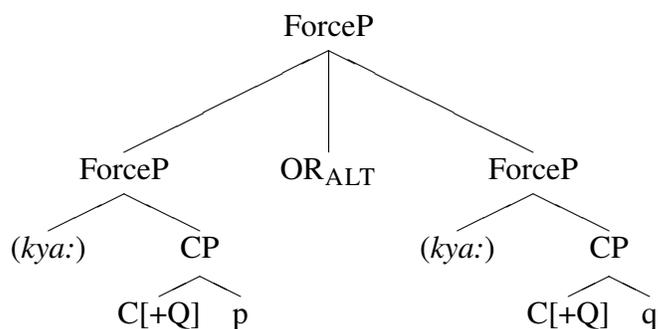
Of these six options, three are not well-formed on type-theoretic grounds, namely
(41a), (41e), and (41f). This is because CPs and ForceP are of type (st)t and cannot
be disjoined by OR$_{\text{BOOL}}$ and OR$_{\text{ALT}}$ cannot be used to disjoin propositions. The
other options are type-theoretically well-formed but (41b) is ruled out because the
input to *kya:* is not a singleton set. This leaves us with (41c), which is the structure
we initially assigned to '*kya:* p or q'. The final option to be considered is (41d),
which involves a boolean disjunction – this structure is entirely well-formed; it
should have the semantics equivalent to 'Is it the case that p or q?'. However,
such an interpretation is not available. We will return to the question of why this

reading is unavailable in §5.2.3. Setting the boolean disjunction cases aside, we list the structures that our analysis makes available to us for the four sequences in (39). All four allow for an analysis which involves ForceP disjunction.

(42)   a. *kya:* p or *kya:* q?
          kya: p or q?
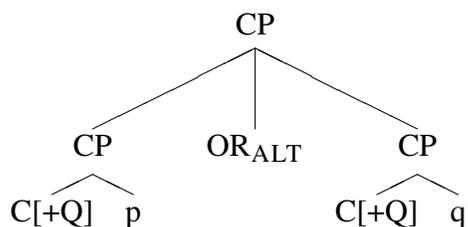   p or *kya:* q?
          p or q?

Disjunction of ForcePs:
$[[_{ForceP} (kya{:}) [_{CP} C[+Q] p]] OR_{ALT}$
$\qquad\qquad\qquad\qquad [_{ForceP} (kya{:}) [_{CP} C[+Q] q]]]$

```
                    ForceP
                   /      \
           ForceP      OR_ALT      ForceP
          /      \                /      \
    (kya:)        CP         (kya:)       CP
                 /  \                    /  \
            C[+Q]    p              C[+Q]    q
```

    b. p or q?

Disjunction of CPs:
$[[_{CP} C[+Q] p] OR_{ALT} [_{CP} C[+Q] q]]$

```
                   CP
                 /    \
           CP    OR_ALT    CP
          /  \            /  \
     C[+Q]    p      C[+Q]    q
```

(42b = 39d), in addition, admits an analysis where there is no ForceP, just a disjunction of two question CPs. This makes a prediction to which we turn to in the

next section.

4.3 Embedded Alternative Questions: ForceP and CPs

Recall now that in our analysis, responsive predicates do not embed ForcePs. They can only embed question CPs and this is why *kya:*, a denizen of ForceP, cannot appear in the complement of a responsive predicate. The additional structural possibility in (42d) predicts that it should be possible to embed a 'p or q?' alternative question under a responsive, but not any of the other disjunctions in (42) that involve a *kya:*. Rogative predicates, however, are predicted to be good with all four options in (42). These predictions are borne out. We illustrate the point with 'p or q?' and '*kya:* p or q'. The judgements for '*kya:* p or *kya:* q' and 'p or *kya:* q?' are the same.

(43) responsive predicate, embeds CP, not ForceP

    a. with 'p or q?': ok

        Mina   jaan-tii   hai   ki tum aa-oge   ya: vo
        Mina.F know.Hab.FSg be.Prs.Sg that you come-Fut.2MPl or   he
        jaa-egaa
        go-Fut.3MSg

        'Mina knows whether you will come or (whether) he will go.'

    b. with '*kya:* p or q?': *

        *Mina jaan-tii   hai   ki kya: tum aa-oge   ya:
        Mina.F know.Hab.FSg be.Prs.Sg that PQP you come-Fut.2MPl or
        vo jaa-egaa
        he go-Fut.3MSg

        'Mina knows whether you will come or (whether) he will go.'

(44) rogative predicate, can embed both CPs and ForcePs

    a. with 'p or q?': ok

        Mina   jaan-naa caah-tii   hai   ki tum aa-oge
        Mina.F know.Inf want.Hab.FSg be.Prs.Sg that you come-Fut.2MPl
        ya: vo jaa-egaa
        or   he go-Fut.3MSg

        'Mina wants to know whether you will come or (whether) he will go.'

    b. with '*kya:* p or q': ok

23

> Mina   jaan-naa caah-tii   hai   ki kya: tum
> Mina.F know.Inf want.Hab.FSg be.Prs.Sg that PQP you
>
> aa-oge   ya: vo jaa-egaa
> come-Fut.2MPl or   he go-Fut.3MSg
>
> 'Mina wants to know whether you will come or (whether) he will go.'

Recall from our earlier discussion that a characteristic identifier of an interrogative ForceP embedded under a rogative predicate is a short pause followed by matrix intonation on the interrogative. In this case, the prosody of the embedded clause in (44b) would not involve a final rise, but rather pitch accents on the two alternatives with a rise on the first alternative and a final fall, characteristic of alternative questions.[21]

4.4   Different Types of Disjunctions in Hindi-Urdu

We have already seen that the disjunction *ya:* is an ingredient of alternative questions in Hindi-Urdu. Let us now look at the role disjunction plays in Hindi-Urdu Y/N and alternative questions more closely. The disjunction *ya:* that appears in alternative questions is the general purpose disjunction marker in the language. It is used to disjoin finite clauses, non-finite clauses, and nominal constituents and it appears in declarative clauses as well as Y/N questions and alternative questions. Since we have already seen *ya:* in alternative questions, we will now illustrate the other cases.

(45)   disjunction marker *ya:*

    a. nominal disjunction:

        Ram coffee ya: ca:i pi-ega:
        Ram coffee or   tea drink-Fut.3MSg

        'Ram will drink coffee or tea.'

    b. non-finite clause disjunction:

        Ram-ne   Kostas-se   [Boston ja:-ne-ko]   ya: [Austin-se
        Ram-Erg Kostas-Inst Boston go-Inf.Obl-Dat or   Austin-from

        a:-ne-ko]   kah-a: tha:
        come-Inf.Obl-Dat say-Pfv be.Pst

---

[21]As indicated earlier, the prediction also is that in precisely those cases where responsive predicates are negated or questioned, the options for embedding alternative questions with ForceP prosody would be acceptable.

'Ram had told Kostas to go to Boston or to come from Austin.'

   c. finite clause disjunction:

     Ram   na:c-egaa   ya: Sita   ga:-egi:
     Ram.M dance-Fut.3MSg or   Sita.F sing-Fut.3FSg

     'Ram will dance or Mary will sing.'

If a rising intonation contour appears on the finite verb in (45a, b), we get Y/N questions. With a different prosodic contour, the strings in (45a, b) can also yield an alternative question interpretation.[22] (45c) seems to only be compatible with the alternative question prosody and hence that is the only interpretation available to it as a question. The presence or absence of an initial *kya:* does not influence the interpretations available.

In addition to *ya:*, there is another disjunction marker *ki*, which is homophonous with the Hindi-Urdu finite clause complementizer seen in several examples in this paper (see 9, 11, 12 and 13 for example). It is limited to alternative questions – (46a) cannot be interpreted as a disjunctive statement. Furthermore disjunctive *ki* cannot be used to disjoin non-finite XPs (noun phrases, 46b, or non-finite clauses, 46c). Since this disjunctive marker is limited to disjoining finite clauses we will gloss it as OR$_{FIN}$.[23]

(46) disjunction marker *ki*

   a. finite clause disjunction: only alternative question interpretation

     (kya:) Ram   na:c-egaa   ki   Sita   ga:-egi:
     PQP   Ram.M dance-Fut.3MSg OR$_{FIN}$ Sita.F sing-Fut.3FSg

     'Will Ram dance or will Mary sing?'
     disjunction, unavailable: 'Ram will dance or$_{BOOL}$ Mary will sing.'
     Yes/No Question unavailable: 'Will [Ram dance or$_{BOOL}$ Mary sing]?'

   b. *ki* as nominal disjunction: *

---

[22]Han & Romero (2004b) report that (45a) does not allow for alternative question readings.

[23]In most cases where *ki* is possible as a disjunction, it is possible to use both *ya:* and *ki* together in the sequence *ya: ki*. It is possible, then, to think of the simple disjunctive *ki* as having a silent *ya:*. One advantage of doing this is that *ki* can be treated as the finite complementizer, thereby providing the basis for the finiteness restriction. Moreover we do not have to postulate a special finite disjunction; it's just that the presence of *ki* tells us that the height of disjunction is CP or ForceP. Furthermore, we note that the disjoined structures have to be interrogative and that therefore the disjunction has to be OR$_{ALT}$.

*(kya:) Ram coffee ki   ca:i pi-ega:↑
PQP   Ram coffee OR$_{FIN}$ tea drink-Fut.3MSg

intended: 'Will Ram drink coffee or tea.'

c. *ki* as non-finite clause disjunction: *

 *(kya:) Ram-ne Kostas-se [Boston ja:-ne-ko]   ki
PQP   Ram-Erg Kostas-Inst Boston go-Inf.Obl-Dat OR$_{FIN}$
[Austin-se   a:-ne-ko]   kah-a: tha:↑
Austin-from come-Inf.Obl-Dat say-Pfv be.Pst

intended: 'Has Ram told Kostas to go to Boston or to come from Austin.'

There are cases where disjunctive *ki* appears in the absence of a full finite clause.

(47)   (kya:) Ram coffee pi-ega: ki   ca:i?
        PQP   Ram coffee drink-Fut.3MSg OR$_{FIN}$ tea
        'Will Ram drink [coffee] or$_{ALT}$ [tea]?

Such cases have been analyzed as instances of gapping (see Han & Romero 2004) and this is the line we will follow. Analyzing these cases as involving elided finite clauses allows us to retain our claim that disjunctive *ki* only disjoins finite clauses. It is worth noting that while the general purpose disjunction *ya:* can have the semantics of OR$_{BOOL}$ or OR$_{ALT}$, disjunctive *ki* only has the semantics of OR$_{ALT}$.

We will use the distribution of the disjunctive *ki* to motivate a division of the cases of disjunctive *ya:* into two groups – cases that involve disjunction of finite clauses – these are the cases where *ya:* can be replaced by disjunctive *ki* – and cases where the disjoined constituent is not a finite clause. We will see that these two groups behave rather differently and so for ease of referring to them, we will refer to the instances of disjunction that disjoin finite clauses as OR$_{FIN}$ and the instances of disjunction that do not disjoin finite clauses as OR$_{NFIN}$ Now we can extract the following generalization.

(48)   a. '(*kya:*) p OR$_{FIN}$ q' is only compatible with the Alternative Question prosody and can only be interpreted as an Alternative Question.

        b. '(*kya:*) p OR$_{NFIN}$ q' with the appropriate prosody can receive a Y/N interpretation or an Alternative Question interpretation.

This generalizations in (48b) are displayed in tabular form below.

ya:	NFIN	FIN
Declarative	✓ (= 45a, b)	✓ (= 45c)
Yes/No	✓ (= 45a, b)	*
AltQ	(✓) (= 45a, b)	✓ (= 38b)

ki	NFIN	FIN
Declarative	*	*
Yes/No	*	*
AltQ	*	✓ (= 46a)

5 Disjunction and Final *kya:*

We have so far discussed the possibility of Alternative and Polar Questions with initial *kya:* but we noted in §3.3 that polar *kya:* can occur clause medially and clause finally. We start by noting differences in acceptabilty between clause-initial and clause-final *kya:* in questions with disjunction. Then we turn to an explanation of these differences within the context of our analysis.

5.1 Restrictions on Final *kya:* with Disjunction

We find that final *kya:* is incompatible with a disjunction of finite clauses.

(49) unreduced clausal disjunction:

    a. initial *kya:*: ok

        kya: Ram   na:c-ega: ya:/ki   Sita   ga:-egii
        PQP Ram.M dance-Fut.3MSg or/or$_{FIN}$ Sita.F dance-Fut.3FSg

        'Will Ram dance or will Sita sing?'

    b. final *kya:*: *

        *Ram na:c-ega: ya:/ki   Sita   ga:-egii   kya:
        Ram.M dance-Fut.3MSg or/or$_{FIN}$ Sita.F dance-Fut.3FSg PQP

        intended: 'Will Ram dance or will Sita sing?'

Cases with gapping and with final *ya:/ki nahĩ:* 'or not' also involve disjunction of finite clauses and these pattern with (49) - initial *kya:* is grammatical and final *kya:* is not.

    Final *kya:* is possible when the disjunction is subclausal, that of something other than a finite clause - the disjoined constituents could be two DPs as in (50) or a remnant verbal projection as in (51).

(50) DP-level disjunction:

    a. kya: tum caai ya: coffee pi-yoge?
        PQP you tea or coffee drink-Fut.2MPl

'Will you drink coffee or tea?'
Reading 1: Y/N question
Reading 2: Alternative question

b. tum caai ya: cofee pi-yoge kya:?
you tea or coffee drink-Fut.2MPl PQP

'Will you drink coffee or tea?'
Reading 1: Y/N question
Reading 2: Alternative Question: **unavailable**

(51) Disjunction of Remnant Verbal Projections:

a. *kya:* S_1 Adv_1 **or** S_2 Adv_2 V

kya: Ram aaj ya: Ravi kal gaaegaa?
PQP Ram today or Ravi tomorrow sing.Fut.3MSg

'Will Ram sing today or Ravi tomorrow?'
Reading 1: Y/N question
Reading 2: Alternative question

b. S_1 Adv_1 **or** S_2 Adv_2 V *kya:*

Ram aaj ya: Ravi kal gaaegaa kya:?
Ram today or Ravi tomorrow sing.Fut.3MSg PQP

'Will Ram sing today or Ravi tomorrow?'
Reading 1: Y/N Question
Reading 2: Alternative Question **unavailable**

We see above that when the disjunction is subclausal, final *kya:* is an option. But while the initial *kya:* variants in (50a) and (51a) allow for both a yes/no question interpretation and an alternative questions interpretation, the final *kya:* variants in (50b) and (51b) do not.

Why might the distinction between disjunction of finite clauses and subclausal disjunction matter? There is a syntactic distinction between the two that is relevant: when the disjunction is of two finite clauses, the disjunction scopes over two finite verbs. When the disjunction is subclausal, there is a single finite verb that scopes over the disjunction.

(52) a. Disjunction of finite clauses:
$[_{TP}\ [_{TP}\ldots$ Finite.Verb$_1$] *or* $[_{TP}\ldots$ Finite.Verb$_2$]]

b. Disjunction of XPs [$\neq$ finite clauses]:
$[_{TP}\ldots\ [_{XP}\ [_{XP}\ldots\ ]$ *or* $[_{XP}\ldots\ ]]]$

The finite verb is the locus of the prosody associated with Yes/No questions and we will return to the significance of this point in the next section.
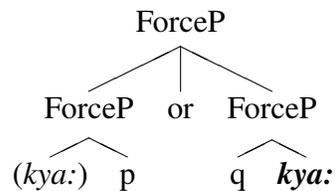
One other point concerning the interaction of disjunction and final *kya:* is worth noting. We have seen in (39) that *kya:* initial questions can be freely disjoined with other *kya:* initial questions as well as *kya:*-less questions. In contrast, *kya:*-final questions cannot be disjoined with other questions.

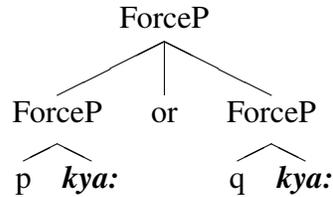(53)　a.　*p ***kya:*** OR (*kya:*) q

```
                    ForceP
                   /  |   \
              ForceP  or   ForceP
              /  \         /   \
             p  kya:    (kya:)   q
```
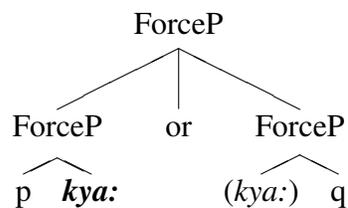
　　　　*tum ja:-oge　　kya: ya: (kya) vo aa-ega:
　　　　you　go-Fut.2MPl PQP or　PQP he come-Fut.3MSg

　　　　'Will you go or will he come?'

　　b.　*(*kya:*) p OR q ***kya:***

```
                    ForceP
                   /  |   \
              ForceP  or  ForceP
              /  \        /   \
          (kya:)  p      q   kya:
```

　　　　*kya: tum ja:-oge　　ya: vo aa-ega:　　　kya:
　　　　PQP　you go-Fut.2MPl or　he come-Fut.3MSg PQP

　　　　'Will you go or will he come?'

　　c.　*p ***kya:*** OR q ***kya:***

```
                ForceP
          ／      |      ＼
     ForceP     or    ForceP
      ╱＼             ╱＼
     p  kya:        q  kya:
```

*tum ja:-oge   kya: ya: vo aa-ega: kya:
you   go-Fut.2MPl PQP or   he come-Fut.3MSg PQP

'Will you go or will he come?'

In fact, as (53c) shows, two *kya:* final Y/N questions cannot be disjoined with each other.

5.2 Deriving the Restrictions on Final *kya:*

The restrictions on the interaction of final *kya:* and disjunction can be summarized as follows:

(54) a. A disjunction of finite clauses is ungrammatical with final *kya:*.

  b. Subclausal disjunctions ('lower' disjunctions that involve something other than a finite clause) are grammatical with final *kya:*, but only with a Yes/No Question. The Alternative Question interpretation becomes unavailable.

Our explanation of these restrictions comes from three different components of the grammar. The first concerns the semantics of *kya:* and its incompatibility with particular scopal configurations, namely those cases where *kya:* scopes over a CP/ForceP disjunction. The second concerns the information structure effects of non-initial *kya:*, more precisely the information structure effects of the movement operations needed to derive non-initial *kya:*. And the third concerns the interaction of the prosodic marking of Hindi-Urdu Y/N questions with finite disjunction.

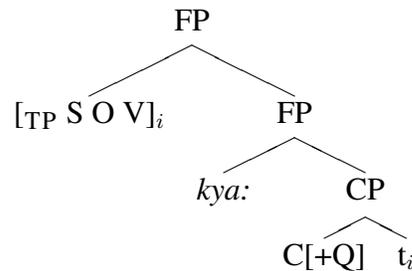### 5.2.1 Derivations for Final *kya:*

Before we turn to the derivation of these restrictions, let us remind ourselves of what we take to be the syntactic structure of final *kya:*. In §3.3, we argued that non-initial *kya:* should be derived by movement of the TP-internal material to the left of *kya:*. We also suggested that clause final *kya:* is derived similarly by

movement of the full clause. For concreteness, we can consider two options here: TP fronting or CP fronting. In this case the choice is immaterial.
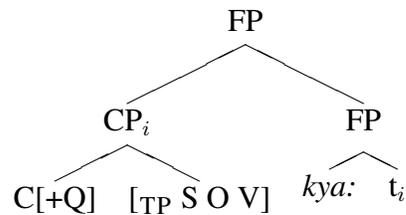
(55) S O V *kya::*

    a. Derivation with TP fronting:

       [FP [TP S O V]$_i$ [FP *kya:* [CP C[+Q] t$_i$]]]

```
                    FP
                  /    \
        [TP S O V]i      FP
                        /   \
                    kya:      CP
                             /  \
                         C[+Q]   ti
```

    b. Derivation with CP fronting:

       [FP [CP C[+Q] [TP S O V]]$_i$ [FP *kya:* t$_i$]]

```
                    FP
                  /    \
            CPi          FP
           /   \         / \
       C[+Q]  [TP S O V]  kya:  ti
```

    semantics with either derivation: $\{p\}$, presupposition of *kya:* is satisfied.

When we combine this analysis of clause-final *kya:* with the two disjunctions that are taken to be the source of the Y/N and the Alternative Question distinction – OR$_{BOOL}$ and OR$_{ALT}$ – we end up with the following structural options for a string of the shape 'p or q *kya:*'.
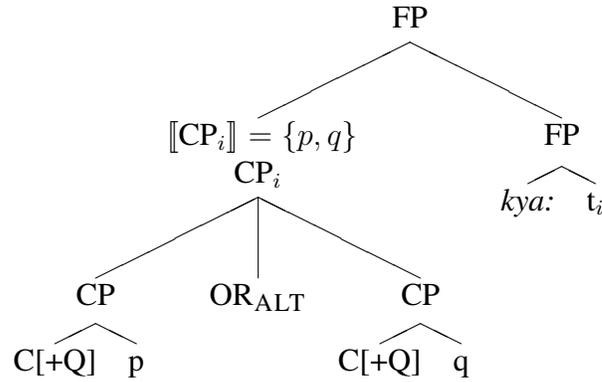
First let's limit our attention to the cases where *kya:* takes scope over the disjunction, which yields the following three options. The fourth logical combination is not a real option – there is no suitable frontable TP constituent when there is CP disjunction.

(56) '[[p or q] *kya:*]'
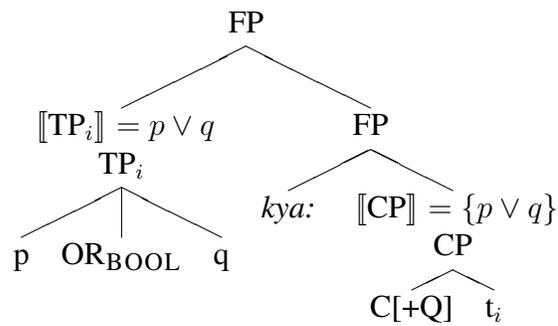
    a. CP disjunction (i.e. OR$_{ALT}$), CP fronting

       [FP [CP [CP C[+Q] p] OR$_{ALT}$ [CP C[+Q] q]]$_i$ [FP *kya:* t$_i$]]

*

FP
```
        FP
       /  \
 [[CP_i]] = {p, q}     FP
    CP_i           /\
                kya:  t_i
   /    |    \
  CP  OR_ALT  CP
 /\          /\
C[+Q] p    C[+Q] q
```

$[\![_{CP} [_{CP}C[+Q] \, p] \; OR_{ALT} \; [_{CP}C[+Q] \, q]]\!] = \{p, q\}$, not singleton!

b. TP disjunction (i.e. OR_{BOOL}), TP fronting
   $[_{FP} [_{TP} \, p \, OR_{BOOL} \, q]_i \, [_{FP} \, kya: \, [_{CP} \, C[+Q] \, t_i]]]$

```
              FP
           /     \
  [[TP_i]] = p ∨ q      FP
      TP_i          /      \
     /   |   \   kya:   [[CP]] = {p ∨ q}
    p OR_BOOL q              CP
                            /\
                          C[+Q]  t_i
```

$[\![_{TP} \, p \, OR_{BOOL} \, q]\!] = p \vee q$
$[\![_{CP}C[+Q] \; TP]\!] = \{p \vee q\}$, singleton.

c. TP disjunction (i.e. OR_{BOOL}), CP fronting
   $[_{FP} [_{CP} \, C[+Q] \, [_{TP} \, p \, OR_{BOOL} \, q]]_i \, [_{FP} \, kya: \, t_i]]$
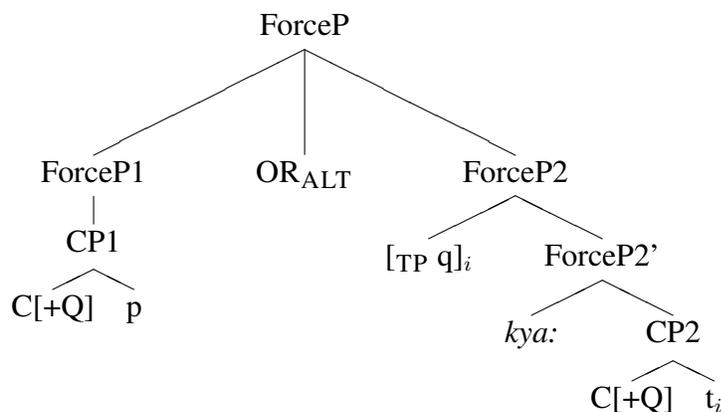   (equivalent to 56b)

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When the disjunction is at the TP-level, i.e. a boolean disjunction in the scope of C[+Q], it does not matter whether the fronted constituent is a CP or a TP. This is along the lines of (55). Both structures end up with the same semantics. So we can collapse (56b and c) and limit our attention to (56a, b). In (56a), the CP disjunction denotes $\{p, q\}$, with p from the $\{p\}$ contributed by the first CP disjunct and $\{q\}$ contributed by the second CP disjunct. The problem now is that this disjoined CP is not a singleton set and the needs of *kya:* are not satisfied. This avenue for deriving an alternative question reading with a final *kya:* is therefore unavailable. Let's take stock. We have given a scope-based explanation for the absence of alternative question interpretations for the structure in (56a). Simply put, the singleton requirement of *kya:* makes it incompatible with a structure where it takes scope over a disjunction of questions.

(56b) satisfies the singleton requirement but it only yields a Yes/No interpretation. This fits the fact that alternative question readings are quite unavailable with final *kya:*. But the link with finiteness of disjunction has not been given an explanation yet – Yes/No readings are available only when the disjunction is of a non-finite constituent; the combination of a finite disjunction with final *kya:* is just ungrammatical. We argue that this link follows from the prosodic realization of Yes/No questions in Hindi-Urdu and we turn to this issue in §5.2.3.

5.2.2 Disjunction and Clausal Topicalization

We are now ready to consider derivations where *kya:* is attached to the second disjunct i.e. the disjunction takes scope over ForceP. Keeping in mind the CP/TP fronting equivalence seen in (55), there is only one such derivation.

(57) 'p or [q *kya:*]'
 ForceP disjunction:
 [FP [FP1 [CP1 C[+Q] p]] OR$_{\text{ALT}}$ [FP2 [TP q]$_i$ [FP2 *kya:* [CP2 C[+Q] t$_i$]]]]

```
                              ForceP
                 ┌──────────────┼──────────────┐
             ForceP1          OR_ALT         ForceP2
                │                          ┌─────┴─────┐
               CP1                      [_TP q]_i   ForceP2'
             ┌──┴──┐                              ┌────┴────┐
          C[+Q]    p                            kya:       CP2
                                                         ┌──┴──┐
                                                      C[+Q]   t_i
```

    a. $[\![\text{FORCEP1}]\!] = [\![\text{CP1}]\!] = \{p\}$

    b. $[\![\text{FORCEP2}]\!] = [\![\text{CP2}]\!] = \{q\}$, singleton requirement of *kya:* is met

    c. $[\![\text{FORCEP}]\!] = \{p, q\}$

This derivation is well-formed and it predicts that the structure should have an alternative question interpretation, which is not in fact available. Why is such an interpretation unavailable? We give an initial answer here which we will deepen in §6 where we examine more carefully the information structure effects of movement to the left of *kya:*. This initial explanation is very straightforward. The alternative question interpretation is unavailable because the structure in (57) is unavailable: polar questions with final *kya:* do not disjoin with other polar questions. We saw this in (53). This is in contrast to polar questions with initial *kya:* which disjoin with other initial *kya:* polar questions as well as with *kya:*-less polar questions (see 38b). Note that this explanation is not circular – our goal here is to block the availability of Alternative Question interpretations. The structure in (57), if available, would allow such an interpretation. We have shown that this structure is independently unavailable in the language. We address why the structure is unavailable at the end of §6.1.

5.2.3 Prosodically Constraining Yes/No Readings

We have seen that clause final *kya:* is incompatible with disjoined finite clauses but that it is acceptable with subclausal disjunction, a disjunction that is lower in the structure than a finite disjunction. Moreover such a disjunction can only have a Yes/No interpretation. This pattern is exemplified below.

(58) a. finite disjunction (SOV or SOV) + final *kya:*:

                        Yes/No: *, Alternative Question: *

 *Mina: a:j   na:ce-gi: ya: Sita: kal   ga:-egi:
Mina.F today dinace-Fut.3FSg or   Sita.F tomorrow sing-Fut.3FSg
kya:
PQP

Intended: Will Mina dance today or Sita sing tomorrow?'

b. subclausal disjunction (SO or SOV) + final *kya:*:

                        Yes/No: ✓, Alternative Question: *

Mina: a:j   ya: Sita: kal   na:c-egi: kya:
Mina.F today or   Sita tomorrow dance-Fut.3FSg PQP

'Will Mina dance today or Sita tomorrow?' (only Yes/No)

The particular role played by final *kya:* in (58) can be seen by considering (59), where we have removed the *kya:*. Ignoring the non-question readings, we find the following options.

(59) a. finite disjunction (SOV or SOV):

                        Yes/No: *, Alternative Question: ✓

Mina: a:j   na:ce-gi: ya: Sita: kal   ga:-egi?
Mina.F today dinace-Fut.3FSg or   Sita.F tomorrow sing-Fut.3FSg

'Will Mina dance today or Sita sing tomorrow?'

b. subclausal disjunction (SO or SOV):

                        Yes/No: ✓, Alternative Question: ✓

Mina: a:j   ya: Sita: kal   na:c-egi:?
Mina.F today or   Sita tomorrow dance-Fut.3FSg

'Will Mina dance today or Sita tomorrow?' (both Yes/No and Alternative)

The discussion in the previous section gives us a handle on why alternative question readings are blocked with final *kya:*. Why are Yes/No readings blocked with finite disjunction? We believe that that this is so because Yes/No questions are marked prosodically in Hindi-Urdu. The Yes/No rising intonation must be marked on a finite verb.

    The problem in the case of a finite disjunction is that there is no single finite verb that takes scope over the entire disjunction. So there is simply no way to convert a finite disjunction into a Yes/No question. The situation with subclausal disjunction in (58b) is quite different. Here we have a a finite verb *na:cegi:*

'dance.Fut.3MSg' that takes scope over the disjunction where the rising prosody can be marked. (58a) ends up being ungrammatical because the final *kya:* blocks the Alternative Question reading and the absence of a finite verb that takes scope over the disjunction blocks the Yes/No reading. None of the possible structures work for (58a). In the case of (59a), the absence of a finite verb that takes scope over the disjunction blocks the Yes/No reading. But an alternative question reading is still accessible, allowing for (59b) to be grammatical.

6 Polar *kya:*, Prosody, and Information Structure

We have seen how clause-initial and clause final *kya:* interact with disjunction. We now return to the earlier observation that *kya:* also occurs clause-medially. Our analysis is that *kya:* is generated in ForceP and takes a CP[+Q] complement to its right. Other variations in word order are a result of TP internal expressions moving to the left of clause-initial *kya:*. Thus we can think of non-initial *kya:* as partitioning the clause into two parts - the material to its left and the material to its right. The intuition of *kya:* as partitioning the clause receives support from a number of diagnostics that suggest that material to the left of *kya:* is interpreted as being not-at-issue, not open to being challenged, while material to the right of *kya:* is unspecified with respect to this distinction. It can be challenged.

6.1 *kya:* Induced Partitions

When *kya:* is clause-initial (or absent), any element in the clause can be challenged using a disjunction in a gapping structure. The resulting structure is interpreted as an alternative question.

(60) initial/absent *kya:*:

(**kya:**) Ram=ne Sita=ko kal   kitaab dii   thii
PQP   Ram=Erg Sita-Dat yesterday book.F give.Pfv.F be.Pst.F

'Had Ram given a/the book to Sita yesterday,...
  a. ya:/ki   Mina=ne
      or/or_FIN Mina=Erg
      'or had Mina?'   (Subject)
  b. ya:/ki   Vina=ko
      or/or_FIN Vina=Dat

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'or to Mina?' (IO)

c. ya:/ki   parsõ
or/or_FIN day.before.yesterday
'or the day before yesterday?' (Adverb)

d. ya:/ki   magazine
or/or_FIN magazine
'or a magazine?' (DO)

When *kya:* is not clause-initial, phrases that precede it cannot be challenged – providing alternatives to them using the above syntactic frame is unacceptable. We illustrate this in (61), where *kya:* follows the subject and the indirect object but precedes the temporal adverb and the direct object.

(61)   S IO **kya:** Adv DO V Aux

Ram=ne Sita=ko kya: kal   kitaab dii   thii
Ram=Erg Sita-Dat PQP yesterday book.F give.Pfv.F be.Pst.F

'Had Ram given a/the book to Sita yesterday,...

a. # ya:/ki   Mina=ne
   or/or_FIN Mina=Erg
'or had Mina?' (Subject)

b. # ya:/ki   Vina=ko
   or/or_FIN Vina=Dat
'or to Mina?' (IO)

c. ya:/ki   parsõ
or/or_FIN day.before.yesterday
'or the day before yesterday?' (Adverb)

d. ya:/ki   magazine
or/or_FIN magazine
'or a magazine?' (DO)

Prosodic prominence on the element being contrasted does not make the subject in (61) at-issue. The focus marking on Ram feels unmoored; it does not help in identifying the contrasted element.

(62)   # [**Ram=ne**]_F Sita=ko kya: kal   kitaab dii   thii
         Ram=Erg   Sita-Dat PQP yesterday book.F give.Pfv.F be.Pst.F
       ya:/ki   Mina=ne
       or/or_FIN Mina=Erg

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'Had Ram given a/the book to Sita yesterday or had Mina?'

A further point worth noting is that the element being contrasted does not have to immediately follow *kya:* as can be seen in (60b-d) and (61d).[24]

The partition contrasts found with gapping are replicated in a paradigm where we consider possible negative responses to a Yes/No question with *kya:*. With initial *kya:*, any phrase can be targeted for correction. This is shown in (63).

(63)   [kya: [S IO Adverb DO V Aux]]

kya: Ram=ne Sita=ko kal   kitaab dii   thii
PQP Ram=Erg Sita-Dat yesterday book.F give.Pfv.F be.Pst.F

'Had Ram given a/the book to Sita yesterday,...

  a. nahĩ:, Shyam-ne   dii   thii
      no,   Shyam-ERG give.Pfv.F be.Pst.F
      'No, Shyam did.'   (Subject corrected)

  b. nahĩ:, Uma-ko   dii   thii
      no,   Uma-Acc give.Pfv.F be.Pst.F
      'No, to Uma.'   (IO corrected)

  c. nahĩ:, parsõ   dii   thii
      no,   day.before.yesterday give.Pfv.F be.Pst.F
      'No, the day before yesterday.'   (Adverb corrected)

  d. nahĩ:, magazine dii   thii
      No,   magazine give.Pfv.F be.Pst.F
      'No, he gave her a magazine.'   (DO corrected)

But when *kya:* is clause-medial, the constituents which precede it cannot be corrected while the post-*kya:* elements can be.

(64)   [S IO [kya: [Adverb DO V]]]

Ram=ne Sita=ko **kya:** kal   kitaab dii   thii
Ram=Erg Sita-Dat PQP yesterday book.F give.Pfv.F be.Pst.F

'Had Ram given a/the book to Sita yesterday,...

a. # nahĩ:, Shyam-ne dii thii
     neg   Shyam=Erg give.Pfv.F be.Pst.F

   'No, Shyam did.'   (Subject corrected)

b. # nahĩ:, Uma-ko   dii   thii
     neg   Uma=Dat give.Pfv.F be.Pst.F

   'No, to Uma.'   (IO corrected)

c. nahĩ:, parsõ   dii   thii
    neg   day.before.yesterday give.Pfv.F be.Pst.F

   'No, the day before yesterday.'   (Adverb corrected)

d. nahĩ:, magazine dii   thii
    neg   magazine give.Pfv.F be.Pst.F

   'No, he gave her a magazine yesterday.'   (DO corrected)

Our partitioning diagnostics are compatible with the observation in Biezma, Butt & Jabeen (2017) who note that clause-medial *kya:* in a Yes/No question imposes restrictions on the information state of the speaker using the question and propose that *kya:* be analyzed as a focus-sensitive operator.

We will assume that polar questions have an ordinary semantic value, which is a singleton propositional set. The response particle *yes* is anaphoric to this and asserts it, the response particle *no* is also anaphoric to it but denies it. This is what we have been assuming so far. In addition, we argue that polar questions also have a focus semantic value which is the set of propositions generated by the alternatives to the focused expression and a plausible continuation of a *no* answer draws on this set. In this we follow the analysis of Turkish polar questions in Atlamaz (2015). In the case at hand, we would have alternatives of expressions to the right of *kya:* but not of expressions to its left.[25] [26]

While we do not offer a full analysis of this pattern, here is our initial approach. Recall that according to our syntactic proposal, *kya:* is in ForceP and pre-*kya:* material gets there via movement to a position higher than *kya:*. We add to our analysis that *kya:* demarcates the domain that is open to challenge, which is minimally the c-command domain of *kya:*.

---

[25] The idea that prosodic focus can generate alternatives that feed possible continuations of negative responses also applies to English: *Did MARY leave?* can felicitously be answered with *No, John did* but not with *No, she didn't*.

[26] The analysis in terms of the focus semantic value of polar questions shares properties with the proposal in Biezma, Butt and Jabeen (2017) which is couched in terms of Questions under Discussion.

(65) [XP$_1$ [XP$_2$ [$_{ForceP}$ *kya:* [$_{CP}$ C[+Q] [$_{TP}$ ... **YP ZP**]]]]]

This means that YP and ZP can be challenged but XP$_1$ and XP$_2$ cannot be.

What happens when we have final *kya:*? Fronting of the clause (TP/CP) moves it into the not-at-issue domain. As we noted earlier, a *yes* answer asserts the propositional nucleus of the question (call it p) and a *no* answer denies p, which is tantamount to asserting $\neg p$. A *no* answer here does not need to draw on the alternatives in the focus semantic value, which in this case will be the same as the ordinary semantic value i.e. $\{p\}$. Since the two values are the same, it is not possible to add a correction along the lines of '*no*, q'. The well-formed cases of correction that we saw earlier were crucially different due to the effect of prosodic focus which results in distinct ordinary and focus semantic values for the polar question., $\{p\}$ and $\{p, q, \ldots\}$ respectively.

6.2   Focus to the left of *kya:*

While what we have said about the partitioning of the polar question by *kya:* is largely consistent with Biezma, Butt & Jabeen (2017)'s discussion of partitioning, there is one point that calls for a refinement of the current analysis. While we have claimed that it is not possible to correct/challenge pre-*kya:* material, Biezma, Butt & Jabeen note that it is possible to do so if the material to the left is stressed.

(66) a. Question:

   [**Anu=ne**]$_F$ **kya:** Uma=ko   tohfa: diya:
   Anu=Erg   PQP Uma=Dat present give.Pfv.MSg

   'Did Anu give a present to Uma?'

   b. Answer:

   nahĩ:, Asim=ne   diya:
   neg   Asim=Erg give.Pfv.MSg

   'No, Asim did.'

They take prosody to over-ride the requirement for the contrasted element to be to the right of *kya:*. We agree with the judgement that they report in (66) but we do not think that prosody is sufficient in general to make just any element be contrast-able. Consider (62), repeated here as (67).

(67) # [**XP**$_1$ [XP$_2$ [$_{ForceP}$ *kya:* [$_{CP}$ C[+Q] [$_{TP}$ ...]]]]]

# [**Ram=ne**]_F Sita=ko kya: kal   kitaab dii   thii
   Ram=Erg   Sita-Dat PQP yesterday book.F give.Pfv.F be.Pst.F
ya:/ki   Mina=ne
or/or_FIN Mina=Erg

'Had Ram given a/the book to Sita yesterday or had Mina?'

Comparing (66) and (67), we see that there is an adjacency effect for focus on the left: stress on the immediately pre-*kya:*-XP can make it possible for it to be contrasted, this is not an option for other pre-*kya:*-XPs. While we do not have a full explanation for this fact, we note that Hindi-Urdu has several particles that associate to the immediate left: *hi:* 'only' (Bajaj 2016), *bhi:* 'also' (Dayal 1995, Lahiri 1998), *nahiĩ* 'not' (Kumar 2003) among others. Given this broader perspective on the grammar of Hindi-Urdu, we conclude that the paradigm regarding *kya:* is not unexpected. Once prosody is appropriately restricted, the focus semantic value of (66) will include alternatives generated by the immediately pre-*kya:* XP.

6.3   Polar *kya:* and types of Polar Questions

We have established that polar *kya:* is restricted to polar questions but we would like to see if there are restrictions within the class of polar questions that may give us further insight into its semantics and pragmatics. We find that polar *kya:* is perfectly acceptable, for example, in polar questions used as rhetorical and quiz questions.

(68)   a.   rhetorical question:
           mujh=se kyõ pu:ch rahe   ho?   (kya:) mẼ tumhari: maa
           me=Inst why ask   Prog.MPl be.Prs.2Pl PQP   I   your   mother
           hũ:?
           be.Prs.1Sg

           'Why are you asking me? Am I your mother?'

       b.   quiz question:
           ab   a:p bata:iye,   (kya:) dharti: gol   hai?
           now you tell.Pol.Imp PQP   earth spherical be.Prs.3Sg

           'Now you should tell me: is the earth spherical?'

We note that in the above examples, *kya:* can occur in all the positions one might expect, of course with appropriate prosody. *kya:* is also acceptable in negative

and/or biased questions.[27]

(69)   negative question:

(kya:) tum=ne su:ar ka   mã:s kabhi: pahle nahĩ: kha:ya:
PQP   you=Erg pig   Gen meat ever   before Neg eat.Pfv.MSg
tha:
be.Pst.MSg

'Had you (really) never eaten pork before?'

In fact, we have so far only been able to definitively identify one type of polar question where polar *kya:* is not possible. These may be classified as incredulity questions. [28] Consider the following in a context where the addressee was supposed to have left town and the speaker is surprised to see him:

(70)   a. are, (*kya:) tum yahĩ: ho?
           oh PQP   you here be.2Pl

           'Oh, you are still here?'

       b. are, (*kya:) tum gaye   nahĩ:?
           oh PQP   you go.Pfv.MPl Neg

           'Oh, you didn't leave?'

To be completely upfront about this, it is unclear to us whether (70) is a polar question or an exclamation. It certainly has a prosody very similar to a polar question. If it is a polar question, then the singleton presupposition requirement of *kya:* would be satisfied and its unacceptability would have to be traced to a different aspect of its pragmatic profile. If, however, (70) is an exclamation and denotes a proposition rather than a set of propositions, the unacceptability of *kya:* here would follow from the presupposition we have posited. We leave the precise status of (70) for the future, noting only the significance of direct evidence – the speaker directly witnesses the presence of the interlocutor – in regulating the distribution of *kya:*.

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[27]Biezma, Butt and Jabeen (2017; slide 32) note that polar questions can be asked even when a speaker expects a negative answer but polar *kya:* questions cannot. They are considering *kya:* questions with prosodically focused expressions and we agree (see footnote 25). But without such focus, our judgement is that expectations about a negative answer pose no problems to *kya:*.

[28]Incredulity questions have not been studied in depth and in the case of polar questions they are notoriously hard to separate from echo questions and/or biased declarative questions. The interested reader is directed to the discussion in Dayal (2016: 8, 279-282) and references there.

This admittedly brief discussion of the pragmatics of Yes/No questions with polar *kya:* resonates with, but is not identical to, the more detailed investigations of this topic conducted in a series of papers by Bögel, Butt & Jabeen (2017) and Biezma, Butt & Jabeen (2018).[29]

7 The crosslinguistic landscape of interrogative discourse particles

In the preceding sections we have presented a fairly detailed account of the polar question particle *kya:* in Hindi-Urdu. In doing so, we have uncovered a complex set of interwoven grammatical effects: the restriction of the polar question particle to polar questions, its sensitivity to quasi-subordination, its appearance in alternative questions, and the relationship between its position in the clause and information structure. One may well wonder if this is simply a quirky fact about the grammar of Hindi-Urdu. In this concluding section we would like to suggest that polar question particles are a robust cross-linguistic phenomenon whose full character is still to be understood. We believe Hindi-Urdu polar *kya:*, as the first of its kind to be analyzed, can help in this process of discovery.

We take the following to be a necessary criterion for determining whether a particular lexical item in a language is a polar question particle: it should only occur in polar questions. There may well be other significant features associated with polar question particles, such as optionality, information structural effects, and/or selectivity in embedding. As indicated earlier, this rules out Japanese *-ka/-no* as a polar question particle. We have taken *-ka/-no* to be Q-morphemes, an overt realization of C[+Q], following a fairly well-established practice in the syntactic and semantic literature. There are other candidates, however, that may qualify as polar question particles. Syed and Dash (2017) have identified particles similar to Hindi-Urdu polar *kya:* in the closely related Indo-Aryan languages, Odia and Bangla. And we have already alluded to the possibility that Mandarin *-ma* may belong with polar kya: as a PQP. Mandarin *nandao*, is another candidate for PQP, though it also obligatorily introduces bias (Xu 2017). Other candidates are Turkish *-mi* (Aygen 2011, Kamalı & Büring 2011, Göksel & Kerslake 2004, Atlamaz

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[29]We have not yet had a chance to consult the GLOW presentation by Biezma, Butt & Jabeen (2018).

2015, Özyıldız 2018), Italian *che* (Nicoletta Loccioni, Paolo Crisma, Giuseppe Longobardi p.c.) and Slovenian *kaj* (Adrian Stegovec p.c.). The latter two are homophonous with the interrogative pronoun that means *what*, similar to the situation in Hindi-Urdu, Bangla and Odia.

We would like to end with one final point related to our analysis of polar *kya:* as an inhabitant of ForceP. As the astute reader would have noticed, we have been non-committal about its status as head or specifier of ForceP. In fact, we have also indicated that we are not fully committed to the polar question particle being in ForceP. What we are crucially committed to is the following: polar *kya:* is not a Q-morpheme because it shows the hallmarks of a root phenomenon. This gives us reason to place it in a projection above the point at which the semantic distinction between interrogatives and declaratives is made. Taking that position to be C[+Q], as is standardly assumed, we place it higher in the left periphery. We have called this higher projection ForceP, but it could very well be a Speech Act Phrase (SAP). Choosing between these options would require a set of diagnostics making a three-way distinction between CP, ForceP and SAP. We leave this for the future, as we leave further exploration of the semantic-pragmatic role of polar *kya:* (briefly alluded to in section 6.3), and by extension other polar question particles, to a late date.

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