1 Introduction

This paper has two inter-related foci, one specific to Hindi-Urdu\textsuperscript{2} and the other more general. Its empirical focus is a particular lexical item in Hindi-Urdu that we refer to as polar \textit{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 \textit{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 \textit{-ka} and \textit{-no} as prototypical examples. The second class is exemplified by Hindi-Urdu polar \textit{kya:}, the new kid on the block.

We begin by introducing the signature properties of the Hindi-Urdu polar question particle in section 2: its restriction to polar questions, its flexible syntactic positioning, and its selectiveness in appearing inside embedded polar questions. In section 3, we present diagnostics distinguishing polar question particles from a clause-typing Q-morpheme. We analyze the Hindi-Urdu PQP \textit{kya:} as having a presupposition that targets polar questions exclusively and we locate it high in the left periphery, at a structure with the prosodic profile of matrix polar questions. We also account for its clause-internal distribution. In section 4, we consider the

\begin{itemize}
\item \textsuperscript{1} Acknowledgements to be added.
\item \textsuperscript{2} We follow a common practice in the South Asian linguistic literature of using Hindi-Urdu to refer to Hindi and Urdu, which for a large number of linguistic phenomena can be considered the same language.
\end{itemize}
pragmatic contribution of *kya:* We present diagnostics to establish that it partitions the clause into a segment that is not-at-issue and is not open to challenge and a segment that is unspecified in this respect and may be challenged. The precise distinctions that arise from this partition are shown to follow from independently motivated constraints that are operative in the grammar of Hindi-Urdu.

Section 5 deals with two issues that arise when we consider polar *kya:* in connection with disjunction. One bears on the presupposition we ascribe to it, the other is an unexpected restriction against final *kya:* In accounting for these facts, we elaborate on the formation of alternative questions in Hindi-Urdu and the interaction of the partitions introduced by *kya:* with the nature of alternatives. We conclude in section 6 by noting two domains of inquiry that our analysis of polar question particles opens up. The overall message we try to highlight is that Hindi-Urdu polar *kya:* belongs to a class of items that has not so far been given formal recognition but for which there is cross-linguistic evidence in the literature.

### 2 Properties of the Polar Particle *kya:*

In this section we establish that the particle *kya:* is restricted to polar questions, that it can occur almost anywhere within a clause, that it can appear in matrix as well as embedded clauses, albeit with some restrictions.

#### 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 declaratives have falling intonation, which is the neutral intonational contour for declaratives. Butt, Bøgel & Jabeen (2017) and Biezma, Butt & Jabeen (2017) associate rising intonation with L/H-H% and falling intonation with L-L% in (1).

\[(1)\]
\[
\begin{array}{l}
\text{a. anu=ne uma=ko kitaab [dii]↑} \\
\quad \text{Anu-Erg Uma=Acc book.F give.Pfv.F} \\
\quad \text{‘Did Anu give a/the book to Uma?’} & \!
\text{[Y/N question: ↑]} \\
\text{b. anu=ne uma=ko kitaab [dii]↓} \\
\quad \text{Anu-Erg Uma=Acc book.F give.Pfv.F} \\
\quad \text{‘Anu gave a/the book to Uma.’} & \!
\text{[Declarative: ↓]} \\
\end{array}
\]
Unlike English, they do not involve 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 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, though also see Jeong 2018, Roelofsen & Farkas 2015, and Westera 2017).

(2) a. *kya*: akna=ne um=ko kitaab [dii]↑
PQP Anu=Erg Uma=Acc book.F give.Pfv.F
‘Did Anu give a/the book to Uma?’ \[*kya*: ↑ → Y/N question\]

b. *kya*: akna=ne um=ko kitaab [dii]↓
PQP Anu=Erg Uma=Acc book.F give.Pfv.F
intended: ‘Did Anu give a/the book to Uma?’ \[*kya*: ↓ → *\]

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. 3

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

3We will, however, not address the link between polar question particle *kya*: and thematic *kya*: in this paper. These two elements seem to be homophones 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 homophones – 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.
(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.2MP1 or coffee  
‘Will you drink tea or (will you drink) coffee?’

2.2 The basic distribution of Polar *kya:

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.4

(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.5

(7) (??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?’  
[wh-question]

---

4It is possible to have the PQP in a preverbal position, but its acceptability seems to vary based on a number of factors such as the the heaviness of the following verbal complex – see for example the fully acceptable (30c) where the verbal complex consists of a participle and an auxiliary.

5The *kya: that appears in the Hindi-Urdu scope marking construction patterns with thematic *kya: in its distribution and prosodic profile.
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, predicates that take interrogative as well as declarative complements. Note that the Hindi-Urdu complementizer _ki_ tracks finiteness but is otherwise compatible with declarative, interrogative and subjunctive clauses.

(8) 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.2MPI
intended: ‘Anu knows whether you will drink tea.’

(9) Polar particle _kya:_ in the complement of rogative predicates: _ok_

a. _ti: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
   drink.Fut.2MPI
   ‘Anu wants to know whether you will drink tea.’

Note that in (9b), the predicate that takes the embedded question as a complement is _jaan_ ‘know’, which is a responsive predicate but in combination with the attitude predicate _caah_ ‘want’ functions like a rogative.

### 2.3 Embedded Polar _kya:_ and Embedded Inversion in English

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]. There was no shortage of embedded _kya:_ questions.

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6This resource was created by Miki Nishioka (Osaka University) and Lago Language Institute (2016-2017). It has around 200 million words. The full reference is: Miki Nishioka (Osaka University) and Lago Language Institute (2016-2017). Corpus Of Spoken Hindi (COSH) and COSH Conc [Software]. Available from http://www.cosh.site
in the corpus but we did not find cases like (8). We did find cases of polar kya: under responsives but only under specific conditions. In each of the following examples, the responsive combines with another operator.

(10)   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 nāhī: 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 nāhī: 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-ē [ki kya: aap=ke bacce=ke paas email account know-2.Imp that PQP you_{non}=Gen child=Gen near email account
       hai]
       is
       ‘Find out whether your child has an email account.’

The responsive versus rogative distinction that we see 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. 

(11) a. responsive: . . . [CP{ . .
        I found out how they got into the building.
        *I found out how did they get into the building.

---

7 An anonymous reviewer notes that the following examples do not constitute a minimal pair and offers us the following example which does form a minimal pair with the rogative.

i. I found out from what source the reprisals could come.
   *I found out from what source could the reprisals come.

The fact that the restriction holds of CPs that syntactically sisters to a P and not to the embedding verb highlights that selection cannot be a simple lexical matter.
b. rogative: \( \ldots \left[CP_2 \ldots \right] \left[CP_1 \ldots \right] \)

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 an embedded inversion if it is part of a larger structure want to know.

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

A question that arises about such examples is whether the complement clause is a quotation. McCloskey gives detailed arguments against this possibility from pronominal binding and sequence of tense. Here we note that if the complement clause in (12) was a quote, I would be bound by everybody but this particular sentence is noted by McCloskey to be a a naturally occurring sentence where I refers to the speaker in the context.

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

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

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, as we have already seen in (9b) and (10). In fact the parallelism extends to question complements of nouns. Compare (14a) from COSH with (14b) from Gunlogson (2003).

(14) a. 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.’

b. The question is, does he have the money?

Further examples could be constructed to show the parallel between English embedded inversion and Hindi-Urdu embedded PQPs but we believe that we have shown establishes the pattern sufficiently. 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 The syntactic and semantic contribution 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 in embedding possibilities that we have been studying.

(15) 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.2MPI

intended: ‘Anu knows whether you will drink tea.’

b. responsive 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.2MPI

‘Anu wants to know whether you will drink tea.’

We have seen that the contrast above represents a more general pattern. Polar particle *kya*: does not seem to embed under responsive predicates but it can be
embedded under rogative predicates.\(^8\) 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. (16) shows that responsive predicates cannot take such a complement under an indirect question interpretation.

(16) ‘know’ + declarative: ‘know that’

\[
\begin{align*}
\text{anu jaan-tii hai} & \quad [\text{ki tum cai piyoge.}] \\
\text{Anu.F know.Hab.F be.Prs.Sg that you tea drink.Fut}
\end{align*}
\]

‘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 ya: nahī: ‘or not’. Interestingly, we cannot add kya: in this case, as shown in (17b):

(17) a. ‘know’ + ‘or not’: ‘know whether’

\[
\begin{align*}
\text{anu jaan-tii hai} & \quad [\text{ki tum cai piyoge ya: nahī:].} \\
\text{Anu.F know.Hab.F be.Prs.Sg that you tea drink.Fut or not}
\end{align*}
\]

‘Anu knows whether you will drink tea or not.’

b. ‘know’: + kya: + ‘or not’ - bad

\[
\begin{align*}
\text{*anu jaan-tii hai} & \quad [\text{ki kya: tum cai piyoge ya: nahī:].} \\
\text{Anu.F know.Hab.F be.Prs.Sg that PQP you tea drink.Fut or not}
\end{align*}
\]

‘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:.*\(^9\)

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

\[
\begin{align*}
\text{*John zhidaot xiayu-le ma zuoqian} \\
\text{John know-rain-PERF Q yesterday}
\end{align*}
\]

intended: ‘John knows whether it rained yesterday.’

---

\(^8\) Dayal (2019) notes that a rogative predicate like nirbhar karnaa ‘depend on’ does not embed a kya: question in Hindi nor does it embed questions with inversion in English.

\(^9\) We thank Mingming Liu, Beibei Xu, Jess H.-K. Law and Yi-Hsun Chen for these judgments. See also Song (2018) for discussion related to polar question particles in Mandarin.
b. want to know + ma-CP: ok
John xiang zhidaoyi shi yu 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 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. 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

(19) a. rogatives (wonder): \[F_{\text{ForceP}} [CP \ C_{+Q}^0 [TP ]]\]
    b. responsives (know): \[CP \ C_{+Q}^0 [TP ]\]

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.

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).
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:

\[(20) \]
\[
\begin{align*}
\text{a. } & [\text{who left}] = \lambda p. \exists x [\text{person}(x) \land p = \check{x} \text{ left}] = \\
& \{\text{John left, Sue left, Kostas left, ... }\}
\end{align*}
\]
\[
\begin{align*}
\text{b. } & [\text{did John leave}] = \lambda p. [p = \check{\text{John left}}] = \{\text{John left}\}
\end{align*}
\]

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 (20a) 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 privileging the nucleus proposition. A *yes* answer or a *no* answer can then be treated as anchored to this proposition. See Gawron 2001, van Rooij and Šafářová 2003, Biezma 2009, Farkas and Bruce 2010, Biezma and Rawlins 2012, Krifka 2013 and Roelofs and Farkas 2015. Taking the proposal in Biezma and Rawlins 2012 for concreteness, the basic denotation of (20b) would be the singleton set \{John left\}.

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, 2017) in connection with the Mandarin particle *nandao*. We define *kya:* as an expression that encodes a presupposition that its complement is a singleton set:\(^{13}\)

\[(21) \] 
\[ [kya:] = \lambda Q (_{st}) : \exists p \in Q [\forall q [q \in Q \to q = p]].Q \]

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

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\(^{12}\)The reasons for this fluidity are explored in Dayal (2019). For a general discussion of issues related to selection, see Dayal (2016: 136-147).

\(^{13}\)We thank Manfred Krifka and Maria Biezma for helpful comments in this connection.
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 may appear to be 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 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 \([\text{CP } C \pm Q \ldots]\) 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). We think this distinction is a useful way to characterize the differential embedding properties of rogative and responsive predicates: both responsiveness and rogatives can take \([\text{CP } C \pm Q \ldots]\) complements; rogatives can also take interrogative ForceP complements but responsiveness, 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, which are not subject to the restrictions found with kya:. The Japanese Q-morpheme, then, exemplifies the kind of clause-typing that was proposed by Cheng (1991).

(22)  
   a. Mary-ga nani-o kat-ta  ka?  
       Mary what bought Q  
       ‘What did Mary buy?’
   
   b. Mary-ga Aspects-o kat-ta  ka?  
       Mary Aspects bought Q  
       ‘Did Mary buy Aspects?’
   
   c. Tanaka-kun-wa (22a/b) sitte-imasu/siri-tagatteiru  
      Tanaka knows/know-wants  
      ‘Tanaka knows/wonders what Mary bought.’  
      ‘Tanaka knows/wonders whether Mary bought Aspects.’

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 $[\text{CP } C_{+Q} \ldots]$.

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 (23).

(23) Anu jaan-tii hai (ki)
    Anu know-Han.F be.Prs.sg that
    ‘Anu knows ..’
    a. kis=ne kitaab khariid-ii
       who-Erg book.F buy-Pfv.F
       ‘who bought a/the book.’
       [wh-question]
    b. *Ravi ghar=par hai
       Ravi home-in be.Prs.Sg
       intended but unavailable: ‘whether Ravi is at home.’
       [polar question]
    c. Ram ghar=par hai ya: nahí:
       Ram home-in is or Neg
       ‘whether Ram is at home or not.’
       [polar alternative question]

The examples in (23a, c) 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 we take $[[C_{[+Q]}]]$ to denote $\lambda q \lambda p[p = q]$] as proposed for example in von Stechow (1996). The only point of cross-linguistic variation is the indirect question interpretation of the polar question in (23b). 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 may well be a root phenomenon cross-linguistically.\(^{14}\)\(^{15}\)

\(^{14}\)For a recent survey of embedded root phenomena, see Heycock (2017).

\(^{15}\)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.

i. a. *Whether Mary leaves, John will be disappointed.
    b. Whether Mary leaves or not, John will be disappointed.
Here is a prediction that follows from our account. Consider the following sentence.

(24) Anu puunch rhiii ki dhartii gol hai
     Anu ask Prog.FSg be.Pst.FSg that 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 \([\text{ForceP} \uparrow [CP \ C+Q \ldots]\). But the first option (=CP) is ruled out analogously to (23b). 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. And, not surprisingly, it becomes possible to have \(kya:\) in the embedded clause: \(ki kya:\ dhartii gol hai.\)

The crucial role of intonation in licensing monoclausal yes/no questions raises questions that are independently interesting. We refer the reader to Dayal (2019) for further discussion. For present purposes the following points are important. Rising intonation of the kind seen in matrix questions is associated with ForceP[+Q], in embedded contexts rising intonation shows the hallmarks of embedded root phenomena and, to the extent that we only see \(kya:\) in the presence of rising intonation, we consider PQPs to belong in the same class.\(^\text{16}\)

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 (25) followed by movement to the left of \(kya:\) as illustrated in (26).

(25) \([\text{ForceP} kya:\ [CP Y/N [_{TP} anu-ne uma-ko kitaab dii]]]\)

(26) distribution of polar \(kya:\:
    \begin{align*}
    \text{Subject } kya: & \text{ Object Verb} \\
    & \left[\text{Subject}, \left[\text{ForceP} kya: \left[\text{CP }_, \ C^0 [+Q] [\text{IP } t_i \ldots ]\right]\right]\right] \\
    \text{Subject Object } kya: & \text{ Verb} \\
    & \left[\text{Subject}, \text{Object}_j \left[\text{ForceP} kya: \left[\text{CP }_, \ C^0 [+Q] [\text{IP } t_i t_j \ldots ]\right]\right]\right]
    \end{align*}

\(^\text{16}\)We are setting aside the issue of bias and its relationship to intonation. For relevant discussion on Bangla and Hindi-Urdu, see Bhadra (2017) and Dayal (2016, 2019).
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

(27)  

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:) vahā: (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?’

According to our proposal, the appearance of the polar question particle *kya*: in an immediately pre-verbal position in (27) indicates that the pre-*kya*: material has moved over *kya*: . In (27), we have direct objects that are resistant to movement, as shown by the following contrasts.

(28)  

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]i kal t_i khaa-ya: thaa
Ram=Erg something yesterday eat-Pfv.MSg be.Pst.MSg

intended: ‘Ram had eaten something yesterday.’

(29)  

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

Ram vahā: jhak maar raahaa thaa
Ram there ‘jhak’ kill Prog.MSg be.Pst.MSg

‘Ram was killing time there.’

b. *jhak* is scrambled: 

17Note 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).
Since the direct objects in (27) are resistant to movement, it follows that the variants of (27a, 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.

(30) a. in-situ:

Mina=ne kal Vina=ko ḍāːt-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 t, ḍāːt-aa thaa
Mina=Erg Vina=DOM yesterday scold-Pfv.Def be.Pst.Def
‘Mina had scolded Vina yesterday.’

c. immediately preverbal polar particle kya:: ok

[Mina=ne], [Vina=ko], kya: t, t, j ḍāːt-aa thaa
Mina=Erg 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:.

(31) Subject Object Verb kya:

[Anu=ne Uma=ko kitaab dii], kya: t,?
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:.

4 The Pragmatic Contribution of Polar Particle kya:

In this section we consider the pragmatic contribution of kya:. Starting with non-initial kya: we present diagnostics to establish that kya: partitions the clause into
a segment that is not-at-issue and is not open to challenge and a segment that is unspecified in this respect and may be challenged. The precise distinctions that arise from this partition are determined by independently motivated constraints that are operative in the grammar of Hindi-Urdu.

4.1 *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.

(32) initial/absent *kya*:

\( \text{(kya:)} \) Ram=ne Sita=ko kitaab dii thii
\[ \text{PQP} \quad \text{Ram=Erg Sita-Dat yesterday book.F give.Pfv.F be.Pst.F} \]

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

a. ya: Mina=ne?
   or Mina=Erg
   ‘or had Mina?’
   (Subject)

b. ya: Vina=ko?
   or Vina=Dat
   ‘or to Mina?’
   (IO)

c. ya: parsō?
   or day.before.yesterday
   ‘or the day before yesterday?’
   (Adverb)

d. ya: magazine?
   or magazine
   ‘or a magazine?’
   (DO)

When *kya*: is not clause-initial, phrases that follow it can be challenged but not those that precede it – providing alternatives to them using the above syntactic frame is unacceptable. We illustrate this in (33), where *kya*: follows the subject and the indirect object but precedes the temporal adverb and the direct object.

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

\( \text{Ram=ne Sita=ko kya: kal kitaab dii thii} \)
\( \text{Ram=Erg Sita-Dat PQP yesterday book.F give.Pfv.F be.Pst.F} \)
‘Had Ram given a/the book to Sita yesterday,...

a. # ya: Mina=ne?  
   or Mina=Erg  
   ‘or had Mina?’  
   (Subject)

b. # ya: Vina=ko?  
   or Vina=Dat  
   ‘or to Mina?’  
   (IO)

c. ya: parsō?  
   or day.before.yesterday  
   ‘or the day before yesterday?’  
   (Adverb)

d. ya: magazine?  
   or magazine  
   ‘or a magazine?’  
   (DO)

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 (34).

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

  kya: Ram=ne Sita=ko kal kitaab dii thii?

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

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

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

c. nahī:, parsō dii thii  
   no, day.before.yesterday give.Pfv.F be.Pst.F  
   ‘No, the day before yesterday.’  
   (Adverb corrected)

d. nahī:, 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.

(35)  
[S IO [kya: [Adverb DO V]]]  
Ram=ne  Sita=ko  *kya:* kal kitaab dii thii?  

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

a. # nahī:, Shyam-ne dii thii  
   neg Shyam=Erg give.Pfv.F be.Pst.F  
   ‘No, Shyam did.’  
   (Subject corrected)

b. # nahī:, Uma-ko dii thii  
   neg Uma=Dat give.Pfv.F be.Pst.F  
   ‘No, to Uma.’  
   (IO corrected)

c. nahī:, parsō dii thii  
   neg day.before.yesterday give.Pfv.F be.Pst.F  
   ‘No, the day before yesterday.’  
   (Adverb corrected)

d. nahī:, magazine dii thii  
   neg magazine give.Pfv.F be.Pst.F  
   ‘No, he gave her a magazine yesterday.’  
   (DO corrected)

The pattern we have noted so far holds if the pre-*kya:* material is read with neutral intonation. But prosody can make a difference. Biezma, Butt & Jabeen (2017) note that when the material to the left of *kya:* is stressed, it is in fact possible to correct/challenge it as in (36).

(36)  
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:  
   nahī:, Asim=ne diya:  
   neg Asim=Erg give.Pfv.MSg  
   ‘No, Asim did.’

We agree with the judgement that they report in (36) but we do not think that prosody is sufficient in general to make just any pre-*kya:* element contrastable. Consider (37).
Prosodic prominence on the subject in (37) does not make it at-issue. The focus marking on Ram feels unmoored; it does not help in identifying the contrasted element.

Comparing (36) and (37), we see that there is an adjacency effect for focus on the left: stress on the immediately pre- kya:-XP makes it contrastable but this is not an option for other pre- kya:-XPs. Syed & Dash (2017) claim that there is a similar adjacency effect on the right i.e. only the immediately post- kya: XP can be contrasted. But the data in (32b-d) and (33d), which are robust and widely-accepted (see Biezma, Butt & Jabeen (2017)), show that adjacency is not required on the right of kya:. To sum up, we claim that all post- kya: material and only the immediately pre- kya: XP can be contrasted. We turn to an explanation of this generalization in the next section.

4.2 Deriving Contrastability Through Focus

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 can be focused, which is minimally its c-command domain. This means that in the schema in (38a), YP and ZP can be focused. Deferring discussion of XP2 for the moment, we can also say that XP1 cannot be focused.

(38)  a.  [XP1 [XP2 [ForceP kya: [CP C[+Q] [TP ... YP ZP ]]]]]

b.  Possible alternatives for (35) with focus on kal ‘yesterday’ (YP):
   {Ram gave a book to Sita day before yesterday, Ram gave book to Sita the day before the day before yesterday, ...}

c.  Possible alternatives for (35) with focus on kitaab ‘book’ (ZP):
   {Ram gave a magazine to Sita yesterday, Ram gave a newspaper to Sita yesterday, Ram gave a comic to Sita yesterday, ...}

d.  Impossible alternatives for (35) with focus on Ram (XP1):
   {Ram gave a book to Sita yesterday, Mina gave a book to Sita yesterday, Kostas gave a book to Sita yesterday, ...}
Recall that we have taken the ordinary semantic value of polar questions to be a singleton propositional set. The response particle *yes* is anaphoric to the unique member of this set and asserts it. The response particle *no* is also anaphoric to this proposition but denies it. What we need to add is a characterization of how permissible corrections arise.

We follow the literature in taking prosodically stressed elements to create a set of alternatives. The focus semantic values shown in (38b) and (38c) draw on alternatives to YP and ZP respectively. A plausible continuation of a *no* answer draws on such sets. 18 In this we are essentially following the analysis of Turkish polar questions with *mı* in Atlamaz (2015). In making reference to the focus semantic value of questions, our analysis also shares properties with the proposal in Biezma, Butt and Jabeen (2017) which is couched in terms of Questions under Discussion.

Turning now to XP₂, we note that Hindi-Urdu has several particles that associate to the immediate left: *hi*: ‘only’ (Bajaj 2016), *bhi*: ‘also’ (Dayal 1995, Lahiri 1998), *nahiţi*: ‘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. Given appropriate prosody, the focus semantic value of (36) will include alternatives generated by the immediately pre-*kya*: XP: \{Anu gave Uma a present, Ram gave Uma a present, Vina gave Uma a present, . . .\}.

Allowing the immediately pre-*kya*: constituent to be at-issue has interesting implications for another structure that our account makes available. Consider final *kya*:

\[
\text{(39)} \quad \begin{align*}
\text{a. } & \text{Anu=ne Uma=ko tohfa: diya: kya:} \\
& \quad \text{Anu=Erg Uma=Dat present.M give.Pfv.MSg PQP} \\
& \quad \text{‘Did Anu give a present to Uma?’}
\end{align*}
\]

\[
\text{b. } \left[\left[\text{CP Anu-ne . . .}\right]_{i} \left[\text{ForceP kya: t}_{i}\right]\right]
\]

18 The idea that prosodic focus can generate alternatives that feed possible continuations of negative responses also applies to English: *Did MARY talk to Bill?* can be felicitously answered with *No, John talked to Bill* but not with *No, Mary talked to Sally*. An anonymous reviewer disagrees but we have found this contrast to be subtle but robust. We acknowledge that the relationship between focus marking and question-answer pairs is a complex one as shown by the following question-answer pair brought to our attention by another anonymous reviewer.

\[
\text{i. } \begin{align*}
\text{A: } & \text{I already know that Peter left. But did MARY leave?} \\
\text{B: } & \text{No, she didnt.}
\end{align*}
\]
An important difference between the fronting seen here and the cases discussed earlier in (38) is that the fronted constituent is a clause and is therefore able to be have internal prosodic structure (for an overview of theories relating prosody to information structure see Büring (2016); for studies specifically looking at Hindi-Urdu see Féry et al 2016, Patil et al. 2008, and Genzel and Kögler 2010). With appropriate stress on Uma as in (40), for example, the focus semantic value can shift to \{Anu gave Uma a present, Anu gave Ram a present, Anu gave Kostas a present, \ldots\} even though Uma neither follows kya: nor is it left-adjacent to it.

\[(40)\]
\[
a. \text{Anu}=\text{ne} [\text{Uma}=\text{ko}]_F \text{tohfa: diya: kya:}
\]
\[
\quad \text{Anu}=\text{Erg Uma}=\text{Dat present.M give.Pfv. Ms} \text{ PQP}
\]
\quad ‘Did Anu give a present to Uma?’
\[
b. \quad [[[CP \text{Anu-ne [Uma=ko]}_F \ldots]_i \quad \text{[ForceP kya: t]}_j]]
\]
\[
c. \quad \text{Focus Semantic Value:}
\]
\[
\quad \{\text{Anu gave Uma a present; Anu gave Huma a present, Anu gave Kostas a present, \ldots}\}
\]

This focus semantic value allows for corrections and alternatives to Uma.

We have ended up with near synonymy between clause-initial and clause-final kya:, which can both allow alternatives and corrections on any focused constituent in their focus domain. As we will see in the next section, however, the parallelism breaks down when polar kya: interacts with disjunction.

5 Polar kya: and Alternative Questions

There are two issues that arise when we consider polar kya: in connection with disjunction. One bears on the singleton-set requirement that we have claimed for it, the other is an unexpected restriction against final kya:.

5.1 The Singleton Set Requirement and Disjunction

In section 3, we alluded to Bolinger in connection with the difference between polar questions as singleton propositional sets and wh-questions as non-singletons.
Let us consider now polar questions with disjunction.19

\[(41)\]

a. \(\text{kya:}~\text{tum caai ya:/}^\text{ki coffee pi-yoge?}^\uparrow\)
   \begin{align*}
   \text{PQP} & \quad \text{you tea or coffee drink-Fut.2MPI} \\
   \text{‘Will you drink tea or coffee?’}
   \end{align*}

b. \(\text{kya:}~\text{tum [caai]_F pi-yoge ya:/ki [coffee]_F?}^\uparrow\)
   \begin{align*}
   \text{PQP} & \quad \text{you tea drink-Fut.2MPI OR coffee} \\
   \text{‘Will you drink tea or coffee?’}
   \end{align*}

The distinction between Y/N questions and Alternative Questions is not always easy to make but they can be identified on the basis of prosody. In English, Y/N questions have a rising intonation while Alternative Questions have pitch accents on the two alternatives and a final fall. In Hindi too, there is a similar prosodic difference, which we have indicated in \((41b)\) using square brackets. Additionally, Hindi has two lexical items for disjunction, \text{ya:} and \text{ki}. While \text{ya:} can occur in both types of questions, \text{ki} can only occur in alternative questions, not in Y/N questions or declarative sentences. We use capital OR to indicate those instances of disjunction where only an alternative reading is available. \((41b)\) shows that \text{kya:} is compatible with alternative questions.

This may be a good place to clarify our position on how the prosodic features of alternative questions relate to structure. Bartels (1997) identifies three signature properties, a pitch accent on each disjunct, a prosodic break between the disjuncts, and a final fall. Pruitt and Roelofsen (2013) establish that pitch accents and the prosodic break are more significant than the final fall in identifying alternative questions. From our perspective, the placement of pitch accents and prosodic break is a clause-internal phenomenon that we expect to be always in evidence, in matrix alternative questions as well as alternative questions embedded under non-matrix predicates. We have argued that the matrix intonation contour enters the derivation at ForceP, which is also the position at which we see PQP

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19 The reader will note that \((41a)\) and \((41b)\) do not form a minimal pair. The minimal pair of \((41a)\), given below in \((i)\), is noted to be ungrammatical in Han & Romero (2004b:538-543).

\[(i)\]

i. \(\text{kya:}~\text{tum [caai]_F ya:/ki [coffee]_F pi-yoge?}^\uparrow\)
   \begin{align*}
   \text{PQP} & \quad \text{you tea or coffee drink-Fut.2MPI} \\
   \text{‘Will you drink tea or will you drink coffee?’}
   \end{align*}

We do not think that \((i)\) is ungrammatical; the source of the problem, we believe, lies in generating the prosody needed for the Alternative Question interpretation with this structure. Some speakers, including one of us, cannot generate the required prosody but accept the Alternative Question reading when presented with questions that have the appropriate prosody.
kya: in Hindi-Urdu and embedded inversion in English. We would venture to say
that this is also where the final fall that marks the closure of proffered options in
alternative questions is located. Since this final fall is indistinguishable from lack
of matrix intonation in complements of predicates that do not embed ForceP the
final fall on its own does not help us separate out alternative questions that project
up to CP from those that project up to ForceP. Interestingly, Ciardelli et al (2019)
also note cases of alternative questions that have a final rise. Such questions, how-
ever, have the behavior of root phenomena. This adds further support to our claim
that matrix question intonation is located in ForceP even in alternative questions.

With respect to answerhood conditions, Alternative Questions typically expect
a positive response to exactly one of the proffered alternatives but the choice be-
tween them is open. This is taken as evidence that each alternative is included
in the question denotation.20 If alternative questions denote multi-membered sets,
the Hindi-Urdu PQP kya:, as we have defined it, should be incompatible with
them. So the fact that they are in fact compatible calls for an explanation. Our
solution rests on the view that it is possible to analyze an alternative question with
kya: as (43) instead of (42), optionally followed by ellipsis of material in either
CP1 or CP2. The account of Hindi-Urdu alternative questions that we develop be-
low is directly inspired by Han & Romero (2004b) and can be seen as a refinement
of their basic insights, from the perspective of PQPs.

(42) Presupposition failure at ForceP, CP not singleton!

---

20 Questions with disjunction can have a choice reading where the speaker provides a choice
of alternatives (e.g. What is your name or your social security number? Either will do.). They
can also have a cancellation reading where the speaker retracts the first question and substitutes
it with a new question (e.g. What is your name? or rather what is your social security number?)
We are focusing here on the choice reading of alternative questions, which has been shown to be
possible with clause-level disjunction (Hirsch 2017, Ciardelli et al 2019). See also Groenendijk
about Hindi-Urdu is that the disjunction operators ya:/ki do not lend themselves to cancellation
type readings, for which balki ‘rather’ needs to be used. We set this aside as it does not affect the
analysis of the PQP kya: in this paper.
(43) Alternative Question: Possible Answers: p/q/*yes/*no

(44) Yes/No Question: Possible Answers: Yes, \( p \lor q \)/No, \( \neg(p \lor q) \) = No, \( \neg p \land \neg q \)

For completeness, we add the structure with kya: and disjunction inside a polar question in (44) below but in what follows we will set aside Yes/No interpretations.

In support of our proposal, we note that alternative questions can be conveyed
by what looks like an explicit disjunction of two Yes/No questions. In Hindi-Urdu also, we find that two kya: questions can be disjoined to yield an alternative question.

(45)  
\begin{enumerate}
  \item a. Will you drink coffee or will you drink tea?  
  \item b. kya: tum ja:-oge ya: kya: vo aa-ega:?  
       PQP you go-Fut.2MPI or PQP he come-Fut.3MSg  
       ‘Will you go or will he come?’
\end{enumerate}

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.

(46)  
\begin{enumerate}
  \item a. kya: p or kya: q?  
  \item b. kya: p or q?  
       kya: tum ja:-oge ya: vo aa-ega:?  
       PQP you go-Fut.2MPI or he come-Fut.3MSg  
       ‘Will you go or will he come?’
  \item c. p or kya: q?  
       tum ja:-oge ya: kya: vo aa-ega:?  
       you go-Fut.2MPI or PQP he come-Fut.3MSg  
       ‘Will you go or will he come?’
  \item d. p or q?  
       tum ja:-oge ya: vo aa-ega:?  
       you go-Fut.2MPI or he come-Fut.3MSg  
       ‘Will you go or will he come?’
\end{enumerate}

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.

\footnote{21Maribel 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?}
By the semantics we have assumed, this means that each polar question denotes a singleton set, \{p\} and \{q\} respectively. \textit{kyā}: if present, only applies to the singleton set corresponding to one of the polar questions and as a result its requirement is met. The crucial component for us is that when we disjoin two Y/N questions, we end up with a multi-membered set \{p,q\}. See Alonso-Ovalle (2005) and Krifka (2015) among others.

5.2 Final \textit{kyā}: and Disjunction

In section 4.2 we saw that clause-initial \textit{kyā}: and clause-final \textit{kyā}: allow the same set of answers. One might therefore expect them to display similar behavior across the board. The two come apart rather spectacularly, however, in the context of disjunction. As we have seen, initial \textit{kyā}: is compatible with a disjunction of finite clauses. But final \textit{kyā}: is not.

(47) a. initial \textit{kyā}: ok

\textit{kyā}: Ram na:c-ega: ya:/ki Sita ga:-egii
\textit{PQP} Ram.M dance-Fut.3MSg OR Sita.F dance-Fut.3FSg
‘Will Ram dance or will Sita sing?’

b. final \textit{kyā}: *

*Ram na:c-ega: ya:/ki Sita ga:-egii \textit{kyā}:
Ram.M dance-Fut.3MSg OR Sita.F dance-Fut.3FSg \textit{PQP}
intended: ‘Will Ram dance or will Sita sing?’

Let us remind ourselves of what we take to be the syntactic structure of final \textit{kyā}:. According to our analysis, clause final \textit{kyā}: is derived by movement of the full clause to the left of \textit{kyā}:.

(48) S O V \textit{kyā}:

a. Derivation with TP fronting:

```
FP
  [TP S O V]_i
    FP
     kya: CP
      C[+Q] t_i
```
b. Derivation with CP fronting:

```
FP
  /\    \
CP_i \  /  /  \ ____________
   FP CP
   \   \   \       \     \    
C[+Q] [TP S O V] kya: t_i
```

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

We want to understand the ungrammaticality of final kya: with disjunction of finite clauses, which we can schematically refer to as ‘p or q kya:’. The following parses are in principle available.

(49) a. ‘[[p or q] kya:]’
    b. ‘[p or [q kya:]]’

Limiting ourselves to alternative questions, we first consider the parse in (49a).

(50) ‘[[p or q] kya:]’

CP disjunction (i.e. OR_ALT), CP fronting

→ Presupposition failure at ForceP, CP not singleton!

*
For the needs of *kya*: to be met in an alternative question, *kya*: must scope under disjunction but in this structure *kya*: scopes over it. We have now shown why (49a) is unavailable. What about the structure in (49b) (‘*[p or [q *kya*:]]’)? where *kya*: is attached to the second disjunct i.e. the disjunction takes scope over ForceP.

(51) ‘p or [q *kya*:]’

ForceP disjunction:

\[ \text{ForceP} \]
\[ \text{ForceP1} \]
\[ \text{ORALT} \]
\[ \text{CP1} \]
\[ \text{C[+Q]} \]
\[ p \]
\[ \text{[TP \ q]} \_i \]
\[ \text{ForceP2}’ \]
\[ \text{CP2} \]
\[ \text{C[+Q]} \]
\[ t_i \]

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? A structure very similar to it is in fact what we have argued underlies alternative questions with initial *kya*: namely ‘[[*kya*: p] or q]’. The significant difference between the two structures is that in the putatively unavailable structure, there is clausal topicalization over *kya*: and this is the domain in which we will locate our explanation.

\[22\]We only show the TP fronting option as fronting the CP is semantically equivalent.
5.3 Partitions, Disjunction and Deletion

Let us remind ourselves of the effect of fronting over kya: In §4.1, we saw that material fronted over kya: could be either not-at-issue (NAI) or contrastively focused (CF).

(52) a. not-at-issue:
[[XP₁]NAI [ForceP kya: [CP C[+Q] [TP ... t₁ ... YP ZP ]]]]

b. contrastively focused:
[[XP₁]CF [ForceP kya: [CP C[+Q] [TP ... t₁ ... YP ZP ]]]]

We are distinguishing between marking of the not-at-issue/contrastive focus distinction triggered by movement over kya: from the in-situ marking via prosody alone of the given/new distinction. We will see that movement over kya: brings with it strict requirements concerning parallelism between the two disjunct and obligatory deletion in the second disjunct.

5.3.1 Case 1: Fronted Material is Not-At-Issue

We first consider cases where the fronted XPs in the two disjuncts are not-at-issue. One might imagine that fronting over kya: and disjunction of polar questions would operate independently of each other. This turns out not to be the case. There are stringent restrictions on what combinations of frontings are legitimate in disjoined polar questions and on the obligatoriness of ellipsis in such disjunctions. Unlike the well-formed disjunction of two kya:-initial polar questions in (53a), its medial kya: counterpart in (53b) is ungrammatical.

(53) a. kya: tum ja:-oge ya: kya: vo aa-ega:? PQP you go-Fut.2MPI or PQP he come-Fut.3MSg ‘Will you go or will he come?’

b. *[tum]NAI kya: ja:-oge ya: [vo]NAI kya: aa-ega:? you PQP go-Fut.2MPI or he PQP come-Fut.3MSg ‘Will you go or will he come?’

We believe the ungrammaticality of (53b) stems from the second disjunct having distinct not-at-issue content (vo ‘he’) from the first disjunct (tum ‘you’). Having said this one might expect (54a) where both disjuncts share the same not-at-issue content (tum ‘you’) to be fully acceptable, but it is not.

(54) a. ??tum kya: ja:-oge ya: tum kya: aa-oge
you PQP go-Fut.2MPI or you PQP come-Fut.2MPI
It seems that in addition to the requirement that the disjuncts in a polar question need to have the same not-at-issue content, there is also a strong preference for deleting the shared content of ForceP. This is why the second kya: can only surface in the second disjunct in a very limited set of cases – when there is no material in the ForceP of the second disjunct and no reduction as in the kya: initial (53a). Let us name the two constraints at play here.

(55) a. Parallelism: the not-at-issue content of two disjoined clauses must be the same.

b. Deletion: Delete shared not-at-issue material

Parallelism is a strong constraint; violating it results in ungrammaticality (see 53b). The deletion constraint is weaker: failure of deletion leads to degradation but not ungrammaticality (see 54a).

We can now apply the insights gained from clause-medial kya: to final kya: and try to understand the restrictions against final kya: in alternative questions: ‘*[p kya:] OR [q kya:]’ . Consider the derivation where the fronted clause is not-at-issue. Parallelism forces both disjuncts to have the same not at issue content. So if p and q are distinct, then ‘[p kya:] OR [q kya:]’ is ruled out by parallelism. If, however, p and q are non-distinct, then we run into a different problem. An alternative question crucially requires some expression/expressions in each clause to provide the alternatives: ‘[p kya:] OR [p kya:]’ is ruled out because the second disjunct does not provide any new alternatives. ‘[p kya:] OR [p kya:]’ is deviant in the same way as Do you want coffee or do you want coffee? is deviant.

5.3.2 Case 2: Fronted Material is Contrastively Focused

We now consider cases of disjoined polar questions where the fronted material is focused. Such cases are also ungrammatical with disjunction.

(56) *[tum]CF kya: kal ja:-oge ya: [vo]CF kya: kal you PQP tomorrow go-Fut.2MPI or he PQP tomorrow ja:-ega:? come-Fut.3MSg

‘Will you go tomorrow or will he come tomorrow?’
In such cases, it is possible to save the structure by keeping the pre-*kya* material and deleting everything else.

(57)  [tum]CF kya: kal ja:-oge ya: [vo]CF kya: kal you PQP tomorrow go-Fut.2MPl or he PQP tomorrow ja:-ega:?
go-Fut.3MSg ‘Will you go tomorrow or will he?’

The deletion constraint here is similar to the one we saw for not-at-issue material but not identical. One difference is that when the fronted material is contrastively focused, *kya* and the post-*kya* material have to be deleted while when the fronted material is not-at-issue, *kya* and the pre-*kya* material can be deleted. As a result *kya* can never surface overtly in the second disjunct.

We apply what we have learned from the interaction of contrastive focus movement and disjunction in the case of medial *kya* to the case of final *kya*. The structure at hand is ‘[p, *kya*: t,] OR [q, *kya*: t,]’ with both p and q having undergone focus movement. The obligatory deletion constraint applies deleting *kya* and post-*kya* material, yielding: ‘[p, *kya*: t,] OR [q, *kya*: t,]’, a structure that does not surface with a final *kya*: This order is grammatical.

(58)  [[[ tum ja:-oge]],]CF kya: t, ya: [[[ vo aa-ega]],]CF kya: t, you go-Fut.2MPl PQP or he come-Fut.2MPl PQP ‘Will you go or will he come?’

Once again, final *kya* is ruled out in the second disjunct of the alternative question. The lessons from clause-medial *kya* therefore provide a principled explanation for the final *kya* data.

### 6 Extensions

We would like to end our discussion by considering two domains in which our account calls for follow-up work. One is specific to polar *kya* and involves the extension of our account beyond information-seeking questions. The other is the cross-linguistic application of the distinction we have made between PQPs and Q-morphemes.
6.1 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.

(59) a. rhetorical question:

\[
\text{mujh=}se \text{ ky}o \text{ pu:ch rahe ho? (kya:) m}E \text{ tumhari: maa me=}Inst \text{ why ask } \text{ Prog.MP} \text{ be.Prs.2PI PQP I your mother h}u:? \text{ be.Prs.1Sg}
\]

‘Why are you asking me? Am I your mother?’

b. quiz question:

\[
\text{ab a:p bata:iye, (kya:) dharti: gol hai? now you tell.Pol.Imp PQP earth spherical be.Prs.3Sg}
\]

‘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.23

(60) negative question:

\[
(\text{kya:}) \text{ tum=ne su:ar ka m}a:s pahle nah}i:\text{ kha:ya: tha: PQP you=Erg pig Gen meat before Neg eat.Pfv.MSg be.Pst.MSg}
\]

‘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.24 Consider the following in a context where the addressee was supposed to have left town and the speaker is surprised to see him:

---

23Biezma, 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 18). But without such focus, our judgement is that expectations about a negative answer pose no problems to *kya*:

24Incredulity 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.
To be completely upfront about this, it is unclear to us whether (61) 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, (61) 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 (61) 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:.

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).

6.2 Interrogative Question Particles Crosslinguistically

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 phenomenon restricted to 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 extended the analysis of Hindi-Urdu polar kya: in Bhatt and Dayal (2014) to similar particles 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 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 require a set of diagnostics making a three-way distinction between CP, ForceP and SAP, for which see Dayal (2019). We see that Polar Particles deepener our understanding of the left periphery. They also shed significant light on the syntax, semantics, pragmatics and prosody of questions.

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