RESEARCH

Evidentials are syntax-sensitive: The view from Bangla

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This paper studies an evidential in Bangla which changes its evidential flavor based on its syntactic position. Forging novel connections with the literature on finiteness, indexical shift, and complementizer agreement, this paper demonstrates how evidentials can be sensitive to the presence of syntactic heads that represent the point-of-view of an utterance. Three main claims are made: (i) evidentials always take finite clauses which are perspective-sensitive, (ii) this perspective-sensitivity is syntactic, i.e. it is the result of control by speech-act heads, (iii) coindexation or contraindexation among these perspectival heads can have very important effects on word order in evidential constructions. This paper thus offers a comprehensive *syntactic* profile of evidential particles, which have generally been investigated with regard to their semantic-pragmatic contribution, arguing that the structural configurations these elements appear in have undeniably crucial effects on the interpretative component.

1 Introduction

The Indo-Aryan language Bangla (also known as Bengali) shows a puzzling pattern whereby the same evidential particle *naki* can denote different evidential flavors based on its syntactic position and the speech act it occurs in. The interpretation that signals the presence of REPORTATIVE evidence is available when *naki* is in any clause-internal position, while the interpretation that signals the presence of INFERENTIAL evidence is only available when *naki* is clause-final. In addition, the latter is available only in polar questions, while the former is available in both polar questions and declarative statements. The pattern shown in (1) is taken from Mukherjee (2008), who makes the claim that only in the clause-medial position, the particle functions as an evidential (which she glossed as H/U (heard/uttered)) while in the clause-final position, the particle functions as an operator for a confirmation question (which she glossed as Confirm):

(1)   Mukherjee (2008: (1, 2))
    a.   Shila **naki** gaan Sikh-ch-e.
          Shila H/U song learn-PROG-3P
          'Shila is learning music, as I have heard.'

    b.   Sita baRi giy-ech-e   **naki**?
          Sita home go-PERF-3P Confirm
          'Sita has gone home. Has she?

In this paper, I argue, contra Mukherjee, that *naki* is underlyingly one single lexical item that, in both positions, is crucially a marker of INDIRECT evidence (cf. Willett 1988's evidential taxonomy; also see De Haan 1999; Rooryck 2001; Faller 2002; Aikhenvald 2004;

Murray 2010). I argue that *naki* is sensitive to a "judge" parameter (cf. Lasersohn 2005; Stephenson 2007) that is available in the *syntax*. *Naki* will be argued to be base-generated in one single underlying position. I will demonstrate that different judges are syntactically made accessible to *naki* in specific syntactic configurations, which results in different evidential flavors in the semantics module. Crucial word order differences between the two instantiations of the evidential are shown to fall out from standard syntactic principles. This paper is solely about the syntactic contribution of *naki*. For a holistic view of *naki* at the syntax-semantics-pragmatics interfaces, see Bhadra (2017).

2 The empirical facts

Naki can occur in two positions in a clause – at the clause-final position and a clause-internal position. Depending on the syntactic position, the **type** of evidentiality denoted by *naki* changes. I provide contexts below to make the evidential distinctions clear.

(2)   Context: Ram heard a rumor about his neighbor that he is now reporting to his friend Sita:
        Mina **naki** amerika chol-e   ja-cche.   REPORTATIVE
        Mina NAKI America go-IMPV go-3P.PRES.PROG
        'Mina is going away to America (I hear).'

(3)   Context: Ram knows that Mina has been thinking about going to America for a while now but has not made up her mind yet. Today, he suddenly sees several of her suitcases, all packed, sitting out in the hall and asks her brother:
        Mina amerika chol-e   ja-cche   **naki**?   INFERENTIAL
        Mina America go-IMPV go-3P.PRES.PROG NAKI
        '(Given what I inferred) Mina is going away to America (is it true)?'

The two sentences above are not really a minimal pair in that (2) appears to be a declarative while (3) is a polar interrogative.[1] The REPORTATIVE interpretation is available in polar interrogatives too, as shown in the interrogative counterpart of (2) below:

(4)   Mina **naki** amerika chol-e   ja-cche?   REPORTATIVE
        Mina NAKI America go-IMPV go-3P.PRES.PROG
        '(Given what I hear), Mina is going away to America (is it true)?'

To demonstrate that the two interpretations of the evidential are non-interchangeable and crucially dependent on syntactic position, it is imperative to mention: in the context in (2), the sentences in (2) and (4) would be felicitous, while the sentence in (3) would be infelicitous/unacceptable; on the other hand, in the context in (3), (2) and (4) would be infelicitous/unacceptable.[2]

The declarative counterpart of the INFERENTIAL interpretation (keeping the context the same as in (3)) however, is mysteriously ungrammatical/infelicitous.[3]

(5)   */#Mina amerika chol-e   ja-cche   **naki**.
             Mina America go-IMPV go-3P.PRES.PROG NAKI
             Intended: 'Mina is going away to America (I inferred).'

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[1] Rising intonation is sufficient to mark this structure as an interrogative. I do not claim any similarities between *naki* questions and tag questions, given the fact that the former exhibits none of the hallmark properties of the latter such as intonation breaks between the host clause and the tag, polarity dependencies between the two clauses, etc (cf. Huddleston 1970; Ladd 1981, among many others).

[2] I thank an anonymous reviewer for asking for clarification on this distinction.

[3] I return to a discussion of this ungrammaticality in Section 6, and also discuss the phenomenon of Interrogative Flip.

One of the hallmark properties of *naki* is that it cannot ever appear in a clause-initial position. Some element needs to linearly precede it.

(6)   *naki Ram amerika chol-e   ja-cche?
        NAKI Ram America go-IMPV go-3P.PRES.PROG
        Intended: '(I hear/infer) Ram is going away to America, (is it true)?'

There appears to be no syntactic or semantic restriction on what kinds of elements can precede *naki*. The preceding element can be of any syntactic category, as indicated below:

(7)   a.   [o-r   jonno]$_{PP}$ naki amra konodin kichu   ko-ri-ni.
             him-GEN for   NAKI we   ever   anything do-1P-NEG
             Lit. '(I hear) for him we have never done anything.'

        b.   [konodin]$_{AdvP}$ naki amra o-r   jonno kichu   ko-ri-ni.
             ever   NAKI we   him-GEN for   anything do-1P-NEG
             Lit. '(I hear) never have we done anything for him.'

        c.   [amra]$_{DP}$ naki konodin o-r   jonno kichu   ko-ri-ni.
             We   NAKI ever   him-GEN for   anything do-1P-NEG
             Lit. '(I hear) we never did anything for him.'

        d.   [amra je   o-r   biye-te   jai-ni   Seta]$_{CP}$ naki o
             we   COMP him-GEN wedding-LOC go-NEG that   NAKI he
             sObai-ke   bol-e   bEray.
             everyone-ACC TELL-IMPV goes
             Lit. '(I hear) that we didn't attend his wedding he goes around telling everyone.'

The elements preceding *naki* could also be any referential/definite or operator-like elements:

(8)   a.   chatro-Ta   naki pOraSona-y bhalo.
             student-CL NAKI studies-LOC good
             'The boy is reportedly good at studies.'

        b.   jekono   rikSa-calok-i   naki oi-Tuku   rasta je-te
             whichever/any rickshaw-driver-EMPH NAKI that-much road go-INF
             raji hoy-e   jaa-be.
             agree happen-IMPV go-FUT.3P
             'Any rickshaw driver will reportedly agree to go only that much distance.'

        c.   Sudhu naki mOd   khe-le-I   neSa   hOy,   ca
             only   NAKI alcohol eat-PERF-EMPH addiction happens tea
             khe-le   hOy-na.
             eat-PERF happen-NEG
             'Only drinking alcohol reportedly causes addiction, drinking tea does not.'

Thus, the data shows that *naki* does not appear to be in the least selective about what precedes it as long as something does.

   In addition, more than one constituent can precede *naki*. The low verbal complex cannot be broken up by *naki*, but apart from that, all other elements in the structure can precede *naki*. Crucially, in all of the cases below, *naki* has the REPORTATIVE interpretation.

(9)   All possible clause-internal positions of *naki*, i.e. no matter which constituent or how many constituents precede *naki*, yield the REPORTATIVE interpretation. The INFERENTIAL interpretation is *unavailable* in all of these configurations.

a. Ram naki Sita-ke kalke skul-e boi-Ta di-te
ram NAKI Sita-DAT yesterday school-LOC book-CL give-IMPV
bhul-e ge-chilo.
forget-IMPV go-PAST.3P
'Ram reportedly forgot to give Sita the book at school yesterday.'
b. Ram Sita-ke naki …
c. Ram Sita-ke kalke naki …
d. Ram Sita-ke kalke skul-e naki …
e. Ram Sita-ke kalke skul-e boi-Ta naki …
f. Ram Sita-ke kalke skul-e boi-Ta dite naki …
g. *Ram Sita-ke kalke skul-e boi-Ta di-te bhul-e naki ge-chilo.

This distribution can be summed up as given in Table 1.

This significant syntactic difference has prompted other studies on *naki* (Mukherjee 2008; Xu 2017) to assume that there are two lexical entries in the Bangla grammar, in spite of both entries belonging to the same grammatical category, having the exact same phonological form, as well as major semantic and pragmatic similarities. In this paper, I will take up the puzzle of *naki*'s syntactic distribution, as summed up in Table 1. I will argue that *naki* is a single element in the Bangla grammar, which is generated in the same base position in both cases and the difference in evidential flavor crucially rests on the syntactic representation of a "judge" argument (cf. Lasersohn 2005; Stephenson 2007) that *naki* has access to and composes with.

3 The clause-initial position in Bangla

The clause-initial position in Bangla is, in some respects, special. Apart from *naki*, several other particles are banned from appearing in the clause-initial position. Bayer & Dasgupta (2016) demonstrate this ban for discourse particles such as *ki* (polar question marker), *ba* ('or'), *to* ('of course'/emphasis marker) and *je* (clause-initial complementizer). These can appear in many other positions, but not in the clause-initial position. The authors accord these particles a **clitic-like status** in the language, given that they mandatorily "attract some focused or at least focusable XP to their left". A few examples are provided below.

The Bangla polar question particle (henceforth, PolQ) *ki* in the clause-initial position leads to ungrammaticality. *ki* shares core distributional properties with *naki* in that multiple constituents can precede it, and there are no restrictions on what syntactic or semantic properties these constituents could have (the data pertaining to these observations presented above for *naki* all apply to *ki* as well). Contrast this affinity of *ki* for the second position with the Hindi PolQ which is perfectly grammatical in the clause-initial position:

(10) a. *__ki__   Onu bhaat kheye niye-che?   Bangla
POL Q Onu rice   eat   take-PERF.3P
Intended: 'Has Onu eaten rice?'

b. __kyaa__   Anu-ne   chawal kha liya?   Hindi
POL Q Anu-ERG   rice   eat   take-PERF
'Has Anu eaten rice?'

Table 1: Position–Interpretation Correlation.

naki	Position
REPORTATIVE	any position inside a clause
INFERENTIAL	end of a clause

Both Hindi and Bangla are relatively free word order languages. Given that property, the ban on the sentence initial position for *ki* but not *kyaa* is surprising. See Bhatt & Dayal (2014; 2017) for a discussion of other properties of Hindi polar *kyaa*.

Other examples of such clitic-like elements provided below are slightly modified from Bayer & Dasgupta (2016):

(11)   a.   kothay-i **ba** ge-che   Dilip?
              where-FOC BA go-PERF.3P Dilip
              'Where is it actually that Dilip went?'

       b. *****ba** kothay-i   ge-che   Dilip?
              BA where-FOC go-PERF.3P Dilip
              Intended: 'Where is it actually that Dilip went?'

(12)   a.   Probal **je**   aS-be   ebong Ushi ghOr buk kor-ech-e
              Probal COMP come-FUT.3P and   Ushi home book do-PFC-PERF.3P
              ami bol-echi-l-am.
              I   say-PFC-PAST-1P
              'I said that Probal will come and (that) Ushi has booked a room (for him)'

       b. *****je**   Probal aS-be   ebong Ushi ghOr buk   kor-ech-e
              COMP Probal come-FUT.3P and   Ushi home book do-PFC-PERF.3P
              ami bol-echi-l-am.
              I   say-PFC-PAST-1P
              Intended: 'I said that Probal will come and (that) Ushi has booked a room (for him)'

Dasgupta (2007) assumes the term "anchors" to refer to clause-internal occurrences of particles such as *ki,* that are associated with sisters of various categorial types – verbs, arguments and adjuncts. The syntactic assumption made is that although anchors are base-generated as particles associated with different categorial constituents, they covertly move their features to C. In this framework, *ki* is generated in a sub-CP position, although it is not clear where. Dasgupta (2007) further argues that [-wh] hosts of the enclitic move to a TP-adjoined Topic position.

Abstracting away from the technical details provided in these works, the general idea is that all of these elements banned from the clause-initial position in the language have "enclitic"-like properties[4] (cf. Faller 2002; Bayer & Dasgupta 2016). I assume that this property is enforced via the presence of an edge feature (Chomsky 2008). This is an EPP feature that requires that some syntactic unit be Merged as the specifier of the category whose feature bears this property. The EPP feature does not specify any properties of the element to be Merged, which is why it would allow any syntactic category, as well as any referential, non-referential, or operator-like elements to satisfy the criteria (for example, see Gísli Jónsson 1991; Holmberg 2000 for accounts of stylistic fronting in Icelandic showing how any category can function as an expletive).

In order to talk about the EPP feature on *naki* in Minimalist terms, let us first very briefly review some of the essential concepts at play.

3.1 Probes, goals and Minimal Search

Chomsky (2000; 2001) laid down the foundations of an Agree operation that crucially involves *probes* and *goals*. AGREE is a syntactic feature checking operation that eliminates the "feature-movement" part of Chomsky's ATTRACT (Chomsky 1995a). In this for-

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[4] These elements do not form one phonological word with the previous XP neither do they bear stress.

mulation, a head H is a probe only if it contains uninterpretable or unvalued features (see Pesetsky & Torrego 2001; 2007 for an alternative formulation where the actual probe is the unvalued feature and not the head). A goal exists in the c-command domain of the probe, and carries a matching interpretable and valued formal feature. This feature on the goal then checks its uninterpretable counterpart on the probe via valuation.

   The standard definition of AGREE is given as follows (Chomsky 2000; 2001):

(13)   Zeijlstra (2012: (1))
        α can *Agree* with β iff:

        a. α carries at least one unvalued and uninterpretable feature and
              β carries a matching interpretable and valued feature.
        b. α c-commands β.
        c. β is the closest goal to α.
        d. β bears an unvalued uninterpretable feature.

Notice that though this early definition contains a restriction of locality, i.e. the goal that is chosen by the probe has to be the closest goal available, it does not make explicit how far a search domain extends. In Chomsky (2001; 2008), Chomsky argues for the notion of *phases*, which prevents linguistic elements at arbitrary structural depths from being potential targets for movement. He writes, "For minimal computation, the probe should search the smallest domain to find the goal: its c-command domain." (Chomsky 2008: 146). This is the foundational basis of the idea of *Minimal Search* (see Aoun & Li 2003 for a similar formulation of the Minimal Match Condition). Numerous studies have exploited this notion of the smallest possible search domain. In particular, Larson (2015) argues that an optimally economical minimal search constraint serves to restrain the application of Chomsky's Merge operation (Chomsky 1995b). The default for Merge is to apply to the smallest domain possible, following the exhaustion of which Merge across a wider domain is permitted. This leads to a hierarchy of possible Merge operations, with Internal Merge being the default and Parallel Merge (Citko 2005) being the most marked:

(14)   Internal Merge > External Merge > Parallel Merge

Larson (2015) argues that phases embody the notion of minimal search to constrain the freedom of Merge to look deep in a given structure. In this paper, the relevant EPP probe will be assumed to be compliant of this restriction.

3.2 EPP on naki

Evidence for the claim that an EPP probe on *naki* (and *ki*) makes it look into its c-command domain comes from "high" adverbs. Another syntactic similarity between *ki* and *naki* is the fact that higher (speaker or subject oriented) adverbials cannot appear preceding *naki*, while lower adverbials can. Bayer & Dasgupta (2016) report that the exact same pattern holds for *je* (the *je* examples are from their work).

(15)   a.   *OboSSo **je**   Dilip   as-te   par-be   na,   …
              however COMP Dilip   come-IMPV   can-FUT.3P   NEG
              Intended: 'However, that Dilip will not be able to come, …'

        b.   *durbhaggobOSoto **je**   Dilip   as-te   par-be   na,   …
              unfortunately   COMP Dilip   come-IMPV   can-FUT.3P   NEG
              Intended: 'Unfortunately, that Dilip will not be able to come, …'

    c.   *OboSSo **naki** Dilip as-te   par-be   na.
        however NAKI Dilip come-IMPV can-FUT.3P NEG
        Intended: 'However, reportedly Dilip will not be able to come.'

    d.   *durbhaggobOSoto **naki** Dilip as-te   par-be   na.
        unfortunately   NAKI Dilip come-IMPV can-FUT.3P NEG
        Intended: 'Unfortunately, reportedly Dilip will not be able to come.'

    e.   *OboSSo **ki**   Dilip as-te   par-be   na.
        however POL Dilip come-IMPV can-FUT.3P NEG
        Intended: 'However, will Dilip not be able to come?'

    f.   *durbhaggobOSoto **ki**   Dilip as-te   par-be   na.
        unfortunately   POL Dilip come-IMPV can-FUT.3P NEG
        Intended: 'Unfortunately, will Dilip not be able to come?'

In (7), we saw that *naki* does not appear to care what category or size or how far the goal is, as long as its edge feature is satisfied. From that perspective, it is surprising that the adverbials in (15) cannot precede *naki*. I claim that the ungrammaticality in (15) stems from the fact that these "high" adverbials are speaker-oriented, which means that they adjoin at a position higher than *naki*, above the C-domain, and are therefore outside its c-command domain (cf. Cinque 1999). These high adverbials thus cannot serve to satisfy *naki*'s EPP needs, because they are not visible to the probe. The derivations for the sentences in (15) crash because of the unsatisfied EPP. Note that as soon as this requirement is met by an element inside the probe domain of *naki* (*Dilip,* for example), the sentences become grammatical:

(16)   a.   OboSSo Dilip naki as-te   par-be   na.
           however Dilip NAKI come-IMPV can-FUT.3P NEG
           'However, reportedly Dilip will not be able to come.'

       b.   durbhaggobOSoto Dilip naki as-te   par-be   na.
           unfortunately   Dilip NAKI come-IMPV can-FUT.3P NEG
           'Unfortunately, reportedly Dilip will not be able to come.'

The facts about "high" adverbials predict that "low" adverbials (adjoined to vP and therefore visible to *naki* in its probe domain) should be able to qualify as goals. This prediction is borne out for both *naki* and *ki*, as shown below:

(17)   a.   khete   khete   naki bas-e   cOra jay-na.
           eat-IMPV eat-IMPV NAKI bus-LOC climb go-NEG
           'Reportedly (one) cannot board a bus while eating.'

       b.   khete   khete   ki   bas-e   cOra jay-na?
           eat-IMPV eat-IMPV POL bus-LOC climb go-NEG
           'Can (one) not board the bus while eating?'

The search domain of *naki* is restricted by phases. Support for this claim comes from the fact that in a bi-clausal structure, when *naki* occurs in the matrix clause, elements cannot be extracted from the embedded clause and moved to the specifier of *naki*. Consider the minimal pair below:

(18)   a.   Ram naki boleche [Sita bhOgoban man-e   na].
           Ram NAKI said   sita god   regard-HAB NEG
           'Ram has reportedly said Sita does not believe in God.'

b. *bhOgoban$_i$ naki Ram boleche [Sita t$_i$ man-e   NA].
    god   NAKI ram said   sita t   regard-HAB NEG
    Intended: 'Ram has reportedly said Sita does not believe in God.'

As we saw above, no matter what or how many elements inside the clause precede *naki,* the evidential flavor is always REPORTATIVE. Interestingly however, as soon as the whole finite clause precedes *naki,* the INFERENTIAL interpretation is obtained. This clause-final position is the only position the INFERENTIAL is felicitous in. The REPORTATIVE interpretation is **unavailable** in this configuration.

(19)   Ram Sita-ke   kalke   skul-e   boi-Ta   di-te   bhul-e
        ram Sita-DAT yesterday school-LOC book-CL give-IMPV forget-IMPV
        ge-chilo   naki?
        go-PAST.3P   NAKI
        '(Given what I infer) Ram forgot to give Sita the book at school yesterday (is it true)?'

Thus, there is a strict position vs. interpretation correlation that can be summed up in terms of the following generalization:

(20)   **Positional Generalization**
        Whenever *naki* moves its own finite clausal complement to its specifier to satisfy the EPP, the resulting interpretation of *naki* is obligatorily INFERENTIAL. At all other times, its interpretation is REPORTATIVE.

To demonstrate an example, consider the following pair, in which the fronted constituent in (21a) is the quotative CP *Mary ashbe bole* ('that Mary will come') which moves from its base-generated position of the complement of the verb. The resulting evidential flavor is REPORTATIVE. This can be demonstrated with other embedded finite clauses as well. In contrast, when the whole finite complement of *naki* is moved, the resulting flavor of evidentiality is INFERENTIAL.

(21)   a. [Mary ash-be   bole]$_i$ naki SObai   asha ko-re   boshe
            Mary come-FUT COMP   NAKI everyone hope do-IMPV sit
            ache   t$_i$.
            is
            Lit. '(**I hear**) that Mary will come everyone is hoping.'
        b. [SObai   [Mary ash-be   bole] asha ko-re   boshe ache]$_i$
            everyone Mary   come-FUT COMP hope do-IMPV sit   is
            naki t$_i$.
            NAKI
            Lit.'(**I infer**) that everyone is hoping that Mary will come, (is it true)?'

Why should this crucial difference arise based on which constituent satisfies the EPP? I argue in the following sections that the answer lies in the **finiteness properties of the moved phrase**.

4 Coordinates of a finite clause
Cross-linguistically, finite clauses have been argued to have the following characteristics: presence of independently referring overt subjects, opacity with respect to movements out of the clause, case-marking of the clausal subject (see McFadden & Sundaresan 2014 for a discussion). Another important property has also been attributed to finite clauses – independent sentencehood status. Nikolaeva (2007) describes the long standing view that non-

finite verbs occur exclusively or predominantly in dependent contexts. The many non-finite forms in Bangla (participles, gerunds, dependent conditionals, subjunctives, infinitives) have many syntactic differences, but none of them can stand alone as an independent utterance in the language, they are always dependent on the matrix tense (Ramchand 2014). Even the subjunctive in Bangla, which behaves like a finite indicative clause as far as syntactic properties are concerned (Dasgupta 1996; Datta 2016), cannot have independent assertive force. Ramchand was the first to suggest that the locus of deficiency in Bangla is not at T but higher up in the clause – namely, in Fin° (following Rizzi 1997).

Bianchi (2003) (as well as Adger 2007; Giorgi 2010) also relates finiteness to temporal anchoring. Simplifying the details, a finite verb has its own temporal encoding in relation to the speech time, while a non-finite verb does not. A non-finite tense is always connected to the temporal anchoring in the main clause (via adjunction or complementation). Bianchi assumes the following configuration:

(22)   [Force [(Topic*)] [(Focus) [+**Fin**° (**Speech Event S$_e$**) [... Tense VP]]]]]

The "speech event" S_e is formulated as the *center of deixis*. Being able to encode its presence is the difference between a [+finite] Fin° and a [–finite] Fin°.

Bianchi draws on the literature on logophoricity to claim that speech events have **internal speakers** or **internal addressees** that logophoric pronouns in embedded clauses can take as antecedents. She defines a Logophoric Centre.

(23)   A **Logophoric Centre** is a speech or mental event which comprises (Bianchi 2003: (26)):

    a.   an *obligatory animate* participant (Speaker/Source)
    b.   an optional Addressee
    c.   a temporal coordinate
    d.   possibly spatial coordinates (for physical events) and is associated with a Cognitive State of the participants in which the proposition expressed by the clause must be integrated.

Based on this formulation, Bianchi ties the ability of introducing a Logophoric Center crucially to only the [+finite] head in the structure, to which the –finite heads are anaphorically related:

(24)   a.   Finite clauses encode the *external Logophoric Center (eLC) in [+finite] Fin°*.

    b.   A [–finite] Fin° encodes an *internal Logophoric Centre (iLC)*, whose participants are the participants of the matrix clause event (the eLC).

Thus, external Logophoric Centers project independent coordinates of Speaker and (optional) Addressee which always correspond to the *actual participants* in the matrix speech event, i.e. the matrix subject and matrix object. Thus, **what Bianchi calls "coordinates" are actual arguments of the matrix verb**. The following example taken from Bianchi schematically represents the idea:

(25)   Gianni$_i$ asked$_1$ Maria$_j$ [iLC$_1$ *Person$_j$* to cook the dinner].

    Coordinates of the speech event encoded by the matrix [+finite] Fin° that the [-finite] Fin° is anaphorically related to:
   SPEAKER = Gianni = i
    ADDRESSEE = Maria = j

The iLC is coindexed with the matrix verb, as per the formulation in (24b).

I propose that in addition to the two coordinates above, a [+finite] Fin° also crucially encodes two other coordinates, which are (null) coordinates of the *finite utterance* and not the event. This proposal is based on the crucial connection between clausal independence and *assertion* that has been argued for in many studies on properties of finiteness (Givón 1990; Anderson 1997; Klein 1998; Cristofaro 2007). These studies have claimed that only a finite clause can be independently asserted and that the major function of non-finiteness is signaling syntactic and semantic embedding.

The two null coordinates of a [+finite] Fin° that I propose to add are the SPEAKER and ADDRESSEE of the finite clause. Let us call these $_{FIN}$SPEAKER and $_{FIN}$ADDRESSEE. Crucially, **they are not the arguments of the matrix verb** that Bianchi equates with the internal coordinates above. Thus, my proposal indicates there are four coordinates in total, as defined and represented below.
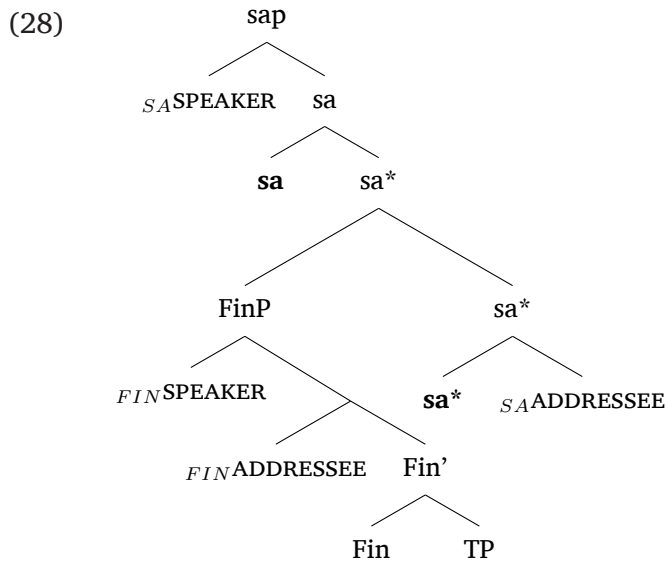
(26)   a.   Bianchi's internal coordinates (arguments of the matrix verb that the non-finite clause is anaphoric to). These are inside the TP selected by Fin∘.

b.   Two **null coordinates** – $_{FIN}$SPEAKER and $_{FIN}$ ADDRESSEE – that denote the speaker and addressee of the finite utterance. These coordinates are above Fin∘, in the matrix clause that selects the FinP.

These are structurally represented in the following configuration:

(27)

FinP

$_{FIN}$SPEAKER

$_{FIN}$ADDRESSEE   Fin'

Fin   TP

Gianni

asked

Maria   …
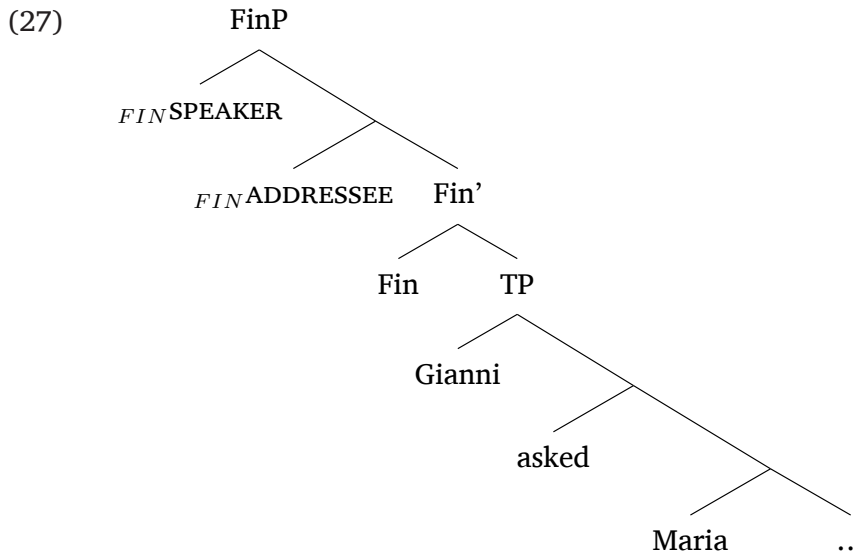
[+finite] Fin°'s SPEAKER and ADDRESSEE are to be crucially kept separate from the Speech Act shells proposed in Speas & Tenny (2003). Speas and Tenny propose that null DPs corresponding to SPEAKER, ADDRESSEE and SEAT OF KNOWLEDGE are generated in Larsonian shells in the speech act domain in all sentences of every language. **These are not tied to events or finiteness in any way**, but by virtue of every utterance being a speech act of some kind or the other, they are present in the left periphery. I will adopt this Speas-Tennyian formulation of the highest segment of the left periphery in this paper. Their proposal combined with my hypothesis about coordinates that are crucially tied to finiteness gives us a structure like the following:[5]

---

[5] Since these are declarative structures, I will not be concerned with the speech act ADDRESSEE node very much.

(28)

```
                        sap
                       /    \
              $_{SA}$SPEAKER   sa
                             /    \
                          sa      sa*
                                 /    \
                             FinP      sa*
                            /   \     /    \
                  $_{FIN}$SPEAKER  sa*  $_{SA}$ADDRESSEE
                          /    \
              $_{FIN}$ADDRESSEE  Fin'
                               /    \
                             Fin     TP
```

In order to avoid notational confusion, let us be extremely clear about each of these coordinates. The notation – $_{SA}$SPEAKER and $_{SA}$ADDRESSEE– refers to the Speas-Tennyian *speech act* coordinates. On the other hand, the notation – $_{FIN}$SPEAKER and $_{FIN}$ADDRESSEE – refers to the coordinates of the *finite* clause, as projected by Fin∘.

Making these distinctions between speech act participants and finite clause participants helps us to make important crucial distinctions in evidential paradigms. For example, consider the English triplet below – the first is a regular assertion, the second an assertion with a REPORTATIVE evidential and the third with an INFERENTIAL evidential. Let us assume a context where John is telling Mary about a party he attended yesterday for some time for all three constructions. The default configuration is one where the speech act coordinates and the finite clause coordinates have the exact same referents, such as (29) below.

(29)   [Ram [$_{[+finite]}$]$_{Fin}$ sang at the party yesterday]]

      Speech Act: $_{SA}$SPEAKER = John, $_{SA}$ADDRESSEE = Mary
      Finite clause: $_{FIN}$SPEAKER = John, $_{FIN}$ADDRESSEE = Mary

(30)   [Ram reportedly [$_{[+finite]}$]$_{Fin}$ sang at the party yesterday]]

      Speech Act: $_{SA}$SPEAKER = John, $_{SA}$ADDRESSEE = Mary
      Finite clause: $_{FIN}$SPEAKER = reporter = a third party (cannot be
      John himself), $_{FIN}$ADDRESSEE = John (could have been told directly
      or he could have overheard it).

The reason behind equating the source of the report with the $_{FIN}$SPEAKER coordinate of the finite event is that he/she is the one who told John about it. Crucially, the coordinates of an event being reported with a REPORTATIVE evidential are different from the coordinates of an event being reported with an INFERENTIAL evidential such as *presumably* below, given the personal nature of inference:

(31)   [Ram presumably [$_{[+finite]Fin}$ sang at the party yesterday]]

      Speech Act: $_{SA}$SPEAKER = John, $_{SA}$ADDRESSEE = Mary
      Finite clause: $_{FIN}$SPEAKER = John, $_{FIN}$ADDRESSEE = Mary[6]

---

[6] Going into different possibilities of who the addressee might be is outside the scope of this paper, and not very relevant to the central thesis of the paper.

My proposal thus makes finite clauses *perspective-sensitive* because of the presence of these two extra coordinates. Perspective-sensitivity, as the name suggests, requires that there be an *anchor* in the structure that perspective-sensitive elements can take as antecedents, thus making some individual's perspective salient. A syntactic way to think about this perspective-sensitivity resulting from finite clauses introducing $_{FIN}$SPEAKER and $_{FIN}$ADDRESSEE operator-like elements is with respect to binding and agreement. Finite clauses with these operators should then be able to enable the following two scenarios:

(32)   a.   In languages with attested indexical shift, indexicals inside a finite clause should be able to take $_{FIN}$SPEAKER and $_{FIN}$ADDRESSEE as antecedents.

        b.   Since $_{FIN}$SPEAKER and $_{FIN}$ADDRESSEE can themselves be controlled by higher operators, indexicals in their scope should be able to, by transitivity, be controlled by these higher operators without violating any locality principles.

I now proceed to show that both of these predictions are borne out. To illustrate (32a), I draw on the indexical shift and complementizer agreement literature, and to illustrate (32b), I discuss the presence of indexical shift across multiple embedded clauses cross-linguistically.

4.1 Finiteness and indexical shift

Shklovsky & Sudo (2014) demonstrate that indexical shift in Uyghur (Turkic; North China and Kazakhstan) is crucially sensitive to the finiteness of the clause containing the indexicals. The phenomenon of indexical shift in Uyghur is confined to attitude report constructions. Uyghur attitude reports can appear in two syntactic forms – as a nominalized complement clause and as a finite complement clause. Although both forms are used to convey similar (synonymous) readings, indexicals have to shift *only* when they appear in the finite complement clause constructions, and they are banned from shifting in the nominalized clauses. This contrast is demonstrated below:

(33)   *Uyghur* (Shklovsky & Sudo 2014: (4a–b))

        a.   **nominalized complement**
              Ahmet   [mening   kit-ken-lik-im-ni]   di-di.
              Ahmet   [1.SG.GEN   leave-REL-NMLZ-1SG-ACC]   say-PAST.3P
              ✓ (non-shifted) 'Ahmet said that I$_{speaker}$ left.'
              * (shifted) 'Ahmet$_i$ said that he$_i$ left.'

        b.   **finite complement**
              Ahmet   [men   ket-tim]   di-di.
              Ahmet   [1   leave-PAST.1SG]   say-PAST.3P
              *(non-shifted) 'Ahmet said that I$_{speaker}$ left.'
              ✓ (shifted) 'Ahmet$_i$ said that he$_i$ left.'

Exactly the same pattern holds for second person indexicals in the language as well. The authors propose that a monstrous operator is syntactically present in Uyghur finite attitude report constructions, which is responsible for shifted interpretation of indexicals. Note that this proposal is compatible with the individual coordinates such as $_{FIN}$SPEAKER or $_{FIN}$ADDRESSEE being present to shift the reference of indexicals; for example, see Anand & Nevins (2004); Deal (2014), among others, for arguments for individualized monstrous operators such as OP$_{AUTH}$, OP$_{LOC}$, etc. A structure representative of what is assumed in the literature is given below, from Deal (2016: (61)). Deal argues that this structure is mostly invariant across languages (with the locus of variation being restricted to the nature of C∘):

(34)

```
              V'
          ╱      ╲
        V          ╲
              OP_LOC  ╲
                    ╲
                  C    ╲
                 OP_ADDR ╲
                      OP_AUTH    TP
```

(34) tree:

$$[_{V'}\; V \quad OP_{LOC} \quad C \quad OP_{ADDR} \quad OP_{AUTH} \quad TP\,]$$
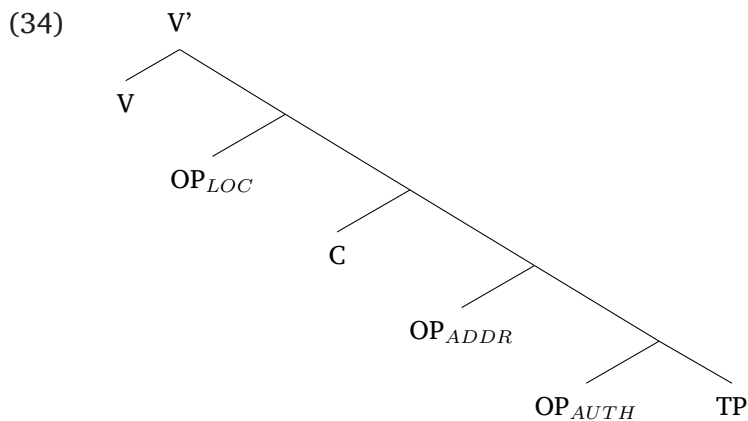
The hypothesis made in this paper, that finite clauses project their own coordinates – $_{FIN}$SPEAKER and $_{FIN}$ADDRESSEE – which are essentially "controllable" by higher operators, is supported by the fascinating pattern in a language with complementizer agreement, Kipsigis (Nilotic; Kenya):

(35)   *Kipsigis* (Diercks & Rao 2016: (31e))

    a.   ko-i-mwaa-wɔɔɣ   **ɑ-lɛ-ndʒɔɔɣ** ko-∅-ɪt   laɣok.
        PST-1SG-tell-2PL.OBJ   1SG-C-2SG   PST-3-arrive children
        'I did tell you (pl) that the children arrived.'

It can be argued that the presence of the two operators – $_{FIN}$SPEAKER and $_{FIN}$ADDRESSEE – is what licenses both the affixes on the complementizer, i.e. reflexes of C agreeing with both of them. Thus, it appears to be empirically viable to maintain the hypothesis that finiteness is correlated with its own coordinates that themselves need to be controlled and can also serve as anchors.

  With regard to the prediction in (32b), Baker (2008: Chapter 3) (as discussed in Vinokurova 2011) offers a syntactic reformulation of the semantic accounts of indexical shift in Stechow (2003) and Schlenker (2004). He argues that while third person agreement occurs via the usual Agree, agreement with first and second person indexicals is an instance of operator-variable agreement. To this end, Baker proposes the presence of two null arguments – S and A (as mnemonics for speaker and addressee) within the CP projection of all matrix clauses and certain embedded clauses. Vinokurova (2011) schematically represents the structural differences this system would assume between a non-shifting language like English and an indexical shift language like Slave (Anand & Nevins 2004):

(36)   Vinokurova (2011: (8–9))

    a.   **English:** [CP1 S$_i$, A$_k$ [TP1 John$_j$ told Mary$_m$ [CP2 [TP2 I$_{i/*j}$ like you$_{k/*m}$]]
    b.   **Slave:** [CP1 S$_i$, A$_k$ [TP1 John$_j$ told Mary$_m$ [CP2 S$_j$, A$_m$ [TP2 I$_j$ like you$_m$]]

In (36b), the Speaker and Addressee in the embedded CP are controlled by John and Mary, and consequently the indexicals in the embedded clause are bound by them. In the English counterpart in (36a), the embedded clause does not project the necessary coordinates and thus indexical shift is unavailable. As may be apparent to the reader, there is a non-trivial similarity between Baker's approach and my proposal. The difference lies, crucially, in the *connection with finiteness*. Baker (2008) assumes that selecting for a CP complement with S and A operators is a lexical property of a certain class of verbs (those predicates that cross-linguistically allow indexical shift), which would have

to vary language by language. My proposal, which ties the presence of these operators to a [+finite] Fin°, would claim that all finite clauses have the same two operators but these operators differ in whether they are monstrous or not. Thus, in the current proposal, Bangla and Slave have the same operators yet the former does not have indexical shift while the latter does, owing to the monstrous nature of the latter's operators.

   This tie-up between finiteness and the presence of $_{FIN}$SPEAKER and $_{FIN}$ADDRESSEE coordinates is also strengthened by the cross-linguistically overwhelming preference of indexicals to shift in finite environments. Deal (2016) draws the following generalization in light of the literature on indexical shift, most directly from the work of Sudo (2012) and Shklovsky & Sudo (2014):

(37)   *Finite Complements Only*
        Indexical shift is restricted to finite complement clauses.

For attitude verbs that allow both finite and non-finite complements, indexical shift has been attested only in the finite complements. For example, similar to the pattern in Uyghur above, Tsez (Caucasian; Russia) also permits indexical shift only in finite-clause embedding constructions, while non-finite forms such as clausal nominalizations only have the non-shifted reading, as shown below:

(38)   *Tsez* (Polinsky 2015: (33a–b))

        a. žoy-ä   neło-qo-r   [babiy-ä   di   Ø-egir-si=ƛin]
            lad-ERG   DEM.nI-POSS-LAT   father-ERG   1SG.ABS(.I)   I-send-PST.WIT-QUOT
            esi-n.
            tell-PST.WIT
            (i) 'The youngster told her that the father had sent me'
            (ii) 'The youngster$_i$ told her that the father had sent him$_i$'
        b. žoy-ä   neło-qo-r   [babiy-ä   di   Ø-egä-ru-łi]
            lad-ERG   DEM.nI-POSS-LAT   father-ERG   1SG.ABS(.I)   I-send-PST.PTCP-NMLZ
            esi-n.
            tell-PST.WIT
            'The youngster told her that the father had sent me.'
            NOT: 'The youngster$_i$ told her that the father had sent him$_i$'

Deal points out that similar alternations are reported in Slave (Rice 1986), Japanese (Sudo 2012), Turkish (Şener & Şener 2011; Özyildiz 2013), Navajo (Schauber 1979), and Korean (p.c. with Yangsook Park). All of the facts follow from the syntactic assumption that the operators that perform indexical shift belong to the finite C system.

   Another property of indexical shift, first described in Anand & Nevins (2004), is the Shift Together principle, in which all indexicals in the scope of a shifting operator shift their reference together. Syntactically, if every embedded (finite) clause contains $_{FIN}$SPEAKER (and $_{FIN}$ADDRESSEE) that all have to be controlled by higher operators, then even deeply embedded indexicals can participate in Shift Together. I present data from the the understudied, indexical shifting language Magahi (Indo-Aryan; India) below, demonstrating that violations of Shift Together are not permitted. I represent the dependency schematically in (39b) and (39c); the bolded element is the controller of all the operators in its scope:

(39)   *Magahi* (Deepak Alok, p.c)

    a.   Banti soch-kai   ki   [hum kah-liai ki   [hum jai-bai]].
        Banti think-PAST COMP I   say-PAST that I   go-FUT
        'Banti thought that Banti said that Banti will go.'
        'Banti thought that $I_{speaker}$ said that $I_{speaker}$ will go.'
        * 'Banti thought that $I_{speaker}$ said that Banti will go.'
        * 'Banti thought that Banti said that $I_{speaker}$ will go.'

    b.   [$_{SA}$SPEAKER **Banti** thought that [$_{FIN}$SPEAKER I said that
        [$_{FIN}$SPEAKER I will go]]].
        'Banti thought that Banti said that Banti will go.'

    c.   [$_{SA}$**SPEAKER** Banti thought that [$_{FIN}$SPEAKER I said that
        [$_{FIN}$SPEAKER I will go]]].
        'Banti thought that $I_{speaker}$ said that $I_{speaker}$ will go.'

Anand & Nevins (2004) provide a similar example from Zazaki to demonstrate that the Shift Together constraint still holds even when the two items are not in a c-command relationship with each other:

(40)   *Zazaki* (Anand & Nevins 2004: (21))

    a.   Hɛsen va kɛ [pyaay kɛ mɨ-ra   hes kene][pyaay kɛ   mɨ-ra
        Hesen said that [people like me.OBL like do][people   that me.OBL
        hes ne kene] ame   zuja.
        NEG like do]   came   together
        'H. said that people that like me and the people that don't like me met'
        'H. said that the people that like AUTHOR(U) and the people that don't like AUTHOR(U) met'
        * 'H. said that the people that like me and the people that don't like AUTHOR(U) met'
        * 'H. said that the people that like AUTHOR(U) and the people that don't like me met'

Thus, this overall body of facts demonstrates that the predictions (in (32)) of the hypothesis relating finiteness to the presence of controlling (binding) and controllable (bindable) operators inside finite clauses are borne out. I will now propose a syntactic analysis to capture the *naki* facts, using this hypothesis as a foundation.
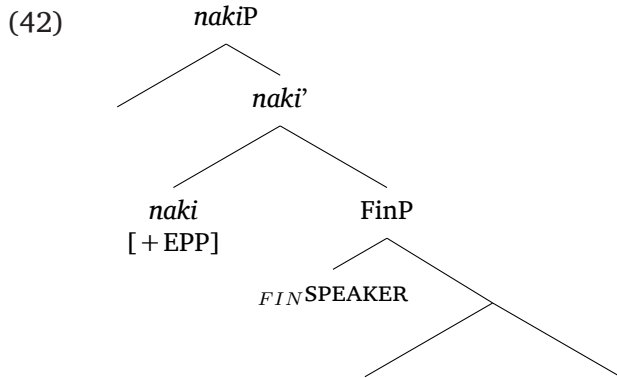
5 Motivating some crucial assumptions

The behavior of *naki* can be summed up as follows:

(41)   a.   clause-final *naki* – ✓INFERENTIAL interpretation, *REPORTATIVE interpretation
     b.   clause medial *naki* – ✓REPORTATIVE interpretation, *INFERENTIAL interpretation

The crucial question here is – how does the syntactic position of the same particle effect a change in interpretation? I argue that *naki* is generated in the same position in both cases and does not move. The apparent differences in syntactic positions and consequent differences in interpretation come about due to the movement of other constituents around

naki and other independent syntactic principles, such as the binding relations between operators in the Speech Act domain and inside finite clauses.

The proposal is that *naki* is a head that takes a finite clause as a complement, and appears to the left of its complement as shown below:

(42)

```
            nakiP
           /    \
              naki'
             /    \
        naki        FinP
       [+EPP]      /    \
              FIN SPEAKER
                  /    \
```

In arguing for this structure, I appeal to the case made in Bayer (1999) with regards to the "hybrid" nature, i.e. mixed-headedness, of Bangla. Bayer argued that while languages display strong tendencies of being either head-final or head-initial, there are often exceptional projections that differ in their headedness. Numerous other works, Van Riemsdijk (1990); Kayne (1994); Samiian (1994) to name a few, argue for mixed-headedness in languages like Dutch, Hungarian, Persian, English, among others, demonstrating that mixed-headedness is arguably a far more common phenomenon than may be apparent from some typological studies.

In their configuration of the high left periphery (see Haegeman & Hill 2013; Hill 2013; Krifka 2013; Woods 2014; Wiltschko 2016 for influential alternate conceptions of the speech-act domain), Speas & Tenny (2003) argue for the presence of a *sentient individual* in the syntactic spine, an individual whose point of view is reflected in the sentence. They term this sentient argument the "Seat-of-Knowledge", the argument that can evaluate the proposition it takes scope over. Together with the Speaker and Hearer of the speech act, the Seat of Knowledge (SOK) makes up the Sentience Domain, crucially mapping to participants in the discourse.

(43)

```
       SentienceP
        /      \
      SOK      Sen'
              /    \
           Sen    Utterance Content
```
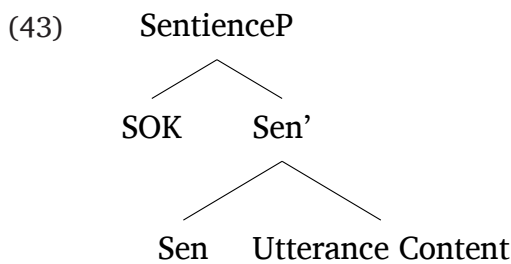
Speas and Tenny argue, following Stirling (1993), that different logophoric roles (Source, Self and Pivot; see Sells 1987) arise due to the various ways in which the SOK argument can be coindexed with other arguments in the structure. The authors assume that the default is SPEAKER$_i$ = SOK$_i$. In a question, the ADDRESSEE is coindexed with the SOK$_i$ (see Miyagawa 2012 for an influential analysis of allocutive agreement and politeness marking in Japanese and Basque, where the ADDRESSEE node is controlled by a probe in a higher position inside the saP). This system crucially treats coindexing to be a sort of *control*, which requires that the controller c-command the controlee. Apart from the default configuration, another productive pattern attested by Speas and Tenny is where the SOK has a disjoint reference from the other arguments in the Speech Act domain, thus conveying

the point of view of someone other than the discourse participants. This notion of disjoint reference will be important in the analysis of *naki* below.

With respect to the ADDRESSEE node, an anonymous reviewer brings up two Bangla particles – *go* and *re* (Dasgupta 1980). These particles do not have any evidential undertones and thus are not directly relevant to the central theses of this paper. However, these two particles are addressee-oriented in a sense, and thus to some extent merit a brief commentary on their place in the system proposed here. These particles essentially serve to provide emphasis or a kind of intensification. Consider the examples below:

(44) a. toma-r   Sari-Ta ki   Sundor   go!
          2P.INT HON-GEN sari-CL   what beautiful GO
          'Your sari is so beautiful!'

      b. tor   Sari-Ta ki   Sundor   re!
          2P.NON HON-GEN sari-CL   what beautiful RE
          'Your sari is so beautiful!'

Both these particles most productively appear sentence-finally (Dasgupta 1987).[7] An important difference between the two particles lies in their sensitivity to the honorificity of the addressee: *go* can only appear when the addressee is given a intermediate honorific status, while *re* can only appear when the addressee has a non-honorific status. In the structure of the left periphery proffered in this paper (as represented in (28)), I assume that both of these particles would be in a position (possibly the sa* head) that is c-commanded by the high $_{SA}$ADDRESSEE node (either from its base position or from its moved position, if we assume a Miyagawa-style movement of the $_{SA}$ADDRESSEE). I leave the investigation of the exact mechanics of such particles for future research.

Inspired by Lewis (1979) and Chierchia et al. (1989), several studies (see Lasersohn 2005; Stephenson 2007) on the semantics of attitude predicates, taste predicates and epistemic modals have proposed the existence of a "judge" parameter which serves as an anchor for perspectival elements in its scope. This sentient "judge" is whose epistemic or doxastic alternatives are quantified over, and the validity of the utterance content is determined against. I propose that the **syntactic representation of this judge argument is the Speas-Tennyian SOK** in the left periphery. This connection, which might have been informally implied by Speas and Tenny, needs to be made formally explicit:

(45) The "judge" of an utterance is syntactically represented as the SOK.

Thus, given the assumptions about the syntactic structure discussed above, there are three crucial components in the left periphery then that play a role in the *naki* paradigm:

(46) All of these elements can be coindexed with each other, and the latter two
      have to be coindexed with an immediately higher element in order to establish
      co-reference.

      a. $_{SA}$SPEAKER
      b. SOK
      c. $_{FIN}$SPEAKER

---

[7] Dasgupta (1987) provides some examples of clause-medial appearances of these particles, which can be argued to be the result of the productive process of VP extraposition.

In the partially schematic representations below, I show that *naki*'s EPP requirement inter-acts in interesting ways with the co-indexation requirements of the elements above to yield the attested grammaticality patterns. Specifically, the closest EPP-goal for *naki* is always FinP. The question arises then – why do we not always get the order "FinP *naki*" (the clause-final order)? I argue that this is because of the interaction of the configuration laid out above with two other factors: (i) there is a higher probe in the structure (a high Topic°), (ii) the controllable elements in the structure have to be controlled by a controller immediately c-commanding them.

In arguing for the presence of the higher Topic probe, I adopt Simpson & Bhattacharya (2003)'s insight. The authors draw evidence from *wh*/focus and the focus particle/com-plementizer *je*'s syntactic properties to argue that the subject in Bangla *wh*-questions regu-larly occurs in a high clausal topic-like position, and the *wh*-landing site is located *under* this topic position. For example, they suggest that in the following *wh*-question, the sub-ject "John" is in a topic position that is higher than where the *wh*-phrase moves to. This is one of the reasons, the authors argue, that although *wh*-movement happens in Bangla it appears to be *wh*-in-situ – actual *wh*-movement is heavily disguised by the movement of other non-*wh* arguments and adjuncts to higher positions in the clause.

(47)   Simpson & Bhattacharya (2003: (28))

      a.   Jon   bOrder-e   kal   [kon   boi-Ta]$_i$ kinlo   t$_i$?
           John   Borders-LOC   yesterday   which   book-CL   bought
           'Which book did John buy yesterday at Borders?

The authors also draw evidence for this high topic position from the observation that *only* referentially definite or specific elements occur as subjects preceding *wh*-phrases in the subject position, i.e. elements that constitute presupposed information as opposed to the new, focused information value of the *wh*-phrase. For example, in the pair below, the con-trast in grammaticality (cf. Bhattacharya 1999) arises when the sequence associated with specificity – [NP [Numeral-Classifier]] – appears before the *wh*-phrase; contrast this with when the sequence associated with nonspecificity – [[Numeral-Classifier] NP] – appears before the *wh*-phrase.[8]

(48)   Simpson & Bhattacharya (2003: (34))

      a.   chele   du-to   [kon   boi-Ta]$_i$ porlo t$_i$? specific/definite subj
           boy   two-CL   which   book-CL   read
           'Which books did the two boys read?'

      b.   *du-to   chele   [kon   boi-Ta]$_i$ porlo t$_i$? non-specific subj
           two-CL   boy   which   book-CL   read
           Intended: 'Which books did two boys read?'

This line of reasoning is further supported by the fact that quantified subjects, which the authors argue frequently resist topicalization (49), can only appear to the right of the *wh*-phrase (50) and not to the left (51).

(49)   *As for no one/everyone/only Mary, which book did he/they/she buy?

(50)   Simpson & Bhattacharya (2003: (35))

---

[8] In particular, Bhattacharya (1999) argues for a Quantifier Phrase (QP), to the specifier of which the whole NP moves, yielding the order in (48a). The Numeral-Classifier sequence is argued to be base-generated in the Q head.

    a. ka-ke   kew   vot dEy-ni?
       who-DAT anyone vote gave-NEG
       'Who did no one vote for?'

    b. ka-ke   Sudhu meri vot dEy-ni?
       who-DAT only   Mary vote gave-NEG
       'Who did only Mary not vote for?'

(51)   a. *kew   ka-ke   vot   dEy-ni?
       anyone who-DAT vote gave-NEG
       Intended: 'Who did no one vote for?'

    b. *Sudhu meri ka-ke   vot dEy-ni?
       only   Mary who-DAT vote gave-NEG
       Intended: 'Who did only Mary not vote for?'

Based on this body of facts, I take the high Topic position that Simpson & Bhattacharya (2003) propose for Bangla *wh*-questions to be generally available in the language, including in *naki* -constructions. Although the authors do not provide an exact syntactic representation of this Topic projection, I propose the following configuration:

(52)
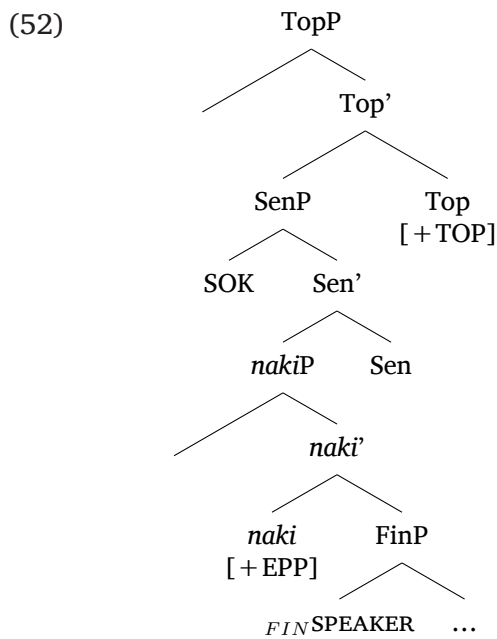
Another pertinent assumption that I make in this paper is Fox (1999)'s framework of reconstruction. Fox argues for a copy theory of movement, in which reconstruction is achieved via the (unrecoverable) deletion of the head of the chain and interpretation of the tail alone. This is schematically shown as follows:

(53)   Fox (1999: (82))

    a. QP_2 ... $pronoun_1$ ...QP_2 ... $pronoun_1$ ... QP_2

Following Fox, I adopt the idea that an element can be deleted only under identity with a copy. This means that in the event that the head of the chain is non-identical to the chain, unrecoverable deletion of the offending copies is blocked, preventing reconstruction from taking place (Fox 1999: 189). This captures the observation that A-bar movement, under the copy theory of movement, can affect Condition C only if the R-expression is inside an

adjunct (54a), and only if this adjunct is inserted *after* movement (54c). Fox illustrates this schematically in the following manner:

(54)   Fox (1999: (80–81))

   a.   *[QP …[$_{complement}$ …R-expression$_1$ …] …]$_2$
        …pronoun$_1$ …[$_{QP}$ …[$_{complement}$ …R-expression$_1$ …] …]$_2$

   b.   *[QP …[$_{adjunct}$ …R-expression$_1$ …]…]$_2$
        …pronoun$_1$ …[$_{QP}$ …[$_{adjunct}$ …R-expression$_1$ …] …]$_2$
        (adjunct inserted before movement)

   c.   [QP …[$_{adjunct}$ …R-expression$_1$ …] …]$_2$
        …pronoun$_1$ …[$_{QP}$ …]$_2$
        (adjunct inserted after movement)

Early (before movement) insertion of the adjunct results in the head and tail of the chain being identical, and thus reconstruction proceeds smoothly. This makes certain predictions about the ability of A-bar movement to bleed Condition C. Fox convincingly shows these predictions are not borne out. I refer the reader to the original work for the full details.

Crucially, however, as (54c) shows, if the adjunct is inserted *after* movement, then reconstruction (i.e. unrecoverable deletion of the adjunct) gets blocked because the head and tail of the chain are not identical anymore, preventing the adjunct from getting interpreted. Thus, Fox argues for late insertion of R-expression containing adjuncts (following Lebeaux 1988). The idea that members of chains can be deleted only under identity with a copy and the fact that reconstruction rests on this identity relation holding between the two ends of a syntactic chain will be important in our analysis of *naki*.

6 Putting the pieces together

In this section, I show how the crucial assumptions made about several parts of the structure can lead us to an unified syntactic analysis of the Bangla evidential *naki*. The binding facts can be spelled out as given in Table 2.

The semantics of *naki* as formulated in Bhadra (2017) argues that *naki* is a function that takes a judge restriction as one of its arguments. This proposal is fleshed out compositionally, where the SOK node supplies this argument for the *naki* function. The epistemic or doxastic alternatives of this judge are then quantified over.

An important consideration that is pertinent here is that of the coindexation pattern in **questions**. As mentioned above, in a question, it is the ADDRESSEE that is coindexed with the SOK$_i$, given the standard conception of a question in which the addressee is the expected locus of information. How is it then, that the INFERENTIAL interpretation still available in questions such as (3)? This is also crucially linked to the phenomenon of Interrogative Flip which is cross-linguistically robustly attested in many languages (see Garrett 2001; Speas & Tenny 2003; Murray 2010; Lim & Lee 2012, among many others) with evidentials – the locus of the evidential shifts from the speaker in declaratives to the addressee in questions. The key questions can thus be framed in the following manner: does Interrogative Flip occur in Bangla questions with *naki*? If yes,

Table 2: Indexation patterns of the SOK.

SOK controlled by $_{SA}$SPEAKER:–	SOK = $_{SA}$SPEAKER
SOK not controlled by $_{SA}$SPEAKER:–	SOK = third party; i.e. some REPORTER

how is the current analysis of indexation of perspectival heads compatible with that empirical fact?[9]

Interrogative Flip is absent in Bangla questions with evidentials. The questions in (3) and (4) are glossed as 'Given what I inferred'/'Given what I hear', in direct contrast with an Interrogative Flip-ing language such as Cheyenne:

(55)   *Cheyenne* (Murray 2010: (7–8))

    a.   É-némene-**sėste** Floyd.   declarative
           3-sing-REP-3SG   Floyd
           'Floyd sang, (**I hear**).'

    b.   Mó = é-némene-**sėste** Floyd?   question
           y/n = 3-sing-REP-3SG   Floyd
           '(**Given what you heard**), did Floyd sing?'

An addressee-oriented interpretation such as (55b) is completely absent with Bangla evidentials such as *naki* and *bujhi* (Section 6.2.2 below has a more detailed discussion of this particle). Bhadra (2017) provides a semantic-pragmatic analysis for this property that I sum up here. Essentially, Bhadra argues that the locus of difference between languages that Flip and ones that do not (such as Bangla, Telugu; and others such as Shipibo-Konibo, Jarawara, Sochiapam Chinantec, Yukaghir, Macedonian[10], Eastern Pomo, etc (cf. San Roque et al. 2017 for an exhaustive list)) lies in the ability of evidentials in these languages to license a special operator ↑ that has context change potential. The ↑ is a function that takes a proposition and returns a new context in which the tentative commitment set of the speaker (cf. Gunlogson 2008; Farkas & Bruce 2010; Malamud & Stephenson 2015) is updated with that proposition. The tentativeness of the commitment stems from the fact that the speaker still seeks the addressee's ratification with regards to the validity of the proposition. The ↑ is manifested in these languages as rising intonation. Thus, the crucial claim is that in constructions such as (3) and (4), what sounds like question intonation actually signals the presence of ↑. It is still an information-seeking act in that it asks for confirmation of a claim, and unlike a question in that it does not expressly present two neutral alternatives for the addressee to choose from.

Adopting this analysis from Bhadra (2017), the speaker-oriented glosses of (3) and (4) in contrast to the addressee-oriented (55b) can be explained simply. Languages with the Flip, like Cheyenne, do not license ↑ and thus (55b) is a regular polar question, where the SOK is co-indexed with the addressee. In the Bangla constructions, in contrast, the SOK is not co-indexed with the addressee; the presence of the always ↑ adds the evidential claim to the speaker's tentative commitment set. Hence, the speaker-oriented evidential interpretations are retained in these constructions. Thus, the current analysis correctly provides the desired indexation patterns and is compatible with the larger vision of a syntax-semantics interface.

Apart from the absence of Interrogative Flip, *naki* constructions are also striking in their asymmetry with respect to the interaction between evidentiality and speech acts. As shown in example (56), repeated below, the INFERENTIAL interpretation (unlike the REPORTATIVE) is unavailable in a declarative:

(56)   */#Mina amerika chol-e   ja-cche   **naki**.
        Mina America go-IMPV go-3P.PRES.PROG NAKI
        Intended: 'Mina is going away to America (I inferred).'

---

[9] I thank an anonymous reviewer for asking for clarifications on these vital considerations.
[10] It should be mentioned here that Macedonian allows both a non-Flipped and a self-directed question interpretation; and San Roque's reports about Shipibo-Konibo and Jarawara are tentative.

The discussion of the semantics of *naki* constructions in Bhadra (2017) also includes an exploration into this puzzle. Below, I provide a brief summary of the solution proposed in that work, which is compatible with the central syntactic theses proffered in this paper. I refer the reader to the original work for the complete semantic-pragmatic proposal, the full details of which are outside the scope of this paper.

In contrast to $\uparrow$ manifested by rising intonation, $\downarrow$ is an operator that is present in speech acts with falling intonation (assertions/declaratives). Bhadra (2017) assumes, following Davis (2009), that $\downarrow$ updates a speaker's actual commitment set, and not a tentative one like $\uparrow$ does. This essentially translates to direct assertive force on the part of the judge, as conveyed by the construction. The reason that (56) is infelicitous is because of the clash between *direct* assertive force and *indirect* inferential evidence signaled by the same judge – the speaker. With the REPORTATIVE interpretation, this clash does not arise because while the direct assertive force is the speaker's, the source of the grounds for the asserted content is crucially not the speaker. Thus, an in-depth exploration of the semantic-pragmatic contributions of *naki* along with its syntactic properties helps us arrive at a holistic picture of the particle.

Returning to our main domain of investigation, one major claim that this section proposed is that the $_{FIN}$SPEAKER needs an immediate controller. The analysis presented below demonstrates how the co-indexation or contra-indexation of the $_{SA}$SPEAKER and the SOK has important consequences for the anchoring of the $_{FIN}$SPEAKER, given independent syntactic principles.

6.1 When $_{SA}$SPEAKER and SOK are contra-indexed

In the following configurations, the $_{SA}$SPEAKER and SOK are contra-indexed, which will result in the REPORTATIVE interpretation. I start with the derivation that gives us the correct structure, and then discuss how other possible derivations would crash.
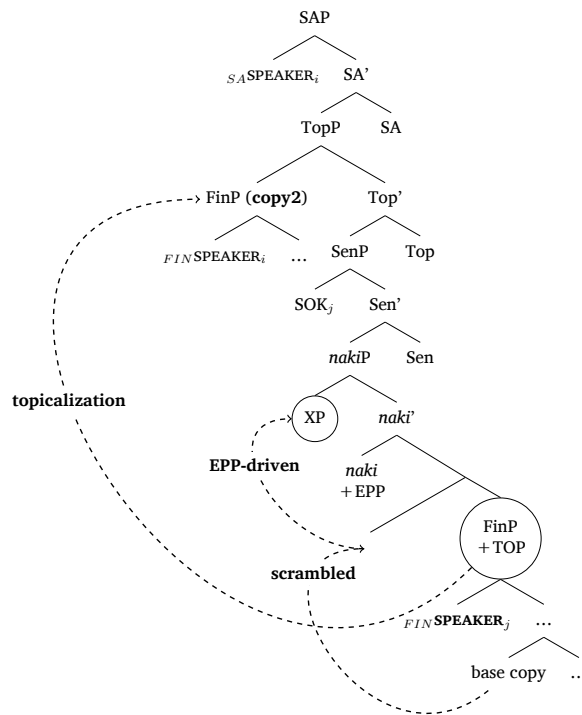
In (57), an XP (which could belong to any syntactic category) is scrambled from within the FinP and adjoined to it. This makes the XP the closest goal for *naki*'s EPP probe. After TOP is merged, (assuming that it attracts +TOP elements) it attracts some topical YP to its specifier. This results in the order $_{SA}$SPEAKER$_i$ YP SOK$_j$ XP *naki* FinP $_{FIN}$SPEAKER$_j$. The semantic module reads off this string and essentially gives us the REPORTATIVE interpretation (given that the SOK $\neq$ $_{SA}$SPEAKER) eventually but **with the correct word order**.

(57)
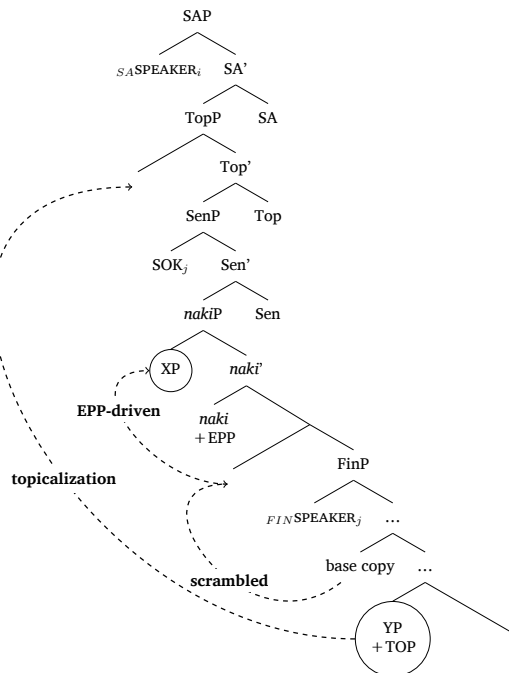
We should discuss other logical possibilities, given this analysis. For example, what happens if the FinP itself is [+TOP]? I show the two possible structures below and discuss each in turn.

(58)

In this configuration, an XP is scrambled from within the FinP and adjoined to it. This makes the XP the closest goal for *naki*'s EPP probe. Here, FinP is [+TOP]. After TOP is merged, it attracts the FinP. This results in multiple copies of FinP in the structure. The higher copy of $_{FIN}$SPEAKER is controlled by $_{SA}$SPEAKER$_i$, and the base copy by the contra-indexed SOK$_j$. Thus, the head and tail of the chain have different indices here. This results in reconstruction being blocked: unrecoverable deletion of the offending copies of FinP is blocked (adopting Fox 1999 as described above). The different indices on $_{FIN}$SPEAKER are enough to block deletion, and the result is incoherent.

(59)
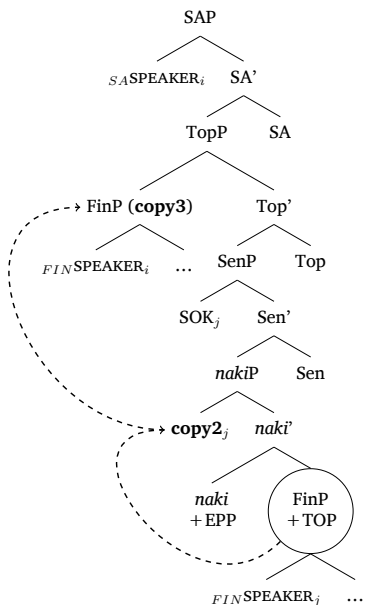
In this configuration too, the exact same problem arises as in the previous case. FinP is [+TOP] and moves to [Spec, TopP] resulting in multiple copies of FinP in the structure. The head and tail of the chain have **different** indexes. Copy 3 (the head of the chain) of $_{FIN}$SPEAKER is controlled by $_{SA}$SPEAKER$_i$, while the base copy (the tail) by the contra-indexed SOK$_j$. Again, given this non-identity, unrecoverable deletion and consequently, reconstruction, are blocked, resulting in an uninterpretable derivation. Note that these alternate structures are important to demonstrate that no extra principles are stipulated in the current analysis to govern the control and indexing relations between these syntactic elements – any indexation configuration is possible, and the discussion above seeks to explain how independent syntactic principles rule out all derivations apart from the correct ones.

Thus, the only possible licit structure for a contra-indexed SOK is (57). This makes "clause-medial *naki* the only position of *naki* that can be associated with its REPORTATIVE interpretation. The utterance content would be evaluated against the epistemic domain of the reporter, as dictated by the meaning of *naki*. We have thus derived the second part of the *Naki* Positional Generalization as formulated in (20).

At this juncture, an apparent counterexample[11] to the Positional Generalization should be discussed. Consider the following discourse, the second utterance of which has *naki* in a clause-final position, but with a REPORTATIVE interpretation:

(60)   a.   Raka Dilip-er   EkTa kOtha-o   naki Son-e-ni.
              Raka Dilip-GEN   one   word-FOC NAKI listen-PAST-NEG
              '(I heard) Raka didn't listen to a single instruction of Dilip's.'

        b.   aSe-i-ni   naki (kalke).
              came-FOC-NEG NAKI yesterday
              '(I heard) she didn't even come (yesterday).'

An anonymous reviewer points out that the clause-final *naki* in (60b) is a counter-example to the claim in this paper that there is a strict positional correlation that dictates the evidential flavor present. The reviewer provides the qualification that (60b) is not felicitous with neutral intonation – without the adverb, a distinct undertone pitch on *naki* is required to get the REPORTATIVE flavor in this clause-final position; with the adverb, the interpretation is more easily available.

I agree with the reviewer with regard to the native speaker judgements. However, I depart from the claim that (60b) is a counter-example to the Positional Generalization. An important observation about the example is that it is only possible with a contrastive focus kind of interpretation. For example, a discourse-initial construction cannot contain a clause-final *naki* with a REPORTATIVE flavor:

(61)   *Context: A sees B for the first time today and opens a conversation about their friends Raka and Dilip:*
        #   Raka Dilip-er   EkTa kOtha-o   Son-e-ni   naki.
              Raka Dilip-GEN   one   word-FOC listen-PAST-NEG NAKI
        Intended: '(I heard) Raka didn't listen to a single instruction of Dilip's.'

In addition, to my native speaker ear, the element preceding *naki* in constructions such as (60b) requires the focus particle – *i* – on the element. Thus, it can be reasonably argued that the *aSe-i-ni* ('did not even come') part is contrastively-focussed, in order to mark a contrast with *EkTa kOthao Soneni* ('did not listen to any instruction') in the previous utter-
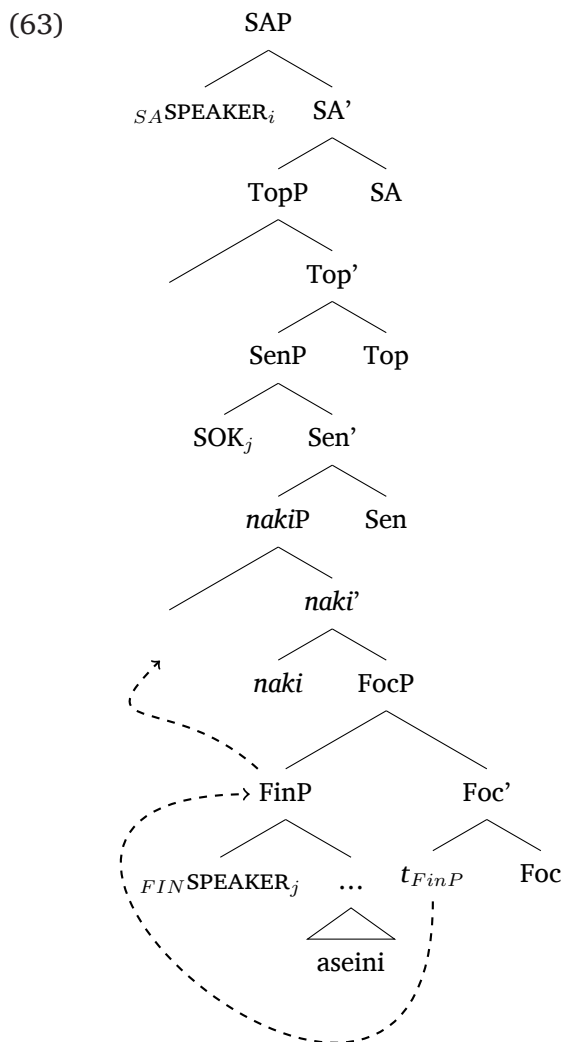
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[11] I thank an anonymous reviewer for the examples in (60).

ance. This can also explain why a very specific special stress is required for the special desired meaning to be available.

In fact, if we examine (60b) without the *naki,* the second utterance would be grammatical just by itself (or with the adverb), but again with the *i* particle and special stress:

(62)   Raka Dilip-er   EkTa kOtha-o   Son-e-ni.   aSe-i-ni   (kalke).
       Raka Dilip-GEN one   word-FOC listen-PAST-NEG. came-FOC-NEG yesterday
       '(I heard) Raka didn't listen to a single instruction of Dilip's. She didn't even come (yesterday).'

This configuration can be accounted for if we assume a Focus projection right on top of the finiteness projection, as conceptualized in Rizzi (1997) (also see Jayaseelan 2001 and Madhavan 2008 for prolific arguments in favor of low Focus projections in other South Asian languages). The entire FinP ((*pro*) *aSeini*) moves to [Spec, FocP]. What happens when *naki* is present in the structure? The EPP probe on *naki* finds the constituent in the specifier of the Focus projection and moves it to its specifier, resulting in the structure (60b). This whole derivation – of (60b) – is shown below:

(63)

```
                          SAP
                         /    \
                 SA SPEAKER_i   SA'
                              /     \
                          TopP       SA
                         /    \
                            Top'
                          /     \
                       SenP       Top
                      /    \
                  SOK_j     Sen'
                          /     \
                     nakiP       Sen
                    /    \
                          naki'
                        /      \
                    naki        FocP
                              /      \
                          FinP        Foc'
                         /    \      /    \
              FIN SPEAKER_j  ...  t_FinP   Foc
                          /\
                       aseini
```

Now the crucial question is – how is it the case that (60b) is still REPORTATIVE and not INFERENTIAL, given the current analysis that clause-final *naki* inevitably results in INFER-ENTIAL *naki*? As we see in the structure (63) above, the final landing site for the FinP

after both focus and EPP movement is [Spec, *naki*P]. Crucially, this position is below the speech act layers, and thus still under the contra-indexed SOK$_j$. This means that although FinP ends up preceding *naki*, the $_{FIN}$SPEAKER is still co-indexed with the SOK$_j$, resulting in a REPORTATIVE. When the adverb *kalke* is present, we can see how the same explanation would work. The adverb is rightward-shifted, as the anonymous reviewer points out, and does not affect the configuration in any other way. The adverb's position again gives *naki* a clause-medial appearance, which may be the reason behind the relative ease of the availability of the REPORTATIVE flavor.

Thus, the Positional Generalization in (20) still stands valid, with apparent counterexamples such as (60b) shown to be a result of the presence of extra structure that does not have any significant bearing on the central thesis of this paper.

6.1.1 Bi-clausal structures and extraction

Before we move on to configurations with co-indexation, a detailed discussion of the consequences of the clause-medial structure proposed above is relevant here, especially as it relates to bi-clausal structures.[12]

In (18), an ungrammatical example was provided to make the case that *naki*'s EPP probe respects phases, whereby an element cannot be extracted out of a subordinate clause and moved to [Spec, *naki*P]. An anonymous reviewer points out that that might be a (18)-specific problem, given that extraction out of an idiom-like chunk is being attempted there. The reviewer provides the following example to show that extraction out of a lower clause to [Spec, *naki* P] is often grammatical:

(64)　Dilip-er　theke(-i)　naki Ram bole-che　　　Sita Taka　dhar
　　　Dilip-GEN from(-FOC)　NAKI Ram say-3P.PSTPERF Sita money loan
　　　niye-che.
　　　take-3P.PRESPERF
　　　'(I heard) it is from Dilip that Ram has said Sita has taken a loan.'

I will argue that the analysis offered in this paper can account for this data, without making any significant changes to the core analysis.

Firstly, note that even in the absence of the now familiar focus particle *-i*, (64) still needs a special stress on the chunk preceding *naki* for the sentence to be grammatical. I take this special stress (in the absence of the overt focus particle) to also be the indication of contrastive focus. Let us investigate the structure without the evidential *naki* for a moment. The extracted constituent has a contrastively-focussed flavor in the plain construction as well. The contrastive nature can be demonstrated with a continuation like the following:

(65)　Dilip-er　　theke(-i)　　Ram bole-che Sita　　　　Taka dhar　　niye-che,
　　　Dilip-gen　from(-FOC)　NAKI Ram　　say-3P.PSTPERF Sita　money loan
　　　Mona-r　　　　　theke　　　noy.
　　　take-3P.PRESPERF　Mona-GEN　from
　　　'It is from Dilip that Ram said Sita has taken a loan, not from Mona.'

I assume, just like in (63) above, the extracted chunk has moved to a contrastive Focus projection above FinP. This gives us the structure for such contrastive extraction in general. When *naki* is present, it merges on top of this FocP, and its EPP probe moves the extracted material from the focus projection into its own specifier, resulting in the surface word order of (64).

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[12] I thank an anonymous reviewer for recommending this extended discussion.

While on the subject of extraction, another empirical fact merits some discussion. Multiple extraction to positions preceding *naki* are possible:[13]

(66)   a.   kuRi   lakh   Taka   dilip-er   theke(-i)   naki   Ram   bole-che   Sita
                 twenty   lakh   rupees   Dilip-GEN   from-FOC   NAKI   Ram   said   Sita
                 dhar   ni-ye   thakte   pare.
                 loan   take-IMPV   AUX   can
                 '(I heard) it is from Dilip that Ram said Sita may have borrowed
                 Rs. twenty lakh.'

           b.   Dilip-er   theke(-i)   naki   kuRi   lakh   Taka   Ram   bole-che   Sita
                 Dilip-GEN   from-FOC   NAKI   twenty   lakh   rupees   Ram   said   Sita
                 dhar   ni-ye   thakte   pare.
                 loan   take-IMPV   AUX   can
                 '(I heard) it is from Dilip that Ram said Sita may have borrowed
                 Rs. twenty lakh.'

In addition to the data presented in Section 2, (66a) shows us that multiple constituents can precede *naki*. (66b) demonstrates that Bangla, being a relatively free word order language, permits these constituents to appear on either side of *naki*. Given the structure proposed in (57), two pertinent questions may be asked here:

(67)   a.   Are all the constituents that precede naki the result of movement
             due to topicalization?

           b.   Do sentences like (66b) point to a co-existence of both scrambling and
             topicalization, as already claimed for the derivation in (57)?

The discussion about structures such as (60b) and (64) above already determines that the answer to question (67a) is negative. These structures show that there is movement due to other processes, such as focus movement, even before *naki* merges. An example like (66a) can be given a fairly intuitive explanation: as seen above, the contrastively focussed constituent (marked with the focus particle and/or with special stress) is *dilip-er theke-i*, and the *kuRi lakh Taka* constituent is topicalized by the higher TOP probe. I provide several topichood tests below in favor of this latter claim.

Assuming the standard Strawson-Reinhart approach, topics are given information, they are what the sentence is about. The first property holds for the constituent "twenty lakh rupees": it can appear consistently with the topic-marking particles *to* and *na* (cf. Dasgupta 1987; Dastidar & Mukhopadhyay 2013), as well as with the definiteness-marking classifier *ta* (cf. (71a) below). A representative example is provided below:

(68)   kuRi   lakh   Taka   to   toma-ke   dite-i   pari.
        20   lakh   rupees   TO   you-DAT   give-FOC   can
        'As for twenty lakh rupees, I can give you (that).'

It is cross-linguistically robustly attested that non-referring elements such as pure indefinites cannot be topics. As expected then, such elements cannot occur before the focus-marked element in the sentence. Consider the grammaticality contrast between an indefinite and a definite noun phrase preceding the focus-marked element:

(69)   a.   ?? Ek-Ta   boi   Dilip-er   theke-i   naki   Ram   bole-che   Sita
                one-CL book   Dilip-GEN   from-FOC   NAKI   Ram   say-3P.PSTPERF   Sita

---

[13] Thanks to an anonymous reviewer for the examples and the consequent questions described in (67).

> dhar ni-ye   thakte pare.
> loan take-IMPV AUX   can
> Intended: '(I heard) one book it is from Dilip that Ram said Sita
> may have borrowed.'

b. boi-Ta Dilip-er   theke-i   naki Ram bole-che   Sita dhar
    book-CL Dilip-GEN from-FOC NAKI Ram say-3P.PSTPERF Sita loan
    niye   thakte pare.
    take-IMPV AUX   can
    Lit: '(I heard) the book it is from Dilip that Ram said Sita may have borrowed.'

The second property of topics – the "aboutness" property have been tested with a *say about* test (Reinhart 1981), which can be successfully applied to our constituent of interest:

(70)   kuRi   lakh Taka   tar biSoye bolte   gele,   Dilip-er   theke-i
        twenty lakh rupees of matter say-IMPV go-COND, Dilip-GEN from-FOC
        naki Ram bole-che   Sita oTa dhar niye-che.
        NAKI Ram say-3P.PSTPERF Sita that loan take-3P.PRESPERF
        'To talk about the twenty lakh rupees, (I heard) it is from Dilip that Ram said
        Sita may have borrowed it.'

Another test of the familiarity that topics encode is the topic-chaining test, where topics can be replaced with demonstratives/pronouns:

(71)   a. Q: kuRi   lakh Taka-Ta   kot-theke   elo?
                twenty lakh rupees-CL where-from came
            'Where did the twenty lakh rupees come from?'

        b. A: oTa Dilip-er   theke-i   naki Ram bole-che   Sita   dhar
                that Dilip-GEN from-FOC NAKI Ram say-3P.PSTPERF Sita   loan
                niye-che.
                take-3P.PRESPERF
            Lit: 'That (money) it is from Dilip that Ram said that Sita has borrowed.'

Thus, what this range of tests demonstrates is that the claim that a higher topic position above *naki* causes productive extraction to positions preceding *naki* on the surface can be conclusively defended. This explanation leaves room for the possibility of multiple topics and foci (in the spirit of Krifka 1991; 1992; Lambrecht 1994; Erteschik-Shir 1997; Rizzi 1997, all of whom argue that the topic-focus assignment is recursive). Thus, we could expect to and do see various constituents in many different permutations and combinations before and after *naki,* depending upon different information-structural configurations.

   The second question in (67) concerns the coexistence of scrambling and topicalization, as propounded in (57) and as pointed to by the structure in (66b). An anonymous reviewer asks: why should the options of scrambling and topicalization both be available? In response to this question, a cross-linguistic investigation reveals that there is no *a priori* principled reason to rule out this coexistence. Relatively free word order languages predictably allow the interaction of such feature-driven A'-movements. For example, Hopp (2005) argues both German and Japanese allow scrambling and topicalization in the same sentence (see also Miyagawa 1997). A German example is given below:

(72)   Hopp (2005: (10a,c))

        a. Scrambling of a complete phrase:
            Ich glaube, dass [den Wagen zu reparieren]$_1$ Peter Schon   t$_1$

I   think   that   the   car   to repair   Peter   already
versucht hat.
tried   has
'I think that Peter already tried to repair the car.'

b.   Remnant topicalization across the scrambled phrase:
[t_1 Zu reparieren]$_2$ hat Peter [den Wagen]$_1$ schon t_2 versucht.
   to repair   has Peter the   car   already   tried
'I think that Peter already tried to repair the car.'

Similarly, Bošković (2004) (citing Müller & Sternefeld 1993 and Stjepanović 1999) brings together a whole host of data to provide evidence for the claim that Russian and Serbo-Croatian have both topicalization and scrambling.

Thus, it appears to be the case that languages productively allow several word order-altering A' movements to take place in a single structure, akin to the Bangla structures discussed in the current paper.

6.2 When $_{SA}$SPEAKER and SOK are co-indexed

The question that naturally arises at this juncture is – what *forces naki* to be clause-final when the $_{SA}$SPEAKER and SOK are co-indexed? This question can be reframed in the following manner – why does *naki* appear clause-finally only in the co-indexed configuration, and not in the contra-indexed configuration? To answer this question, I draw an important insight from the work of Bhatt & Dayal (2017) on the Hindi (a very close linguistic relative of Bangla) polar Q particle *kyaa*.

One of the main pervasive claims of this paper is that the indexation patterns of the relevant heads do not affect topicalization or other movements, but it affects reconstruction of moved elements. The co-indexed configuration is the only one that allows smooth reconstruction of perspectival chunks of structure, and hence gives rise to clause-final *naki*.

6.2.1 Whole clause topicalization

Bhatt & Dayal (2017) argue that *kyaa* is base-generated in the clause-initial position (inside ForceP), and other positions that the particle appears in (clause-medial, clause-final) are derived via topicalization of constituents from inside IP to above *kyaa*, as illustrated below.

(73)   Distribution of Hindi polar *kyaa* (Bhatt & Dayal 2017: (27, 36))

a.   (Kyaa) anu-ne   (kyaa) uma-ko   (kyaa) kitaab   (%kyaa)
       Q_{YN} Anu-ERG Q_{YN} Uma-ACC Q_{YN} book.FEM Q_{YN}
    [dii]↑
    give.PFV.FEM
    'Did Anu give a/the book to Uma?'

b.   Subject *kyaa* Object Verb
    ← [Subject$_i$ [ForceP *kyaa* [CP$_1$ _C$_o$ [Y/N][IP t_i …]]]]

c.   Subject Object *kyaa* Verb
    ← [Subject$_i$ Object$_j$ [ForceP *kyaa* [CP$_1$ _C$_o$ [Y/N][IP t_i t_j …]]]]

d.   Subject Object Verb
    ← [ForceP TP$_i$ *kyaa* [CP [Y/N] t_i]]

The authors provide two diagnostics for testing the validity of this proposal: (i) favored continuations in gapping, and (ii) Y/N question congruence.

Bhatt and Dayal assume that if any material precedes *kyaa*, that material is presupposed while material following *kyaa* is open for confirmation. Based on this assumption, it follows that pre *kyaa* material cannot be contrasted. The authors test this hypothesis for all positions of *kyaa*; below, I provide only one of their examples: the clause-medial *kyaa*. In this example, it is presupposed that it is *Ram* who gave something to someone. Apart from the subject (74b), other constituents such as the IO (74c) or DO (74d) can be questioned/confirmed.

(74)   *kyaa* follows the subject:

    a.   [Ram-ne$_i$ [kyaa [t$_i$ Sita-ko   kitaab dii]]]?
        ram-ERG Q$_{Y/N}$ Sita-ACC book   gave
        'Did Ram give Sita the/a book?'

    b. #yaa Mina-ne?
        or   Mina-ERG
        Intended: 'or did Mina?'

    c.   yaa Vina-ko?
        or   Vina-DAT
        'or to Vina?'

    d.   yaa magazine?
        or   magazine
        'or did he give Sita a magazine?'

The other diagnostic for the topicalization account presented in Bhatt & Dayal (2017) are Y/N question congruence facts. This test predicts that, since only non-presupposed material may be negated/rejected, only material following *kyaa* should be able to be negated. Again, I provide only their clause-medial *kyaa* paradigm below; I refer the reader to the original work for the exhaustive list of tests.

(75)   [S [*kyaa* [IO DO V]]]

    a.   [Ram-ne$_i$ [kyaa [t$_i$ anu-ko   kitaab dii]]]?
        ram-ERG Q$_{Y/N}$ anu-ACC book   gave
        'Did Ram give Anu the/a book?'

    b. *nahĩ:, Shyam-ne   dii.   Subject negated
        NEG   Shyam-ERG gave
        Intended: 'No, it was Shyam.'

    c.   nahĩ:, Uma-ko   dii.   IO negated
        NEG   Uma-DAT gave
        'No, it was Uma (to whom Ram gave the book).'

    d.   nahĩ:, magazine dii.   DO negated
        NEG   magazine gave
        'No, it was a magazine (that Ram gave to Anu).'

6.2.2 Topicalized FinP

I argue that this analysis can be extended to the clause-final instantiation of the Bangla counterpart of Hindi *kyaa* – i.e. *ki,* as well as *naki*. Evidence for this approach being on the right track comes from the fact that applying Bhatt and Dayal's diagnostics to clause-final *naki* and *ki* constructions lead to expected results. The results are demonstrated below for clause-final *naki*. An important disclaimer needs to be made here.[14] As

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[14] I thank two anonymous reviewers for calling for clarifications on this issue.

stated in Section 3, the Q-particle *ki* shares core distributional properties with *naki* in that multiple constituents can precede it and there are no restrictions on the syntactic or semantic properties of these constituents. Consequently, all of the empirical facts laid out in the initial sections of this paper with respect to *naki* pertain to *ki* as well, as described above. It is with this crucial similarity in mind that we can use elements of the Bhatt and Dayal analysis for Hindi *kyaa* for Bangla *naki* and importantly, also for Bangla *ki*.

For each of the diagnostics discussed above, I first provide Bhatt and Dayal's test for clause-*final kyaa*, followed by a similar test on clause-final *naki*. For reasons of space, I do not provide the tests for constructions with *ki*, but predictably, the results would be exactly the same as with *naki* constructions.

(76)   Clause-final *kyaa* (Bhatt & Dayal 2017: (35))

   a.   Anu-ne   Uma-ko   kitaab   dii   kyaa?
         Anu-ERG   Uma-DAT   book.FEM give.PFV.FEM Q_{YN}
         'Did Anu give a/the book to Uma?'

(77)   **Gapping continuation diagnostic**: pre-*kyaa* (Bhatt & Dayal 2017: (37)) and pre-*naki* material cannot be contrasted.

   a.   **Hindi *kyaa***
         *Anu-ne   Uma-ko   kitaab   dii   kyaa yaa Mona-ne?
         Anu-ERG   Uma-DAT   book.FEM give.PFV.FEM Q_{YN} or   Mona-ERG
         Intended: 'Did Anu give a/the book to Uma or was it Mona who gave a/the book to Uma?'

   b.   **Bangla *naki***
         *Anu   Uma-ke   boi-Ta   diye-che   naki na   Mona?
         Anu   Uma-DAT   book-CL   give-PFV.3P   NAKI NEG   Mona
         Intended: '(I infer) Anu give a/the book to Uma or it was Mona who gave a/the book to Uma, (is it true)?'

(78)   **Y/N congruence diagnostic**: pre-*kyaa* (Bhatt & Dayal 2017: (38)) and pre-*naki* material cannot be "corrected" (i.e. denied/negated) in a Y/N question configuration. In response to (76) (and an indentical question with *naki* in Bangla), the following cannot be felicitous answers.

   a.   #nahĩ:,   Mina-ERG dii.
         NEG   Mina-ERG give.PFV.FEM
         Intended: 'No, it was Mina who gave a/the book to Uma.'

   b.   #na,   Mina   diye-che.
         NEG   Mina   give-PERF.3P
         Intended: 'No, it was Mina who gave the book to Uma.'

Thus, we can defend the claim that *naki* surfaces clause-finally because its whole complement clause is topicalized.

Adapting this idea of whole clause topicalization to the analysis offered in this paper would amount to the claim that the whole finite clause complement of *naki* undergoes movement to the high TopP. We have already seen the consequences of such movement, in the *contra*-indexed $_{SA}$SPEAKER and SOK cases above ((58), (59)). Those derivations crashed because the topicalized FinPs could not be reconstructed, given the contra-indexation of the perspectival heads in the structure. What happens when the

relevant perspectival heads are *co*-indexed? We predict that this is the **only configuration** in which the movement of FinP to [Spec, TopP] can be successful, i.e. can be reconstructed and interpreted. This is possible because the head and tail of the chain ends up with the same indexes, as shown in the derivation below. The higher copy of $_{FIN}$SPEAKER is controlled by $_{SA}$SPEAKER$_i$, and the lower one by the co-indexed SOK$_i$. Reconstruction proceeds, with the pronunciation of the head of the chain and the interpretation of the base copy.

(79)
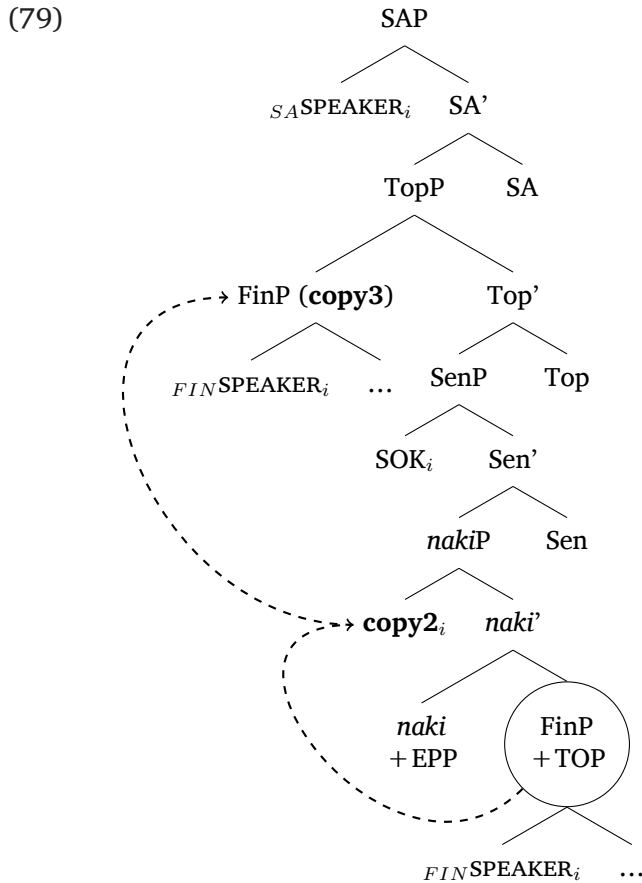
The semantic module reads off the structure in (79). The FinP is the closest goal for *naki* and thus moves to [Spec, *naki*P] first. The "judge" (SOK) is co-indexed with the $_{SA}$SPEAKER, resulting in the perspective being anchored to the $_{SA}$SPEAKER. In the semantics, such an orientation translates to quantification over the epistemic alternatives of the $_{SA}$SPEAKER. The outcome is the INFERENTIAL interpretation but with the correct word order.

An anonymous reviewer points out that the overall analysis of *naki* presented in this paper merits a comparison with another evidential particle *bujhi* in Bangla.[15] Although both of these particles can be classified as making evidential contributions, there are some significant differences between the two, which I enumerate as follows: (i) *bujhi* literally translates to 'I understand', thus having a verbal origin (unlike *naki*). It is derived from the verb *bojha* ('to understand'), with first person inflection; (ii) without effecting any change in meaning, *bujhi* as an evidential particle can appear in both clause-medial and

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[15] The reviewer also suggests discussion of another particle *to*, which is best translated as the *right?* at the end of some confirmatory English questions. I do not go into the details of *to* as the properties of this particle do not overlap in any manner with *naki* and will take us far away from the central goals of this paper. See Ghosh (1982) for a detailed description of *to*.

clause-final positions, but with only one flavor – INFERENTIAL (unlike *naki*).[16] Examples of *bujhi* constructions are provided below, using the same inference context as before:

(80) Context: Ram knows that Mina has been thinking about going to America for a while now but has not made up her mind yet. Today, he suddenly sees several of her suitcases, all packed, sitting out in the hall and asks her brother:

   a. Mina bujhi amerika cole jacche?
       Mina BUJHI America go-IMPV go-3P.PRES.PROG
       '(I infer) Mina is going away to America, (is it true)?'

   b. Mina amerika cole jacche bujhi?
       Mina America go-IMPV go-3P.PRES.PROG BUJHI
       '(I infer) Mina is going away to America, (is it true)?'

The verbal-derivative nature of *bujhi* is the most important point of departure from *naki*. Conceivably, the conceptually close relationship between a phrase such as "I understand" (a proposition) and the process of inferring a proposition could have led to *bujhi* becoming a fixed colloquialism with INFERENTIAL overtones. The first person inflection on the verb is instrumental in achieving the INFERENTIAL interpretation – the responsibility of the content embedded under *bujhi* lies solely with the speaker using it. This morpho-syntactic property, I argue, is the reason *bujhi* would only be compatible in a configuration where the SOK and the $_{SA}$SPEAKER are co-indexed. Nothing in the syntax prevents *bujhi* from appearing in contra-indexed configurations; the resulting structure result in an interpretative clash in the semantics module.[17]

Returning to the derivation in (79), note that in this $_{SA}$SPEAKER$_i$ = SOK$_i$ configuration, there is nothing preventing a scrambled XP (that adjoins to FinP) from being the closest goal for *naki*, as we saw in (57) and (58). This XP would move to [Spec, *naki*P] while the remnant FinP would move to [Spec, TopP] as expected. This is shown in the schematic representation of (81a) in (81b). The grammaticality of (81a) tells us that the approach presented in this paper is on the right track.

(81) a. [boi-Ta t$_i$ phel-e eSe-cho] [[bajar-e$_i$] naki]?
          book-CL leave-IMPV come-PERF.2P market-LOC NAKI
          '(I infer) you left the book at the market, (is it true)?'

   b. [$_{TopP}$ [$_{FinP}$ boita t$_i$ phele eshecho]$_k$ TOP …[$_{nakiP}$ bajaare$_i$ naki t$_k$]]

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[16] This judgement is robustly shared by the author as well as five other native speakers consulted by the author.

[17] An anonymous reviewer cites the following sentence (in [ ] brackets below) from a Bangla classic (*Khirer Putul*), with the claim that the uses of *bujhi* carry a reportative flavor. However, the author as well as other native speakers consulted by the author find a reportative reading completely impossible to get in this sentence. Only the usual inferential flavor associated with *bujhi* is present here. For actual overt linguistic evidence that it is the speaker's, and not anybody else's epistemic domain that is being referred to, I present the surrounding context of the reviewer's sentence, from the exact same book and passage, but embedded within a bigger excerpt (*Khirer Putul*, pg. 10):

"rajao jahaje core dukkhini bORorani ke bhule gelen. biday-er dine choto ranir Sei haSi-haSi mukh mone pOre ar **bhaben** – Ekhon rani ki korchen? **bodhoy** cul badhchen. ebar rani ki korchen? *bujhi* ranga paye alta porchen. [ebar rani Sat malonce phul tulchen, ebar *bujhi* Sat maloncer Sat Saji phule rani mala gaMthchen aar amar kOtha bhabchen.]" (The king forgot about the older queen once he boarded the ship. The younger queen's smiling face on the day of the farewell comes back to him and he thinks – what is the queen doing now? Maybe she's tying her hair. What is she doing now? Maybe she is adorning her feet with a red paste. [Now the queen is plucking flowers, now maybe she making a garland of the plucked flowers and thinking about me.])

The bolded words in the excerpt are particularly telling. Notice that the excerpt is fully reflective of the speaker's, i.e. the king's, epistemic state, as explicitly marked by the attitude verb *think* and speaker-oriented adverbs such as *maybe* (marked in bold). All of the occurrences of the evidential *bujhi* similarly mark the speaker's inferential process. No other agent or source of information is even implied, completely ruling out a reportative reading.

7 Conclusion

This paper defended an unified analysis of the Bangla evidential *naki* which changes its evidential flavor based on its syntactic position relative to other phrases. The particle *naki* was argued to be generated in one single base position; the apparent surface differences in the syntactic distribution of the two evidential flavors were shown to fall out from independent syntactic principles relating to c-command and control, binding, locality and reconstruction. In particular, this paper attempted to provide an understanding of how the syntactic representation of perspective interacts with evidentiality, by demonstrating that evidentials always take finite clauses as complements. Finite clauses were crucially argued to always be syntactically perspective-sensitive, i.e. the left periphery of finite clauses were shown to contain elements susceptible to control by speech act heads. The evidence for this claim was drawn from the literature on indexical shift and complementizer agreement – realms which have not been connected with evidentiality before. In addition, different patterns of indexation among several speech-act-related operators were demonstrated to be inherently linked with resultant word orders, a result that would otherwise appear surprising. This paper, thus, attempted to present a view of the syntactic foundations on which the (primarily semantic) category of evidentiality rests in human language.

Abbreviations

1 = first person, 2 = second person, 3 = third person, ABS = absolutive, ACC = accusative, CL = classifier, COMP = complementizer, DAT = dative, DEM = demonstrative, DO = direct object, EMPH = emphasis, ERG = ergative, IMPV = imperfective, IO = indirect object, FUT = future tense, NEG = negation, NMLZ = nominalizer, OBJ = object, PL = plural, PERF = perfect, PFV = perfective, PST = past tense, PRESPERF = present perfect, PSTPERF = past perfect, PTCP = participle, SG = singular.

Transcription key:
T D R = Retroflex ʈ ɖ ɽ
S = Palato-alveolar ʃ
N = Velar ŋ
E O = mid vowels æ ɔ
M = Nasalisation

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Competing Interests

The author has no competing interests to declare.

References

Adger, David. 2007. Three domains of finiteness: A minimalist perspective. *Finiteness: Theoretical and empirical foundations* 23–58.

Aikhenvald, Aleksandra. 2004. *Evidentiality.* Oxford University Press.

Anand, Pranav & Andrew Nevins. 2004. Shifty Operators in Changing Contexts. In Robert B. Young (ed.), *Proceedings of SALT 14*, 20–37. Cornell University, Ithaca, NY: CLC Publications. DOI: https://doi.org/10.3765/salt.v14i0.2913

Anderson, John M. 1997. Finiteness and auxiliarihood. In Mats Rydén (ed.), *From Runes to Romance: A Festschrift for Gunnar Persson on his Sixtieth Birthday*, 1–20. Umeå: University of Umeå.

Aoun, Joseph & Yen-hui Audrey Li. 2003. *Essays on the representational and derivational nature of grammar: The diversity of wh-constructions*. Cambridge, MA: MIT Press.

Baker, Mark C. 2008. *The syntax of agreement and concord*, vol. 115. Cambridge: Cambridge University Press. DOI: https://doi.org/10.1017/CBO9780511619830

Bayer, Josef. 1999. Final complementizers in hybrid languages. *Journal of Linguistics* 35(02). 233–271. DOI: https://doi.org/10.1017/S0022226799007665

Bayer, Josef & Probal Dasgupta. 2016. Emphatic topicalization and the structure of the left periphery: Evidence from German and Bangla. *Syntax* 19(4). 309–353. DOI: https://doi.org/10.1111/synt.12125

Bhadra, Diti. 2017. *Evidentiality and Questions: Bangla at the Interfaces*. New Brunswick, NJ: Rutgers University dissertation.

Bhatt, Rajesh & Veneeta Dayal. 2014. Polar kyaa: Y/n or speech act operator. Presentation at the Workshop on Non-Canonical Questions and Interface Issues at the Kloster Hegne, University of Konstanz.

Bhatt, Rajesh & Veneeta Dayal. 2017. Polar Questions, Selection and Disjunction: Clues from Hindi-Urdu polar kyaa. Presentation at University of Konstanz.

Bhattacharya, Tanmoy. 1999. *The structure of the Bangla DP*. London: University College London dissertation.

Bianchi, Valentina. 2003. On finiteness as logophoric anchoring. In Jacqueline Gueron & Liliane Tamowski (eds.), *Temps et point de vue/Tense and point of view*, 213–246. Paris: Université de Paris X.

Bošković, Željko. 2004. Topicalization, focalization, lexical insertion, and scrambling. *Linguistic Inquiry* 35(4). 613–638. DOI: https://doi.org/10.1162/0024389042350514

Chierchia, Gennaro, Barbara Hall Partee & Raymond Turner. 1989. *Properties, types and meaning*. Dordrecht; Boston: Kluwer Academic Publishers. DOI: https://doi.org/10.1007/978-94-009-2721-6

Chomsky, Noam. 1995a. Bare phrase structure. In Gert Webelhuth (ed.), *Government binding theory and the minimalist program*, 383–439. Oxford: Oxford University Press.

Chomsky, Noam. 1995b. *The Minimalist Program*. Cambridge, MA: MIT Press.

Chomsky, Noam. 2000. Minimalist Inquiries: The framework. In Roger Martin, David Michaels & Juan Uriagereka (eds.), *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, 89–156. Cambridge, MA: MIT Press.

Chomsky, Noam. 2001. Derivation by Phase. In Michael Kenstowicz (ed.), *Ken Hale: A life in linguistics*, 1–52. Cambridge, MA: MIT Press.

Chomsky, Noam. 2008. On phases. *Current Studies in Linguistics Series* 45. 133.

Cinque, Guglielmo. 1999. *Adverbs and functional heads: A cross-linguistic perspective*. New York: Oxford University Press.

Citko, Barbara. 2005. On the nature of merge: External merge, internal merge, and parallel merge. *Linguistic Inquiry* 36(4). 475–496. DOI: https://doi.org/10.1162/002438905774464331

Cristofaro, Sonia. 2007. Deconstructing categories: Finiteness in a functional-typological perspective. In Irina Nikolaeva (ed.), *Finiteness: Theoretical and empirical foundations*, vol. 2007, 91–114. Oxford: Oxford University Press.

Dasgupta, Probal. 1980. *Questions and relative and complement clauses in a Bangla grammar*. New York, NY: New York University dissertation.

Dasgupta, Probal. 1987. Sentence particles in Bangla. In Elena Bashir, Madhav M. Deshpande & Peter Edwin Hook (eds.), *Selected papers from SALA 7*, vol. 7, 49–75. Bloomington, IN: Indiana University Linguistics Club.

Dasgupta, Probal. 1996. Remarks on subjunctivity. In Shivendra K. Verma & Dilip Singh (eds.), *Papers on language in society (papers in memory of Prof. Srivastava)*, vol. 1, Delhi: Kalinga.

Dasgupta, Probal. 2007. The ubiquitous complementizer. In Josef Bayer, Tanmoy Bhattacharya & M.T. Hany Babu (eds.), *Linguistic theory and South Asian languages: Essays in honour of K.A. Jayaseelan,* 163–173. Amsterdam: John Benjamins. DOI: https://doi.org/10.1075/la.102.15das

Dastidar, Rimi Ghosh & Sibansu Mukhopadhyay. 2013. Utterance Discourse and Meaning: A Pragmatic Journey with the Bangla Discourse Particle na. In Rajendra Prasath, Philip O'Reilly & T. Kathirvalavakumar (eds.), *Mining intelligence and knowledge exploration*, 814–822. Tamil Nadu: Springer. DOI: https://doi.org/10.1007/978-3-319-03844-5_80

Datta, Madhumanti. 2016. *The Bangla subjunctive*. New Delhi: Delhi University M.Phil. dissertation.

Davis, Christopher. 2009. Decisions, dynamics and the Japanese particle yo. *Journal of Semantics* 26(4). 329–366. DOI: https://doi.org/10.1093/jos/ffp007

De Haan, Ferdinand. 1999. Evidentiality and epistemic modality: Setting boundaries. *Southwest Journal of Linguistics* 18(1). 83–101.

Deal, Amy Rose. 2014. Nez Perce embedded indexicals. In Hannah Greene (ed.), *SULA 7: Proceedings of the Seventh Meeting on the Semantics of Under-Represented Languages in the Americas*, Amherst, MA: University of Massachusetts, Graduate Linguistic Student Association.

Deal, Amy Rose. 2016. Shifty asymmetries: universals and variation in shifty indexicality. Presentation at the LSA Annual Meeting.

Diercks, Michael & Meghana Rao. 2016. Upward Oriented Complementizer Agreement in Kipsigis, Ms. Pomona College.

Erteschik-Shir, Nomi. 1997. *The dynamics of focus structure*. Cambridge: Cambridge University Press.

Faller, Martina T. 2002. *Semantics and pragmatics of evidentials in Cuzco Quechua*. Stanford, CA: Stanford University dissertation.

Farkas, Donka F & Kim B Bruce. 2010. On reacting to assertions and polar questions. *Journal of Semantics* 27(1). 81–118.

Fox, Danny. 1999. Reconstruction, binding theory, and the interpretation of chains. *Linguistic Inquiry* 30(2). 157–196. DOI: https://doi.org/10.1162/002438999554020

Garrett, Edward John. 2001. *Evidentiality and Assertion in Tibetan*. Los Angeles, CA: UCLA dissertation.

Ghosh, Arun. 1982. Bangla nipat to. *Bhasha* 2. 68–74.

Giorgi, Alessandra. 2010. *About the speaker: Towards a syntax of indexicality*. Oxford: Oxford University Press.

Gísli Jónsson, Jóhannes. 1991. Stylistic fronting in icelandic. *Working Papers in Scandinavian Syntax* 48. 1–43.

Givón, T. 1990. *Syntax: A functional-typological introduction*, vol. 1. Amsterdam: John Benjamins.

Gunlogson, Christine. 2008. A question of commitment. *Belgian Journal of Linguistics* 22(1). 101–136.

Haegeman, Liliane & Virginia Hill. 2013. The syntacticization of discourse. *Syntax and its limits* 48. 370–390.

Hill, Virginia. 2013. *Vocatives: How syntax meets with pragmatics*. Leiden: Brill.

Holmberg, Anders. 2000. Scandinavian stylistic fronting: How any category can become an expletive. *Linguistic inquiry* 31(3). 445–483. DOI: https://doi.org/10.1162/002438900554406

Hopp, Holger. 2005. Constraining second language word order optionality: Scrambling in advanced English-German and Japanese-German interlanguage. *Second Language Research* 21(1). 34–71. DOI: https://doi.org/10.1191/0267658305sr246oa

Huddleston, Rodney. 1970. Some remarks on Case-Grammar. *Linguistic Inquiry* 1(4). 501–511.

Jayaseelan, K A. 2001. Questions and question-word incorporating quantifiers in Malayalam. *Syntax* 4(2). 63–93. DOI: https://doi.org/10.1111/1467-9612.00037

Kayne, Richard S. 1994. *The Antisymmetry of Syntax*. Cambridge, MA: MIT Press.

Klein, Wolfgang. 1998. Assertion and finiteness. In Norbert Dittmar & Zvi Penner (eds.), *Issues in the theory of language acquisition: Essays in honor of Jürgen Weissenborn*, 225–245. Bern: Lang.

Krifka, Manfred. 1991. A Compositional Semantics for Multiple Focus Constructions. In Steven Moore & Adam Zachary Wyner (eds.), *Proceedings of SALT I*. 127–158. Ithaca, NY: Cornell University Working Papers in Linguistics. DOI: https://doi.org/10.3765/salt.v1i0.2492

Krifka, Manfred. 1992. Thematic Relations as Links between Nominal Reference. In Ivan Sag & Anna Szabolcsi (eds.), *Lexical matters*, 29–54. Stanford, CA: Center for the Study of Language and Information.

Krifka, Manfred. 2013. Response particles as propositional anaphors. In Todd Snider (ed.), *Proceedings of SALT 23*, vol. 23, 1–18. eLanguage(online). DOI: https://doi.org/10.3765/salt.v23i0.2676

Ladd, D Robert. 1981. A first look at the semantics and pragmatics of negative questions and tag questions. In *Papers from the Seventeenth Meeting of the Chicago Linguistics Society*, 164–171. Chicago, IL: Chicago Linguistics Society.

Lambrecht, Knud. 1994. *Information structure and sentence form: Topic, focus and the mental representations of discourse participants*. Cambridge: Cambridge University Press. DOI: https://doi.org/10.1017/CBO9780511620607

Larson, Bradley. 2015. Minimal search as a restriction on merge. *Lingua* 156. 57–69. DOI: https://doi.org/10.1016/j.lingua.2014.12.009

Lasersohn, Peter. 2005. Context dependence, disagreement, and predicates of personal taste. *Linguistics and Philosophy* 28(6). 643–686. DOI: https://doi.org/10.1007/s10988-005-0596-x

Lebeaux, David. 1988. *Language acquisition and the form of the grammar*. Amherst, MA: University of Massachusetts, Amherst dissertation.

Lewis, David. 1979. Scorekeeping in a Language Game. *Journal of Philosophical Logic* 8. 339–359. DOI: https://doi.org/10.1007/BF00258436

Lim, Dongsik & Chungmin Lee. 2012. Perspective Shifts of Korean evidentials and the effect of contexts. In Anca Chereches (ed.), *Proceedings of SALT 22*, vol. 22, 26–42. Chicago, IL: Linguistic Society of America. DOI: https://doi.org/10.3765/salt.v22i0.2648

Madhavan, Punnappurath. 2008. Multiple wh-questions and clefts in Malayalam: Agree or Move? Presentation at Cleft Workshop, ZAS Berlin.

Malamud, Sophia & Tamina Stephenson. 2015. Three ways to avoid commitments: Declarative force modifiers in the conversational scoreboard. *Journal of Semantics* 32(2). 275–311. DOI: https://doi.org/10.1093/jos/ffu002

McFadden, Thomas & Sandhya Sundaresan. 2014. Finiteness in South Asian languages: An introduction. *Natural Language & Linguistic Theory* 32(1). 1–27. DOI: https://doi.org/10.1007/s11049-013-9215-7

Miyagawa, Shigeru. 1997. Against Optional Scrambling. *Linguistic Inquiry* 28(1). 1–25.

Miyagawa, Shigeru. 2012. Agreements that occur mainly in main clauses. In Lobke Aelbrecht, Liliane Haegeman & Rachel Nye (eds.), *Main clause phenomena: New horizons*,

79–112. Amsterdam: John Benjamins Publishing. DOI: https://doi.org/10.1075/la.190.04miy

Mukherjee, Aparna. 2008. *Evidentiality: The Case of Bangla Naki*. New Delhi: Jawaharlal Nehru University M.Phil. dissertation.

Müller, Gereon & Wolfgang Sternefeld. 1993. Improper movement and unambiguous binding. *Linguistic inquiry* 24(3). 461–507.

Murray, Sarah E. 2010. *Evidentiality and the structure of speech acts*. New Brunswick, NJ: Rutgers University dissertation.

Nikolaeva, Irina. 2007. *Finiteness: Theoretical and empirical foundations*. New York, NY: Oxford University Press.

Özyildiz, D. 2013. When I is not me: A preliminary case study of shifted indexicals in Turkish, Ms. ENS.

Pesetsky, David & Esther Torrego. 2001. T-to-C Movement: Causes and Consequences. In Michael Kenstowicz (ed.), *Ken Hale: A life in language*, 355–426. Cambridge, MA: MIT Press.

Pesetsky, David & Esther Torrego. 2007. The syntax of valuation and the interpretability of features. In Simin Karimi, Vida Samiian & Wendy K. Wilkins (eds.), *Phrasal and clausal architecture: Syntactic derivation and interpretation*, 262–294. Amsterdam: John Benjamins Publishing Company. DOI: https://doi.org/10.1075/la.101.14pes

Polinsky, Maria. 2015. Embedded finite complements, indexical shift, and binding in Tsez. *Languages of the Caucasus* 1(1). 1–37.

Ramchand, Gillian. 2014. Deriving variable linearization. *Natural Language & Linguistic Theory* 32(1). 263–282. DOI: https://doi.org/10.1007/s11049-013-9225-5

Reinhart, Tanya. 1981. Definite NP anaphora and C-command domains. *Linguistic Inquiry* 12(4). 605–635.

Rice, Keren. 1986. Some remarks on direct and indirect discourse in Slave (Northern Athapaskan). In *Direct and indirect speech*, vol. 31, 47–76. Berlin: Mouton de Gruyter. DOI: https://doi.org/10.1515/9783110871968.47

Rizzi, Luigi. 1997. The fine structure of the left periphery. In Liliane Haegeman (ed.), *Elements of grammar*, 281–337. Dordrecht: Kluwer Academic Publishers. DOI: https://doi.org/10.1007/978-94-011-5420-8_7

Rooryck, Johan. 2001. Evidentiality, Part I. *Glot International* 5. 125–133.

Samiian, Vida. 1994. The Ezafe Construction: Some implications for the theory of X-bar Syntax. In Mehdi Marashi (ed.), *Persian studies in north america*, 17–41. Iranbooks Betheda, MD.

San Roque, Lila, Simeon Floyd & Elisabeth Norcliffe. 2017. Evidentiality and interrogativity. *Lingua* 186. 120–143. DOI: https://doi.org/10.1016/j.lingua.2014.11.003

Schauber, Ellen. 1979. *The syntax and semantics of questions in Navajo*. New York, NY: Garland Publishing.

Schlenker, Philippe. 2004. Person and binding: A partial survey. *Italian Journal of Linguistics* 16(1). 155–218.

Sells, Peter. 1987. Aspects of Logophoricity. *Linguistic Inquiry* 18(3). 445–480.

Şener, Nilüfer Gültekin & Serkan Şener. 2011. Null subjects and indexicality in Turkish and Uyghur. In Andrew Simpson (ed.), *Workshop on Altaic Formal Linguistics (WAFL) 7*, 269–284. Los Angeles, CA: University of Southern California.

Shklovsky, Kirill & Yasutada Sudo. 2014. The syntax of monsters. *Linguistic Inquiry* 45(3). 381–402. DOI: https://doi.org/10.1162/LING_a_00160

Simpson, Andrew & Tanmoy Bhattacharya. 2003. Obligatory overt wh-movement in a wh-in-situ language. *Linguistic Inquiry* 34(1). 127–142. DOI: https://doi.org/10.1162/002438903763255940

Speas, Peggy & Carol Tenny. 2003. Configurational properties of point of view roles. *Asymmetry in Grammar* 1. 315–345. DOI: https://doi.org/10.1075/la.57.15spe

Stechow, Arnim von. 2003. Feature deletion under semantic binding. In Makoto Kadowaki & Shigeto Kawahara (eds.), *Proceedings of NELS 33*, vol. 33, 377–403. Amherst, MA: University of Massachusetts, Graduate Linguistic Student Association.

Stephenson, Tamina. 2007. Judge dependence, epistemic modals, and predicates of personal taste. *Linguistics and Philosophy* 30(4). 487–525. DOI: https://doi.org/10.1007/s10988-008-9023-4

Stirling, Lesley. 1993. *Switch-Reference and Discourse Representation*. Cambridge: Cambridge University Press. DOI: https://doi.org/10.1017/CBO9780511597886

Stjepanović, Sandra. 1999. Scrambling: Overt movement or base generation and LF movement? *Journal of Slavic Linguistics* 305–324.

Sudo, Yasutada. 2012. *On the Semantics of Phi Features on Pronouns*. Cambridge, MA: Massachusetts Institute of Technology dissertation.

Van Riemsdijk, Henk. 1990. Functional prepositions. In Harm Pinkster & Inge Genee (eds.), *Unity in diversity*, 229–241. Berlin: De Gruyter. DOI: https://doi.org/10.1515/9783110847420.229

Vinokurova, Nadya. 2011. Shifting indexicals in Sakha. In *Proceedings of the 10th Seoul International Altaic Conference*. Seoul, South Korea: Altaic Society of Korea.

Willett, Thomas. 1988. A cross-linguistic survey of the grammaticization of evidentiality. *Studies in Language* 12(1). 51–97. DOI: https://doi.org/10.1075/sl.12.1.04wil

Wiltschko, Martina. 2016. Ergative constellations in the structure of speech acts. In *The Oxford Handbook of ergativity*, New York: Oxford University Press.

Woods, Rebecca. 2014. The syntax of orientation shifting: Evidence from English high adverbs. In Martin Kohlberger, Kate Bellamy & Eleanor Dutton (eds.), *Proceedings of the 22nd Conference of the Student Organization of Linguistics in Europe (ConSOLE)*, vol. 22, 205–230. Leiden University.

Xu, Beibei. 2017. *Question bias and biased question words in Mandarin, German and Bangla*. New Brunswick, NJ: Rutgers University dissertation.

Zeijlstra, Hedde. 2012. There is only one way to agree. *The Linguistic Review* 29. 491–539. DOI: https://doi.org/10.1515/tlr-2012-0017