Evidentiality, Bias and Questions

Overview: The phenomenon of *interrogative flip* [IF], whereby evidentials shift their orientation from the speaker's perspective in declaratives to the addressee's in polar questions, has cross-linguistic validity (attested in Tibetan (Garrett 2001), Cheyenne (Murray 2010), English (Speas & Tenny 2004), Korean (Lim & Lee 2012) a.o). This study will add a new dimension to this cross-linguistic research by forging a novel relationship between IF, possessing evidence and *speaker bias*. To this end, the claim made below will be defended:

(1) Questions with evidentials that **do not** undergo IF are *biased questions*.

Crucially, in languages with attested IF (mentioned above), no bias on the speaker's part has been reported. With regards to *non-interrogative-flip* [NIF] questions with evidentials, the Bangla evidential *naki* (see San Roque et al. 2015 for other NIF languages) is presented as a case-in-point (& also as a contrast to English *probably*), demonstrating that the speaker-orientation of evidentials in questions translates directly into bias.

Basic Data and Contrasts: *Naki* has two distinct interpretations based on its syntactic position:

(2) *Mina* **naki** *amerika chole   jacche?*   REPORTATIVE evidence
     mina REP   America go.IMPV go.3P.PRES.PROG.
     '(Given what I **heard**), Mina is going away to America (is that true)?'

(3) *Mina amerika chole   jacche   naki?*   INFERENTIAL evidence
     mina America go.IMPV go.3P.PRES.PROG. INFE
     '(Given what I **infer**) Mina is going away to America (is it true)?'

Both questions above have two properties: (A) they are *biased questions* (speaker expects φ to be more likely to be true than $\neg\varphi$); (B) both are NIF constructions - the evidential perspectives are anchored to the *speaker*, as the parentheticals indicate. I will argue for the causal relationship: (B) $\Rightarrow$ (A) - as explicitly stated in the claim in (1). Presenting some more contrasts - while a polar interrogative with INFERENTIAL *naki* (henceforth *naki$_{INF}$*) is possible (2), an assertion is infelicitous (3a). Note that the English modal *probably* (which also has an INFERENTIAL restriction (cf. von Fintel and Gillies 2010)) has the exact opposite distribution of *naki$_{INF}$* (3b-c):

(4) *S is known to be careful about energy. Driving past her house now, we see her lights on. R says:*

   a. #*S ekhon barite   ache* **naki**.   Bangla: inference + assertion = #
        S now   home-LOC be-3P INFE
        'S is at home now, (I infer).'
   b.   S is **probably** at home now.   English: inference + assertion = ✓
   c. #Is S **probably** at home right now?   English: inference + question = #

While a *naki$_{INF}$* assertion is infelicitous (4a), a REPORTATIVE *naki* (*naki$_{REP}$*) assertion is felicitous.

(5) S *naki* ekhon barite ache.   Bangla: report + assertion = ✓
     '(Given what I heard), S is at home right now.'

I will crucially focus on **three contrasts**, giving each puzzle a specific name (B=Bangla;E=English):

(3) & (4c)	**B**: inference + question = ✓; **E**: inference + question = #	**the B-E puzzle**
(3) & (4a)	B: inference + **question** = ✓; B: inference + **assertion** = #	**the speech-act puzzle**
(4a) & (5)	B: **inference** + assertion = #; B: **report** + assertion = ✓	**the sourcehood puzzle**

Main Claim: I argue that the solutions to all three puzzles rest on a **crucial assumption**:

(6) NIFs appear to be polar questions *but are actually rising declarative locutions*.

Rising declaratives have speared numerous studies (Bartels 1999, Gunlogson 2003, 2008, Malamud & Stephenson 2015 [M&S], Farkas & Roelofsen 2015, a.o.) which agree on two crucial properties: (A) rising declaratives [RDs], e.g. *John eats meat?↑*, crucially signal **contingent commitment** of the speaker towards φ (*John eats*

meat); (B) **addressee's ratification** of φ is still required to complete the questioning act (Poschmann (2008) calls rising declaratives *confirmative questions*). The claim is therefore, that the *naki* 'interrogatives' in (2)-(3) are both RDs, while (4a) and (5) are normal declaratives (with a falling intonation). A *naki* RD can be said to have a *bipartite orientation*: the evidence is anchored to the speaker, while the RD is still an explicit request for ratification of the prejacent from the addressee. A successful mapping of these components can be achieved via exploring the *discourse change potential* of evidentials.

A dynamic model of discourse: Adopting [M&S]'s dynamic approach to speech acts (building on Ginzburg 1996; Roberts 1996; Farkas & Bruce 2010, Krifka 2014), I assume for each discourse participant X, $\textbf{DC}_X$ is a set of X's *public discourse commitments*, and $\textbf{DC}_X{}^\star$ is a set of X's tentative **projected commitments**, resulting in a multi-dimensional discourse structure with a CG (common ground) and a **projected** CG*. We need another crucial component in this model - a source set $\textbf{(I)SS}_X$ and a **projected source set** $\textbf{(I)SS}_X{}^\star$ for each participant:

(7) $\textbf{(I)SS}_\chi = \{$w $\in$ W: all commitments of agent χ in discourse *d* for which agent χ is an **independent source** are true in w $\}$

Being a source for φ requires being committed to φ, but being committed to φ *does not* require being a source for φ (Gunlogson 2008). Herein lies the distinction between *independent sourcehood* (speaker asserts φ; directly perceived/inferred φ) and *dependent sourcehood* (speaker asks φ?; heard/was told φ). This discourse structure, based on the interaction between DCs, (I)SSs, RDs, polar questions and assertions, can solve our three puzzles.

A polar interrogative offers the prejacent φ without any commitment to φ - the addressee is considered an authoritative source. An RD, on the other hand, crucially adds φ to $\textbf{DC}_{speaker}{}^\star$. A *naki* RD has contributes on two levels (other discourse level representations in [M&S] omitted for brevity):

(8)

	Previously	after *naki* RD
$\textbf{DC}_{speaker}{}^\star$	{}	$\{\{p\}\}$
$\textbf{(I)SS}_{speaker}$	$\{\{\}\}$	$\{\{p\}_{inference}\}$

The **B-E puzzle** is rooted in the clash between *probably* which adds $\{p\}_{inference}$ to $\textbf{(I)SS}_{speaker}$, while the interrogative form that demands no commitment towards φ or $\neg\varphi$. While *naki* 'interrogatives' such as (3) are RDs and thus felicitous, (4c) is not, leading to infelicity. This predicts that *probably* should be felicitous in RDs (dissolving the B-E puzzle), and we will see in the full talk that that is borne out.

Interrogative Flip: We can now provide a discourse-based definition of IF: I claim **IF $\approx$ commitment concord**. An IF-ed evidential adds $\{p\}_{inference/report/direct}$ to the **projected** source set of the **addressee: $\textbf{(I)SS}_{adressee}{}^\star$**. Since the addressee is anyway the authoritative source in an interrogative locution, there are no clashes in commitments. The IF counterpart of (2) would be : '(Given what **you** heard), is M going to America?'

REP vs. INF: The **sourcehood puzzle** stems from the speaker's pragmatic need to avoid independent sourcehood status for φ. In a [DECL *naki*$_{REP}$ φ] structure, the *source* of the speaker's contingent/projected commitment is a third-party, and is easily defeasible. In a pure assertion - [DECL *naki*$_{INF}$ φ] structure with inference, it is harder to maintain a dependent, defeasible commitment. Thus, with reports, pure assertions are felicitous, while with inference, only RDs are - [DECL *naki*$_{INF}$ φ ↑].

DEC vs. DEC↑: The **speech-act puzzle** also crucially arises from the distinctions in the discourse contribution of a declarative (full commitment) and a rising declarative (projected commitment). Projected commitment coupled with an *indirect* evidence is preferable to full commitment with indirect evidence, This sourcehood preference vis-a-vis scales of evidential hierarchy (Willett 1988, Faller 2002) is arguably parametric, given that Bangla is sensitive to it, while English is not (recall that (4b) is felicitous in English).

This abstract proposed a discourse-oriented redefining of IF as an expression of commitment concord, and a formulation of bias as a projected commitment towards φ (over $\neg\varphi$) that awaits addressee ratification of φ. The novel nexus between (N)IF, sourcehood and bias was proposed in the context of the issues raised by *naki*, thus providing us with a window into the relationship between speech acts, intonation and evidentiality.