

What indexical shift sounds like: Uyghur intonation and interpreting speech reports

Travis Major & Connor Mayer (UCLA)

Introduction. This study provides prosodic evidence for a contrast between three interpretations of finite embedded clauses in Uyghur (SE Turkic). We show that prosodic structure not only informs us about the syntax and semantics of indexical shift, but also serves as a diagnostic for ruling out direct discourse. This paper makes two contributions: a revised syntactic structure for Uyghur (c.f. Sudo & Shklovsky 2014) based on novel prosodic evidence, and a new diagnostic for indexical shift: prosody as quotation control.

Indexical Shift Pattern. Sudo & Shklovsky (henceforth S&S) observe that Uyghur nominative embedded subjects obligatorily shift (1a), while accusative subjects obligatorily do not shift (1b).

- 1) a. Ahmet [(men) ket-tim] di-di. b. Ahmet [*(méni) ket-ti] di-di.
 Ahmet [1SG.NOM leave-PST.1SG say-PST.3] Ahmet 1SG.ACC leave-PST.3 say-PST.3
 ✗ (nonshifted) `Ahmet said that I_{speaker} left.` ✓ (nonshifted) `Ahmet said that I_{speaker} left.`
 ✓ (shifted) `Ahmet_i said that he_i left.` ✗ (shifted) `Ahmet_i said that he_i left.`

Sudo (2010) and S&S conclude that nominative pronouns (both overt and *pro*) are obligatorily interpreted relative to the reported speech context (they shift), while accusative subjects are interpreted relative to the utterance context (following S&S, we ignore the difference in verb agreement). Following Anand and Nevins (2004), they assume the presence of a monstrous (context-shifting) operator situated in the periphery of the embedded clause, which partitions it into two domains: one that is outside the scope of the monster (no shift) and the other inside (obligatory shift). They further argue that ACC-subjects raise to a position in the periphery of the embedded CP outside the scope of the monster.

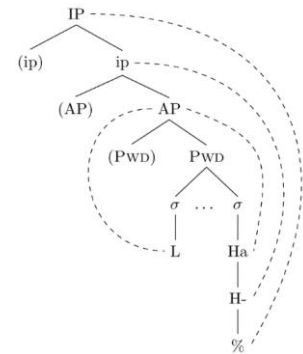
- 2) [...never shift... [Subj_{ACC} [Op. [Subj_{NOM} [...must shift...]]]] (S&S 2014: 394)

We assume the basic claims in Sudo (2010) and S&S regarding the existence of an operator and its syntactic presence. We further follow Sudo (2010) in using the wh-question diagnostic developed in Schlenker (1999; 2003), to ensure that these finite embedded clauses involve shift as opposed to quotation (a question inside a direct quote cannot take matrix scope). We used short three-sentence discourses to ensure that our targets either involved direct quotation, indexical shift, or no-shift. For each, there was both a declarative and an interrogative target. After segmenting the audio files, we played the target sentences in isolation (outside of the discourses in which they were recorded) to speakers and found that without any discourse, they are able to tell whether a given sentence involves shift or direct quotation.

Uyghur Intonation. We adopt the auto-segmental metrical model (Pierrehumbert 1980, a.o) of Uyghur intonation proposed in Major & Mayer (2018), and summarized in the figure on the right. Boundaries that are shared are assigned tones based on the highest prosodic constituent that shares the boundary.

- Intonation Phrases (IP) have a final H% vs. L% tone indicating questions vs. declaratives respectively.
- Intermediate phrases (ip) are marked by an H- tone on their right. These generally fall on the subject, but also associate with focused constituents.
- Accentual phrases have a high target associated with the right boundary (Ha), which is much less prominent than the ip-final H- tone.

We argue for the syntactic and corresponding prosodic structures for Uyghur finite embedded clauses in (4-6). Alternative analyses that do not violate the Strict Layering Hypothesis are available, but for syntactic parsimony we analyze as follows (this does not affect the outcomes of our proposal).



- 3) [TP [Ahmet] [[CP Op. [TP *pro* Verb_{embedded}]] Verb_{Matrix}]]
 (IP (ip))

Indexical Shift

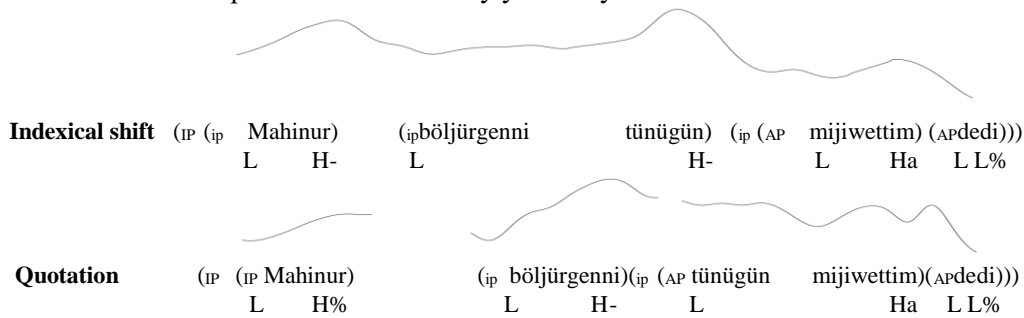
What indexical shift sounds like: Uyghur intonation and interpreting speech reports

Travis Major & Connor Mayer (UCLA)

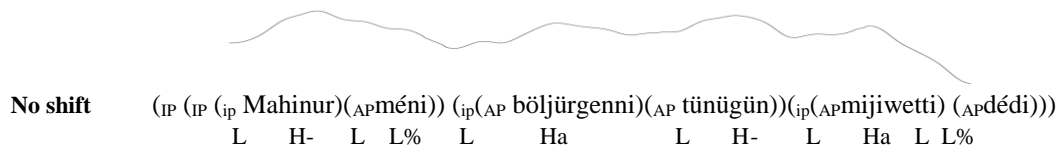
- 4) [TP [Ahmet] [[CP Op. [TP Subj_{NOM} Verb_{embedded}]] Verb_{Matrix}]] *Direct Quotation*
 (IP (IP) (IP)))
 5) [TP [Ahmet] [[Subj_{ACC} [CP Op. [TP t_i Verb_{embedded}]]] Verb_{Matrix}]] *No Shift*
 (IP(IP)))

Analysis of direct quotation. The most salient cue to direct quotation is the obligatory presence of an H% boundary, which also corresponds to a larger juncture leading into the direct quote. The tones of the direct quotation itself are a close approximation of the speech act being quoted, therefore, if the example below were a question, the embedded verb would bear an H% tone. When indexical shift occurs, the matrix subject forms its own ip (standard for subjects). The final tone of the embedded verb indicates clause type: declarative (L%) or interrogative (H%). In addition, unlike the findings from S&S, our speakers only accepted matrix scope wh-questions out of a clause containing shifted indexicals with pro-drop. This is in line with the shift patterns in Mishar Tatar (Podobryaev 2015).

- 6) Mahinur böljürgenni tünügün mijiwetti/m didi.
 Mahinur strawberry yesterday squeezed.3/1SG said
 'Mahinur said I squeezed the strawberry yesterday.'



Indexical Shift or No-shift? Prosodic cues in conjunction with accusative case on the embedded subject indicate when there is no shift. In no-shift contexts, we see an L% boundary on the right edge of the accusative subject. The matrix subject and embedded subjects phrase together as a unit, likely the result of (hyper)-raising to object, meaning the accusative subject is actually in the matrix clause (c.f. S&S). This suggests that the accusative subject is escaping the scope of the monster by raising out of the embedded clause.



Conclusions. We report on an intonational correlate of indexical shift, illustrating that prosody disambiguates direct quotation from indexical shift. As such, the monstrous operator corresponds to particular intonational patterns and thus its presence can be diagnosed without being forced to insert questions/NPIs into already complex sentences, which takes some of the burden off native speaker consultants. Within the intonational literature, the data presented here can be tied to related IP-level phenomena, such as: restrictive vs. non-restrictive relative clauses, parentheticals, quotation, mixed quotation, free-indirect discourse, and predicate fronting (e.g. Ladd 1986; Selkirk 2005; Dehé 2009).