

# Indexical Shift in Uyghur

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## 1 Indexicals

- **Indexicals** = expressions that refer to certain aspects of utterance context, such as SPEAKER, HEARER, UTTERANCE TIME, UTTERANCE LOCATION, etc.
  - first and second person pronouns (*me, you, us*, etc.)
  - *now*
  - *here*
- NB: This terminology might sound like first and second pronouns are somehow fundamentally different types of expressions from third person pronouns. Some classical semantic analyses assume so, at least at the semantic level (e.g., [Kaplan 1977](#)), but the morphosyntax of natural language seems to group all pronouns together, and some modern proposals pursue a uniform approach.
- Generally, indexicals **directly refer**, i.e., their referents are not affected by modal expressions, unlike definite descriptions ([Kaplan 1977](#)).
  - (1) a. Paul likes me.  
b. Paul likes the person who is speaking now.
  - (2) a. Mary thinks that Paul likes me.  
b. Mary thinks that Paul likes the person who is speaking now.
  - (3) a. I could have been a phonologist.  
b. The person who is speaking now could have been a phonologist.
- (In English) the only grammatical contexts that can affect the interpretation of indexicals seem to be (direct and pure) quotations.
  - (4) a. Tom said "I am a syntactician".  
b. "I am a syntactician" is a sentence.

In these constructions the quoted elements are said to be merely 'mentioned', and not 'used', with respect to the other expressions in the matrix clause, so they are not considered to be counterexamples to the aforementioned generalisation.

## 2 Indexical shift

- **Indexical shift:** In some languages—though not in English or other major European languages—indexicals in attitude reports can be interpreted with respect to ‘reported contexts’ (see below for a list of languages with indexical shift and references).

(5) John j̣iəgna n-ñṇ̃ yil-all  
John hero be-1sg says  
‘John says that {✓I am, ✓he is} a hero.’ (Amharic; [Schlenker 2003](#): p. 68)

You might think that this is just direct vs. indirect speech, as in (6).

(6) John says I’m a hero.  
a. John says “I’m a hero”.  
b. John says that I’m a hero.

- But the ambiguity persists in the presence of a long-distance dependency like a long-distance *wh*-phrase.

(7) John j̣iəgna ləṃin n-ñṇ̃ yil-all?  
John hero why COP.PRES-1s says-3sm  
‘Why does John say that {✓I am, ✓he is} a hero?’ (Amharic; [Anand 2006](#): p. 82)

Compare:

(8) a. John said I met Mary.  
b. Who did John say I met?

- Examples of languages with indexical shift (see [Deal 2020](#), [Blunier 2024](#) for more comprehensive lists):
  - Slave (Athabaskan) ([Rice 1986](#))
  - Amharic (Semitic) ([Schlenker 1999, 2003](#))
  - Navajo (Athabaskan) ([Speas 2000](#))
  - Zazaki (Iranian) ([Anand & Nevins 2004, Anand 2006](#))
  - Matses (Panoan) ([Ludwig et al. 2009, Munro et al. 2012](#))
  - Mishar Tatar (Turkic) ([Podobryaev 2014](#))
  - Nez Perce (Sahaptian) ([Deal 2020](#))
  - Farsi (Iranian) ([Anvari 2019](#))
- Our primary data will come from (Modern) **Uyghur** (Turkic; East Turkestan/Xinjiang Uyghur Autonomous Region, China), based on my previous work ([Sudo 2012, Shklovsky & Sudo 2014](#)) and recent fieldwork. We will also discuss [Major 2022](#).
- We will discuss Japanese at the end.

### 3 Indexical shift in Uyghur

- Indexical shift is **obligatory** in finite complement clauses to attitude predicates in Uyghur (unlike in Amharic, Zazaki, etc., where indexical shift is optional).

(9) Ahmet [ **men** ket- **tim** ] dëdi.

Ahmet [ 1SG leave-PAST.1SG ] said

✓ 'Ahmet said that **he** (=Ahmet) left.'

✗ 'Ahmet said that I (=speaker) left.'

(10) Tursun Muhemmet-ke [ *pro* xet jaz- **ding** ] dëdi.

Tursun Muhemmet-DAT [ *pro* letter write-PAST.2SG ] said

✓ 'Tursun told Muhemmet that he (=Muhemmet) wrote a letter.'

✗ 'Tursun told Muhemmet that you (=hearer) wrote a letter.'

- Finite complement clauses are not (always) direct quotations.

– Long-distance *wh* + indexical shift:

(11) Tursun [ **men** kim-ni kör- **dim** ] dëdi?

Tursun [ 1SG who-ACC see-PAST.1SG ] said

✓ 'Who did Tursun say that he saw?'

✗ 'Who did Tursun say that I saw?'

– Long-distance neg-word licensing + indexical shift:

(12) Tursun [ **men** hichkim-ni kör- **dim** ] dë-mi-di.

Tursun [ 1SG anybody-ACC see-PAST.1ST ] say-NEG-PAST.3

✓ 'Tursun didn't say that he saw anybody.'

✗ 'Tursun didn't say that I saw anybody.'

– NB: Any long-distance dependencies can be used for such anti-quotation tests, e.g., [Shklovsky & Sudo 2014](#) also use *de re* as a test.

### 4 The syntax of indexical shift in Uyghur

Among the languages that are known to have indexical shift, Uyghur provides especially clear evidence for the relevance of syntax.

#### 4.1 Nominalised clauses

Besides finite complement clauses, Uyghur has other morphosyntactic means of clause-embedding, and many of them involve **nominalisation**.

- In some examples, finite and nominalised complement clauses seem synonymous.

(13) a. Ahmet [ mu'ellim ket-ti ] dëdi.

Ahmet [ teacher leave-PAST.3 ] said

'Ahmet said that the teacher left.'

- b. Ahmet [ mu'ellim-ning ket-ken-lik-i-ni ] dëdi.  
 Ahmet [ teacher-GEN leave-GAN-LUQ-POSS.3-ACC ] said  
 'Ahmet said that the teacher left.'

- In nominalised complement clauses, indexical shift is never observed (= they are like English attitude reports). Consequently finite and nominalised complement clauses containing indexicals are not synonymous.

- (14) Ahmet [ **mëning** ket-ken-lik-**im** -ni ] dëdi  
 Ahmet [ 1SG.GEN leave-GAN-LUQ-POSS.1SG-ACC ] said  
 ✗ 'Ahmet said that **he** (=Ahmet) left.'  
 ✓ 'Ahmet said that **I** (=speaker) left.'

- (9) Ahmet [ **men** ket-**tim** ] dëdi.  
 Ahmet [ 1SG leave-PAST.1SG ] said  
 ✓ 'Ahmet said that **he** (=Ahmet) left.'  
 ✗ 'Ahmet said that **I** (=speaker) left.'

- (15) Tursun Muhemmet-ke [ *pro* xet jaz-ghan-liq-**ing** -ni ] dëdi  
 Tursun Muhemmet-DAT [ *pro* letter write-GAN-LUQ-POSS.2SG-ACC ] said  
 ✗ 'Ahmet said that **he** (=Ahmet) left.'  
 ✓ 'Ahmet said that **I** (=speaker) left.'

- (10) Tursun Muhemmet-ke [ *pro* xet jaz-**dïng** ] dëdi.  
 Tursun Muhemmet-DAT [ *pro* letter write-PAST.2SG ] said  
 ✓ 'Tursun told Muhemmet that he (=Muhemmet) wrote a letter.'  
 ✗ 'Tursun told Muhemmet that you (=hearer) wrote a letter.'

- This observation suggests that whatever triggers indexical shift is not the attitude predicate alone. We'll come back to this later.

#### 4.2 Accusative subjects of finite complement clauses

- The subject of a finite complement clause in Uyghur can be nominative or accusative (cf. **Raising-to-Object** in Japanese; [Kuno 1976](#), [Bruening 2001](#), [Tanaka 2002](#)). The sentences in (16) are essentially synonymous.

- (16) a. Ahmet [ Tursun ket-ti ] dëdi.  
 Ahmet [ Tursun leave-PAST.3 ] said  
 'Ahmet said that Tursun left.'
- b. Ahmet [ Tursun-**ni** ket-ti ] dëdi.  
 Ahmet [ Tursun-ACC leave-PAST.3 ] said  
 'Ahmet said that Tursun left.'

- Notes on **Differential Object Marking (DOM)**: Accusative marking on direct objects correlates with 'specificity' (as in Turkish), but it seems that there is no comparable effect on embedded subjects.
- We observe that indexical accusative subjects never shift. The sentences in (17) are not synonymous.

- (17) Tursun [ **mən** ket- **tim** ] dēdi  
 Tursun [ 1SG leave-PAST.1SG ] said  
 ✓ 'Tursun said that he (=Tursun) left.'  
 ✗ 'Tursun said that I (=speaker) left.'
- (18) Tursun [ **məni** ket- **ti** ] dēdi  
 Tursun [ 1SG.ACC leave-PAST.3 ] said  
 ✗ 'Tursun said that he (=Tursun) left.'  
 ✓ 'Tursun said that I (=speaker) left.'

- Notice the agreement mismatch in (18). There are two ways of thinking about it.
  - Default agreement (Major 2022)
  - Verbal agreement undergoes indexical shift (Shklovsky & Sudo 2014)

We'll provide some evidence against the default agreement account below.

## 5 Quotation theories and their problems

### 5.1 Indexical shift as direct quotation

- **Idea:** Shifted indexicals are in direct speech.
- **Problems:** Compatibility with long-distance dependencies (as discussed above).

- (11) Tursun [ **mən** kim-ni kör- **dim** ] dēdi?  
 Tursun [ 1SG who-ACC see-PAST.1SG ] said  
 ✓ 'Who did Tursun say that he saw?'  
 ✗ 'Who did Tursun say that I saw?'
- (12) Tursun [ **mən** hichkim-ni kör- **dim** ] dē-mi-di.  
 Tursun [ 1SG anybody-Acc see-PAST.1ST ] say-NEG-PAST.3  
 ✓ 'Tursun didn't say that he saw anybody.'  
 ✗ 'Tursun didn't say that I saw anybody.'

### 5.2 Partial quotation theory

- Quotations can be smaller than sentences. Such cases are called **partial quotations** (alt.: **mixed quotations**) (see Maier 2020 for an overview).

- (19) a. She notes that children who have learned to read and write by tapping on a digital tablet "often have difficulty distinguishing letters that look a lot like each other or that are mirror images of each other, like the b and the d."<sup>1</sup>  
 b. Bush said that his opponents 'misunderestimated' him.  
 (Cappelen & LePore 2023)

- It's well discussed that indexicals in partial quotations (can) shift.

- (20) a. Mary said that going to fancy restaurants is "not my cup of tea."

<sup>1</sup><https://www.scientificamerican.com/article/why-writing-by-hand-is-better-for-memory-and-learning/>

b. Bush said that his opponents “misunderestimated me.” (Maier 2020)

- **Idea:** What looks like shifted indexicals are in partial quotations.

(21) Tursun said that “I” left.

- In theory, partial quotations should be compatible with long-distance dependencies elsewhere in the same clause, as in (22).

(22) Who did Tursun say that “I” saw?

- **Problems**

- Cross-linguistic variation: Why don’t we have indexical shift in English (and other major European languages)?
- Obligatory shifting in finite complement clauses in Uyghur.
  - It would have to be assumed that all indexicals in finite complement clauses in Uyghur are obligatorily partially quoted.
  - For languages in which indexical shift is optional (Amharic, Zazaki, etc.), there is no particular issue here.
- No indexical shift in nominalised complement clauses in Uyghur.
  - It would have to be assumed that partial quotations are unavailable in nominalised complement clauses in Uyghur.
  - As far as I know, there is no research on partial quotations in Uyghur, but partial quotations in many languages don’t seem to be constrained by syntactic factors.
- No indexical shift of accusative subjects in Uyghur.
  - Similar problem as above.
- No indexical shift outside attitude reports.
  - Partial quotation doesn’t require syntactic embedding under attitude predicates.

(23) “Drawing information and enacting information is helpful because you have to think about information and you have to produce something that’s meaningful,” she says. And by transforming the information, you pave and deepen these interconnections across the brain’s vast neural networks, making it “much easier to access that information.”<sup>2</sup>

## 6 Schlenker’s theory and its problems

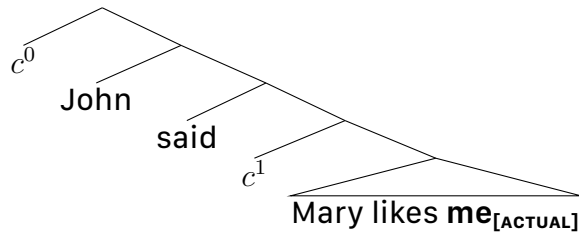
- Schlenker 1999, 2003 is the first to build a formal theory of indexical shift (see Anvari 2019 for a related theory).
- Among many things, he proposes:
  - Attitude predicates in all languages are ‘Kaplanian monsters’ = operators that affect the interpretation of indexicals by quantifying over possible contexts.
  - Cross-linguistic variation is in the lexicon.

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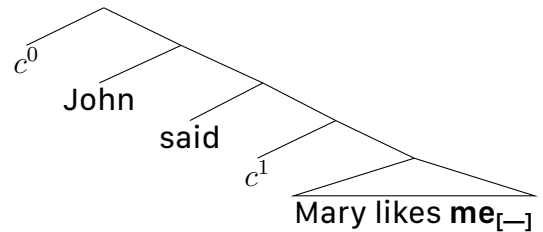
<sup>2</sup><https://www.scientificamerican.com/article/why-writing-by-hand-is-better-for-memory-and-learning/>

- Indexicals in English are lexically specified to be always interpreted relative to the current speech context.
- Indexicals in Amharic, Zazaki, etc. have no specification and can be relative to the current speech context or to any other context that is accessible in the semantic derivation.
- (So-called 'logophors' are lexically specified to be never interpreted relative to the current speech context)

(24) Languages w/o indexical shift



(25) Languages with indexical shift



• **Problems:**

- Obligatory indexical shift in finite complement clauses in Uyghur (also in Matses).
- The contrast between finite and nominalised complement clauses in Uyghur.

(26) Ahmet [ **mëning** ket-ken-lik- **im** -ni ] dëdi  
 Ahmet [ 1SG.GEN leave-GAN-LUQ-POSS.1SG-ACC ] said  
 ✗ 'Ahmet said that **he** (=Ahmet) left.'  
 ✓ 'Ahmet said that I (=speaker) left.'

(9) Ahmet [ **men** ket- **tim** ] dëdi.  
 Ahmet [ 1SG leave-PAST.1SG ] said  
 ✓ 'Ahmet said that **he** (=Ahmet) left.'  
 ✗ 'Ahmet said that I (=speaker) left.'

- Accusative subjects never shift. Detailed arguments are omitted here, but in a nutshell:
  - Accusative objects in finite complement clauses do shift, so it's not the form of the indexical that matters.
  - You might think accusative subjects are base-generated in the matrix clause, above the attitude predicate, but [Shklovsky & Sudo 2014](#) present evidence suggesting that they at least can, and probably must, be base-generated in the embedded clause.

## 7 Two current theories of indexical shift in Uyghur

### 7.1 Operator-based theory of indexical shift

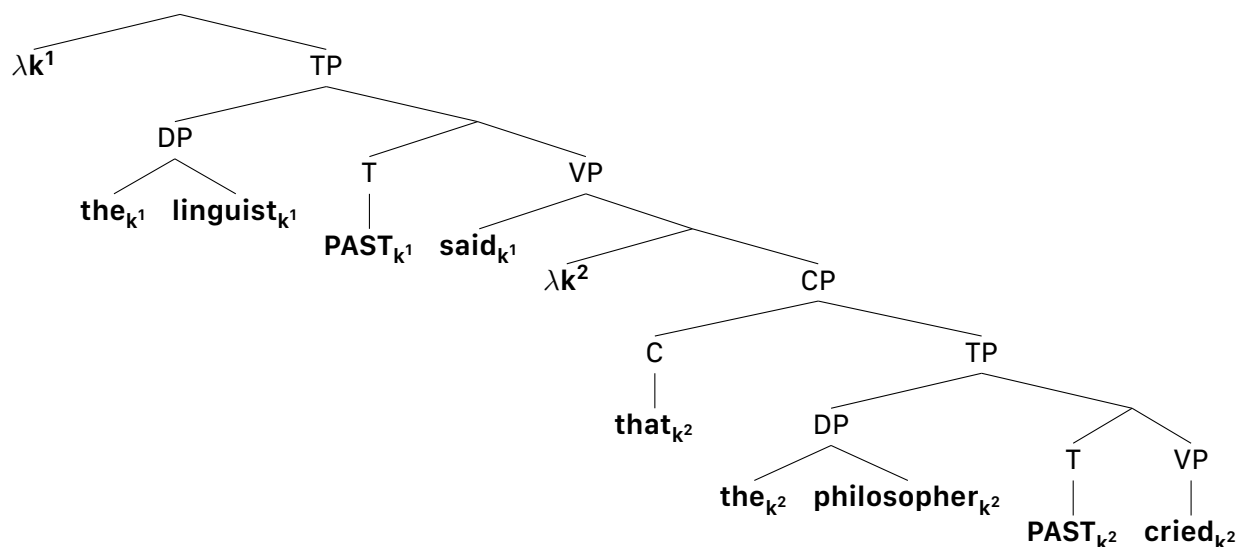
[Anand 2006](#) proposes an operator-based theory of indexical shift (see also [Anand & Nevins 2004](#), [Anand 2006](#), [Sudo 2012](#), [Deal 2020](#)).

- Possible contexts are 'generalised centred worlds', and can be seen as enriched evaluation indices with more components than just a time and a possible world:

- author ( $\approx$ speaker)
- (hearer)
- location
- time
- possible world

These additional components are necessary to account for expressions that require generalised *de se*, but we won't discuss *de se* reference today.

- For expository purposes, we postulate intensional pronouns at LF, which are represented as subscripts ( $\mathbf{k}$ ,  $\mathbf{k}^1$ ,  $\mathbf{k}^2$ , etc.) throughout. This is not a crucial assumption.



- Attitude predicates quantify over possible contexts, but they themselves are not Kaplanian monsters.

(27) a.  $\llbracket \text{say}_{\mathbf{k}} \rrbracket^{c,g} = \lambda p_{\langle k,t \rangle} . \lambda x_e . \forall c'_k \in \text{SAY}_{g(\mathbf{k})}(x)[p(c') = 1]$   
 b.  $\llbracket \text{think}_{\mathbf{k}} \rrbracket^{c,g} = \lambda p_{\langle k,t \rangle} . \lambda x_e . \forall c'_k \in \text{DOX}_{g(\mathbf{k})}(x)[p(c') = 1]$

- Indexicals are interpreted in the same way in all languages. Note that they are insensitive to the intensional pronoun.

(28) a.  $\llbracket \text{me}_{\mathbf{k}} \rrbracket^{c,g} = \text{author}(c)$   
 b.  $\llbracket \text{you}_{\mathbf{k}} \rrbracket^{c,g} = \text{hearer}(c)$

- Languages with indexical shift contain a **Kaplanian monster** ( $\text{☹}$ ) in their lexicon that manipulates the context parameter, whereby affecting the interpretations of indexicals in its scope.<sup>3</sup>

<sup>3</sup>(29) states the semantics of  $\text{☹}$  syncategorematically. The same thing can be stated categorically with a special compositional rule, Monstrous Functional Application, which combines the monster with the 'character' of its sister constituent.

(i)  $\llbracket \text{☹}_{\mathbf{k}} \rrbracket^{c,g} = \lambda f_{\langle k,\tau \rangle} . f(g(\mathbf{k}))$

(ii) Monstrous Functional Application

If  $\alpha$  has  $\text{☹}_{\mathbf{k}}$  and  $\beta$  as its daughter constituents, then  $\llbracket \alpha \rrbracket^{c,g} = \llbracket \text{☹}_{\mathbf{k}} \rrbracket^{c,g}(\lambda c'_k . \llbracket \beta \rrbracket^{c',g})$



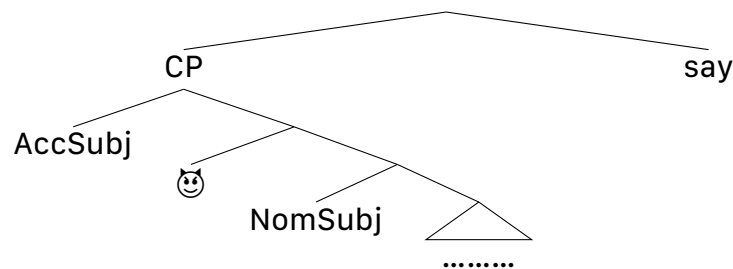
$$(29) \quad \left[ \left[ \begin{array}{c} \text{XP} \\ \text{☺}_k \end{array} \right] \right]^{c,g} = \left[ \text{XP} \right]^{g(k):g}$$

- In some languages (Amharic, Zazaki), ☺ is optionally present in attitude reports, so optional shifting.
- [Anand 2006](#) and [Deal 2020](#) postulates several distinct monsters that shift different aspects of possible contexts.

## 7.2 Two operator-based theories of indexical shift in Uyghur

### 1. Uniform theory ([Sudo 2012](#), [Shklovsky & Sudo 2014](#)):

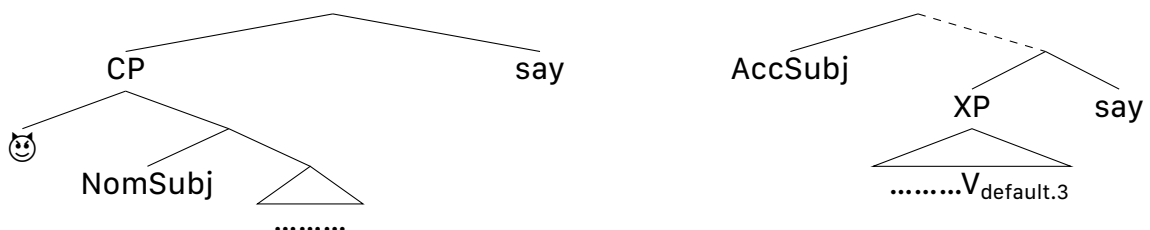
- Finite complement clauses with nominative and accusative subjects only differ with respect to the height of the subject.
- [Shklovsky & Sudo 2014](#) provide evidence that the accusative subject is structurally higher than the nominative subject.
- They propose that ☺ sits below the accusative subject but above the nominative subject.



- [Shklovsky & Sudo](#) also suggest that ☺ might be C, but its exact structural location is hard to determine in a strictly head-final language like Uyghur.
- Nominalised complement clauses are monster-free = no indexical shift.

### 2. Non-uniform theory ([Major 2022](#))

- Finite complement clauses with nominative subjects are as [Shklovsky & Sudo 2014](#) propose.
- Finite complement clauses with accusative subjects are a different construction. They are smaller in size and never contain ☺ (cf. nominalised clauses).
  - The accusative subject undergoes movement for case assignment. There is evidence that the accusative case is assigned by the matrix predicate.
  - The embedded verb bears default third-person agreement.



### 7.3 Potential issues for the non-uniform theory

1. Major 2022, 2024 does not provide direct evidence for the claim that finite clauses with an accusative subject are smaller in size. There is some suggestive evidence that they are not so small: Expressions that are considered to appear very high in structure are compatible with accusative subjects.

- Evidentials are compatible with accusative subjects.

(30) Adil [ Hoshur(-ni) nan ye-**p**-tu ] dë-di.  
Adil [ Hoshur(-ACC) bread eat-EVID-PRES.3 ] said  
'Adil said that Hoshur apparently ate bread.'

- Subjective particles are compatible with accusative subjects.

(31) Adil [ Dilyar(-ni) bazar-gha bar-ghan **du** ] dëdi.  
Adil [ Dilyar(-ACC) market-to go-PERF PRT ] said  
'Adil said that Dilyar certainly went to the market.'

- Embedded finite polar questions can have accusative subjects (We'll come back to *dep*).

(32) Adil [ Dilyar(-ni) ket-ti-mu dep ] sör-di.  
Adil [ Dilyar(-ACC) leave-PAST.3-Q DEP ] asked  
'Adil asked if Dilyar had left.'

2. There is some evidence against the claim that the apparent agreement mismatch is due to default agreement. Shklovsky & Sudo 2014 report some examples of accusative subjects with non-third person agreement.

(33) Ahmet [ Aygül-ni nan ye-**ysen** ] dëdi.  
Ahmet [ Aygül-ACC bread eat-NONPAST.2SG ] said  
'Ahmet said (to Aygül) that she ate bread.'

(34) men [ peqet öz-em-ni-la nan ye-**y-men** ] dëdim.  
1SG [ only self-1SG-ACC-FOC bread eat-NONPAST.1SG ] said  
'I said that only I ate bread.'

Major 2022 claims that in these cases, the accusative phrase is a proleptic argument of the matrix verb (similarly to *of* in English), and the embedded clauses are full CPs containing  $\bar{C}$  and a null (shifted) nominative subject, which triggers agreement.

But if accusative subjects are sometimes real subjects (triggering default agreement) and sometimes proleptic, then we'd expect both (35) and (36) to be acceptable.

(35) *pro* [ **mëni** ket-**tim** ] dë-dim.  
[ 1SG.ACC leave-PAST.1SG ] say-PAST.1SG  
'I said I had left.'

(36) \**pro* [ **mëni** ket-**ti** ] dë-dim.  
[ 1SG.ACC leave-PAST.3 ] say-PAST.1SG

These agreement facts are puzzling for the uniform theory too. We'll come back to this.

3. Accusative subjects can cooccur with shifted non-subject indexicals, contrary to [Major 2022](#).

- (37) Tursun Hoshur-gha [ Patigül-ni tünügün **mëni** kördi ] dédi.  
 Tursun Hoshur-DAT [ Patigül-ACC yesterday 1SG.ACC saw ] said  
 ✓ 'Tursun said that Patigül saw **him** (=Tursun) yesterday.'  
 ✓ 'Tursun said that Patigül saw **me** (=speaker) yesterday.'

This is less problematic for the uniform theory: the accusative indexical object *mëni* might be under ☹️, or above ☺️ (via string vacuous scrambling).

## 8 Open questions and issues

Overall the uniform theory seems to fare better, but there are some open issues.

### 8.1 Shifted verbal agreement

- Verbal agreement with the accusative subject makes sense if it undergoes indexical shift, but this is only possible if the verbal agreement is semantically interpreted.
- Analytical possibility: Verbal agreement is a clitic pronoun in Uyghur.
- Mishar Tatar (Turkic; Russia) works differently: Indexical shift is optionally available with *pro*-drop (also in Turkish?).

- (38) a. Alsu [ **min** kaja kitte-**m** diep ] at'tɣ?  
 Alsu [ I where left-1sg C ] said  
 ✗ 'Which place did Alsu say that she went?'  
 ✓ 'Which place did Alsu say that I went?'
- b. Alsu [ *pro* kaja kitte-**m** diep ] at'tɣ?  
 Alsu [ where left-1sg C ] said  
 ✓ 'Which place did Alsu say that she went?'  
 ✓ 'Which place did Alsu say that I went?' (Podobryaev 2014: p. 84)

In Turkic language, verbal agreement morphology looks very similar, casting doubt on postulating variation in their function.

### 8.2 Distribution of indexical shift and *dep*

- Distribution of indexical shift across languages and constructions:
  - No indexical shift: English, German, nominalised clauses in Uyghur, etc.
  - Optional indexical shift: Amharic, Zazaki, etc.
  - Obligatory indexical shift: finite clauses in Uyghur, etc.

The uniform theory accounts for this by stipulating when and where ☹️ cannot, can, or must appear.

- One generalisation that is not accounted for is that indexical shift appears to be never observed in clauses that cannot be independently used as full sentences, or non-verbal attitude operators like *according to her*.

- Variation among attitude predicates is another source of cross-linguistic variation.
  - In Amharic and Zazaki, indexical shift happens only under one verb *say/tell*.
  - In Slave indexical shift seems to be possible under several attitude predicates, but more data need to be gathered.
- Sudo 2012 observes that indexical shift obligatorily takes place in finite complements to all sorts of attitude predicates in Uyghur, including *dë-mek* 'say', *maxtan-maq* 'brag', *aghrin-maq* 'complain', *bil-mek* 'think/know', *oyli-mak* 'think', *ümid qil-mek* 'hope', *xejal qil-mek* 'dream', *angli-maq* 'hear'.
- Sudo's characterisation of Uyghur might not be entirely correct (as Major 2024 pointed out), because when the embedding attitude verb is not *dë-mek*, *dep* is obligatorily present.

(39) Ahmet [ qaysi imtihan-din öt- tim **dep** ] bilidu.  
 Ahmet [ which text-from pass-PAST.1SG DEP ] thinks  
 'Which test does Ahmet think that he passed?'

Major 2024 analyses *dep* as the converbial form of *de-* (similar to て形 in Japanese). This use is illustrated in (40).

(40) Mahinur birnëmi-ler-ni **de-p** warqiridi.  
 Mahinur something-PL-ACC say-CONV screamed  
 'Mahinur screamed, saying something.' (Major 2024)

Major 2024 proposes that *dep* that appears in finite complement clauses as in (39) is also just a converb, and the sentence means 'Ahmet thought, saying that he passed which test?', with a bleached meaning of 'say' (NB: We expect no island constraints with *wh*-in-situ).

- But Major's converbial analysis is untenable for cases like (41).

(41) Ahmet Aygül-din [ qaysi imtihan-din öt- **tim** dep ] anglidi.  
 Ahmet Aygül-from [ which text-from pass-PAST.1SG DEP ] heard  
 'Which test did Ahmet hear from Aygül that he passed?'

It's not Ahmet who 'said' something here, yet the shifted first person still refers to him!

- That being said, Major might be partially correct: It's possible that the complementiser use of *dep* is not a full-fledged complementiser but a 'grammaticalised converb' retaining (some of) the syntactic properties of converbs.

### 8.3 Reconstruction effects

- Shklovsky & Sudo 2014 tacitly assume that accusative subjects don't reconstruct. But some of their examples seem to contradict this assumption.

(42) Tursun [ **toqquz qiz-ning tolghaq-ni** teng keldi ] dëdi.  
 tursun [ nine girl-GEN labour-ACC together arrived ] said  
 'Tursun said that times were hard.'

- (43) Ahmet [ **hichkim-ni** ket-mi-di ] dëdi.  
 Ahmet [ anybody-ACC leave-NEG-PAST ] said  
 'Ahmet said that nobody left.'

If accusative subjects can reconstruct to their base-generated position, below 😊, they should be able to (optionally) shift, contrary to fact!

- [Shklovsky & Sudo 2014](#) also observe that scrambling to the left of the accusative subject bleeds indexical shift.

- (44) Ahmet Aygül-ge [ **sanga mëni** xet ewetti ] dëdi.  
 Ahmet Aygül-DAT [ you.DAT me.ACC letter sent ] said  
 ✗ 'Ahmet said to Aygül that I sent a letter to her.'  
 ✓ 'Ahmet said to Aygül that I sent a letter to you.'

- Scrambling in similar languages (e.g., Turkish, Japanese, Korean, Hindi/Urdu) is known to reconstruct, at least optionally. Again, if reconstruction is possible in (44), we'd expect the scrambled indexical to be able to (optionally) shift contrary to fact.
- Note that under every theory of indexical shift in the current literature, it's the LF position that matters. We might have to reconsider this assumption.

#### 8.4 Other indexicals in Uyghur

We only discussed indexical personal pronouns, but there are other indexical expressions, e.g., *here, now, today, yesterday*, etc.

- [Deal 2020](#) claims that there is variation among indexical expressions with respect to their shiftability:

(45) 1st person > 2nd person > locative

- As discussed by [Anand 2006](#), [Sudo 2012](#) and [Deal 2020](#), second person pronouns only shift under attitude verbs whose meanings are compatible with the idea of 'hearer', e.g., *tell*, but not under those that are not, e.g., *think*.
- It seems that demonstratives never shift across languages, although their interpretations are also dependent on contexts of utterance, similarly to indexicals (cf. [Kaplan 1977](#)).
- [Sudo 2012](#) reports that locative indexicals in Uyghur never shift, and suggests that this is related to the fact that they are morphosyntactically demonstratives, (e.g., *bu yer* '(lit.) this place').
- In my fieldwork with Kirill Shklovsky, we investigated temporal indexicals (e.g., *tünügün* 'yesterday', *bügün* 'today', *ete* 'tomorrow'), but our informant's judgments about them were not stable.
- More recently, I tested with some students possessive indexicals. Their judgments seemed to be also similarly unstable.

## 9 Concluding remarks

### 9.1 Summary

Dimensions of variation in indexical shift:

- **Availability:** Indexicals in English never shift, indexicals in Uyghur do
- **Optionality:** Indexicals in Amharic and Zazaki optionally shift, indexicals in finite complement clauses in Uyghur must shift.
- **Licensors:** Indexical shift is only possible under *say/tell* in Amharic and Zazaki, possibly so in Uyghur as well, but is observed under other verbs in Slave.
- **Undergoers:** Person indexicals generally shift but locative indexicals never do in Uyghur.

Conjectures:

- Indexical shift is never observed in clauses that cannot stand alone.
- What matters for indexical shift is LF position rather than surface position.

### 9.2 日本語

The following sentences seem to be ambiguous.

- (46) a. 花子は 太郎が私を招待したんだと 言っていた。  
b. 花子は 太郎が私に反論すると 思っていない。

But it's unclear if Japanese marks indirect vs. direct speech morphosyntactically (see, e.g., [Kuno 1988](#), [Maier 2008](#)).

#### 9.2.1 Long-distance *wh*-phrases

Baselines:

- (47) a. 花子は 誰が太郎を招待したんだと 言っていたの？  
b. 花子は 太郎が誰を招待したんだと 言っていたの？

I find the following examples ambiguous with respect to the referents of indexicals.

- (48) a. 花子は 誰が私を招待したんだと 言っていたの？  
b. 太郎は 誰が僕を招待したんだと 言っていたの？  
(49) a. 花子は 私が誰を招待したんだと 言っていたの？  
b. 太郎は 僕が誰を招待したんだと 言っていたの？  
(50) a. 花子は 誰が私に気があるみたいだと 思っているの？  
b. 花子は どの学術雑誌に私の論文が載っていると 自慢したの？  
(51) a. 先週花子は 誰が今日訪ねてくる予定だと 言っていたの？  
b. 花子は 誰と今電話していると そのとき言っていたの？

### 9.2.2 Long-distance negative concord licensing

Baselines:

- (52) a. 花子は 誰も太郎に反論すると 思っていない。  
b. 花子は 太郎が何もできると 思っていない。

I think the following examples do not have shifted interpretations.

- (53) a. 花子は 誰も私に反論すると 思っていない。  
b. 太郎は 誰も僕に反論すると 思っていない。  
(54) a. 花子は 私が何もできると 思っていない。  
b. 太郎は 僕が何もできると 思っていない。  
(55) a. 先週花子は 誰も今日訪ねてくる予定があるとは 言っていなかった。  
b. そのとき花子は 誰も今自分の家にいるとは 言っていなかった。

### 9.2.3 Both tests at the same time

- (56) a. 花子は どの会議では誰も私に反論すると 思っていないの？  
b. 太郎は どの会議では誰も僕に反論すると 思っていないの？

### 9.2.4 Finite vs. nominalised complement clauses

- (57) a. 花子は 私が誰を追い詰めてしまったと 後悔しているの？  
b. 花子は 私が誰を追い詰めてしまったことを 後悔しているの？  
(58) a. 花子は どの学術雑誌に私の論文が載ったと 自慢していたの？  
b. 花子は どの学術雑誌に私の論文が載ったことを 自慢していたの？

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