

A tale of two *-mİş*'s: between evidential and attitudinal semantics

Lingzi Zhuang, Eszter Ótrott-Kovács*

Cornell University

Tu+7 Workshop

March 25, 2022

1 Introduction

- Turkish is well-known for overtly marking indirect evidentiality (Şener 2011, Meriçli 2016)

- (1) Okul Pazartesi günü aç-ıl-acak-**mİş**.
school Monday day open-PASS-PRSP-EVID

‘The school is going to reopen on Monday (**I heard/ I inferred**).’

- **Focus of today’s talk: the “double-*mİş*” construction**

- (2) Okul Pazartesi günü aç-ıl-acak-**mİş-mİş**.
school Monday day open-PASS-PRSP-EVID-**mİş**

1. ‘The school is going to reopen on Monday (**I heard from someone who heard it from someone**).’
2. ‘The school is going to reopen on Monday (**I heard from someone but it’s ridiculous**).’

Main proposals

- Two distinct meanings of *-mİş-mİş*:
 - 3rd-hand reportative evidential: “SPKR heard *p* from someone, who heard it from someone else”
 - Incredulity attitude over 2nd-hand report: “SPKR heard *p* from someone, and finds *p* to be ridiculous.”
- The two uses pattern differently with respect to: **Interrogative Flip, discourse commitments**
- Proposal in a nutshell:
 - Distinguish reportative evidential *-mİş_{REP}* and incredulity attitude *-mİş_{INCR}*
 - Compositionally derive 3rd-hand reportative *-mİş-mİş* and incredulity over 2nd-hand report *-mİş-mİş*

*We would like to thank our five Turkish consultants for providing their judgments, and also to Burak Öney for judgments on some very difficult data. We are greatly indebted to Figen Uç for her invaluable comments and discussion.

2 Two uses of *-mİş-mİş*

- Double-*mİş* constructions have two distinct interpretations

- **3rd-hand reportative**

- (3) **The principal told Gökçen** that the school is going to reopen on Monday. **Gökçen then told this to Merve.** Merve says to her mother: *I just talked to Gökçen, who talked to principal...*
Okul Pazartesi günü aç-ıl-acak-mış-**mİş**.
school Monday day open-PASS-PRSP-REP-**3REP**
'The school is going to reopen on Monday (I heard from someone **who heard it from someone**).'

- **Incredulity attitude over 2nd-hand report**

- (4) **Gökçen told Merve** that the school is going to reopen on Monday. **Merve thinks that this information is ridiculous.** Merve says to her mother: *I just talked to Gökçen...*
Okul Pazartesi günü aç-ıl-acak-mış-**mİş**.
school Monday day open-PASS-PRSP-REP-**INCRED**
'The school is going to reopen on Monday (I heard from someone, **but it's ridiculous**).'

- The incredulity attitude ranges over the **at-issue proposition** (the information being reported):

- In (4), Merve's utterance conveys that she thinks that *the school is going to reopen on Monday* is ridiculous.
 - The incredulity attitude is *not* about the evidential proposition "According to what Gökçen believes/thinks, *the school is going to reopen on Monday*."
 - This is diagnosed by the infelicity of (5).
- (5) **Gökçen told Merve** that the school is going to reopen on Monday. **Merve thinks that it is ridiculous for Gökçen to believe/think such thing.** Merve says to her mother: *I just talked to Gökçen...*
Okul Pazartesi günü aç-ıl-acak-mış-**mİş**.
school Monday day open-PASS-PRSP-REP-**INCRED**
'(It's ridiculous for Gökçen to believe/think that) The school is going to reopen on Monday.'
- The incredulity attitude is also *not* about the quality of the **source** of information.
 - If the quality of the source was relevant, (6) would be felicitous

- (6) Gökçen encounters a fortune teller, who tells Gökçen that his wife is cheating on him. **Gökçen happens to know that his wife is cheating on him, but he also thinks that fortune telling is bogus.** He says to a friend: *I just talked to a fortune teller...*
Eş-im beni aldat-ıyor-muş-**muş**.
partner-1SG(POSS) 1SG.ACC cheat-PROG-REP-**INCRED**
'(According to an unreliable source) My wife is cheating on me.'

3 Key empirical differences

3.1 Discourse commitments

- Reportatives cross-linguistically are compatible with variable speaker commitment to the at-issue p (“Reportative exceptionality”, AnderBois 2014)

- (7) Okul Pazartesi günü aç-ıl-acak-**mış**.
school Monday day open-PASS-PRSP-**REP**
‘The school is going to reopen on Monday (I heard from someone).’
- a. ... **valla, ben inanıyorum.**
‘I believe this.’
- b. ... **ben inanmıyorum.**
‘I don’t believe this.’

3.1.1 3rd-hand reportatives

- Evokes variable speaker commitment to the at-issue p
- Patterns with reportative evidentials

- (8) Okul Pazartesi günü aç-ıl-acak-mış-**mış**.
school Monday day open-PASS-PRSP-REP-**3REP**
‘The school is going to reopen on Monday (I heard from someone **who heard it from someone**).’
- a. ... **valla, ben inanıyorum.**
‘I believe this.’
- b. ... **ben inanmıyorum.**
‘I don’t believe this.’

3.1.2 Incredulity attitude over 2nd-hand report

- INCRED commits the SPKR to the incredulity attitude
- (9) is only compatible with lack of speaker commitment

- (9) Okul Pazartesi günü aç-ıl-acak-mış-**mış**.
school Monday day open-PASS-PRSP-REP-**INCRED**
‘The school is going to reopen on Monday (I heard from someone, **but it’s ridiculous**).’
- a. #... **valla, ben inanıyorum.**
‘I believe this.’
- b. ... **ben inanmıyorum.**
‘I don’t believe this.’

3.2 Interrogative Flip

- The evidence holder flips from **SPKR** to **ADDR** in information-seeking questions (Garrett 2001, Korotkova 2018, Bhadra 2020)
 - It is possible for evidentials to be non-flipping if the interrogative force is noncanonical (Dayal 2016), e.g. quiz questions, self-directed questions, etc. (Bhadra 2020)
 - In the information-seeking interrogative (10) the evidence holder flips from the **SPKR** (Merve's brother) to the **ADDR** (Merve)
- (10) **Gökçen told Merve** that the school is going to reopen on Monday. Merve's brother overheard Merve's conversation, but misses the date. He asks Merve:
Okul ne zaman aç-ıl-acak-mış?
school what time open-PASS-PRSP-**REP**
'(According to **YOUR second-hand report**) When is the school going to reopen?'

3.2.1 3rd-hand reportative

- **3REP** displays Interrogative flip: the **evidential origo** flips to the **ADDR**
 - In (11) the evidence holder is flipped to the **ADDR** (Merve), who has third-hand evidence
- (11) **The principal told Gökçen** that the school is going to reopen on Monday. **Gökçen then told this to Merve**. Merve's brother overheard Merve's conversation, but misses the date. He asks Merve:
Okul ne zaman aç-ıl-acak-mış-mış?
school what time open-PASS-PRSP-REP-**3REP**
'(According to **YOUR third-hand report**) When is the school going to reopen?'
- In unbiased questions, the evidence holder obligatorily flips to the **ADDR**
 - In the unbiased interrogative (12) the evidence holder can't be the **SPKR** (Merve's brother)
- (12) **Gökçen told Merve** that the school is going to reopen on Monday. Merve's brother overheard Merve's conversation, but misses the date. He asks Merve:
Okul ne zaman aç-ıl-acak-mış-mış?
school what time open-PASS-PRSP-REP-**3REP**
'(According to **MY third-hand report**) When is the school going to reopen?'

3.2.2 Incredulity attitude over 2nd-hand report

- **Evidence holder** flips from **SPKR** to **ADDR**
- **Attitude holder** remains the **SPKR**
 - In (13) the evidence holder is the **ADDR** (Merve), but the attitude holder is the **SPKR** (Merve's brother)

- (13) **Gökçen told Merve** that the school is going to reopen on Monday. Merve’s brother overheard Merve’s conversation, but misses the date. **Merve’s brother thinks that Gökçen is a liar.** He asks Merve:
Okul ne zaman aç-ıl-acak-mış-mış?
school what time open-PASS-PRSP-REP-INCRED
‘(According to YOUR second-hand report) When is the school going to reopen (—and I would find whatever your report says to my question to be ridiculous)?’

- The attitude holder can’t be flipped to the ADDR
 - In the **infelicitous** (14) both the evidential origo and the attitude holder are flipped to the ADDR (Merve)

- (14) **Gökçen told Merve** that the school is going to reopen on Monday. Merve’s brother overheard Merve’s conversation, but misses the date. **He knows that Merve does not believe whatever Gökçen says. He thinks Gökçen is reliable.** He asks Merve:
Okul ne zaman aç-ıl-acak-mış-mış?
school what time open-PASS-PRSP-REP-INCRED
‘(According to YOUR second-hand report) When is the school going to reopen (—and YOU would find whatever your report says to be ridiculous)?’

- (15) Summary of empirical properties for REP, 3REP and INCRED-OVER-REP

	REP	3REP	INCRED-OVER-REP
SPKR commitment to p	variable	variable	no commitment
Interrogative Flip:			
Evidence holder flips to ADDR	✓	✓	✓
Attitude holder flips to ADDR	—	—	×

4 Analysis

4.1 Overview

- Want: a *parsimonious* set of lexical items that
 - Compositionally derives both uses of $-mİş-mİş$ and their key properties;
 - Is both language-internally and typologically well-motivated.

Proposal 1: Turkish has two $-mİş$ suffixes with distinct semantics.

- A reportative evidential $-mİş_{REP}$ = identical with the reportative version of single evidential $-mİş$
- An incredulity attitudinal $-mİş_{INCRED}$

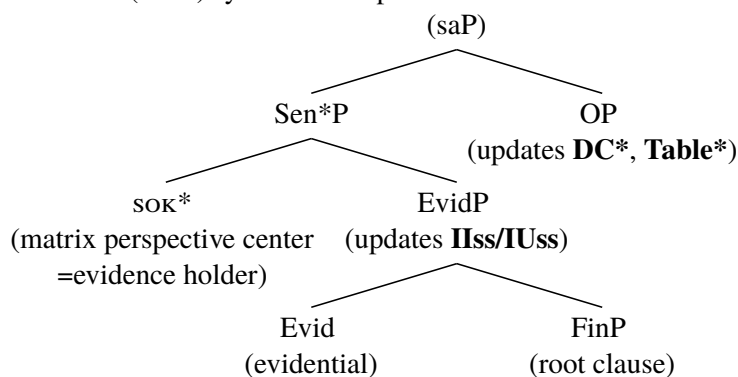
Proposal 2: The two uses of $-mİş-mİş$ are derived compositionally from $-mİş_{REP}$ and $-mİş_{INCRED}$.

- 3rd-hand reportative $-mİş-mİş$ is composed of $-mİş_{REP}-mİş_{REP}$ = a genuine “double evidential”
- Incredulity over 2nd-hand report $-mİş-mİş$ is composed of $-mİş_{REP}-mİş_{INCRED}$

4.2 Theoretical preliminaries

- Two types of approaches to evidential meaning
 - Evidentials as encoding **epistemic** meaning, either modal (Izvorski 1997, Matthewson et al. 2007, Smirnova 2013, a.m.o.) or attitudinal (Korotkova 2016)
 - Evidentials as contributing **illocutionary** updates (Faller 2002, Murray 2010, 2017, AnderBois 2014, a.o.)
- Evidentials-as-epistemic theories more explicitly handle **epistemic-semantic** properties: embedding, perspective-anchoring/shift, de se-ness, modal strength of claim
- Evidentials-as-illocutionary theories more explicitly handle **discourse-level** properties: discourse commitments, not-at-issue-ness, force, anaphora
- Recent work (Bhadra 2017, 2020) has pointed towards a **integrative/interface** approach:
- Model **both** epistemic **and** illocutionary meanings, at different functional layers in the syntactic-compositional structure. This is schematically shown in (16).
- Main ingredients of this approach:
 - Adopt *configurational* (syntactic) representations of evidentiality, point-of-view phenomena and discourse roles in the left periphery (Speas and Tenny 2003, Miyagawa 2012, Haegeman and Hill 2013, Wiltschko and Heim 2016, Zu 2018, a.o.)
 - Explicitly define semantic composition and discourse updates in terms of this articulated syntactic structure.
 - Goal: an explicit syntax-semantics (static and dynamic) interface

(16) Bhadra's (2020) syntactic-compositional structure for evidentially-marked utterances

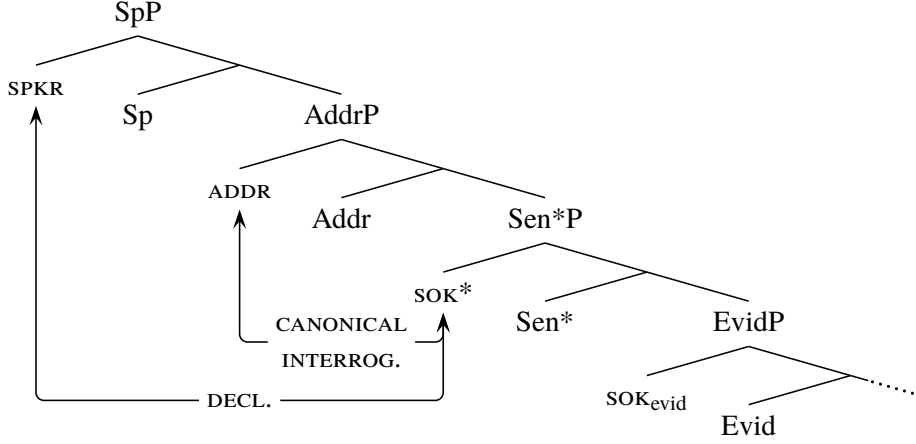


(Bhadra 2020:ex.57, adapted)

- We are working towards an integrative analysis for *-mIs-mIs*.
 - Today's focus: static compositional semantics, in the Sentence layer
- We specifically adopt Zu's (2018) formulation of the speech-act layer in the syntax, as shown in (17).
 - The root *SPKR* and *ADDR* are each introduced in the specifier position of a dedicated speech-act-layer functional projection: *SpP* and *AddrP*.

- Root-clause perspective center (“seat of knowledge,” sok) is introduced in the specifier position of a root-clause Sentence projection: Sen*P
- Importantly: Interrogative Flip is modeled as the differential binding of root sok by SPKR (in declaratives and certain non-canonical questions) and ADDR (in canonical questions).
- This mechanism will enable a configurational account of why evidentials such as 3_{REP} -mI_S-mI_S Flip, whereas attitudinal markers such as INCRD -mI_S-mI_S do not Flip.

(17) Syntactic representation of discourse context (Zu 2018, synthesized)



4.3 3rd-hand reportativity = reportative evidential -mI_S × 2

- We analyze the semantics of evidentials like -mI_{S_{REP}} as epistemic attitudes (following Korotkova 2016, Bhadra 2017, Bhadra 2020).
 - In particular, following Bhadra (2020), we analyze _{REP} evidentiality as **attitude ascription to a third person** (a non-discourse participant) by a discourse participant, as shown in (18).
- For expository purposes, we adopt a two-dimensional semantic representation (*à la* Potts, 2005, see also Bary and Maier 2021), to keep track of the at-issue proposition and the not-at-issue evidential/attitudinal meaning component (not necessarily claiming specific dynamic-semantic properties at this stage).

(18) **Denotation of reportative -mI_S**

$$\llbracket -mI_{S_{REP}} \rrbracket^{c, \langle w, t, j \rangle} = \lambda p \lambda q \lambda t \lambda j \lambda w \left\langle \begin{array}{c} p \\ \forall w', t', j' \in EPIST_{w, t, j} [q(w')(t')(j')] \end{array} \right\rangle$$

defined iff. $\exists e \in E[\text{SAY}(e) \wedge Ag(e) = j \wedge \tau(e) = t < \text{TIME}(c) \wedge \text{Content}(e) \models p]$
 where $EPIST_{w, t, j} = \{ \langle w', t', j' \rangle \mid \text{it is compatible with what } j \text{ knows in } w \text{ at } t \text{ for } j \text{ to be } j' \text{ in } w' \text{ at } t' \}$;
 (Stephenson 2007)

E is some discourse-salient set of events (Bary and Maier 2021)

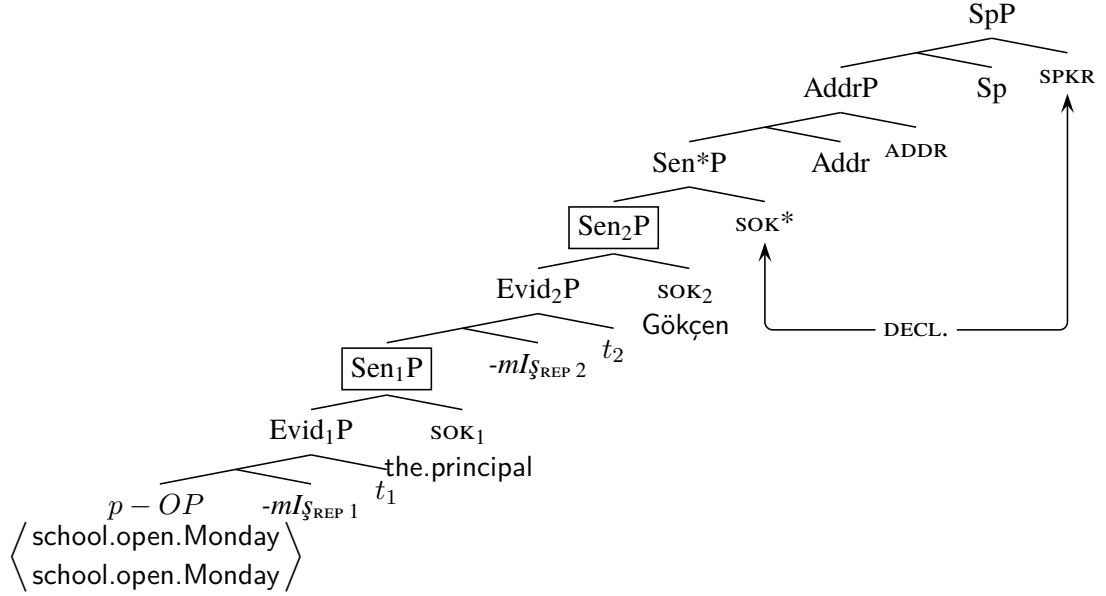
Paraphrase of evidential component: p is true for all that j knows in w at t .

- This enables us to analyze 3rd-hand reportative -mI_S-mI_S as one -mI_{S_{REP}} embedded in another -mI_{S_{REP}}. An illustrative derivation is shown in (19a).

- Each $-mI_{\text{REP}}$ heads a EvidP projection, with a Sen(tience)P introducing its evidence holder (Speas and Tenny 2003).
- SenP’s can be embedded: models perspective-shift phenomena in attitude complements (Zu 2018:§2).
- We maintain a root Sen*P as the locus of the perspective center of the evidentially-marked root clause, i.e. the evidence holder (SPKR in declaratives, ADDR in canonical questions).

(19) Syntactic-compositional structure and semantic derivation for 3rd-hand reportative $-mI_{\text{REP}}-mI_{\text{REP}}$:

- a. ‘The school is going to open on Monday (SPKR heard it from Gökçen who heard it from the principal).’ ... (3)



- b. Semantic derivation for 3rd-hand reportative $-mI_{\text{REP}}-mI_{\text{REP}}$

$$\begin{aligned}
 \llbracket \text{Sen}_1\text{P} \rrbracket &= \llbracket -mI_{\text{REP } 1} \rrbracket \left(\left\langle \begin{array}{c} \text{school.open.Monday} \\ \text{school.open.Monday} \end{array} \right\rangle \right) (t_1) (\text{the.principal}) \\
 &= \lambda t \lambda j \lambda w \left\langle \begin{array}{c} \text{school.open.Monday} \\ \forall \langle w', t', j' \rangle \in \text{EPIST}_{w, t, j} [\text{school.open.Monday}(w')(t')(j')] \end{array} \right\rangle (t_1) (\text{the.principal}) \\
 &= \lambda w \left\langle \begin{array}{c} \text{school.open.Monday} \\ \forall \langle w', t', j' \rangle \in \text{EPIST}_{w, t_1, \text{the.principal}} [\text{school.open.Monday}(w')(t')(j')] \end{array} \right\rangle \\
 \llbracket \text{Sen}_2\text{P} \rrbracket &= \llbracket -mI_{\text{REP } 2} \rrbracket (\llbracket \text{Sen}_1\text{P} \rrbracket) (t_2) (\text{Gökçen}) \\
 &= \lambda w \left\langle \begin{array}{c} \text{school.open.Monday} \\ \forall \langle w'', t'', j'' \rangle \in \text{EPIST}_{w, t_2, \text{Gökçen}} [\\ \quad \forall \langle w', t', j' \rangle \in \text{EPIST}_{w, t_1, \text{the.principal}} [\text{school.open.Monday}(w')(t')(j')] \end{array} \right\rangle
 \end{aligned}$$

Paraphrase of evidential component: for all that Gökçen knows in w at t_2 , it is the case that, for all that the principal knows in w at t_1 , school will reopen on Monday.

- Essentially: the evidential meaning of $p-mI_{\text{REP}}-mI_{\text{REP}}$ amounts to “ p for all that src_2 knows at t_2 from all that src_1 knows at t_1 .”

- In the pragmatics, (a chain of) third-person attitude ascriptions will not necessarily commit the SPKR to the root proposition.
→ **variable discourse commitment**
- Note that 3REP $-mI_S - mI_S$, like any other evidential, is interpreted *below* the locus of the matrix sok^* , which hosts the evidence holder.
 - Thus, under the 3REP version of $-mI_S - mI_S$, the evidence holder is subject to Interrogative Flip exactly as expected from the differential binding of sok^* as in (17).
→ **Interrogative Flip**

4.4 Incredulity over 2nd-hand report = a reportative evidential + a subjective attitude marker

- In addition to $-mI_{S_{\text{REP}}}$, we propose a distinct $-mI_{S_{\text{INCRD}}}$, which encodes a subjective attitude over the at-issue proposition p . This is shown in (20).

(20) **Denotation of incredulity $-mI_S$**

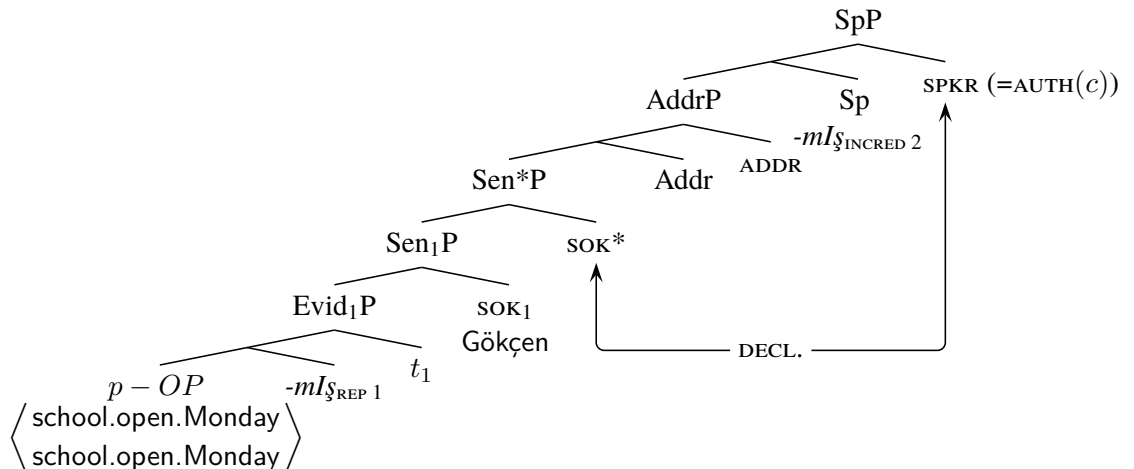
$$\llbracket -mI_{S_{\text{INCRD}}} \rrbracket^{c, \langle w, t, j \rangle} = \lambda p \lambda q \lambda j \lambda w \left\langle q \wedge j \text{ thinks that } p \text{ is ridiculous in } w \right\rangle$$

defined iff. $\exists e \in E[\text{SAY}(e) \wedge \text{Ag}(e) = j \wedge \tau(e) = t < \text{TIME}(c) \wedge \text{Content}(e) \models p]$

- Thus, we analyze incredulity over 2nd-hand report $-mI_S - mI_S$ as $-mI_{S_{\text{INCRD}}}$ embedding a $-mI_{S_{\text{REP}}}$. An illustrative example is given in (21a-21b).
- Unlike $-mI_{S_{\text{REP}}}$, we analyze $-mI_{S_{\text{INCRD}}}$ as a higher Sp head: this guarantees that the judge argument of $-mI_{S_{\text{INCRD}}}$ in (20) will always be saturated by the matrix SPKR.
 - This accounts for the fact that the perspective center (attitude holder) of the INCRD attitude is rigidly anchored to the matrix SPKR.
no Interrogative Flip of INCRD attitude
 - Unlike the evidence holder of the inner reportative $-mI_{S_{\text{REP}} 1}$ (=sok*), which remains subject to differential binding by SPKR and ADDR!
Interrogative Flip of 2nd-hand REP
- Since $-mI_{S_{\text{INCRD}}}$ lexically encodes a SPKR-oriented attitude of incredulity, it commits the SPKR to having that attitude over p .
→ **lack of SPKR commitment**

(21) Syntactic-compositional structure for incredulity over 2rd-hand report $-mI_S - mI_S$

- a. ‘The school is going to reopen on Monday (SPKR heard from Gökçen, and SPKR thinks it’s ridiculous).’ ... (4)



b. Semantic derivation for incredulity over 2nd-hand report *-mİş-mİş*

$$\begin{aligned} \llbracket \text{Sen}_1 \text{P} \rrbracket &= \lambda w \left\langle \begin{array}{c} \text{school.open.Monday} \\ \forall \langle w', t', j' \rangle \in \text{EPIST}_{w, t_1, \text{Gökçen}} [\text{school.open.Monday}(w')(t')(j')] \end{array} \right\rangle \\ \llbracket \text{SpP} \rrbracket &= \llbracket -mİş_{\text{INCRED } 2} \rrbracket (\llbracket \text{Sen}_1 \text{P} \rrbracket) (t_2) (\text{SPKR}=\text{AUTH}(c)) \\ &= \lambda w \left\langle \begin{array}{c} \text{school.open.Monday} \\ \forall \langle w', t', j' \rangle \in \text{EPIST}_{w, t_1, \text{Gökçen}} [\text{school.open.Monday}(w')(t')(j')] \wedge \\ \text{AUTH}(c) \text{thinks that} \quad \text{school.open.Monday} \quad \text{is ridiculous in } w \end{array} \right\rangle \end{aligned}$$

Paraphrase of evidential-attitudinal component: for all that Gökçen knows in w at t_1 , school will open on Monday, *and* SPKR finds it ridiculous that school will open on Monday.

5 Summary: internal and cross-linguistic motivations

- We have identified two homophonous *-mİş* suffixes for Turkish: one with **evidential** semantics, one with **attitudinal** semantics.
- We have shown that an evidential *-mİş* and an attitudinal *-mİş* can derive the two interpretations of *-mİş-mİş* in a straightforwardly compositional way.
- Motivations for positing evidential-attitudinal homophony:
- **Language-internally:**
 - Enables *compositional* analysis of 3REP and INCRED-over-2nd-hand-report...
 - ...*without* the need for an (implausible) pragmatic account of how a reportative evidential might sometimes lose its evidential restriction altogether, only retaining an attitudinal meaning.
[# INCRED-over-3rd-hand-report]
 - Allows for a straightforward account of the different behavior of the attitudinal marker in questions.
[According to *your* 2nd-hand report which # *you* find ridiculous, ...?]
 - Enables a cleaner, more parsimonious morphosyntactic analysis: no “reduplication” of evidential morphemes (*pace* Şener 2011)
- **Cross-linguistically:**
 - Attitudinal markers with a reportative evidential etymology are commonly attested.
 - Zhuang (*in prep*): Shanghai Wu counterexpectational (mirative) attitude marker *ghikaon* < speech report parenthetical *ghi kaon* 渠講 ‘3sg-say’

(22) CONTEXT: The weather forecast last night said it would be sunny all day today. You wake up, walk out of your windowless bedroom and see it’s raining. You say:

lahlah loh yu **ghikaon**.

辣辣 落 雨 渠講

PROG fall rain **MIR**

‘It’s raining, gosh (I didn’t expect that).’

Shanghai Wu, Sinitic

- Cantonese “novelty/noteworthiness” attitude marker *wo3* (\neq *wo5* ‘reportative marker’) < *waa* 話 ‘say’

- (23) baa⁴baa¹ giu³ nei⁵ zik¹hak¹ heoi³ wo³.
 爸爸 叫 你 即刻 去 啲³
 father ask 2sg immediately go **NOTEWORTHY**
 ‘Father asked you to go immediately, it turns out!’

Cantonese, Sinitic (Leung 2011:p. 35, slightly adapted)

- Bulgarian “double evidential”: dismissive attitude over 2nd-hand report (Simeonova 2021, cf. Sauerland and Schenner 2007)

- (24) Ali bi-l pročē-l kniga. * no 3REP meaning (=no longer)
 A. COP-ATT read.PFV-REP book * In questions: only attitude-over-speech-act reading,
 ‘Ali read a book, I heard from Burak—as if!’ no attitude-over-alternatives reading

Bulgarian, South Slavic (Simeonova 2021:ex. 2a, slightly adapted)

- Interestingly: the Bulgarian “double evidential,” while a clear morphosyntactic parallel of Turkish *-mİş*, does not (=no longer) attest a 3rd-hand reportative meaning.
- Zhuang and Ótrott-Kovács (2022) propose a diachronic reanalysis process of reportativity markers to markers of SPKR-oriented attitude.
- In sum: positing a synchronically distinct attitudinal marker *-mİş* is well-motivated.

Turkish INCRED *-mİş* in fact has two readings differing in scope:
 school.reopen.Monday-dl-mİş?

- (a) attitude-over-alternatives reading: {p, not-p}?, — and I would find either p or not p ridiculous
 (b) attitude-over-speech-act reading: (p, not-p)?, — what a ridiculous question to ask!

References

- AnderBois, Scott (2014). “On the exceptional status of reportative evidentials.” In: *Semantics and Linguistic Theory*. Vol. 24, pp. 234–254. DOI: [10.3765/salt.v24i0.2424](https://doi.org/10.3765/salt.v24i0.2424).
- Bary, Corien and Emar Maier (2021). “The landscape of speech reporting.” In: *Semantics and Pragmatics* 14, p. 8.
- Bhadra, Diti (2017). “Evidentiality and questions: Bangla at the interfaces.” PhD thesis. Rutgers, The State University of New Jersey-New Brunswick.
- (2020). “The Semantics of Evidentials in Questions.” In: *Journal of Semantics* 37.3, pp. 367–423. DOI: [10.1093/jos/ffaa003](https://doi.org/10.1093/jos/ffaa003).
- Faller, Martina Theresia (2002). “Semantics and pragmatics of evidentials in Cuzco Quechua.” PhD thesis. Stanford University.
- Haegeman, Liliane and Virginia Hill (2013). “The syntacticization of discourse.” In: *Syntax and its limits* 48, pp. 370–390.
- Izvorski, Roumyana (1997). “The present perfect as an epistemic modal.” In: *Semantics and Linguistic Theory*. Vol. 7, pp. 222–239.

- Korotkova, Natasha (2016). “Heterogeneity and uniformity in the evidential domain.” PhD thesis. University of California, Los Angeles.
- Leung, Wai Mun (2011). “A Study of Evidential Particles in Cantonese: the case of wo3 & wo5.” In: *The Buckingham Journal of Language and Linguistics* 4, pp. 29–52.
- Matthewson, Lisa, Henry Davis, and Hotze Rullmann (2007). “Evidentials as epistemic modals: Evidence from St’át’imcets.” In: *Linguistic Variation Yearbook* 7.1, pp. 201–254.
- Meriçli, Benjamin S. (2016). “Modeling Indirect Evidence.” PhD thesis. University of California, Santa Cruz.
- Miyagawa, Shigeru (2012). “in the main clause.” In: *Main clause phenomena: New horizons* 190, p. 79.
- Murray, Sarah (2010). “Evidentiality and the structure of speech acts.” PhD thesis. Rutgers, The State University of New Jersey-New Brunswick.
- (2017). *The semantics of evidentials*. Vol. 9. Oxford University Press.
- Potts, Christopher (2005). *The Logic of Conventional Implicatures*. Oxford Studies in Theoretical Linguistics 7. Oxford University Press. DOI: [10.1093/acprof:oso/9780199273829.001.0001](https://doi.org/10.1093/acprof:oso/9780199273829.001.0001).
- Sauerland, Uli and Mathias Schenner (2007). “Embedded evidentials in Bulgarian.” In: *Proceedings of Sinn und Bedeutung*. Vol. 11, pp. 525–539.
- Şener, Nilufer (2011). “Semantics and pragmatics of evidentials in Turkish.” PhD thesis. University of Connecticut.
- Simeonova, Vesela (Mar. 2021). “The bull\$#% ! operator.” Handout at Szklarska Poręba 21.
- Smirnova, Anastasia (2013). “Evidentiality in Bulgarian: Temporality, epistemic modality, and information source.” In: *Journal of semantics* 30.4, pp. 479–532.
- Speas, Peggy and Carol Tenny (2003). “Configurational properties of point of view roles.” In: *Asymmetry in Grammar*. Ed. by Anna Maria Di Sciullo. Vol. 1. John Benjamins, pp. 315–345. DOI: [10.1075/1a.57.15spe](https://doi.org/10.1075/1a.57.15spe).
- Stephenson, Tamina (2007). “Judge dependence, epistemic modals, and predicates of personal taste.” In: *Linguistics and Philosophy* 30.4, pp. 487–525. DOI: [10.1007/s10988-008-9023-4](https://doi.org/10.1007/s10988-008-9023-4).
- Wiltschko, Martina and Johannes Heim (2016). “The syntax of confirmationals.” In: *Outside the clause: Form and function of extra-clausal constituents* 178, p. 305.
- Zhuang, Lingzi (in prep). “The reportative-mirative connection.”
- Zhuang, Lingzi and Eszter Ótrott-Kovács (2022). “How reportatives become attitudinal: Turkish ”double evidential” in diachronic and cross-linguistic view.” Annual Meeting of the Linguistic Society of America. Washington, D.C.
- Zu, Xin (2018). “Discourse participants and the structural representation of the context.” PhD thesis. New York University.

A Incredulity *-mİş-mİş* under attitude embedding

- The evidential origo can shift (from the *SPKR* to the *SUBJECT* of the matrix clause) (Şener 2011)
- The attitude holder can also shift under verbs of *saying*
 - In (26a)-(26b) the attitude holder is shifted (it is the *SUBJECT*)

(25) Merve, who was introduced to Gökçen just last week, confesses her love to him. **Gökçen believes her.**

Gökçen then talks to a friend of Merve's, and tells the friend that Merve told him that she loved him.

This friend does not believe that Merve loves Gökçen.

The friend then says to another person:

- a. Gökçen_i, Merve **onu_i** sev-iyor-muş-**muş** dedi.
Gökçen_i Merve **3SG.ACC_i** love-PRGR-REP-**INCRED** said
'Gökçen said that Merve loves him. (**Gökçen believes it, SPKR doesn't believe it.**)'
- b. # Gökçen_i, Merve **beni_i** sev-iyor-muş-**muş** dedi.
Gökçen_i Merve **1SG.ACC_i** love-PRGR-REP-**INCRED** said
'Gökçen said that Merve loves him. (**Gökçen believes it, SPKR doesn't believe it.**)'

(26) Merve, who was introduced to Gökçen just last week, confesses her love to him. **Gökçen doesn't believe her.**

Gökçen then talks to a friend of Merve's, and tells the friend that Merve told him that she loved him.

This friend believes that Merve loves Gökçen.

The friend then says to another person:

- a. Gökçen_i, Merve **onu_i** sev-iyor-muş-**muş** dedi.
Gökçen_i Merve **3SG.ACC_i** love-PRGR-REP-**INCRED** said
'Gökçen said that Merve loves him. (**Gökçen doesn't believe it, SPKR believes it.**)'
- b. Gökçen_i, Merve **beni_i** sev-iyor-muş-**muş** dedi.
Gökçen_i Merve **1SG.ACC_i** love-PRGR-REP-**INCRED** said
'Gökçen said that Merve loves him. (**Gökçen doesn't believe it, SPKR believes it.**)'