

What was believed, what was true: the case of *meġer*

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Referring back to past epistemic states

- Natural languages have ways to refer back to the previous stages of the epistemic states of conversational participants.

(1) I believed that Aramis was in France.

Falsity entailment

- These do not necessarily imply an update on the epistemic states of the participants, i.e., they do not say anything with respect to their current epistemic state.

- (2)
- a. I believed that Aramis was in France.
 - b. ... and he was in France.
 - c. ... and he was in Italy.

Refer to the past, update the present

- Differently from English ‘I believed that p’, *meğer* in Turkish can simultaneously refer to the previous and current epistemic states of the speaker.

(3) Dün Aramis-le konuş-tu-m. **Meğer**
 yesterday Aramis-COM talk-PST-1.SG *meğer*
 İtalya-da-y-mış.
 Italy-LOC-COP-EVID
 ‘I talked with Aramis yesterday. *Meğer* he is/was in Italy.’
 \approx *I believed that Aramis was not in Italy. I now believe that he is/was.*

Refer to the past, update the present

- One could argue that *meğer* is reminiscent of *apparently* in English.
- However, although *apparently* implies the falsity of the past belief, it does not entail it as illustrated in (4).

(4) I believed that Aramis was in France. Apparently he was.

Contextualizing *meğer*

- *Meğer* seems to belong to a subset of discourse markers that refers to the epistemic states of conversational participants (Erguvanlı-Taylan 2000).
- There has been research on such markers in German (Kratzer 1999; 2004, Coniglio 2007, Egg & Zimmermann 2012, Döring 2016; 2019, a.o.).
- In Turkish, to my knowledge, only *hani* has been given formal treatment (Akar et al. 2020, Akar & Öztürk 2020, Dikmen et al. 2023).
- This study aims to contribute to the formal research on discourse markers in Turkish.

Complexity of *meġer*

- *Meġer* has two other forms:

(5) meġer-se(-m)
 meġer-CON-1.SG

- Although the morphosyntactic complexity of the variations might suggest a compositional approach to the meaning of this discourse marker, I will focus on the simplest form in this presentation and leave a possible decomposition to further research.

Proposal in a nutshell

- I argue that *meġer* introduces the following two presuppositions:
 - 1 The speaker of utterance **believed** that possibly $\neg p$
 - 2 The speaker of utterance **currently believe** that p

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Contrastive beliefs

- *Meğer* contrasts what the speaker considered to be true in the past with what is actually true.

- (6) a. Ben Aramis Fransa-da san-mış-tı-m.
1.SG Aramis France-LOC think-ANT-PST-1.SG
'I believed that Aramis was in France.'
- b. ... **meğer** İtalya-da-y-mış.
meğer Italy-LOC-COP-EVID
'... *meğer* he is/was in Italy.'

Lack of contrast leads to infelicity

- When the prejacent of *meğer* lacks a ‘contrastive’ content to the previous belief, the *meğer* clause is infelicitous.

- (7) a. Ben Aramis Fransa-da san-mış-tı-m.
 1.SG Aramis France-LOC think-ANT-PST-1.SG
 ‘I believed that Aramis was in France.’
- b. ... #**meğer** Fransa-da-y-mış.
meğer France-LOC-COP-EVID
 ‘... *meğer* he is/was in France.’

meğer is the culprit

- Note that the continuation is felicitous without *meğer*. So, the infelicity of the continuation must result from the contribution of *meğer*.

- (8)
- Ben Aramis Fransa-da san-mış-tı-m.
1.SG Aramis France-LOC think-ANT-PST-1.SG
'I believed that Aramis was in France.'
 - ... Fransa-da-y-mış.
France-LOC-COP-EVID
'... he is/was in France.'

meğer is the culprit

- Erguvanlı-Taylan (2000) states that “the form *meğer* [...] is an overt expression of the loss of validity of the speaker’s earlier beliefs/knowledge about a certain state of affairs, upon realization of some new evidence (p. 135).”
- Sentences without *meğer* on the other hand are “neutral in the sense that [they do] not reflect any meta attitude of the speaker over the given state of affairs (p. 135).”

Falsity of the prejacent

- These suggest that *meğer* is felicitous when the speaker believed the prejacent to be *false* in the past. Therefore, a context guaranteeing the truth of the previous belief is expected to render the use of *meğer* infelicitous (9).

- (9) a. Context: Since he first went to Italy, Athos has known that Aramis has been in Italy.
- b. Dün Aramis-le konuŝ-tu-m. #**Meğer**
 yesterday Aramis-COM talk-PST-1.SG meğer
 İtalya-da-y-mıŝ.
 Italy-LOC-COP-EVID
 ‘I talked with Aramis yesterday. *Meğer* he is/was in Italy.’

Falsity of the prejacent

- I also observe that it is sufficient for the speaker to believe that the prejacent might be false for the legitimate use of *meğer* (10).

(10) Aramis yurtdışın-da mı değil mi
 Aramis abroad-LOC Q not Q
 bil-m-iyor-du-m. **Meğer**
 know-NEG-IMPERF-PST-1.SG meğer
 yurtdışın-da-y-mış.
 abroad-LOC-COP-EVID
 ‘I did not know whether Aramis was abroad or not. *Meğer*
 he is/was.’

Falsity of the prejacent

- (11) Aramis-in İtalya-da ol-ma-ma-sı muhtemel diye
 Aramis-GEN Italy-LOC be-NMZ-NEG-POSS possible C
 düşün-müş-tü-m. Meğer İtalya-da-y-mış.
 think-ANT-PST-1.SG meğer Italy-LOC-COP-EVID
 ‘I had thought it unlikely that Aramis would be in Italy. *Meğer*
 he is/was.’

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Constituent questions

- *Meğer* can occur with **constituent** questions.

(12) Ben Aramis burada san-ıyor-du-m. Meğer
 1.SG Aramis here think-IMPERF-PST-1.SG meğer
nereye git-miş?
 where go-EVID
 ‘I believed that Aramis was here. *Meğer* where did he go?’

Yes/No Questions

- *Meğer* can occur with **yes/no** questions as well.

(13) Ben Aramis Fransa-da san-ıyor-du-m. Meğer
 1.SG Aramis France-LOC think-IMPERF-PST-1.SG meğer
 İtalya-da **mı**-y-mış?
 Italy-LOC Q-COP-EVID
 ‘I believed that Aramis was in France. *Meğer* is he in
 Italy?’

Meğer and questions

- *Meğer* with questions are only felicitous when there is a particular answer that the speaker believes to be true.
- In this sense, these are not genuine information seeking questions. Indeed, they seem to be more on a par with exclamatives rather than questions (Zanuttini & Portner 2003).

- (14) a. Context: When Athos went to the apartment of Aramis, he did not find him there and called him. Aramis told him that he was in Italy.
- b. Ben Aramis burada san-ıyor-du-m. Meğer
 1.SG Aramis here think-IMPERF-PST-1.SG meğer
 nereye git-miş?
 where go-EVID
 ‘I believed that Aramis was here. Meğer where did he go?’

Meğer and questions

- (15) a. Context: When Athos went to the apartment of Aramis, he did not find him there and called a friend of his to ask his whereabouts.
- b. #Ben Aramis burada san-ıy-or-du-m. Meğer
 1.SG Aramis here think-IMPERF-PST-1.SG meğer
 nereye git-miş?
 where go-EVID
 ‘I believed that Aramis was here. Meğer where did he go?’

Meğer and questions

- Similar to constituent questions, yes/no questions give rise to rhetorical effects rather than seek for information.

- (16) a. Context: Athos heard that Aramis went abroad, but he is not sure. He asked someone whether he went abroad.
- b. #Ben Aramis Fransa-da san-ıy-or-du-m.
 1.SG Aramis France-LOC think-IMPERF-PST-1.SG
 Meğer İtalya-da mı-y-mış?
 meğer Italy-LOC Q-COP-EVID
 ‘I believed that Aramis was in France. Meğer is he in Italy?’

Meğer and questions

- (17) a. Context: As they checked the live broadcast of Aramis online, Athos and Porthos saw that Aramis was abroad.
- b. Ben Aramis Fransa-da san-ıyor-du-m. Meğer
 1.SG Aramis France-LOC think-IMPERF-PST-1.SG meğer
 İtalya-da mı-y-mış?
 Italy-LOC Q-COP-EVID
 ‘I believed that Aramis was in France. Meğer is he in Italy?’

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Proposal and Formal Implementation

- I argue that *meğer* combines with the characteristic functions of sets of propositions (i.e., is a partial identity function over sets of propositions).
- It introduces the definedness condition that speaker believed that the prejacent was possibly false, and she currently believes that it is true.

$$(18) \quad \text{For any quadruple } \langle w_c, t_c, s_c, g_c \rangle, \\ \llbracket meğer \rrbracket^{\langle w_c, t_c, s_c, g_c \rangle} = \lambda P_{\langle st, t \rangle} : \exists t' [t' < t_c] \wedge \exists ! q [P(q) = 1 \wedge \text{DOX}_{w_c, t', s_c}(q) = 0 \wedge \text{DOX}_{w_c, t_c, s_c}(q) = 1].P$$

Proposal and Formal Implementation

- Let us define DOX:

(19) For any quadruple $\langle w_c, t_c, s_c, g_c \rangle$,
 $\llbracket me\check{g}er \rrbracket^{\langle w_c, t_c, s_c, g_c \rangle} = \lambda P_{\langle st, t \rangle} : \exists t' [t' < t_c] \wedge \exists! q [P(q) = 1 \wedge \text{DOX}_{w_c, t', s_c}(q) = 0 \wedge \text{DOX}_{w_c, t_c, s_c}(q) = 1].P$

(20) Let DOX be a function from $D_{\langle s, t \rangle} \rightarrow \{1, 0\}$, for any world w , interval t , individual x and proposition p ,
 $\text{DOX}_{w, t, x}(p) = 1$ iff $\forall w' [\text{compatible}(w', w, t, x) \rightarrow p(w') = 1]$

Declarative prejacent

- I assume that the meaning of declarative sentences also correspond to Hamblin sets (Hamblin 1973), hence they are characteristic functions of singletons of propositions (21).

$$(21) \quad \llbracket \text{Aramis was abroad} \rrbracket = \lambda p_{\langle s,t \rangle}. p = \lambda w. \text{Aramis was abroad in } w$$

Declarative prejacent

- They can therefore combine with *meğ* without a type mismatch.

$$(22) \quad \llbracket \text{meğ} + \text{Aramis was abroad} \rrbracket^{\langle w_c, t_c, s_c, g_c \rangle} \text{ is defined only if} \\ \exists t' [t' < t_c]$$

$$\wedge \exists! q [q = \lambda w. \text{abroad}_{was}(\text{Aramis}, w) \wedge \\ \exists w' [\text{compatible}(w', w_c, t', s_c) \wedge \neg \text{abroad}_{was}(\text{Aramis}, w')] \\ \wedge \forall w'' [\text{compatible}(w'', w_c, t_c, s_c) \rightarrow \\ \text{abroad}_{was}(\text{Aramis}, w'')]]$$

$$(23) \quad \text{if defined } \llbracket \text{meğ} + \text{Aramis was abroad} \rrbracket^{\langle w_c, t_c, s_c, g_c \rangle} = \\ \lambda p_{\langle s, t \rangle} . p = \lambda w. \text{abroad}_{was}(\text{Aramis}, w)$$

$$(24) \quad \text{There is a time prior to the speech time when the speaker} \\ \text{believed that Aramis was possibly not abroad and she} \\ \text{currently believes that he is/was.}$$

Questions

(25) $\llbracket \text{meğger where did Aramis go} \rrbracket^{\langle w_c, t_c, s_c, g_c \rangle}$ is defined only if
 $\exists t'[t' < t_c] \wedge \exists! q[\exists x : \text{place}(x) \wedge q = \lambda w. \text{went}(\text{Aramis}, x, w) \wedge$
 $\exists w'[\text{compatible}(w', w_c, t', s_c) \wedge \neg \text{went}(\text{Aramis}, x, w')] \wedge$
 $\forall w''[\text{compatible}(w'', w_c, t_c, s_c) \rightarrow \text{went}(\text{Aramis}, x, w'')]]$

(26) Meğger nereye git-miş?
 meğger where go-EVID
 ‘Meğger where did he go?’

- *There is a past time before t_c when the speaker believed that Aramis might not have gone to a certain place x , and currently, she believes that Aramis did.*
- This will be only true for a particular x given the uniqueness requirement on the proposition that satisfies these conditions.

Declarative prejacent

- These definedness conditions for *meğer* clauses with declarative prejacent account for the requirement that the prejacent must be believed to be possibly false.

$$\begin{aligned}
 (27) \quad & \llbracket \textit{meğer} + \textit{Aramis was abroad} \rrbracket^{\langle w_c, t_c, s_c, g_c \rangle} \text{ is defined only if} \\
 & \exists t' [t' < t_c] \\
 & \wedge \exists! q [q = \lambda w. \textit{abroad}_{was}(\textit{Aramis}, w) \wedge \\
 & \exists w' [\textit{compatible}(w', w_c, t', s_c) \wedge \neg \textit{abroad}_{was}(\textit{Aramis}, w')]] \\
 & \wedge \forall w'' [\textit{compatible}(w'', w_c, t_c, s_c) \rightarrow \\
 & \textit{abroad}_{was}(\textit{Aramis}, w'')]]
 \end{aligned}$$

Questions

- They also explain the non-information seeking nature of *meğ*er questions.
- Among the possible answers, there is a unique proposition that the speaker believed to be possibly false, but currently believes to be true.
- Hence, the question cannot have information seeking purposes.

$$\begin{aligned}
 (28) \quad & \llbracket \textit{meğ}er \textit{ where did Aramis go} \rrbracket^{\langle w_c, t_c, s_c, g_c \rangle} \text{ is defined only if} \\
 & \exists t' [t' < t_c] \wedge \exists ! q [\exists x : \textit{place}(x) \wedge q = \lambda w. \textit{went}(\textit{Aramis}, x, w) \wedge \\
 & \exists w' [\textit{compatible}(w', w_c, t', s_c) \wedge \neg \textit{went}(\textit{Aramis}, x, w')] \wedge \\
 & \forall w'' [\textit{compatible}(w'', w_c, t_c, s_c) \rightarrow \textit{went}(\textit{Aramis}, x, w'')]]
 \end{aligned}$$

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A note on evidentiality

- The evidential *-mİş* is obligatory with **meğer** constructions (Erguvanlı-Taylan 2000).

(29) Ben Aramis burada san-ıyor-du-m. Meğer
 1.SG Aramis here think-IMPERF-PST-1.SG meğer
 git*(-miş)/*-ti/*iyor/*-edecek.
 go-EVID-PST-IMPERF-FUT
 ‘I believed that Aramis was here. Meğer he (has) left, is
 leaving/will leave.’

A note on evidentiality

- I do not have a formal analysis of this requirement.
- However, it seems that any context with such a shift in beliefs necessitates *-mİş*.

A note on evidentiality

- Compare (30) with (31).

(30) Aramis-in İtalya-da ol-duğ-un-u
 Aramis-GEN Italy-LOC be-NMZ-POSS-ACC
 bil-iyor-du-m. Aslında tüm yaz
 know-IMPERF-PST-1.SG in.fact all summer
 orada-y-dı.
 there-COP-PST
 'I knew that Aramis was in Italy. In fact, he was there all summer.'

(31) Aramis İtalya-da diye bil-iyor-du-m. Aslında
 Aramis Italy-LOC COMP know-IMPERF-PST-1.SG in.fact
 tüm yaz Fransa-da-y*(-mıŝ)/*-dı.
 all summer France-LOC-COP-EVID/PST
 'I thought that Aramis was in Italy. (Apparently) he was in France.'

A note on evidentiality

- Indicating belief shifts somehow requires the morphological marking of evidence.
- This might have to do with the presuppositions of evidential *-miş* that are necessarily satisfied in such contexts.
- One way to account for its obligatoriness might therefore involve a version of Heim's *Maximize Presupposition!* (Heim 1992).
- This, I leave for further research.

Thank You!

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