

The Hungarian question tag *mi?* As characterized by dependent and independent commitments

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ABSTRACT

The Hungarian question tag *mi?* is subject to more special contextual restrictions compared to *ugye?*. An utterance that features *mi?* i) tentatively commits the addressee as a source for the anchor proposition of the tag question, and ii) it commits the speaker as a source for the addressee's being a source for *p*, which is a pragmatic presupposition. A speaker is a source for a proposition *p* if that speaker's commitment to *p* does not depend on any other discourse participant's commitment (Gunlogson 2008). The results of an online survey of a minimal set of pragmatically relevant contexts support claim i), and indirectly, claim ii). The effect of *mi?* on the immediate context of the discourse is modeled on a conversational scoreboard (Farkas & Bruce 2010; Malamud & Stephenson 2015).

KEYWORDS

tag questions, *mi?*, Hungarian, commitment, sourcehood

1. INTRODUCTION

1.1. The Hungarian tag question *mi?*

Tag questions are utterances that consist of a host clause, referred to here as the *anchor*, and a question tag, which arguably is a reduced interrogative clause (Asher & Reese 2007). In the formal pragmatic literature, tag questions with a declarative anchor in English are described as utterances that conventionally express speaker bias and elicit confirmation from the addressee (Asher & Reese 2007; Farkas & Bruce 2010; Malamud & Stephenson 2015; Farkas & Roelofsen

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2017). This description applies to a number of Hungarian tag questions as well. The English reverse polarity tag (e.g., *isn't it?*) could be translated by *ugye?*, *nem?* lit.: 'no?', *igaz?* '(is it) true?', *nem igaz?* or *nemde?* '(is it) not true?', all of which have a very similar though not identical function (Molnár 2019b). The utterance in (1), regardless of which tag is chosen, conveys that the speaker is committed to the proposition conveyed by the anchor (referred to as *p* throughout the paper) and expects the addressee's subsequent commitment; that is, the speaker seeks agreement in that the food being tasted is delicious.

- (1) Finom, *ugye?* / *nem?* / *igaz?* / *nem igaz?* / *nemde?*
 tasty UGYE no true not true NEMDE
 'It's tasty, isn't it? / no? / right?'

The present paper aims at describing the use-conditional meaning of another member of the inventory of Hungarian question tags, namely *mi?*. This tag has not received any attention in descriptive grammars or accounts of Hungarian tag questions, and its counterparts in other languages have similarly been largely ignored. The best candidate for the English counterpart of *mi?* is utterance-final *huh?* with a rising intonation, as used in North American English, hence Hungarian examples with *mi?* are translated as *huh?* throughout the paper, as shown in (2).

- (2) Finom, *mi?*
 tasty MI
 'Tasty, huh?'

In this paper, *mi?* gets compared to *ugye?*, the most common and least marked question tag in (1). An immediate observation is that their distribution across contexts is not the same: *mi?* is only acceptable in a (proper) subset of the contexts *ugye?* can occur in. To illustrate the difference, consider example (3).

- (3) Beoltottak, *ugye?* / *mi?*
 VM.vaccinate.PST.3PL UGYE MI
 'You got vaccinated, right? / huh?'

Ugye? can be felicitously asked by someone who does not know whether the addressee got vaccinated and is requesting confirmation, or by someone who is sure about a positive answer but still wishes to elicit acknowledgment. However, the speaker who chooses *mi?* cannot be in doubt whether the addressee has been vaccinated, and they must even have some grounds for this commitment available in the context, for example that they see a plaster on the arm of the addressee where vaccines are usually given. The aim of the paper is to spell out these intuitions, and to formalize the effect of a *mi?*-tagged utterance on the conversational scoreboard.

The comparison of *mi?* to (the question tag use of) *ugye?* based on constructed examples reveals subtle pragmatic differences, which makes it necessary to gather data from native speakers. The present paper uses the results of an online survey where participants gave their judgments on the appropriateness of the two tag questions in different pragmatic contexts.

The paper is structured as follows. In the remainder of this section, the formal properties of *mi?* are presented. Section 2 introduces dependent and independent commitments, section 3



describes the kind of bias *mi?* conveys, section 4 presents the details and results of a pragmatic survey, section 5 models the meaning of *mi?* formally, section 6 lists some open issues, and section 7 concludes the paper.

1.2. Formal properties of *mi?*

1.2.1. Anchor clause types. Tag questions consist of an anchor and a reduced interrogative clause. If the anchor is a declarative clause, which in itself would realize an assertion, the addition of an interrogative question tag creates a complex speech act, showing traits of both assertions and questions (Asher & Reese 2007; Farkas & Roelofsen 2017).

Tag questions can have anchors other than declarative clauses, as it has been reported in various languages (see Scheffler & Malamud (2021) for imperative anchors in English with the tag *won't you?*; Clausen & Scheffler (2020) for a variety of German tag questions; and Osa (2017) for Spanish *¿no?*, among others). As for Hungarian, imperative clauses can be followed by certain tag questions such as *jó?* 'good?', but not by *mi?* or any of the question tags that are hosted by declarative anchors listed in (1).

- (4) Majd küldd el azt a pdf-et, jó? / #ugye? / #mi?
 later send.2SG.IMP VM that.ACC the pdf-ACC good UGYE MI
 'Send me that pdf, OK?'

Polar interrogative anchors cannot host any question tags. Hungarian interrogative clauses are marked by a rise-fall intonation, or by adding a question particle *-e* (Kálmán 2001; Gyuris 2009). Tag questions cannot have an anchor with an interrogative rise-fall intonation,¹ or with the *-e* question particle (Gyuris 2009; Molnár 2019b); and the same holds of *mi?*-tagged utterances.

- (5) a. #Mari Járt Párizsban/, ugye? / mi?
 Mari go.PST.3SG Paris.INESS UGYE MI
 Intended: 'Mari has been to Paris, right? huh?'
- b. #Mari Járt -e Párizsban, ugye? / mi?
 Mari go.PST.3SG E Paris.INESS UGYE MI
 Intended: 'Mari has been to Paris, right? / huh?'

Even though a declarative question by definition consists of a declarative clause (Gunlogson 2003; Poschmann 2008), which is marked in Hungarian by multiple rise-fall contours (Kálmán 2001; Varga 2002; Gyuris 2019), it cannot host *mi?* or any other tag question.

- (6) Meghívták a/ Melindát a/ bulira/, #nem? / #ugye? / #mi?
 VM.invite.PST.3PL the Melinda.ACC the party.SUBL no UGYE MI
 Intended: 'Melinda was invited to the party, wasn't she? / huh?'

¹Rise-fall intonation is marked by \wedge at the end of the contour.



Finally, unlike *mi?*, *ugye?* can appear in a wh-interrogative (Molnár 2016; Gyuris 2017).

- (7) (Hát) én mit tehetek *ugye* / #*mi?*
 HÁT I what.ACC do.MOD.1SG UGYE MI
 ‘(Well) what can I do, right?’ (Gyuris 2009, (30))

However, (7) is not an example of the question tag use of *ugye?*, which is also reflected by its phonology, namely, *ugye* in this case does not have interrogative intonation and forms a single intonational unit with the anchor. This use of *ugye* is taken up in section 6.1.

1.2.2. The intonation of *mi?* Gyuris (2017) reports that utterance-final *ugye?* can be pronounced with a rise-fall intonation. The Hungarian interrogative contour needs at least three syllables to reveal both its rise and fall, but when it is realized on a two-syllable word like in the case of *ugye?*, only the rise is fully realized, the fall that follows it gets truncated but remains detectable (Varga 2002). *Mi?* bears the same interrogative contour, although since it consists of just one syllable, only the rise is audible.

However, while it is possible for *ugye* to have a non-rising contour (marked here by \), for *mi?*, the rise is obligatory.

- (8) a. Finom, *ugye?*\
 b. Finom, **mi?*\

1.2.3. Position in utterance. *Mi?* has to appear utterance-finally, unlike *ugye?*, which can appear elsewhere in the sentence, in which case it cannot have interrogative intonation (Gyuris 2009).

- (9) (Ugye) holnap (ugye) elmegyünk (ugye) moziba (ugye)?
 UGYE tomorrow UGYE VM.go.1PL UGYE theater.ILL UGYE
 ‘We’ll go to the movies tomorrow, right?’ adapted from Molnár (2016), (11)–(13)

In (10), where *Ugye?* is acceptable on its own as a reactive move, *mi?* is not. It is possible to ask *Mi?* independently, without an anchor, but in that case it means ‘What?’ as in ‘What did you just say?’, the relation of which to the question tag *mi?* is not immediately clear.

- (10) A: Hát itt most nem kizárólag arról van szó, tudja, hogy végül is mit mondanak, hanem hogy hogyan beszélnek. Mmm.
 ‘You know, we’re not just considering what they say, but also how they say it.’
 B: Mmm.
 ‘Uh-huh’
 A: *Ugye?* / #*Mi?*
 ‘Right?’ (Molnár 2019b, (2.7))



In sum, *mi?* is similar to *ugye?* in that they both can be hosted by declarative clauses (except declarative questions), they bear interrogative intonation, and they both can appear utterance-finally. On the other hand, *mi?* differs from *ugye?* in that *mi?* is not allowed in positions other than the utterance-final one, nor in wh-interrogatives, and in that *mi?* has to have a rising tune, while *ugye?* may be non-rising.

2. DEPENDENT AND INDEPENDENT COMMITMENTS

Besides their formal properties, *mi?* and *ugye?* also differ pragmatically, in terms of the kind of bias they convey. Utterances with *mi?* appear in a subset of contexts that license utterances tagged by *ugye?*, and are compatible with a smaller range of propositional attitudes compared to *ugye?*. The speaker who uses *mi?* attributes commitments (to both him- or herself and to the addressee) that do not depend on the commitment of anyone else. In order to precisely characterize the complex bias profile of *mi?*, Gunlogson's notions of *dependent* and *independent* commitment have to be introduced.

The commitment of an interlocutor to the truth of a proposition can be as one's own, genuine commitment or one that is based and dependent on someone else's. Gunlogson (2008) has shown that this distinction is relevant in modeling the meaning of declarative questions, another biased question type. Gunlogson's discourse model is made up of the following components. Each discourse participant is assigned a commitment slate, which is a set of propositions such that they are held true by the owner of the slate, and these beliefs have also been publicized. Commitment sets (cs) are sets of worlds defined by the propositions in a commitment slate. The context is defined as an n-tuple of commitment sets: it gives the sum of commitments of all discourse participants (in a given state of the discourse). Commitment sets are continuously updated by new commitments (Hamblin 1971; Stalnaker 1978; Farkas & Bruce 2010).

(11) Model of discourse following Gunlogson (2008)

- a. Commitment set $(cs)_{\alpha,d} = \{w \in W : \text{all discourse commitments of } \alpha \text{ in } d \text{ are true in } w\}$, where w is a possible world, W is the set of all possible worlds, d is a discourse variable, and α is an agent in d
- b. Context: an n-tuple of the commitment sets of all discourse participants $C_d = \langle cs_\alpha, cs_\beta, \dots \rangle$, where C is a context variable
- c. Update: $cs'_\alpha = cs_\alpha \cap \phi$, where ϕ is a set of worlds defining a proposition p

Following Stalnaker (1978), I assume that by making a statement, the speaker commits herself to the truth of the proposition conveyed by that statement, and the speaker also invites the addressee to commit to that proposition. But commitments, as mentioned before, can be of different kinds. A speaker α can commit to the truth of a proposition p based on strong grounds, for example by having direct evidence to the fact expressed by the proposition, in which case α 's commitment does not depend on other interlocutors' commitments, and is therefore called *independent*. Speakers who commit to a proposition this way Gunlogson (2008) called *sources* for p in that given dialogue. On the other hand, if α 's commitment is one that relies solely on someone else's commitment, then α 's commitment is called *contingent*, and α is only *dependently* committed to p in that dialogue (Gunlogson 2008).



Ann in (12) is a source: Any unadorned assertion of a proposition conventionally marks the speaker as source, which follows from the Maxim of Quality (Grice 1975). When making an assertion of a proposition to which the speaker lacks adequate evidence, the sentence needs to be marked by the right evidentiality strategy in order for the speaker to remain cooperative.

- (12) Ann: The server's down.
 a. Ben: Oh. (I didn't know that.)
 b. Ben: Yes, I know./Yes, that's right. (Gunlogson 2008)

Ben's response in (12a) starts with *Oh*, which here signals mirativity, that is, that Ben has not expected and has just learned about the fact that the server was down (Heritage 1984; Kraus 2019). In this case, his commitment to the proposition 'the server's down' is contingent on Ann's, because if Ann changes her mind and retracts her commitment, Ben has to do the same. But if Ben replies as in (12b), he indicates that he, too, is a source, meaning that he is independently committed to the truth of the proposition 'the server's down'. This independent commitment will not necessarily change even if Ann later retracts her previous commitment.

Gunlogson thus redefines the context in a way that it differentiates between independent and contingent (dependent) commitments.

- (13) a. Context: $C_d = \langle \sigma_\alpha, \sigma_\beta, \dots \rangle$,
 where each σ_χ is a triple $\langle cs, ss, \chi \rangle$, with χ an agent in d , and
 b. Commitment set: $cs = \{w \in W: \text{all discourse commitments of agent } \chi \text{ in discourse } d \text{ are true in } w\}$,
 c. Source set: $ss = \{w \in W: \text{all commitments of agent } \chi \text{ in discourse } d \text{ for which agent } \chi \text{ is a source are true in } w\}$

An independent commitment to a proposition p (which defines the set of worlds ϕ) now involves two operations: both the commitment set and the source set are updated, while dependent commitments only update the former.

- (14) Update by an independent commitment
 a. $cs_{\alpha'} = cs_\alpha \cap \phi$
 b. $ss_{\alpha'} = ss_\alpha \cap \phi$
 (15) Update by a dependent commitment
 a. $cs_{\alpha'} = cs_\alpha \cap \phi$

This addition to the discourse model allows us to model the bias conveyed by *mi?*-tagged utterances more precisely.

3. THE BIAS CONVEYED BY *MI?*

Tag questions with *mi?* are biased, which means that they do not merely express an inquiry with the purpose of filling in an informational gap but also convey that the speaker already has an



idea about the answer. Since they have a sentence radical (*anchor*), they are comparable to other expressions with a sentence radical, such as declaratives conveying assertions or interrogatives conveying polar questions.

Tag questions are similar to polar questions, in that they explicitly raise the issue of whether *p* is true (Farkas & Bruce 2010; Farkas & Roelofsen 2017). However, unlike polar questions, the two alternatives of a tag question, *p* and $\neg p$, are not represented as having “equal weight”, due to the speaker’s bias towards the truth of *p*. As such, they constitute a biased question type by which the speaker conventionally marks that they take *p* more likely to be true than $\neg p$. In contexts where the questioner is supposed to be impartial or uninformed, genuine questions such as (16a) or (16b) are felicitous, but not biased questions. The fact that tag questions with *ugye?* are infelicitous in such a context (Molnár 2016; Gyuris 2017), just as tag questions with *mi?*, demonstrates that they are biased utterances.

(16) Context: The judge’s first question asked in a courtroom Following Gunlogson (2003)

- a. Tagja volt -e Ön a Kommunista Pártnak?
member.POSS were E you the Communist Party.DAT
- b. Ön tagja volt a Kommunista Pártnak?/\n
you member.POSS were the Communist Party.DAT
‘Were you a member of the Communist Party?’
- c. #Ön tagja volt a Kommunista Pártnak, ugye? / mi?
you member.POSS were the Communist Party.DAT UGYE MI
‘You were a member of the Communist Party, weren’t you? / huh?’

Though Gunlogson’s courtroom context guarantees the exclusion of any biased utterances, a reviewer points out that it also excludes *mi?*-tagged utterances by virtue of their register, namely a courtroom situation requires a certain level of formality that in itself does not favor the use of *mi?*. Consider the situation in (17), where a latecomer who by assumption has no information or expectations about whether there are any tickets left, is asking a clerk.

(17) Latecomer to clerk at a movie theater:

- a. Van -e még jegy?
there.is E still ticket
- b. Van még jegy?/\n
there.is still ticket
‘Are there still any tickets?’
- c. Van még jegy, ugye? / #mi?
there.is still ticket UGYE MI
‘There are still some tickets, aren’t there? / huh?’

If the latecomer is indeed unbiased, *mi?* is not licensed in this context. Note, however, that *ugye?* is felicitous both as a tag question and as a discourse marker: *Ugye van még jegy?* ‘I hope you still have tickets’. This is possible since according to Gyuris (2017), the speaker’s wishes or expectations are enough to use *ugye?* felicitously, of which (17c) is an example.

Tag questions are also similar to assertions, in that the speaker in both cases is committed, broadly speaking, to *p*. But while the speaker fully commits to *p* in assertions, tag questions may



convey a weaker-than-full commitment to p . In contexts where the speaker is biased, but has less-than-full commitment towards p , it is felicitous to use *ugye?* to elicit confirmation, similarly to at least some uses of the English reverse polarity tag questions (Asher & Reese 2007; Malamud & Stephenson 2015; Farkas & Roelofsen 2017). But *mi?* is ruled out in these contexts, indicating that it does not convey speaker uncertainty.

- (18) Uncertain patient to doctor:
 a. Az oltás biztonságos, *ugye?* / #*mi?*
 the vaccine safe UGYE MI
 ‘The vaccine’s safe, isn’t it? / #huh?’

Thus while tag questions comparable to the reverse polarity tag question in English (Malamud & Stephenson 2015), such as Italian *no?* (Servidio 2014) and Hungarian *ugye?* (Gyuris 2009; Molnár, 2019a, b) allow some degree of uncertainty, a *mi?*-tagged utterance does not. In order to understand what the nature of the bias is, it is necessary to look at what bias is attributed to the addressee when using these tags. Section 3.1 describes the bias attributed by *mi?* to the addressee, and section 3.2 describes the bias it attributes to the speaker.

3.1. Addressee bias

I claim that *mi?* attributes a commitment towards p to the addressee. For example, an utterance like (19) expresses the speaker’s belief that the addressee believes that p = ‘2020 was a tough year’.

- (19) 2020 nehéz egy év volt, *mi?*
 2020 tough a year was MI
 ‘2020 was a tough year, huh?’

To support this claim, I first turn to adversative contexts in which the addressee is committed to $\neg p$, and then, to unbiased contexts, in which the addressee is presented as not yet committed towards either p or $\neg p$ (see 3.1.1).

In addition to signaling that the speaker believes that the addressee believes that 2020 was a tough year, I claim that such an utterance also conveys that this belief of the addressee does not depend on anyone else’s commitment but is held independently. To support this claim, I look at tag questions with anchors containing predicates of personal taste, following Farkas & Roelofsen (2012) and Malamud & Stephenson (2015), which are methodologically useful in characterizing bias profiles in terms of dependent and independent commitments (see 3.1.2).

3.1.1. Addressee attitudes excluding *mi?* Adversative contexts arise whenever there is a crisis in conversation due to incompatible commitments (Farkas & Bruce 2010). If speaker A commits to p , and speaker B believes that $\neg p$ is the case (whether or not speaker A is aware of speaker B’s belief), B can signal this adversativity by employing biased questions dedicated to such a purpose, such as negative polar questions (Ladd 1981; Buring & Gunlogson 2000;



Romero & Han 2004), echo declarative questions (Poschmann 2008; Kiss 2021b), or negative wh-constructions (Cheung 2009; Kiss 2017). In addition, the adversativity of these utterances can also be conveyed or reinforced by discourse particles (Egg 2013; Giorgi 2018; Eckardt & Yu 2020; Ippolito et al. to appear) and gestures (Ippolito 2021).

Consider example (20), where the speaker has a prior belief that Mary had bought a red dress, but given the evidence found in the context, the addressee can no longer be taken to be committed to this fact. In Italian, such a speaker marks adversativity with the discourse particle *ma*, and in Hungarian, by *dehát*.

- (20) Context: Mary calls me on the phone and tells me that she has a new red dress to wear at tonight's party. When I meet her at the party, I see that she indeed has a new dress but it's blue.

I'm surprised and say:

- a. *Ma non era rosso?* (Italian)
but not was red
'But wasn't it red?'

Giorgi (2018), (1)

- b. *Dehát nem piros ruhát vettél?*
DEHÁT not red dress.ACC buy.PST.2SG
'(Wait a minute,) didn't you buy a red dress?'

In (21), the utterances in (20) are paraphrased as tag questions with a declarative anchor. While *no?* in Italian and *nem?* in Hungarian are available, *mi?* is excluded along with its Italian equivalent *eh?* (Kiss 2021a).

- (21) a. *Ma tu hai comprato un vestito rosso, no? / #eh?* (Italian)
but you have.PRS.2SG bought a dress red no EH
b. *Dehát te egy piros ruhát vettél, nem? / #mi?*
DEHÁT you a red dress.ACC buy.PST.2SG no MI
'But you bought a red dress, didn't you?'

Based on the fact that the addressee is wearing a new dress that is blue, not red, there is reason for the speaker to doubt whether the addressee has bought a red dress at all; it is no longer uncontroversial for the speaker to consider the addressee committed to *p* = 'that the addressee bought a red dress'.

Thus *mi?* is not licensed in a context in which the addressee is (or seems) committed to the opposite of the proposition conveyed by the anchor. In addition to that, *mi?* is also excluded from situations in which the addressee is not committed to *p*, an example of which is the courtroom example shown in (16). In sum, *mi?*-tagged utterances are felicitous in contexts where the addressee is perceived by the speaker to be committed to *p*.²

²The cases when the addressee is not fully committed but merely biased towards $\neg p$ or *p* is not treated there, as pragmatic differences at this level of subtlety in the case of belief attribution cannot be reliably controlled for. Therefore only clear, categorical cases are considered here (i.e., commitment to $\neg p$, no commitment, and commitment to *p*).



3.1.2. Predicates of personal taste. In addition to the contextual restriction that the addressee is committed to *p*, *mi?*-tagged questions with anchors containing predicates of personal taste suggest that the addressee also must be independently committed to *p*.

As mentioned in section 2, dependent and independent commitments are locally determined. This means that a speaker's role of being a source for *p* can change from one conversation to the other. Predicates of personal taste (taste predicates, for short) are a useful tool in examining whether a certain commitment is dependent or independent, because the only way to independently commit to a proposition involving a taste predicate is to have direct access to the object described by the taste predicate. In a context like (22), in which the speaker perceives the addressee to be independently committed to *p* = 'ice-cream X is tasty', *mi?* is felicitous.

- (22) Context: A and B taste ice-cream X for the first time. Both enjoy it and can tell the same about each other, too. A to B:
 a. Finom, *ugye?* / *mi?*
 'Tasty, isn't it? / huh?' cf. ex. (157) of Farkas & Roelofsen (2012)

However, if we modify the context in (22) so that the addressee does not have access to the taste of the ice-cream in question, *mi?* becomes unavailable. This is shown in example (23).

- (23) Context: A and B are waiting in line to taste ice-cream X for the first time. A receives her ice-cream first, tastes it, and clearly likes it very much. B can tell that A likes it. However, B has never tried this ice-cream before. A to B:
 a. Finom, #*ugye?* / #*mi?*
 'It's tasty, #isn't it? / #huh?'

The unacceptability of *mi?* in a context like (23) persists even if B happens to fully trust A as a source in matters of taste. If B commits to *p* = 'ice-cream X is tasty' on the grounds that A, whom he trusts in matters of taste, is also committed to *p* (by presenting herself as enjoying the taste), then B's commitment can be at most a dependent one, given the fact that B has never had access to the taste of this ice-cream. The fact that a tag question with *mi?* is infelicitous in such a case suggests that the addressee's dependent commitment is not enough to license *mi?*.

Taste predicates are special for at least one more reason, namely because they have a subjective flavour which lead Lasersohn (2005) (among others) to add a "judge parameter" to their semantics. On this view, if Mary says "This chili is tasty", it is interpreted as "This chili is tasty to Mary": the judge parameter is linked to Mary, since she talks about her own experience. But this does not account for the phenomenon called *faultless disagreement*, where participants can disagree without there being a crisis in the conversation.

- (24) a. Mary: This chili is tasty.
 b. John: No it isn't!

The problem, in a nutshell, is the following: if (24a) means 'this chili is tasty to Mary', how can anyone other than Mary disagree with it or question it at all (Lasersohn 2005)?



Although this problem is highly relevant for commitment-based accounts, it is not considered here in detail; I simply outline my assumptions. McCready (2007) follows Lasersohn (2005) by assigning contextual judge parameters (which is the fifth parameter of the Kaplanian context quintuple C in McCready's formulation, and is therefore noted as $5(C)$), and observes further that genuine polar questions bring about an “interrogative flip” by operators (Kaplanian “monsters”) that manipulate the contextual judge parameter. There is an asymmetry between an assertion (25a) and a question (25c) in terms of who the judge is.

- (25) a. Walnuts are tasty.
 b. $[[tasty(walnuts)]]^C = 1$ iff walnuts are tasty for $5(C)$
 c. Are walnuts tasty?
 d. $[[Q(tasty(walnuts))]]^C = ?([tasty(walnuts)])^{C[5(C) \rightarrow i_C]}$ (McCready 2007)

The judge in the assertion is the speaker ($5(C)$), and in the question, the judge parameter is shifted from the speaker to the addressee (i_C). McCready considers this a pragmatically motivated move: questions are generally about our interlocutors, hence the need for the shifting operator. Duff (2019) goes further and proposes that this monstrous operator is in fact determined by the locus of commitment on the conversational scoreboard: Whoever updates their discourse commitments is the judge. Here the above views are adopted with one further refinement, namely the idea that taste predicates express the judgment of an ideal judge (Francis 2015; Pearson 2012). In Francis' analysis, the judge is selected by an ordering source (similarly to the one used for modals), and possible judges are ranked according to the relevant dispositional traits. In the end, what Mary and John disagree on in (24) is not whether the chili is tasty to Mary but on whether an ideal judge would consider the chili under discussion tasty.

Taste predicates analyzed as above are useful for the present study because they help to keep interlocutors' commitments apart: Independent commitments to propositions with taste predicates can only arise by direct experience. When Mary reports to John that the chili she is having is tasty, she commits herself independently to the proposition that ‘the chili is tasty according to an ideal judge’. This utterance has an objective trait as it refers to the judgment of an ideal judge about which one can agree or disagree, but it is subjective because it is the ideal judge *according to Mary*.

The claim that the addressee needs to be independently committed to p in order for $mi?$ to be used receives support from the results of an online survey on the acceptability of $mi?$ -tagged utterances with taste predicates in different contexts, which are shown in section 4.

3.2. Speaker presupposition

I argued in the previous section that the speaker must perceive the addressee as being independently committed to p in order to use $mi?$. In addition to that, the speaker who uses $mi?$ also presupposes to be a source for the fact that the addressee is a source for p . First, I show, by constructing different contexts, that a speaker who uses $mi?$ cannot be unbiased regarding the



addressee's sourcehood for p , and that not even a dependent speaker commitment is enough to license *mi?*. I then argue that the speaker's commitment is a (pragmatic) presupposition.

Consider example (26a), where the speaker is not committed to q = 'the addressee is independently committed to p '.

- (26) Context: A and B meet near an ice-cream place where they sell ice-cream X. Both A and B have tasted ice-cream X before and both of them liked it, but they do not know this of each other. A points to ice-cream X and says to B:
- a. Finom, *#ugye?* / *#mi?*
'Tasty, right? / huh?'

Example (26a) shows that any tag question is unacceptable in a context where the speaker has no bias about the addressee's propositional attitude to p . I now turn to the question of whether it is enough for the speaker to be only dependently committed to the fact that the addressee is a source for p . Since the speaker's commitment is about someone else's commitment, taste predicates can no longer be used, as we can never have direct access to someone else's commitment. But manipulating the above ice-cream contexts can show indirectly that *mi?* does indeed prefer contexts in which the speaker presents herself as a source for the fact that the addressee is a source for p .³

Consider the situation in (27), in which the speaker has been informed about the addressee's experience with ice-cream X through someone else's report. In such a context, *mi?* is at most marginally acceptable.

- (27) Context: B and C have tasted ice-cream X, and B found it very tasty. They meet with A, who has never tasted ice-cream X, but C tells A that B liked it. A to B:
- a. Finom, *ugye?* / *?mi?*
tasty UGYE MI
'It's tasty, isn't it? / huh?'

There is another way to reveal what kind of meaning this speaker commitment could be, namely by looking at what happens to the speaker's commitment to q if the addressee accepts (as opposed to rejecting) the *mi?*-tagged utterance. Consider again context (22), repeated below in (28), together with a confirmative and a negative answer.

³Let me acknowledge that the fact that the speaker bases their commitment on someone else's commitment may seem at first sight to be a dependent commitment similar to Ben's commitment in (12a). However, I argue against this conclusion. In (12a), Ben commits to 'the server is down', which is a commitment *based on* someone else's commitment, which makes it dependent. The speaker commitment signaled by *mi?*, however, is a commitment *about* someone else's commitment, which makes it different from dependent commitments. In (12a), Ann's commitment serves as the grounds for the dependent commitment, while in the case of a *mi?*-tagged utterance, the grounds for the speaker commitment originates from the speaker, not from someone else. The peculiarity is that the content of this independent commitment is indeed about someone else's commitment. If the speaker's commitment is about the addressee's commitment, one could argue that it is, after all, a dependent commitment, since it would change whenever the addressee would change their commitment. However, this would be triggered by a change of facts, which would also trigger a revision of any other "regular" independent commitment of any rational agent.



- (28) Context: A and B taste ice-cream X for the first time. Both enjoy it and can tell the same about each other, too. A to B:
- a. Finom, *ugye?* / *mi?*
‘Tasty, isn’t it? / huh?’
 - b. B: Yup.
 - c. B: No.
 - d. B: No *actually*, I just enjoyed the cherry on top, but the ice-cream itself was terrible.

If B gives a confirmative answer as in (28b), both p = ‘ice-cream X is tasty’ and q = ‘the addressee is a source for p ’ become grounded, which means that from now on, these propositions will be treated as part of the common ground. If B disagrees, however, as in (28c), only p gets rejected, but it remains up to the speaker whether they want to change the status of q . If the addressee wants to reject q , it has to be done explicitly, and such a move would typically involve strategies used in presupposition-canceling denial like *actually*, as shown in (28d). Proposition q is thus a presupposition in the sense of Stalnaker (1974) who defines them as propositions that the speaker presents as already given or ones that follow from the common ground.

Example (29a), in which B’s move targets presupposition q introduced by A’s utterance, namely that A is a source for p , is another example that reveals the presupposition status of proposition p . Such a move is felicitously done with *wait a minute*. Proposition p is not settled in this case, as B has decided to resolve the issue about q first.

- (29) Context: A sees B eating A’s favorite ice-cream, without B being aware of it. It is clear to A that B likes the ice-cream very much. A to B:
- a. Finom, *ugye?* / *mi?*
‘Tasty, isn’t it? / huh?’
 - b. B: *Wait a minute*, you’re spying on me?

In sum, I have argued in this section that a *mi?*-tagged utterance commits the addressee to the truth of the anchor proposition as a source, and in addition, it also comes with the pragmatic presupposition that the speaker is a source for the addressee’s independent commitment.

This concludes the survey of pragmatic contexts which help characterize the bias profile of tag questions with *mi?*. The main claims of this paper have been illustrated by constructed examples, which only reflect the author’s introspective judgments. The question arises whether these intuitions are shared by a sample of Hungarian speakers.

4. DATA FROM AN ONLINE SURVEY

Given the subtle differences between the pragmatic contexts, which differ only in terms of the nature of the speaker’s and the addressee’s commitments (dependent vs. independent), it is desirable to put introspective judgments to test by looking at empirical data. To this end, an online survey was compiled which presents participants with briefly described contexts and offers five utterance types sharing the same sentence radical, from which they choose all those they judge as acceptable in the given context.



4.1. Survey design

A survey consisting of six trials was compiled for the purpose of data collection. Each one consisted of a short description of a situation such that the respondent to the survey is a participant of that situation and interacts with an interlocutor. In each situation, there are five answer options, allowing to check multiple options at the same time: a statement (30a), a tag question with *ugye?* (30b) and with *mi?* (30c), a statement with the epistemic modal *lehet* (30d), and a genuine polar question (30e).

- (30) a. Ez nagyon finom. ‘This is very tasty’
 b. Finom ugye? ‘Tasty isn’t it?’
 c. Finom mi? ‘Tasty huh?’
 d. Finom lehet. ‘It must be tasty’
 e. Szerinted finom? ‘Do you think it’s tasty?’

Each trial included a context that has a different setup in terms of the speaker’s and the addressee’s commitment to *p*, which are here abbreviated as an ordered pair of the speaker’s (S) and the addressee’s (A) commitments. Given the fact that *mi?*-tagged utterances convey biased questions, there are four contexts of interest: when both the speaker and the addressee are independently committed to *p*, ($\langle S:\text{Independent}, A:\text{Independent} \rangle$), when both are only dependently committed to *p*, arising from a third party’s independent commitment ($\langle S:\text{Dependent}, A:\text{Dependent} \rangle$), and mixed cases when only the speaker or only the addressee is dependently committed, while the other one is independently committed ($\langle S:\text{Independent}, A:\text{Dependent} \rangle$ and $\langle S:\text{Dependent}, A:\text{Independent} \rangle$). (31) shows the English translation of a sample context in the $\langle S:\text{Independent}, A:\text{Independent} \rangle$ condition.

- (31) Mari and you go to get ice cream. You both choose the sweetcorn vanilla flavoured one. As you receive your ice cream, you both start eating it and you see on each other’s face that you find it good. You say to Mari:

There are two fillers in addition to the four target contexts: one where the speaker is independently committed to *p* while the addressee is not committed ($\langle S:\text{Independent}, A:\text{None} \rangle$), and one where neither of them is committed ($\langle S:\text{None}, A:\text{None} \rangle$). These serve as control items that help confirm the overall reliability of the answers. The rest of the possible contexts was not tested because not all of them are plausible, and the ones that are require more complicated descriptions, which is to be avoided. The six contexts are shown in Table 1.

Participants thus saw six trials, consisting of six items in six different contexts. The questionnaire was filled out by 247 native speakers of Hungarian from Hungary, recruited via Prolific (www.prolific.co). Only the four target contexts are included in the target dataset, which contains 1305 observations.

The plots in Fig. 1 show the distribution of all answer choices across pragmatic contexts. Assertions favor independent speaker commitment regardless of the perceived level of commitment of the addressee. Questions and assertions with the epistemic modal *lehet* largely occupy the complement of the space assertions take up: they most likely occur when the speaker



Table 1. Pragmatic contexts

		Addressee		
		Independent	Dependent	None
Speaker	Independent	⟨S:Independent, A:Independent⟩	⟨S:Independent, A:Dependent⟩	⟨S:Independent, A:None⟩
	Dependent	⟨S:Dependent, A:Independent⟩	⟨S:Dependent, A:Dependent⟩	not tested
	None	not tested	not tested	⟨S:None, A:None⟩

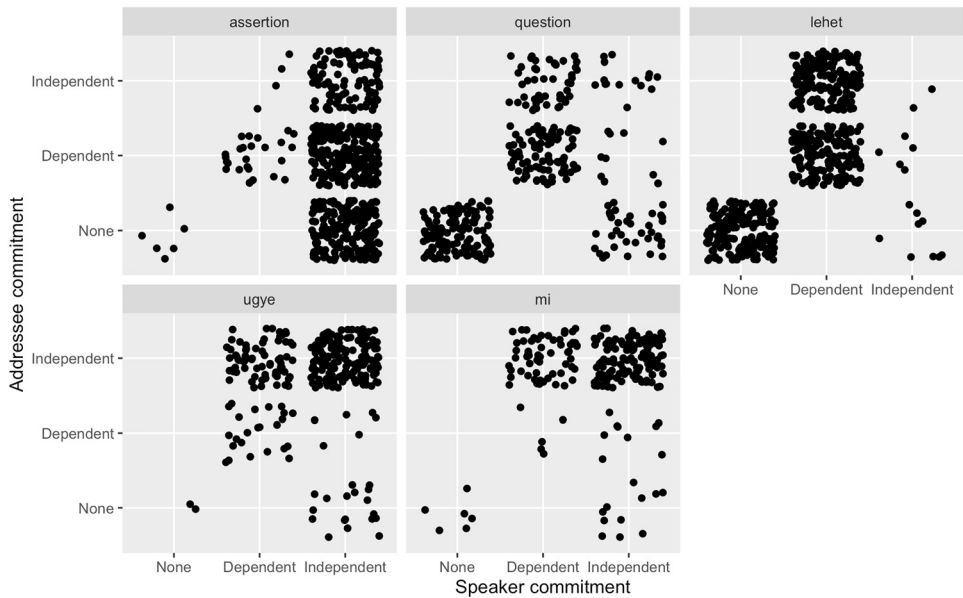


Fig. 1. Distribution of answers across contexts

is not independently committed. The distribution of these three “cornerstone” answer options show crisp judgments, as expected, therefore the dataset can be considered reliable.⁴

Responses to *ugye?*- and *mi?*-tagged utterances show a very similar distribution: both prefer contexts where the addressee is independently committed to *p*. Both tags were chosen in contexts where the speaker is only dependently committed to *p*, but *ugye?* seems to appear somewhat more frequently in ⟨S:Dependent, A:Dependent⟩ contexts compared to *mi?*.

In what follows, each of the two tag questions gets compared to the three ‘cornerstone’ answer options, in two separate statistical models. For this purpose, two subsets are extracted

⁴To avoid or detect fraud, speakers were also asked to provide short answers and to resolve linguistic riddles that are not readily searchable on Google. All scored at least 60% on the screening, nobody had to be excluded.



from the full dataset, so that each only contains assertions, modal assertions, questions and one of the two kinds of tag questions. The *mi?*-dataset consists of 1057 observations, and the *ugye?*-dataset, of 1107 observations.

4.2. Predictions

Based on the claims made in section 3, the following two predictions can be made. First, if using *mi?* is licensed when the addressee is independently committed to the truth of *p*, we expect that such contexts trigger more *mi?* responses than the contexts where the addressee is dependently committed. Thus, (S:Independent, A:Independent) licenses more *mi?* responses than (S:Independent, A:Dependent), and (S:Dependent, A:Independent) licenses more *mi?* responses than (S:Dependent, A:Dependent).

Second, it is expected that the number of *mi?*-responses gets higher in contexts where the speaker, too, is a source for *p*. The rationale behind this expectation is simply that commitments always arise based on some grounds, and when speakers attribute an independent commitment to *p* to their addressee (or present themselves as a source for the addressee's commitment to *p*), they arguably have stronger grounds to do so when they themselves are sources for *p*, compared to when this is not the case.

4.3. Analysis

Two conditional inference tree models (*party* package by R Core Team (2019)) were fit on each of the above datasets to make inferences about the use of *mi?* and its pragmatic kin *ugye?*.^{5,6}

The conditional inference tree model that was fit on the *mi?*-dataset, had the outcome variable Answer with two levels, *TQmi* 'tag question *mi?*' and *other*; and the predictors Addressee Commitment (with levels *Dependent* and *Independent*), and Speaker Commitment (with levels *Dependent* and *Independent*). Fig. 2 shows that the model identified Addressee Commitment as the strongest predictor of whether one uses a *mi?*-tagged utterance, and Speaker Commitment as the second most important one. In other words, when the addressee is independently committed, *mi?*-tagged utterances are preferred when the speaker, too, is independently committed to *p*. Both of these predictors have a significant effect on the outcome variable and the value of the goodness of fit measure, the concordance index, indicates excellent discrimination ($C = 0.83$).

The model fit on the *ugye?*-dataset had the same predictors but the response variable had the levels *TQugye* ('tag question *ugye?*') and *other*. Just as in the case of *mi?*, the use of *ugye?* is

⁵Ideally and conventionally, a mixed effects logistic regression model should be used for this purpose, but this was not possible for this dataset because of significant collinearity between the two main predictors, Speaker Commitment and Addressee Commitment.

⁶The algorithm of conditional inference trees creates binary splits on the dataset recursively. It finds the predictor that has the strongest association with the dependent variable and creates two 'branches'. Next, it does the same for both branches, and so it goes until there are no more possible splits at the given level of significance. Conditional inference trees have the advantage of not being sensitive to multicollinearity between predictors or to a low number of observations, and because it comes with no distributional assumptions, it is suitable for an unbalanced design such as this one (Tagliamonte & Baayen 2012).



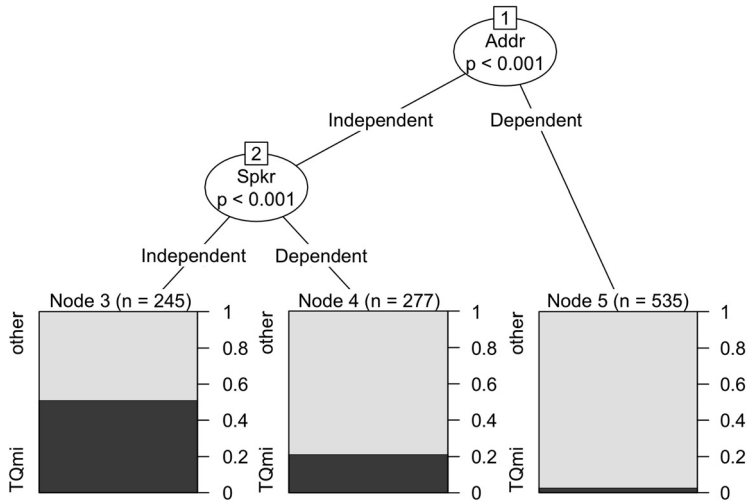


Fig. 2. Conditional inference tree model fit on the *mi?*-dataset (*Addr* = ‘Addressee commitment’, *Spkr* = ‘Speaker commitment’, *TQmi* = ‘tag question with *mi?*’)

predicted by speaker and addressee commitment as well, namely it is preferred in cases when both are independently committed to *p*, and to a lesser extent, when the addressee is independently committed but the speaker is only dependently committed. But the branch of dependent addressee commitment is further divided showing that *ugye?*-tokens are more sensitive to speaker commitment than *mi?*. In a situation where the addressee is dependently committed, *ugye?* is chosen slightly more frequently when the speaker is also dependently committed. The value of the goodness of fit measure, the concordance index ($C = 0.75$), indicates good discrimination.

4.4. Discussion

The predictions mentioned in section 4.2 are partially confirmed by the results of the online survey. First, *mi?* is indeed used significantly more often when the addressee is perceived by the speaker as being independently committed to *p*. Second, *mi?* is most favored in a context where both the speaker and the addressee are independently committed to *p*. This latter preference indirectly supports the claim that the speaker of a *mi?*-tagged utterance is independently committed to the fact that the addressee is independently committed to *p*, because as a source for *p*, the speaker is in a better position to attribute a sourced commitment to someone else and to present him- or herself as a source for the addressee’s commitment to *p*.

The two plots show that both of these properties are true of *ugye?* as well: whenever *mi?* is acceptable, so is *ugye?*, and to a similar extent. In general, *ugye?* was used more often than *mi?*, and *mi?* is indeed acceptable in a subset of the contexts where *ugye?* is acceptable. The context where *ugye?* and *mi?* diverge is ⟨S:Dependent, A:Dependent⟩. Fig. 3 shows that when the addressee is perceived as being dependently committed to *p*, *ugye?* is more acceptable when the speaker is dependently committed to *p* as well, as opposed to when the speaker is independently



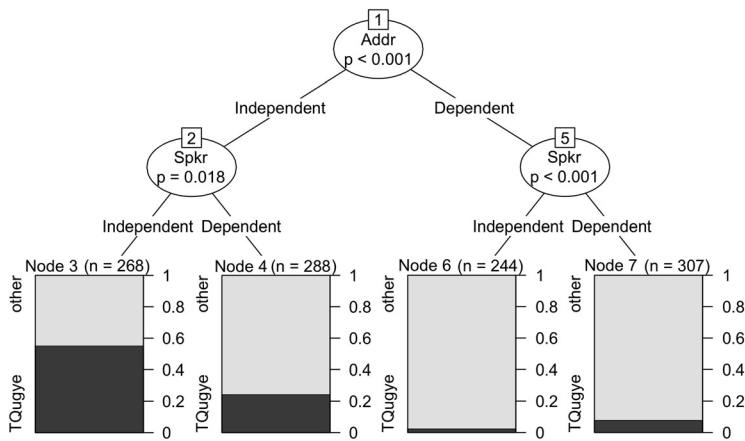


Fig. 3. Conditional inference tree model fit on the *ugye?*-dataset (*TQugye* = ‘tag question with *ugye?*’)

committed. This is in line with Gyuris’s (2017) description of *ugye?*-tagged utterances: “the use of *ugye?* in questions does not require that the speaker have evidence for the truth of the propositional content, her commitment can be based on her expectations or wishes as well” (p. 205). The context that licenses *mi?*, however, is more restricted: Fig. 2 shows that for *mi?*, at least the addressee has to be independently committed.

The results of the present survey support the claim that *mi?* signals that the addressee is a source for *p*, the anchor proposition of the *mi?*-tagged utterance. Also, the fact that *mi?* also favored independent speaker commitment indirectly supports both the previous claim and the claim that *mi?* presents the speaker as a source for the addressee’s being a source for *p*. However, *mi?* has not been directly compared to *ugye?*, because *ugye?* is more versatile in its functions. Importantly, *ugye?* can carry various intonational contours, which would easily become a confound in a written survey.

The survey had various other limitations. First, it only made use of one predicate of personal taste, *finom* ‘tasty’, which raises the question of whether the claims made here apply to ‘predicates of personal taste’ or just to one of them. Second, this survey required native speakers to provide answers in a way that inevitably raises metalinguistic awareness, which is not the ideal way to elicit linguistic data. For the sake of keeping the survey very short, no fillers were used other than the two control items, which raises the problem of whether participants were still naïve by the time they completed the survey. These issues may be overcome in psycholinguistic experiments that use more sophisticated methods to collect data.

5. TAG QUESTIONS WITH *MI?* ON THE CONVERSATIONAL SCOREBOARD

In this section, I model the change in the context that *mi?*-tagged utterances bring about. Based on the bias profile of *mi?* described in different contexts, I propose that when hosted by a declarative anchor, these tags convey the following meaning:



- (32) A tag question consisting of a declarative anchor denoting a proposition p and the question tag *mi?* in dialogue d conveys that
- q = the addressee is a source for p in d and
 - that the speaker is a source for q in d .

To represent their context-change potential, I use a conversational scoreboard model building on Gunlogson (2008), Farkas & Bruce (2010), Farkas & Roelofsen (2012), and Malamud & Stephenson (2015). The model keeps track of discourse participants such as the speaker (*Spkr*) and the addressee (*Addr*),⁷ and of their commitments; it marks whether a commitment to a proposition p is a dependent one, updating the discourse commitment set of an interlocutor (DC), or an independent one, updating their sourced commitments (SC); it marks whether a commitment to p is an actual one or only a conditional or projected commitment (Gunlogson 2008; Farkas & Roelofsen 2012), which becomes an actual commitment upon acceptance by the addressee; it keeps track of the issues raised during the dialogue on the Table; and it keeps track of the common ground (CG). This model is summarized in (33), and a blank conversational scoreboard is shown in Table 2.

- (33) Model of discourse context
- Discourse participants: *Spkr*, *Addr*
 - Discourse commitments vs. sourced commitments:
DC _{x} : the discourse commitments of discourse participant x
SC _{x} : the sourced commitments of discourse participant x
 - Actual vs. projected commitments:
DC _{x} / SC _{x} : actual commitments of x
DC _{x} ^{*} / SC _{x} ^{*}: projected commitments of x : propositions that will become commitments upon an interlocutor's acknowledgment
 - Table: a stack of issues raised during the conversation
 - Existing vs. projected common ground:
CG: the common ground between two speakers x and y is a set of propositions that are mutually believed to be commitments of both x and y .
CG*: projected common ground, the next step in the development of the common ground, depending on the acceptance of a current proposal.

I first model assertions on the conversational scoreboard, and then show how tag questions with *ugye?* and *mi?* compare to it. The discourse effects of an assertion conveying proposition p involves adding p to the speaker's sourced commitments (SC_{*Spkr*}), as any unadorned assertion commits the speaker as a source for p in that dialogue. As a consequence, p is also added to the speaker's discourse commitments (DC_{*Spkr*}), and since upon acceptance, p will still be the speaker's commitment, p is also added to the two slates of projected commitments of the speaker, DC_{*Spkr*}^{*} and SC_{*Spkr*}^{*}. Lastly, the projected common ground will also contain p , since upon acceptance, p automatically becomes part of the common ground (Table 3).

⁷Although there could be more than one addressee, their number is not relevant for the present discussion as it does not change the claims made here.



Table 2. Blank conversational scoreboard

Conversational Scoreboard			
Discourse commitments		Sourced commitments	
DC _{Spkr} {}	DC _{Spkr} [*] {}	SC _{Spkr} {}	SC _{Spkr} [*] {}
DC _{Addr} {}	DC _{Addr} [*] {}	SC _{Addr} {}	SC _{Addr} [*] {}
Table ⟨{}⟩			
CG {}			
CG [*] {}			

The discourse effects of a tag question with acknowledgment-eliciting *ugye?*, an example of which was shown in example (22), are shown in Table 4.

By using acknowledgement-eliciting *ugye?* as a tag, the speaker proposes that the addressee commit as a source for *p*. The commitment assigned to the addressee is a tentative one, which is shown by *p* appearing in the addressee’s projected sourced commitments (SC_{Addr}^{*}). The addressee’s projected discourse commitments (DC_{Addr}^{*}) get automatically updated by the content of their projected source set, because by assumption, sourced commitments are a subset of discourse commitments (Gunlogson 2008). Since the use of *ugye?* in this particular context is more natural if the speaker is also independently committed to *p*, it is added to the speaker’s sourced commitments (SC_{Spkr}). Any sourced commitment of the speaker is also present in their discourse commitments (DC_{Spkr}), and since upon acceptance, the speaker’s commitments would persist, *p* is also added to the speaker’s projected discourse commitments and projected sourced commitments, DC_{Spkr}^{*} and SC_{Spkr}^{*}, respectively.

The Table is updated by *p* and ¬*p*, and while the common ground is left unchanged by the utterance, there are two projected common grounds in CG^{*}, one in which the common ground acquires *p*, and another one in which ¬*p* becomes a member. The projected status of CG^{*} indicates that once the addressee gives an answer, one of these possibilities would become the actual common ground CG.

The effect of a *mi?*-tagged utterance on the context is different from that of an *ugye?*-tagged one, as they update the context by two propositions: the proposition conveyed by the anchor of

Table 3. The conversational scoreboard after pronouncing an assertion

Conversational Scoreboard			
Discourse commitments		Sourced commitments	
DC _{Spkr} { <i>p</i> }	DC _{Spkr} [*] { <i>p</i> }	SC _{Spkr} { <i>p</i> }	SC _{Spkr} [*] { <i>p</i> }
DC _{Addr} {}	DC _{Addr} [*] {}	SC _{Addr} {}	SC _{Addr} [*] {}
Table ⟨{ <i>p</i> }⟩			
CG {}			
CG [*] { <i>p</i> }			



Table 4. The conversational scoreboard after pronouncing an assertion

Conversational scoreboard			
Discourse commitments		Sourced commitments	
$DC_{Spkr} \{p\}$	$DC_{Spkr}^* \{p\}$	$SC_{Spkr} \{p\}$	$SC_{Spkr}^* \{p\}$
$DC_{Addr} \{\}$	$DC_{Addr}^* \{p\}$	$SC_{Addr} \{\}$	$SC_{Addr}^* \{p\}$
Table $\langle \{p, \neg p\} \rangle$			
CG $\{\}$			
CG* $\{CG \cup \{p\}, CG \cup \{\neg p\}\}$			

the tag question (p), and a meta-conversational proposition (q) with the content ‘the addressee is a source for p in the current dialogue d ’. The scoreboard representing the effects of a *mi?*-tagged utterance on the context is shown in Table 5.

The tag question *mi?* adds p to the addressee’s projected sourced commitments (SC_{Addr}^*), and commits the speaker to q as a source as well, thus q is added to SC_{Spkr} . Adding a proposition to the set of sourced commitments automatically adds a proposition to the set of discourse commitments, so p is also added to DC_{Addr}^* , and q is also added to DC_{Spkr} and to DC_{Spkr}^* . Note that only p and $\neg p$ are added to the Table, as q is not associated with a syntactic object (Farkas & Bruce 2010). Proposition q is a pragmatic presupposition, hence it is not at-issue, and cannot be referred back to by response particles (cf. example (28)). A pragmatic presupposition is added to the speaker’s commitment sets and to the projected common ground, without ever making it to the Table.⁸

Table 5. The conversational scoreboard after an utterance with *mi?* pronounced by the speaker, where p = the proposition conveyed by the anchor, and q = ‘the addressee is a source for p (in the current dialogue d)’

Conversational scoreboard			
Discourse commitments		Sourced commitments	
$DC_{Spkr} \{q\}$	$DC_{Spkr}^* \{q\}$	$SC_{Spkr} \{q\}$	$SC_{Spkr}^* \{q\}$
$DC_{Addr} \{\}$	$DC_{Addr}^* \{p\}$	$SC_{Addr} \{\}$	$SC_{Addr}^* \{p\}$
Table $\langle \{p, \neg p\} \rangle$			
CG $\{\}$			
CG* $\{CG \cup \{p, q\}, CG \cup \{\neg p, q\}\}$			

⁸While the scoreboard used here does not differentiate between the speaker’s and the addressee’s perspectives on the common ground, it is assumed that the conversational scoreboard represents the speaker’s view of the conversation. The pragmatic presupposition q is thus part of the common ground from the speaker’s perspective, and adding it to the projected common ground CG* means verifying if q is considered as common ground by the addressee as well.



Table 6. The conversational scoreboard after the addressee's confirmative answer to a *mi?*-tagged utterance

Conversational Scoreboard			
Discourse commitments		Sourced commitments	
$DC_{Spkr} \{\}$	$DC_{Spkr}^* \{\}$	$SC_{Spkr} \{\}$	$SC_{Spkr}^* \{\}$
$DC_{Addr} \{\}$	$DC_{Addr}^* \{\}$	$SC_{Addr} \{\}$	$SC_{Addr}^* \{\}$
Table $\langle \{\} \rangle$			
CG $\{p, q\}$			
CG [*] $\{\}$			

If the answer to the *mi?*-tagged utterance is confirmative, the Table and all commitment slates get cleared, and *p* becomes common ground, along with *q*, as shown in Table 6.

Whether or not the *mi?*-tagged utterance is accepted or rejected, *q* can become common ground. If the addressee gives a negative response, *q* may be retracted from the (speaker's view on the) common ground and from the speaker's commitment sets, but being a pragmatic presupposition, this is up to the speaker.

6. DISCUSSION AND REMAINING ISSUES

The present paper characterizes the bias profile of Hungarian tag questions with *mi?* by means of constructed examples and with the help of a survey on their acceptability ratings by native speakers. In doing so, it offers a first look at *mi?*, a type of question tag that Kiss (2021a) refers to as *source tags*, due to its special contextual requirements. In this section, I discuss the formal and pragmatic properties raised in section 1.2 and bring up some of the open issues, all of which are left for future research.

6.1. Formal properties

The fact that question tags including *mi?* cannot be hosted by declarative questions indicates that both question tags and the multiple rise-fall contours found in Hungarian declarative questions convey the same type of meaning. Both biased question types convey speaker bias, but they are not pragmatically equivalent, hence their conversational scoreboards would not be the same. Though Malamud & Stephenson (2015) have a proposal for how declarative questions look on the scoreboard, there are various other types of declarative questions, thus this question is left unaddressed here.

It has been noted that *mi?* stands in contrast with *ugye?* in terms of its position in the utterance and its intonational contour. While *ugye?* can appear in utterance-initial and utterance-medial positions, and utterance-finally, it can have both a rising and a falling intonation, *mi?* is restricted to an utterance-final position and an obligatorily rise-fall intonation contour (which, due to its shortness, is realized as a rise Varga 2002). The explanation for this may be



that *ugye?* is on a grammaticalization path towards becoming a discourse marker, while *mi?* is only used as a question tag.

It has been proposed that *ugye?* originally was a question tag with a rise-fall intonation, consisting of *úgy* ‘like that’ and the question particle *-e*, which is still transparent in present day Hungarian (Benkő 1967; Gyuris 2017). At a later stage, it became an internalized tag (see example (9)), after which it underwent semantic reanalysis and lost its prosodic marking. Thus *ugye?* shows all of what Tabor & Traugott (1998) refer to as the “hallmarks of grammaticalization”: syntactic change, semantic change and gradualness. The loss of prosodic marking itself has been identified as a milestone in the grammaticalization path of discourse markers, as also confirmed by the prosodic marking of the different uses of *ugye?* (Gyuris 2009). Thus the non-rising version of utterance-final *ugye?* shown in example (8a), as well as its occurrences in sentence-initial and sentence-medial position shown in example (9) are arguably all instances of its discourse marker use, not their question tag use. The fact that discourse markers have more freedom in terms of their syntactic position explains their wider distribution (cf. example (9)) compared to that of the question tag *mi?*.

Mi?, on the other hand, is still at a purely question tag stage, hence it cannot be deprived from its interrogative contour and is restricted to the utterance-final position. This can explain its unavailability in *wh*-questions as well: if *mi?* is a question tag and is not used as a discourse marker, then it can only serve to elicit confirmation to the truth of the anchor proposition, which *wh*-questions do not have.

Finally, the etymology of *ugye?* outlined in Gyuris (2017) provides an explanation for why *ugye?* can stand alone as a reacting move. If *ugye?* is the reduction of the interrogative *úgy van-e* ‘is that so?’, as it is proposed by Benkő (1967), it contains the propositional anaphora *úgy* ‘so’, which refers back to some proposition contributed by the previous move. Since this structure is still transparent for speakers of Hungarian today, it is arguably the reason why *ugye?* can participate in this kind of anaphoric relation. On the other hand, *mi?* does not contain such an element. Although this paper does not present the etymology of the tag question *mi?*, it certainly is a necessary step in understanding its pragmatics in Modern Hungarian.

6.2. Contextual bias or evidentiality strategy?

The analysis offered here correctly predicts the unacceptability of *mi*-tagged utterances in contexts where the speaker is supposed to be unbiased, such as in the courtroom context (16), since a neutral epistemic stance is incompatible with the contextual restrictions of *mi?*. And as the rest of the examples in section 3 have shown, *mi?* expresses a more complex bias compared to *ugye?* in that the addressee needs to be independently committed, which itself must be an independent commitment of the speaker.

It has been proposed that speaker bias should be classified into bias originating from the speaker’s expectation and bias originating from the context of discourse (Büiring & Gunlogson 2000; Sudo 2013; Northrup 2014; Gärtner & Gyuris 2017). The question arises whether the speaker presupposition about the addressee’s commitment is a contextual bias. In the contexts where *mi?* is acceptable, contextual evidence indeed seems to play an important role. But it is not clear whether this is a requirement, because *mi?* could be equally felicitous in contexts where the speaker’s independent commitment is based not on a directly perceivable contextual evidence. Consider example (34), a modified version of (27).



- (34) Context: B and C have tasted ice-cream X, and C learns that B found it very tasty. Later on, C tells to A, who herself has tried ice-cream X and liked it, that B liked ice-cream X. Even later, A meets B and says:

a. Szóval megkóstoltad az X fagyit. Finom volt, ugye? / ?*mi*?
 so VM.taste.PST.2SG the X ice-cream.ACC tasty was UGYE MI
 ‘So you tasted ice-cream X. It was tasty, wasn’t it? / huh?’

In the context of (34), the speaker’s independent commitment is based on some evidence from the past, which is not directly available in the current dialogue, hence it cannot be considered contextual evidence. If A’s utterance in (34a) is felicitous in this context, it means that the speaker bias conveyed by *mi?* is not tied to contextual evidence; and if it is not felicitous, it suggests that *mi?* is indeed sensitive to contextual evidence. This seems to be a question that calls for empirical observations, which require a more advanced data collection method than online surveys; for now this question remains open.

If *mi?* turns out to require contextual evidence, this fact would suggest that *mi?* conveys evidential meaning, as it has been proposed about its English counterpart *huh?* (Norrick 1995). These tags would not be *evidentials*, the core meaning of which is the source of evidence. Instead, *mi?* should rather be called an evidentiality strategy, which Aikhenvald (2004) defines as “categories and forms which acquire secondary meanings somehow related with information source” (p. 105).

However, independent commitment, according to Gunlogson’s (2008) definition, is not necessarily made based on direct access to the source of evidence (for example by direct visual perception); thus whether or not *mi?* represents an evidentiality strategy in Hungarian does not influence the validity of the claims made about its contextual restrictions.

6.3. Counterparts and cognates

We find cognates in the realm of tag questions across languages in the Indo-European family. North American *huh?*, Canadian *eh?/hein?*, and Italian *eh?* all have uses that correspond to the use of *mi?* described in this paper, although they have further uses which *mi?* does not share (see Kiss 2021a).

Huh can be used with both a rising and a falling intonation utterance-finally, and they can even appear at the beginning of an utterance. It has been analyzed as part of a mirative strategy (Kraus 2019).

- (35) a. A: The server is down.
 B: Huh. They must be updating it. (Kraus 2019, (3b))
 b. Pepper and Raj are at the market, shopping for a (single) snack for Ahmed.
 Pepper picks up a dragon fruit.
 R: Ahmed likes dragon fruit, huh. I had no idea. (Northrup 2014, (12”b))

In (35a), *huh* is in an utterance-initial position, and in both examples, *huh* is pronounced with a falling contour. These properties make them different enough from the utterance-final, rising *huh?*-tag which I assume is the counterpart of Hungarian *mi?*



Canadian English *eh?* is felicitous in example (2), in which in Hungarian also uses *mi?*, but not in a range of other contexts and different types of anchors (Wiltschko et al. 2018, 575), an example of which is shown in (36).

- (36) a. Get me a beer, *eh?* (Wiltschko et al. 2018, (19b))
 b. Hozz egy sört, jó? / #*mi?*
 bring.2SG.IMP a beer.ACC good MI
 ‘Bring me a beer, OK?’

Italian *eh?* can modify various speech acts, not just ones that have an assertive illocutionary point but also essentially hearer-directed speech acts such as the one shown in (37), which has an imperative anchor. This utterance can be said by a parent who is leaving their baby with the baby sitter.

- (37) a. Fa il bravo, *eh?* (Italian)
 do.IMP.2SG the great EH
 b. Csak ügyesen, jó? / #*mi?*
 only well good MI
 ‘Come on, do your best!’

One function that the Italian and the two North American tags share is that they can elicit a repetition of the preceding utterance if used alone with an interrogative intonation. Hungarian *mi?* can be used for the same purpose felicitously, however in this case, it clearly means ‘what?’, as opposed to its use as a tag, where its literal meaning is less obvious. The *mi?* that is used in context (38) could be the result of ellipsis: *Mi [az amit mondasz?] ‘What [are you saying]?’*.

- (38) a. A: Did anyone call me?
 b. B: *Huh?* (What was that?) / *Eh?* / *Mi?*
 c. A: Did anyone call me?

Besides English and Italian, a number of other Indo-European languages have tags that share the use of Hungarian *mi?* described here. The tag *eh?* can be found, besides Italian and Canadian English, in Spanish (García Vizcaino 2005) and Catalan (Castroviejo 2018), French and Brazilian Portuguese have *hein?*. If they are cognates, and the historical development of their formal and functional properties would likely provide invaluable insight into the meaning of present-day *mi?* and other source tags.

6.4. Sarcasm and impoliteness

Kiss (2021a) argues that source tags are more prone to convey irony compared to basic tag questions. Consider the courtroom context again, repeated in (39), where the tags are marked odd because the context does not permit bias.



- (39) a. Ön tagja volt a Kommunista Pártnak, #ugye? / #mi?
 you member.POSS was the Communist Party.DAT UGYE MI
 ‘You were a member of the Communist Party, weren’t you? / huh?’

While both tags can add a sarcastic flavor to the utterance, contributing thereby to their unacceptability in a context which is not supposed to convey non-neutral affective stance, *mi?* can amplify sarcasm, more so than *ugye?*. I speculate that this is made possible by the speaker presupposition which presents the speaker as being independently committed to the addressee’s sourcehood for *p*. Since sourcehood is often (although not obligatorily) tied to direct perception, presupposing the speaker’s sourcehood conveys the message of ‘regardless of your answer, I can tell that you are a source for *p*’. What gives rise to sarcasm is the contrast between the inquiry about a certain matter (whether the addressee is a member of the Communist Party), and a presupposition that resolves the same issue (the presupposition that the addressee is a source for *p*, ‘the addressee was a member of the Communist Party’). For a similar reason, this speaker presupposition also gives rise to impoliteness effects. This is in line with the hypothesis that the more direct access to a certain piece of information one attributes to their addressee, the less polite the utterance will be (San Roque et al. 2017). The authority of the addressee in making her own commitment gets restricted by the speaker’s belief attribution, especially if the implication is strong, as it is in the case of a presupposition.

7. CONCLUSION

The present paper proposes an analysis of *mi?*-tagged utterances in a commitment-based model. I claim that the tag *mi?* is favored in contexts where both the addressee and the speaker are independently committed to *p*; in addition, the speaker is independently committed to the fact that the addressee is independently committed. The contextual restrictions of *mi?* are different from *ugye?*, allowing it to appear only in a subset of the contexts in which *ugye?* can occur. The intuitions underlying the claims in this paper have been corroborated partly by the results of an online survey collecting acceptability judgments from native speakers of Hungarian, which reveals that the tag *mi?* is favored in contexts where both the addressee and the speaker are independently committed to *p*. These results provide direct support for the claim that *mi?* tentatively commits the addressee as a source for *p*. The preference for independent speaker commitment provides further indirect support for the main claims of the paper: being a source for *p* provides stronger grounds for both the aforementioned commitment attribution and for presenting oneself as a source for the addressee’s commitment. While a number of questions are left open, this work contributes to the growing body of literature on the formal pragmatic analysis of tag questions in Hungarian and of source tags in general.

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