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Alda Mari

3 Disconfirmational MICA in surprise questions (and some notes on concessivity)

Abstract: Through the study of the particle MICA in Italian, this paper addresses the question of mirativity in the broader context of future and questions. It achieves three main results: (i) it shows that MICA is not a common ground management device; it is a particle that manipulates inferences rather than anchoring to discourse participants, patterning with disconfirmational evidentials cross-linguistically. (ii) it proposes that semantic and pragmatic composition can interact and do not proceed independently, and (iii) it establishes a new connection between mirativity and concessivity.

Keywords: Mirativity, concessivity, future, questions, *mica*

1 Introduction

Future questions are one of the many contexts in which the Italian discourse particle MICA can be found. In this context (note the future *avrà* ‘will have’), MICA creates a biased question, and, more specifically, a mirative question.¹

- (1) Oh, no ! (Sara) non **avrà mica** detto ad Anna che ho un altro figlio da lei (Sara) ? ! ? Non può averlo fatto ! Cielo, e se invece fosse così ?²
‘Oh no ! Sara will have not told Anna that I have another son from her (Sara) ? ! ?
She cannot have done it ! God, what if instead she did it ?’

In the specific case (1), as the punctuation ‘? ! ?’ reveals, the MICA-question is imbued with surprise (also spelled out in the preceding ‘Oh, no !’), and it is loaded with a series of presuppositions that surface as expectations that have been referred to as ‘biases’

1 In the absence of an English direct translation for Italian *mica*, we illustrate right from the bat the effects that it enhances. As we show, we consider *mica* as the representative of a class of disconfirmational evidentials, and capitalize it, as representative of a class.

2 <https://www.wattpad.com/277641804-pensami-federico-rossi-20-vendetta-o-quasi>

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in the literature.³ (i) First, the speaker believes that Sara would not be able to tell Anna that the speaker has another son from her (Sara). (This has been called the *speaker bias* and it is spelled out later in the discourse as *Non può averlo fatto!* ‘She cannot have done it!’.) (ii) Second, the speaker might have evidence, in the context of utterance, that Sara has told Anna. This is the *evidence bias*. (iii) Third, the speaker expects a positive answer to the question (*answer bias*). Furthermore, the question is a true question⁴ that reveals uncertainty and requires a clarification, as the follow up with *Cielo, e se invece fosse così?* ‘God and what if it is indeed the case?’ shows. Note that, replacing *mica* with *forse* (‘maybe’) removes all these biases and with them, the effect of mirativity.

The ability of MICA to create bias and enhance mirativity can be appreciated by comparing MICA future questions with future questions without MICA, which we dub as ‘bare future questions’ (see Mari 2021; Giannakidou and Mari 2023).

(2) Dove sarà Anna? Non la vedo.
 where be.FUT.3SG Ann? not her see.1SG
 ‘Where might Ann be? I do not see her.’

(3) Anna sarà a casa ora?
 Ann be.FUT.3SG at home now?
 ‘Might Ann be at home now?’

None of these questions features a surprise effect. Surprise comes with biases and expectations, whereas bare future questions are anti-biased: they are questions that reveal a state of complete uncertainty, that might not even require an answer and that the speaker can address to themselves (see e.g. Littell et al. 2010; Eckardt and Beltrama 2019; Giannakidou and Mari 2023).

Our study aims to disentangle the semantic contribution of future tense and MICA to explain the nature of these biases and how these biases and the surprise effect arise. For the purposes of this paper, we will not address the interaction of future and question operators in the absence of MICA (see Giannakidou and Mari 2023; Mari 2024) but focus on the following three questions: (i) what is the meaning of future? (ii) what is the meaning of MICA? and (iii) how do questions (QUES), future (FUT) and MICA interact?

We submit that MICA triggers an expectation that takes the form of a defeasible generalization (or a generic rule). It delivers a conclusion that is contrary to the default inference, no matter whether the expectation is a positive or a negative one.

³ See, among many others Krifka (2015), Malamud and Stephenson (2015), AnderBois (2019), Buring and Gunlogson (2000), Larrivé and Mari (2022).

⁴ Pace Frana and Rawlins (2019).

In line with much of the literature (see for a recent discussion Frana and Rawlins 2019; Greco 2022; Magistro 2023), we will assume that MICA and NON-MICA have the same interpretation and that (4-a)–(4-b) are in free distribution.

- (4) a. Mica Avrai già mangiato?
 mica have.FUT.2SG already eaten?
 ‘You have not eaten yet, don’t you?’
- b. Non Avrai Mica già mangiato?
 not have.FUT.2SG MICA already eaten?
 ‘You have not eaten yet, don’t you?’

We will proceed by focusing on MICA in Section 2, where we discuss previous analyses as well as our new proposal. We recall in Section 3 our own epistemic analysis of Italian future, relying on Mari (2009); Giannakidou and Mari (2018b, 2023b, to appear). Section 4 brings these two pieces together within the specific context of questions. Section 5 discusses the consequences of the analysis, highlighting the evidential underpinnings of the mirative effect associated with MICA. Section 6 offers some comments on a previously unnoticed connection between mirativity and concessivity, comparing MICA questions to their corresponding concessive questions in French. Section 7 concludes.

2 MICA, expectations and reasoning

It is uncontroversial that MICA is a negative element that is anaphoric to information available in the common ground. Theoreticians have focused on individuals’ beliefs, and disagree on whether it is presupposed that the speaker expects p or $\neg p$.

2.1 The debate

First attempt: speaker bias towards p . According to Cinque (1991), MICA can deny a proposition that has never been expressed linguistically, but simply inferred or believed to be believed by the addressee. Cinque discusses the context in which the speaker S sees the addressee A pouring milk into a dish for S ’s cat. S infers that p (in this case: the milk is good for cats) is assumed by A .

- (5) Guarda che il latte non fa mica bene al gatto.
 ‘Look, the milk is NOT good for cats’

According to Cinque's analysis, NON introduces a regular negation and MICA adds a definedness condition: in the context c , p is presupposed by some participant in the conversation.

Second attempt: in questions, the speaker is biased towards $\neg p$. Frana and Rawlins (2019) provide new evidence against Cinque's analysis, and elaborate a scenario where Clara invites Miles for dinner and makes clear to him that she will prepare her best dishes. When he gets there, Miles barely touches any food. Clara asks him:

- (6) Non Hai mica già mangiato?
 not have.2SG MICA already eaten?
 'You have not eaten yet, haven't you?'

Clara expects that Miles has *not* eaten yet, she is biased towards $\neg p$, but has evidence (evidence bias) that p (Miles barely touches any food).

Frana and Rawlins (2019) maintain Cinque's generalization for assertions, but provide a different generalization for questions, overall proposing what follows:

- (7) Frana and Rawlins (2019) generalization.
- a. In **assertions**, MICA sentences are felicitous in contexts where p is assumed by some participant in the conversation (as in Cinque 1991).
 - b. **Questions** with MICA are felicitous if the speaker has prior bias (prior to the ex- change) for $\neg p$.

We show that this generalization is not correct for questions, and that a unified account for both assertions and questions is possible.

New observation: the valence of the speaker's bias is not relevant. We observe that, even in questions, p can be expected to be part of the common ground (rather than $\neg p$), as the following case, where p is expected to be true by the speaker, shows. The context is one in which I am eating a whole bag of chips and my friend asks me:

- (8) Scusa non sei mica a dieta?
 orry not be.2SG MICA at diet?
 'Sorry to ask, aren't you on a diet?'

The speaker expects p to be true (that I am on a diet) and has evidence for $\neg p$ (that I am not on a diet as I am eating a whole bag of chips). We conclude that MICA is not sensitive to the valence of the speaker's bias presupposition (if any; as we indeed argue, the bias is inferred and not presupposed), and it does not always create a bias reversal as argued by Frana and Rawlins (2019a).

2.2 New proposal

We propose that MICA is anaphoric to rules and generalizations of the form (9), where E is a body of evidence (a set of propositions) available in the context of utterance c .

(9) E then *normally* q

(9) is a defeasible inference that can be based on stereotypes, norms, commonsense reasoning. It is enhanced by contextual information or general knowledge (see a.o. Dowty 1979; König 1991; Krifka et al. 1995; Mari et al. 2012; Mari 2014).

MICA states that a certain generalization does not hold and that the inference associated with the generic generalization should not go through, according to the speaker.

(10) a. MICA is defined if:

The context c makes available a rule of the form:

E THEN *normally* q

b. If defined MICA means:

E AND $\neg q$

(= \neg (E THEN *normally* q))

Unfolding (8), the reasoning goes as follows.

- | | | |
|---------|---|----------------------------------|
| (11) a. | eating a lot (E) \rightarrow not on a diet ($\neg p$) | <i>defeasible generalization</i> |
| b. | MICA: eating a lot (E) AND on a diet (p) | <i>MICA content</i> |
| c. | <u>p and $\neg p$ are valid alternatives.</u> | <i>Question</i> |

The same analysis applies to MICA-assertions, and there is no need to differentiate them from questions (*pace* Frana and Rawlins 2019).

Consider the scenario in which the addressee (A) is far away and the speaker (S) announces that the addressee's sister will pick them up (Cinque 1991; Frana and Rawlins 2019). In so doing the speaker seems to presuppose that the addressee's sister can drive. The addressee clarifies that his sister is not able to drive.

(12) S: Sei lontano. Ti viene a prendere tua sorella.

'You are far away. Your sister is going to pick you up.'

A: Non sà mica guidare.

'She is not MICA able to drive.'

According to our account, what matters for MICA is that there is a contextually available generalization according to which if someone picks up a person who is far away, they will probably use the car.

- (13) a. Defeasible inference:
 pick up (E) \rightarrow normally can drive (p)
 b. MICA:
 pick you up AND not drive

As we see, the mechanics remain intact, no matter whether the defeasible generalization leads to the conclusion that p (8) or $\neg p$ (12) is true, and no matter whether an assertion or a question is at stake.

Furthermore, dealing with conditionals allows us to derive the expected inference that the addressee's sister will not pick him up. As per König (1991), by *conditional perfection* if the conclusion does not hold, then the premise does not hold either.

- (14) Conditional perfection⁵
 a. Given If E then normally q ,
 b. And given E AND $\neg q$,
 c. Then $\neg E$

This inference could not be derived on an account that relies on mere speaker's expectations about the truthfulness of the prejacent.

If our analysis is correct, MICA relies on a conditional reasoning and turns out to be a disconfirmational particle, that rejects contextual evidence as valid (see also Aikhenvald and Dixon 2014).

3 The modal semantics of Italian future

3.1 Background on future and future questions

It is no longer controversial that the future tense is not the dual of the past tense (see among many others, Enç (1987), Bertinetto (1979), Copley (2009), Mari (2009), De Saussure and Morency (2012), Giannakidou and Mari (2013b, 2018b), Frana and

⁵ The conditional perfection is an instance of Modus Tollens

Menéndez-Benito (2019), Escandell-Vidal (2021) among many others; *pace* Prior (1962), Kissine (2008).)

The modal future can have present and past orientation in a way akin to *dovere* (*must*) and *potere* (*might*), which has lead several theoreticians to conceive of the future as an *epistemic* modal (Bertinetto 1979, Mari 2009, Pietrandrea 2005, Giannakidou and Mari 2013a, 2018b), with some amount of disagreement as to the force of future, underspecified for some (e.g. Pietrandrea 2005, Baranzini and Mari 2019) and universal for others, with (Giannakidou and Mari, 2018a) or without bias (Mari 2021; Giannakidou and Mari 2023).

- (15) a. Flavio sarà nella sua camera.
 ‘Flavio must/might be in his room.’
 b. Flavio deve essere nella sua camera.
 ‘Flavio must be in his room.’
 c. Flavio può essere nella sua camera.
 ‘Flavio might be in his room.’

Several theoreticians have argued in favor of an evidential theory for future. They have argued that future is inferential evidential (Frana and Menéndez-Benito 2019, Eckardt and Beltrama 2019) or a subjective evidential (after Mari 2010b, Ippolito and Farkas 2021). The very fact that future cannot be used in questions that are addressee-oriented (16) has been used as an argument for future as an evidential (Frana and Menéndez-Benito 2019).

- (16) #Quanti Anni avrai?
 how.many Years have.FUT.2SG?
 ‘How old might you be?’

Indeed, future would trigger what is called the interrogative flip, that is to say the phenomenon whereby the addressee is the source of the evidence needed to answer the question, whereas, in assertives, the source of the evidence grounding the assertion is the speaker. The flip is argued to occur with evidentials in biased questions (Bhadra (2020), Korotkova (2016), Murray (2016), a.o.), according to a reasoning that proceeds as follows: (i) a question containing an evidential expects that the hearer has the type of evidence encoded by the evidential (e.g. Speas and Tenny 2003, Aikhenvald 2004, Murray 2016; San Roque et al. 2017, Bhadra 2020), (ii) the evidential future is an inferential, (iii) the evidential future can be felicitously used in questions only if the hearer does not have direct evidence to answer the question. This would explain the infelicity of (16) as a case of presupposition failure with the addressee having direct evidence rather than indirect evidence. (Note, indeed,

that, if the addressee is in a state of confusion and does not remember their age anymore, the question is felicitous, see discussion in Eckardt and Beltrama 2019).

However, the emergence of the interrogative flip is not a solid argument for the evidential nature of Italian future. Epistemic modal questions such as (17) are also odd, on the assumption that the addressee knows their own age and that this impossibility is not due to evidentiality.⁶

- (17) #*Quanti anni Puoi avere?*
 How many years Can have?
 ‘How old might you be?’

What we call the anti-addressee effect (see Giannakidou and Mari 2024) is not a peculiarity of evidentials, and the Italian future, again, aligns with epistemic modals.

In a series of recent works, Mari (2021) and Giannakidou and Mari (2024) propose that questions with future are reflective and do not even require an answer. They pattern along with conjectural questions that have been identified cross-linguistically. Modal questions belong to this class (see also Kang and Yoon 2019). Evidentials can also enhance conjectural questions (Eckardt and Beltrama, 2019; Matthewson, 2010), as data from Gitksan (Littell et al., 2010) reveals (see Matthewson 2010 for extensive discussion of the data).

The question still stands of whether anti-knowledge or inferentiality is the hallmark of Italian future.

3.2 Inference as ancillary to anti-knowledge marking

The following much debated contrast (see Giannakidou and Mari (2016) and references therein) shows that the Italian future, just like epistemic modals cannot be used when the speaker has direct evidence for the truthfulness of *p*.

Context: Direct visual perception of rain, the speaker sees the rain falling.

- (18) a. #*Starà piovendo.*
 be.FUT.3SG Raining
 ‘It must/might be raining’

⁶ Ippolito and Farkas (2021) have a mixed account, very similar to Mari (2010b), where the future has an anti-knowledge presupposition and a subjective component. According to Ippolito and Farkas, the evidential component of Italian future triggers the interrogative flip. See Mari (2021) and Giannakidou and Mari (2023) for extended comments to Ippolito and Farkas proposal.

- b. #Deve star piovendo.
 Must be Raining
 'It must be raining'

Context: I see a wet umbrella.

- (19) a. Starà piovendo.
 be.FUT.3SG Raining
 'It must/might be raining.'
 b. Deve star piovendo.
 must be Raining
 'It must be raining.'

This contrast is intended to show that Italian future is incompatible with *knowledge*.

There is no doubt that epistemic modals have evidential presuppositions (Von Stechow and Gillies 2010; Giannakidou and Mari 2016, 2021a,b, 2024), and indeed, the epistemic modal base is itself the evidential basis for epistemic modals.⁷ The question whether Italian future is *primarily* an anti-knowledge marker or an inferential evidential is legitimate. This specific question is addressed in great details in Mari (2021) and we will not duplicate the demonstration here. One important point is that when inference entails knowledge, then the Italian future cannot be used, as in (20). Consider the context where there are 3 boxes and 1 ball. The ball is hidden below one of the three boxes. The ball is neither in A nor in B.

- (20) #Sarà (FUT) in C
 'It is maybe in C.'⁸

Why is it that future is felicitous in (19-a) (the umbrella case) and not felicitous in (20) (the boxes case)? In line with Giannakidou and Mari (2016) we claim that this is due to the fact that in the context of (19-a) the speaker has a lack of knowledge

⁷ The epistemic modal base can encode both endogenous or exogenous evidence, that is either evidence based on external facts, or subjective beliefs and preferences or a combination of both (see Giannakidou and Mari 2021b). Most of the times, unless otherwise lexicalized (see for instance Nuyts (1992); Mari (2016a)), the two sources of evidence are tightly intertwined.

⁸ Note that the addition of *dunque* (*therefore*) improves the acceptability. *Dunque* enhances a quasi-temporal interpretation, targeting the ratification time (Mari, 2016b) at which the boxes will be turned upside down and it will be revealed where the ball is hidden. The same observation holds for *allora* (*then/therefore*)

about whether it is raining outside, while, in the context of (21) the speaker has knowledge of where the ball is (box C is the only option).

Both direct and indirect sources (Willett 1988) can be sources of knowledge. We learn from direct experience as well as from inference or hearsay. However, these same types of sources may not produce knowledge, depending on their degree of reliability.

Epistemic modals are sensitive not to evidence type but to evidence quality.⁹ The lack of knowledge component enhances uncertainty and thus leaves room for all sorts of inferences (granted they do not lead to knowledge): the inferential component of epistemic modals hinges on their being anti-knowledge markers.

The inference that the future relies upon is of the following form:

(21) If E then *normally* q .

Where E is a set of propositions, conceived as the intersection of stereotypicality conditions (worlds where the course of events follows normality conditions) as well as subjective preferences (worlds that comply with what the speaker believes and their personal credences), and, most importantly here, *contextually learned evidence*.¹⁰

3.3 Analysis

We adopt here the concepts and the analysis of Giannakidou and Mari (2016, 2018b, 2021a,b),¹¹ recalling only the main building blocks and definitions. Our starting notion will be the one of the epistemic state of an individual anchor i , which, for Italian future, is always the speaker.

(22) *Epistemic state of an individual anchor i*

An epistemic state $M(i)$ is a set of worlds associated with an individual i representing worlds compatible with what i knows or believes in the context of utterance.

⁹ Note that lack of knowledge is not cancellable (as the recent account of Ippolito and Farkas (2021) proposes by deriving lack of knowledge as an implicature), as future statements would otherwise be compatible with scenarios of direct evidence.

¹⁰ For further discussion on the nature of the content of the evidence on which Italian future relies, see Mari (2010a, 2021); Giannakidou and Mari (2018b, 2023).

¹¹ All the definitions in this section are cited from their latest version in Giannakidou and Mari (2021a).

A nonveridical state conveys epistemic uncertainty if (and only if) it is partitioned into p and $\neg p$ worlds.

(23) *Nonveridical information state*

An information state $M(i)$ is nonveridical about p iff $M(i)$ contains both p and $\neg p$ worlds (Figure 1).

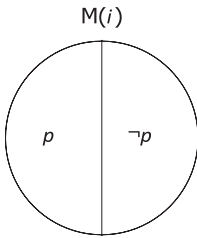


Figure 1: Uncertainty: partitioned epistemic state.

A function Ideal_S selects those worlds in $M(i)$ which best comply with *stereotypicality, speakers's expectations, beliefs and also credences* Giannakidou and Mari (2016, 2018b, 2023). This function does not add an ordering. It restricts the set of relevant worlds to those that follow the regularities expected by the speaker.

(24) Ideal_S .

Given the epistemic modal base $M(i)$, the Ideal_S set contains worlds that comply with stereotypicality conditions, as well as subjective preferences of the speaker i (Figure 2).

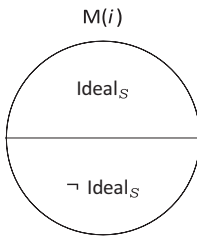


Figure 2: Ideal_S : Stereotypicality and speaker's credences.

Ideal_S is a subset of $M(i)$, that includes the evidence available in the context of utterance.

Future (FUT) quantifies over the set of Ideal_S worlds and adds the information that p is true there. In other terms, p is true in all worlds that comply with the contextual evidence as well as the expectations and credences.

- (25) An Italian future sentence presupposes (see for the formal analysis Giannakidou and Mari 2018b, 2023):
- (i) that the epistemic $M(i)$ is partitioned between p and $\neg p$ worlds,
 - (ii) that $M(i)$ is partitioned between Ideal_s and non- Ideal_s worlds, and asserts that
 - (iii) All Ideal_s worlds are worlds in which p is true.
- = In all worlds compatible with what the speaker i knows/learns in the context of utterance and that comply with stereotypicality and defeasible preferences, p is true (Figure 3).

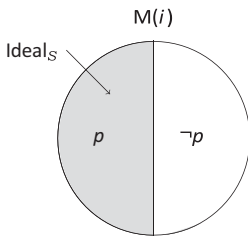


Figure 3: The meaning of Italian future.

4 FUT and MICA in questions

Bringing the pieces together, recall from Section 2 that MICA has the content spelled out in (10), repeated here in (26):

- (26) a. MICA is defined iff:
 The context c makes available a rule of the form:
 E THEN *normally* q
- b. If defined MICA means:
 E AND $\neg q$ ($= \neg (E$ THEN *normally* $q)$)

(27) rewrites (26b) in terms of Ideal_s , where Ideal_s is a set of propositions that comply with stereotypicality and normalcy conditions as well as preferences and facts of the worlds, as we explained above in Section 3. As a subset of $M(i)$, Ideal_s include worlds in which the newly learned evidence is true.

- (27) At issue content of MICA:
 In all Ideal_s worlds $\neg q$ is true.
 = In all worlds compatible with stereotypicality conditions, preferences and contextual evidence, $\neg q$ is true.

To account for the effect of MICA in questions, we start with the interpretation of future questions, on the assumption that QUES is a speech act operator that scopes over FUT (see Figure 4). QUES creates two alternatives. One in which all Ideal_s are p worlds, and one in which only some of the Ideal_s are p worlds.

- (28) $[[\text{QUES}(\text{FUT}(p))]]^{M,i,\text{Ideal}} =$
 {In all Ideal_s worlds p } OR {not in all Ideal_s worlds p }

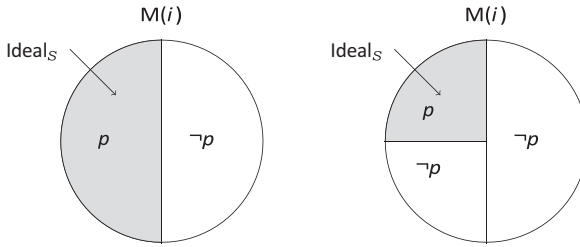


Figure 4: Non optimal question $\text{QUES} > \text{FUT}$ – with uninterpreted MICA.

This question is not ‘optimal’. Rephrasing it, it asks whether all worlds compatible with $\text{Ideal}_s p$ is true or whether there are only some of the worlds in Ideal_s in which p is true. As per Hamblin (1958) and later Groenendijk and Stokhof (1982), questions denote sets of mutually disjoint alternatives.

Our main claim is that the effect of MICA in future questions is of strengthening the distinction between the two alternatives guaranteeing disjointedness. Consider the second alternative in (28) highlighted here in (29):

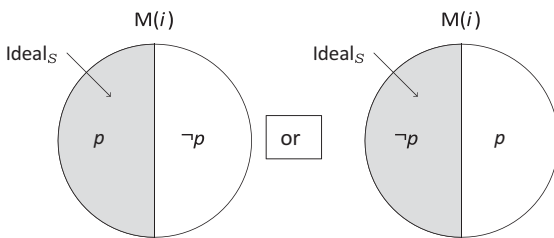
- (29) *Not* in all Ideal_s worlds p .

Strengthening leads to (30), where the Ideal_s worlds are all non p worlds.

- (30) Strengthening of (29).
 In all Ideal_s worlds *not* p .

By substitution of the strongest meaning (30), the second alternative in (28) is replaced by the content that MICA provides (26), namely that all the Ideal_s worlds are $\neg p$ worlds. Furthermore, note that the first alternative of the question is identical to the presupposition of MICA. The resulting MICA-question will thus be as in (31), illustrated in Figure 5.

$$(31) \quad [[\text{MICA} - \text{QUES}(\text{FUT}(p))]]^{M,i, \text{Ideal}} = \\ \{ \text{In all Ideal}_S \text{ worlds } p \} \text{ OR } \{ \text{in all Ideal}_S \text{ worlds } \neg p \}$$



NON-MICA-QUES > FUT

Figure 5: MICA future question.

It is clear that the maximization effect does not proceed compositionally.¹² It is a pragmatic principle that allows strengthening at issue meaning according to instructions given by the lexical items available in the utterance, which we have referred to as ‘substitution of the strongest meaning’. In other terms, since the strongest meaning (30) is available in the sentence, it is interpreted where needed.

What happens between QUES and FUT in the absence of MICA is a matter for a different paper. We anticipate here that in the case of bare future questions, the order FUT and QUES is reverse and that (28) is not generated to begin with (see Mari 2021; in press).¹³

5 Discussion

5.1 The sources of the mirative effect

Where does the mirative effect come from? Recall that Ideal_S worlds are evidence worlds: their basis is what the speaker knows and learns in the context of utterance,

¹² Research in progress is further elaborating on the question of the interaction at the compositional level between at-issue and non-at-issue meaning, and envisages the possibility that non-at-issue composition can ‘rescue’ semantically un-interpretable forms issued by regular composition at the at-issue level. For more results on compositionality, see Mari (in press).

¹³ Note that, considering the evidence compatible with both p and non- p leads us to consider the evidence as irrelevant (no matter the evidence question). This immediately explains why MICA can be used in ‘by any chance’ questions (independently of everything questions): ‘Mica hai una penna?’ / *Do you have a pen, by any chance?* The explanation of how this reading arises is left for future research

as well as stereotypicality conditions and preferences. This is the evidential basis for what the speaker believes, and from which inferences are derived and calculated.

The question, by opening up two possibilities in which the evidence holds and it is compatible with p being true as well as with $\neg p$ being true, signals that the evidence available to the speaker is not sufficient to settle whether p is true or whether $\neg p$ is true.

The recent literature on common ground management devices has brought to light *enimitive* (from Latin *enim, indeed*) (Panov 2020). Enimitives are expressions of confirmation.

(32) Mirabiliter **enim** moratus est, sicut nosti.

‘For he has a strange moral habitus **as you know**.’ (Cic. Att. 2.25.1)

Unlike enimitive, disconfirmational MICA acts as a type mirative element. Mirativity arises in two steps: the speaker enters in the conversation with some previous bias towards p or its negation. New evidence intervenes in the course of the conversation that leads to an unexpected conclusion. The mechanism enhanced by MICA is different in that nothing is presupposed about a prior speaker’s bias. The prior bias is inferred insofar as MICA denies that the conclusion to which the evidence leads is endorsed by the speaker.

5.2 MICA vs. FUT: sensitivity to the valence of the inference

We have stated in Section 2 that MICA has the property of canceling a defeasible inference, no matter whether the inference leads to the conclusion that p or to the conclusion that $\neg p$. In other terms, MICA does not impose any constraint on the valence of the speaker bias. Future also features an evidential presupposition: evidence can be only be used if it supports p .

Recall the contrast between the diet case (8) and the Miles-is-not-eating case (6). In the diet case (here (33) = (8)), the speaker has a prior belief that p and acquires evidence that $\neg p$. In Miles-is-not-eating case ((34) = (6)) the speaker has a prior belief that $\neg p$ and acquires evidence that p .

(33) Scusa non sei mica a dieta?

sorry not are MICA at diet?

‘Sorry to ask, aren’t you on a diet?’

(34) Non hai mica già mangiato?

not have.2sg MICA already eaten?

‘You have not eaten yet, haven’t you?’

Interestingly, Italian future cannot be used in Scenario 1, as illustrated in (35).

Scenario 1: The speaker has evidence that the addressee is *not* on a diet.

- (35) Scusa non #sarai mica a dieta?
 sorry not be.FUT mica at diet?
 ‘Sorry to ask, aren’t you on a diet?’

The future can only be used if the evidence supports *p* as in Scenario 2.

Scenario 2: The speaker has evidence that the addressee *is* on a diet.

- (36) Scusa Non sarai mica a dieta?
 sorry Not be.FUT mica at diet?
 ‘Sorry to ask, aren’t you on a diet?’

FUT and MICA are compatible only in the case in which the evidence supports *p*. This furthermore shows that MICA does not flip the evidential source, but acts at a different level of the evidential information, namely the inferences that evidence enhances, like other disconfirmational evidentials cross-linguistically (Aikhenvald 2014).

6 Mirativity and concessivity: A new connection

Reasoning with normalcy conditions and canceling defeasible inferences based on normalcy- based rules is the hallmark of conditional concessives and concessives more generally (König (1991), see Baranzini and Mari (2019) on Italian and French concessives).

- (37) Concessive reasoning
E THEN *normally q*
E AND $\neg q$ (= \neg (*E* THEN *normally q*))

- (38) Even if he is cute, he does not have a girlfriend.
 Generic rule: he is cute then he should normally have a girlfriend. Rule
 cancellation: he is cute and he does not have a girlfriend.

Further confirmation that our analysis is on the right track comes from the observation that MICA (future) questions might be cross-linguistically translated into

concessive questions. This is the case in French, which resorts to the concessive *quand même* ('nonetheless').

The question arising in the Miles-is-not-eating scenario, where Susan is asking Miles whether he has already eaten (contrary to what she expects) has the following form:

- (39) Tu n' as/aurais quand-même *pas* mange?
 you not has/would.have nonetheless not eaten?
 'You have not eaten yet, haven't you?'

The question that my French addressee would formulate wondering whether I am really on a diet, seeing me eating a whole packet of chips will be as:¹⁴

- (40) Tu es quand même à la diète, n'est-ce pas ?
 'You are nonetheless on a diet, don't you?'
 (Scenario 1: contextual information leads to conclude that the addressee is *not* on a diet)

The concessive reasoning acknowledges (and accepts) the premises, but blocks the normal conclusion that would follow from those premises. The concessive *quand même* question also reveals an amount of surprise and the concessive question is disconfirmational of the inference that available evidence would enhance, just like MICA-questions.

Furthermore, French disentangles the negative from the concessive component. Indeed, the negation *ne . . . pas* appears only when the speaker has prior belief that $\neg p$, as in (41). Note that the *quand même* can be dislocated.

- (41) Tu n'as pas mangé? . . . *quand-même*
 'You haven't eaten?' . . . *Litt: Nonetheless*
 'You haven't eaten, haven't you?'

When the speaker has a prior belief that *p* is true, *quand même*, without the negation, is used.

¹⁴ These concessive questions are akin to tag questions, or even raising declaratives. The precise nature of these concessive questions in French is the matter of future research

- (42) Tu es à la diète ? . . . quand même !
 ‘You are on a diet’ . . . Litt: nonetheless
 ‘You are on a diet, haven’t you?’

The negation seems to play a true negative role, creating a negative question. The concessive has a clear non-at-issue status, and reveals a stance of incredulity on the part of the speaker. This stance is unfolded as a concessive reasoning, whereby the speaker acknowledges the evidence, yet does not endorse the conclusions that this evidence leads to.

In Italian, MICA seems to act at the at-issue level, as it cannot be dislocated as in French:

- (43) a. Non hai mangiato ? #mica
 ‘You haven’t eaten ? #nonetheless’
 b. Sei a dieta ? #mica
 ‘Are you on a diet? #nonetheless’

Furthermore, MICA and NON-MICA, as we announced it right from the bat, are in free distribution, at least in some dialects, including Milanese, which I am a speaker of. Both forms with overt and covert negation *non* can be used in the scenarios discussed here above, in which either prior belief that p or prior belief that $\neg p$ can be inferred.

In spite of those differences, the observation is now put forward that there is some deep semantic relation between MICA, concessivity and mirativity, and future cross-linguistic research will determine whether this connection is a matter of fortuity or whether it is revealing of a deeper mechanism that mirativity and concessivity share, as we are suggesting. Way more work is needed to determine whether *quand même* questions are exclamatives or *queclaratives* and what the precise composition might be (see Mari, in press for more thoughts about how semantic and pragmatic composition can interact).

7 Conclusion

In this paper we have proposed that MICA is a sub-type of mirative, which we have labeled disconfirmational, as it does not recognize the validity of the inference enhanced by contextual evidence. When used in future questions, MICA highlights that contextual information is to be discarded, while creating a true question revealing uncertainty. Given the evidence learned, the speaker is in a state of

uncertainty that requires clarification. MICA interacts with QUES and FUT providing the content necessary to the formation of a valid clarification seeking question.

Future questions in Italian are a natural locus for its use, as they also rely on inferentiality and evidence. We have highlighted how the conditional reasoning underlying the semantics of future and MICA proceeds, and we have finally discovered a connection between MICA, mirativity and concessivity that revolves around the cancellation of generic rule based defeasible inferences. Future work will tell us to what extent mirativity and concessivity cross-linguistically and cross-categorically meet.

References

- Aikhenvald, Aleksandra. 2004. *Evidentiality*. Oxford: Oxford University Press.
- Aikhenvald, Aleksandra & R. M. W. Dixon. 2014. *The Grammar of Knowledge: A Cross Linguistic Typology*. Oxford: Oxford University Press.
- AnderBois, Scott. 2019. Negation, alternatives, and negative polar questions in American English. *Questions in Discourse. Current Research at the Semantic-Pragmatic Interface* 35. 118–171.
- Baranzini, Laura & Alda Mari. 2019. From epistemic modality to concessivity: Alternatives and pragmatic reasoning per absurdum. *Journal of Pragmatics* 142. 116–138.
- Bertinetto, Pier Marco. 1979. Alcune ipotesi sul nostro futuro (con osservazioni su “potere” e “dovere”). *Rivista di Grammatica Generativa* 4(1–2). 77–138.
- Bhadra, Diti. 2020. The semantics of evidentials in questions. *Journal of Semantics* 37(3). 367–423.
- Buring, Daniel & Christine Gunlogson. 2000. Aren't positive and negative polar questions the same? *Ms.UCLA*.
- Cinque, Guglielmo. 1991. Teoria linguistica e sintassi italiana. *Teoria linguistica e sintassi italiana*. Milano: Il Mulino.
- Copley, Bridget. 2009. *The Semantics of the Future*. Psychology Press.
- De Saussure, Louis & Patrick Morency. 2012. A cognitive-pragmatic view of the french epistemic future. *Journal of French Language Studies* 22(2). 207–223.
- Dowty, David R. 1979. *Word Meaning and Montague Grammar: The Semantics of Verbs and Times in Generative Semantics and in Montague's PTQ*. Dordrecht: Kluwer.
- Eckardt, Regine & Andrea Beltrama. 2019. Evidentials and questions. *Empirical Issues in Syntax and Semantics* 12. 121–155.
- Enç, Mürvet. Anchoring conditions for tense. 1987. *Linguistic Inquiry* 18. 633–657.
- Escandell-Vidal, Victoria. 2021. The semantics of the simple future in romance: Core meaning and parametric variation. *Cahiers Chronos* 31. 9–31.
- Frana, Ilaria & Paul Menéndez-Benito. 2019. Evidence and bias: The case of the evidential future in italian. *Semantics and Linguistic Theory* 29. 727–747.
- Frana, Ilaria & Kyle Rawlins. 2019. Attitudes in discourse: Italian polar questions and the particle mica. *Semantics and Pragmatics* 12. <https://semprag.org/index.php/sp/article/view/sp.12.16/pdf>
- Giannakidou, Anastasia & Alda Mari. 2013a. The future of greek and italian: an epistemic analysis. *Proceedings of Sinn und Bedeutung* 17. 255–270.

- Giannakidou, Anastasia & Alda Mari. 2013b. A two dimensional analysis of the future: modal adverbs and speaker's bias. *Proceedings of the Amsterdam Colloquium 2013*. 115–122.
- Giannakidou, Anastasia & Alda Mari. 2016. Epistemic future and epistemic must: Nonveridicality, evidence, and partial knowledge. In Joanna Blaszack, Anastasia Giannakidou, Dorota Klimek-Jankowska & Krzysztof Migdalski (eds.), *Mood, Aspect, Modality Revisited. New Answers to Old Questions*, 75–124. Chicago: University of Chicago Press.
- Giannakidou, Anastasia & Alda Mari. 2018a. The semantic roots of positive polarity: epistemic modal verbs and adverbs in English, Greek and Italian. *Linguistics and Philosophy* 41(6). 623–664.
- Giannakidou, Anastasia & Alda Mari. 2018b. A unified analysis of the future as epistemic modality: The view from Greek and Italian. *Natural Language & Linguistic Theory* 36. 85–129.
- Giannakidou, Anastasia & Alda Mari. 2021a. *Veridicality in Grammar and Thought: Modality, Pro-positional Attitudes and Negation*. The University of Chicago Press, Chicago.
- Giannakidou, Anastasia & Alda Mari. 2021b. A linguistic framework for knowledge, belief, and veridicality judgement. *Know. A Journal on the Formation of Knowledge*. 255–295.
- Giannakidou, Anastasia & Alda Mari. 2023. The Italian future as a non-biased epistemic necessity: a reply to Ippolito and Farkas. *Linguistics and Philosophy* 46. 1269–1284.
- Giannakidou, Anastasia & Alda Mari. 2024. Modalization and bias in questions. Unpublished ms. Institut Jean Nicod and University of Chicago.
- Giannakidou, Anastasia & Alda Mari. To appear. *Modal Sentences*. Cambridge University Press.
- Greco, Matteo. 2022. From Latin to modern Italian: Some notes on negation. *Languages* 7(1). <https://www.mdpi.com/2226-471X/7/1/46>.
- Groenendijk, Jeroen & Martin Stokhof. 1982. Semantic analysis of “wh”-complements. *Linguistics and Philosophy* 5. 175–233.
- Hamblin, Charles L. 1958. Questions. *Australasian Journal of Philosophy* 36. 159–168.
- Ippolito, Michela & Donka Farkas. 2021. Assessing alternatives: the case of the presumptive future in Italian. *Linguistics and Philosophy* 45. 943–984.
- Kang, Arum & Swong Yoon. 2019. Modalized questions in Korean. *Studies in Generative Grammar* 29(3). 459–483.
- Kissine, Mikhail. 2008. From predictions to promises: how to derive deontic commitment. *Pragmatics & Cognition* 16(3). 471–491.
- König, Ekkehard. 1991. Concessive relations as the dual of causal relations. *Semantic Universals and Universal Semantics*. 190–209.
- Korotkova, Natalia. 2016. *Heterogeneity and Uniformity in the Evidential Domain*. University of California.
- Krifka, Manfred 2015. Bias in commitment space semantics: Declarative questions, negated questions, and question tags. *Semantics and Linguistic Theory* 25. 328–345.
- Larrivée, Pierre & Alda Mari. 2022. Interpreting high negation in negative interrogatives: the role of the other. *Linguistics Vanguard* 8. 219–226.
- Littell, Patrick, Lisa Matthewson & Tyler Peterson. 2010. On the semantics of conjectural questions. *Evidence from Evidentials* 28. 89–104.
- Magistro, Giuseppe. 2023. The rise and fall of illocutionary negation: Evidence from Veneto. *Journal of Pragmatics* 208. 138156.
- Malamud, Sophia A. & Tamina Stephenson. 2015. Three ways to avoid commitments: Declarative force modifiers in the conversational scoreboard. *Journal of Semantics* 32(2). 275–311.
- Mari, Alda. 2009. Disambiguating the Italian future. *Generative Lexicon*. 209–216.
- Mari, Alda. 2010. On the evidential nature of the Italian future. Unpublished manuscript. Institut Jean Nicod. <https://jeannicod.ccsd.cnrs.fr/ijn0678549/document>.
- Mari, Alda. 2014. Each other, asymmetry and reasonable futures. *Journal of Semantics* 31(2). 209–261.

- Mari, Alda. 2016a. Assertability conditions of epistemic (and fictional) attitudes and mood variation. *Semantics and Linguistic Theory* 26. 61–81.
- Mari, Alda. 2016b. French future: Exploring the future ratification hypothesis. *Journal of French Language Studies* 26(3). 353–378.
- Mari, Alda. 2021. Epistemic future in questions: evidence quality and the mirativity effect of *mica*. *Proceedings of IATL 26 (Invited talk)*, Bar-Ilan, Israel. https://www.iatl.org.il/wp-content/uploads/2023/05/IATL_36_proceedings_3MariPaper.pdf
- Mari, Alda. In press. On Italian future questions: scope ambiguities and reflexivity. *Proceedings Sinn und Bedeutung* 28.
- Mari, Alda, Claire Beyssade & Fabio Del Prete. 2012. Introduction. In Alda Mari, Claire Beyssade & Fabio Del Prete (eds.), *Genericity*, 1–92. Oxford: Oxford University Press/
- Matthewson, Lisa. 2010. Cross-linguistic variation in modality systems: The role of mood. *Semantics and Pragmatics* 3. <https://semprag.org/index.php/sp/article/view/sp.3.9/828>
- Murray, Sarah E. 2016. Evidentiality and illocutionary mood in Cheyenne. *International Journal of American Linguistics* 82(4). 487–517.
- Nuyts, Jan. 1992. Subjective vs. objective modality: What is the difference. *Layered structure and Reference in a Functional Perspective*. 73–97.
- Panov, Vladimir. The marking of uncontroversial information in Europe: presenting the enimitive. *Acta Linguistica Hafniensia* 52(1). 1–44.
- Pietrandrea, Paola. 2005. *Epistemic modality: functional properties and the Italian system*. (Studies in Language Companion Series 74). Amsterdam/Philadelphia: John Benjamins Publishing.
- Prior, Arthur N. 1962. Tense-logic and the continuity of time. *Studia Logica: An International Journal for Symbolic Logic* 13. 133–151.
- San Roque, Lila, Simeon Floyd & Elisabeth Norcliffe. 2017. Evidentiality and interrogativity. *Lingua* 186. 120–143.
- Speas, Peggy & Carol Tenny. 2003. Configurational properties of point of view roles. *Asymmetry in Grammar*. 315–345.
- Von Stechow, Kai & Anthony S Gillies. 2010. Must... stay... strong ! *Natural Language Semantics* 18(4). 351–383.
- Willett, Thomas. 1988. A cross-linguistic survey of the grammaticization of evidentiality. *Studies in Language* 12. 51–97.

