ANCHORING IN GRAMMAR: PUZZLES WITH EPISTEMIC COMPARATIVES[*]

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This paper discusses two puzzles with epistemic comparatives (ECs) that provide new insights into the interaction between modals, tense, and aspect. We show that, cross-linguistically, ECs pose restrictions on the featural specifications in T(ense). Additionally, we observe that interactions of ECs with modals seem to be non-uniform; while epistemic modals can co-occur with ECs, some modal interpretations of the Romance imperfect appear to be deviant. The analysis we propose sheds light on how anchoring to the Speaker's Deictic Center in the highest left periphery is manipulated by T and modals (Speas and Tenny 2003, Giorgi 2010, Wiltschko 2014). We argue that interactions between ECs and modals are in fact uniform, as predicted by our analysis. The deviance of the modal imperfect with ECs is due to an independent reason.

1. Introduction

In this paper, we discuss one type of modal comparatives, namely *epistemic comparatives*, illustrated by the Romanian example in (1). In (1), the speaker conveys that she believes the state of affairs where Ion is at home to be more plausible than the state of affairs where Ion is in the office.

(1)   Ion **este**   mai de-grabă acasă decât la birou.   *Romanian*
        Ion be-PRES.IND more ADV-early home than at office
        'According to the speaker, it is more plausible that Ion is at home than in the office.'

We focus on two puzzles regarding the co-occurrence of ECs with modals, tense, and aspect. The first puzzle relates to their interaction with the indicative present, while the second puzzle refers to their interaction with modals. We introduce the two puzzles below.
        Puzzle 1. In some languages ECs are well-formed with the present indicative (see (1)), whereas in other languages this co-occurrence is blocked (see (2)).

(2)   *Gianni **è** in ufficio piuttosto che a casa.   *Italian*
        Gianni is in office sooner   than at home
        Intended: 'According to the speaker, it is more plausible that Gianni is at work than at home.'

Following Goncharov and Irimia to appear, we attribute this restriction to different featural specifications of T and the requirement that T be anchored to the speaker in some languages. We generalize this account to the past indicative.

The second puzzle is related to the interaction between ECs and some interpretations of the modal imperfect in Romance. This is unexpected as ECs appear to otherwise combine freely with modals. We focus on data from Romanian, as in (3).

Puzzle 2. ECs are well-formed with (epistemic) modals (see (3-a)), but are deviant with modal uses of the imperfect (see (3-b)).

(3)   a.   Ion **putea**   fi   la birou mai degrabă decât acasă.
               Ion can.IMPF.3.SG be.INF at office more soon   than home
               'According to the speaker, it is more plausible that there was a possibility for Ion to be in the office rather than at home.'

        b.   *Ion **era**   mâine   acasă mai degrabă decât la birou.
               Ion be.IMPF$_{dox}$.3.SG tomorrow home more soon   than at office
               Intended: 'According to the speaker, the plan for Ion to be at home tomorrow is more plausible than the plan for Ion to be in the office tomorrow.'

The account we propose builds on decompositional analyses of the modal imperfect (Giorgi 2010), according to which this class contains a covert modal component. We show that the deviance in (3-b) is not due to the restrictions on T, but rather has an independent source. More specifically, we present evidence supporting the NPI nature of the covert modal in the modal imperfect.

The paper is structured as follows. In Section 2 we provide some background information on ECs. Section 3 is dedicated to the first puzzle and its analysis. In Section 4 we address the second puzzle. Section 5 contains the conclusion.

2.   Background on Epistemic Comparatives

Epistemic comparatives[1] (ECs) compare two propositions *p* and *q* with respect to the possibilities assigned by the speaker (von Fintel and Kratzer 2014, Herburger and Rubinstein 2014). (4-a) and (4-b) illustrate ECs in German and Russian respectively. In these examples, the speaker conveys that according to her, it is more plausible that Hans/Ivan is at work than that Hans/Ivan is at home. As also seen in (4-b), only 'sooner' (but not 'more' or 'better') can be used in such constructions in Russian. We take this to be a characteristic property of epistemic comparatives and use it to single out these constructions cross-linguistically (Goncharov and Irimia to appear). Note that ECs are not possible in modern English with temporal adverbs such as *sooner* or *rather*, as shown in (4-c).

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[1]We take epistemic comparatives to be part of the class of modal comparatives, which also includes *metalinguistic* and *preference* comparatives, see Goncharov and Irimia to appear and references cited there.

(4)   a.   Hans ist jetzt **eher**   auf der Arbeit als   zu Hause.
               Hans is now sooner at   the work   than at home
               'According to the speaker, it is more plausible that Hans is at work than at
               home now.'   *German*

        b.   Ivan ✓**skoree**/*__bol'še__/*__lučše__ na rabote čem doma.
               Ivan sooner/more/better   at work   than home
               'According to the speaker, it is more plausible that Ivan is at work than at
               home.'   *Russian*

        c.   *John is sooner/more/rather at work than at home.

For reasons of space, we are not able to discuss all properties of ECs here. We mention three of them that are relevant to our discussion. We refer the reader to von Fintel and Kratzer 2014 and Herburger and Rubinstein 2014 for a thorough discussion of the properties of ECs in German. Most of them hold in other languages as well.

    The first property is that ECs use the comparative form of a temporal adverb, e.g. German *eh+er* 'sooner', Russian *skor+ee* 'faster', and Romanian *mai degrabă* 'more early'. Temporal *eher* is illustrated in (5):

(5)   Die Schildkröte war **eher**   am   Ziel als   Achilles.
        the tortoise   was earlier at-the goal than Achilles
        'The tortoise reached the goal before Achilles.'   (von Fintel and Kratzer, 2014)

    The second property is that ECs are indeed clausal and not phrasal. More detailed discussion and evidence are also found in Goncharov and Irimia to appear.

    The third property shows the epistemic nature of ECs. Similarly to epistemic modals, ECs are infelicitous when direct evidence is available, e.g. von Fintel and Gillies 2010. This is illustrated in (6-a). Also like epistemic modals, ECs are relativized to the attitude holder when embedded under an attitude predicate, as shown in (6-b), see Herburger and Rubinstein 2014 for German.

(6)   a.   Context: you are sitting in Ivan's office in front of Ivan
              #Ivan skoree na rabote čem doma.
              (*lit.*) 'Ivan is sooner at work than at home.'

        b.   Maša dumaet čto Ivan skoree na rabote čem doma.
             (*lit.*) 'Maša thinks that Ivan is sooner at work than at home.'
             = 'According to Maša, it is more plausible that Ivan is at work that at home.'

    ECs have not received a lot of attention in the literature. We briefly mention here the accounts we are aware of. von Fintel and Kratzer 2014 describe epistemic comparatives in German without attempting a formal analysis. Herburger and Rubinstein 2014 use epistemic comparatives to argue that German epistemic modals are not gradable and

provide a formal analysis that we adopt in this paper. Goncharov 2014 discusses epistemic comparatives in Russian. In Goncharov and Irimia to appear, ECs are investigated from a cross-linguistic perspective. The discussion in section 3 is also based on Goncharov and Irimia to appear.

As a theoretical background, we assume the decompositional analysis in Herburger and Rubinstein 2014. For these authors, *eher* has two components: a comparative head *-er* with the regular denotation in (7-a) and an epistemic component *eh-*, which they take to be a believe-type predicate with a degree argument, see (7-b). For the example in (4-a), the two authors provide the LF in (8-a) and the truth-conditions in (8-b). (7) and (8) are from Herburger and Rubinstein 2014: 564-5. (8) is adapted for our example.

(7)   a. $[\![-er]\!] = \lambda P_{dt}.\lambda Q_{dt}.\max(Q) > \max(P)$

        b. $[\![eh-]\!]^z = \lambda p.\lambda d.z$ is d-ready to believe p (defined only if z doesn't have direct evidence for p)

(8)   a.   [[-er [(than) eh- Hans is at home]] [eh- Hans is at work]]

        b. $[\![-er]\!]^z([\![than\ eh-\ Hans\ is\ at\ home]\!]^z)([\![eh-\ Hans\ is\ at\ work]\!]^z) =$
            max(λd.z is d-ready to believe that Hans is at work) $>$
            max(λd.z is d-ready to believe that Hans is at home)
            where z is usually the speaker

We believe the analysis proposed by Herburger and Rubinstein 2014 for German is on the right track. We elaborate on it and extend it to cover cross-linguistic data.[2]

3.   Puzzle 1: interaction in the T-domain

In this section we introduce the first puzzle with ECs, based on Goncharov and Irimia to appear. As we mentioned in the introduction, the puzzle is related to the various ways in which ECs interact with tense cross-linguistically. In section 3.1 we present the relevant data. In section 3.2 we outline an analysis in terms of language specific requirements on T to be (un)anchored to the speaker's perspective (following Giorgi 2010).

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[2]Interesting support for the decompositional analysis of *eher* comes from the fact that in Austrian and Bavarian German there is a discourse particle *eh-* with a similar epistemic interpretation, see (i) from Herburger and Rubinstein 2014: ex.32.

(i)   Das ist auf regionaler Ebene eh möglich.
        that is on regional   level   eh possible
        'That is anyways possible on a regional level.'

3.1 ECs cross-linguistically: the SOT correlation

In Goncharov and Irimia to appear, ECs are examined cross-linguistically and the generalization in (9) is formulated.[3]

(9) *EC Generalization*
     There are two types of languages:

     a.   languages that allow epistemic comparatives with simple indicative present (German, Romanian, Russian, etc.) and

     b.   languages that cannot use the simple indicative present, like Italian and French.

The first type of languages is illustrated by Romanian in (1), German in (4-a), and Russian in (4-b). The second type of languages is illustrated by Italian in (10):

(10) *Italian*
      *Gianni **è** in ufficio piuttosto che a casa.[4]
      Gianni is in office sooner   than at home
      Intended: 'According to the speaker, it is more plausible that Gianni is at work than at home.'

    In Italian-type languages, ECs can be saved if overt modal morphology (future, conditional) is used, as illustrated in (11):

(11)   Gianni sarà   /sarebbbe in ufficio piuttosto che a casa.
         Gianni be-FUT be-COND in office sooner   than at home

    Goncharov and Irimia to appear also observe that, cross-linguistically, this split correlates with the presence of 'indexical present' (Sharvit 2003, Schlenker 2004, a.o.), which is detected by the Sequence of Tense phenomenon (SOT). The (unidirectional) correlation in (12) is proposed based on data from three language families (Germanic, Romance, Slavic):

(12) *The SOT correlation*
      SOT languages do not allow epistemic comparatives with simple indicative present.

A note on SOT

SOT is reflected in the behavior of past/present under past, summarized in the Table 1 below (Abusch 1988, among many others). Following Sharvit 2003, we can see the SOT rule as a rescue strategy in embedded configurations that allows languages with indexical

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[3]We leave aside languages of the English type, where temporal adverbs, such as *sooner* (or *rather*), cannot be used in epistemic comparatives.

[4]This example is fine under a metalinguistic interpretation, that does not concern us here, see fn.1.

present (i.e. the present obligatorily referring to the utterance time) to have the same range of interpretations as languages without indexical present.

	SOT	non-SOT
pres-under-past	double-access	simultaneous/double-access
past-under-past	simultaneous/anteriority	anteriority

Table 1: A brief summary of SOT

As seen in Table 1, in SOT languages double-access is obligatory in the pres-under-past configuration. We use the double-access readings as a diagnostic of the presence of indexical present. This diagnostic shows that the present is indexical in Italian (an SOT language), as pres-under-past results in deviance in contexts like (13-a). In this sentence, the use of the present in the embedded clause requires that Maria's pregnancy hold at the utterance time. However, it should also hold at the time of Gianni's saying (2 years prior to the utterance time). Linking to both Gianni's saying and the utterance time (i.e. the obligatory double-access reading) results in infelicity. Languages with non-indexical present, like Romanian (non-SOT), do not have this problem, as the double-access reading is not obligatory. This is illustrated in (13-b).

(13) a. #Due anni fa   Gianni ha detto che Maria è   incinta.
          two years ago Gianni has said that Maria be-IND.PRES pregnant
          '#Two years ago, Gianni said that Maria is pregnant.'   *Italian*

      b. Acum zece ani, Ion a   spus că Maria este   însărcinată.
          ago   ten years John has said that Maria be-IND.PRES pregnant
          Lit. 'Ten years ago, John said that Maria is pregnant.'   *Romanian*

As seen in Table 2, most non-SOT languages have ECs with indicative present. In SOT-languages, ECs are not well-formed with simple indicative present. Austrian German and Dutch appear to be exceptional. We leave them aside for the purposes of this paper.[5]

To summarize, we observe two main patterns regarding the interaction between ECs and Tense. This is illustrated in Table 3.

3.2 Analysis

We follow Goncharov and Irimia to appear who formalize the observations above by assuming a model where the speaker's perspective is encoded in the narrow syntax. The system makes use of the deictic layer in the highest CP periphery where features related to the speaker's deictic center are present (see Speas and Tenny 2003). This is combined with

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[5]See Goncharov and Irimia to appear for more detailed discussion.

language	epist. comp. with PRES.IND	SOT
Romanian	✓	*
Italian	*	✓
French	*	✓
Spanish	*	✓
Russian	✓	*
Bulgarian	✓	*
Slovenian	✓	*
Serbian	✓	*
German	✓	*
Austrian German	*	*
Dutch	✓	?✓

Table 2: The SOT correlation data

	SOT	EC with PRES.IND	language
Type 1	*	✓	Romanian...
Type 2	✓	*	Italian...

Table 3: Interactions between ECs and Tense

the intuitions in Giorgi 2010 for whom this layer is also responsible for the derivation of Sequence of Tense phenomena.

The gist of the proposal is that the SOT correlation reduces to a type of intervention effect (e.g. Beck 2006); both the interpretation of the EC and the derivation of SOT require anchoring to the Speaker's Perspective. But as their features have divergent specifications, a clash results in languages where SOT holds. The analysis makes use of the following two ingredients:

i) Giorgi's 2010 SOT analysis: In SOT languages, present indicative must be strictly linked to the Speaker's Deictic Center. This requires that the present indicative features in T overlap with the speaker's *here* and *now*. Non-SOT languages do not have this requirement.

ii) Wiltschko's 2014 anchoring formalization: Anchoring is encoded both positively (overlap with the speaker's perspective) and negatively (lack of overlap with the speaker's perspective). Following Wiltschko's system, this can be formalized as using a coincidence [coin] feature. Categories that require linking to the *here* and *now* of the speaker must be specified as [+coin]. Combining this with Giorgi's intuition, Goncharov and Irimia to appear propose that the indicative present in SOT languages must be [+coin]. Non-SOT languages, which do not require anchoring to the Speaker's Deictic Center (SpeakerC) are unspecified for [coin].

Assuming that SOONER has the same lexical meaning across languages, as well as Herburger and Rubinstein's (2014) decompositional analysis for SOONER we obtain the structure in (14):

(14)   [[-ER [(than) EPIST PRES John be at work]] [EPIST PRES John be at home]]

We assume that EPIST is merged high above C.[6] As it has modal nature, it must be specified as [-coin] (not overlapping with the speaker's world and time). Thus, it is only possible in a configuration where the Speaker's Perspective projection contains [-coin] (also called [distancing] in the literature).

Another piece of machinery we need is that T [$\pm$ coin] anchoring is sensitive not only to the t (tense) variable but also to other variables, among which the w (world) variable. As we show below, languages vary with respect to whether T anchoring is realized via t (possibly Dutch), w (Austrian German), both (Italian) or neither (Romanian). Putting all these pieces together, we start by presenting the simplest case of the SOT correlation, namely Type I languages like Romanian and Russian. In these languages, ECs are possible with the present indicative and there is no SOT. Following Giorgi 2010, in these languages, T does not require anchoring to the Speaker's Deictic Center, thus [coin] features are not present in T. We illustrate this in (15-a). In (15-b), we include a derivation that contains the epistemic comparative. Its modal nature implies [-$coin_w$] in EPIST and the [distancing] specification in the high Speaker's Perspective projection. But, as T is not specified for [coin] features, the present indicative is possible with the EC.

(15)   *Type 1: Romanian (non-SOT)*
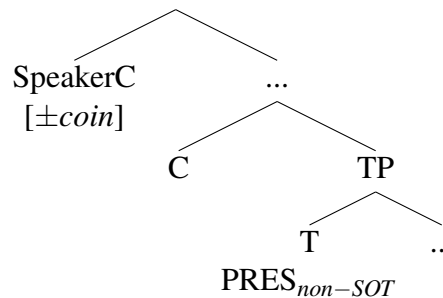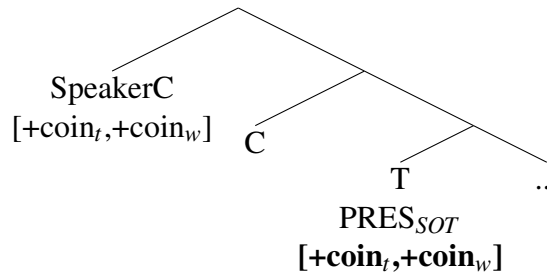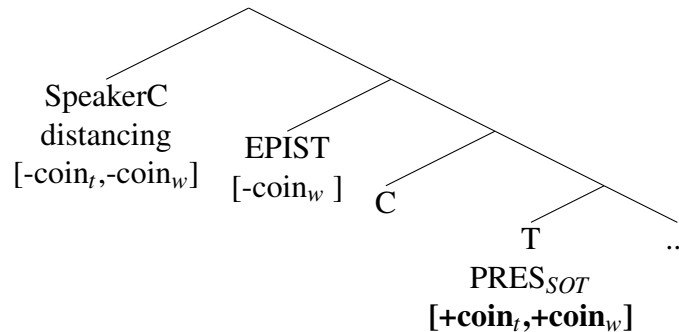
    a.

    b. ✓
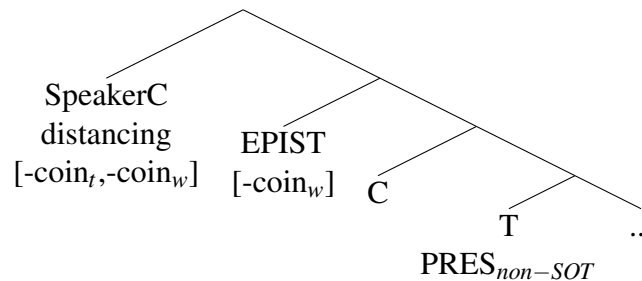
Type 2, namely the Italian pattern, is more complex. As these are SOT languages, present indicative specifications in T require obligatory anchoring to the Speaker's Perspective (based on Giorgi 2010, see ingredient i) above). Thus, for the present indicative to be spelled-out, T must be [+coin], as illustrated in (16-a). A problem arises when EPIST is merged. As EPIST requires [-coin$_w$], the Speaker's Perspective head must be *distancing*. But, as shown in (16-b), this would clash with the present indicative features in T, which require [+coin$_t$,+coin$_w$] (that is, linking to the speaker's *here* and *now* is required).

(16)   *Type 2: Italian (SOT)*
a.

SpeakerC
[+coin$_t$,+coin$_w$]   C

T   ...
PRES$_{SOT}$
[+coin$_t$,+coin$_w$]

b.   *

SpeakerC
distancing
[-coin$_t$,-coin$_w$]   EPIST
[-coin$_w$]   C

T   ...
PRES$_{SOT}$
[+coin$_t$,+coin$_w$]

One way to avoid the clash in (16-b) is to have features in T specified as [-coin$_t$,-coin$_w$] and spell-out modal morphology, see the example in (11).[7]

Summarizing the discussion in this section so far, we have proposed that the unacceptability of ECs with the indicative present in languages like Italian reduces to the featural clash between the obligatory [+coin] specifications in T and the [-coin] requirement on the modal component of ECs. On the other hand, in non-SOT languages like Romanian, the indicative present does not need anchoring to the speaker's deictic center, allowing it to co-occur with the modal component in ECs which involves *distancing* from deictic center.

We can also show that well-formedness of ECs in languages like Romanian generalizes to the indicative past. In other words, in Romanian, the past indicative does not impose any anchoring constraints on T. This holds for both the analytic past, as illustrated in (17-a)

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[7]There is yet another strategy, namely using an adverb which overtly encodes the speaker's perspective, namely *secondo me* 'according to me', see Goncharov and Irimia to appear for detailed discussion.

as well as the imperfective past in (17-b).[8]

(17)   a.   Ion **a fost** acasă mai degrabă decât la birou.
Ion has be.PST.PRT home more soon than at office
'According to the speaker, it is more plausible that Ion was in the office rather than at home.'

        b.   Când am intrat în cameră, Ion se **juca** pe calculator
when AUX.1 enter.PST.PRT in room, Ion SE play.IMPF.3.SG on computer
mai degrabă decât **lucra.**
more soon than work.IMPF.3.SG
'According to me, it is more plausible that Ion was playing on the computer rather than working when I entered the room.'

These sentences convey that, according to the speaker, and given the indirect evidence the speaker has, the first proposition is more plausible than the proposition in the *than*-clause.

4.   Puzzle 2: interaction between ECs and the modal imperfect

4.1   An imperfect modal puzzle

We showed above that ECs are well-formed with the imperfect under its temporal interpretation. However, a puzzle arises when we combine the EC with some *modal* readings of the imperfect. In (18-a) we show a deviant example with what Ippolito (2004) calls the *epistemic-doxastic imperfect* (IMPF$_{dox}$). In (18-b) we provide a well-formed context with the imperfect used as a modal. What is conveyed in the latter example is that the speaker has/had the expectation for a certain eventuality (event or state) to hold. For instance there is a plan for Ion to be at home tomorrow. The speaker then finds herself in a context in which it seems that the relevant piece of information related to the planned event is either misinterpreted or missing. For example, the speaker learns that there is a meeting scheduled for tomorrow which Ion needs to attend. The speaker therefore seeks to confirm her initial expectation. On such readings, the IMPF$_{dox}$ is allowed to co-occur with future oriented adverbials, despite its apparent past tense morphology. The puzzle is that the IMPF$_{dox}$ is deviant in ECs (18-a):

(18)   a.   *Ion **era** mâine acasă mai degrabă decât la birou.
Ion be.IMPF$_{dox}$.3.SG tomorrow home more soon than at office
Intended: 'According to the speaker, the plan for Ion to be at home tomorrow is more plausible than the plan for Ion to be in the office tomorrow.'

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[8]The analytic past is constructed from a form of the auxiliary *have* and a past participle. As in other Romance languages, the analytic past is not interpreted as a present perfect, it only receives a past tense reading. See for example Giorgi and Pianesi 1997. The imperfect, on the other hand, has syncretic morphology.

    b.   Ion **era**   mâine   acasă, nu e aşa?
         Ion be.IMPF$_{dox}$.3.SG tomorrow home, not is right
         'Ion was (staying) home tomorrow, isn't that right?'

IMPF$_{dox}$ is similar to an epistemic modal (as has been noticed in the literature) in that it conveys a possibility based on some previous indirect evidence. Crucially, the deviance we see above cannot be attributed to an incompatibility between epistemic comparatives and epistemic modals. As we show in (19), sentences containing both an epistemic modal and the epistemic comparative are well formed. We illustrate ECs with an epistemic modal in the present in (19-a), and in the imperfect (19-b).
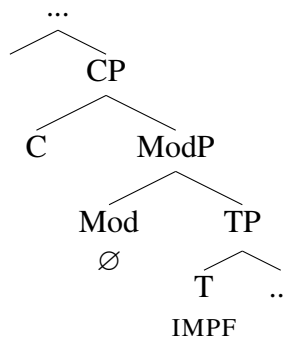
(19)   a.   Ion **poate**   fi   la birou mai   degrabă decât acasă.
            Ion can.PRES.INDIC.3.SG be.INF at office more soon   than home
            'According to the speaker, it is more plausible that Ion might be in the office rather than at home.'

        b.   Ion **putea**   fi   la birou mai   degrabă decât acasă.
            Ion can.IMPF.3.SG be.INF at office more soon   than home
            'According to the speaker, it is more plausible that there was a possibility for Ion to be in the office rather than at home.'

4.2   Analysis

It has been repeatedly observed in the literature that the Romanian (Romance) imperfect is an extremely versatile category, spanning over both indicative as well as modal uses. See especially Bazzanella 1990, Giorgi and Pianesi 1997, 2001, Delfitto 2004, Ippolito 2004, a.o. for remarks from other Romance languages to which the Romanian imperfect is very similar. Under *realis* readings, the imperfect is normally interpreted as an *imperfective past*. Example (17-b) reveals both its imperfective past side (the eventuality of Ion playing on the computer is conceived as being in progress at a past moment), as well as its non-deviance with ECs.

    When constructed as an *irrealis* category, the imperfect can appear in a variety of contexts ranging from the epistemic-doxastic one we just mentioned to counterfactual, oneiric, play situations and can be also used as a politeness marker (for an exhaustive taxonomy see especially Bazzanella 1990, Ippolito 2004, a.o.). Here, we are only interested in the epistemic-doxastic interpretation which shows deviance with ECs. Other irrealis uses of the imperfect also appear to be deviant with ECs but we leave their exploration for further investigation. Structurally, authors like Giorgi (2010) decompose the irrealis imperfect into a tense component and a silent modal component. We capitalize on this intuition and propose that the irrealis imperfect has the structure in (20). We assume that the cluster Mod+T in (20) corresponds to the epistemic-doxastic interpretation of the imperfect. We leave the details of this derivation for future research. What is important for us here is the existence of the covert modal in the structure.

(20)

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              ...
               |
              CP
             /  \
            C    ModP
                /    \
              Mod     TP
               ∅      /\
                     T  ...
                   IMPF
```

An interesting observation is that the EC in (18-a) improves once negation and/or question intonation is added, see (21):

(21) **Nu** era   Ion mâine   acasă mai degrabă decât la birou **?**
      not be.IMPF$_{dox}$.3.SG John tomorrow home more soon   than at office
      'Isn't it more plausible that there was a plan for Ion to be at home rather than in the office?'

Given these facts, we propose that the covert modal in (20) is a Negative Polarity Item (NPI). It has been observed in the literature that cross-linguistically some modals behave like NPIs. For instance, this is the case of English *need*, Dutch *hoeven*, and German *brauchen*, see Hoeksema 2008, Homer 2010, Iatridou and Zeijlstra 2010, 2013. (22) shows that *need* is ungrammatical in a simple episodic sentence unless licensed by sentential negation, as in (22-a), or a negative quantifier, as in (22-b).

(22) a. You need *(not) leave.
      b. No/*Every/*Some student need leave.   (Iatridou and Zeijlstra 2013:531)

That IMPF$_{dox}$ is subject to similar licensing conditions is demonstrated (23). (23-a) shows that IMPF$_{dox}$ in Romanian cannot appear in a positive sentence. The examples in (23-b-e) illustrate that IMPF$_{dox}$ is licensed under negation, in questions, by *only* and *surprise*, similarly to canonical weak NPIs like *any*.[9]

(23) a. *Ion era   mâine   acasă.
          Ion be.IMPF$_{dox}$ tomorrow home
          'There was a plan for Ion to be home tomorrow.'

      b. Ion nu era   mâine   acasă.
          Ion not be.IMPF$_{dox}$ tomorrow home
          'There was no plan for Ion to be home tomorrow.'

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[9]The licensing conditions for IMPF$_{dox}$ require more investigation. For example, the questions must normally have an echo intonation. It has been noticed in the literature that some types of irrealis imperfect are deviant in positive sentences, e.g. Giorgi and Pianesi 1997, Ippolito 2004, a.o. However, to the best of our knowledge this fact has never been connected to an NPI nature of modals.

    c.   (Nu) era   Ion mâine   acasă?
        not   be.IMPF$_{dox}$ Ion tomorrow home
        'Isn't it the case that there was a plan for Ion to be home tomorrow?'

    d.   ?Doar Ion era   mâine   acasă.
        Only Ion be.IMPF$_{dox}$ tomorrow home
        'There was a plan that only Ion was (supposed to be) home tomorrow.'

    e.   Sunt   surprinsă   că Ion era   mâine   acasă.
        be.INDIC.PRES.3.SG surprised.F.SG that Ion be.IMPF$_{dox}$ tomorrow home
        'I am surprised that Ion was supposed to be home tomorrow.'

Interestingly, as noted by Hoeksema 2008, not all NPI-licensors make structures with modal NPIs licit, see (24), cited after Iatridou and Zeijlstra 2013. We do not attempt to account for such restrictions in this paper. However, we note that the same licensors do not license IMPF$_{dox}$ in Romanian, see (25).

(24)   a.   Not everybody need to know.

        b.   Only God need to know.

        c.   *Everybody who need know, should be informed.

        d.   *If you need know, you'll be informed.   (Iatridou and Zeijlstra 2013:560)

(25)   a.   *Toţi   care erau   acasă sunt   bucuroşi.
        everybody who be.IMPF$_{dox}$ home be.3 PL.INDIC.PRES happy.M.PL
        Intended 'Everybody who was supposed to be at home is happy.'

        b.   *Dacă Ion era   la birou, Maria este   bucuroasă.
        if   Ion be.IMPF$_{dox}$ at office Maria be.3.SG.INDIC.PRES happy.F.SG
        'Intended 'If Ion was supposed to be in the office, Mary is happy.'

To summarize, ECs with IMPF$_{dox}$ support our analysis in section 3. As predicted by our account, the modal component in the IMPF$_{dox}$ does not clash with the epistemic component in ECs. The deviance of examples like (18-a) is instead due to an independent source, namely the NPI nature of the covert modal part in IMPF$_{dox}$.

5.   Conclusion

In this paper we have introduced and solved two puzzles involving epistemic comparatives. On the one hand, we showed that in some languages this class is not well-formed with the present indicative. On the other hand, expected well-formedness with modals does not go

through in some contexts with modal interpretations of the Romance imperfect. Under our analysis, the answer to the two puzzles is to be found in the various ways the specifications in T need to be syntactically anchored to the Speaker's Deictic Center. As the modal component in epistemic comparatives is specified as *distancing*, it is predicted to be felicitous only with i) T specifications which do not require obligatory linking to the Speaker's Deictic Center or ii) with other *distancing* classes. Under ii) the surprising deviance with certain modal categories like the modal imperfect is predicted to have an independent source. We have presented diagnostics proving that this is indeed the case. The covert modal component in the imperfect passes tests indicating that it has an NPI nature. The conclusions obtained from the analysis of these two puzzles can help us further understand the nature of epistemic comparatives (which are understudied), the present indicative, SOT phenomena, as well as modal uses of temporal aspectual categories.

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