THE ROMANIAN PRESUMPTIVE MOOD: INFERENTIAL EVIDENTIALITY AND

UPPER-END DEGREE EPISTEMIC MODALITY

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ABSTRACT

THE ROMANIAN PRESUMPTIVE MOOD: INFERENTIAL
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The Romanian Presumptive Mood has long been an object of controversy. Starting from a reassessment of what morphologies really belong in this mood, we move on to a discussion of evidentiality and epistemic modality, culminating with an analysis of the Romanian presumptive-epistemic FUT modal from the perspective of the standard theory of epistemic modality. The conclusion will be that the Romanian Presumptive Mood is, in essence, a matter of upper-end degree epistemic modality. As our discussion unfolds, we will also touch upon other issues such as gerund-type imperfectivity in the Romanian language, the status of the future tense, and pragmatic effects in epistemic modality.

ACKNOWLEDGMENT

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List of Abbreviations

ADV   adverb

Aff   affirmative

CF   counterfactual

Cl   clitic

COND   conditional

EN   English

FUT   future

IMPF   imperfect

INF   infinitive

Interr   interrogative

Neg   negative

PRES   indicative present

RO   Romanian

SUBJ   subjunctive

Chapter 1

The Romanian Presumptive Mood

The aim of this chapter is to settle the dispute about what type of morphology/ies properly belong in the Romanian Presumptive Mood.

We will begin by briefly reviewing the alleged organization of the Presumptive Mood. Then we will go on to study the details of the 3 morphologies traditionally (and inconsistently) associated with it. Third, having visualized the data, we will outline the conclusions the data seems to warrant.

In the course of our attempt to liberate the data from the confusion of the controversial 'Presumptive Mood' label we will invoke a number of somewhat clearer notions such as evidentiality, counterfactuality, and pragmatic interference.

A mood of sorts

The Romanian mood system traditionally includes the following moods:

- finite moods:

    1. Indicative

    2. Conjunctive (some kind of Subjunctive; hereafter called Subjunctive)

    3. Conditional-Optative

    4. Imperative

    5. Presumptive

- non-finite moods:

    1. Infinitive

2. Participle (a Past Participle)

3. Gerund (a Present Participle)

4. Supine (a compound mood consisting of a preposition, DE, and the Past Participle form of the verb)

The classification of the Romanian moods relies (1) on a personal vs. non-personal distinction: personal moods are those that inflect for person; and (2) on some property of the moods. Insofar as (2) is concerned, the names of the moods themselves are telling: all the verbal forms in the 'indicative' mood are indexed, or tensed, unlike, for example, the forms in any other mood, which, however, in some cases, may be morphologically marked for aspect. Then, the verbal forms in the conditional-optative and the imperative bear functions that can be guessed from their names - to express conditions or wishes or orders. The conjunctive is named after the conjunction SĂ which introduces its verbal forms - as in the other cases, the name practically seizes its most basic element, which in this case has to be morphological, since its syntactic and semantic functions are otherwise too diverse to fit under one functional label. And so on.

In light of this classification, we predict that the presumptive:

- should inflect for person

- should have no inherent tense

- may have aspect

- may include a number of different paradigms, just like the indicative includes no less than 10 paradigms

- should include only paradigms that have a common denominator, in the sense of a common function, just like the function of all the forms in the indicative mood is, for example, to assign a time index to an action (we do not consider the conjunctive morphological common denominator a valid precedent in the sense of a purely *formal* common denominator: the conjunction of the conjunctive mood most basically signifies subordination, which is a defining feature of the conjunctive mood even if certain contexts may allow it to occur independently)

In the following sections we will review a number of assumptions and facts about the Romanian Presumptive Mood.

Formation paradigms and aspect

There are many controversies surrounding the number of aspects and paradigms within the presumptive mood. In a maximalist approach (cf. Friedman 1997, 174), however, the Romanian Presumptive Mood is taken to include as many as 3 different 'formats' or morphologies: the Future morphology, the Subjunctive morphology, and the Conditional-Optative morphology. In the table below we introduce the grammatical morphemes specific to each of the 3 morphologies (the two FUTs and the COND require actual auxiliary verbs - a form of the verb 'to want' specialized for the FUT, and a form of the verb 'to have', for the COND -, whereas the SUBJ makes use of a conjunction):

Table 1.1: The FUT & COND auxiliaries, and the SUBJ
conjunction

	FUT.aux ('will')		SUBJ.conjunction	COND.aux ('have.COND')
	colloq.aux	lit.aux		
1SG	oi	voi	SĂ	aş
2SG	ăi/ei	vei		ai
3SG	o	va		ar
1PL	om	vom		am
2PL	ăţi/eţi	veţi		ţi
3PL	or	vor		ar

These auxiliaries/conjunction combine with a short infinitive (without the infinitival marker *a*) in the case of the two FUT conjugations and of the COND paradigm, and with the SUBJ form of the verb in the case of the SUBJ paradigm, to form the 'presumptive simple'. In the formation of the 'presumptive progressive' and the 'presumptive perfect' yet another morpheme is needed, the invariable auxiliary *fi* - the short infinitive of the verb 'to be'. (To avoid confusion between this auxiliary and the lexical verb 'to be' that might come up in our examples, we will hereafter gloss the former as '.AUX' for 'auxiliary', and the latter as '.LEX', for 'lexical'.) We illustrate all these facts in the table below (inflecting for the verb *a cânta* - 'to sing'):

Table 1.2: Structure and aspect of the 3 formats

	FUT.aux (lit.&colloq.) + INF	SĂ + verb.SUBJ	COND.aux + INF
Presumpt. Simple	voi/oi cânta	să cânt	aş cânta

Presumpt. Progressive	voi/oi fi cântând	să fi cântând	aş fi cântând
Presumpt. Perfect	voi/oi fi cântat	să fi cântat	să fi cântând

To sum up the data, in its loosest acceptance, the Presumptive Mood is said to include 3 formats and 3 aspects.

Homonymy with other moods/tenses

With the exception of Presumptive *Progressive*, the forms of the Presumptive Mood are identical with the simple and perfect forms of the Future (Indicative Mood), and with the present and perfect forms of the Subjunctive and, respectively, the Conditional-Optative Mood. This compells the question of what exactly distinguishes these forms from the Future of the Indicative Mood, or from the Conditional or the Subjunctive Mood. On the assumption that the Presumptive Mood is indeed a separate Mood, we would predict that, if it has a FUT morphology, this morphology cannot function as a time indexical; or, if it has a Subjunctive and a Conditional morphology, these morphologies must have a different function than the one they already have within the Subjunctive and, respectively, the Conditional-Optative Mood. Although Zafiu (2002) concludes that the two latter morphologies are in no way different in the allegedly presumptive examples than they are in their own respective moods, there is no clear consensus in the literature about this; we will dedicate a good part of this chapter to this matter.

Paradigmatic homophony among the 3 formats

It is possible that the 'presumptive' FUT, COND and SUBJ are nothing more than extended uses of the moods with which they are nearly homonymous. One thing that nevertheless strikes them apart is their ability to combine with the progressive aspect in the form of a present participle. To grasp the oddity of this alliance we must point out that, except for the FUT, COND, and the SUBJ - and sometimes the INFinitive - Romanian never resorts to the present participle to convey progressiveness. The rarity of this alliance, coupled with its occurrences in untypical uses of the FUT-, COND-, SUBJ-, (and, rarely, INF-)based morphologies persuaded some to see a little more similarity between the 3 formats than closer scrutiny would warrant. Friedman (1997, 178) thus regards the formats as being so similar as to be in fact interchangeable; on the other hand, other authors such as Irimia (2009, 2) and Zafiu (2002) argue with examples against approaches suggesting a 'synonymy' of the 'presumptive auxiliaries'. The question is therefore whether this progressive aspect

which lies at the root of most claims of format synonymy is in any way responsible for the construction of the presumptive meaning. The fact that the perfective (or 'simple') presumptive seems to be able to convey presumptive meanings just fine raises doubts with regard to the contribution of the progressive aspect in this matter. Its occurrence in these formats is nevertheless an interesting fact, and we will try to give it some attention in this thesis too.

'Presumptive' meanings

Finally we get to the meanings, and the meanings of the presumptive mood are not easy to map out: to figure them out is, in fact, the object of this entire thesis! For the time being, therefore, I will simply lay out some of the sentences that have convinced earlier grammarians to postulate the existence of such a mood.[1] Since Friedman (1997) does a good overview of the structures assumed in the literature to be presumptive, in following few lines we will simply repeat some of the examples that he cites from other authors [Iorgu & Robu (1978, 473), Ioana Chiţoran (1998), Vasiliu (1966, 223-24), Irimia (1976, 118), Dimitriu (1979, 269.271), cited in Friedman (1997, 173-175)], with comments inserted wherever relevant for our present inquiry. For clarity of exposition, I will mention for each example (in bold face, after the translation) which of the 3 morphologies the example demonstrates.

Since we are not yet convinced that these examples deserve to be called 'presumptive', for the time being we prefer to place this label between inverted commas.

The first few 'presumptive' examples quoted in Friedman's overview focus on some uses of the FUT morphology:

(1) Do they call you Nick the Liar?

Mi-or fi zicând.
me.DAT-will.3PL be.AUX saying.

'They [supposedly] do call me that.' **FUT**

(2) Doar n-o fi având purici!
surely not-will.3SG be.AUX having fleas
'Surely s/he doesn't have fleas!' **FUT**

The examples below demonstrate some 'presumptive' uses of the SUBJ and, respectively, COND morphology.

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[1]See Friedman (1997); Irimia (2009); Zafiu (2002, 2009) for some succint overviews of the historical pedigree of the Presumptive Mood, and the various trends regarding its composition.

(3) Oare   să fi   existând strigoi?
     possibly SĂ be.AUX existing ghosts?
     'Do ghosts really exist?' **SUBJ**

(4) Alongside the bear it is also said that...

     ...ar   fi   având şi această pajură   care-l
     ...would.3SG be.AUX having and this golden.eagle that-him.Cl.ACC
     priveghează.
     watches.over'

     '...he has this golden eagle that keeps a vigil over him.' **COND**

We notice in Friedman (1997) a bias for the progressive forms only. Suffice it for the
moment to say that simple forms are equally felicitous in such examples as well (we will
discuss the simple/progressive dichotomy in 1.1.6.2, and later, in 3.3). E.g.

(5) Doar n-o   avea purici!
     surely not-will.3SG have fleas
     'Surely s/he doesn't have fleas!' **FUT**

Some examples for the perfect aspect would be:

(6) -Va   fi   citit el acest roman? -Mă   îndoiesc.
     'will.3SG be.AUX read he this   novel?' 'me.Cl.ACC doubt.1SG'
     'Do you think he has read this novel!' 'I doubt it.' **FUT**

Here Friedman (1997) correctly contrasts this presumptive use of the FUT morphology
with the temporal future perfect tense. As for the other 2 morphologies, he includes the
following examples:

(7) Zice că   ar   fi   citit lecţia.
     says that would be.AUX read lesson.the
     'He says that he has read the lesson.' **COND**

(8) Had the circumstances been different,

     nu ar   fi   fost posibil să fi   ajuns el până acolo.
     not would be.AUX been possible SĂ be.AUX arrived he until there

     'it wouldn't have been possible for him to have gotten there.' **SUBJ**

Thus far Friedman's examples have basically done no more than pursue certain untypical
functions of the FUT, COND, and respectively, SUBJ morphologies - such as to express

surprise, supposition, inference, doubt, report - and label them as 'presumptive'. Now, it is unclear what exactly is supposed to render them related, but we shall defer a detailed discussion of that until later. One immediately questionable move is nevertheless the fact that, following Dimitriu (1979, 271), Friedman (1997, 175) assumes identity between the 3 formats, and quotes the example repeated below:

(9) Va / să / ar fi ajuns el până acolo?
will.3SG / SĂ / would.3SG be.AUX arrived he until there?

'Has he gotten there?' (Friedman collectively marks these as 'presumptive'.)

We shall see in the section below that such an identity is - even under shallow scrutiny - unwarranted.

Meaning variation among the three formats

As I suggested above, although they do appear similar, the three formats are no longer similar once we get past the distraction manipulated by the progressive aspect.

Without getting to their semantic details, one way to perceive the difference between them is to test their compatibility with independent/matrix and, respectively, embedded clauses. A rough generalization would be that the FUT and the SUBJ formats seem to be the most versatile (although, as we will see shortly, the SUBJ format is functionally a lot more restricted than the FUT format), whereas the COND format is only compatible with embedded clauses.[2] The table below summarizes all these observations:

Table 1.3: Clause-type compatibility of the 3 paradigms

	Independent Clauses			Subordinate Clauses
	Aff	Interr	Neg	Aff, Interr, Neg
FUT paradigm	✓	✓	✓	✓
SUBJ paradigm	✓ (restricted)	✓ (restricted)	✓ (restricted)	✓
COND.OPT paradigm	✗	✗	✗	✓

But the distinction does not stop here. Supposing the 3 formats do indeed have in common some kind of a presumptive meaning, are there any differences in the particular flavor of presumptiveness that they may encode? Although extremely raw (an as we will see later, unsupported by the actual data), the table below nevertheless maps out some common preconceptions:

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[2]Irimia 2010 gives an example to the contrary; see Section 1.3.3.3 for a brief discussion.

Table 1.4: Confidence level encoded in the 3 paradigms

FUT paradigm	strong hypothesis
SUBJ paradigm	?? weak hypothesis
COND.OPT paradigm	?? (the paradigm seems to merely signal reported information)

Yet again, the 3 formats do not align. We shall see a lot more about this later.

The aspectual and temporal values of the 'presumptive mood'

The Presumptive Simple

The presumptive simple is perhaps most aptly described as a nonpast perfective. On the one hand, this label accounts for the fact that the presumptive simple may be used in both a present and a future time frame of reference. On the other hand, it accounts for the fact that actions described by a presumptive simple are regarded as a unitary whole.

Since some of the literature on the Romanian presumptive seems to be oblivious to the future applicability of the presumptive, it is probably a good idea to tackle it here. Discussing the values of the colloquial FUT auxiliaries, Irimia (2010) argues, for example, that

(10) O   fi   bolnav *mâine.
      will.colloq.3SG be.LEX sick   tomorrow

means 'He might be sick (now)' but cannot mean 'He will be sick tomorrow' or 'He might be sick tomorrow'. While she is correct in the first and the second observation, her third observation that this structure cannot read as a future presumptive is not confirmed by the data. Consider, for example, a scenario like the following:

(11) Mary has been down with a cold for a week. The first day after her recovery she
      went skiing, and spent most of the day wearing damp clothes, sweating with effort,
      then shivering with cold when she was not skiing. Her mom predicts, with a sense of
      inevitability:

      Mâine   o   fi   iară   bolnavă!
      tomorrow will.colloq.3SG be.LEX again sick

      'She'll be sick again tomorrow!'

The FUT simple morphology thus seems to work just fine with inferences about the future.

Now, Irimia's purpose in using her example was not to make a claim about the future-inferential values of the FUT simple morphology but rather to draw attention to the fact that the colloquial FUT auxiliary cannot be used with a temporal future value and is thus exclusively presumptive. This is a point that we can confirm. On the other hand, our data compels us to take issue with her contention that her example cannot be glossed as a future inferential ('He might be sick tomorrow'). The observation that the FUT morphology can be used to express future-inferentiality is important since it points to a potential connection between such inferential uses of this morphology and the future tense itself (see, for example, 3.1). Incidentally we notice that ignoring the future-inferential values of the FUT morphology translates, for Irimia (2010, 127), into confining the Romanian Presumptive Mood to only the progressive and the perfect morphologies.

The Presumptive Progressive

Progressiveness is usually associated with the imperfective aspect, and it basically involves situations with some internal structure. As we mentioned in 1.1.4, however, overtly marked imperfectiveness is a rare phenomenon in Romanian, where aspect is only partly grammaticalized. This explains why, in practice, native speakers of Romanian would be hard-pressed to find any difference between the Presumptive Progressive and the Presumptive Simple. That is, no difference other than the fact that the morphology of the presumptive simple is ambiguous between 'presumptive' and 'non-presumptive' meanings, whereas the morphology of the Presumptive Progressive is uniquely 'presumptive'. Zafiu (2002) cites this as an important reason why some grammarians have preferred to declare that the only truly 'presumptive' morphology is that of the 3 present participle periphrases.

These considerations of history and phonology aside, it is true, nonetheless, that the Presumptive Progressive does seem especially compatible with iterative, habitual or durative meanings[3]. On the other hand, the Presumptive Progressive may be used with verbs of other flavors too, especially when, for example, the presumptive verb is placed in contexts where its homonymy with its 'non-presumptive' counterparts may cause ambiguity (e.g. in the future time frame of reference a 'presumptive simple' is morphologically indistinguishable from a 'regular future', so unless the presumptive nature of the claim is obvious from the context, or unless the 'presumer' provides other cues about the fact that s/he is merely presuming, the audience may well perceive the statement as a statement proper about the future; using a resumptive progressive form in such cases marks a much appreciated contrast).

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[3]In his description of the Hindi Presumptive Progressive, Shapiro (1989) gives clear examples for such uses. On the other hand, in Hindi the progressive aspect is a lot more grammaticalized in Romanian, where such examples can be given, but do not in fact apply strictly to signal those functions.

Overall, we are not very clear about the role of the progressive aspect yet. The argument we can understand the best thus far is Zafiu's argument from phonology. If in the course of presenting the data we find more evidence as to its uses, we will signal them as they appear. For the time being we will stop worrying about it.

The Presumptive Perfect

Like the presumptive simple, the Presumptive Perfect suffers the consequences of sharing its morphology with the FUT-, the COND-, and, respectively, the SUBJ-perfect. If in the case of the presumptive simple the temporal ambiguity with the future could be avoided by replacement with the Presumptive Progressive, for the Presumptive Perfect this option is not valid since the Presumptive Progressive cannot fulfil the functions of a perfect. This explains perhaps why, although the 'presumptive' perfect is theoretically possible in a future time frame of reference, it is nevertheless almost exclusively used with reference to the past, wherein lies the clearest disambiguation cue with respect to a regular future. Insofar as the COND and SUBJ morphologies are concerned, their distinction from the 'non-presumptive' uses is not a matter of time but rather of other considerations, of which we will take care in Sections 1.3 and, respectively, 1.4.

The mood we are trying to dismiss has sparked much dissent among those who have been trying to make sense of it.

Note on methodology

In Sections 1.2, 1.3 and 1.4 of this chapter I will try to lay out the facts about the FUT, COND, and respectively SUBJ morphology in Romanian. Given that most recent studies on the Romanian presumptive point towards a connection between the Romanian presumptive and evidentiality (Irimia 2009, 2010; Reinheimer-Rîpeanu 2000; Zafiu 2002, 2009), and some of them even identify evidentiality as potentially the most useful tool in solving the presumptive conundrum (Zafiu 2002, 136), and also given that some authors (Squartini 2001, 305) have pointed towards the link between the Romance FUT and COND morphologies and evidentiality, I will try to map out my data in a way to make that connection obvious. Since I am using evidentiality mainly for taxonomic purposes, I will content myself, for the moment, with its most basic definition:

Definition 1. *Evidentiality is the linguistic encoding of the source of information.*[4]

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[4] *Cf. e.g. Bybee (1985, 184) & Anderson (1986, 274), cited in de Haan (2001b, 194).*

Now, there are many different ways in which evidentiality can be analyzed.[5] The question is, which one would help us shed the most light on the Romanian data? In his study on the evidential uses of the Future, Conditional and Indicative Imperfect in various Romance languages (mostly French, Italian, Portuguese, Spanish), Squartini (2001, 304) reaches the conclusion that the most helpful classification for the Romance data seems to be Willett's schema. Since Romanian, too, is a Romance language, and since the FUT and the COND morphologies are part of our inquiry, we think it wise to adopt the same classification, which for clarity we will copy below (cf. Willett 1988, 57):

Figure 1.1: Willett's taxonomy of evidentials

Willett's scheme basically proposes that the types of evidentiality can be divided according to their source, into direct and, respectively, indirect evidentiality. Evidence collected directly via the senses is considered 'attested'. Evidence acquired indirectly is divided into reported and inferred evidence, each of them with its respective subclasses, as can be seen in the scheme above. One thing we need to point out about Willett's classification is the fact that his classification relies on a hierarchy between the source of information (direct or indirect) and the modes of acquiring information, as well as a prescription of which modes of acquiring knowledge fall under which type of source (e.g. 'inference' falls under 'indirect source', etc.). We shall see in 1.2.3.1 that this hierarchy is not always supported. For the time being, however, we shall use it as it is.

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[5]See, for example, the classifications of Anderson (1986, 284), Willett (1988, 57), and, respectively, Frawley (1992, 413), cited in Squartini (2001, 299-300).

The FUT morphology

Form

The FUT morphology consists of a form of the auxiliary 'will' (literary: *voi, vei, va, vom, veţi, vor*; or colloquial: *oi, ăi/ei, o, om, ăţi/eţi, or*) plus either one of the following:

1. the short infinitive of the verb (i.e. without the infinitival morpheme 'a') (nonpast perfective)

2. the auxiliary 'fi' + the past participle of the verb (perfect)

3. the auxiliary 'fi' + the present participle of the verb (imperfective)

Note that the forms of the FUT auxiliary are archaic forms of the verb 'to want' in the present tense. Nowadays these forms are used only as auxiliaries.

Meanings: non-evidential

The non-evidential meanings of the FUT morphology are those meanings where the morphology simply serves to place an event in a future time frame of reference. Such meanings can be found in statements such as 'Tomorrow the president of Romania will visit Nicaragua' or 'The plane will take off at 6 o'clock in the morning'. An example of how FUT morphology encodes this future reference in Romanian is:

- *Future indexical*

  (12)   Trenul   va   sosi   la ora   5.
         train.the will.3SG arrive at hour 5
         'The train will arrive at 5 o'clock.'

  Reinheimer-Rîpeanu (2007) points out that comparative studies of the indexical future in Romance languages reveal that the FUT is actually rarely used as an indexical. In fact, according to Fleischman, whom she quotes,

    > As a temporal marker, the simple future plays a minor role, occurring most often in formal, 'intellectualized' varieties of the written language (journalistic writing, official documents and communications, etc.) and less commonly in unmonitored conversation [...]. In the spoken language, the Romance simple future is now predominantly a modal form. (Fleischman 1982, 101, cited in Reinheimer-Rîpeanu 2007).

Reinheimer-Rîpeanu (2007) adds that one reason why the Romanian FUT may have evolved into a modal could be the fact that the Romanian FUT does not have any periphrastic forms, and thus the auxiliary is unattached; moreover, the indexical future can, and is indeed often, replaced by the present tense, whose temporal coordinates are redefined with the help of time adverbials.

Meanings: evidential

The Romanian FUT morphology may also function as a marker of evidentiality. In such cases, it seems to specialize in indirect-inferential evidentiality.

Direct

FUT morphology in direct evidence environments yields surprising results. Given that only two lines above we were identifying evidential FUT as a marker of *indirect* evidentiality, one would naturally expect the FUT morphology to be unavailable for situations perceived directly. A statement in the indicative present tense would make a lot more sense since direct evidence is easily, if not by default, expressed by means of the indicative present. The indicative present is in fact so adequate for the expression of directly perceived events that attaching to it a sensory verb is, in most languages, pleonastic: while sensory verbs may be tolerated in some languages, they are demoted, in such environments, to the status of mere parentheticals (see Rooryck 2001).

And yet the indirect-evidential FUT morphology may still be used in cases of direct perception provided there exists any doubt with regard to the reliability of the perception. Otherwise put, FUT morphology avoids a statement by a guess, as can be seen in the example below:

- *Visual (✓, but ✗ with sensory verbs)*

   (13)   My neighbor is always drunk. Today I see him wobbling.

   Va/o   fi   / va/o   fi   fiind iară beat!
   will.3SG be.LEX / will.SG be.AUX being again drunk

   'He is probably drunk again!'

Note, however, that this use is not compatible with sensory verbs (in this case, not because we are citing evidence jointly with the default expression of evidence - as was the case with the indicative present - but rather because we are citing supposedly

conclusive evidence - our sensory experience - while at the same time expressing doubt about the reliability of our perception):[6]

(14) My neighbor is always drunk. Today I see him wobbling.

*Văd   că   va/o   fi   / va/o   fi   fiind iară   beat!
see.1SG that will.3SG be.LEX / will.SG be.AUX being again drunk

'*I see that he is probably drunk again.'

- *Auditory (✓, but ✗ with sensory verbs)*

(15) I'm in a house with a new-born baby. I hear the sound of someone crying.

Va/o   plânge / va fi   plângând bebeluşul.
will.3SG cry   / will be.AUX crying   baby.the

'It's probably the baby who's crying.'

Same comment as above.

Note: The non-progressive alternative seems hard to use in this context. Could it because the situation requires some sense of simultaneity and the progressive conveys it better? Or is it simply for phonological disambiguation in relation to a temporal future? Probably a combination of both. We will look into this again in 3.3.

- *Other sensory (✓, but ✗ with sensory verbs)*

(16) I am watching over my sister who has the flu. Mom's asking if she still has a fever. I'm touching her forehead and I feel it burning. However, I've been handling hot peppers the whole day, so actually *anything* feels to me like it's burning. I can sense hotness but I don't know if it's fever. I go with mom's hypothesis, but not to the point of confirming it by a statement:

Va/o   fi   având.
will.3SG be.AUX having

'Yes, she's probably having (a fever).'

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[6]This issue of compatibility with sensory verbs will come up again for the COND and the SUBJ morphologies. The interaction between such sensory verbs and the three morphologies certainly deserves more attention. Insofar as we are concerned, we will simply try to see in what shape the three morphologies are able to express evidentiality. As we will see for the COND and the SUBJ morphologies, their reliance on such overt sensory verbs suggests these morphologies do not themselves encode evidentiality: they are merely *compatible with certain types of evidentiality*, provided certain *aiding agents* - such as these verbs, or certain other grammatical elements - are available.

Same comment as above.

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An important observation with regard to our initial assumptions about the various evidential modes is that what we seem to be dealing with here is not 'direct evidentiality' proper, but rather a direct source of evidence combined with inference. This confirms de Haan (2001b, 205)'s observation that

> inferential evidentials are [...] ambiguous between those that denote that the action is being viewed from the perspective of the speaker (similar to direct evidentials) and those that denote that the action is viewed as one in which the speaker plays no role at all. The latter is the usual definition of indirect evidentiality.

The availability of direct inferentiality in Romanian compels us to endorse Squartini (2001, 304)'s call[7] for a revision of Willett's taxonomy in which type of evidence, on the one hand, and source of information, on the other hand, be considered "independent interacting notions, instead of...hierarchically embedded" notions. For simplicity, however, in this study we will continue to use the hierarchical model, with comments attached wherever required by the data.

Indirect

Reported

We defined evidential FUT as an indirect-*inferential* evidential. The examples below will show, nevertheless, that this inferential FUT may, in some cases, intrude upon other types of environments as well. In this case, the host is the reportative environment, where, as we shall see, the FUT will compete with the default COND. The result is rather interesting.

- *Secondhand (✓, citational)*

  (17) I'm looking for John but I can't find him anywhere. Anne tells me that he's probably out shopping. Somebody asks me, Where is John? I am reporting that I have this information from Anne, and that not even Anne knows it for a fact, she's merely giving me her best guess.

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[7]Inspired, as he says, by Botne (1997, 525).

Ana zice că va/o fi / va fi fiind la cumpărături.
Anne says that will.3SG be.LEX / will.3SG be.AUX being at shopping

'Anne says he's probably out shopping.'

This use of the FUT morphology conveys the impression that I am *quoting* Anne. This impression of *quoting* is given by the fact that FUT morphology replaces here COND morphology, which is the default option after *verba dicendi*:

(18) Ana zice că ar fi / ar fi fiind la
Anne says that would.3SG be.LEX / would.3SG be.AUX being at
cumpărături.
shopping
'Anne says he's probably out shopping.'

In such contexts, therefore, the FUT morphology forces a report of the fact that what Anne says is an *inference* over a report of the *contents* of Anne's utterance.

- *Thirdhand (✓, citational)*

   Thirdhand reporting environments behave more or less in the same way. Here, however, we have 2 verbs that can be shift around between COND and FUT morphology - with the results spelled out above. E.g.

(19) ♯Ana zice că Mari zice că Ion va/o fi / va fi fiind
Anne says that Mary says that John will.3SG be.LEX / will be.AUX being
la cumpărături.
at shopping
'Anne says that Mary says that John is probably out shopping.'

or

(20) ♯Ana zice că Mari va/o zice / va/o fi zicând că Ion
Anne says that Mary will.3SG say / will.3SG be.AUX saying that John
ar fi / ar fi fiind la cumpărături.
would.3SG be.LEX / would.3SG be.AUX being at shopping
'Anne says that Mary says that John is probably out shopping.'

The odd thing about these examples is that it tries to fit a signaling of inference in an environment which is strictly in the domain of report. The result is acceptable, but distinctly forced.

The default - and preferred - option is, nevertheless, the COND morphology:

(21) Ana zice că   Mari zice că   Ion   ar   fi   / ar
    Anne says that Mary says that John would.3SG be.LEX / would.3SG
    fi   fiind la cumpărături.
    be.AUX being at shopping

    'Anne says that Mary says that John is probably out shopping.'

- *Folklore (✓, marginally)*

    (22) People speculating about whether a certain person long gone is still alive, or
         dead.

    ♯Se   zice că   va/o   fi   murit.
    REFL says that will.3SG be.AUX died

    'They say he has probably died.'

Intuitively, a reason why this use of the FUT morphology is only marginally acceptable
could be the fact that nobody bothers to report that public rumor is an inference and
not a reliable statement of facts, and therefore nobody would bother to overrule the
default COND prescribed by *verbum dicendi* settings. The preferred formula is again
the COND:

    (23) Se   zice că   ar   fi   murit.
        REFL says that would.3SG be.AUX died
        'They say he has probably died.'

With regard to folklore evidentiality: another citational use of the FUT morphology
is in adversative structures where it seems to signal citation of a collective inference /
assumption. Thus:

    (24) Va/o   fi   / va   fi   fiind el priceput, dar aici greşeşte.
        will.3SG be.LEX / will.3SG be.AUX being he skilled,   but here is.wrong
        'He may be skilled, but he's wrong about this.'

Inference

- *Results (✓)*

    (25) Mark is a little boy who loves chocolate cake. One day his mom buys a chocolate
         cake and puts it in the fridge. Later she sees someone has eaten half of the
         cake. Her best guess about who might have eaten it is:

O   va   fi   mâncat-o   Mark!
it.ACC will.3SG be.AUX eaten-it.Cl.ACC Mark

'It must be Mark that ate it!'

- *Reasoning (✓)*

    (26) Maggie's roommate is putting on a nice dress and jewelry and make-up. She
          looks happy and excited. Maggie's best guess is:

          Va/o   merge / va/o   fi   mergând la întâlnire!
          will.3SG go   / will.3SG be.AUX going   at meeting

          'She's probably going on a date!'

- *Special inferentials*

    Inferential FUT may also occur as part of the adverbial clause of a factual conditional
    in the future:

    (27) *factual condition in the future*

          Dacă va/o   fi   / va/o   fi   fiind acasă, te   va
          if   will.3SG be.LEX / will.3SG be.AUX being home, you.Cl.ACC will.3SG
          suna negreşit.
          ring undoubtedly

          'If he's home, he will definitely call you.'

Moreover, if thus far all our examples have been in the second or the third person
(fact which, Zafiu 2002 notices, is rather to be expected, since we tend to make in-
ferences about others more than about ourselves), we must point out, nevertheless,
that inferential FUT morphology may occur in the first person too, e.g. in rhetorical
statements, either to echo polemically an inference made by someone else, or to infer
introspectively about one's own sensations. Thus:

    (28) *polemic echoing of another person's inference*

          Voi/oi   spera / voi/oi   fi   sperând eu; nu e treaba   ta!
          will.1SG hope / will.1SG be.AUX hoping I;   not is business your

          'Maybe I am indeed hoping; none of your business!'

and

(29) *introspective guess / polemic echoing of inference*

M-oi   fi   înduioşat   şi eu poate; şi eu
me.Cl.ACC-will.1SG be.AUX become.tender-hearted and I maybe;   and I
sunt om.
am   human

'Maybe I was indeed touched; I'm a human too after all.' (cf. Zafiu 2002, 137)

Finally, another interesting use of inferential FUT is in structures encoding partial agreement or concession:

(30) *partial agreement / concession*

(A) It's too late now. (B) -Aşa va/o   fi   / va/o   fi   fiind,
(A) It's too late now. (B) so   will.3SG be.LEX / will.3SG be.AUX being,
dacă zici   tu.
if   say.2SG you

(A) 'It's too late now.' (B) 'It might be, if you say so!'

What seems to be happening here is the following: By using 'presumptive' morphology[8] speaker B seems to be demoting speaker's A's statement to the status of a mere inference. Thus s/he indicates that s/he concedes to part - but not all - of speaker A's assertion.

Pragmatic effects

Certain 'presumptive' meanings may sometimes acquire certain pragmatic overtones, such as, for example, irony or sarcasm. Thus, the partial agreement example we saw a few lines before could look like this:

(31) *partial agreement / concession: ✗; sarcasm: ✓*

(A) It's too late now. (B) -Aşa va/o   fi   / va/o   fi fiind), dacă zici
(A) It's too late now. (B) so   will.3SG be.LEX / will.3SG be being, if   say.2SG
tu, că   doară tu le   ştii   pe toate!
you, because after.all you them.Cl.ACC know.2SG PE all

(A) 'It's too late now.' (B) 'Yeah, sure, it must be so, if you say so, after all don't you know them all!'

---

[8]We may safely call it 'presumptive' for 2 reasons: (1) 'will' here is typically presumptive; and (2) this FUT is in the present time frame of reference, so it is clearly not a non-evidential future.

Obviously B does not really mean that A 'knows them all'. What we notice here is an exaggeration which is clearly not, as in our previous examples, a reasonable inference. The length itself of B's reply points to a flouting of Grice's maxim of quantity. The pragmatic effect obtains due to the fact that the inference, which ought to be the *best* guess one can express with regard to some state of facts, clearly does not measure up to its definition.

A general observation would be that using the FUT inferential to express an inference which is obviously not valid will lead to pragmatic effects of the kind exemplified above. In this case - as it often happens, in fact - an improper use of the FUT-inferential combines with the flouting of a pragmatic maxim - in this case, the Gricean maxim of quantity. Without the string *dacă zici tu, că doară tu le ştii pe toate!* - 'if you say so, because after all you know everything' - our presumptive *aşa va fi* would have simply indicated a non-commital agreement such as 'I suppose so'. That string included, our FUT inferential not only does not express but in fact expresses irony! This interplay between the FUT inferential morphology and pragmatic floutings is common.

This issue is somewhat difficult to grasp with our current tools. We will come back to it in section 3.2.

The FUT auxiliaries

Having visualized these facts, a comment on the distribution of the auxiliaries is in order. The literature on the Romanian presumptive tends to associate the 'presumptive mood' mostly with the colloquial auxiliaries. Our examples seem to confirm that since, whereas the literary FUT auxiliaries seem to be available for all settings, the colloquial auxiliaries seem to be unable to convey future-indexical meanings (i.e. to state facts about the future), being, rather, restricted to evidential settings. Thus the colloquial auxiliary does not seem to fit into a temporal future setting:

(32) O   fi   bolnav *mâine.
      will.3SG be.LEX sick   tomorrow
      'He will be sick tomorrow.' (Irimia 2010, 126)

Irimia (2010) is therefore probably right to label this colloquial auxilairy the 'epistemic inferential auxiliary' *par excellence.*

FUT in short

The FUT morphology may convey two broad types of meanings: (1) non-evidential meanings: future indexicality; and (2) evidential meanings: direct inferentiality (without sensory or

verbs to the effect of 'seem') and indirect inferentiality. The FUT may also occur evidentially in indirect-reportative environments, as a citation of an external source's inference.

The Romanian FUT morphology has two sets of auxiliaries, of which the colloquial set seems to be exclusively compatible with evidential meanings.

As noted above, the evidential uses of the FUT fall into the spectrum of inferentiality. Now, the process of inferring involves deriving logical conclusions from premises known or assumed to be true. In Romanian, this condition may be deliberately flouted: people may use FUT morphology even when the premises their inference relies on are not known or assumed to be true, or are in fact even known or assumed to be exactly the opposite. Such a use of the FUT triggers pragmatic effects such as irony, sarcasm, disbelief, or indifference.

The FUT morphology seems to be able to convey evidential meanings all by itself, without the help of any external marker of evidentiality.

The COND morphology

Form

The COND morphology consists of a form of the auxiliary 'have' (*aş, ai, ar, am, aţi, ar* - a form of the verb 'to have' exclusive to COND counterfactuals and reportative evidentials) plus either one of the following:

1. the short infinitive of the verb (i.e. without the morpheme 'a') (nonpast perfective)

2. the auxiliary 'fi' + the past participle of the verb (perfect)

3. the auxiliary 'fi' + the present participle of the verb (imperfective)

Note: (1) also supports claims about the FUT, not only the present.

Meanings: non-evidential

- *Counterfactual conditionals*

    (33)   *CF condition in the present or the future*

        Dacă aș   avea timp, ţi-aş   scrie mai   des.
        if   would.1SG have time, to.you-would.1SG write more often

        'If I had time I'd write to you more frequently.'

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(34) *CF condition in the past*

Dacă aș   fi   avut timp, ţi-aş   fi   scris
if   would.1SG be.AUX had time, to.you-would.1SG be.AUX written
mai des.
more often

'If I had had time, I would have written to you more frequently.'

The 'fake imperfective' alternative.

As shown above, the Romanian conditional sentence takes the same 'conditional' morphology in both the antecedent and the consequent. The examples below show that the antecedent may also take imperfect morphology.

(35) *CF condition in the present*

Dacă aveam   timp, citeam   toată ziua,   dar nu
if   have.1SG+IMPF time, read.1SG+IMPF whole day.the, but not
am.
have.1SG+PRES

'If I had time, I would read the whole day, **but I don't** [**have time**].'

Please note that, unlike the COND adverbial clause, the IMPF adverbial clause cannot function as a counterfactual condition in the future.

(36) *CF condition in the past*

Dacă aveam   timp, citeam   toată ziua,   dar nu
if   have.1SG+IMPF time, read.1SG+IMPF whole day.the, but not
am   avut.
have.1SG had

'If I had had time, I would have read the whole day, **but I didn't** [**have time**].'

We note that both the counterfactual condition in the present *and* the counterfactual condition in the past are conveyed by exactly the same IMPF structure; in this case, we are able to tell the difference only by the tense used in the tail of the sentence.

- *Wishes, possibility*

Cf. the observation made by Iatridou (2000, 238) for Greek: "the morphology found in CF wishes is identical to that found in CF conditionals" - except that CF wishes cannot

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be conveyed by a 'fake IMPF' like the one illustrated above). The same observation is valid for Romanian (just that in Romanian the CF morphology is different from the one in Greek). Thus:

(37) *wish in the present*

    Aș   mânca o   îngheţată.
    would.1SG eat   an ice-cream

    'I would [like to] eat an ice-cream.'

(38) *wish in the past*

    Aș   fi   mâncat o îngheţată.
    would.1SG be.AUX eaten   an ice-cream

    'I would have [liked to eat/] eaten an ice-cream.'

With regard to this similarity, Iatridou (2000, 244) remarks that "possibly...the only true CF environment is the CF conditional and [...] CF wishes are counterfactual because they contain CF conditionals as part of their meaning." This observation seems correct for Romanian. Moreover, the same observation seems to be plausible with regard to other uses of the COND morphology such as polite requests, suggestions, possibilities, etc.

Meanings: evidential

The COND morphology is with predilection compatible with indirect-reported evidentiality. In conjunction with the verb 'to seem' - or verbs or adverbs to the same effect - it may also express inference. The ability of the COND morphology must however be restricted to these environments.

Some authors also see inferentiality in some of the reportive uses of the COND morphology. This, we argue, is owed to a loose translation or equivalation of 'They say that p' with 'Supposedly p'. This kind of translation misleadingly inserts a note of inferentiality in a place which in fact belongs to reportedness.

We mention all these facts because in what follows, for sheer legibility, we will gloss the Romanian COND auxiliary - a derivative of the lexical verb 'to have' - as 'would' - a derivative of the English 'will'. This is not to imply that the COND auxiliary is in any way derived from the FUT auxiliary - in fact, in Romanian the distinction is clear. We will

see that this distinction will be rather important when we discuss the inferential-epistemic status of the 3 morphologies.

These said, we may now continue with our data.

Direct

The direct-evidential uses of COND morphology are practically equivalent to a 'seem' type of inferential (cf. de Haan 2001a,b).

- *Visual (✓; felicitous with sensory verbs; effect = 'it seems')*

  (39) I see the light on in my friend's room. To me that *looks as if* s/he is home. I say:

  Văd   că   ar   fi   / ar   fi   fiind acasă.
  see.1SG that would.3SG be.LEX / would.3SG be.AUX being home

  'I see that s/he is home.' ≃ 'It looks like s/he is home.'

  Note: This 'I see' rather has the value of an 'it seems that...' or 'it looks as if...' One might prefer to use the impersonal form of the verb, coupled with a more transparent counterfactual structure of the type 'as if'. E.g.

  (40) Se   aude ca.și.cum ar   fi   / ar   fi   fiind acasă.
  REFL hears as.if   would.3SG be.LEX / would.3SG be.AUX being home
  'It sounds as if she were home.'

- *Other sensory (✓; felicitous with sensory verbs; effect = 'it seems')* 'se simte ca și cum...' - 'it feels as if...', 'miroase ca și cum...' - 'it smells as if...'.

  The question is, where exactly is the source of evidentiality in these examples?

  Please note the comparative 'realis' feature of the conditional-optative morphology: a statement in the negative would prefer the subjunctive. E.g.

  (41) Nu văd   să fie   / să fi   fiind acasă.
  not see.1SG SĂ be.3SG+SUBJ / SĂ be.AUX being home
  'I don't see him to be home.'

  The conditional morphology in the negative results instead in a citational value. E.g.

  (42) Nu văd   că   ar   fi   / ar   fi   fiind acasă.
  not see.1SG that would.3SG be.LEX / would be.AUX being home
  'I don't see that [e.g. as you say] he is home.' ≃ 'There is a claim that he is home but I don't see that to be the case.'

Indirect

Reported

The COND morphology seems to thrive in reported environments.

- *Secondhand (✓)*

  (43) Ana zice că ar   fi   / ar   fi   fiind la cumpărături.
        Anne says that would.3SG be.LEX / would be.AUX being at shopping

        'Anne says he's out shopping.'

- *Thirdhand (✓)*

  (44) Ana zice că Mari zice / ar   zice / ar   fi   zicând că
        Anne says that Mary says / would.3SG say / would be.AUX saying that

        Irina ar   fi   / ar   fi   fiind la cumpărături.
        Irene would.3SG be.LEX / would be.AUX being at shopping

        'Anne says that Mary says that Irene is out shopping.'

- *Folklore (✓)*

  (45) Se   zice că aici ar   fi   fost o cetate romană.
        IMPERS says that here would.3SG be.AUX been a fortress Roman

        'They say that here used to be a Roman fortress.'

Inference

The inferential uses of the COND morphology are very similar to the 'it seems...' and 'as if' situations described in the 'direct evidence' section:

- *Results (✓)*

  (46) Mark stinks. Somebody says:

        Miroase ca şi cum nu s-ar   fi   spălat de   o lună!
        smells   as if -   not REFL-would.3SG be.AUX washed since a month

        'S/he smells as if s/he hasn't taken a bath in a month!'

- *Reasoning (✓)*

  (47) I see somebody wobbling in the street.

        Văd   c-ar   fi   beat!
        see.1SG that-would.3SG be.LEX drunk

        'S/he looks as if s/he were drunk!'

Evidential COND and independent clauses

The evidential examples above have all shown COND morphology being introduced by something, typically, a *verbum dicendi*. But can COND morphology convey evidential meanings by itself? In light of all the examples given above, my contention is that the evidential COND cannot occur on its own in independent clauses. Instead, it must be introduced by a *verbum dicendi*. Alternately, it may be introduced by an adverb derived from a *verbum dicendi*:

(48) *'cică', derived from 'zice că' = 'says that'*

    Cică   ar   fi   / ar   fi   fiind beat!
    they.say would.3SG be.LEX / would.3SG be.AUX being drunk

    'They say s/he is drunk!'

  Or by a sentence to the same effect:

(49) *The story goes as follows:*

    Ar   fi   intrat în magazin pe.la   ora 2 dimineaţa şi   ar
    would.3SG be.AUX entered in store   around hour 2 a.m.   and would.3SG
    fi   furat...
    be.AUX stolen...

    'The story goes as follows: [They say] he entered the store around 2 a.m. and stole...'

According to my contention, therefore, the COND morphology does not encode evidentiality on its own: instead, evidentiality is carried by these external *verba dicendi*, or other markers to the same effect. Since this goes against some of the examples offered in the literature (cf. Irimia 2010, Zafiu 2002, Friedman 1997), it is perhaps a good idea to find out whether the evidential COND can indeed be found on its own, and if yes, under what conditions.

A quick Google search of the string *ar fi fost* - 'would be.AUX been' (the COND perfect form of the verb 'to be') soon reveals the following independent evidential COND's:

(50) O nouă specie de oameni ar   fi   fost descoperită în China
    a new species of humans would be.AUX been discovered in China
    'They say a new species of humans has been discovered in China.' (cf. http://www.
    evz.ro/detalii/stiri/o-noua-specie-de-oameni-ar-fi-fost-descoperita-in-
    china-971714.html)

(51) Yasser Arafat ar   fi   fost otrăvit   cu   poloniu.
      Yasser Arafat would be.AUX been poisoned with Polonium

      'They say Yasser Arafat has been poisoned with Polonium.' (cf. http://www.
      gazetadebistrita.ro/citeste/3862-yasser-arafat-ar-fi-fost-otravit-cu-poloniu?
      n=1)

(52) Ipoteză   şocantă: Lara Şaban ar   fi   fost ucisă la ordinul
      hypothesis shocking: Lara Şaban would be.AUX been killed at order.the
      iubitului   turc.
      lover.of.the Turkish

      'Shocking hypothesis: They say Lara Şaban has been killed at the order of her Turkish
      lover.' (cf. http://www.dcnews.ro/2012/05/ipoteza-socanta-lara-saban-ar-
      fi-fost-ucisa-la-ordinul-iubitului-turc/)

One thing that all these examples have in common is the fact that they occur in newspaper headings. Headlinese, on the other hand, is famous for its nonconversational abbreviated writing style, so it shouldn't surprise us if a morphology that typically occurs in embedded environments is used on its own. In fact, trying to find instances of grammaticalized evidentials in English, de Haan (2001b, 214) comes to the conclusion that "newspaper headlines are about the only place where grammaticalized evidentials can be found in English." His examples are drawn from the on-line edition of the New York Times:

19a. Sierra Leone Mine Said Collapses. (March 7, 2000)

19b. Plane Said Crashed Just Flying Low. (January 7, 2001)

De Haan comments that what we are seeing here are "particle[s] ... stripped of [their] verbal properties," and concludes that "at present, it is unclear just how widespread the use of the nonconfirmational particles is outside of the newspaper register. I have tested examples (19) with some speakers of Standard American English and it was universally judged ungrammatical in everyday use."

Given all these facts, the conclusion seem to be that evidential-COND morphology typically *does* require the support of a *verbum dicendi*, or of an adverb or an introductory sentence to the same effect as that of a *verbum dicendi*.

COND in short

Like the FUT morphology, the COND morphology too seems to have (1) non-evidential meanings: counterfactuality; and to be *compatible with* (2) evidential meanings: inferentiality (with sensory or 'seem' verbs), and reportativeness (with *verba dicendi*).

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Contrary to some hypotheses in the literature, the Romanian COND does not seem to be able to convey evidentiality all by itself.

The SUBJ morphology

The SUBj morphology is typically used in subordinate clauses to express various states of unreality such as wish, emotion, possibility, judgment, opinion, necessity, condition, or potentiality. In matrix clauses it takes on imperative or inferential-estimative values, or inferential-dubitative values, in interrogative matrix clauses.

Form

The SUBJ morphology consists of the conjunction 'SĂ' + plus either one of the following:

1. the 'present subjunctive' form of the verb (nonpast perfective)

2. the auxiliary 'fi' + the past participle of the verb (perfect)

3. the auxiliary 'fi' + the present participle of the verb (imperfective)

Romanian is one of the languages listed in Giannakidou (2009, 1884) as having no specific auxiliary morphology for the subjunctive, the category being rather identified with an uninflected particle that appears external to the verb and looks like complementizers.[9]

Meanings: non-evidential

- *Embedded infinitivals*

  According to Giorgi & Pianesi (1997, 195), "although possible in matrix clauses, the subjunctive is mainly used in subordinate clauses" - and specifically in those contexts where English or French would resort to infinitive complement clauses. Non-finite complementation with the infinitive is possible in Romanian too, just that it nowadays it is increasingly perceived as archaic. Some environments where SUBJ morphology actually substitutes itself to INF morphology include:

  (53)   *direct object clause*

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[9]For a general discussion, see Rivero (1994), Terzi (1992), Roussou (2000), Bulatovic (2008), cited in Giannakidou (2009).

Preferă să tacă.
prefers SĂ keep.silent.3SG+SUBJ

'S/he prefers / They prefer to keep silent.'

(54) *temporal clause*

Până să ajung   eu,   trenul   plecase.
until SĂ arrive.1SG+SUBJ I.NOM train.the had.left.3SG

'By the time I arrived there the train had left.'

(55) *purpose clause*

Am   venit să îmi   iau   rămas bun.
have.1SG come SĂ me.Cl.DAT take.1SG+SUBJ leave   good

'I came to say goodbye.'

(56) *manner adjunct clauses*

Muncește fără   să se   plângă.
toils   without SĂ REFL complain.3SG+SUBJ

'S/he works without complaining.'

(57) *manner adjunct clauses*

Muncește fără   să se   fi   plâns   o.dată.
toils   without SĂ REFL be.AUX complained once

'S/he toiled on without having ever complained.'

Following certain matrix verbs, the SUBJ competes with the Indicative. The SUBJ
adds a note of probability, as opposed to the relative certainty of the Indicative.

(58) *future*

Sper   să poată   veni. / Sper   că va
hope.1SG SĂ be.able.to.3SG+SUBJ come. / hope.1SG that will.3SG
putea   veni.
be.able.to come

'I hope s/he/they would come. / I hope s/he/they will come.'

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(59) *past*

Sper   să fi   ajuns la timp. / Sper   că   a   ajuns la timp.
hope.1SG SĂ be.AUX arrived at time. / hope.1SG that has arrived at time

'I hope s/he arrived in time.'

In this embedded infinitival type of clauses, SUBJ morphology seems to act like a nonpast perfective - in the case of SUBJ simple - and like a perfect - in the case of SUBJ perfect.

Now, insofar as the unembedded uses of the non-evidential SUBJ are concerned, Giorgi & Pianesi (1997, 194) claimed that "the subjunctive appears in matrix clauses only if they have a special illocutionary force, such as optatives." In Romanian, this statement is not exactly supported. For one thing, an unembedded SUBJ is never truly an optative in Romanian - rather, it is more of an abridged conditional:

(60) *optative = abridged conditional*

Să am   eu   timp...
SĂ have.1SG+SUBJ I.NOM time...

'If I had time...'

Instead, two environments where an unembedded SUBJ truly thrives are the conditional counterfactuals and the hortative counterfactuals. We will exemplify them below:

- *Conditional counterfactuals*

  (61) *counterfactual to the present, perfectly equivalent to the COND conditional counterfactual*

  Să am   timp, ţi-aş   scrie mai des.
  SĂ have.1SG+SUBJ time, you.Cl.DAT-would.1SG write more often

  'If I had time I'd write to you more frequently.'

  (62) *counterfactual to the past, perfectly equivalent to the COND conditional counterfactual*

Să fi avut timp, ţi-aş fi scris mai des.
SĂ be.AUX had time, you.Cl.DAT-would.1SG be.AUX written more often

'If I had had time, I would have written to you more frequently.'

Just like the COND conditional counterfactuals, these SUBJ conditionals may alternate with the 'fake imperfect' sentences which can basically be rephrased with no change in meaning by either one of the two morphologies (in their conditional counterfactual syntactic configuration).

- *Hortative counterfactuals*

  (63) *hortative in the present*

  Să-ţi fie de bine!
  SĂ-you.Cl.DAT be.3SG+SUBJ of good

  'May this be to your good!'

Technically speaking, this *could* have a COND parallel such as:

(64) *COND hortative*

  *Fi-ţi-ar de bine!
  be-you.Cl.DAT-would.3SG of good!

  'May this be to your good!'

However, in practice this doesn't occur. Rather, the only such uses of the COND typically involve a curse (SUBJ may be used in both curses and positive wishes):

(65) *COND curse-hortative*

  Cădea-ţi-ar vitele-n prăpastie!
  fall-you.Cl.DAT-would.3PL cattle.the-in pit!

  'May your cattle fall into a pit!'

A neater parallel between SUBJ and COND hortatives occurs if we insert a quantifier such as 'at least':

(66) *SUBJ 'if only' hortative*

  Să-ţi fi fost măcar de folos!
  SUBJ-to.you be.AUX been at.least of use

'May it at least have been of some use to you!'

Compare with the COND:

(67) *COND 'if only' hortative*

De ţi-ar   fi   fost măcar de folos!
if   you.Cl.DAT-would.3SG be.AUX been at.least of use

'If only it had been of some use to you (but it wasn't)!'

The difference seems to be that the COND feels more 'real' than the SUBJ - it actually looks like a complaint: 'if only it had been of some use to you, but it wasn't even any good!' With the SUBJ there seems to be no presupposition that 'it' has been of no use, the SUBJ merely expresses a hope about something (in this case, something in the past).

- *Other uses of the SUBJ*

  (68) *concessive clauses*

  Să îmi   dea   o avere, și   tot nu accept
  SĂ me.Cl.DAT give.3SG+SUBJ a fortune, and still not accept.1SG
  compromisul.
  compromise.the

  'Even if s/he should offer me a fortune, I would still not accept the compromise.'

  (69) *imperative - exhortation*, especially for persons other than 2SG,PL.

  (Hai/Haideți) să mergem!
  (Let's)   SĂ go.1PL+SUBJ

  '(Come on,) let's go!'

  (70) *imperative-order*, especially for persons other than 2SG,PL.

  Să plece   imediat!
  SĂ leave.3SG+SUBJ immediately

  'I want him/her to leave immediately.'

  (71) *wish, regret, necessity, etc., in the present or the past*

  Trebuia   să fi   venit   și Ana cu   ei.
  have.to.3SG+IMPF SĂ be.AUX come.PPART and Anne with them

  'Anne ought to have joined them too.'

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Meanings: evidential

Although they fall into the same pattern of replacement of the infinitive by the subjunctive, the following uses of the SUBJ are different from the examples given above since they are compatible with an evidential reading. However, the only evidential uses that the SUBJ appears to be compatible with involve, in a form or another, the raising-to-subject verb 'seem' or certain markers of estimation:

Direct

- Sensory-'seems' inferentials

  (72) Par   să fie   vreo   zece.
        seem.3PL SĂ be.3PL+SUBJ approximately ten

        'They seem to be approximately ten in number.'

A variation of this would be:

  (73) *'seem'-less estimative-inferential*,where 'seem' is presupposed, the reason being probably the fact that the number estimated with the help of the SUBJ verb is already marked as an approximation by the indefinite quantifier 'vreo' - approximately:

        Să fie   vreo   zece.
        SĂ be.3PL+SUBJ approximately zece

        'They seem to be approximately ten in number.'

From which we can also derive:

  (74) *'seem'-less dubitative-inferential*, where the role of 'seem' is not played by 'vreo', as in the example above, but rather by the question mark itself:

        Să fie   vreo   zece?
        SĂ be.3PL+SUBJ approximately ten

        'Could they be ten in number?'

In fact, in order to yield an independent clause, the evidential SUBJ seems to always require some external marker of evidentiality. In the examples above this role was in turn played by 'seem', 'vreo', the question mark (without these evidential markers

these SUBJ clauses would have been infelicitous in independent clauses). But these examples have been of the estimative-inferential type. Let's see how the evidential SUBJ behaves in non-estimative clauses:

(75)   *'seem' inferential*:

Par   să fie   acasă.
seem.3PL SĂ be.3PL+SUBJ home

'They seem to be home.'

(76)   *'seem'-less inferential*, interrogative:

Să fie   (oare)   acasă?
SĂ be.3PL+SUBJ (I.wonder.ADV) home

'Could they be home?'

(77)   *'seem'-less inferential*, with 'could':

Pot   să fie   acasă.
can.3PL SĂ be.3PL+SUBJ home

'They could be home.'

Or even:

(78)   *'seem'-less inferential*, with the impersonal 'could', or with the adverb 'maybe':

(Se)   poate să fie   acasă.
IMPERS could SĂ be.3PL+SUBJ home

'They could be home.' or 'It could be that they are home.'

The 'could' examples are, however, ambiguous between evidentiality and weak modal force. They are evidential only to the extent to which they are equivalent to a 'seem' type of construction (and, since we are talking about direct evidentiality, some kind of direct evidence). Speaking of which, we must say that the SUBJ is not restricted to 'weak' modal force but is also compatible with 'strong' modal force markers.

(79)   *'seem'-less inferential*, with 'it is probable':

(E) probabil să fie   acasă.
(is) probable SĂ be.3PL+SUBJ home

'They are probably home.' or 'It is probable that they are home.'

Indirect

In reported evidentiality, just like the COND, the seem-inferential SUBJ usually seems to require the use of *verba dicendi*. At the same time, however, apart from the estimative uses, the seem-inferential SUBJ also requires a 'seem' verb. This suggest that the SUBJ morphology is properly neither inferential, nor reportative, but indirectly compatible with both (in the case of the former, by means of one facilitator, a particle of estimation or a 'seem' verb; in the case of the latter, by means of a reportative *and* the facilitators required for the former).

Reported

- Secondhand

    (80) *citation of seem-inferential*

    Zice că   Mari pare   să fie   bolnavă.
    says that Mari seems SĂ be.3SG+SUBJ sick

    'S/he says that Mary seems to be sick.'

    (81) *citation of seem-inferential*, with 'vreo':

    Zice că   (par) să fie   vreo   zece.
    says that (seem) SĂ be.3PL+SUBJ approximately zece

    'S/he says that they seem to be approximately ten in number.'

- Thirdhand

    (82) *citation of seem-inferential*

    Ana zice că   Mari zice că   Ion pare să fie   bolnav.
    Anne says that Mary says that John seems SĂ be.3SG+SUBJ sick

    'Anne says that Mary says that John seems to be sick.'

    (83) *citation of seem-inferential*, with 'vreo':

    Ana zice că   Mari zice că   (par)   să fie   vreo
    Anne says that Mary says that (seem.3PL) SĂ be.3SL+SUBJ approximately
    zece.
    zece

'Anne says that Mary says that they seem to be approximately ten in number.'

- Folklore

(84) *citation of seem-inferential*

Lumea   zice că Ion pare să fie   bolnav.
world.the says that John seems SĂ be.3SL+SUBJ sick

'They say that John seems to be sick.'

(85) *citation of seem-inferential*, with 'vreo':

Lumea   zice că (par)   să fie   vreo   zece.
world.the says that seem.3PL SĂ be.3SL+SUBJ approximately zece

'They$_{\text{impers.}}$ say that they seem to be approximately ten in number.'

***

Thus far we have seen that the evidential use of the SUBJ requires some kind of an external marker of evidentiality. The most straightforward example of such a marker appears to be 'seem', or other words to the same effect. In reportative environments, moreover, the reportative-evidential use of the SUBJ seems to depend (in fact, just like the COND) on *verba dicendi* too. Given these facts, the SUBJ seems to be directly neither an inferential, nor a reportative evidential. The indirect-inferential evidential examples below are simply variations on the same theme:

Inference

- Results

(86) *'seem' inferential*:

Ion pare să fi fost pe-aici.
John seems SĂ be been over-here

'John seems to have been over here.'

- Reasoning

(87) It's winter. I look out through the window and I notice that people are extremely warmly dressed.

Pare să fie extrem   de frig afară!
seems SĂ be extremely DE cold outside!

'It seems to be extremely cold outside!'

SUBJ in short

Compared to the FUT and COND morphologies, the SUBJ morphology seems to cover the most diverse array of meanings. Thus, the (1) non-evidential uses of the SUBJ include: embedded infinitivals of all kinds, hortative counterfactuals, and exhortative-imperative counterfactuals; the (2) *evidential uses that the SUBJ seems to be compatible with*: direct and indirect 'seem'-like inferentials (occasionally, with estimative or dubitative flavors) and cited 'seem'-like inferentials.

Like the COND, the SUBJ does not really seem capable of expressing evidentiality on its own. Perhaps its only intrinsic features are actually limited to: (1) subordination and (2) potentiality (e.g. the infinitival uses) and counterfactuality.

There is a lot more to say about this. Insofar as what we need to know is concerned, we may stop here.

Conclusions

In this section we set out to explore the contents of the Romanian Presumptive Mood. Our inquiry compelled us to proceed to a thorough survey of the uses of the 3 morphologies allegedly involved in the construction of the presumptive meanings. Following upon the suggestion of some authors that evidentiality might be *the* key issue in this discussion, we used Willett's taxonomy to organize our data. The table below summarizes our conclusions about what kind of evidential environments our morphologies appear to be compatible with.

Table 1.5: Evidentiality type compatibility

	Direct	Indirect	
	Sensory-inferential	Reported	Inferential
FUT	✓	citation of inference	✓
COND	✓ (*seem*)	✓ (*verba dicendi*)	✓ (*seem*)
SUBJ	✓ (*seem*)	citation of 'seem'-inferential	✓ (*seem*)

Despite of its gaps (of which we should be fully aware, if we remember the details of our discussion above), this table nevertheless helps us understand why these morphologies have been often bundled together under the label 'presumptive': with the exception of the little

grey cell in the middle of our table, every other cell represents some instance or another of inferentiality, or 'presumption'.

Another important observation is that, whereas the FUT is able to express 'presumptiveness' all by itself, the COND and the SUBJ morphologies seem to require the help of external agents to perform a similar task (although, unlike the FUT, with a manifest preference for a 'seem' type of evidentiality).

With these in mind, let us return to the basic question of this chapter: (1) What is the Presumptive Mood all about, and (2) in what kind of morphology/ies is it grammaticalized?

The answer to (1) is that 'presumptiveness' basically has to do with deduction or inference. Insofar as all of our 3 paradigms may be used in inferential constructions, we may concede that indeed, all three are at least compatible with a notion of 'presumptiveness'.

As for (2), our data supports two important conclusions:

- Striking though its presence may be in the FUT, COND, and respectively SUBJ morphology, the imperfective morphology does not seem to encode inferentiality; its conflation with the notion of inference may be simply a matter of phonological pragmaticism[10] based on the fact that the imperfective aspect is the only aspect of the FUT morphology in which it can be interpreted only inferentially (the simple and the perfect aspects being, as mentioned earlier, homonymous with the simple and perfect aspects of the indexical FUT); its occurrence in the FUT, COND, and respectively SUBJ paradigms is, however, noteworthy, and we will try to do it some justice in Chapter 3.

- Insofar as the Presumptive Mood is supposed to specialize in the grammaticalization of inference in Romanian, the only morphology that properly belongs to it appears to be the FUT morphology. Other instances of inferentiality in conjunction with the COND and the SUBJ thus appear to be merely incidental outputs of the interaction between certain embedding verbs and the inherent counterfactual flavors of the COND and, respectively, the SUBJ.[11]

The Romanian Presumptive Mood therefore consists of the FUT morphology, which - apart from its indexical, non-presumptive meanings - seems to specialize in the expression of inferentiality. Our evidential approach in this chapter has allowed us to see that, in contrast with traditional assumptions, inference is not restricted to an indirect source of information but may also occur when there is direct evidence but either the evidence or the perception of the evidence are deemed insufficient to warrant a statement. Moreover, in Romanian, the

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[10]Observation confirmed by Zafiu (2002).
[11]Fact which confirms the intuitions presented succintly in Zafiu (2002, 136).

grammatical expression of inference may also be embedded, when, for example, we report an inference made by someone else. Insofar as considerations of tense / time frame of reference are concerned, the FUT morphology seems to be able to act inferentially in both a present and a future time frame of reference (although, in the latter, the literary auxiliary construction is ambiguous between an inferential and an indexical reading); we defer a more careful examination of this to Chapter 3.

If in this chapter we have tackled the evidential status of the FUT morphology, the time has come for us to look at how this fits together with the modal values of the FUT auxiliary. The next chapter will tackle the connection between evidentiality and epistemic modality, the epistemic force of the FUT morphology, and a semantic analysis thereof. Enter Modality...

Chapter 2

The Romanian FUT-epistemic modality

Evidentiality and epistemic modality

In this section we will recapitulate the evidential properties of the Romanian FUT auxiliary and try to situate it in the larger spectrum of evidentiality, and then, epistemic modality.

What kind of an evidential is the Romanian FUT auxiliary?

We saw in the previous chapter that the Romanian FUT auxiliary more often than not functions as an evidential. Moreover, we saw that, whereas in the case of the COND or the SUBJ evidentiality was actually encoded in the 'dicendi' or 'seem' verbs which introduced these moods, in the case of the FUT, the FUT morphology itself, with its auxiliary, is sufficient to encode evidentiality. How frequent is it for an auxiliary / a tense morphology to function as an evidential?

On the scale of Europe this phenomenon is relatively widespread. Cornillie (2009, 46-47) remarks, for example, that, in languages without an obligatory evidential system (such as Germanic and Romance), the most comon grammaticalization of evidentiality is "either by lexical elements such as adverbs, e.g. English *allegedly* [for hearsay] and *presumably* [for inference] [...] and by more grammaticalized expressions such as evidential auxiliaries, e.g. English *seem*. De Haan 2001b adds that evidentiality may also be encoded by means of moods, for example, the subjunctive in German or Dutch. De Haan 2001b remarks that evidentiality in European languages may also be encoded by means of a modal verb, but he notes that "from a crosslinguistic point of view, evidentials from modal verbs [...] are not as common as evidentiality expressed through mood (subjunctive, irrealis, or other-

wise)...Finnish is the only example in the WALS sample of a language with evidentiality deriving from a modal verb."

As we will show in greater detail in what follows, the Romanian FUT auxiliary falls into this last class of evidentials - the class of the modal evidentials. If de Haan quotes Finish as the only example in WALS of a language with evidentiality deriving from a modal verb, that is perhaps because WALS does not actually cover Romanian.

The Romanian FUT auxiliary is therefore a modal evidential. How did it come to be so?

According to de Haan (2001b), the grammaticalization of evidentials happens in a few stages of deverbalization whereby the verbs pass from lexical verbs through auxiliary verbs to markers of evidentiality. De Haan also remarks that this process is similar to the process whereby lexical verbs become modal verbs, and notes that "in some linguistic theories, modal verbs are analyzed as raising verbs, an approach which is consistent with the deverbalization approach." This last piece of information is particularly relevant to Romanian, where the FUT auxiliary used to be the lexical verb 'to want', which then underwent a process of deverbalization by raising, and eventually ended up to be known as 'the FUT auxiliary'. The examples below demonstrate this process of deverbalization:

(88)   archaic[1] 'want' + infinitive

Voi   a   face...
want.archaic.1SG A(infinitive) do...

'I want to do...'

(89)   modern FUT auxiliary + short infinitive (without A)

Voi   face...
will.aux.1SG do...

'I will do...'

We showed in these examples the transition of the FUT auxiliary from lexical verb to auxiliary verb. What about its transition from auxiliary verb to evidential/epistemic modal? This transition did not require any change in the morphology - the evidential/epistemic FUT looks just like our last example above. In fact it is not clear that there *was* actually any second transition at all: as we mentioned with regard to the temporal uses of the FUT morphology in Chapter 1, the FUT morphology is in fact rarely used as a temporal future; moreover, the temporal / evidential / epistemic future actually seem to have a lot in common.

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[1]It is difficult to give an exact date. Such constructions can still be encountered in texts dating from the second half of the 19th century.

Maybe this has something to do with the fact that the meaning itself of the verb 'to want' is in some ways evidential: intention can very well function as (at least indirect) evidence of fact. We will discuss more aspects of this in the second part of this chapter, with further speculations in Chapter 3.

For now we will try to resolve the evidential/epistemic connection. But before that, what is epistemic modality? And what is modality?

What is epistemic modality?

Modality is "the linguistic phenomenon whereby grammar allows one to say things about, or on the basis of, situations which need not be real" (Portner 2009, 1). Different flavors of modality include

- deontic modality (whereby we refer to a set of laws or rules, e.g. 'According to law, you *have to* pay a fine if you park illegally.')

- bouletic modality (whereby we refer to a set of wishes, e.g. 'According to what the king wants, every man that is able to fight *must* fight.')

- circumstantial (whereby we refer to a set of circumstances, e.g. 'Given my state of illness, I *have to* stay in bed.)

- teleological (whereby we refer to a set of goals, e.g. 'Given your intention to be there on time, you *should* start out right now.')

- epistemic (whereby we refer to a set of things that are known or believed, e.g. 'Given what I know about her, she must be have arrived already / she may have arrived already.')

First, we notice that the same modal verb may be used for more than one flavor of modality. For example, von Fintel & Gillies (2007, 34) show that *have to* is extremely chameleonic, being compatible with any of the flavors of modality listed above. Second, we notice that some of the modals listed above are stronger than some others; for example, the teleological 'You *should* start out right now' is weaker than the teleological 'You *have to* start out right now', or the epistemic 'She may have arrived already' is weaker than the epistemic 'She *must* have arrived already.'

Insofar as *epistemic* modality alone is concerned, what it does is use information to infer more information, and what seems to matter the most from a linguistics point of view is the

degree of certainty or, more subjectively, confidencence, with which that latter information can be expressed.

In our glosses to the many examples of FUT morphology that we gave in Chapter 1 we 'translated' the evidential FUT morphology by means of 'probably'. What we meant by that was 'a relatively high degree of certainty or confidence that the modalized proposition is true'.

While these degrees of certainty / confidence / probability assigned to events are, strictly speaking, a continuum, most languages have modals to express only certain limited intervals. In English, for example, the continuum from 0 probability to 100% probability is polarized between possibility (or weak epistemic modality) and necessity (or strong epistemic modality) - or, simply put, between 'may' and 'must'; in German, this pair would be mögen/können - sollen/müssen; and so on. The first elements of these pairs are called 'possibility epistemics', or 'existential quantifiers' - since they express the fact that there exists at least a possibility that what is being said is actually true - and the second elements are called 'necessity epistemics' or 'universal quantifiers' - since they express the fact that it is necessary that something be true, or at least, that something have very high chances of being true.

In Romanian these degrees of epistemic confidence may also be expressed by means of a dual pair: *poate că p* - 'may p' and *trebuie că* - 'must p'. These two Romanian modals are actually sentential modals, syntactically speaking, above CP. Moreover, the latter of the two is comparatively rare in current usage.

Insofar as the Romanian FUT epistemic is concerned, strangely enough, it somehow seems to be able to express both epistemic possibility *and* epistemic necessity, albeit with a preference for the latter (i.e. a preference for high probability). The examples below demonstrate this fact:

(90)   possibility modal - epistemic FUT

Poate că   a   ajuns deja.   - Va fi ajuns   deja.
maybe that has arrived already. - will be arrived already.

'[S/he] may have arrived already.'

As a possibility modal, the Romanian epistemic FUT may be affirmed in conjunction with its negation without resulting in contradiction:

(91)   possibility modal - epistemic FUT: *E mai bine la munte decât la mare. Ce zici?* - 'In the mountains it is better than at the seaside. What do you think?'

O   fi   şi   n-o   fi.
will.3SG be.LEX and not-will.3SG be.LEX

'It may and it may not be.'

Although rare, such an example is perfectly plausible, expressing the hesitation of the speaker to commit to either option while acknowledging the evidence available for each.

As for the necessity modal:

(92)   necessity modal - epistemic FUT

Trebuie că   a   ajuns deja.   - Va fi ajuns deja.
must.be that has arrived already. - will be arrived already.

'[S/he] must have arrived already.'

Again, as a necessity modal, the Romanian epistemic FUT may also be used in contexts where affirming it in conjunction with its negation results in contradiction. Such truly 'necessity' uses of the Romanian epistemic FUT are nevertheless labeled as 'future tense' proper, the regular 'presumptive' FUT being always - even if only by a notch - weaker than a full-fledged necessity modal:

(93)   necessity modal - epistemic FUT

Trenul   va   sosi şi nu va   sosi la ora 5.
train.the will.3SG arrive and not will.3SG arrive at hour 5

'The train will arrive and will not arrive at 5 o'clock'

We notice thus that, whereas the Romanian epistemic FUT may be loosely glossed as either 'may' or 'must', it is actually equivalent to neither since it only marginally passed the contradiction test for possibility modals and downright failed the contradiction test for necessity modals. This partly has to do with the vague nature of 'may' and 'must'. On the other hand, this also has to do with the fact that the Romanian epistemic FUT is properly neither of the two. In the next sections we will come back to this statement time and again, with a final discussion in 2.2.4.4.

For now let us conclude this fragment with a definition of epistemic modality:

> The epistemic category refers to the "evaluation of the chances that a certain hypothetical state of affairs under consideration (or some aspect of it) will occur, is occurring or has occurred in a possible world" (Nuyts 2001b: 21). The result of the evaluation goes from absolute certainty that a state of affairs is real to absolute certainty that it is not real. In between these two extremes there is a continuum including probability to possibility. (Cornillie 2009)

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Now that we know both what evidentiality *and* what epistemic modality is, what possible relation could there be between the two? The next mini-section will attempt to answer this question.

What is the relation between evidentiality and epistemic modality?

We started out by classifying the Romanian FUT morphology based on a taxonomy of evidentiality, and what we have found out is that it may express a whole variety of inferences. As hinted in the mini-section above, these inferences are not all the same: depending on the context, their quantificational force may be perceived as slightly different. This of course brings to the forefront the modal value of the FUT auxiliary. It is therefore important for us to understand what the relation between modality and evidentiality is. Some basic questions include: Which of the two came first? Are the two notions independent, or does the emergence of one implicitly bring about the emergence of the other?

Given the wide variety of expressions of evidentiality and modality worldwide, these questions are harder than we would have imagined. Indeed, in his paper on 'Disentangling evidentiality and epistemic modality', Squartini (2004, 873) remarks that "the semantic relation between evidentiality and epistemic modality is mentioned in Dendale and Tasmowski (2001: 341) as the first entry in their list of unsettled questions in the recent literature on evidentiality."

With the Romanian FUT epistemic data at hand, however, the answer does not seem that difficult: as the clearest statement in the literature goes (e.g. de Haan 2001b; Squartini 2004, and others), evidentiality marks the grammaticalized expression of the source of information, whereas epistemic modality has to do with the degree of confidence expressed with regard to that information. In Romanian, these two elements seem to be inextricable, especially since the Romanian FUT epistemic has to do with inferences, which by their nature are supposed to rely on premises, the source of which is necessarily of interest when it comes to judging the strength of the inference.

This leads us into the trap of correlating evidence with inferential strength, a trap which, in some cases, is bound to have serious consequences. De Haan (2001b) shows, for example, that the fact that a strong epistemic modal in German also functions as an evidential has led some to define strong epistemic modality in terms of evidentiality, thereby assuming that there is a link between them - which is not surprising - but at the same time assuming that weak epistemic modals do not require evidence, and treating them accordingly - which de Haan claims to have been a mistake, for two reasons: "one, it implies that evidentials can be derived only from strong modal elements, and two, that evidence is relevant only for

strong epistemic elements." Based on cross-linguistics data, de Haan shows how both these assumptions are false. First, there are many languages where evidentials are altogether independent morphemes from modal morphemes (e.g. in the Romanian data, although the SUBJ and the COND *were* did participate in the construction of evidential meanings, evidentiality itself was carried in fact by the 'verba dicendi' and by 'seem'). Second, even if modals are indeed involved, these modals need not be *strong* epistemic modals, there are languages where evidentiality is expressed by weak modals too. Otherwise put, it is not the case that strong epistemic modality inherently requires signaling evidence.

On the other side of the coin, de Haan says, strong evidence does not necessarily increase a speaker's epistemic modal confidence: "there is [...] no good reason to suppose that there is a causal link between strong epistemic modality and evidentiality." De Haan supports his claim with the following set of examples:

1. John must be home. The light is on.

2. John may be home. The light is on.

3. John is home. The light is on.

The problem seems to be that the evidence is not 'strong' by itself, instead, it is made 'strong' by some other correlation, for example, John is usually careful to turn the light off before leaving, for case (1), and John sometimes forgets to turn the light off before leaving, for case (2). As for (3), (3) is not a modalized claim but instead a full-fledged assertion; a relevant correlation for this case would be a very thrifty or environment-caring John who would never forget to turn the light off when he leaves home, or simply a sloppy speaker who makes assertions without judging evidence and its strength in advance. It seems, therefore, that, if any correlation can be made between the strength of a modal and the strength of the evidence that it has access to, that correlation is complete *only* if there is a third - independent, contextual - standard whereby to measure the evidence. Otherwise, conceiving of 'strong evidence' as requiring 'strong confidence', or of 'strong confidence' as requiring 'strong evidence' is not how things work.

As for which of the two came first, evidentiality or epistemic modality, de Haan (2001b) claims that the order has to be, epistemic modals first, then evidentials, since there is no language which has only evidentiat but no modals, whereas there are many languages that have modals but no evidentials. On the other hand it is not necessarily the case that evidentials are always derived from modals. On the contrary, in many languages of the world they constitute independent morphemes. As for those cases where they overlap morphologically

with some other grammatical marker, evidentials may share the same morphology not only with epistemic modals, but also with a whole variety of other areas of grammar, including, but not restricted to,(spatial) deixis, tense/aspect systems, areas of perception, or mirativity.

In light of all these facts, we derive two relevant conclusions:

- in Romanian, evidentiality overlaps with epistemic modality in the area of the FUT morphology; here we retain Cornillie (2009, 51)'s comment that "rather than representing a concrete overlap domain, epistemic or evidential expressions may more accurately be described as having similar subdimensions that meet at some point [...] these subdimensions [can be discussed] in terms of reliability of knowledge (evidentiality) and speaker commitment (epistemic modality)."

- this does not mean that epistemic modality is the only way to express evidentiality, in Romanian or in other languages, or that (a) the strength of the evidence will determine the strength of the epistemic modal, or (b) the strength of a modal is an expression of strong evidence

What kind of an epistemic modal is the Romanian evidential FUT?

The Romanian FUT modal is by no means well known in the epistemic modality literature. Although in the sections above we have given a few previews of its compatibility with both weak and strong epistemicity, with a preference for the latter, its status in the spectrum of epistemic modality is yet unclear.

For a gentle argumentation of where it stands, we will begin by introducing first a couple of better studied modals such as the English 'must' and 'may'. Since we are primarily interested in their epistemic flavor, we will ignore, in the following, their other modal readings (e.g. deontic).

Modal force: the Romanian FUT, 'must', and 'may'

'Must' and 'may' are primarily defined in the epistemic literature as 'the universal quantifier' and 'the existential quantifier', respectively. The reason for this lies with the fact that 'must' is taken to express epistemic *necessity*, whereas 'may' is taken to express epistemic *possibility*.

Imagine, for example, the following scenario: John has bought all the tickets for a lottery. John must win the lottery. Or, rephrased: In view of the fact that John has bought all the tickets available for a lottery, John must win that lottery. In a *universal quantifier approach*, what 'must' is telling us is that the proposition 'John wins the lottery' is true in all the scenarios where John has bought all the lottery tickets for that lottery.

Imagine now a second scenario: John has bought one lottery ticket. John may win the lottery. Or, rephrased: In view of the fact that John has bought one of the tickets available for a lottery, John may win that lottery. In an *existential quantifier approach*, what 'may' is telling us is that it is possible that the proposition 'John wins the lottery' is true in at least one scenario where John has bought a lottery ticket for that lottery.

Now, the lottery scenarios have a certain mathematical quality about them which most linguistic uses of 'must' and 'may' in fact do not have: if each lottery ticket has a chance to win, and if John has bought them all, then he has 100% chances to win. Likewise, if he has bought one ticket, then he automatically has non-zero chances to win, since any ticket has a chance to win.

Speaking of which, it is perhaps a good time to make the observation that possibility is merely a special case of probability. 100% probability equals factuality. Zero probability equals impossibility. Non-zero probability equals possibility. Although attested in speech, 'very possible' is technically speaking meaningless, and expressions such as 'there is a good possibility that' mean nothing more than 'not only is there a non-zero probability that x, in fact the probability is pretty high that x'.

Getting back to our lottery tickets, we notice that the first scenario actually allows us to match 'must' to 100% probability, and thus attest to it being indeed a universal quantifier. Moreover, in the first scenario 'must' *is* actually the dual of 'may', since, as stipulated in modal logic, it actually means 'it is not possible that not p'. If John has all the chances to win, then it is impossible (there is no chance left) for him not to win.

Now, in most linguistic uses, 'must' is usually a lot vaguer. In fact, most of the time it means nothing more than 'I have good reasons to think that x'. In those cases 'must' is clearly not a *universal* quantifier: far from meaning 'in all cases where p, then q', or 'it is not possible that not p', what it means is simply 'given p, I'd say chances are very high that q'. Commenting on von Fintel & Gillies' approach to 'must' as a universal quantifier, Matthewson (2010, 70) was remarking, for example, that "I don't know if 'must' is always strong, but there are modals in other languages which make an always-strong 'must' look typologically odd..." We will come back to this later, in section 2.2.4.4.

How does the RO epistemic 'will' relate to these definitions of 'must' and 'may'?

As indicated throughout this work thus far, the RO epistemic 'will' is a marker of inferentiality. When we make an inference p, unless we place it in a tie with another inference, what we usually mean is that p is our best bet given the data.

Now, in this example, and many other examples in Chapter 1, we translated the evidential/epistemic FUT morphology by means of 'probably'. 'Probably' is actually a pretty good approximation of what is going on in the Romanian construction: it points to the

probabilistic-inferential nature and to the status of 'best bet' of the epistemic FUT utterance. But 'probably' is an adverb. Is there any way to map the RO epistemic 'will' to an EN epistemic necessity modal such as 'must'?

Before we give an answer to this, we will first take a look at an interesting phenomenon in Romanian, whereby the force of the FUT epistemic may be weakened / strengthened by external modifiers such as 'certainly' or 'maybe'.

External modification of force

The modal force of the Romanian epistemic FUT can be modified by external modifiers. Below we will take one scenario and modify it in three different ways. (I will follow some of the examples and discussion in Squartini (2008), cited in Cornillie 2009, 50. Like Squartini, I will use 'will' in the gloss, to avoid any debatable association with 'must'.)

- The generic inferential:

    (94) It's ringing at the door.

          Va   fi   poştaşul!
          will.3SG be.LEX   mailman.the

          'It will be the postman!'

- The enhanced inferential:

    (95) It's ringing at the door.

          Sigur   va   fi   poştaşul!
          certainly will.3SG   be.LEX   mailman.the

          'It will certainly be the postman!' (Cornillie calls this a 'conjectural' inferential.)

- The weakened inferential:

    (96) It's ringing at the door.

          Poate   va   fi   poştaşul!
          maybe   will.3SG   be.LEX   mailman.the

          'Perhaps it will be the postman!' (Squartini uses 'is' here. Again, to avoid all debate, I will simply force the note in English. Cornillie calls this a 'conjectural' inferential.)

These examples show that the modal force of RO 'will' can indeed be modified.

But thus far my examples have followed those of Squartini. For a confirmation that such uses do exist in Romanian I will quote below an independent example. (The example is part of a Romanian translation of a text originally written in Portuguese, quoted in Reinheimer-Rîpeanu 2007. This acknowledged, we must say, however, that the example seems perfectly felicitous in Romanian, and would probably be confirmed by data of strictly Romanian origin. Without further ado, we will use it as a Romanian example proper):

(97) PO ...porventura serão estes os únicos seres humanos que como são se vêem...

RO ...poate or   fi singurele fiinţe omeneşti care se   văd   aşa cum
RO ...maybe will.3PL be only.the beings human   which REFL see.3PL as   how
sunt...
are.3PL...

'Perhaps they are the only human beings who see themselves as they are...'

These examples seem to indicate that the default meaning of the Romanian epistemic FUT is simply that of 'best guess given the evidence', with no probability attached to it. As 'best' guess, this epistemic will indeed have a certain positive quality about it, which explains why it is often tempting to say it assigns a probability of $> 50\%$.

A question we must ask at this point is: Can 'must' undergo the same kind of external modification that the Romanian epistemic FUT seems to be able to undergo? A quick Google search will reveal that 'must' may be modified too. Some quick examples include: 'She must probably think...' or 'She must possibly be musing about...'

The most adequate conclusion seems to be that both the Romanian epistemic modal *and* 'must' may be modified externally. Moreover, at least in the case of the Romanian epistemic, the default meaning seems to be that of 'best guess'. The reason why it is nevertheless true that a Romanian epistemic FUT more or less equivalent to, let's say, 'She is probably at the gym' seems weaker than 'She must be at the gym' is probably due to the fact that 'must' stands in a dual relation with 'may', which polarizes it, whereas the Romanian epistemic FUT does not undergo any such polarization and is thus more obviously fluid.

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In light of this data, we go back to a question we asked earlier: Is there any way we can map the RO epistemic 'will' into an epistemic necessity modal such as 'must'?

English 'must' and the Romanian epistemic 'will'

To facilitate this mapping, we compare the RO 'will' and the EN 'must' in the table below:

Table 2.1: 'must' vs. RO epistemic 'will'

	must	RO epistemic 'will'
epistemic necessity	✓	✓(best guess)
indirect evidentiality	✓	✓
is in a dual pair with a possibility modal	✓: 'may'	✗
deontic modality	✓	✗
FUT tense	✗	✓
force may be modified adverbially[2]	✓	✓

In summary, regardless of their differences, both 'must' and the RO epistemic 'will' express a 'best guess', just that in the case of 'must' this guess has to mark a contrast with 'may', whereas in the case of the RO epistemic, this guess is free to remain vaguely 'the best'.

Would the RO 'will' be compatible with the lottery scenario in which we tested the universal quantification properties of 'must'? The answer is yes. Just that in that case the RO 'will' will be perceived as a factual, non-modalized statement about the future, fact confirmed that it may be replaced by the simple present - the default expression of factuality. Otherwise put, where 'must' assigns exactly 100% probability, the Romanian FUT epistemic assigns future tense. We will see more about this in Chapter 3.

For now let us compare 'must' and the Romanian epistemic FUT on one last level.

Other flavors of modality in 'must' and the Romanian epistemic FUT

Thus far we have identified 'must' and the Romanian presumptive FUT as epistemic modals. Sometimes, however, their meanings get dubiously close to other flavors of modality. In epistemic statements, data otherwise identified as deontic (*in view of what the law says*) or teleological (*in view of what the purposes are*) or bouletic (*in view of what the wishes are*) or circumstantial (*in view of what the circumstances are*) is sometimes translated epistemically into *in view of what I believe the law is* (where 'believe' is taken to express belief but also potentially incomplete knowledge) or *in view of what I believe the purposes of X are* or *in view of what I believe the wishes of X are* or *in view of what I believe the circumstances are.*

Insofar as the Romanian epistemic FUT is concerned, this observation is particularly important, especially since this epistemic occurs with predilection - if not exclusively - in subjective statements, where the exact body of knowledge or beliefs that the modal has

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[2]As shown in 2.1.4.1 above.

access to is emphatically subjective.

These observations will be extremely relevant in the next sections, where we will try to establish the bodies of knowledge/belief/expectations that the Romanian epistemic FUT modal has access to.

<center>***</center>

In this part of Chapter 2 we have translated our evidential FUT into an epistemic modal. Our comparisons with the English modal 'must' reveals that both 'must' and the Romanian epistemic FUT are at root 'best guesses', with the difference that 'must' is polarized in relation to the weak epistemic 'may' and this seems to give it a higher default value than that of the Romanian epistemic FUT.

In the next part of this chapter we will use the similarities revealed by this comparison of the two modals to adopt a 'must'-like treatment of epistemic modality for the Romanian epistemic FUT. We defer more comments on the differences until the basic semantic analysis is complete.

And now, finally, we tread into semantic frontiers.

The Romanian FUT modal

In this section we will have a look at an example of a Romanian epistemic FUT modal, then outline its syntactic layout, following which we will attempt to understand its semantic composition and then, finally, set out to reconstruct its modal meaning.

Our working example

(98)   *It's 7 pm. Anne asks John, 'Where is Mary?' John knows that Mary goes to the gym every evening at the gym. He doesn't know where Mary is right now, but his* best guess *right now is:*

Va/o   fi   fiind   la sală.
will.3SG be.AUX being at gym
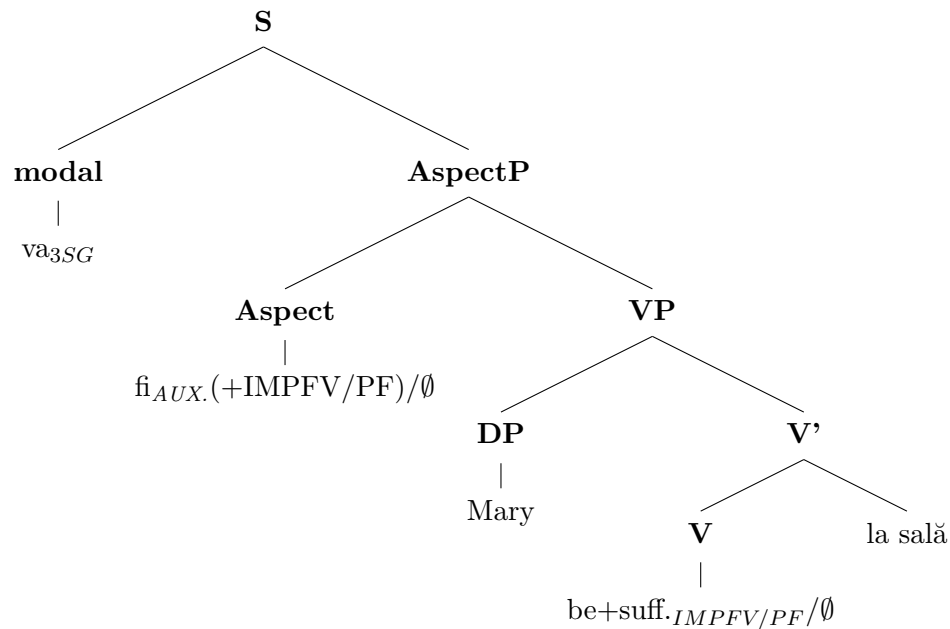
'She is probably at the gym.'

Syntactic assumptions, and a few elements of semantics

A syntactic representation of the Romanian epistemic FUT modal will have to include:

- the verb phrase

- the aspect

- the tense

- the FUT modal

Aspect and the VP

As mentioned already, the FUT morphology is compatible with 3 aspects, simple, progressive, and perfect. Whereas the perfect aspect is relatively straightforward, it is not yet clear if there is any distinction at all between the simple and the progressive aspects. Leaving this aside, another tricky issue about aspect is that in the case of the progressive and the perfect aspect the syntax includes an extra auxiliary - *fi* - 'be' - above the verb, and a perfect or imperfective suffix on the verb. What seems to be happening is that the aspect inflection lowers onto the verb, although this statement requires a caveat: Romanian is a language that has 'verb clusters', and the morphosyntax of verb clusters is far from being a trivial issue.[3] For the purpose of our discussion we will assume nonetheless a structure such as the one below. Since the simple (i.e. perfective) aspect does not require either the auxiliary 'be' or the suffix on the verb, we will indicate that by $\emptyset$ in the relevant places. The place of the modal is yet unclear; we will worry about it later. For now, this is our structure:

Time/tense, and a note on the modal

What is the tense of the FUT morphology? If it had had no inferential meanings, we would have said simply, the future. Most of our inferential examples above, however, take place in a present time frame of reference. Are we dealing perhaps with a morphology that is by default 'future' but, when 'embedded' into a present time context, acquires inferential meanings? The example below shows that inferential meanings are possible regardless of whether the time frame of reference is the present or the future:

(99) *'Where will Mary be tomorrow when John arrives from Paris?'*

> Va   fi   fiind la sală.
> will.3SG be.AUX being at gym

> 'She will probably at the gym.'

In fact, if we take into account instances of perfect-FUT-morphology inferences such as:

(100) *'Where was Mary when John had the accident?'*

> Va   fi   fost la sală.
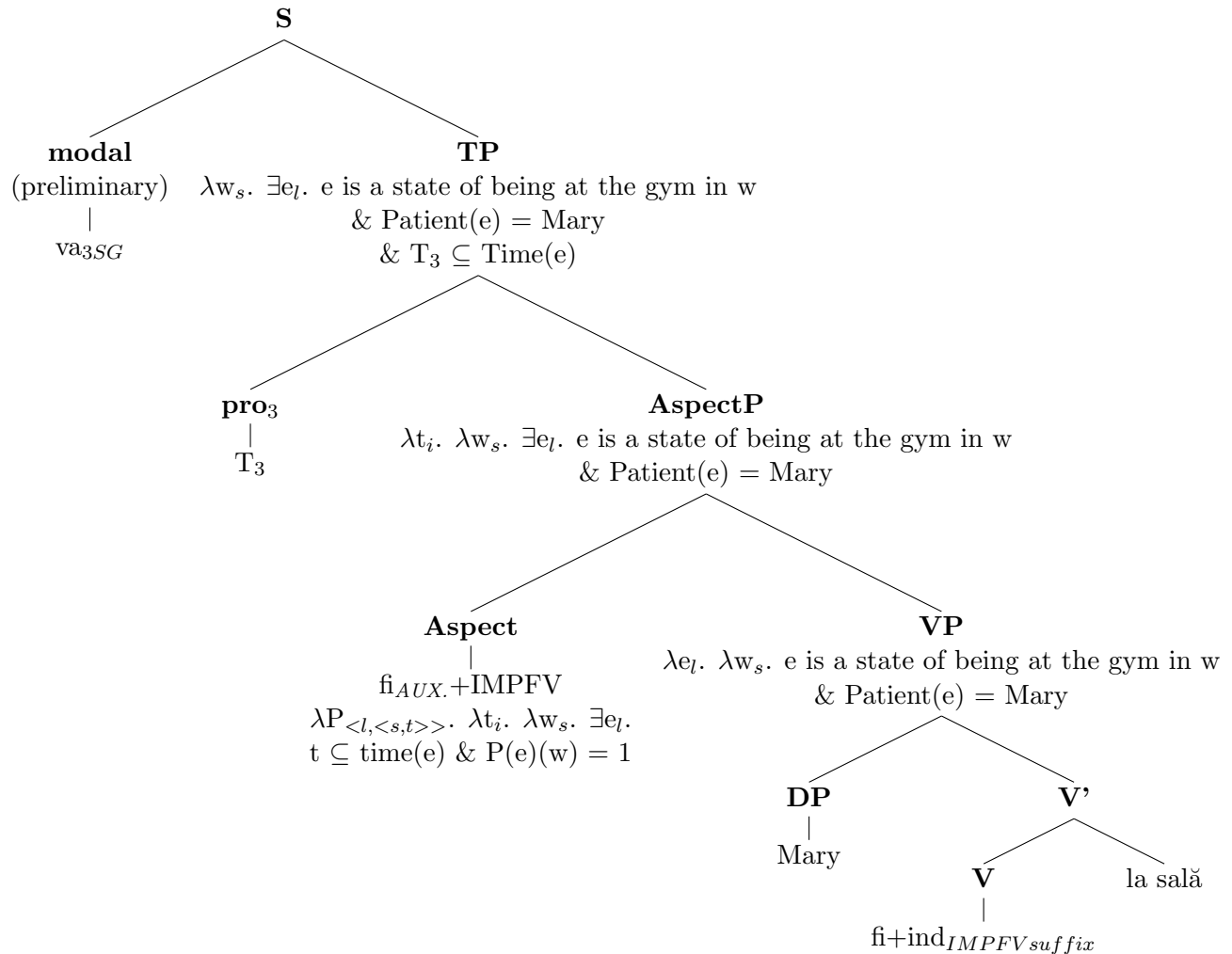> will.3SG be.AUX been at gym

> 'She was probably at the gym.'

then epistemic FUT inferences seem to be possible in all three time frames of reference, past, present and future:

$$\text{PAST/PRES/FUT + FUT modal} = \checkmark$$

Otherwise put, FUT inferences are possible in any time frame of reference whatsoever. Moreover, whether the time frame of reference is past, present or future seems to be entirely a matter of context/adverbs, and - at least insofar as inference-making is concerned - has nothing to do with the FUT morphology itself.

The exact relation between tense and modals remains a question for future research. For now - given our data and the purpose of this analysis - we will take the tense of the FUT morphology to be some kind of a silent operator with values assigned from the context.

As for the modal: we are not sure what its place in the structure should be. For one thing, we know that it checks ϕ-features. On the other hand, traditional accounts seem to indicate that epistemic modals cannot scope under Tense (see e.g. Hacquard 2011, 40). We choose therefore to represent it directly under S, as shown in the tree below:

S
├── **modal**
│   (preliminary)
│   │
│   va$_{3SG}$
└── **TP**
    $\lambda w_s.\ \exists e_l.$ e is a state of being at the gym in w
    & Patient(e) = Mary
    & T$_3 \subseteq$ Time(e)

modal (preliminary) | **TP** $\lambda w_s.\ \exists e_l.$ e is a state of being at the gym in w & Patient(e) = Mary & T$_3 \subseteq$ Time(e)

va$_{3SG}$

pro$_3$
|
T$_3$

AspectP
$\lambda t_i.\ \lambda w_s.\ \exists e_l.$ e is a state of being at the gym in w
& Patient(e) = Mary

Aspect
|
fi$_{AUX.}$+IMPFV
$\lambda P_{<l,<s,t>>}.\ \lambda t_i.\ \lambda w_s.\ \exists e_l.$
t $\subseteq$ time(e) & P(e)(w) = 1

VP
$\lambda e_l.\ \lambda w_s.$ e is a state of being at the gym in w
& Patient(e) = Mary

DP
|
Mary

V'

V
|
fi+ind$_{IMPFV\,suffix}$

la sală

Semantic *Legend*

The tree above gives us not only the syntax of the FUT morphology but also some elements of its semantic composition. These elements are listed and briefly defined below:

- Semantic types: e (entities), t (truth values), l (events), s (possible worlds), i (times)

- Neo-Davidsonian event semantics: λe_l.

  - The argument structure of the verb contains a hidden 'event' argument (cf. Davidson 1967.)

  - Every part of the VP is construed as a predicate of the event. Event participants are added via thematic roles.

- Possible worlds: λw_s.

- The valuation of a sentence is not absolute (either true or false), as in standard propositional logic, but relative to a possible world: a sentence is true or false in a world w, depending on the facts in w. It may be true in one world, and false in another.

- Aspect: $\lambda P_{<l,<s,t>>}.$ $\lambda t_i.$ $\lambda w_s.$ $\exists e_l.$ $t \subseteq \text{time}(e)$ & $P(e)(w) = 1$, a mapping from events to possible worlds via times (cf. Kratzer 1998, 17.pdf):

  - Imperfective ('reference time included in event time'): $\lambda P_{<l,<s,t>>}.$ $\lambda t_i.$ $\lambda w_s.$ $\exists e_l$ $(t \subseteq \text{time}(e)$ & $P(e)(w) =1)$

  - Perfective ('event time included in reference time'): $\lambda P_{<l,<s,t>>}.$ $\lambda t_i.$ $\lambda w_s.$ $\exists e_l$ $(\text{time}(e) \subseteq t$ & $P(e)(w) =1)$

  - Perfect ('event over by reference time'): $\lambda P_{<l,<s,t>>}.$ $\lambda t_i.$ $\lambda w_s.$ $\exists e_l$ $(\text{time}(e) < t$ & $P(e)(w) =1$
    The tree above shows only the imperfective scenario.

- The time pronoun, pro_3: $[\![\text{pro}_3]\!]^{w,g} = g(3) = T_3$. We showed above that a Romanian epistemic-FUT construction is practically tenseless by itself, its time frame of reference being assigned by the context. To indicate this, we represent time by a pronoun with an index to which a variable assignment function will assign a value, based on context (cf. the referential theory of tense Kratzer 1998). We will see more about this in the section on variable assignment.

Possible worlds semantics

More on possible worlds

When we introduced the notion of possible worlds in the *Legend* above we mentioned that it allows us to conceive of a proposition as not having an absolute truth value by itself but rather a truth value that is relative to a possible world: a sentence is true or false in a world w depending on what the facts in w are. (See, for example, an introduction to this in Portner 2009, etc.) For example, the statement 'Horses fly' is false in the actual world as we know it. However, in fairy tales 'Horses fly' is often a true statement. The notion of possible worlds thus allows us to capture the dynamic character of reality - as we know it, or as it could be.

Now, if establishing the truth value of a simple, non-modalized proposition such as 'Horses fly' requires us to first consider the question 'In what world?', things are no different when it comes to establishing the truth value of a modalized proposition such as 'Horses may fly'.

The subtle difference lies in the fact that "the truth of modalized formulae is ... relative to a possible world, but in such a way that their valuation depends on the truth of p itself in *other* [emphasis mine] possible worlds," modals having a "displacing effect" (cf. Hacquard 2011).

We will give two examples to illustrate this.

(1) The deontic modal 'must' in: 'John has parked illegally. He must pay a fine.' (A famous example in the literature on modality.) The truth of the modalized proposition 'John must pay a fine' depends on the truth of 'John pays a fine' in another set of possible worlds, that is, since we are speaking of a deontic modal, in the set of worlds where the law that 'Whoever parks illegally must pay a fine' is valid. In the set of worlds where this law applies absolutely, i.e., is valid, or true, it will also be true that John will pay a fine. The truth of the modalized proposition 'John must pay a fine' thus depends on the truth of 'John pays a fine' in the set of worlds of the parking laws.

and

(2) The epistemic modal 'must' in: 'Mary always goes to the gym at 7 pm and stays there until 8 pm. It is 7.30 pm. Mary must be at the gym.' The truth value of 'Mary must be at the gym' depends on the truth value of 'She is at the gym' in another set of worlds - the set of worlds where a precedent is true, or the set of worlds where certain premises (Mary always goes to the gym at 7 pm) apply.

Our two examples above showed how the truth value of (1) deontically- and, respectively, (2) epistemically-modalized propositions depends on the truth value of the modalized proposition in (1) a set of worlds of laws and, respectively, (2) a set of worlds of premises of the proposition that they modalize. The only thing that seems to distinguish the two *must*s is thus the conversational background to which they are relative, modal expressions having "in and of themselves a rather skeletal meaning", it being only "in combination with the background context that they take on a particular shade of meaning (such as epistemic or deontic)" (von Fintel 2006, 5.pdf). As shown in Kratzer (2012b), this background context may be made explicit by phrases such as *in view of* or *given that*, which spell out what may otherwise be simply implied: (1) in view of the fact that whoever parks illegally must pay a fine, and given that John has parked illegally, then John must pay a fine; and (2) in view of the fact that Mary goes to the gym every evening at 7 pm and stays there until 8 pm, and given that now it is 7.30 pm, then Mary must be at the gym.

Conversational backgrounds

The two *in view of* phrases above indicate that there are many different types of conversational backgrounds. What *are* conversational backgrounds all about, though? Let us for the start quote the definition given in Kratzer (1981, 43) (she customizes it to suit epistemic contexts, but we will try for now to get the general picture):

> We know already that a conversational background is the kind of entity which might be referred to by the utterance of a phrase like *what is known* (we might ignore the *in view of* bit). What is known is different from one possible world to another. And what is known in a possible world is a set of propositions. In our semantics, a conversational background will therefore be construed as a function which assigns sets of propositions to possible worlds. In particular, the meaning of *what is known* will be that function from W into the power set of the power set of W, which assigns to any world w of W the set of all those propositions which are known in w. This is an example of an epistemic conversational background.

Although easy enough in theory, this definition is not that easy to grasp in practice. For transparency, we will go through it step by step.

First, we start from W, the set of all possible worlds.

$$W = \{w_1, w_2, ..., w_n, ...\}$$

And we define the power set of W using the standard definition of a power set:

Definition 2. *The power set of any set S, written P(S), is the set of all subsets of S, including the empty set and S itself.*

Thus, the power set of W is the set of all possible words - is the set of all subsets of W, including the empty set and W itself.

$$P(W) = \{\{w_k, ..., w_k\}, \{w_k, ..., w_k\}, ...\{w_k, ..., w_k\}, ...\}$$

Where k is a random index assignment with values in the set of natural numbers. Basically, what we mean is that these subsets include any possible combination of worlds.

Now, we define a proposition as:

Definition 3. *A proposition p is a set of possible worlds.*

$$p = \{w_1, w_2, ..., w_n, ...\}$$

Going back to the definition of $P(W)$, it results that $P(W)$ can be re-written as:

$$P(W) = P(W) = \{\{w_k, ..., w_k\}, \{w_k, ..., w_k\}, ...\{w_k, ..., w_k\}, ...\} = \{p_1, p_2, ..., p_n, ...\}$$

Now, if $P(W)$, then the power set of this set will be that set which includes all possible sets of propositions:

$$P(P(W)) = \{\{p_k, ..., p_k\}, ..., \{p_k, ..., p_k\}, ...\}$$

Where, again, k is a random index assignment with values in the set of natural numbers.

With these in mind, we may go back to Kratzer's definition. For convenience, we repeat it below:

Definition 4. *A conversational background is a function which assigns sets of propositions to possible worlds. In particular, the meaning of what is known will be that function from W into the power set of the power set of W, which assigns to any world w of W the set of all those propositions which are known in w.*

Re-phrased, this means the following:

$$f : W \rightarrow P(P(W))$$

$$\text{or}$$

$$f : \{w_1, w_2, ..., w_n, ...\} \rightarrow \{\{p_k, ..., p_k\}, ..., \{p_k, ..., p_k\}, ...\}$$

Where the propositions p which are assigned may or may not be true in the input worlds (see more about this below).

An example of a conversational background function looks like this:

$$f = \begin{bmatrix} w_@ & \rightarrow & p_1, p_2, p_3, p_4 \\ w_1 & \rightarrow & p_2, P_5 \\ w_2 & \rightarrow & p_1, p_4, p_7 \\ \vdots & \rightarrow & \vdots \end{bmatrix}$$

where w$_@$ is by convention the *actual* world, and w$_{1,2,...}$ are other possible worlds and where the propositions are defined as follows:

p$_1$ = We are in the year 2012. = \{w$_@$, w$_1$\}

[Read: p$_1$ is true in w$_@$ and w$_1$. Please note that although f does not assign w_1 proposition p_1, this proposition is defined below as being true in w_1 (it includes w_1); similarly, although f does assign p_1 to w_2, p_1 is not true in w_2. A possible explanation for w_1 would be simply that f does not assign to w_1 all the propositions that are in fact true in w_1: in real life we often pick only the most salient elements of a conversational background, that is, those details which bear the most upon the circumstances that matter to us at a certain

point in time. A possible scenario for w_2 would be: a very confused person in the year 2009 who thinks the year is 2012.]

p$_2$ = Spain is ruled by a king. = {w$_@$, w$_1$}

And so on for all the propositions and all the worlds.

In conclusion, our function f goes [from worlds to (propositions to truth values)]. Since propositions are themselves functions from worlds to truth values, our function actually goes [from worlds to ((worlds to truth values) to truth values)]. In semantic terms, our conversational background function f is of type $< s, << s, t >, t >>$.

Epistemic conversational backgrounds

We mentioned just now that the propositions which are assigned to the input world by the conversational background function may or may not be true. What does this mean?

If the propositions assigned to a world by f are not true in the worlds to which they are assigned, then the conversational background is said to be *unrealistic*.

If, however, they are true in that world, than the conversational background is said to be *realistic*:

Definition 5. *A realistic conversational background is a function f which assigns sets of propositions to members of W such that for any w ∈ W: w ∈ ∩f(w). Kratzer (1981, 44)*

Kratzer (1981) identifies *epistemic* conversational backgrounds as special cases of realistic conversational backgrounds:

Definition 6. *An epistemic conversational background is a function f which assigns sets of propositions to members of W such that for all w ∈ W: f(w) contains all those propositions which are established knowledge in w - for a group of people, a community, etc. Since only true propositions can be known, epistemic conversational backgrounds are special cases of realistic conversational backgrounds.*

An important observation for our analysis, though, is that Kratzer's conclusion about epistemic conversational backgrounds as 'realistic' must be stretched to allow for unrealistic aspects too. As we saw in 2.1.4.4, where we showed how a FUT epistemic in Romanian often expresses someone's *beliefs or knowledge about the law, somebody else's wishes, etc.*, the exact meaning of an epistemic utterance depends on the perspective of the speaker, since the conversational background available to the modal depends on who is making the utterance.

A good illustration of this concept is the way gossip works. Imagine, for example, of a scenario where the population of a village witnesses an arrest; supposing it's a small village

where everybody knows everybody, every person in that crowd will probably have their own blend of knowledge, beliefs or assumptions about the reasons why that person was being arrested; their individual inferences will reflect all these elements. And - what matters for us - these inferences will tend to be expressed by means of the Romanian epistemic FUT.

Another important adjustment of the definition of an epistemic conversational background will have to accommodate the citational uses of the Romanian epistemic FUT. When an inference is quoted, the relevant conversational background will be that of the person(s) being quoted.

Tailored for the Romanian epistemic FUT, an epistemic conversational background will - at least for some cases[4] - have to be redefined as follows:

Definition 7. *In the case of the Romanian epistemic FUT, an epistemic conversational background is a function f which assigns sets of propositions to members of W such that for all $w \in W$: $f(w)$ contains all those propositions which are believed by the speaker in w or by the persons that the speaker is quoting in w (be they about the normal course of things, about the law, about someone's wishes or purposes, etc.). Since a person may 'know' or take as 'knowledge' both true and false facts, epistemic conversational backgrounds are typically only partly realistic.*

As for the truth conditions for a Romanian epistemic FUT with the conversational background defined as aboves, they must be weighed relative to the premises of the statement: suppose that John knows from Mary herself that she goes to the gym every evening; suppose, however, that Mary actually lied to him; his premise that 'Mary' goes to the gym every evening is therefore false and as such cannot guarantee the truth of the conclusion that would have normally followed from it. Suppose now that Anne knows that Mary uses the 'gym' as a cover for when she's out on a date. Even so, following John's epistemic-FUT inference, it would not be adequate for her to reply 'You're wrong'. Suppose she asks him, 'How do you know?' He can answer: 'Mary is probably at the gym because she goes to the gym around this time every evening, and now is just the time when she would be there.' It is clear from such a statement that John's guess is actually supported, and the best guess given his background information. The most Anne can take issue with is his premise. Which still does not justify on her part a reply such as: 'You are wrong.' The Romanian epistemic FUT is in this sense highly solipsistic. Moreover, this feature seems unexpendable: our analysis cannot afford to ignore it by, for example, assuming some kind of a 'shared' conversational background among the interlocutors. A way to deal with such possible contradictions would

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[4]As we will see shortly, at least insofar as the ordering source is concerned

be to assume that conversational backgrounds may change over the course of a dialogue, in a pattern of turn-taking and/or information update.

Doubly relative modality

Modal meaning does not rely only on what one knows about the past, about laws, about wishes, but also on what the current state of the world is - basically, another conversational background.

A question that we must settle from the start is again: Does speaker perspective matter? That is, for our example, is there any reason to suspect that the facts that are relevant to Anne about the world at the moment of the dialogue are different from John's? The answer is, yes and no. In the more common scenario, the answer is no: in the context of a dialogue, there is usually some shared knowledge or, if there is not, it usually gets shared during the dialogue, e.g. Anne: Where is Mary? I can't find her anywhere. She has vanished! John: Nah, I just saw her in the street. (John's information about the actual world just now is richer than Anne's.) John continues: She's probably going to the gym.

A plausible and grammatically telling version of the dialogue would be:

Anne: Where is Mary? I've been looking for her everywhere. She's just vanished!

(The state of the world according to Anne: Mary has vanished. = Mary is in none of the places where I've looked for her.)

John: Vanished? Nah!

(John is taking issue with Anne's belief about the state of the world.)

John: I just saw her 2 minutes ago.

(John is updating Anne's belief about the state of the world.)

John: She's probably on her way to the gym.

(John betrays his assumption that Mary is in the habit of going to the gym.)

Anne: She goes to the gym?!

(Anne takes note of John's assumption, with surprise.)

Anne: Hahaha!

(Although she has taken note of it, Anne refuses to share John's assumption.)

Anne: Who told you that?

(Anne requests information about the source of John's premise.) Anne: She hasn't been to the gym in ages!

(Anne contradicts John's assumption.)

John: How do you know?

(John requests information about the basis of Anne's alternative premise.)

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Anne: Well, she's dating my brother. They go out every evening. The gym must be just her cover story.

(Anne establishes her source - Mary is dating her brother, so she, Anne, is in a position to know this. Then she provides 'insider' information: Anne's brother and Mary go out every evening (so Mary can't possibly be going to the gym). Moreover, now that she knows that John used to know that Mary was going to the gym, Anne infers further that Mary must have been using the 'gym' as a cover story for her dates.)

Speaker perspective, therefore, does matter, since the conversational backgrounds available to a modal depend on who is making the modalized claim.

Coming back to our introductory statement that modal meaning depends not only on a certain body of pre-existing knowledge but also on the current state of the world, how is this idea supported in the scenario we described above? What are John's and, respectively, Anne's conversational backgrounds at the beginning(!) of this dialogue? That is, what kind of prior information/beliefs does each of them have, for example, about Anne, and what exact facts do they assign to the current state of the world at the beginning of this conversation?

For ease of reference we will introduce the technical names for these conversational backgrounds: *modal base* for the conversational background containing information about the current state of the world, and *ordering source* for the conversational background that establishes a preference regarding the various facts that fit into the modal base. Also, henceforth we will use p to designate the propositions belonging to the modal base, and q to denote the propositions belonging to the ordering source. (On a related note, we will use f for the modal source conversational background, and h, for the ordering source conversational background.) We will also use subscript indices to number the propositions, and superscript indices - to indicate whether a proposition belongs to John's conversational backgrounds or to Anne's.

- John's modal base

  - p_1^j: It is evening.
  - p_2^j: Anne doesn't know where Mary is.
  - p_3^j: I saw Mary walking somewhere just a few minutes ago.
  - p_4^j: Mary is somewhere in the neighborhood.

- Anne's modal base

  - p_1^a: It is evening.

– p_2^a: Mary is in none of the usual places / the places where I've been looking for her.

- John's ordering source

    – q_1^j: Mary goes to the gym every evening.

- Anne's ordering source

    – q_1^a: Mary goes out with my brother every evening.

    – q_2^a: Mary hasn't been to the gym in a long time now.

Modal meaning is therefore constructed in the following way: faced with a fact that we must interpret, we use other knowledge / beliefs / expectations we have to interpret the new fact. John believes that Mary goes to the gym every evening. Now it is evening. He is faced with a situation of the type 'Mary's location is unknown, where is Mary?' And his belief (part of his ordering source) compels him to infer that she is probably at the gym.

More technically (cf. von Fintel & Heim 2009),

1. The MODAL BASE is a function f that assigns to any input world a set of propositions P describing the relevant circumstances. E.g.

$$f = \begin{bmatrix} w_1 & \to & p_1, p_2, p_3, p_4 \\ w_2 & \to & p_2, P_5 \\ w_3 & \to & p_1, p_4, p_7 \\ \vdots & \to & \vdots \end{bmatrix}$$

(Where p_i may or may not be true in the input worlds. See 2.2.3.2 above.)

  The set of worlds accessible from the evaluation world will contain only the worlds where all the propositions in the input world are true, that is, the worlds which are at the intersection of all the propositions assigned to a particular world. E.g. $\cap f(w_1)$, if the input world is w_1.

2. The ORDERING SOURCE is a function h (g in original; we are using h to avoid confusion with the variable assignment function g that we wil introduce shortly) that assigns to any evaluation world a set of propositions Q which are known to be true (since we are dealing with epistemic modals) in the evaluation world.

3. The idea is now that such a set of propositions Q can be used to ORDER THE WORLDS IN THE MODAL BASE. For any pair of worlds w_1 and w_2, we say that w_1 comes closer than w_2 to the ideal set up by P iff the set of propositions from P that are true in w_2 is a proper subset of the set of propositions from P that are true in w_1.

4. For our simple example then, from John's point of view, any world in the modal base where Mary is at the gym will count as better than other worlds where she is not at the gym. Modals then make quantificational claims about the best worlds in the modal base (those worlds for which there isn't a world that is better than them). In our case, 'Mary must be at the gym' claims that in the best worlds (among those worlds where Mary's routine is true), Mary is indeed at the gym.

More technically:

Definition 8. *Given a set of worlds $X \subset W$ and a set of propositions Q [in the original, P - we use Q to avoid confusion with the set of propositions assigned by the modal base], the* STRICT PARTIAL ORDER $<_Q$ *is defined as follows:*

$$\forall\ w_1,\ w_2 \in X:\ w_1 <_Q w_2\ iff\ \{q \in Q:\ q(w_2) = 1\} \subset \{q \in Q:\ q(w_1) = 1\}.$$

Definition 9. *For a given strict partial order $<_Q$ on worlds, define the selection function max_Q that selects the best of $<_Q$-best worlds from any set X of worlds:*

$$\forall\ X \subseteq W:\ max_Q(X) = \{w \in X:\ \neg\exists w' \in X:\ w' <_Q w\}.$$

Definition 10. $[\![must]\!]^{w,g} = \lambda f_{<s,<<s,t>,t>>}.\ \lambda h_{<s,<<s,t>,t>>}.\lambda r_{<s,t>}.\ \forall\ w' \in max_{h(w)}(\cap f(w))$: $r(w') = 1$. *(where f is the modal base and h is the ordering source)*

At this point, a note on methodology is in order. Following von Fintel & Heim (2009, 57) - whose version of Kratzerian doubly relative modality we have pursued thus far - we note that this approach only works if we agree to make the assumption that the "$<_P$ relation has minimal elements, that there always are accessible worlds that come closest to the P-ideal, worlds that are better than any world they can be compared with via $<_P$." This assumption - called in the literature the 'Limit Assumption' - has been rejected by some authors such as Lewis (1973, 20) or Kratzer (1981) based on the fact that one can imagine scenarios where it is not true. On the other hand, other authors (e.g. Stalnaker 1980, 89) defend it, observing that in practice the Limit Assumption is perfectly reasonable.

The Limit Assumption seems reasonable for our discussion of inferentiality too, especially since inference naturally involves an assessment of alternative possibilities. Without further ado, we will therefore adopt, for our treatment of the Romanian epistemic FUT, von Fintel & Heim's version of Kratzer's theory of doubly relative modality, as applied to the English 'must'.

The variable assignment function

Before we move on to a more in-depth discussion of the semantics of the Romanian epistemic FUT, there is one more little thing that we need to discuss: the variable assignment function g.

First of all, what is a variable? Cf. Heim & Kratzer (1998), a variable is a lexical item whose denotation varies with the assignment. More precisely:

Definition 11. *A terminal symbol α is a variable iff there are assignments g and g' such that $[\![\alpha_i]\!]^g \neq [\![\alpha_i]\!]^{g'}$.*

In our case, our variables are the 2 conversational backgrounds and a time interval (remember: we adopted a referential theory of time). In the last tree above we listed time as a pronoun (T_3). Let us now assign pronouns for the 2 conversational backgrounds as well:

$$\lambda f_{<s,<st,t>>}.\ \lambda h_{<s,<st,t>>}.$$
$$\lambda q_{<s,t>}.\ \forall\ w' \in \max_{h(w)}(\cap f(w)):$$
$$q(w') = 1$$

In the tree above, pro_5 and pro_7 are syntactic positions for the conversational backgrounds, whereas A_5 and B_7 are their corresponding, pronoun-like variables.

These variables can be interpreted by means of a variable assignment function defined on $\mathbb{N}$ (the set of natural numbers), with values in D_e (the set of entitities). We will call this function g, and we will apply it using the Traces and Pronouns Rule (we use j instead of i for the index to distinguish it from the semantic type i - for times):

Definition 12. *If α is a pronoun or trace and g is a variable assignment and j is in the domain of g, then $[\![\alpha_j]\!]^{w,g} = g(j)$.*

Based on our context, g will thus assign values as follows:
$[\![A_5]\!]^{w,g} = g(5) = ...$ (the modal base, as shown in the matrix for f above)

$[\![B_7]\!]^{w,g} = g(7) = ...$ (the ordering source, as shown in the matrix for h above)

Since we have two different types of variables - on the one hand, time intervals, and, on the other hand, conversational backgrounds, we could make this rule even more specific by specifying the type of index. Following Heim & Kratzer (1998), we can thus assume that an index is not just a number, but a pair of a number and a semantic type. Accordingly, the variable assignment function could then be redefined as follows:

Definition 13. *A variable assignment is a partial function g from the set of pairs $< j, \tau >$ where j is an index and τ is a semantic type, to the set of all denotations, such that, for every $<j, \tau >$ in the domain of g, $g(< j, \tau >) \in D_\tau$.*

The formulation of the Pronouns and Traces rule could also then be modified as shown below:

Definition 14. *If α is a trace or pronoun, and j and τ are a number and a type respectively, then, for any assignment g, $[\![\alpha_{< i, \tau >}]\!]^{w,g} = g(< i, \tau >)$.*

We can thus rewrite our variables T_3, A_5 and B_7, specifying this time their respective variable types:

$[\![T_{<3,i>}]\!]^{w,g} = g(< 3, i >) = ...$ (the particular time interval drawn from context)
$[\![A_{<5,<s,<<s,t>t>>>}]\!]^{w,g} = g(< 5, < s, << s, t > t >>>) = ...$ (the modal base, as shown in the matrix for f above)
$[\![B_{<7,<s,<<s,t>t>>>}]\!]^{w,g} = g(< 7, < s, << s, t > t >>>) = ...$ (the ordering source, as shown in the matrix for h above)

We notice how this fits into the definition of 'must' given in the previous section. The modal takes as argument a conversational background of type $< s, << s, t > t >>$. The sister to the modal - in our case, A_5 - has a denotation of the same type, thus being able to saturate the $< s, << s, t > t >>$ argument position of the modal.

$***$

We saw in this section how in our little working example there are 3 variables of 2 different types. The variable assignment function is able to assign them values from the context based on their index number, by means of the Traces and Pronouns Rule. To mark the difference between the different kinds of variables, e.g. between times and conversational backgrounds,

we may optionally specify their semantic type along with their index. For most practical purposes, however, the indices will suffice.

The challenge for the next section will be to assemble all these elements in a way that will adequately accommodate all the Romanian data.

The Romanian epistemic FUT

Many of the things we will say in this section have been anticipated already in the sections where we were still trying to assess the evidential nature of the Romanian epistemic FUT, or where we were still looking into the possible worlds approach to epistemic modality. Below we will try to piece everything together in a way directly relevant to the Romanian epistemic FUT.

The modal base

According to Kratzer (2010, cf. Matthewson 2010), "so-called 'epistemic' modals are just modals whose modal base is defined based on evidence (not knowledge)." It seems therefore that the best place to start our quest for what constitutes a valid modal base for the Romanian epistemic FUT is our earlier discussion of its evidential uses. Our examples in that discussion reveal that valid circumstances include:

- direct evidence where the evidence is potentially inconclusive:

  - I see my neighbor wobbling but maybe he is not drunk

  - I hear the sound of someone crying but maybe it's not the baby

  - I feel the forehead of my sister burning with fever but maybe it is my hands that are burning because I've been handling hot peppers the whole day

- indirect evidence

  - from results: The cake is gone.

  - from reasoning: Maggie's roommate is dressing up.

To these we must add the citational uses of the Romanian epistemic FUT, whereby circumstances such as the ones listed just now are relative to the modal base of the person(s) quoted by the person reporting the inference.

Now, insofar as our working example is concerned, there are two ways we could go about the modal base:

1. We could acknowledge all the possible differences of perspective on what the fact of the matter is and represent a distinct modal base - probably with some elements in common - for each of the participants in the dialogue (e.g. we claimed that the fact that Anne can't find Mary in any of the usual places makes the statement 'Anne's location is unknown' a lot more alarming than it would be to John, who hasn't been looking for Anne 'everywhere' and who, on the contrary, has just seen her in the street); or

2. We could assume that the differences are insignificant, or add them to the ordering sources, and proceed instead from the idea that the modal base consists only of the shared observations of Anne and John about the real world - in our case, the fact that the question 'Where is Mary?' is an open question, or otherwise put, the fact that Mary's precise location is not known. This latter course of action would be supported by the fact that Romanian FUT epistemics are also evidentials, and thus they rely on some body of evidence which is presumably available to the interlocutor as well - in case the epistemic FUT utterance is addressed to an interlocutor. If a certain body of knowledge is not shared, then the epistemic FUT utterance is in fact often frozen in the form of thought, or stated only to oneself, fact which might explain the apparent frequency of the Romanian epistemic FUT in soliloquies, 'thoughts to oneself', or highly subjective inferences - although even here the need for some kind of personally valid evidence still stands. Otherwise, when a certain body of knowledge is shared, then the epistemic FUT utterance often has the status of a 'stating of the common guess'. The evidential side of the Romanian epistemic FUT actually seems to have a tremendous importance for how the modal base is defined: if no need for evidence were required, then our modal bases would run wild with individual distortions of what the fact of the matter truly is.

We incline in favor of option (2). In order to adopt it successfully, we will relegate John's 'extra evidence' that Mary has not 'vanished' to the ordering source, and strip the modal base to its most basic essentials: in our working example, the fact that (p_1) Mary's location is not known at the moment when the inference about her location is made in $w_@$, and also, that (p_2) it is evening in $w_@$. We assign these propositions to the actual world.

For the rest, our actual world may be assigned any propositions whatsoever, provided they are true statements about the world - otherwise we would not be able to go through with the next step of our derivation, which involves finding the common denominator (set of worlds in common) of all the propositions assigned to the actual world (if we assigned false propositions to our world, then the actual world would not turn up in the common denominator of the intersection of all the propositions assigned to the actual world).

However, if we want to define our modal base conversational background narrowly as *the* conversational background that triggers the inference in our working example, then we would have to restrict it to only those propositions which are true in the actual world and are also directly relevant to a complete description of the situation. Since in our case this would make our example too barren, we will tolerate other propositions regarding, for example, a description of how John was when he met Anne, or the reason for which Anne wanted to find Mary. The only caveat is that we should not inadvertently include propositions which in fact more properly belong in the ordering source (propositions which shed light on the state of the matter that prompted the inference).

Let us now cast our observations into a Kratzerian type of definition:

Definition 15. *The modal base for the Romanian epistemic FUT is a conversational background described by a function f which assigns sets of propositions to members of W such that for all $w \in W$: $f(w)$ contains all those propositions which constitute (1) direct, but insufficient, or (2) indirect evidence about a certain event in w. Since evidence is supposed to be factive, the modal base will typically be realistic (unless we are dealing with a case of individual or mass delusion).*

Moreover, we may add, the modal base will also typically be shared (at least in its basic elements), otherwise the speaker will either feel compelled to share it before advancing the inference, or will altogether keep the inference to him/herself.

More technically,

$$\llbracket A_5 \rrbracket^{w,g} = g(5) = \begin{bmatrix} w_@ & \to & \{p_1, p_2, p_3, p_4, p_7\} \\ w_1 & \to & \{p_1, p_3, p_9\} \\ w_2 & \to & \{p_2, p_4\} \\ w_3 & \to & \{p_7, p_{15}\} \\ w_4 & \to & \{p_{79}\} \\ \vdots & & \vdots \end{bmatrix}$$

Where, in compliance with the approach thought out above (tolerant to include propositions which are not relevant evidence *per se* but which are not part of the ordering source either), we define the propositions as follows:

$p_1 = \{w:$ Mary's location is not known in $w\} = \{w_@, w_1, w_2, w_3, w_{15}\}$
$p_2 = \{w:$ It is evening in $w\} = \{w_@, w_1, w_2, w_3, w_4, w_{15}\}$
$p_3 = \{w:$ Anne doesn't know where Mary is in $w\} = \{w_@, w_2, w_4\}$
$p_4 = \{w:$ John doesn't know where Mary is in $w\} = \{w_@, w_2, w_{23}\}$

$p_5 = \{w: \text{Anne is wearing a purple dress in } w\} = \{w_@, w_2, w_9\}$

$p_6 = \{w: \text{John looks tired in } w\} = \{w_@, w_1, w_3, w_{15}\}$

$p_7 = \{w: \text{Anne has some important news for Mary in } w\} = \{w_@, w_2, w_3\}$

We will not bother to define the rest of the propositions since we are directly interested only in the contents of the propositions assigned to the actual world.

At this point, according to the theory, the set of worlds accessible from the evaluation world will contain only the worlds where all the propositions in the input world are true, in our case:

$$\cap g(5)(w_@) = p_1 \cap p_2 \cap p_3 \cap p_4 \cap p_5 \cap p_6 \cap p_7 = \{w_@, w_2\}$$

The ordering source

Given our discussion above,

Definition 16. *The ordering source for the Romanian epistemic FUT is a conversational background described by a function h which assigns sets of propositions to members of W such that for all $w \in W$: h(w) contains all those propositions which constitute information that is potentially relevant to the interpretation of the direct but insufficient or indirect evidence provided by the modal base.*

In light of our discussion, we may add that, contrary to the modal base, which is typically objective (resistant to subjective distortions), the ordering source is allowed to be highly subjective - and thus potentially unrealistic - varying from one person to the other. One word of caution, though: if the ordering source is subjective to the point where it is entirely devoid of reason, inferential statements will be obscure to a hearer which is not aware of this ordering source. Suppose that in my ordering source there is a proposition saying that 'Every time it rains an alien lands on Earth'; in keeping with my ordering source, every time it rains I am entitled to say 'Aliens are probably landing on Earth again!' To anyone who is not aware of my crazy idea, this inferential claim will be odd and incomprehensible. Which is why, although inferential claims with strange and uncommon ordering sources are possible - and may be encountered in soliloquy uses of the Romanian epistemic FUT - in actual practice people will tend to either resort to the most intuitive ordering sources or - if their ordering source insists to be odd - to explain what persuades them to make a specific inferential claim.

Coming back to the more mundane John and Anne, what possible ordering sources could they have? For economy, let us consider for the moment only John's ordering source -

that is, the ordering source which led to the 'She is probably at the gym' inference in the initial version of our working example. As above, we will tolerate in the set of propositions assigned to the actual world, along the propositions directly relevant to the interpretation of the modal base, any other propositions that John may assign to the actual world and which do not more properly belong to the modal base.

More technically, the ordering source for John is, then, as follows :

$$[\![B_7]\!]^{w,g} = g(7) = \begin{bmatrix} w_@ & \to & \{q_1, q_2, q_3, q_4, q_5\} \\ w_1 & \to & \{q_1, q_3, q_9\} \\ w_2 & \to & \{q_2, q_4\} \\ w_3 & \to & \{q_7, q_9, q_{18}\} \\ w_4 & \to & \{q_{58}\} \\ \vdots & & \vdots \end{bmatrix}$$

Now, we isolate from the propositions assigned by g(7) only those which are assigned to the real world, since only those will help us interpret what we know from the modal base:

$$g(7)(w_@) = \{q_1, q_2, q_3, q_4, q_5\}$$

Where, in our case, these propositions are defined as follows:

$q_1 = \{w$: Mary was last seen just a few minutes ago in $w\} = \{w_@, w_1, w_2, w_3, w_{15}\}$

$q_2 = \{w$: Mary goes to the gym every evening in $w\} = \{w_1, w_2, w_4\}$

$q_3 = \{w$: The gym is in the neighborhood where Mary was seen just a few minutes ago in $w\} = \{w_@, w_2, w_4\}$

$q_4 = \{w$: Mary doesn't have a boyfriend in $w\} = \{w_2, w_{23}\}$

$q_5 = \{w$: Mary is pretty in $w\} = \{w_@, w_1\}$

etc. (Again, we will not bother to define the propositions assigned to the other worlds.)

We notice that the way we defined our propositions in terms of sets of worlds reflects the facts revealed in the extended dialogue between Anne and John that we imagined above: John assigns to the real world propositions such as q_2 and q_4; however, these propositions are not actually true in the actual world.

Ordering

The mechanism for ordering is fairly simple. We basically have to use the propositions in the ordering source as a yardstick for the worlds accessible from the evaluation world which we identified earlier:

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$$\max{}_{g(7)(w_@)}(\cap g(5)(w_@)) = \max{}_{\{q_1,q_2,q_3,q_4,q_5\}}(\{w_@, w_2\}) =$$

Now, according to how we defined the propositions just lines above, $w_@$ can be found only in $q_{1,2,5}$, whereas w_2 is in $q_{1,2,3,4}$. Therefore, w_2 is better than $w_@$, and

$$\max{}_{\{q_1,q_2,q_3,q_4,q_5\}}(\{w_@, w_2\}) = \{w_2\}$$

All that remains to be done now is for us to plug this finding into our definition of 'must':

$[\![va\ (in\ view\ of\ what\ John\ believes)\ Mary\ fi\ la\ sal\breve{a}]\!] =$
$= [\![va]\!]^{w_@,g} ([\![A_5]\!]^{w_@,g}) ([\![B_7]\!]^{w_@,g}) (\lambda w.\ \text{Mary be at the gym in w}) =$
$= 1$ iff $\forall\ w' \in \max{}_{g(7)(w_@)}(\cap g(5)(w_@))$: Mary is at the gym in w' $=$
$= 1$ iff $\forall\ w' \in \max{}_{\{q_1,q_2,q_3,q_4,q_5\}}(\{w_@, w_2\})$: Mary is at the gym in w' $=$
$= 1$ iff $\forall\ w' \in \{w_2\}$: Mary is at the gym in w' $=$
$= 1$ iff Mary is at the gym in w_2

Otherwise put, John's inference is true iff Mary is at the gym in the world that complies best with his set of beliefs / knowledge / expectations about Mary.

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This section completes our analysis of the Romanian epistemic FUT as a necessity epistemic modal in the vein of 'must'. Before adopting this approach, however, we pointed out that the Romanian epistemic FUT and 'must' are not exactly the same. In the next section we will add a few closing remarks with regard to this.

Upper-end degree epistemic modality

In the previous sections we have been assuming that 'must' and the Romanian epistemic FUT modal are sufficiently similar for us to apply to the latter the standard approach to the former. We would now like to get back to one point (that we have already anticipated but set on the side until now) where the two stand in contrasts (or, perhaps, where the definition of 'must' as an always strong epistemic must be reconsidered): the quantificational force.

As we were noting already in our comparison of 'must' and the Romanian epistemic modal, the latter does not quite have the same quantificational force as 'must': whereas 'must p' seems to emphasize that chances are very low or non-existent that p is not true, 'Ro.FUT.epist p' simply says that p is the best guess given certain insufficient-direct/indirect evidence, and given what else we know that may bear on the issue. This is probably due - we said - to the fact that the English 'must' stands in a dual pair relationship with 'may'

and is thus more polarized than the soloist FUT epistemic is in Romanian. On the other hand, we said, the Romanian epistemic FUT seems to be compatible not only with epistemic *necessity* but also with epistemic *possibility*.

With regard to observations like this, Portner (2009) noted that one of the drawbacks of the Kratzerian approach to epistemic modals is the fact that it relies on dual modals, whereas there are languages in the world - and we have seen that Romanian is one of them - where epistemic modals do not come in a pair - or, at least, the pair is differently polarized. In her revised version of her 1981 paper, Kratzer (2012a) responds to this and comments that:

> Rather than being just a possibility modal or a collapsed possibility/necessity modal, a modal without dual could also be a degree expression covering the upper end of a scale of degrees of probabilities or preferences. [...] We would then expect there to be a certain amount of vagueness with respect to the lower bound of the range of probabilities allowed. For epistemic degree modals admissible probabilities might range from, say, around 50% to 100%, for example.[p. 46] [...] If, depending on context, a modal shows a chameleon-like behavior in allowing both possibility and necessity interpretations, but with a preference for necessity interpretations, a degree modal might be your best bet. [49]

And indeed, our best bet for the Romanian epistemic FUT does seem to be an upper-end degree modal.

How does on treat such modals, though? Our analysis showed that it is possible for us to accommodate such modals within the standard theory. Discussing a series of examples from St'át'imcets - very similar to the Romanian epistemic FUT - Kratzer (2012a) debates on whether non-dual modals require any additional piece of theory to have their domains restricted appropriately. Kratzer's conclusion is that no special domain restriction mechanism is needed since the ordering source is already able to cope with what is going on.

The importance of the ordering source in this matter is reinforced by Matthewson - Kratzer's source for the St'át'imcets data mentioned before. Dealing with St'át'imcets - a language without duals - Matthewson criticizes von Fintel & Gillies (2010)' notion of a strong necessity 'must'. In her assessment of the strength of 'must', Matthewson (2010, 70-1) notes, for example, that

> the strength of 'must' follows for v[on]F[intel]&G[illies] because they place all trustworthy propositions into the kernel, and the kernel *entails* ϕ. [...] So they place propositions in the kernel which in a standard theory would be in the

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ordering source. [...] If the only way to keep 'must' strong is to do away with ordering sources, then how can we account for variable-force modals?

Matthewson's conclusion thus confirms that quantificational force of even necessity modals ultimately boils down to the ordering source.

Since Romanian comes very close to the data described in Kratzer (2012a) and in Matthewson (2010), we assume their conclusions to apply to our data as well.

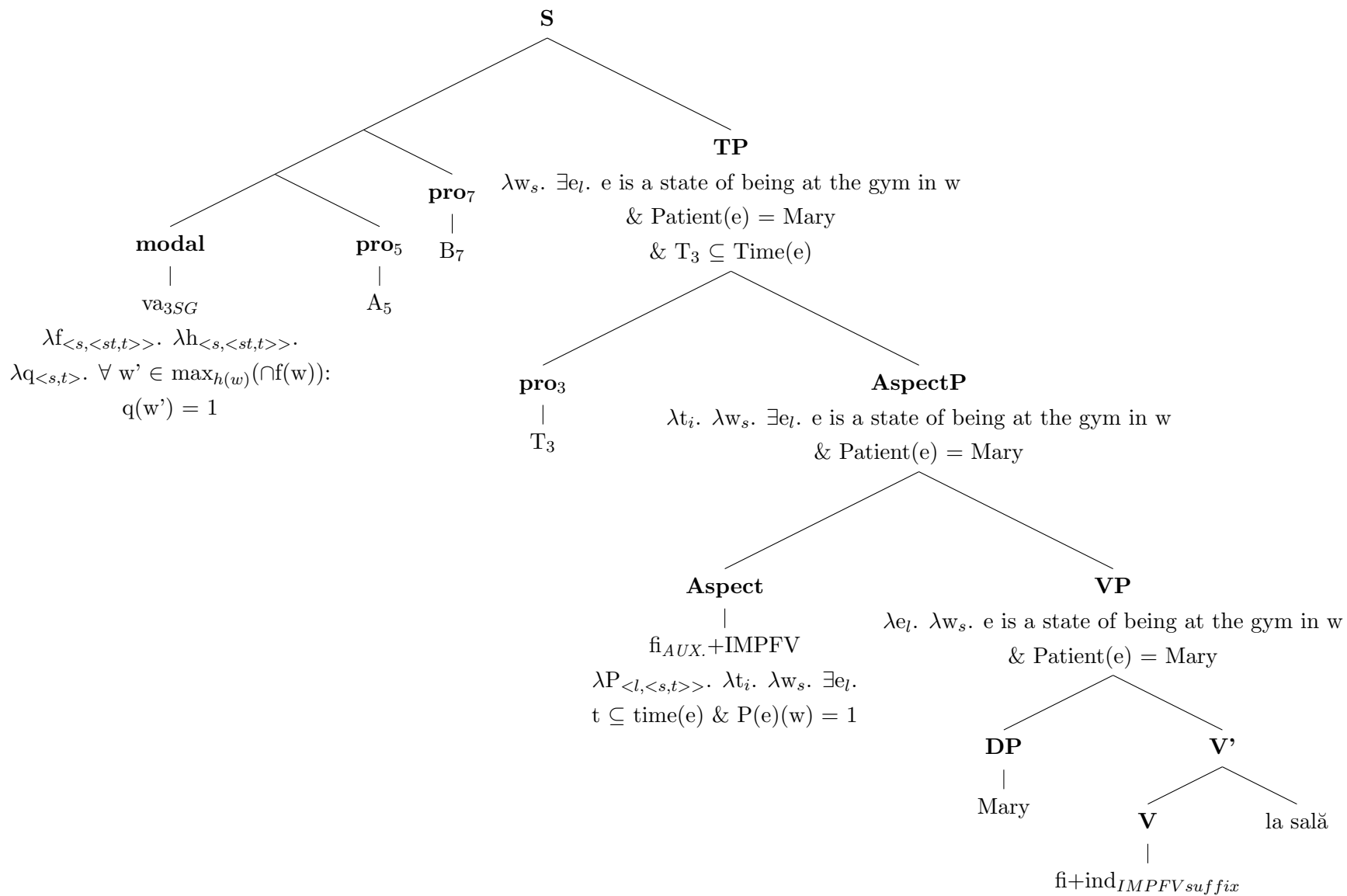As for the existential uses of the Romanian epistemic FUT, Kratzer remarks that

> quite generally, necessary propositions are always covered by an upper-end degree modal. Since the lower bounds of what are acceptable degrees of probabilities, preferences, tendencies, propensities, etc. are genuinely underdetermined, there might be questions about which possible propositions are covered too. (Kratzer 2012a, 48-9)

Which explains a fact we mentioned earlier that the quantification force of the Romanian epistemic may occasionally be existential, either by itself or owing to modification by external possibility adverbs (as shown in 2.1.2).

<p align="center">***</p>

With this ends our attempt to find out what the meaning of the Romanian epistemic FUT really is. For a sense of achievement, we display a complete map of the possible worlds scenario we have been building thus far on the next page.

Before we move on to a few other details, let us recapitulate: In this chapter we translated the Romanian epistemic FUT from evidentiality into epistemic modality, and provided a possible worlds analysis for how the modal meaning is assembled. Our conclusion was that, although similar to a necessity modal, the Romanian epistemic FUT is in fact an upper-end degree epistemic modal.

In the next chapter we will try to sketch some directions of research for a few of the things that thus far we have touched upon but then abandoned in favor of our main topic. For lack of space and time (and what not!), we acknowledge from the start that nothing that will follow claims to be more than, simply, our 'best guess', based on all the mini-conclusions - be they true in *truth*, or merely assigned by us, in our ignorance, to be true - that we have managed to come to thus far.

S

- modal
  - va$_{3SG}$
  - $\lambda f_{<s,<st,t>>}.\ \lambda h_{<s,<st,t>>}.$
  - $\lambda q_{<s,t>}.\ \forall\ w' \in \max_{h(w)}(\cap f(w)):$
  - $q(w') = 1$
- pro$_5$
  - A$_5$
- pro$_7$
  - B$_7$
- TP
  - $\lambda w_s.\ \exists e_l.$ e is a state of being at the gym in w
  - & Patient(e) = Mary
  - & T$_3$ ⊆ Time(e)
  - pro$_3$
    - T$_3$
  - AspectP
    - $\lambda t_i.\ \lambda w_s.\ \exists e_l.$ e is a state of being at the gym in w
    - & Patient(e) = Mary
    - Aspect
      - fi$_{AUX.}$+IMPFV
      - $\lambda P_{<l,<s,t>>}.\ \lambda t_i.\ \lambda w_s.\ \exists e_l.$
      - t ⊆ time(e) & P(e)(w) = 1
    - VP
      - $\lambda e_l.\ \lambda w_s.$ e is a state of being at the gym in w
      - & Patient(e) = Mary
      - DP
        - Mary
      - V'
        - V
          - fi+ind$_{IMPFV\,suffix}$
        - la sală

Chapter 3

Facts, speculations, and final conclusions

This chapter will conclude our thesis. Since previous chapters have each had a conclusion already, we will use this space to try to sketch instead an analysis for 3 other issues related to the FUT morphology which we have constantly referred to in our work thus far but never truly resolved. Without any more procrastination, these 3 issues are: (1) the relation between the epistemic and the temporal future; (2) the construction of pragmatic effects using the epistemic FUT; and (3) the role of the imperfective aspect in the FUT morphology.

We will not attempt to provide an in-depth analysis of these issues. Instead, we will use the work that we have done already thus far to venture a few hypotheses which - we hope - may serve as guidelines for future research.

The temporal FUT

As we will remember from the very first pages of this thesis, the epistemic FUT that we have been trying so hard to define shares its morphology with the temporal FUT. As such, it is only natural that we should suspect that the temporal FUT ought to be amenable to the same kind of discussion that we had in the case of the epistemic FUT. In fact, given all that we have said thus far, it seems that the temporal FUT is simply a special case of epistemic FUT. And if in Chapter 2 we spent a lot of effort trying to show in what ways the Romanian epistemic FUT is *not* a universal quantifier, intuitively we can say now that the temporal FUT *is* actually the universal quantifier that the presumptive FUT failed to be. This intuition is confirmed by the cntradiction test we applied to the necessity modal in 2.1.2: *Va merge şi nu va merge la sală mâine.* 'She will and she will not go to the gym

tomorrow' is indeed a contradiction - that is, as long as there is, for example, an intention on her part to go there, and nothing prevents her from turning her intention into fact.

Let us take it systematically. What is a possible modal base or a possible ordering source for the temporal FUT?

In the case of the presumptive FUT the modal base consisted of all the circumstances in which an inference could be triggered. As we saw in detail in Chapter 2, in fact, the modal base was restricted to the contexts where the epistemic FUT itself was plausible.

In the case of a purely temporal FUT, however, we do not have to worry about restrictions from evidentiality any more. If at all present, evidentiality - of the direct type - would consist simply in a person's commitment to a plan. See, for example:

Anne: 'Mary is going to the gym tomorrow.'
John: 'How do you know?'
Anne: 'She told me herself.'

In this dialogue, the modal base is: Mary tells me she will go to the gym tomorrow; the ordering source is null, or possibly a statement such as 'Nothing prevents Mary from putting in practice her plan'. The best world where this plan exists and where nothing prevents it from happening is that world where Mary's plan actually comes true.

Apart from this sufficiency of the modal base, in order for the temporal FUT to fare well in our framework, it also needs to have its time frame of reference fixed to the future time frame of reference, and its aspect fixed to one of the options available to the temporal future morphology in Romanian: the perfective or the perfect.

In profane terms - the Romanian temporal FUT may be defined simply as an epistemic FUT overlapping with direct evidentiality which, in combination, makes a claim with 100% probability of being true - in the future.

Pragmatic effects in the Romanian epistemic FUT

In Chapter 2 we tried to show how the meaning of an epistemic FUT inference is constructed. Now, our small section on the pragmatic effects of the epistemic FUT in Chapter 1 also informed us that there are contexts where FUT-epistemic inferences may be manipulated pragmatically to express not so much inference as, rather, irony, sarcasm, disbelief, or indifference. What is the semantic composition of such utterances? For ease of reference we give a fresh example below:

(101) *After the first encounter where he was asked about Mary's whereabouts, and informed that she could not possibly have been at the gym but rather on a date, John and Anne meet again. It is again evening, and, again, Anne asks John, 'Where is Mary?' John wants to answer that Mary is on a date. However, he also wants to make a funny allusion to Mary's using the gym as the cover story. So he says with a wink:*

Va/o   fi   fiind la sală.
will.3SG be.AUX being at gym

'She is probably at the gym.'

Clearly, in view of the analysis we provided in Chapter 2, John's inference in this context would have to be false, because according to his updated ordering source Mary cannot possibly be at the gym now. On the other hand, by means of this false inference - the falsehood of which is obvious to Mary - John signals humor. This kind of pragmatically marked inference basically combines FUT-epistemic inferentiality with a flouting of Grice's pragmatic maxim of quality to generate supralinguistic effects such as humor.

But this example was fairly easy to handle. Other such pragmatically marked inferences can be a lot more complex, involving not only a 'best guess' type of inferentiality and a Gricean maxim, but also all kinds of other rules of social interaction. Consider, for example, the scenario below:

(102) *Mary made a blunder. Hearing what she did, John says to her: 'Man, YOU're dumb!' Mary replies with spite:*

{No lasă că} tu   nu vei   fi greşind   niciodată!
{ah well -}   you.NOM not will.2SG be making.mistakes never!

'As if YOU never make blunders!'

What is happening in this dialogue is no mystery to us. At the same time, we get the impression that behind these two lines there is a lot going on. Let us try for a moment to imagine what is going on behind the curtains:

- Mary made a blunder.

- The fact that Mary made that blunder shows that she was unwise in that particular respect.

- John incorrectly turns this partial, circumstantial conclusion into a general statement: Mary is dumb.

- John communicates his conclusion to Mary.

- In light of what Mary knows about logic, John's conclusion is an unsupported generalization.

- In light of what Mary knows about the rules of cooperation, John's utterance is unconstructive.

- In light of what Mary knows about the etiquette conventions applicable to the degree of familiarity between her and John, John's utterance is uncharitable.

- In light of how Mary feels about injustice, unprovoked attack, or simply, uncharitable attitudes, an acceptable reaction to John's attack would be, let's say, (a) to accept John's conclusion and to tolerate all the other floutings committed by John; or (b) to accept John's conclusion but to take issue with any, some, or all of John's trespassings; or (c) to reject John's conclusion, partly or entirely and to ignore/tolerate/reject any/some/all of John's trespassings; etc.

- Mary chooses to take issue with John's right to express his conclusion to her the way he did; practically she is choosing to take issue with the fact that he has flouted the popular saying, 'Take the log out of your eye, and only then come to take the speck out of other people's eyes'.

- So she says to him something to the effect, 'I presume you never make any blunders yourself?

- Obviously meaning: But of course, you do make blunders yourself. Look at your own blunders before you judge mine.

What is the modal base and ordering source for a pragmatically marked epistemic FUT in a context like this? The modal base would have to include the fact that Mary made a stupid mistake and John is making a comment which flouts all kinds of unwritten laws. In Mary's ordering source, such a comment is ruled as unjust, uncharitable, rude and deserving of a retort; also in her ordering source, a blunder deserves criticism, regardless of manners, and also, a valid response to an attack perceived as unjust and uncharitable is to attack the offender on his own premises. In the best worlds selected by Mary's ordering source, Mary's best solution is that she should point out to John that he is not without error himself . Mary's pragmatic choice of how to convey this message is to blatantly express the opposite of the 'best guess' validated by her conversational backgrounds. The pragmatic result is that of irony.

Although intimidating at first glance, such pragmatically marked inferences do not pose any real challenge to the approach to the FUT-epistemic modality mechanism that we outlined in Chapter 2.

The role of imperfectivity in Romanian

Disclaimer: To our knowledge, Romanian has at least 2 kinds of imperfectivity. One of them is encoded in the morphology of what is called the Romanian 'imperfect' tense of the Indicative Mood. The other one is the present participle kind of imperfectivity that we have seen at work in the Romanian FUT, SUBJ, COND. In what follows we will only be concerned with the latter.

In our discussion of what contributes to the make-up of the presumptive meanings in Chapter 1 we discarded a discussion of the imperfective aspect pretty early on, based on our perception that, at least insofar as 'presumptiveness' is concerned, this aspect is a false issue. Our reason in doing so was the fact that presumptive meanings could be realized by the other two aspects without any problem, so it was clear that, whatever role the imperfective might have, it cannot be essential to the construction of presumptive meanings. Moreover, in many cases the imperfective morphology seemed to be freely interchangeable with the perfective morphology, fact which confirmed our initial idea that imperfectiveness is not fully grammaticalized in Romanian. When sometimes we hesitated to list the perfective variant as an alternative to the imperfective variant, we assumed our hesitation was due to reasons of phonological pragmaticism, the tendency of a native speaker of Romanian being to replace the more ambiguous perfective morphology with the clearly epistemic morphology in those contexts where the inferential nature of a given statement was not very obviouss. In other cases, however (those of inferentiality in the present of direct but insuficient evidence) we expressed a budding suspicion that our hesitation could also be due to the imperfective aspect being preferred in contexts where there is some hint or another of simultaneity. To refresh our memory, we copy one such example below:

(103)   I'm in a house with a new-born baby. I hear the sound of someone crying.

> ??{Va/o   plânge} / va/o   fi plângând bebeluşul.
> ??{will.3SG cry}   / will.3SG be crying   baby.the
>
> 'It's probably the baby who's crying.'

The more we think about this example, the more it seems that simultaneity is not the issue here in fact. The problem seems to lie simply with the way and the degree in which

the Presumptive Mood is grammaticalized in Romanian. As hinted by some authors (e.g. Zafiu 2002, 2009), the Presumptive Mood is not that frequently used in current Romanian that people would be fluent in interpreting or producing it promptly and equally for all its forms and for all the verbs of the Romanian language. A verb of great frequency such as the verb 'to be' might fare better where the less frequently handled verb 'to cry' is met with hesitation or resistance. To test this assumption we will slightly tweak our scenario to accommodate the verb 'to be':

(104)   Anne and I are visiting Mary. We hear the sound of someone crying. Now, I know that Mary has a baby, but Anne doesn't. Anne asks me: Who could it be? I answer:

✓{Va/o   fi} / va/o   fi fiind bebeluşul.
✓{will.3SG be} / will.3SG be being baby.the

'It's probably the baby.'

Our data combined with the supported claim that the forms of the Presumptive Mood are unequally grammaticalized for various verbs of the Romanian language - depending on the frequency of these verbs and, possibly, also on their compatibility with inferential scenarios - persuades us to rule out the possibility that imperfective aspect may have any contribution *per se* in the construction of presumptive meanings, with the one exception that it helps distinguish the verb forms phonologically from their non-epistemic counterparts. This is our best judgment insofar as the FUT morphology is concerned.

What we still have to account for is the presence of imperfective morphology in - if not the presumptive-epistemic - at least the evidential COND, SUBJ or even - as we will show below - the INFinitive mood. Some examples in this sense are shown below. For contrast, we will also include the perfective variants of the utterances, and mention between brackets where lies the contribution of the imperfective:

(105)   COND - reportative (ongoing activity)

Cică   Dl. X ar   fi / ar   fi fiind de vină.
they.say.that Mr. X would be / would be being of fault

'They say that it's Mr. X's fault.'

(106)   COND - 'seem' inferential (ongoing activity)

Se   pare că   ar   încerca / ar   fi încercând să
IMPER seems that would.3SG try   / would.3SG be trying   SĂ
convingă   publicul că...
convince.3SG+SUBJ public.the that...

'It seems that s/he is trying to convince the public that...'

(107)   COND - 'seem' inferential (internal structure of the event)

Uite! Parcă   ar   vrea / ar   fi vrând   să zboare!
Look! seemingly would want / would be wanting SĂ fly.3SG+SUBJ!

'Look! It looks as if s/he/it wanted to fly!'

(108)   SUBJ - 'seem' inferential (ongoing activity/internal structure of the event)

Pare să plutească   / să fi plutind la vale.
seems SĂ float.3SG+SUBJ / SĂ be floating at downstream

'It seems to be floating away.'

(109)   SUBJ - 'seem' inferential (ongoing activity)

[E] posibil/probabil să vină   / să fi venind amândoi.
is   possible/probable SĂ come.3SG+SUBJ / SĂ be coming both

'It's possible/probable that they are both coming.'

If we are familiar with the evidential uses of the COND and the SUBJ morphologies exemplified above, the examples below will bring into the picture what appear to be evidential uses of the INF morphology too. As we will shortly see, these imperfective uses of the INF morphology seem to be introduced by verbs such as 'to consider', 'to seem', 'to prove to be', 'to claim to be' - in other words, verbs with an evidential quality about them. These INF uses of the imperfective morphology are therefore, just like the COND and the SUBJ uses, evidential - if not by themselves, at least in combination with evidential verbs. In the INF

(110)   INF (ongoing activity)

Alţii îl   consideră   a fi / a fi fiind Zalmoxis.
others him.Cl.ACC consider.3PL A be / A be being Zalmoxis

'Others consider him to be Zalmoxis [an ancient Getae divinity].'

(111)   INF (ongoing activity)

Acest avocat pare a fi / a fi fiind cel mai bun din România.
this lawzer seems A be / A be being the more good from Romania

'This lawyer seems to be the best in Romania.'

(112)   INF (ongoing activity)

Se   dovedeşte a fi / a fi fiind cel mai puternic.
himself proves   A be / A be being the more strong

'He proves to be the strongest.'

(113)   INF (ongoing activity)

Se   pretinde a fi / a fi fiind un ziar   de încredere.
itself pretends A be / A be being a   newspaper of trust

'It claims (with little or no reason) to be a reliable newspaper.'

To sum up, gerund imperfectivity in Romanian

- seems to associate well with evidential settings. In the case of the FUT morphology, evidentiality was encoded in the FUT morphology itself. In the case of the COND, SUBJ, and INF, evidentiality is encoded in the verbs/adverbs/sentential markers of doubt (e.g. for the SUBJ - questions, estimative words, etc.) that associate with these respective morphologies.

- does not seem to contribute to the construction of presumptive meanings

- to a limited extent functions as, for example, an English progressive, marking a contrast with perfective morphology in the sense of suggesting that an action is an ongoing activity or has an internal structure, etc. This could be a possible reason why it correlates well with evidentiality, since after all evidentiality too requires evidence to be brought forth into simultaneity, for evaluation.

- unlike the English progressive aspect, the Romanian gerund imperfective is perfectly compatible with state verbs, adding to them a sense of ongoing activity or internal structure.

Rare though it may be in Romanian, gerund imperfectivity actually follows into the footsteps of its foreign counterparts. It is not clear yet how it relates to other manifestations of imperfectivity in the language (e.g. the Indicative Imperfect): we defer this to future research.

***

Facts and speculations complete, we are now on to our final conclusions!

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Final conclusions

We have come a long way since the first page of this thesis! Some of the major conclusions that have emerged over the course of our research include:

- The Romanian Presumptive Mood is the grammaticalized expression of inference.

- The Romanian Presumptive Mood is available in three *aspect* morphologies: perfective, imperfective, perfect.

- The Romanian Presumptive Mood is available in one *mood* morphology: the Indicative FUT morphology. Although all of the FUT, the COND and the SUBJ morphologies may be encountered in inferential contexts, it is only the FUT morphology that constitutes a proper grammaticalization of inference. Of the two sets of FUT auxiliaries - literary and colloquial - the literary set may be used both for epistemic expressions and for the temporal future, whereas the colloquial set is used only inferentially.

- The Romanian evidential-inferential FUT is compatible with (a) direct but insufficient evidence, and (b) indirect evidence. The strength of the evidence does not correlate in a straightforward manner with the strength of the inference: the latter rather depends on the strength of the correlation of a particular piece of evidence with a particular set of conclusions.

- The quantificational force of the Romanian epistemic FUT may range from weak to strong, granted the inference it expresses is someone's 'best guess' in a particular circumstance. Although a 'best guess' may naturally correlate with a high degree of commitment, this is not necessarily the case.

- The Romanian epistemic FUT fits into the standard theory of epistemic modality *à la* Kratzer (1981, 2012a,b) (our discussion adopted the von Fintel & Heim 2009 version of the theory, which included the Limit Assumption).

- A typical modal base for the Romanian epistemic FUT is inspired from the inferential-evidential uses of the FUT morphology: it relies on circumstances which constitute insufficient/indirect evidence that something is the case. Given this evidential restriction, typical modal bases are realistic.

- A typical ordering source for the Romanian epistemic FUT includes someone's knowledge/beliefs/expectations with regard to events, persons, etc. As such, ordering sources

are allowed to be subjective and even unrealistic - especially in monologues. In dialogues, non-realistic far-fetched ordering sources may lead to communication failure, whereas transparent ordering sources, or ordering sources that get spelled out during the course of the dialogue, lead to the successful communication of an inference.

- Given the possible - and even expected - subjectivity of the ordering source in even the commonest uses of the Romanian epistemic FUT, an inference must be judged on its premises.

- While it has been discussed in constant reference to the English necessity epistemic 'must', the Romanian epistemic FUT is different from 'must' since it belongs to the class of the non-dual, upper-end degree epistemic modals.

- Based on all of the above, some speculations would be that: (1) the temporal future is nothing more than a special case of epistemic FUT; (2) pragmatic effects in epistemic FUT utterances depend on the degree of plausibility of the inference: a blatantly wrong inference probably conveys irony, whereas a consenting inference in the presence of an ordering source which suggests dissent probably conveys indifference, etc., and (3) imperfectivity is not essential to the construction of presumptive meanings - its presence in the FUT, COND, SUBJ and INF morphologies is rather due to the evidential nature of these morphologies.

We hope the points outlined above - and argued for over the course of this thesis - will contribute to making the infamous Presumptive Mood a little less of a *terra incognita*. Slowly and painstakingly, we have blazed a trail. We hope the data, discussions, and conclusions we reached in this work will fare well in the service of future research.

With these in mind, we end our thread here.

<div align="center">The End</div>

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