

# Indirect Evidentials: More Arguments for the Sentience Domain Projection

Monica Alexandrina Irimia

## 1. Introduction – the Sentience Domain Projection\*

Speas and Tenny (2003) have argued for the existence of a special syntactic layer above the CP node (see also Hill 2014), labelled the *Sentience Domain*. This syntactic domain encompasses (at least) two projections, the *Speech Act Projection* and the *Sentience Projection* (1), illuminating some non-trivial aspects in the syntactic encoding of the pragmatic force and sentience.

- (1) a. *Speech Act Projection* [<sub>SAP</sub> Speaker SA [<sub>SA\*</sub> (utterance content) [<sub>SA\*</sub> SA (hearer)]]]  
b. *Sentience Projection* [<sub>SEALP</sub> Seat of Knowledge EVAL [<sub>EVIDP\*</sub> Evidence [<sub>EVIDP\*</sub> Evid S]]]

This paper provides further arguments for the syntactic projection of the Sentience Domain. More specifically, it shows that it can derive in a straightforward manner some otherwise puzzling properties of indirect evidentiality (IEV) in Romanian (Romance languages) where this class establishes *morphological syncretism* with other T(ense) A(spect) M(ood) categories (Squartini 2001, etc.). This paper proposes that this syncretism can be disambiguated syntactically, building on three main assumptions: **i)** Speas' (2010) implementation of IEVs. as categories of the indicative; **ii)** analyses that use real Tense heads merged above modal heads (Ippolito 2002, 2013, Arregui 2007, etc.); **iii)** canonical decompositions (formalized in Izvorski 1997, following crucial insights in Comrie 1976) of IEV as a category which encompasses two types of features: *distancing* (speaker has not witnessed an eventuality directly) and *inclusion* to the deictic center (speaker gets to know about the eventuality via its results or indirect evidence). We show that what sets the IEV apart is the presence of deictic features at a syntactic layer [Eval] above the modal projection(s). In the language(s) under investigation these deictic features are computed as temporal specifications which are set to (strict) PRESENT (speaker's deictic center), blocking forward-shifting and temporal 'mismatches', and deriving the 'indicative' behavior of IEVs. The structure of the paper is as follows. Section 2 introduces the data and the syncretism puzzle. Section 3, which is the main part of the text, discusses a battery of diagnostics which set the IEV reading apart from other modal construals; some difficulties with previous accounts are also signalled, and the ambiguity is shown to actually be three-fold (modal/general epistemic/evidential). Some preliminary remarks about how Speas and Tenny's (2003) *Sentience Domain* can derive syntactically the special behavior of IEVs are provided. Section 4 contains the conclusion.

## 2. The data

Cross-linguistically common (Chafe and Nichols 1986, Izvorski 1997, Palmer 1986, Comrie 1976, Tomić 2003, Chung 2012, Aikhenvald 2004, etc.), the IEV – TAM syncretism is particularly salient in

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\* Monica Alexandrina Irimia, University of Modena and Reggio Emilia, alexandrina-monica.irimia@york.ac.uk. I would like to thank Pino Longobardi, Virginia Hill, Peter Sells, Nina Radkevich, Dimitris Michelioudakis, Diane Massam, Becky Woods, George Tsoulas, as well as the audiences at WCCFL 34, and LSRL 45 for their very useful comments, discussion and feedback at various stages of this work. Parts of this work have been funded by the ERC Advanced Grant # 295733, as well as the Department of Languages and Linguistics at the University of York. All errors are mine.

Romance, where counterfactual (CF.)<sup>1</sup> conditional (COND.) and future (FUT.) morphology have been shown to also permit IEV readings (Coşeriu 1977, Squartini 2001, Ippolito 2002, 2013, Giorgi and Pianesi 2004, Delfitto 2004, Hill 2011, Irimia 2010, etc.). The syncretism is illustrated in (2) with perfect COND. forms in Romanian, where (at least) two readings are possible: a counterfactual one, and an interpretation which has been described as (*indirect*) evidential<sup>2</sup>:

- (2) Candidatul                    *ar*                    *fi*                    *câştigat*                    deja                    alegerile.  
 Candidate.the.M.SG   COND.3.SG   be   win.PST.PRT   already   election.the.PL  
*Counterfactual*: ‘S/he would have already won the elections.... (if...)’  
*Hearsay (evidential)*: ‘There is hearsay that s/he already won the elections’

In its counterfactual reading, the eventuality is presented as hypothetical and uncertain, and hence not having already taken place. In the hearsay reading, on the other hand, the eventuality is presented as completed according to the information the speaker has about it. Hence under the latter interpretation, the only uncertainty is related to the precise source of information the speaker is basing his claim on. Although the two interpretations are intuitively distinct, the nature of this syncretism proves very difficult to pin down. One important reason is that in Romance the syncretism generally covers the full paradigm of the TAM classes in question.

However, as opposed to most Romance, the Romanian IEVs are more transparent in that the language exhibits a special morpho-syntactic paradigm in the modal domain, traditionally known as the ‘*presumptive mood*’ (see the detailed descriptions in Slave 1957, Coşeriu 1976, Avram and Hill 1997, etc.). As illustrated in Table 1, this paradigm has a mixed status – in the past its forms are fully homophonous with other modal constructs, and thus give rise to evidential/other modal ambiguities. In the present, on the other hand, the morphology is idiosyncratic and only seems to allow evidential readings (while the ‘present’ forms of the other modal readings are constructed from the infinitive). As the evidential readings have certain matching grammatical restrictions, this allows us to further probe and isolate the indirect evidential construct in the past, in spite of syncretism.

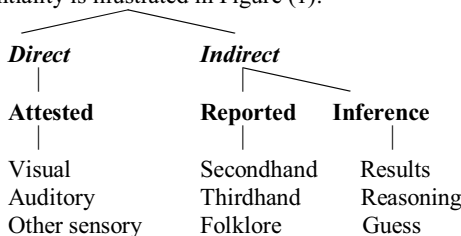
MOD AUX + <i>fi</i> +	{ <i>citind</i> (read+GER) <u>PRESENT IEV only</u> <i>citit</i> (read+PST.PRT) <u>PAST IEV/MOD</u>	} Presumptive
MOD AUX + <i>ciți</i> (read + INF)		
		<u>PRESENT MOD</u>

TABLE 1. ROMANIAN MODAL SYSTEM

The syncretism with the past participles (as in 2) is not unproblematic; many accounts assume that IEVs do not form an independent paradigm, and that the presumptive readings are ‘sub-types’ of the other morphologically homophonous constructs. One contribution this paper makes to this debate is to present novel tests which are shown to disambiguate the evidential pattern. This is done in Section 3.

<sup>1</sup> Abbreviations: AUX = auxiliary, CF = counterfactual, COND = conditional, EPIST = epistemic, FUT = future, GER = gerund, IEV = indirect evidential, IMPF = imperfect, IMPFV = imperfective, INFER = inferential, INDIC = indicative, INSTR = instrumental, M = masculine, MOD = modal, PL = plural, PRES = present, PROGR = progressive, PRT = participle, PST = past, SG = singular, SUBJ = subjunctive, 1 = first person, 3 = third person.

<sup>2</sup> The category encoding speaker’s information source or type of evidence for the claims made. Willett’s (1988) taxonomy of evidentiality is illustrated in Figure (1):



### 3. Setting evidentials apart

Three classes of tests are examined below, which support two conclusions: i) the syncretism illustrated by the modal<sup>3</sup> constructs in Romanian is three-fold; for example, the CF for the past (as seen in 2) collapses three types of readings: a) counterfactual; b) evidential; c) general epistemic. ii) there are diagnostics which isolate each of them. For example, we will see below that the general epistemic interpretation is, as expected, more similar to the evidential reading than to the counterfactual one; there are however diagnostics that only the evidential reading passes (such as embeddability under *if* with obligatory indicative morphology in the consequent). The tests are listed below (see also Irimia 2010):

- interactions with future adverbials - counterfactuals vs. evidentials (*subsection 3.1*)
- interactions with future adverbials - epistemics vs. evidentials (*subsection 3.2*)
- embedding under ‘if’ (*subsection 3.3*)
- embedding under negation (*subsection 3.4*)

#### 3.1. Interactions with future adverbials – counterfactuals vs. epistemics

One of the facts discussed in the literature on counterfactuals is their special interaction with temporal adverbials. More precisely, perfect/past participle counterfactuals allow *future-oriented* adverbials (Mondadori 1978, Palmer 1986, Iatridou 2000, Stowell 2004, Condoravdi 2002, Ippolito 2002, 2013, etc.). At a first look, this is very puzzling as these types of structures contain morphology which, in many languages, is usually associated with (real) past<sup>4</sup> tense readings. As expected, the future-oriented adverbial *mâine* (‘tomorrow’) in (3) is perfectly acceptable with a perfect participle conditional in Romanian, but only under the *counterfactual meaning*:

- (3) Dacă *ar fi venit* **mâine**, nu *am mai fi plecat*  
 If COND.3 be come.PST.PRT tomorrow not COND.1.PL yet be leave.PST.PRT  
 ieri.  
 yesterday  
 CF<sup>OK</sup>, ‘If he/they had come tomorrow, we wouldn’t have left yesterday’.  
 IEV. # ‘If he/they had come tomorrow (as people say), we wouldn’t have left yesterday’.

If the hearsay interpretation is needed instead, adverbials for the future become impossible and the whole structure is ill-formed, as also shown in (4), where the overt hearsay particle (*cică* ‘they say’) forces the IEV context:

- (4) *Cică ar fi câştigat* deja *alegerile* \**mâine*.  
 they say COND.3.SG be win.PST.PRT already election.the.PL tomorrow  
*Intended* = ‘S/he already won the elections (there is hearsay).’

Traditional and more recent formal discussions about the structure of counterfactuals show that the semantic contribution of this morphology is that of introducing a future possibility seen from a situation

<sup>3</sup> Table 2 contains the modal auxiliary forms. Note that the syncretism with subjunctives is not discussed here due to lack of space.

COND.		INFER. (FUT1)		FUT. (FUT2)		SUBJ.
inflected for person and number						uninflected
<i>Singular</i>	<i>Plural</i>	<i>Singular</i>	<i>Plural</i>	<i>Singular</i>	<i>Plural</i>	să
aş	am	oi	om	voi	vom	
ai	aţi	oi	oţi	vei	veţi	
ar	ar	o	or	va	vor	

TABLE 2. MORPHOLOGY OF THE ROMANIAN MODAL AUXILIARIES

<sup>4</sup> Past tense morphology is not overt in Romanian counterfactuals, presumably due to the fact that the language lacks sequence-of-tense.

located in a (temporal) context which is not congruent with it. What does this mean at the level of internal structure? Both Condoravdi (2001), as well as Ippolito (2002, 2006, 2013) analyze counterfactuals as constructed from a modal component (**WOLL**), as well as a level of PAST merged *above* it. The informal simplified structure for counterfactual sentences like (5) is as in (6):

- (5) If he came tomorrow we would not leave today.  
 (6) **PAST (WOLL (he come tomorrow))(not leave today))**

The higher PAST is what derives the counterfactual reading when interpreted in the modal domain (Iatridou 2000, Comrie 1976, Palmer 1986, etc.). Hence the counterfactual arises in a configuration where the past tense takes scope over the modal (**PST > MOD**). Condoravdi (2001) summarizes the semantics of the counterfactual as indicating a ‘state of affairs in the actual world that has not yet been fixed at the time of the modal evaluation’. Therefore, the counterfactual is ‘not just about epistemic uncertainty at that past time’ (Condoravdi 2001).

The IEV, on the other hand, is more like epistemics. The actual state of affairs concerning the eventuality has already been determined at the time of modal evaluation. Thus, as already mentioned on Section 2, the only uncertainty left might involve the speaker’s knowledge about the actual state of affairs that obtains. As the state of affairs has already been set at a past context, future – oriented morphology is not possible anymore, since it would lead to a temporal clash (an eventuality cannot be about both the past and the future). For Condoravdi (2001) this is true ‘for any epistemic modal whose complement has an eventuality time that is interpreted as being simultaneous with or, past-shifted with respect to, the modal evaluation time.’ Therefore, the decomposition of the past IEV should look like in (7):

- (7) **(MOD (PERF/PAST (he win the elections)))**

A similar line is followed by Ippolito (2002), where the structures in (8) and (9) are proposed for the two categories:

- (8) COUNTERFACTUAL ABOUT THE PAST (Ippolito 2006) (9) EPISTEMIC ABOUT THE PAST  
*He would have come.* *He might have left.*
- 

These structural decompositions not only capture the distinctions between counterfactuals and epistemics/evidentials in a straightforward manner, but they also make a further important claim. As in epistemics the modal layer is merged above temporal/aspectual heads, they are predicted to be *future-oriented* with eventive predicates, due to the prospective operator in the composition of the modal (Matthewson 2012, etc.). Given that in Romanian, IEVs have dedicated morphology for the present, it is easy to test this prediction. But as can be seen in Subsection 3.2, this outcome is not always borne out.

### 3.2. Interactions with future adverbials – epistemics vs. evidentials

Given that the gerund forms generally receive idiosyncratic interpretation which emphasizes the source of evidence (i.e., the gerund construct with the conditional auxiliary has not been attested with counterfactual/conditional readings diachronically or synchronically, see also Slave 1957), it is safe to follow previous accounts and take this morphology to be the grammaticalization of IEV. As a second step, we can examine how these forms behave when future oriented adverbials are added. As the COND + GER forms are not in use anymore in standard Romanian, the test can be performed instead with the FUT + GER

constructs, which are robust in the language. In (10) we see an IEV for the present built out of what was labeled as INFER (FUT1) AUX in the Table 2 in footnote 3, and which has a IEV (generally inferential, but also hearsay) reading. The example is contrasted in (11) with a string which contains the same auxiliary, this time composed with the infinitive, and which is interpreted as a future, or a general epistemic.

(10) O                      fi              dormind              \*<sup>???</sup>mâine.  
 INFER.FUT.3.SG      be              sleep.GER              tomorrow  
 ≈ ‘I infer she’s sleeping/sleeps.’

(11) O                      dormi                      mâine.  
 INFER.FUT.3.SG      sleep.INF              tomorrow  
 ‘S/he might sleep tomorrow//S/he will sleep tomorrow.’

The two constructs thus show differences when it comes to tolerance of future-oriented adverbials. If the latter are well formed with infinitives, speakers describe them as odd, or plainly ungrammatical with the gerunds<sup>5</sup>. The question is what derives this contrast. One answer that comes to mind is the *imperfective/progressive* nature of the gerund which might force backward-shifting (due to the Imperfective Paradox). It is also well known that imperfectives have this type of effects cross-linguistically (Stowell 2004, Condoravdi 2001, Matthewson 2012, Rullmann and Matthewson 2012, etc), as also seen in the examples in (12), and (13) from Stowell (2004):

(12) He might be sleeping now/tomorrow.

(13) He might sleep \*now/√ tomorrow.

We could assume that the gerund contains an imperfective operator (see also Avram and Hill 2007, etc.), following the entry in (14) proposed by Kratzer (1998):

(14) Imperfective:  $\lambda P_{\langle l, \langle s, t \rangle \rangle}. \lambda t_i. \lambda w_s. \exists e_i (t \subseteq \text{time}(e) \ \& \ P(e)(w) = 1)$  (Kratzer 1998)

However, this would predict that the FUT + GER should allow both future-oriented readings<sup>6</sup>, as well as backward shifting. Thus it is still a puzzle why the future orientation is absent, especially given that we are dealing with a morpheme which otherwise grammaticalizes the future in the language. On the other hand, this type of behavior, although very surprising, is not unexpected for IEVs. The typological and descriptive literature have discussed an important generalization, namely that evidentials cannot be about the future (see especially the contributions in Chafe and Nichols 1988, Aikhenvald 2004, etc.). The same behavior is also exhibited by evidential parentheticals, as shown in the examples below from Rooryck (2001, ex.19):

<sup>5</sup> One speaker mentioned that future adverbials were acceptable for him with the gerund. Dialectal variation, as well as diachronic evidence indicate that the gerund can be part of verbal constructs that allow future-orientation (see also Avram and Hill 2007). However, it appears that the interpretations obtained are not necessarily IEV, but they could also be broad epistemic, or progressive future.

<sup>6</sup> Some epistemics for the past do allow future adverbials, as seen with pan-Romance imperfect (past imperfective - Delfitto 2004, Giorgi and Pianesi 2004, Ippolito 2004, etc.):

(i) Nu              *venea*                      mâine?  
 Not              come.PST.IMPF.3.SG              tomorrow  
 ‘Wasn’t he coming tomorrow?’ (according to what I know/ the schedule, according to what is expected)

However, there is an important distinction between this use of the imperfect, which encodes expectations (Giorgi and Pianesi 2004), and IEVs. *Evidentials are not about expectations*; they simply present the evidence about actualized eventualities – eventualities that are being/have been experienced second-hand/third-hand.

- (15) a. Jules is back, I see/I saw/\*I have seen/ \*I will see. (inferential)  
 b. Jules is back, I'm/\*I was/\*I have been/\*I will be afraid. (surprisal)  
 c. Jules is back, they say/they said/they've said<sup>??</sup> they will say. (hearsay)  
 d. Jules is back, I head/I heard/I've heard<sup>??</sup> I will hear. (hearsay)

Concluding this subsection, the behavior under future-oriented adverbials appears to set apart not only CF from EPIST, but also IEV from EPIST. However, given that there was a speaker who accepted the GER with future oriented adverbs, it is necessarily to see whether IEV can further be isolated through other tests. Subsection 3.3 discusses another diagnostic, namely embedability under *if*.

### 3.3. Embeddability under *IF*

Another very surprising observation about the gerund forms, as well as about the past participial forms with IEV readings is that they can be embedded under *if*. However, one important condition must be respected, namely that the consequent must carry *indicative* morphology. This is illustrated in (16) with the IEV constructed from the COND AUX.

- (16) Dacă ar fi scris ieri (aşa cum se spune), atunci e bine.  
 If COND.3 be write.PST.PRT yesterday (as they say), then be.INDIC.PRES.3 good  
 'If it is true that he wrote yesterday (as they say), then it's good.'  
 ≠ 'If he had written yesterday, then it's (=would be) good.'
- (17) \*Dacă ar fi scris ieri (aşa cum se spune), atunci ar fi bine.  
 If COND.3 be write.PST.PRT yesterday (as they say), then COND.3 be good

Note also that the indicative morphology is only possible under IEV interpretation. Counterfactual conditionals always require conditional morphology in the consequent, as expected (see also example 3). Let's examine now the behavior of morphology which is rather epistemic (that is, forms with infinitive constructed from FUT AUX.). As we can see in the sentence in (18), these forms cannot be easily continued with an indicative in the consequent (if they can be embedded under *if* to begin with)<sup>7</sup>:

- (18) <sup>???</sup>Dacă o veni mâine, e bine.  
 If INFER.FUT.3.SG come.inf tomorrow, be.INDIC.PRES.3 good  
 Intended: 'If he might come tomorrow, then it's good.'

Once the GER morphology is added to the FUT AUX, and the evidential reading is made salient, embeddability under *if* becomes possible, and indicative morphology is accepted in the consequent (as expected):

- (19) Dacă o fi dormind, atunci face bine.  
 If INFER.FUT.3.SG be sleep.PRES then do.INDIC.PRES.3 well  
 'If he is sleeping (as I can infer/as you say), then he's doing the right thing.'

Thus, similarly to what we saw in Subsection 3.2, we get here another pattern where IEVs are distinct from both CF, as well as broad EPIST. Thus a construct with COND + PST.PRT is three-way ambiguous (20):

- (20) Ar fi plecat.  
 COND.3 be leave.PST.PRT  
 a) Counterfactual – (PAST (PERF (MOD (φ))))  
 b) Epistemic – (MOD (PERF (φ)))  
 c) Indirect evidential (hearsay) – ??

<sup>7</sup> The indicative in the consequent becomes possible if adverbials indicating source of evidence are present in the antecedent.

If the difference between the counterfactual and the epistemic is obtained through the merge of a layer of past (or two layers of past for *past* counterfactuals) above the modal in the former, what about the indirect evidential? The hypothesis we would like to entertain is that IEVs can also be disambiguated structurally; what sets them apart is the presence of a temporal/deictic layer above the modal; this projection contains features related to the speaker's deictic center, signaling inclusion of the evidence to the evaluation center. In other words, 'the speaker assumes evidence type for a sentence uttered' (Cinque 1999, Giorgi 2010, etc.), and the 'here and now' (deictic center) restriction on evaluation explains lack of forward-shifting, as well as the indicative behavior. Thus, the default specification is strict PRES. The Sentience Projection in Speas and Tenny (2003) provides the site for the merge of this head, outside CP.

(21) Indirect evidential (hearsay) – **PRES** [(**MOD** (**PERF** ( $\phi$ )))]

(22) *Sentience Projection* [<sub>EVALP</sub> Seat of Knowledge EVAL [<sub>EVIDP\*</sub> Evidence [<sub>EVIDP\*</sub> Evid S]]]

This implementation can further derive another difference between IEVs and epistemics/other modals, namely the behavior under negation. The relevant examples are in Subsection 3.4.

### 3.4. Behavior under negation

As already noticed in Izvorski (1997), (some) indirect evidentials are special in that the evidential component cannot be negated. Romanian is no exception. In this respect, IEVs are distinct from both epistemics, as well as counterfactuals (which do pass contradiction tests, as famously demonstrated by Anderson 1953). The contrast between IEVs and epistemics is given in (23) vs (24).

(23) INDIRECT EVIDENTIAL

Pisica	<i>n-</i>	<i>o</i>		<i>fi</i>	<i>dormind.</i>	
Cat.the	not	INFER.FUT.3.SG	be		sleep.GER	
= 'The cat is not sleeping (I infer/I guess).'						EVID >> NEG
≠ 'It is not the case that I infer that the cat is sleeping.'						*NEG >> EVID

(24) EPISTEMIC

Prietena	<i>mea</i>	<i>poate</i>	<i>n-o</i>		<i>veni</i>	<i>măine.</i>
Friend.the.F.SG	my	maybe	not-FUT.3.SG		come.INF	tomorrow.
= There is a possibility that my friend is not coming tomorrow.						EPIS >> NOT
= It is not the case that my friend might be coming tomorrow.						NOT >> EPIS

This distinction also supports the observation that evidentials tend to be higher than other modals both on the surface, as well as detected through more refined diagnostics. This is clearly seen in Cinque's (1999) cartography, where indirect evidentials appear higher than epistemics and counterfactuals:

(25) MoodP<sub>speech act</sub> > MoodP<sub>evaluative</sub> > **MoodP<sub>evidential</sub>** > **ModP<sub>epistemic</sub>** > TP<sub>Past</sub> > TP<sub>Future</sub> > MoodP<sub>irrealis</sub>  
 > TP<sub>anterior</sub> > **ModP<sub>alethic</sub>** > ... > ModP<sub>volition</sub> > AspP<sub>continuative</sub> > AspP<sub>perfect</sub> > ...AspP<sub>progressive</sub> >  
 AspP<sub>prospective</sub> > ...VoiceP > ... > AspP<sub>completive(II)</sub> > V

To summarize, we have seen several diagnostics which set indirect evidentials apart; we have also preliminarily proposed that the *Sentience Domain* can capture the differences structurally, in a straightforward manner. Table 3 summarizes the results of the discussion in Section 3, while Section 4 (the Conclusion) briefly evaluates the predictions of the Sentience Domain analysis against other formalizations for indirect evidentiality.

HOMOPHONOUS COND–EVID.	COUNTERFACTUALS	NON-ENDORSEMENT EPISTEMICS	EVIDENTIALS
Forward shifting (present forms)	YES	YES	NO
Mismatched tense - adverbs	YES	YES (imperfect)	NO
Embedding under IF	Counterfactual	NO?	Indicative
Narrow scope under negation/Contradiction	YES (contradiction)	YES	NO

TABLE 3. EVIDENTIALS VS. OTHER MODALS

#### 4. Conclusion – reconciling some (contrasting) intuitions and accounts

There are (at least) two main approaches to the structure of evidentials, namely the *modal/quantificational* and *non-quantificational* (evidentials seen as always pertaining to the indicative)<sup>8</sup> implementations. A representative example of both camps will be briefly discussed below; then it is discussed how the *Sentience Domain* can reconcile both classes in a non-stipulative manner.

Izvorski (1997) is a pioneering work in the field of IEvs, providing a structural decomposition of the category, and thus disambiguating these types of readings from other TAM interpretations. Izvorski (1997) analyzed languages in which evidential are homophonous with the present perfect, as seen in the example from Bulgarian in (26) below:

- (26) BULGARIAN **present perfect** and overt temporal adverbials for the *present*
- |                         |   |        |                                 |
|-------------------------|---|--------|---------------------------------|
| Toj                     | <i>pišel</i>  | pismo  | točno sega/točno v tozi moment. |
| he                      | written-PRES.PERF   | letter | right now/right in this moment  |
| IEv. <sup>OK</sup>      | ‘He is apparently writing a letter right now/at this very moment’ |        |                                 |
| Pres.Perf. <sup>#</sup> | ‘*He has written a letter right now/at this very moment’          |        |                                 |
- (Izvorski 1997, ex.21 a and b)

Just like in Romanian, the Bulgarian IEv reading is set apart from the Pres Perf in that it allows overt present tense adverbials. This again signals that temporal operators are manipulated in a distinct way than with present perfects. Izvorski (1997) attributes this possibility to the *modal*<sup>9</sup> character of the IEv. However, in order to explain the syncretism the connection between the Pres Perf and the IEv is derived from the semantics of the Pres Pr. This category is canonically defined as asserting that “the C(ulminating) S(tage) of *e* having culminated holds at the time of utterance (TU)” (Izvorski 1997, Comrie 1976, etc.). Therefore, two ingredients are important in the construction of the IEv, as in (27):

- (27) **the perfect: (hold (CS(*e*), *t*) & ¬ hold (*e*, *t*))**  
**the present: CS hold at TU (Time of Utterance)**

Izvorski (1997) shows that these two ingredients have the same contribution in the IEv as in the Pres Perf, with the important distinction that in IEv they quantify over the domain of worlds, as opposed to the domain of times. IEv are thus seen as sub-types of epistemic modals. Under this interpretation *hold* (*e*, *t*) translates into the fact that the interpretation of a proposition *p* is known in a set of possible worlds. If  $\cap f(w_s)$  is defined as the speaker-anchored deictic center in *W*, the set of worlds in which *p* is known are epistemically inaccessible from  $\cap f(w_s)$ . As a result, the speaker has no direct evidence for *p*. On the other side, CS is known at TU; this implies that a proposition *p*’ There are consequences/results of *p* is known in  $\cap f(w)$ ; and as  $w_s \in \cap f(w)$ , it results that the speaker has indirect evidence for *p*. PRESENT

<sup>8</sup> A third class is formed by accounts in terms of *Speech Acts* (Faller 2002). As the predictions they make do not hold for Romanian, they are not discussed here.

<sup>9</sup> IEv is generally understood as similar to a *must*-like modal which carries a presupposition that the speaker has indirect evidence for their claim.

(i)  $[[\text{EV}p]]^{fg} = \{w \in W : \forall u \in W [(u \in \cap f(w) \wedge \neg \exists v \in W (v \in \cap f(w) \wedge v <_{g(w)} u)) \rightarrow u \in p]\}$



tense morphology is CRUCIAL for deriving the semantics of IEv, as CS (e) is taken to hold at TU (Time of Utterance).

Although this account is an important contribution to the understanding of that nature of indirect evidentiality, it cannot be applied as such to the Romanian data. First of all, it's not easy to see how the mapping to the syntax is done, in order to capture both *inclusion* and *distancing*. Secondly, we have seen that in Romanian there are important differences between *broad epistemics* and *indirect evidentials* – remember that the latter are more specialized when it comes to the encoding of the strict type of source of evidence, they appear to reject future-oriented adverbials with ‘future’ morphology, and must take scope over negation. Third, another question is related to the mapping to the morphology – if the IEv is inherently modal, why is it spelled out as a Pres Perf, and not a Perf Modal (as Bulgarian contains the latter class)? Similarly, why do we see Modal morphology with ‘indicative’ behavior in Romanian?

In order to avoid some of the problems with the modal analysis presented above, as well as to account for the *indicative* morphology seen with evidentials cross-linguistically, Speas (2010) proposes a non-quantificational analysis. The general assumption in Speas (2010) is that ‘evidentials differ from modals in that they express something about the situations that lead the speaker to believe what he is asserting, but they do not specify a type of quantification. Rather they tell us a little bit more about the relevant accessible situations.’ As evidentials always pertain to the indicative (Jakobson 1956, Nikolaeva 2007, Speas 2010, etc.), *syncretisms between aspect/tense and evidentials are due to the similar function they play in the grammar: indirect evidentials encode inclusion and accessibility relations among situations*. However, one shortcoming here is that IEvs appear to have a more complex structure than the ‘indicative’ accounts predict, and more complex morphological make-up which in many languages includes ‘modal’ categories. We are presented here with the opposite side of the coin – why overt modal morphology, in spite of ‘indicative’ behavior.

The assumption that IEvs make use of the Sentience Domain can mitigate these contrastive intuitions. IEvs are complex categories which, in descriptive terms, make use of two features: *distancing* and *inclusion* (Comrie 1978). These two features can be seen as being distributed across two heads. The *Evidence Head* in the Sentience Domain hosts the *inclusion* component, which has as an output the presupposition that the speaker has indirect evidence for the proposition asserted. This can derive indicative morphology, as well as lack of future-orientation. Given its high location in the tree (above the CP), un-embeddability under negation is also predicted.

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