

HPSG and the interfaces

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ESSLLI01

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1 Complex Predicates as test case for grammatical interfaces

- Phenomena of complex predicate formation are highly relevant for a better understanding of the interaction of the different modules of the

grammar.

- At the *syntax-semantics* interface one is faced with a biclausal predicate-argument structure corresponding to a monoclausal syntactic structure.
- The two (or more) verbs which are present act in various senses as a single unit in that arguments of the complement verb act as arguments of the matrix verb.
- Complex predicates raise relevant questions also with respect to the *syntax-phonology* interface, even though this aspect has received less attention in the literature.
- Do the different verbs constitute individual prosodic words or do they merge in one unit?
- Is there a parallelism between prosodic structure and syntactic structure?

2 Basic properties of Romanian tense auxiliaries

- Romanian tense auxiliaries can be found in the present perfect, conditional and future paradigms.

(1) Different forms of the tense auxiliaries

	1 Sg	2 Sg	3 Sg	1 Pl	2 Pl	3 Pl	
Aux Psp.	am	ai	a	am	ați	au	past participle
Aux Cond.	aș	ai	ar	am	ați	ar	bare infinitive
Aux Fut.	voi	vei	va	vom	veți	vor	bare infinitive

2.1 Position of adverbs

- In Romanian, adverbs cannot separate the tense auxiliary from the verbal complement.

- (2) a. *Am adesea văzut filme bune.
 have often seen good films
 b. Am văzut adesea filme bune.
 have seen often good films
 ‘I have often seen good films.’

- This is not the case in French and in Italian.

- (3) a. Paul a évidemment lu ce text.
 Paul has clearly read this text
 ‘Paul has clearly read this text.’
 b. Ha siguramente visto il nuovo film di Almodovar.
 has for sure seen the new film by Almodovar
 ‘He has for sure seen the new film by Almodovar.’

- The only exception to this is constituted by a group of five monosyllabic intensifiers (i.e. *mai*, ‘again’, *cam* ‘little’, *prea* ‘very’, *și* ‘also’, *tot* ‘still’) which have affixal status.

- (4) Aș mai mânca.
 would again eat
 ‘I would still eat.’

2.2 Position of quantifiers

- In Romanian, quantifiers cannot intervene between the tense auxiliary and the verb, unlike in French.

- (5) a. *Elevii tăi au toți citit un poem de Verlaine.
 students yours have all read a poem by Verlaine
 b. Elevii tăi au citit toți un poem de Verlaine.
 students yours have read all a poem by Verlaine
 ‘Your students have all read a poem by Verlaine.’

- c. Marie les a tous vus.
 Marie cl.(acc) has all seen
 ‘Paul has seen them all.’

- The situation is more complex in Italian where there is variation with respect to acceptability.

- (6) a. ?? Elena li ha tutti mangiati.
 Elena CL.ACC has all eaten
 ‘Elena has eaten them all.’
- b. Elena li a mangiati tutti.
 Elena CL.ACC has eaten all
 ‘Elena has eaten them all.’

2.3 Position of subject

- In Romanian, subjects can be found in different positions.

- (7) a. Mama a făcut o prăjitură.
 mum has made a cake
 ‘Mum has made a cake.’
- b. A făcut mama o prăjitură.
 has made mum a cake
- c. A făcut o prăjitură mama.
 has made a cake mum

- The subject cannot intervene between the tense auxiliary and the lexical verb.

- (8) *A mama făcut o prăjitură.
 has mum made a cake
 ‘Mum has made a cake.’

- Subject clitics can intervene between the tense auxiliary and the lexical verb in French.

(9) L'as-tu mangé ?
 cl. (acc) have you eaten
 'Have you eaten it ?'

- In Italian, the subject can intervene between the tense auxiliary and the lexical verb, in certain cases.

(10) Avendo Martina deciso di partire, possiamo usare la sua stanza.
 having Martina decided to leave, can use the her room
 'Martina having decided to leave, we can use her room.'

- Complements cannot occur between the two verbs.

(11) *Am filme bune văzut.
 have good films seen
 'I have seen good films.'

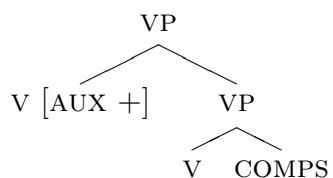
2.4 Conclusion

- The tense auxiliary and the lexical verb form a unit which cannot be separated by other elements.
- This is not the case in French and in Italian where (clitic) subjects, adverbs and quantifiers can intervene between the two verbs.

3 The syntactic structure of tense auxiliaries

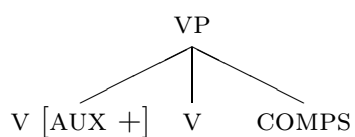
- Three possible structures can be suggested in order to account for the properties of Romanian tense auxiliaries
- The tense auxiliary takes a VP complement in a hierarchical structure.

(12) Hierarchical structure



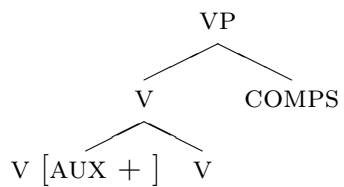
- The nonfinite verb and its complements are sisters of the tense auxiliary in a flat structure.

(13) Flat structure



- The tense auxiliary and the nonfinite verb constitute a complex verb.

(14) Compound structure



- In the linguistic literature, the hierarchical structure is the one usually adopted to represent Romance tense auxiliaries.

3.1 The syntactic structure of French auxiliary verbs

- Abeille and Godard (1994) have challenged this tradition with respect to French auxiliaries by arguing against a hierarchical structure and in favor of a flat one.
- Motivations are mainly based on standard constituency tests:
 - (i) the sequence which comprises the nonfinite verb and its complements cannot be cliticized;
 - (ii) it cannot undergo deletion;
 - (iii) it cannot undergo preposing;
 - (iv) it cannot undergo clefting;
 - (v) it is not possible to question the complement of an auxiliary verb;
 - (vi) distribution of manner adverbs;
 - (vii) behavior of auxiliaries in *tough* constructions, infinitival relative clauses and causative verbs.
- If the flat structure is assumed, it is possible to deal with the fact that certain elements such as clitic subjects, adverbs and quantifiers can occur between the auxiliary and the nonfinite verb.

3.2 The syntactic structure of Italian auxiliary verbs

- The evidence provided by Abeille and Godard (1994) against a hierarchical structure for French auxiliaries carries over to Italian auxiliaries.
- The flat structure is the most appropriate representation for Italian auxiliaries.
- It allows for a proper treatment of the fact that certain elements can occur between the auxiliary and the nonfinite verb.

3.3 The syntactic structure of Romanian tense auxiliary

- The compound structure is the most appropriate to capture the intuition that, in Romanian, the tense auxiliary and the lexical verb form a unit which cannot be separated by other elements.
- This structure requires an appropriate schema to license it such as the one suggested for the German verbal complex by Hinrichs and Nakazawa (1994).

$$(15) \quad [SS | L | C | HEAD \textit{verb}] \rightarrow H \textit{word} , C [SS | S | C | HEAD \textit{verb}]$$

- The schema allows for the tense auxiliary and the lexical verb to combine together before any non-verbal complements are added.
- This structure thus accounts for the fact that no element can intervene between the two verbs, which is the desired result.
- The underlying assumption is that this kind of compounding occurs in syntax and not in morphology.
- Special linearization constraints should be formulated, if the flat structure is adopted.
- They are necessary to account for the fact that it is not possible for subjects, adverbs, quantifiers and complements to intervene between the two verbs.
- A hierarchical structure is also not plausible in view of the fact that Romanian tense auxiliaries can be optionally placed after the verbal complement.
- Furthermore, the standard constituency tests do not support the view that the nonfinite verb and its complements form a constituent.

4 Romanian inverted auxiliaries

- Inverted auxiliaries are limited to certain registers. They are possible in some dialects, in poetry and in curse expressions.

- (16) a. Văzut-am.
 seen have
 ‘I have seen.’
- b. Mira-m-aş.
 wondered cl.(acc) would
 ‘I would wonder.’
- c. Pleca-voi.
 leave shall
 ‘I shall leave.’

4.1 The analysis

- This type of inversion can be accounted for by adopting an analysis similar to the one proposed by Pollard and Sag (1994) for English which makes use of the feature *INV*.
 - Auxiliaries which cannot occur after the verb are specified as *INV –* (i.e. the passive auxiliary).
 - Auxiliaries which optionally invert have *INV boolean* as their value (i.e. the future and the present perfect auxiliaries).
 - Linear Precedence constraints account for the relevant orders.
- (17) a. Auxiliaries which are marked [*INV –*] must precede the verb.
 b. Auxiliaries which are marked [*INV +*] must follow the verb.

4.2 Inverted conditionals

- Conditional auxiliaries are quite peculiar in that inversion is possible only if clitics are present.
- (18) a. Mira-m-aş.
 wondered cl.(acc) would
 ‘I would wonder.’

- b. *Mînca aș.
 eat would
 ‘I would eat.’

- These properties are accounted for if conditional auxiliaries are marked INV *boolean*.
- The impossibility of inverted conditionals if clitics are lacking is accounted for by an implicational constraint.

$$(19) \left[\begin{array}{l} \text{HEAD} \left[\begin{array}{l} \textit{verb} \\ \text{INV } + \end{array} \right] \\ \text{VAL} \left[\text{COMPS} \left\langle \left[\begin{array}{l} \textit{w-ss} \\ \text{HEAD} \left[\begin{array}{l} \textit{verb} \\ \text{VFORM } \textit{bse} \end{array} \right] \end{array} \right\rangle \right] \right] \end{array} \right] \rightarrow [\text{CLTS } \textit{nelist}]$$

- It states that if a conditional verb is marked INV +, its CLTS list must not be empty.
- It should be noticed that if clitics are lacking, it is possible to have inverted auxiliaries, but the long form of the infinitive must be present.

- (20) Mîncare-aș.
 eat -would
 ‘I would eat.’

- The following constraint accounts for this case. It states that if a conditional subcategorizes for a long infinitives, its CLTS list must be empty.

$$(21) \left[\begin{array}{l} \text{HEAD} \left[\begin{array}{l} \textit{verb} \\ \text{INV } + \end{array} \right] \\ \text{VAL} \left[\text{COMPS} \left\langle \left[\begin{array}{l} \textit{w-ss} \\ \text{HEAD} \left[\begin{array}{l} \textit{verb} \\ \text{VFORM } \textit{long-inf} \end{array} \right] \end{array} \right\rangle \right] \right] \end{array} \right] \rightarrow [\text{CLTS } \textit{elist}]$$

5 Mesocclisis in European Portuguese

- The inverted conjugations are still alive not only in Romanian, but also in modern European Portuguese (EP) in the future and conditional forms.
- These forms belong mainly to the literary language and they are disappearing from the spoken language being replaced by the present and the imperfect indicative, respectively.

5.1 The future and the conditional form in the absence of clitics

- In the future and conditional form, the auxiliary follows the lexical verb and it has been reanalyzed into an inflectional affix.
- The verb stem and the affixes are treated as one phonological word by the relevant phonological rules (Vigario 2000).

(22)

European Portuguese		
	Future	Conditional
1 Sg	falar-ei	falar-ia
2 Sg	falar-ás	falar-ias
3 Sg	falar-á	falar-ia
1 Pl	falar-emos	falar-íamos
2 Pl	falar-eis	falar-íeis
3 Pl	falar-ão	falar-iam

5.2 The future and the conditional form in the presence of clitics

- Unlike other Romance languages, in European Portuguese, pronominal clitics can intervene between the verb stem and the tense/aspect markers for the conditional and the future.

- (23) a. Falar-lhe-emos.
Speak cl.(dat) fut.
'We will speak to him.'
- b. *Falar-emos-lhe.
Speak fut. cl.(dat)

- In this case, phonological evidence argues for the word status of the future/conditional markers (Vigario 2000).
- Adverbs cannot intervene between the verb and the tense/aspect markers while they can separate other auxiliaries from the verb.

- (24) a. *O Joao falar-lhe sempre á nisso.
The John tell cl.(acc) always fut. it
'John will always tell him about it.'
- b. O Joao falar-lhe-á sempre nisso.
The John tell cl.(acc) fut. always it
'John will always tell him about it.'
- c. O Joao tinha-lhe já falado nisso.
The John had cl.(acc) already told it
'John had already told him about it.'

5.3 The analysis of Portuguese auxiliaries

- I suggest that the the tense/aspect markers for the conditional and future are true auxiliaries as in Romanian.

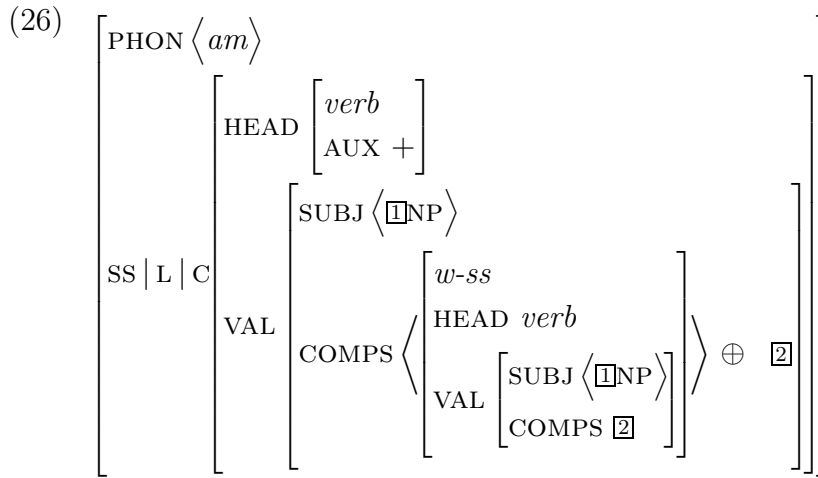
- They combine with the infinitival in a compound structure. It is thus possible to account for the fact that adverbs cannot intervene between the two verbs.
- The analysis is simpler than in Romanian since in EP the future/conditional markers are always enclitic, while in Romanian inversion is an optional phenomenon.
- A linearization principle will order the future/conditional marker after the infinitival.
- Auxiliaries which are marked [VFORM *future* ∨ *conditional*] must follow the verb.
- The only elements that can occur between the lexical verb and the future/conditional marker are object clitics. Under the assumption that they are inflectional affixes (Chrysmann 2000) it is straightforward to deal with this fact.
- The clitics are enclitic to the infinitival and are attached to it.

6 Romanian tense auxiliaries and the distribution of clitics

- In Romanian, if a tense auxiliary is present, the pronominal clitic, which is an argument of the embedded verb, must precede the tense auxiliary and cannot attach to the lower verb.

(25) Le-am văzut.
 cl.(acc) have seen
 ‘I have seen them.’

- An analysis in terms of *argument composition* (Hinrichs and Nakazawa 1990) along the lines of that proposed for French (Abeille and Godard 1994) and Italian (Monachesi 1993) can account for the position of the clitic.



- Argument composition is a lexical mechanism according to which the auxiliary inherits the complements of the verb including those ones which might be realized as clitics.

6.1 A lexical analysis of Romanian pronominal clitics

- Romanian pronominal clitics are considered affixes on a par with French (Miller 1992) and Italian clitics (Monachesi 1999).
- They are not considered lexical items, *signs* thus, but featural information which is provided in the lexicon and used in morphophonology for the realization of the cliticized verb form.
- I will assume that cliticization is a lexical operation which has both a syntactic/semantic and a morphophonological effect.
- The former is reflected on the fact that clitics satisfy the subcategorization requirements of the verb they are an argument of. A lexical rule can be proposed to achieve this effect.

(27) Complement Cliticization Lexical Rule (CCLR)

$$\left[\begin{array}{l} word \\ HEAD \quad \quad \quad verb \\ VAL | COMPS \quad \boxed{1} \quad \circ \quad \boxed{2} \\ CLTS \quad \quad \quad elist \end{array} \right] \mapsto \left[\begin{array}{l} VAL | COMPS \quad \boxed{1} \\ CLTS \quad \quad \quad \boxed{2} \end{array} \right]$$

- Verbs which have undergone this operation are enriched with the relevant featural information, which is used in morphophonology for the realization of the cliticized verb form.

6.2 The realization of the clitics

- Appropriate constraints relate the featural information present on verbs to the actual phonological realization of the clitics.
- They are sensitive to the phonological structure (and the morphosyntactic form) of the verb.

$$(28) \left[\begin{array}{l} word \\ MORPH | STEM | SS | L | C | CLTS \langle NP[acc]_{3fpl} \rangle \end{array} \right] \rightarrow \left[\begin{array}{l} AFFIX \left[\begin{array}{l} prefix \\ PHON \langle le \rangle \end{array} \right] \end{array} \right]$$

6.3 Clitic climbing

- The analysis of Romanian tense auxiliaries in terms of argument composition interacts in the appropriate way with the analysis of pronominal clitics.
- It is thus possible to provide an account of the distribution of the clitics in the presence of tense auxiliaries.

$$(29) \text{ Le-am} \quad \quad \text{văzut.}$$

CL.ACC have seen
‘I have seen them.’

- The auxiliary *am* subcategorizes for the past participle and its complements as result of the lexical operation of argument composition.

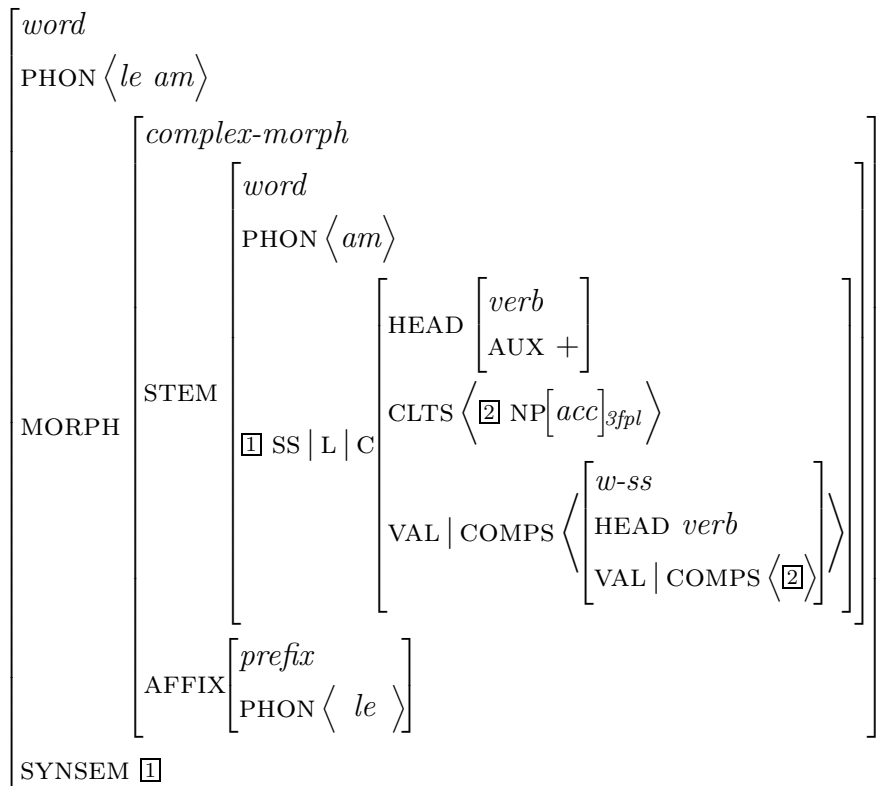
$$(30) \left[\text{COMPS} \left\langle \text{V} \left[\text{COMPS} \left\langle \underline{\text{I}} \right\rangle, \underline{\text{I}}\text{NP} [acc]_{[3fp]} \right\rangle \right] \right]$$

- The Complement Cliticization Lexical Rule applies to license cliticized verbs. Its effect is that the relevant complements are removed from the COMPS list and added as value of the [CLTS list.

$$(31) \left[\begin{array}{l} \text{VAL} \mid \text{COMPS} \left\langle \text{V} \left[\text{COMPS} \left\langle \underline{\text{I}} \right\rangle \right] \right\rangle \\ \text{CLTS} \left\langle \underline{\text{I}}\text{NP} [acc]_{[3fp]} \right\rangle \end{array} \right]$$

- A realizational constraint will be responsible for the spell out of the cliticized verb form *le am*.

(32) Realization of the cliticized verb form *le am*



6.4 The distribution of the clitic *o*

- Romanian constitutes an exception to the generalization which holds across Romance languages that object clitics must precede the auxiliary verb.
- The third person feminine clitic *o* must attach to the embedded verb and cannot precede the tense auxiliary.

- (33) a. Am văzut-o.
 have seen cl.(acc)
 ‘I have seen her.’
- b. *O-am văzut
 cl.(acc) have seen

- The reason seems to be of phonological nature: the clitic *o* cannot precede an auxiliary which begins with a vowel.
- In the future paradigm, the tense auxiliary begins with a consonant and the clitic *o* can occur either after the infinitive or in front of the auxiliary.

- (34) a. Voi vedea-o.
 will see cl.(acc)
 ‘I will see her.’
 b. O voi vedea.
 cl.(acc) will see

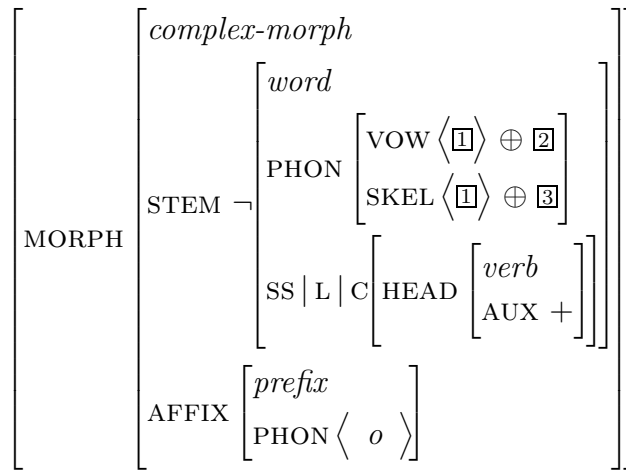
- Past participles and bare infinitives should be excluded as possible hosts for pronominal clitics. They can only be hosts for the clitic *o*.

$$(35) \left[\begin{array}{l} \textit{word} \\ \text{MOR} | \text{ST} | \text{SS} | \text{L} | \text{C} \left[\begin{array}{l} \text{HEAD} \left[\text{VFORM} \left[\neg (\textit{psp} \vee \textit{bare-inf}) \right] \right] \\ \text{CLTS} \langle \text{NP}[\textit{acc}]_{3\textit{fpl}} \rangle \end{array} \right] \end{array} \right] \rightarrow$$

$$\left[\begin{array}{l} \text{AFFIX} \left[\begin{array}{l} \textit{prefix} \\ \text{PHON} \langle \textit{le} \rangle \end{array} \right] \end{array} \right]$$

- Appropriate conditions can be formulated to rule out the combination of the clitic *o* with an auxiliary which begins with a vowel.

$$(36) \left[\begin{array}{l} \textit{word} \\ \text{MORPH} | \text{ST} | \text{SS} | \text{L} | \text{C} | \text{CLTS} \langle \text{NP}[\textit{acc}]_{3\textit{fsg}} \rangle \end{array} \right] \rightarrow$$



- If two object clitics are present, one of which is the clitic *o*, they will not climb together. The result is a ‘split clitic’ configuration.

(37) *le am dat-o.*
 cl.(dat) have given cl.(acc)
 ‘I have given it to them.’

- The constraint on *o* allows it to combine with the past participle, while this is not the case for the clitic *le*, which is licensed next to the tense auxiliary by the mechanism of argument composition.

7 Tense auxiliaries and monosyllabic intensifiers

- In Romanian, there is a small class of monosyllabic intensifiers with constrained distribution: *mai*, ‘again’, *cam* ‘little’, *prea* ‘very’, *și* ‘also’, *tot* ‘still’.
- They can separate tense auxiliaries and nonfinite verbs

(38) *Aș mai mânca.*
 would again eat

‘I would still eat.’

- They can occur between a pronominal clitic and a lexical verb.

(39) Îl mai văd.
 cl.(acc) again see
 ‘I see him again.’

Like pronominal clitics, these intensifiers exhibit affix behavior as argued at length in Monachesi (2000).

- Lexical rules can be proposed to account for the fact that monosyllabic intensifiers are attached to the verb.

(40) MAI Lexical Rule

$$\left[\begin{array}{l} word \\ PHON \textcircled{1} \\ SS | L \left[\begin{array}{l} CAT \left[\begin{array}{l} HEAD \textit{verb} \\ AUX - \end{array} \right] \\ CONT \textcircled{2} \end{array} \right] \end{array} \right] \right] \mapsto \left[\begin{array}{l} PHON \textit{mai} \oplus \textcircled{1} \\ SS | L | CONT \textit{mai} (\textcircled{2}) \end{array} \right]$$

- The condition AUX – accounts for the fact that *mai* cannot attach to tense auxiliaries.
- Contrary to what has been assumed in the literature, these intensifiers do not exhibit uniform behavior, as argued in Monachesi (in prep.).
- A treatment in terms of lexical rules seems thus the most appropriate to deal with the variation attested.

8 Tense auxiliaries and negation

- Negation cannot intervene between a tense auxiliary and the nonfinite verb.

- (41) *Ar nu vrea să te supere
 Would neg. want that you bother
 ‘He wouldn’t want to bother you’

- Negation is the most external element in the verbal complex.

- (42) nu l-am mai văzut
 not cl. (acc) have again seen
 ‘I haven’t seen him again’

- *Nu* will be considered a negative adverb which modifies a phrasal head.

- (43)
$$\left[\begin{array}{l} \text{PHON } \langle nu \rangle \\ \text{SS | L} \left[\begin{array}{l} \text{CAT | HEAD } \left[\begin{array}{l} \textit{adv} \\ \text{MOD VP: } \boxed{1} \end{array} \right] \\ \text{CONT } \left[\begin{array}{l} \textit{not-rel} \\ \text{ARG } \boxed{1} \end{array} \right] \end{array} \right] \end{array} \right]$$

- It is thus possible to account for the fact that negation is the most external element in the cluster and that it cannot intervene between the tense auxiliary and the nonfinite verb. This is because negation modifies a VP, but the nonfinite verb is a V that cannot project.

9 Future auxiliaries

- In Romanian there are several ways to express the future including a colloquial form.

- (44) Different forms of the Romanian future

	1 Sg	2 Sg	3 Sg	1 Pl	2 Pl	3 Pl	
literary fut.	voi	vei	va	vom	veți	vor	bare infinitive
colloquial fut.	am	ai	are	avem	aveți	au	subjunctive
colloquial fut.	o						subjunctive

- Dobrovie-Sorin (1994) argues in favor of a uniform analysis for tense auxiliaries and the colloquial future on the basis of the crucial similarities between the two. She suggests that a biclausal configuration is associated with these verbs.

9.1 Tense and future auxiliaries: a comparison

- Adverbs and quantifiers cannot intervene between the auxiliary and the subjunctive, but they should follow the embedded verb, as in the case of tense auxiliaries.

- (45) a. * Ion are adesea să cînte la pian.
 John has often CONJ. play to piano
 ‘John will often play the piano.’
- b. * Copiii au toți să cînte la pian.
 children.the have all CONJ. play to piano
 ‘The children will all play the piano.’

- Subjects cannot intervene between the tense auxiliary and the lexical verb. This is the case also for the colloquial future.

- (46) * Are Ion să cînte la pian ?
 has John CONJ. play to piano
 ‘Will John play the piano?’

- There are some crucial differences between the two constructions which are neglected by Dobrovie-Sorin. Tense auxiliaries trigger clitic climbing while this is not the case for the colloquial future.

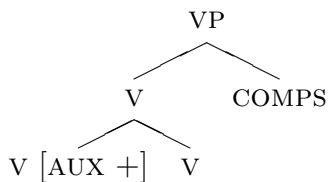
- (47) a. *S-are să plimbe.
 CL.REFL.has CONJ. goes for a walk
 ‘He will go for a walk.’
- b. Are să se plimbe.
 has CONJ. CL.REFL goes for a walk
 ‘He will go for a walk.’

- The forms of the auxiliary in the colloquial future are different from those of the tense auxiliaries. In the colloquial future the paradigm is constructed with the conjugated forms of the verb *a avea*.

9.2 The analysis

- I suggest that the similarities between the tense and the colloquial future auxiliaries (i.e., strict adjacency) are accounted for by assuming the same syntactic structure in both cases.
- A compound structure can deal with the fact that that no elements can occur between the auxiliary and the subjunctive.

(48) Compound structure



- The differences with respect to clitic climbing can be accounted for if it is assumed that the lexical operation of argument composition is not triggered in the colloquial future.
- These data seem thus to suggest that there is no direct connection between syntactic structure and argument composition, as also concluded by Abeille and Godard (2001).

9.3 Negation and the future auxiliaries

- Negation precedes the auxiliary in the colloquial future as in the case of tense auxiliaries. Given the syntactic structure assumed, this is the expected position.

- (49) a. nu am să plec.
NEG. have CONJ. leave
'I will not leave.'
- b. *am nu să plec.
have NEG. CONJ. leave
'I will not leave.'
- c. *am să nu plec.
have CONJ. NEG. leave
'I will not leave.'

- Since negation modifies a VP, but the embedded verb is a V that cannot project it is possible to account for the fact that negation cannot intervene between the two verbs.
- Dobrovie-Sorin (1994) has to stipulate that the colloquial future auxiliaries cannot subcategorize for a negated complement in order to deal with the position of negation.

9.4 Intensifiers and future auxiliaries

- Intensifiers can only occur attached to the embedded verb, they cannot precede the future auxiliary and they cannot intervene between the two verbs.

- (50) a. am să mai plec.
have CONJ. INT. leave
'I will not leave.'
- b. *mai am să plec.
INT. have CONJ. leave
'I will not leave.'

- c. *am mai să plec.
 have INT. CONJ. leave
 ‘I will not leave.’

- This distribution is the expected one given the lexical rules assumed for intensifiers.

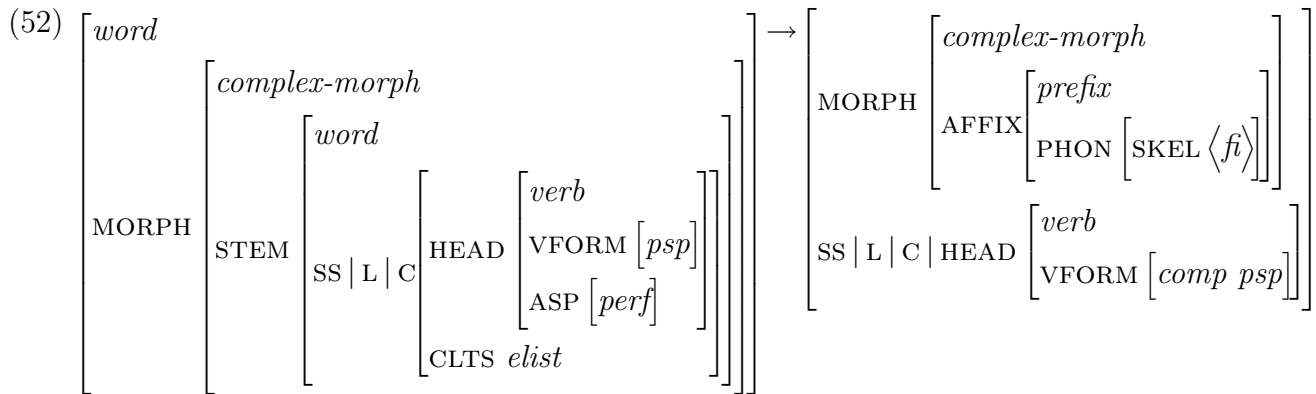
10 The perfect auxiliary *fi*

- In Romanian, perfect aspect is expressed by the invariable element *fi*.
- It combines with a past participle and nothing can separate it from the nonfinite verb, even object clitics and intensifiers usually precede this element.

- (51) să o mai fi văzut.
 that CL.ACC INT. BE seen
 ‘That I should have seen her again.’

10.1 The analysis of the perfect auxiliary *fi*

- I suggest that *fi* is a prefix which attaches to the past participle. It represents the spell-out of a feature ASP *perf*.



- The constraint states that if there is a past participle with the feature ASP equal to *perf*, this is realized as the prefix *fi* and the VFORM of the resulting word is of type *composed past participle*. The condition CLTS *elist* ensures that object clitics and intensifiers occur before *fi*.

10.2 The distribution of the clitic *o*

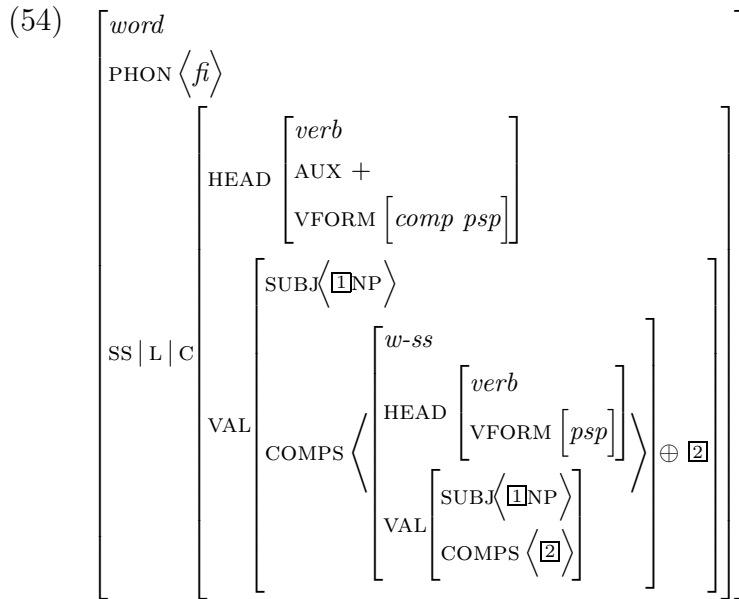
- In this construction, the clitic *o* can attach to the past participle, but it can also precede the composed form.

- (53) a. Nu cred să fi spus-o Ion.
 NEG. believe CONJ. be say.CL.ACC. John
 ‘I don’t believe John to have said it.’
- b. Nu cred s-o fi spus Ion.
 NEG. believe CONJ.CL.ACC. be say John

- The former position is the expected one, as it is also exhibited in the case of tense auxiliaries. The interaction of the spell-out constraint for clitic *o* together with the one responsible for enclisis accounts for it.
- The latter position can be dealt with if it is assumed that the composed past participle can be preceded by clitics. The constraint which accounts for proclisis should be thus modified to include this form among the ones that allow for preverbal clitics.

10.3 An alternative analysis

- Alternatively, it can be assumed that *fi* has the same status as tense auxiliaries. Also in this case a compound structure should be assumed.



- The position of the clitic *o* would be thus considered a case of optional clitic climbing as also exemplified by the future tense auxiliary *voi*.
- It might be argued that aspectual *fi* had originally the same status as tense auxiliaries, but it is now in the process of becoming a prefix.
- The two analysis proposed might represent different stages of the development of this element and might be both available for Romanian speakers.

10.4 Intensifiers and the aspectual marker *fi*

- Intensifiers should normally precede the aspectual marker, but in spoken language they can also intervene between *fi* and the past participle.

- (55) a. ?? Eu aș fi mai stat.
 I would have INT. stayed
 ‘I would have stayed more.’
- b. Eu aș fi tot stat.
 I would have INT. stayed

‘I would have still stayed.’

- The position of intensifiers is thus similar to that found in the case of tense auxiliaries and it receives the same analysis.

11 Raising constructions

- Some of the common properties shown by tense auxiliaries and by the colloquial future are also exhibited by Romanian raising constructions.
- Adverbs and quantifiers cannot occur between the relevant verbs.

- (56) a. * Ion urmează adesea să cînte la pian.
John follows often CONJ. play to piano
‘John is going to often play the piano.’
- b. * Copiii urmează toți să cînte la pian.
children.the follow all CONJ. play to piano
‘The children are all going to play the piano.’

- Raising constructions differ from both tense auxiliaries and the colloquial future in that subjects can precede the subjunctive.

- (57) Crezi că urmează și Ion să cînte?
believe that follows also John CONJ. play
‘Do you think that also John is going to play?’

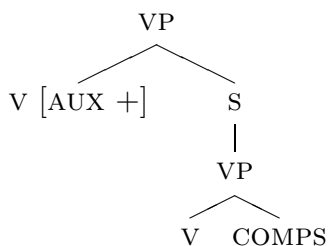
- They do not trigger clitic climbing as in the case of the colloquial future.

- (58) * Copiii l-urmasu să conduc la gară.
children.the CL.ACC.believed CONJ. take to station.the
‘The children were going to take him to the station.’

11.1 The analysis of raising verbs

- I suggest that a hierarchical structure is the most appropriate to deal with the adjacency requirements of raising verbs.

(59) Hierarchical structure



- Raising verbs do not trigger the lexical operation of argument composition.
- It is thus possible to deal with the fact that they do not allow clitic climbing as well as for the fact that adverbs and quantifiers cannot intervene between the two verbs.
- However, subject can occur between the two verbs.

11.2 Negation and raising verbs

- Negation should precede the raising verb and might precede the embedded verb, but it cannot intervene between the two verbs.

- (60) a. Ion nu urmează să cînte la pian.
John NEG. follow CONJ. play to piano
'John is not going to play the piano.'
- b. *Ion urmează nu să cînte la pian.
John follows NEG. CONJ. play to piano
'John is not going to play the piano.'

- c. ? Ion urmează să nu cînte la pian.
 John follow CONJ. NEG. play to piano
 ‘John is not going to play the piano.’

- If raising verbs subcategorize for a sentential complement, it is possible to account for the fact that negation cannot intervene between the two verbs since it modifies a VP. The position of the subject seems to argue in favor of this assumption.

11.3 Intensifiers and raising verbs

- Intensifiers can attach to the raising verb and to the embedded verb, but they cannot occur between the two verbs.

- (61) a. Ion mai urmează să cînte la pian.
 John INT. follow CONJ. play to piano
 ‘John is going to play the piano again.’
- b. * Ion urmează mai să cînte la pian.
 John follows INT. CONJ. play to piano
 ‘John is going to play the piano again.’
- c. Ion urmează să mai cînte la pian.
 John follow CONJ. NEG. play to piano
 ‘John is going to play the piano again.’

- Since intensifiers can only attach to a v, it is possible to account for the fact that they cannot intervene between the two verbs.

12 Modal verbs

- The clitic distribution attested by tense auxiliaries can also occur if the modal verb *a putea* ‘can/may’ is present.

(62) O pot vedea.
cl.(acc) can see
'I can see her.'

- There are certain differences between the modal verb *a putea* and the tense auxiliaries.
- A pronominal subject can separate the modal from the infinitival.

(63) Ne-putem noi închipui.
cl.acc can we imagine
'We can imagine.'

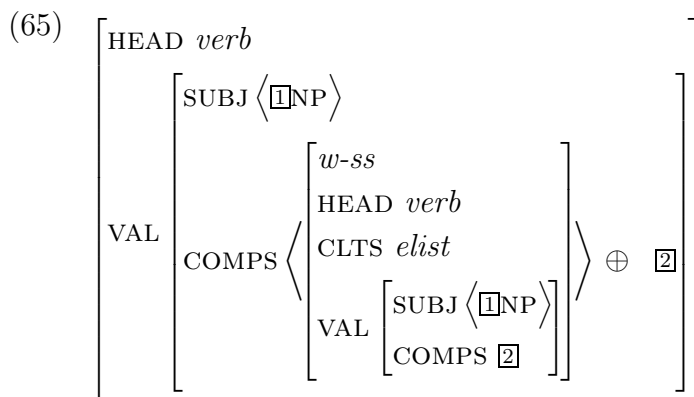
- Adverbs and quantifiers can separate the modal from the infinitival.

(64) a. Se putea uneori pierde.
cl.(refl.) can sometimes lose
'He could sometimes lose himself.'

b. Elevii tăi pot toți citi un poem de Verlaine.
students yours can all read a poem by Verlaine
'Your students can all read a poem by Verlaine.'

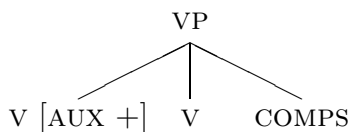
12.1 The analysis of modal verbs

- An analysis in terms of argument composition can be assumed also in the case of the modal.



- It is thus possible to deal with the fact that modal verbs trigger clitic climbing.
- The differences between modal verbs and the tense auxiliaries can be accounted for if the modal verb is associated with a flat structure since this configuration allows for elements to intervene between the two verbs.

(66) Flat structure



12.2 Negation and modal verbs

- The position of negation argues in favor of the flat structure since negation cannot intervene between the modal verb and the embedded one.

(67) *El poate nu veni.
 he can NEG. come
 'He cannot come.'

- This distribution is the expected one given that negation modifies a VP, but the nonfinite verb is a V that cannot project.

12.3 Intensifiers and modal verbs

- Intensifiers constitute a problem since they usually cannot occur between the two verbs, but they normally precede the modal.

- (68) a. * (Nu) pot mai/cam/prea/tot veni.
 NEG. can INT. come
 ‘I can(not) come again/a little/too much still.’
- b. (Nu) mai/cam/prea/tot pot veni.
 NEG. INT. can come
 ‘I can(not) come again/a little/too much still.’

- I suggest that intensifiers should be members of the CLTS list.
- The condition CLTS *elist* in the lexical entry for the modal, excludes the possibility of the intensifiers to be attached to the bare infinitive.
- Similarly, it doesn’t allow pronominal clitics to combine with the infinitive.

- (69) *Pot vedea-o.
 can see-CL.ACC
 ‘I can see her.’

13 Summing up

- Romanian tense auxiliaries exhibit certain peculiar properties that set them aside from other Romance counterparts.
- The relevant differences between Romanian tense auxiliaries and French/Italian auxiliaries have been accounted for in terms of different syntactic structure.

- Romanian exhibits also a rich typology of auxiliary(-like) constructions which are characterized by the presence (or absence) of clitic climbing and by the possibility (or impossibility) for certain elements to intervene between the auxiliary and the nonfinite verb.
- I have accounted for the variation in adjacency conditions by means of different syntactic structures while the differences with respect to clitic climbing have been accounted for in terms of the lexical mechanism of argument composition.

14 Syntax or Phonology?

- The variation exhibited by Romanian auxiliary(-like) constructions with respect to adjacency conditions could receive an alternative explanation.
- The explanatory device could be found in the principles that govern the *form* dimensions of grammatical composition.
- The interaction of the lexical mechanism of argument composition with the various modes in which elements can merge allow for a unitary analysis of the similarities and differences of these constructions.

15 Romanian tense auxiliaries

- The strict adjacency exhibited by Romanian tense auxiliaries in combination with the nonfinite verb can be captured by assuming that the two words merge together (in the form component) to form a new one.
- (70) $[Word\ Word]_{Word}$
- An implicational constraint can be assumed in order to enforce the compound composition mode.

$$(71) \left[\begin{array}{l} \text{HD} \left[\begin{array}{l} \text{PHON} \left[\begin{array}{l} \text{word} \\ \langle \text{1} \rangle \end{array} \right] \\ \text{SS} | \text{L} | \text{C} \left[\begin{array}{l} \text{H} \left[\begin{array}{l} \text{verb} \\ \text{AUX} + \end{array} \right] \\ \text{VAL} | \text{C} \left\langle \begin{array}{l} \text{3} \\ \left[\begin{array}{l} w\text{-ss} \\ \text{HEAD verb} \end{array} \right] \end{array} \right\rangle \end{array} \right] \end{array} \right] \\ \text{N-HD} \left[\begin{array}{l} \text{PHON} \left[\begin{array}{l} \text{word} \\ \langle \text{2} \rangle \end{array} \right] \\ \text{SS} \text{ 3} \end{array} \right] \end{array} \right] \end{array} \right] \rightarrow \left[\begin{array}{l} \text{PHON} \left[\begin{array}{l} \text{word} \\ \text{1} \oplus \text{2} \end{array} \right] \end{array} \right]$$

- The constraint states that the phonology of the auxiliary verb is concatenated with that of its verbal complement to form a word.

16 Future auxiliaries

- Future auxiliaries share the same adjacency conditions with tense auxiliaries while they differ crucially from them with respect to clitic climbing.
- I have suggested that the similarities can be accounted for in terms of the same syntactic structure.
- Alternatively, it can be argued that the adjacency requirements should be dealt with in the *form* dimension by appropriate composition modes, while the lexical operation of argument composition takes place in the *meaning* dimension.
- The similarities between the two constructions (i.e., the impossibility of intervening elements) can be explained in terms of the same composition mode: the two verbs merge together to form a word.

17 Raising and modal verbs

- The adjacency properties of raising verbs could also be accounted for by assuming a different composition mode in the *form* dimension. The raising verb combines with the complement in a phrasal composition mode.

(72) $[Word\ Phrase]_{Phrase}$

- In the case of modal verbs, an additional composition mode will account for their properties.
- The modal verb and the infinitival combine together to form a phrase.

(73) $[Word\ Word]_{Phrase}$

18 The role of ARG-ST

- In HPSG the subcategorized arguments of a head are stored in the SUBCAT list.
- In a later version, following suggestions of Borsley (1989), the *valence features* SUBJ, COMPS and SPR are introduced.
- The SUBCAT list is kept in order to be able to deal with Binding Theory. It is the *append* of the SUBJ, COMPS and SPR list.
- The redundancy between the SUBCAT list and the VALENCE list has been broken in recent work.
- The existence of these two lists can be quite useful in the analysis of *pro-drop*.
- The SUBCAT list is used to explain phenomena such as binding, linking and it has thus become similar to certain notions of argument structure.
- The SUBCAT list has been renamed ARG-ST. It should be viewed as a syntactic representation and not as a partial semantic representation.

- There are reasons to dissociate argument structure from valence. It is thus possible to have two independent syntactic notions of valency and argument structure and motivate them on the basis of existing dissociations motivated by passives, binding and ergative languages (Manning and Sag 1998).

19 Two kinds of composition in French complex predicates

- The different behaviour of French auxiliary and causative verbs with respect to clitic climbing is accounted for by Abeille et al. (1998) by means of two different kinds of argument composition.
- In French, certain clitics can stay on the infinitival verb after *faire* while no clitics can be realized on the past participle.

- (74)
- a. C' est une révélation brutale qui a fait se
it is a revelation sudden that has made cl.(refl)
convertir Claudel.
to convert Claudel
'It is a sudden revelation that made Claudel be converted.'
 - b. * Claudel est se converti.
Claudel is cl.(refl) converted
 - c. Claudel s'est converti.
Claudel cl.(refl) is converted
'Claudel was converted.'

- Abeille et al. (1998) suggest that *a-composition* should be distinguished by *c-composition*.
- *a-composition* requires that part of the argument structure of the trigger verb is identical to that of the embedded verb. It involves the lexical verbal argument ARG-ST list.
- *c-composition* requires that part of the argument structure of the trigger verb is identical to the COMPS list of the embedded verb. It involves the *sc comps* list of the lexical verbal argument.

- Abeille et al. (1998) assume that intrinsic clitics can only belong to the COMPS list of a verb and never to its COMPS list.
- The verb *faire* involves *c-composition* therefore it will never be possible for these clitics to surface attached to *faire* which is the desired result.
- Since auxiliary verbs involve *a-composition*, it will be possible for these clitics to appear attached to the auxiliary.
- Even though there are other differences between French auxiliaries and the causatives, this distinction doesn't play any role in accounting for them.
- This distinction doesn't seem to be necessary in Italian which patterns like French in the case of the auxiliaries, but it differs from French with respect to the causative.

- (75) a. *Claudel è convertitosi.
Claudel is converted cl.(refl)
- b. Claudel si è convertito.
Claudel cl.(refl) is converted
'Claudel was converted.'
- c. È una rivelazione improvvisa che ha fatto convertire
is a revelation sudden that has made to convert
Claudel.
Claudel
'It is a sudden revelation that made Claudel be converted.'