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Article abstract

In this paper I propose that the existence of morphological paradigms in the domain of the verbal inflection is subject to a morphosyntactic constraint: paradigms are based on an asymmetrical relation between tense and agreement features. The syntactic dependence of agreement features on the Tense node is carried out at the morphological level in the following way: verbal forms that have a syntactic tense representation will be assigned a paradigm in a post syntactic morphological module; verbal forms that do not have a syntactic tense representation will not be assigned a morphological paradigm (as is the case of the so-called non-personal moods like the gerund) or will have a “parasitic paradigm” (as, for example, the subjunctive and the imperative in Romance languages). In other words, tense features legitimate paradigmatic structure. Examples from Romance languages as well as from unrelated languages as Hungarian and Albanian seem to support this hypothesis.

MORPHOLOGICAL PARADIGMS AND THE ROLE OF TENSE*

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1. Introduction

Several constraints on the paradigmatic structure have been put forth in the literature: Carstairs 1987 establishes a correlation between paradigms and inflectional class; Wunderlich 1995 proposes that paradigms are constructed by the combinatorial force of the affixes; Di Sciullo (in press) advances the hypothesis that morphological paradigms are based on an asymmetrical relation going from the type of categories (N, V) to morphosyntactic features. In this paper I would like to propose that the existence of morphological paradigms in the domain of the verbal inflection is subject to a morphosyntactic constraint: paradigms are based on an asymmetrical relation between tense and agreement features. The main language used for this proposal is Romanian, but examples from other Romance languages as well as from unrelated languages seem to support the hypothesis.

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2. The concept of paradigm in verbal inflection

2.1 The paradigm: whole verbal forms or just affixes?

Having considered various views of the paradigm, I will base my own on that proposed by Carstairs 1987, which considers the paradigm to be a pattern of inflectional affixes of number and person and not a pattern of fully inflected forms. The opposite view takes paradigms to be patterns of whole inflected words (cf. Bybee 1985, Maiden 1992, Matthews 1993, Zager 1979). For Romanian, it is best to work with only affixal realizations of number and person. In the Romanian verbal system, variations of the root¹ are only relevant at the phonological level, without consequences for morphosyntactic agreement (cf. Irimia 1976: 24, 1994: 56). In (1) I give an example of a consonantal alternation:

- | | |
|-------------|-------------|
| (1) cânt | cânt-i |
| sing [-1SG] | sing-2SG |
| 'I sing.' | 'you sing.' |

Other relevant examples have been put forward for different Romance languages by Carstairs 1987. At a theoretical level, it also seems best to distinguish between roots and affixes (cf. Aronoff 1994, Halle and Marantz 1993, Lieber 1980, Noyer 1997).

2.2 The paradigm and the tense morphosyntactic feature

Carstairs 1987 makes the observation that, in order to correctly identify the paradigms of a language, it seems that morphosyntactic features other than number and person must be taken into account:

[...] certain morphosyntactic property contrasts, such as ones involving Aspect and Tense, seem to define partitions of verbal paradigms which are morphologically in some sense more fundamental than other property contrasts such as those of Person and Number.

Carstairs 1987: 80

The idea of the preceding paragraph is not developed or formalized in Carstairs' work. In this article I focus on this relationship between morphosyntactic tense and morphological paradigms. I propose that morphosyntactic tense is essential for grouping person/number affixes into verbal paradigms,

¹ I adopt a traditional definition of the root: the part of the word that remains after eliminating all the affixal elements (agreement/tense, etc., thematic vowels).

and that when tense is not present there is no autonomous paradigmatic pattern to be expected. My proposal is based on a crucial empirical observation: the Romanian subjunctive and imperative endings are identical to those of the present of the indicative², as Table 1 shows:

Table 1
Person/number affixes according to mood

SUBJUNCTIVE	INDICATIVE	IMPERATIVE (~ INDICATIVE)
-Ø	-Ø	
-i	-i	
-ă/-e	-e	2SG: <i>vorbește!</i> (~ indicative 3SG)
-m	-m	
-ți	-ți	2PL: <i>vorbiți!</i> (~ indicative 2PL)
-ă/-Ø	-e	

I interpret the facts in Table 1 as suggesting that subjunctives and imperatives in Romanian do not have their own paradigm, and I propose that they are parasitic on the indicative present paradigm, which I call an “autonomous paradigm”. The dichotomy I propose is the following: in a given verbal system there are only autonomous paradigms, licensed by tense, and any other paradigmatic arrangements are “parasitic” paradigms on this primary morphosyntactic unit. A parasitic paradigm is therefore defined by inflectional endings identical to ones from another paradigm, called autonomous paradigm. In the next section, I will suggest different ways to implement the proposed correlation between the tense and the paradigmatic pattern within a theory of grammar.

3. Paradigms and the syntactic temporal representation

The correlation that I have proposed in the previous section can be implemented into a minimalist framework which assumes the weak lexicalist hypothesis: verbal roots come in the syntax inflected with morphosyntactic features but with no phonetic content (Chomsky 1999).

It is generally accepted that some verbal forms can have an independent temporal interpretation whereas others have to acquire theirs from elements

² The same holds for French and Spanish subjunctive, and for Italian and French imperatives. It is also interesting to mention that in Albanian, the subjunctive is realized as a periphrastic form consisting of the particle *të* immediately followed by the indicative verbal form (cf. Georgi and Pianesi 1997, ch. 5, note 63).

outside their clause, for example the difference between the indicatives and subjunctives. In generative grammar, it is proposed that this difference in the temporal interpretation has to be syntactically represented, by a difference in the status of the functional category T. The correlation that I proposed in the previous section can therefore be interpreted as one between the different status of the T category in the syntax and the different types of morphological paradigms respectively. A verbal form that syntactically combines with a Tense category with specific tense features (present, past, and so on) is recognized morphologically and assigned a paradigm³. On the contrary, a verbal form without T in its syntactic functional environment (as, for example, has been proposed for imperatives, see Pirvulescu and Roberge 1999, among others; perhaps also infinitives, gerunds and past participles) or which combines with an anaphoric T (such as the subjunctive, cf. Enç 1987, Nichols 1999, Partee 1984, Terzi 1992, among others) will be impossible to identify morphologically, and no specific paradigm will be assigned (for the subjunctive, probably because of the unspecified features on the anaphoric T, see Motapanyane 1995)⁴. From the point of view of morphology then, there is no distinction between anaphoric T and the lack of tense: both will be uninterpretable at this level.

A more radical approach would be to consider that verbal forms with parasitic paradigms (or with no paradigm at all) have no tense representation in the syntax. This will group, syntactically and morphologically, all the moods except the indicative in the class of tenseless forms⁵. This is the view that I will develop here for the Romanian subjunctive.

4. The Romanian subjunctive

I propose that parasitic paradigms in the Romanian subjunctive result from the absence of the category Tense at the syntactic level⁶. What does the

3 An important question is how and where would the paradigm be represented in the grammar. For a suggestion compatible with the model assumed here, see Bibis and Roberge (forthcoming).

4 There is another distinction to be made inside this class: there are verbal forms that appear in parasitic paradigms, like subjunctives and imperatives, and verbal forms with no paradigm at all, like the infinitives or gerunds. However, this does not seem to be a significant distinction as it does not hold systematically. See section 5 on the inflected infinitives in Hungarian.

5 Interestingly, this idea seems to parallel the semantic opposition hierarchy proposed by Hyams 2001 given in (i):

(i) realis irrealis (Mood)
 past non past (Tense)

6 As one reviewer pointed out, syntactic evidence is also needed for this claim. See Pirvulescu 2002 for arguments from the sequence of tenses and Pirvulescu (in preparation) for a detailed discussion on the syntactic tense and the temporal interpretation in subjunctive clauses.

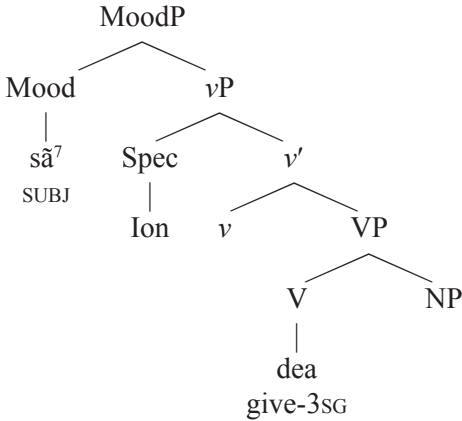
subjunctive clause lose if the node T is not present? I will begin this section by presenting the main assumptions of the Minimalist Program (Chomsky 1999) regarding the status of the T/Agr functional projections. Then, I will discuss the case of the Romanian subjunctive and the implications of a tenseless analysis of the subjunctive clause.

In the minimalist framework, the T node bears the following features: phi-features, an EPP feature, a strong verbal feature and a temporal feature. The Agr projection is deemed superfluous on conceptual grounds and discarded: it is the only category that has only non-interpretable features and its sole reason is to justify the overt movement of lexical categories such as V and NP. Its features (phi-features) are transferred to the V node and the ability to check case to the T node. T has also an EPP feature which is non-interpretable but a selectional feature: it has to be checked in a Spec-head configuration by a category moving into the [Spec, TP], in general the subject generated into the [Spec, vP]. The other non-interpretable feature of T, the strong V feature, is checked by the verb, which moves by head movement in T. The temporal feature is an interpretable feature. Phi-features are deleted by the subject in [Spec, TP] and at the same time the Nominative case feature is checked under identity between the phi-features of T and those of the subject: "Structural case is not a feature of the probe (T, v) but it deletes under agreement if the probe is appropriate – phi-complete [...] Case itself is not matched, but deletes under matching of phi-features." (Chomsky 1999: 4)

4.1 Agreement in the Romanian subjunctive clause

If the tense category is missing from the subjunctive clause representation, what happens to the agreement features and to the other features of T? Consider the agreement features. If we follow Chomsky's position discussed above, if the T node is not present, no agreement category/feature is present either: they are just bundles of features parasitic on the T. The subjunctive clause structure would look like in (2):

(2)



If we adopt Chomsky's view of parasitic agreement features, we predict that features parasitic on T will also be parasitic on Mood⁸. Therefore, the Mood head will host [mood] and [agr] features. That fact that the verb is displaced (i.e. it raises) shows that Mood has also a strong V feature. What happens with the EPP feature? I propose that EPP features are absent from the Mood head. An argument for this is the fact that in subjunctive phrases the subject is obligatorily post-verbal, in [Spec, vP] (for arguments in favor of the post-verbal subject in [Spec, vP], see Alboiu 2000, Pirvulescu 2002; I follow an analysis that assumes a SVO basic order for Romanian, see Alboiu 2000, Cornilescu 1997, among others)⁹:

- (3) a. Sã vinã Victor mîine.
 SUBJ come.3SG Victor.NOM.SG tomorrow
 "That Victor come tomorrow."
- b. Nu cred sã vinã poștașul azi.
 NEG think.1SG SUBJ come.3SG postman.ACC.SG.DET today
 "I don't think that the postman comes today."

7 For arguments of the subjunctive particle *sã* in the Mood head, see Rivero 1994 and Motapanyane 1995.

8 A different approach would be to consider reintroducing an independent Agr projection. Due to space limitations I will not discuss this possibility here.

9 The two exceptions are (a) when the subject is in focal position (i) and (b) when the complementizer *ca* "that" introduces the subordinate clause (ii).

(i) Vreau Ana sã vinã cu noi și nu Ion.
 want.1SG Ana SUBJ come.3SG with us and NEG Ion
 "I want Ana to come with us and not Ion."

(ii) Petru vrea ca Ion sã plece.
 Petru want.3SG that Ion SUBJ leave.3SG
 "Peter wants Ion to leave."

The verb moves to Mood to check its verbal feature. The Nominative case gets checked as the result of the Agree operation between the verb and the subject in [Spec, vP]. There are several arguments that support the fact that Agr features exist in the syntax and that they can be present on the category Mood.

First, the subjunctive verb shows agreement with the subject even if it does not have its own morphological paradigm (it has a parasitic paradigm). If we assume that the syntax feeds the morphology, and that the paradigms are partitioned by tense features, this is easily accounted for: at the morphological level, the subjunctive is not recognized as a tense and therefore does not have a paradigm. The agreement features are spelled-out by a default mechanism from the indicative present paradigm.

Second, Romanian subjunctives can have an overt subject as in (3). The nominative case of the subject therefore needs a way to be checked in the syntax. The representation in (2) offers a way to check the Nominative case of the subject, even if it goes against the usual assumption that the presence of an overt subject is a reflex of the presence of a syntactic [+finite] tense (cf. Cowper 1996, Motapanyane 1995, among others). Studies based on other languages have presented convincing evidence in favor of the dissociation between [+finite] tense, or even the tense and the presence of an overt subject. For example, Harley 2000 presents examples from Icelandic where Nominative case is assigned to objects in experiencer-subject infinitivals as shown below.

- (4) Hann taldi henni hafa verið gefnir hattarnir
 he believed her.DAT to have been given hats.NOM
 “He believed her to have been given hats.”

For the Romanian subjunctives with an overt subject, then, Nominative case is assigned in the manner specified by Chomsky 1999 but mediated by the category Mood and not T. Third, agreement markers may appear on the mood auxiliary in the conditional:

- (5) ai dori
 have.2SG want.INF
 “You wish.”

The mood marker *ai*, derived from *avea* (“have”) has agreement morphology (see Avram 1999 for arguments for the definition of the conditional auxiliary as a mood marker).

The representation of subjunctive in (2) contrasts with the representation of the indicative where a temporal syntactic projection must be projected. The lack vs. the presence of syntactic T seems to define the irrealis (the subjunctive) vs. realis (indicative) dichotomy:

- (6) Subjunctive Indicative
MoodP + Agr TP + Agr

The subjunctive phrase is essentially a modal projection while the indicative phrase is a temporal one. This also holds for the so-called past subjunctive, as in *să fi plecat* “that (he) should have gone”. The invariable auxiliary *fi* “be” is not a temporal marker but an aspectual one, selected by Mood (irrealis) but not by T (realis). This can be seen from the distribution of *fi*: it only appears in modal constructions (see (8)), as opposed to the auxiliary *a avea* “to have” which appears in the past tense of the indicative (see (7)).

- (7) a. am pleca-t
have(AUX).1SG go-PAST.PARTICIPLE
“I left.”
- b. *am fi plecat
“I left.”
- (8) a. să fi pleca-t
SUBJ be(AUX) go-PAST.PARTICIPLE
“That I should have gone.”
- b. înainte de a fi pleca-t
before PREP INFIN be(AUX) go-PAST.PARTICIPLE
“Before being gone.”
- c. aş fi pleca-t
have(AUX).1SG¹⁰ be(AUX) go-PAST.PARTICIPLE
“I would have gone.”
- d. voi fi pleca-t
want(AUX).1SG be(AUX) go-PAST.PARTICIPLE
“I will have gone.”

The invariable form of *fi* “be” is easily accounted for if it is an aspectual element, as opposed to *a avea* “to have” which presents agreement markers¹¹.

10 The auxiliary *a avea* “to have” has different forms for past and past conditional:

- | | | | | |
|-----|------|-----|------|------------------|
| (i) | PAST | | (ii) | PAST CONDITIONAL |
| | am | am | | aş am |
| | ai | aţi | | ai aţi |
| | a | au | | ar ar |

11 Semantic arguments also have been put forth for the aspectual achieved value of the past subjunctive as opposed to a temporal value (Pirvulescu 2002). For additional tests that support this hypothesis, see Avram and Hills 2002.

In the light of (6), the distinction between autonomous and parasitic paradigms can be stated as follows:

- (9) a. Autonomous paradigms exist only when the phi-features are associated with tense features.
 b. Parasitic paradigms are the result of the dissociation between phi-features and tense features¹².

How are parasitic paradigms assigned? Assuming that paradigms are partitioned by tense at a morphological level (cf. section 2.2), a default mechanism seems to be at work, which assigns the least marked paradigm, i. e. the indicative present one.

5. Consequences

The thesis presented in the previous sections raises (at least) one question: is it true that all verb forms without tense interpretation (infinitives, gerunds, past participles) have a parasitic paradigm? A clear answer to this question should be based on a careful analysis of data from a large variety of languages. However, based on cases of inflected infinitives – such as the inflected infinitives of Hungarian – I suggest that the answer is yes. It is, I believe, quite remarkable that the agreement paradigms for these verb forms turn out to conform to the notion of parasitic paradigm.

Consider the agreement paradigm of the Hungarian inflected infinitives below:

(10)	<i>olvas</i> “to read”	<i>fest</i> “to paint”	<i>tör</i> “to tear”
1SG	olvasnom	festenem	törnöm
2SG	olvasnod	festened	törnöd
3SG	olvasnia	festenie	törnie
1PL	olvasnunk	festenünk	törnünk
2PL	olvasnotok	festenetek	törnetek
3PL	olvasniuk	festeniük	törniük

12 In addition, data from other Romance languages, such as Italian and Portuguese subjunctives, shows that a parasitic paradigm does not show distinct affixes for the 2nd person (singular and plural) with respect to authentic paradigms. This observation seems interesting, especially in the light of other findings on the status of the 2nd person: several studies attested a “special” status of the 2nd person in the pronominal paradigm (Heap 2000, 2001; Poletto 1993, Renzi and Vanelli 1982). Further research is needed.

(11)	PERSON	SINGULAR	PLURAL
	1	-m/-om/-em/-öm	-nk/-unk/-ünk
	2	-d/-od/-ed/-öd	-(o)tok/-(e)tek/-(ö)tök
	3	-(j)a/-(j)e	-(j)uk/-(j)ük

(cf. Kenesei et al. 1998)

Notice that the agreement endings in (10) (for the three classes of verbs) are identical to the personal possessive affixes from the pronominal paradigm in (11). Hungarian inflected infinitives are therefore parasitic on the pronominal paradigm¹³.

6. Conclusion

In this paper, I presented a correlation between the status of morphological paradigms – autonomous or parasitic – and the tense feature. This correlation seems to suggest that there is information exchanged at the interface between syntax and morphology and that morphological overt realisation of agreement features is linked to the morphosyntactic tense feature. There are several implications for the general model: 1° the subjunctive is a tenseless mood in Romanian, and presumably universally; 2° only the T-Agr complex is visible at the morphological level, and agreement features are asymmetrically linked to the tense features; 3° uninterpretable Agr features are not, by themselves, visible morphologically – there are no authentic verbal paradigms based solely on agreement features; therefore, uninterpretable Agr features remain so at all levels of grammar; 4° morphological realization of agreement features is not always a direct result of the checking syntactic operation: default mechanisms are also at work (cf. also Bouchard 1995 for agreement in extra-sentential contexts, Roberge 1999 on Quaint Agreement phenomena, among others).

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¹³ This raises the interesting question about how far a search for a paradigm can go into the morphological space. The same applies to the Portuguese inflected infinitive, which takes the paradigm of the future subjunctive. I leave this question open here for future research.

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