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# Romanian *tough*-constructions and multi-headed constituents

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I propose an account for the absence of agreement on *tough*-words in Romanian *tough*- constructions (TCs). I argue that absence of agreement cannot be explained by an A-bar movement derivation, because Romanian TCs involve A-movement, the non-finite complement having passive properties. I also argue against an adverb analysis of Romanian *tough*-words and against a subject analysis of the clausal argument of the *tough*-word. I propose a novel analysis, which is supported by West Germanic data: non-agreeing TCs are multi-headed constituents, in which the adjective is the internal head, selecting the supine CP, and the supine C is the external head. Since the adjective is not the external head, it cannot take part in agreement relations involving the [Adjective+Supine] constituent. I provide a technical implementation of the notion of multi-headed constituents which relies on Citko’s (2008) flexible label projection: in this case, it is the label of the complement that projects (an instance of Project-Goal). Finally, I discuss the correlation between the availability of multi-headed TCs and the morphological (in)distinctness between adjectives and adverbs.

## 1. Introduction: The problem of Romanian *Tough*- Constructions

Standard Romanian is unique among Romance languages in that it disallows agreement on the adjective in *tough*-constructions (TCs). As can be seen in (1), sequences *tough*-adjective + Supine can be used attributively with a noun interpreted as the object of the supine (see (1a)) as well as predicatively with a subject interpreted as the object of the supine (see (1b)), where verb agreement indicates that the preverbal DP is the grammatical subject), exactly like TCs in the other Romance languages and in English. However, the adjective in these constructions fails to agree with the head noun or subject, respectively:

- (1) a. o teorie greu de înțeles (Attributive TC)  
a theory(F) hard.MSG of understand.SUP  
‘a theory hard to understand’

- b. Aceste teorii sunt greu de înțeles. (Predicative TC)  
 these theories(F) are hard.MSG of understand.SUP  
 ‘These theories are hard to understand,’

Instead, it shows a masculine singular form. This form can be analyzed as a morphological default, used when the adjective’s gender and number features remain unvalued, being the form used when the adjective is the predicate of a sentence without a nominal subject, as can be seen in (2) (note that (2a) is the impersonal pattern of *tough*-adjectives):

- (2) a. E greu {să înțelegem teoria / de rezolvat  
 is hard.MSG SBV understand.1PL theory-the of solve.SUP  
 atâtea probleme}.  
 so-many problems  
 ‘It’s hard {for us to understand the theory/to solve so many problems}.’  
 b. [A vorbi liber despre aceste subiecte] nu e ușor.  
 to talk.INF freely about these matters not is easy.MSG  
 ‘To talk offhandedly about these matters is not easy.’

In other Romance languages (see (3a-c)) as well as in some non-standard varieties of Romanian and in the language (see (3d)), *tough*-adjectives do agree:

- (3) a. teorie dificili da testare (It.)  
 b. théories difficiles à tester (Fr.)  
 c. teorías difíciles de probar (Sp.)  
 theories difficult.PL to test  
 d. Pogor o declară rea și imposibilă de primit.  
 Pogor it(F) declared bad and impossible.FSG of receive.SUP  
 (XIXth century Ro.: Negruzzi, apud Pană-Dindelegan 1982)  
 ‘Pogor declared it bad and impossible to accept.’

Given the fact that the [*tough*-A + Supine] constituent occupies an attributive position in (1a), and the copula does agree in (2b), the absence of agreement in (1) is surprising. In this paper I will concentrate on the analysis of this construction, which is the most challenging from a theoretical point of view. I will also present analyses of the agreeing pattern, insofar as the explanation for the absence of agreement in the other construction implies a comparison with the ‘normal’ agreeing construction.

Various solutions have been proposed for the problem of the lack of agreement, which I will revise in Section 2, where I will also show that each of these analyses has a number of problems. In Section 3 I will propose my own solution to the problem, which combines insights from some of the previous analyses and uses a non-standard syntactic concept, that of multi-headed constituents. I will explain the lack of agreement by the fact that the verbal functional head selected by the adjective acts as the

*external* head of the construction (the adjective being the *internal* head). In Section 4 I will discuss the theoretical aspects of this analysis, proposing an implementation of the idea which is based on the flexible label projection mechanism proposed by Citko (2008), a.o. In Section 5 I will discuss the correlation between the availability of multi-headed TCs and the morphologic (in)distinctness between adjectives and adverbs.

Before discussing the analyses, a few remarks are in order about the non-finite form used in Romanian TCs: this is the so-called “supine”, a second infinitival form of Romanian, formally identical to the masculine singular of the past participle, preceded either by *de* ‘of’ or by prepositions.<sup>1</sup> The element *de* has acquired here the status of a low non-finite complementizer, similar to French *de*, *à* and Italian *di*, *a*, hence its analysis as C (Soare 2002; Hill 2002) or Fin (Giurgea and Soare 2010a). Given that in some contexts (in reduced relatives) the supine has modal properties (see Section 2.3 below), and Romanian has a similar modal particle for the subjunctive (*să*), another possible label of *de* is Mood (Giurgea and Soare 2007). Since a fine-grained analysis of Romanian supines is outside the scope of this paper, I will use here the label C—which is justified by the fact that *de* alternates with prepositions. Nevertheless, it should be stressed that this element behaves as a defective C, insofar as supine clauses, unlike other non-finite clauses in Romanian, do not license a subject (see Soare 2002) and do allow A-movement (as we will see in 2.1 below).<sup>2</sup>

## 2. Previous accounts and their problems

### 2.1 Dye (2006)

Building on the well-established correlation between A-movement and agreement, Dye (2006) proposes that agreeing TCs involve A-movement, whereas non-agreeing TCs involve A-bar movement.

For non-agreeing TCs, Dye assumes that the *tough*-A selects a CP, whose verb is in the active voice (represented as a TransP below a PredP; Dye adopts Bowers’s 2002 analysis of voice). The object of the supine is a null operator undergoing A-bar movement inside this CP, to SpecCP. The subject of the TC is base-generated in a SpecPredP above the *tough*-A and is coindexed with the null operator:

$$(4) \quad \begin{array}{l} \text{[}_{\text{PredP}} \text{Subj}_i \text{ [ Pred}^0 \text{ [}_{\text{VP}} \text{[be [}_{\text{AP}} \text{easy [}_{\text{CP}} \text{Op}_i \text{ de [}_{\text{PredP}} \text{V}_{\text{Supine}} \text{ [}_{\text{TransP}} \text{t}_V \text{ [}_{\text{VP}} \text{t}_V \text{ t}_{\text{Op}} \\ ]]]]]]]]] \end{array}$$

1. This form does not directly continue the Latin supine, but originates in a verbal nominalization built with the same suffix as the past participle (see Soare 2002; Dragomirescu 2013); the nominal use is still productive today (see Cornilescu et al. 2013).

2. For a few exceptions, see Pană-Dindelegan (2011), Dragomirescu (2013).

For agreeing TCs, she assumes that the *tough*-A selects a smaller projection (PredP), which lacks TransP (the supine thus being passive). The object of the supine, which, unlike in (4), is not case-licensed by the supine verb, raises to the supine's SpecPred, then to SpecAP and further up to SpecPredP, becoming the subject of the main clause:

- (5) [<sub>PredP</sub> Subj<sub>i</sub> [<sub>Pred</sub><sup>0</sup> [<sub>VP</sub> [*be* [<sub>AP</sub> t<sub>i</sub> [*easy* [<sub>PredP</sub> t<sub>i</sub> [*de* [<sub>V<sub>Supine</sub></sub> t<sub>i</sub>]]]]]]]]]]]

This account is confronted with serious problems. First, there is no evidence for A-bar movement in non-agreeing TCs, as opposed to agreeing TCs. As noticed by Soare (2002) and Giurgea and Soare (2007), in non-agreeing TCs the dependency must be strictly local, unlike in English TCs:

- (6) a. \*Această carte e greu de convins copiii  
           this book(F) is hard.MSG of convince.SUP children-the  
           s(-o) citească  
           SBJV(-it) read.3  
       b. This book is hard to convince children to read.

Soare (2002) concludes that the supine in non-agreeing TCs is passive. This is supported by the fact that it allows *by*-phrases (as noticed by Giurgea and Soare 2007):

- (7) cărți greu de înțeles de către copii  
       books hard of understand.SUP by children

Dye gives two pieces of evidence in favor of A-bar movement in non-agreeing TCs. The first one involves a supine verb taking another supine as its complement:

- (8) Noțiuni de genul acesta vor fi dificil de început  
       notions of kind-the this will be hard of begin.SUP  
       de abordat (OK for Dye 2006)  
       of approach.SUP

First, notice that such examples are not fully acceptable (for me and other speakers I consulted) and I have been able to find only one example of this type on Google:

- (9) Ai deschis un subiect interesant și deloc ușor de  
       have.2SG opened a subject interesting and not-at-all easy of  
       terminat de dezbătut.  
       finish.SUP of discuss.SUP  
       'You opened a subject that is interesting and not at all easy to finish  
       debating upon.'

(<http://www.linkedin.com/groups/Atitudinea-sau-experienta-2260452.S.49801983>)

More importantly, there is evidence that these constructions involve A-movement. First, notice that such a local relation is only possible if the low verb is also a supine. Moreover, the high verb must be *a verb that allows a long passive*. This construction, not fully grammatical in Romanian, is the easiest to get precisely with the verb *termina* 'finish', as shown by the following attested example:

- (10) după ce Scriptura a fost terminată de scris  
 after that Bible-the.F has been finished.FSG of write.SUP  
 (www.crestinortodox.ro/forum/)

This type of example has the same degree of acceptability as those in (8)–(9) (and the same sporadic occurrence on the Internet).

The second argument for A-bar movement offered by Dye is licensing of parasitic gaps. Here I strongly disagree with the author, finding the example totally unacceptable (a judgment shared by the speakers I consulted):

- (11) \*Aceleste formule sunt ușor de memorat fără (de)  
 these formulae are easy of memorize.SUP without (of)  
 a înțelege (OK for Dye 2006)  
 to understand

In conclusion, non-agreeing TCs appear to involve A-movement, the supine complement having passive properties (see (7)). The locality constraints are the same as for the agreeing TCs of other Romance languages (see Canac-Marquis 1996 for French; Giurgea and Soare 2010b for French and Italian):

- (12) \*des livres difficiles à convaincre tes enfants de lire (Fr.)  
 INDEF.PL books difficult.PL to convince your children to read

Secondly, it is not clear, under Dye's analysis in (4), how the thematic interpretation of the external argument is achieved. Dye assumes that this argument is somehow linked ("by some notion of predication coindexation") to the null operator in the adjective's complement. But what element in the structure guarantees the interpretative connection between the subject and the null operator? I think the only possible candidate is the adjective, because this construction is lexically restricted to certain adjectives, and the clause hosting the null operator is selected by the adjective. SpecPred is not a thematic position *per se*. But this implies that the subject must be argumentally related to the adjective. Then we expect agreement, as we do for any external argument of an adjective.

Thirdly, in (4), the subject, although it sits in SpecPred, fails to trigger agreement on the adjective. But Pred(icate)Phrases have been introduced precisely for hosting the base (thematic) position of the external argument of adjectives in general (see Bowers 1993; Baker 2003), and predicative adjectives in Romanian do agree, like in the other Romance languages.

## 2.2 Giurgea and Soare (2007)

The two other analyses I discuss share the idea that Romanian TCs involve A-movement, as we have seen in Section 2.1 above.

Giurgea and Soare (2007) propose that in non-agreeing TC the clause is a subject, sitting in SpecPred:

- (13) [<sub>PredP</sub> [<sub>SupineP</sub> V Subject] [Pred AP]]

By contrast, in agreeing TCs, the clause is a complement; the verb's object, which needs to raise for case-licensing, passes through SpecPred, whereby it triggers agreement:

- (14) [<sub>PredP</sub> Subject [<sub>AP</sub> A [<sub>InfinitiveP</sub> V Subject]]]

A potential problem of this analysis is that in non-agreeing TCs, the clause normally *follows* the adjective, so that obligatory extraposition of a clausal SpecPred must be assumed. This is indeed the normal order with clausal arguments of impersonal adjectives as in (15):

- (15) E important să fim devreme.  
is important SBJV be.1PL early  
'It's important that we be there early.'

Since the clause is the *external* argument of the adjective, it can be analyzed as occupying SpecPred (on the assumption that copular constructions uniformly involve a PredP complement). We thus have independent evidence for obligatory extraposition of clausal SpecPred.

But the analysis in (13) still faces problems: for predicative TCs, it is not clear why T probes the DP subject inside the subject clause, instead of showing a default 3sg form, like in other cases of clausal subjects—in other words, what is the difference between the impersonal construction in (16a) (and also (2) above) and the TC in (16b–c)?

- (16) a. E greu de rezolvat atâtea probleme.  
is hard.MSG of solve.SUP so-many problems  
'It's hard to solve so many problems.'  
b. Sunt greu de rezolvat problemele.  
are.3PL hard of solve.SUP problems-the  
c. Atâtea probleme sunt greu de rezolvat  
so-many problems are.3PL hard of solve.SUP

A possible answer is that the subject clause is phasal in (16a) and non-phasal in (16b–c). The non-finite projection in TCs would thus be transparent for Agree with T, leading to the licensing of the supine's (deep) object as a nominative subject. For attributive TCs, the role of T in promoting the object would be played by the head involved in relativization (Pred<sub>+rel</sub> according to Giurgea and Soare 2007).

The most problematic aspect of this analysis is the assumption that the finite clause is not *c*-selected in non-agreeing TCs, as opposed to agreeing TCs (where it is a complement). This leads us to expect non-agreeing TCs to be less dependent on the lexical choice of the adjective than agreeing TCs. But Romanian non-agreeing TCs show roughly *the same lexical restrictions* as their agreeing counterparts in other languages—as we can see in (17), not all adjectives that can take a clausal subject can appear in non-agreeing TCs:

- (17) a. E amuzant de citit povestirile lui.  
is amusing.MSG of read.SUP stories-the his  
'It's amusing to read his stories.'
- b. \*Povestirile lui sunt amuzant de citit.  
stories(F)-the his are amusing.MSG of read.SUP
- c. E frumos {să-ți respecti părinții / de spălat  
is beautiful SUBJ-you.DAT respect.2SG parents-the of wash.SUP  
rufele afară}.  
linen(PL)-the outside  
'It is proper to respect your parents/to wash the linen outside.'
- d. \*Părinții sunt frumos de respectat.  
parents-the are beautiful.MSG of respect.SUP
- d'. \*Rufele sunt frumos de spălat afară.  
linen(PL) are beautiful.MSG of wash.SUP outside
- e. E plăcut de făcut focul pe plajă.  
is pleasant of make.SUP fire.the on beach  
'It's pleasant to make the fire on the beach.'
- f. \*foc plăcut de făcut  
fire pleasant of do.SUP

This strongly suggests *c*-selection by the adjective. But SpecPred is not *c*-selected.

Moreover, one may wonder why the derivation leading to non-agreeing TCs is not available in the other Romance languages.

### 2.3 Soare (2002), Soare and Dobrovie-Sorin (2002), Giurgea and Soare (2010a,b)

These studies adopt the traditional analysis (see, e.g., Pană-Dindelegan 1992), which takes the *tough* word in non-agreeing TCs to be an adverb (rather than an adjective). Indeed, adverbs in Romanian are usually homophonous with masculine singular adjective forms (this holds for all adjectives involved in TCs):

- (18) Cântă/scrie greu.  
sings/writes hard(.MSG)  
'S/he sings/writes with difficulty/hard.'



In this analysis, the *tough*-word is not the head selecting the supine, but a specifier of the verbal projection. Giurgea and Soare (2010a,b), analyzing *de* as Mood<sup>0</sup>, place the *tough*-word in SpecMoodP:

- (19) [<sub>PredP</sub> teorie [<sub>Pred</sub><sup>0</sup> [<sub>MoodP</sub> greu [<sub>Mood</sub> de][înțeles teorie]]]]]  
(Giurgea and Soare 2010a,b)

Since the *tough*-word is not the (lexical) head of the construction, this analysis predicts that supines should be able to function as adnominal modifiers and predicates in the absence of the *tough*-word. This prediction is borne out: *de*-supines can function as modal reduced relatives, with a deontic necessity or teleological possibility meaning (see Giurgea and Soare 2010b):

- (20) a. cărți de citit  
book of read.SUP  
'books to (be) read'  
a' cărți greu de citit  
books hard of read.SUP  
'books hard to read'  
b. Cărțile sunt de citit (de către elevi) până mâine.  
books-the are of read.SUP by pupils until tomorrow  
'The books are to be read (by the pupils) until tomorrow.'  
b'. Cărțile sunt greu de citit (de către copii)  
books-the are hard of read.SUP by children  
'The books are hard to read (for children).'

The passive character of both constructions is indicated by the agent-PPs in (20b–b').

This analysis faces two problems: (i) Since in non-agreeing TCs *tough*-words do not take the clause either as an external or as an internal argument, the connection between the use of *tough*-words in TCs and their adjectival use in the impersonal construction (see (2)) is lost.

(ii) We expect to find TCs built with adverbs in languages where adverbs do have distinct morphology, contrary to fact:

- (21) a. \*livres facilement à lire (Fr.)  
b. \*books easily to read/to be read

This casts some doubt on the analysis of *tough*-words in Romanian TCs as adverbs.

### 3. Proposal: Non-agreeing TCs as multi-headed constituents

The solution I propose combines the account for the lack of agreement in the analysis 2.3, namely, the fact that the verbal functional head rather than the *tough*-word is

the head of the construction, with the idea that the *tough*-word c-selects the adjective (dispensing thus with an adjective/adverb ambiguity of *tough*-words, as in Section 2.3, and with the idea that the clause is the external argument, problematic for the reasons exposed in Section 2.2 above).

These two apparently contradictory claims can be reconciled by using the notion of *multi-headed constituents*, i.e., constituents where a distinction can be made between an *internal* and an *external* head. The internal head is the word that c-selects a phrase as its complement, building the structure. The external head, a word different from the internal head, is the word that gives the entire constituent its label—it is called *external* because it behaves as a head in everything that concerns the distribution of the whole constituent, i.e., its *external* syntactic relations.

In our case, the adjective that c-selects the supine clause is the *internal* head. However, the whole [A+Supine] constituent takes the label of the complement (the label of the Supine complement projects). Thus, the functional head of the supine, for which I use the label C here, is the *external* head. The constituent [A + CP] is thus labeled CP.

This labeling is supported by the fact that TCs and modal reduced relatives show the same distribution, as we have seen in (20) above. Lack of agreement follows from the fact that agreement is an *external* relation of the [A+Supine] constituent, and the external head of this constituent is C.

Multi-headed constituents have been proposed on independent grounds, for other constructions. For instance, some modified cardinals are built by using prepositions, as illustrated in (22). The preposition takes the cardinal as its complement, behaving thus as an internal head (notice that in (22b) the preposition selects a coordination of cardinals). The whole constituent nevertheless shows the distribution of cardinals, and not that of (spatial) PPs. Thus, in (22) we see it occupy the position between a definite determiner and a noun, which is typical of cardinals and other nominal quantity expressions. Note also that the cardinal behaves as the head with respect to agreement—as can be seen in (22), cardinals that have inflection (such as *doi*, *două* ‘two.M’, ‘two.F’) agree with the head noun and the determiner:

- (22) a. cele [peste două] zile (Rom.)  
           the.FPL over two.F days(F)  
           ‘the more than ten days’  
       b. cele [între două și șase] luni  
           the.FPL between three.F and six months(F)

The cardinal can also appear inside the prepositional complement of a degree head, and still show the behavior of a head with respect to distribution of the entire constituent and agreement (notice that *doi* agrees, whereas the quantitative *mult* ‘much’,

although the lexical head on which the comparative is built, does *not* agree—it does not show the M.PL form *mulți*):

- (23) *cei [mai mult [de doi]] ani* (Rom.)  
 the.ML more much of two.M years(M)  
 ‘the more than two years’

Another example, discussed in Van Riemsdijk (2006), is (24). Since English obeys the head-final constraint on prenominal modifiers, the adjective *obvious* must be considered the head of this construction. However, it is inside a PP selected by the adverb *far*. Using a multi-headed constituent analysis, *far* is to be treated as the internal head, and the adjective as the external head (such constituents indeed have the distribution of adjectives):

- (24) a [far [from obvious]] matter

Crucial evidence for the multi-headedness analysis of TCs is provided by German and Dutch.<sup>3</sup> In these languages, TCs can appear attributively in prenominal position, ending with the infinitive verb. Since prenominal modifiers obey the head-final constraint in these languages, the infinitive should be considered the (external) head of the constituent. Moreover, in German the infinitive also receives agreement (plus a *-d-* morpheme which is inserted between the infinitive ending and the agreement morpheme, making it look like the present participle, see (25a)):

- (25) a. *ein [schwer zu lesen-d-es]* Buch (German)  
 a hard to read.INF-*d*-NSG.NOM/ACC book(N)  
 b. *Das Buch ist schwer zu lesen*  
 the book is hard to read.INF
- (26) *een [makkelijk te maken] tentamen* (Dutch, Zwart 2012)  
 a easy to make.INF test

Agreement clearly indicates that the infinitival verb is the external head of the constituent.

Like in Romanian, the non-finite form in TCs is the same as the one used in modal reduced relatives:

- (27) a. *ein [zu lesen-d-es]* Buch (German)  
 a to read.INF-*d*-NSG.NOM/ACC book(N)  
 ‘a book to read/to be read’  
 b. *Das Buch ist zu lesen.*  
 the book is to read.INF  
 ‘The book is to be read.’

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3. I am grateful to Petra Sleeman for having pointed out to me the Dutch construction.

The analysis proposed for Romanian extends thus to German and Dutch.

The derivation of Romanian TCs is schematized in (28), which I assume to be the common part of predicative and attributive TCs—a reduced relative, analyzable as a PredP (see Giurgea and Soare 2010a). The predicative and attributive constructions are derived according to whether this PredP is the complement of the copula (or embedded in other predicative environments), see (29a), or embedded into a relativization structure, for which I assume a nominalizing head (see Bhatt 2002; Giurgea and Soare 2010a), as in (29b):

$$(28) \quad [_{\text{PredP}} \text{DP} [\text{Pred}^0 [_{\text{CP}} \text{A} [_{\text{CP}} \text{de+V} [_{\text{SupP}} \text{t}_{\text{DP}} \text{t}_{\text{V}} [_{\text{VP}} \text{t}_{\text{V}} [_{\text{VP}} \text{t}_{\text{V}} \text{t}_{\text{DP}}]]]]]]]]]$$

(29) a. Predicative TC (with copula):

$$[_{\text{TP}} \text{DP} [\text{T}^0 [_{\text{VP}} \text{be} [_{\text{PredP}} \text{t}_{\text{DP}} [\text{Pred}^0 [_{\text{CP}} \text{A} [_{\text{CP}} \text{de+V} [_{\text{SupP}} \text{t}_{\text{DP}} \text{t}_{\text{V}} [_{\text{VP}} \text{t}_{\text{V}} [_{\text{VP}} \text{t}_{\text{V}} \text{t}_{\text{DP}}]]]]]]]]]]]$$

b. Attributive TC:

$$[_{\text{NomP}} \text{NP} [\text{Nom}^0 [_{\text{PredP}} \text{t}_{\text{NP}} [\text{Pred}^0 [_{\text{CP}} \text{A} [_{\text{CP}} \text{de+V} [_{\text{SupP}} \text{t}_{\text{NP}} \text{t}_{\text{V}} [_{\text{VP}} \text{t}_{\text{V}} [_{\text{VP}} \text{t}_{\text{V}} \text{t}_{\text{NP}}]]]]]]]]]]]$$

Regarding the structure in (28), the claims defended here are the following: (i) although the A selects the CP, the external head is the supine C, therefore the A+CP constituent is labeled CP; (ii) the entire CP domain is a reduced clause which doesn't case-license the object (see Section 2.1 above for the passive nature of the supine in TCs); the object raises to SpecPred for case-licensing reasons (possibly through an intermediate specifier position inside the clause, according to the preferred analysis of passivization).<sup>4</sup> It is a well-known property of reduced relatives that they involve an un-case-marked argument (see Bhatt 1999, who uses the term 'external argument'; in passive reduced relatives, this argument is, of course, the deep object).

Other details about the structure in (28) are not relevant for our topic and are represented for convenience—I made no choice about the inflectional head which bears the supine morphology, using the label Sup. Since in Romanian mood particles/low complementizers and auxiliaries always form a complex head with the verb (Dobrovie-Sorin 1994; Barbu 1999; Giurgea 2011), I represented the verb as raised to the C head *de* (with a non-standard order inside the complex head *de+V*).

Agreeing TCs that are based on a passive configuration—in non-standard varieties of Romanian as well as other Romance languages (see (3) above)—differ from the structures in (28)–(29) only in labeling, which in their case proceeds in the standard way (there is no relabeling): the A+CP constituent is labeled AP—the A is both the

4. For recent proposals on passivization, see Collins (2005), Roberts (2010), Bruening (2013), a.o.

external and the internal head of the construction. Therefore, it establishes an agreement relation with SpecPred. Since the raised object passes through SpecPred, the adjective establishes agreement with it.

The table in (30) below summarizes the comparison between the proposed account and the previous analyses. (The first five rows are requirements, showing why the proposed analysis is to be preferred over its predecessors; the sixth and seventh rows are predictions, therefore the ‘no’ in the respective columns is not to be taken as an argument against the analyses.)

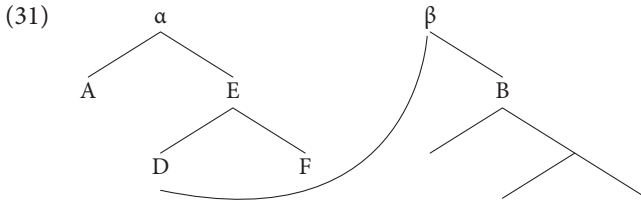
(30) Comparison between the proposed analysis and previous ones, discussed in Section 2

|  | Proposed analysis | Analysis 2.1 | Analysis 2.2 | Analysis 2.3 |
|--|-------------------|--------------|--------------|--------------|
| <i>tough</i> -words have the same category in all their uses                                 | OK                | OK           | OK           | *            |
| <i>tough</i> - words <i>select</i> the clause in non-agreeing TCs (like in agreeing TCs)     | OK                | OK           | *            | *            |
| TCs involve A-movement   | OK                | *            | OK           | OK           |
| Lack of agreement  | OK                | *            | OK           | OK           |
| Absence of TCs with marked adverbs (* <i>easily to do</i> , * <i>difficilement à faire</i> ) | OK                | OK           | OK           | *            |
| predicts that TCs have the same distribution as modal reduced relatives                      | yes               | no           | no           | yes          |
| predicts that the <i>tough</i> -word in non-agreeing TCs have the same forms as adverbs      | no                | no           | no           | yes          |

#### 4. On the formal implementation of multi-headedness

The main problem of the account proposed in the previous section is the use of non-standard analytical tools. This section is devoted to a discussion of the theoretical aspects of my proposal.

Van Riemsdijk (2006) formalizes multi-headedness by the concept of *grafting*. Noticing that the minimalist notion of Merge leaves open the possibility of re-merging a syntactic object that is not the root, he proposes that in multi-headed constituents the external head is remerged into a different tree, as represented below:



Citko (2005, 2011) uses the same mechanism, called *parallel Merge*, for the derivation of a variety of constructions:<sup>5</sup> ATB movement, *wh*- questions with conjoined pronouns, right node raising, gapping, free relatives, transparent free relatives, *wh*-amalgams, cleft amalgams., The operation can be represented as in (32), treating re-merging as sharing:



Here, the constituent  $\gamma$  is shared between  $\alpha$  and  $\beta$ . Applying the idea to multi-headed constituents, the head of  $\gamma$  would be the external head, and the head of  $\alpha$ —the internal head.

The main problem of this proposal is how these structures are interpreted at the interfaces, in particular at the PF-interface, where a single string must be obtained from the two trees.<sup>6</sup> Note moreover that the constructions treated by this mechanism by Citko fall for the most part into two major types—(i) constructions involving coordination, where the trees which share a constituent are sub-trees of a single big tree (ATB movement, *wh*-questions with conjoined pronouns, right node raising, gapping), and (ii) constructions with a parenthetical interpretation (transparent free relatives, *wh*- amalgams, cleft amalgams). The solutions to the linearization problem envisaged by Citko (2011) mainly apply to type (i). In any case, TCs don't belong to either of these types; multi-headedness in TCs is correlated to a *lexical* property of *tough*-words, appearing in one of their c-selectional patterns.

5. Similar notions are Bobaljik and Brown's (1997) 'interarboreal movement' and Nunes's (2001, 2004) 'sideward movement'.

6. For other problems regarding van Riemsdijk's (2006) proposal, see Grosu (2010).

For these reasons, I adopt a different account of multi-headedness in TCs (which may extend to the other multi-headed constructions discussed in Section 3). I do not assume multidominance, but rather relabeling: multi-headedness appears when the label of a constituent is different from the label of the head whose selectional properties have built that constituent. The external head is the one that projects its label in this non-standard fashion (such as C in TCs, which is the head of A's complement).

As pointed out by Chomsky (2000), the assumption that the selector projects its label (i.e., the label of  $(\alpha, \beta)$ , where  $\alpha$  is the selector, is necessarily  $(\alpha)$  is an axiom (it is non-derivable from any other principle). Since this observation was made, several studies have proposed to abandon this assumption in specific cases—for instance, allowing moved elements to project their label (Larson 1998; Donati 2006, a.o., for free relatives; Iatridou, Anagnostopoulou, and Izvorski 1999/2001, adopted by Bhatt 1999, for raising relatives—the claim is that the NP attracted to SpecCP projects its label). The most radical proposal was made by Citko (2008), who allows all possibilities of label projection: Project Probe (i.e., selector: the standard label projection), Project Goal (i.e., selectee; this includes both specifiers and complements), Project Both (used for extended projections and head movement), and Project None (suggested for the root node).<sup>7</sup> Notice that projection of the label of the complement is assumed to be possible, and is in fact used, in the form of Project Both (where the 'Goal' is the complement), to explain the percolation of the categorial feature of the lexical head in extended projections.

In our TCs, we have an instance of projection of the complement's label. Because this type of label projection is certainly more restricted than Project Probe, I propose to formalize it by using a special projection feature on the Probe—the default mechanism, used when there is no special projection feature, being Project Probe. This feature is a lexical feature associated to a given selectional feature. I call selectional features the features that trigger Merge of a complement or a specifier (see Bruening 2013).

I propose thus that *tough*-adjectives in Romanian have a c-selectional feature [ $+de_{\text{sup}}$ -CP] (where  $de_{\text{sup}}$  is the complementizer *de* that selects the supine) associated to a [Project Goal] feature in TCs:<sup>8</sup>

7. In addition to Citko's examples of the various possibilities, a clear case where the label is projected from the specifier is coordination constructions: e.g., in [DP [& DP]], & is the internal head, but D(P) is the label of the whole constituent.

8. This specification is necessary because Romanian has other *de* complementizers, with different properties (supine *de* and infinitive *de* have the same origin—the preposition *de*—but there also exists an indicative *de*, of unclear etymology).

- (33) [<sub>A</sub> *tough*]<sup>+de-CP +Project-Goal</sup> + [<sub>CP</sub> *de-V*<sub>Supine</sub> .....Object] → [<sub>CP</sub> [A] [*de-V*<sub>Supine</sub> .....Object]]

In the impersonal construction (see (2) in Section (1), *tough*-adjectives select for any irrealis clause (they can take supines, subjunctives or infinitives) and have no [Project Goal] feature.

A problem for this hypothesis is that *tough*- adjectives in TCs can combine with degree words:

- (34) probleme [atât de ușor de rezolvat]/ [mai ușor de rezolvat]  
 problems so-much of easy of solve.SUP more easy of solve.SUP  
 ‘problems so easy to solve/easier to solve’

If such words involve a DegP (for which there is evidence in Romanian, see Corver 2000; Vișan 2004; Cornilescu and Giurgea 2013), it follows that the A+Supine constituent does not immediately become a CP, but can still behave as an adjective, being selected by Deg.

A solution to this problem is to assume that the [Project-Goal] feature becomes active only after the functional structure of the head is built. It is widely admitted that functional heads share some features of the lexical head (this idea is at the core of the notion of ‘extended projection’ proposed by Grimshaw 1991). In the flexible label projection theory, as we have seen, the concept of extended projection can be represented using Project Both—we would thus have a label {Deg,A} instead of Deg on the DegP. Let’s assume that the [Project-Goal] feature of the A percolates to the Deg-level and triggers relabeling only after the functional domain of the internal head (i.e., the DegP) is completed. The labeling mechanism would work as follows:

- (35) [<sub>Deg</sub> mai] + [<sub>A</sub> ușor [<sub>C</sub> de rezolvat]]<sub>A (+CP+ Project-Goal)</sub> →  
 [mai [[<sub>A</sub> ușor [<sub>C</sub> de rezolvat]]]<sub>Deg+A (+CP+ Project-Goal)</sub> → [<sub>CP</sub> mai [[<sub>A</sub> ușor [<sub>C</sub> de rezolvat]]]

## 5. Non-agreeing TCs and the Adj/Adv indistinctness

In discussing the analysis of *tough*-words as adverbs (Section 2.3), we noticed that in Romanian most adverbs do not have a distinctive morphology, showing the default form of adjectives instead (which is the masculine singular form). We have seen that, in spite of this fact, an analysis as adverbs is unlikely because in languages with overt adverbial marking (like Engl. *-ly*, Fr. *-ment*, It. *-mente* etc.), we never find such forms in TCs. Nevertheless, there seems to be a correlation between non-agreeing TCs (in languages which have adjectival agreement) and lack of adverbial morphology: not just in Romanian, but also in the Germanic languages discussed in the previous



section, which also show relabeling in TCs, adverbs are usually not formally distinguished from adjectives:

- (36) a. Er singt wunderbar/ schön / schrecklich. (German)  
           he sings wonderful beautiful horrible  
           ‘He sings/is singing wonderfully/beautifully/horribly.’  
       b. Er ist wunderbar/ schön / schrecklich.  
           he is wonderful beautiful horrible  
           ‘He is wonderful/beautiful/horrible.’
- (37) Hij zingt/is prachtig. (Dutch)  
       he sings/is splendid  
       ‘He sings splendidly/He is splendid.’

On the other hand, the other Romance languages, which use a suffix derived from Latin *mente* for adverbs, do not have non-agreeing TCs.

- (38) a. \*Ces livres sont difficile / difficilement à lire (Fr.)  
       b. \*Questi libri sono difficile / difficilmente da leggere (It.)  
       c. \*Esos libros son difícil / difícilmente de leer  
           these books are difficult.sg / difficult-ly to read

These data support the following generalization:

- (39) TCs with relabeling are found in languages where adjectives and adverbs are not formally distinguished.

If this generalization proves to hold cross-linguistically, we should provide an explanation for it. What I would suggest is that *tough*-words, although merged as adjectives, must be *compatible* with the syntactic environment created by non-standard label projection, and in this environment, they come to occupy an adverbial position. Therefore, the construction is allowed only in languages which have items *underspecified* for the adjective/adverb distinction—items for which we should rather assume an ‘archi-category’ *a*.

Since there are many semantic and distributional similarities between quality adjectives and adverbs (both are typically modifiers, with a poor functional structure—only the Degree projection—and often express properties which can be applied either to individuals or to events or states of affairs, see *a beautiful woman/a beautiful dance/She dances beautifully; This is a clever action/He cleverly did it*), and for those properties that can apply both to individuals and events there is a productive way of forming adjective-adverb pairs (even in languages where the two classes are morphologically distinct, see Fr. *-ment*, Engl. *-ly*, etc.), the hypothesis that languages where there is no overt morphological difference between the members of these pairs have an archi-category *a* instead of a zero derivational morpheme (for the adverb) does not

seem unreasonable. Baker, in his book on lexical categories also argues that adjectives and adverbs are “essentially the same category” (Baker 2003, 151; see Section 4.5 of the book).

A possible objection against this hypothesis comes from agreement. Of course, even when there is no adverbial suffix, adjectives differ from adverbs by the fact that they can show agreeing forms. Adopting the current minimalist assumption that agreeing items come from the lexicon with unvalued features, one might say that adjectives are distinct from adverbs by possessing unvalued  $\phi$ -features in their lexical entries. A full treatment of this objection would require a discussion of current theories of agreement, which cannot be addressed in the space of this paper. However, I think there is an answer to this objection which holds no matter which theory of agreement we choose. As we have seen in Section 1, items which are definitely adjectives can appear in environments where no value for their  $\phi$ -features is provided (in predicate position of ‘impersonal’ clauses, e.g., when the subject is a clause, see (2) above).<sup>9</sup> This means that either adjectives can come without  $\phi$ -features or that absence of valuation does not make the derivation crash (unvalued features do not create a problem at the PF-interface if the system has morphological defaults—underspecified vocabulary insertion rules in the Distributed Morphology framework). No matter which account is chosen, it is equally applicable to adverbs (*a* items in an adverbial use).

## 6. Conclusion

I have argued that the difference between Romanian TCs, where the *tough*-word does not agree, and agreeing TCs is not to be found in the argument structure—the clause is a complement of the adjective in both constructions—or in the type of movement (non-agreeing and agreeing TCs both rely on A-movement). I proposed that the lack of agreement is due to a non-standard label projection (or ‘relabeling’) by which the [A+CP] constituent receives the label CP instead of AP (a theoretical possibility for which Citko 2008 provided independent evidence). We thus obtain a ‘multi-headed’ constituent, in which the adjective is the internal head (selecting the clause) and the non-finite C is the external head. Since agreement is an *external* relation of the [A+Supine] constituent, the adjective does not take part in it. This type of TC has been shown to exist in German and Dutch. Since in these languages, like in Romanian,

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9. It is unlikely that adjectives in impersonal constructions get their  $\phi$ -features valued by an expletive subject in all instances: languages with overt expletives still have cases in which the clausal/verbal projection itself occupies the subject position, no expletive being present, e.g., Fr. *Se coucher tard est nuisible* ‘REFL go-to-sleep.INF late is harmful’.

adverbs are normally indistinguishable from (the default form of) adjectives, I envisaged the possibility of a correlation between relabeling in TC and the existence of an ‘archi’-category *a* comprising both adjectives and adverbs. This correlation may be explained by the fact that in the ‘relabelled’ constituent the adjective finds itself in an adverbial environment.

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