

# Subject Free Relatives in Null-Subject Languages: Evidence from Slavic<sup>1</sup>

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## 1 Introduction

Free relatives, also known as headless relatives<sup>2</sup>, get their name from the fact that they do not appear accompanying and modifying a noun phrase. In contrast, ‘ordinary’ relative clauses (both restrictive and appositive) are NP modifiers.<sup>3</sup> As an illustration, consider the Polish sentences in (1).<sup>4</sup> In (1a) the relative clause is headed, that is, it modifies the pronoun *ten*.<sup>5</sup> The relative clause in (1b) does not have a head to modify, i.e., it is a free relative.

- (1) a. Ten *kto umył ręce*, może zacząć jeść.  
that-one who washed hands can begin eat  
‘The one who has washed his hands can begin eating.’  
b. *Kto umył ręce*, może zacząć jeść.

The internal syntax of free relatives has been a matter of some disagreement, particularly concerning the position of the *wh*-word. The view that the *wh*-element is the head of the free relative, known as the HEAD HYPOTHESIS, is advocated by Bresnan and Grimshaw (1978). The bracketing in (2) illustrates their proposal:

- (2) [<sub>NP</sub> [<sub>NP</sub> kto] [<sub>S</sub> e umył ręce]]

The claim is that the *wh*-word is base-generated as the head of its phrase. Pronoun deletion in the remaining part of the free relative leaves a gap whose category is the same as that of the *wh*-word.

An alternative to Bresnan and Grimshaw’s proposal has been advanced by Groos and van Riemsdijk (1979), Harbert (1983), Suñer (1983, 1984), among others. Although the exact details of these accounts differ, the general approach, known as the COMP HYPOTHESIS, considers the *wh*-phrase to be in COMP (i.e., Spec, CP) of the free relative; the head is either phonologically null or altogether absent. The two variants of the approach, the NULL-HEAD COMP HYPOTHESIS and the NO-HEAD COMP HYPOTHESIS are shown in (3):

- (3) a. [<sub>NP</sub> [<sub>NP</sub> e] [<sub>CP</sub> kto<sub>i</sub> t<sub>i</sub> umył ręce]]  
b. [<sub>NP</sub> [<sub>CP</sub> kto<sub>i</sub> t<sub>i</sub> umył ręce]]

As seen in (3), the supporters of the COMP-Hypothesis hold that in free relatives the *wh*-word is placed in Spec, CP by *wh*-movement, just like in headed relative clauses.

The Head- and COMP- Hypotheses represent the two main approaches to the internal syntax of free relatives. Some mixed analyses have also been proposed, e.g. by Hirschbühler (1976) and Bonneau (1990), according to which the *wh*-phrase moves from COMP to the head position (in the overt syntax or at LF). The disagreement about the exact phrase structure of free relatives is particularly relevant to the phenomenon of MATCHING, to which I now turn.

In many languages the *wh*-phrase of a free relative has to be of the appropriate category (and case, where case is marked overtly on *wh*-pronouns) for the position where the relative clause itself appears. This phenomenon has been called the MATCHING EFFECT and languages vary as to whether or not they exhibit it. The requirement of matching is summarized in (4):<sup>6</sup>

(4) The Matching Requirement

- a. Case Matching:         $[_{FR} \text{wh-CASE}_i \dots ]\text{-CASE}_i$
- b. Categorical Matching:  $[_{FR} \text{wh-XP}_i \dots ]\text{-XP}_i$

Thus if the free relative clause appears as a direct object in a matching language, its *wh*-phrase has to be an NP and bear accusative case, if case is overtly marked.

Failure of matching results in ungrammaticality in languages like English, Dutch, German, French, Catalan, Spanish, as discussed in detail in Bresnan and Grimshaw (1978), Groos and van Riemsdijk (1979), Hirschbühler and Rivero (1981, 1983), Harbert (1983), Suñer (1983, 1984), among others. Languages like Latin, Classical Greek, Archaic German, Old Spanish, and Old English do not exhibit matching effects (cf. Groos and van Riemsdijk 1979, Harbert 1983).

Because the Slavic languages are *pro*-drop, they will figure prominently in the later discussion of (non-)matching in subject position. It is therefore important to establish that they indeed are matching languages. Borsley (1984) and Rudin (1986) have shown that Polish and Bulgarian free relatives, respectively, obey the matching requirement. Here I will use examples from Serbo-Croatian and Slovene to demonstrate the matching effect.

Let us first look at category matching. The need for the *wh*-word of a free relative to correspond in category to the free relative itself is illustrated in example (5), from Serbo-Croatian. The example in (5a) represents a violation of the matching requirement: the matrix verb requires an NP object yet the free relative has a PP *wh*-phrase. In (5b) the free relative is matching, since it appears in the object position of a verb that subcategorizes for a PP.

- (5) a. \*Unajmiću     $[_{FR} \text{s kime god budeš pričao}]$ .  
          will-hire-1sg    with who ever be-fut talked  
          ‘I will hire whoever you talk with.’
- b. Pričaću         $[_{FR} \text{s kime god ti budeš pričao}]$ .  
          will-talk-1sg    with who ever you be-fut talked  
          ‘I will talk with whoever you talk with.’

Let us consider next the requirement of case matching. The Slavic languages mark case on pronouns overtly and the case of the *wh*-phrase has to be the same as the one assigned to the position of the free relative.<sup>7</sup> Example (6) from Slovene illustrates this point. The matrix verb in all three cases requires a dative indirect object. In the (a) example the *wh*-phrase is dative, however the free relative is not well-formed because the embedded verb requires a nominative subject. When the case of the *wh*-phrase meets the requirements of the embedded verb, as in (6b), the sentence remains unacceptable, because now there is a

mismatch with the case required by the matrix verb. When the matrix and the embedded verb have the same case requirements, the resulting sentence is grammatical (cf. (6c)):

- (6) a. \* Pomagal bom [<sub>FR</sub> **komur** pride prvi].  
 help will-1sg who-DAT comes first  
 ‘I will help whoever comes first.’
- b. \* Pomagal bom [<sub>FR</sub> **kdor** pride prvi].  
 help will-1sg who-NOM comes first  
 ‘I will help whoever comes first.’
- c. Pomagal bom [<sub>FR</sub> **komur** oni pomagajo].  
 help will-1sg who-DAT they help  
 ‘I will help whoever they help.’

The phenomenon of matching is still not completely understood.<sup>8</sup> My main concern here, however, will not be the question of the exact nature of matching, but rather the special status of subject free relatives with respect to matching. It has been noted that in Spanish and Catalan, which are otherwise matching languages, the matching requirement does not apply when the free relative is in subject position (Hirschbühler and Rivero 1981, 1983, Suñer 1983, 1984, Harbert 1983). In languages like English, German, or French, however, subject free relatives show matching effects. The analysis proposed for this difference in behavior (what is known as the *pro*-HEAD ACCOUNT of Suñer 1983, 1984, Harbert 1983) is that the head of the non-matching free relative in Spanish and Catalan is *pro*, which satisfies the requirements of the matrix verb, allowing the *wh*-word to vary in case and category just as in ‘normal’ headed relatives. In English, German, and French *pro* is disallowed so free relatives in subject position need to meet the matching requirement.

Here I propose an alternative to the *pro*-head account that still ties the absence of matching effects in subject position to the availability of *pro*-drop. I show, however, discussing data from Slavic, that the generalization that *pro*-drop languages never require matching in subject position is not correct. In particular, I demonstrate that in the Slavic languages when the free relative subject is focused (as when it is the new information in an answer to a question or the associate of a focus-sensitive adverb like *only* and *even*), the matching requirement is obligatorily observed. Similarly, when the subject free relative is post-verbal, it is necessarily matching. To account for these new observations as well as for the previously known correlation between (non-)matching and *pro*-drop, I propose that non-matching subject free relatives are in fact left-dislocated clauses, coindexed with a resumptive *pro* in the main clause. This proposal, in addition to explaining the previously unknown restrictions on non-matching subjects in *pro*-drop languages, is also in conformity to the observation in Hirschbühler and Rivero (1981, 1983), Suñer (1983, 1984), and Harbert (1983), that left-dislocated free relatives in Spanish, Catalan, German, and English alike need not exhibit matching effects.

## 2 Matching Effects in Subject Position

### 2.1 Required Matching in Subject Position

In languages like English and German free relatives in subject position have to meet the matching requirement, just like free relatives in other argument positions. Thus subject free relatives are not special in any way. Examples (7) and (8) illustrate that matching effects hold in subject position in these languages. The English (7) is ungrammatical because the *wh*-phrase of the free relative is a PP and does not match the

requirements for the category of the matrix subject.<sup>9</sup> The German example in (8) (from Groos and van Riemsdijk 1979) is unacceptable because the internal syntax of the free relative requires that the *wh*-word be accusative, whereas the free relative as a whole is in a position where nominative case is assigned.

- (7) \* [<sub>FR</sub> **With whom** I talked] arrived last.
- (8) \* [<sub>FR</sub> **Wen** Gott schwach geschaffen hat], muss klug sein.  
 who-ACC God weak created has must clever be  
 ‘Who God has created weak must be clever.’

## 2.2 Absence of Matching Effects in Subject Position

It has been noted that in Spanish and Catalan, otherwise matching languages, the matching conditions do not apply when the free relative is in subject position (Hirschbühler and Rivero 1981, 1983, Suñer 1983, 1984, Harbert 1983). The Catalan example (9), from Hirschbühler and Rivero (1981), and the Spanish (10), from Suñer (1983), illustrate this point. In both sentences the *wh*-phrase is a PP, thus of an inappropriate category for a free relative that is in subject position.

- (9) [<sub>FR</sub> **A qui** has parlat] està malalt  
 to whom have-2sg spoken is sick  
 ‘The one to whom you have spoken is sick.’
- (10) [<sub>FR</sub> **Con quien** me quiero casar] está en la esquina.  
 with whom me want marry is on the corner  
 ‘The one with whom I want to get married is on the corner.’

Suñer (1983, 1984) and Harbert (1983) propose that the relevant distinction between languages regarding (non-)matching in subject position is *pro*-Drop. Languages like Spanish and Catalan that allow null-subjects also allow non-matching subject free relatives. Non null-subject languages, like English, French, or German, require matching in subject position.

Turning to the Slavic languages, we can see that the correlation between non-matching and *pro*-drop holds there as well. Examples (11) to (13), from Bulgarian, Polish, and Serbo-Croatian, respectively, show that matching is not obligatory in subject position. The (a) sentences illustrate violations of category matching, and the (b) sentences represent violations of case matching; in both cases there is no effect on grammaticality.

- (11) a. [<sub>FR</sub> **S kogoto** govoriš] pečeli sâstezanieto.  
 with whom speak-2sg wins the-race  
 ‘Whoever you speak with wins the race.’  
 b. [<sub>FR</sub> **Kogoto** celuneš] pečeli sâstezanieto.  
 who-ACC kiss-2sg wins the-race  
 ‘Whoever you kiss wins the race.’
- (12) a. [<sub>FR</sub> **Z kimkolwiek** porozmawiasz], zrozumie cię.  
 with whoever will-talk-2sg will-understand-3sg you  
 ‘Whoever you talk to will understand you.’

- b. [<sub>FR</sub> **Kogo** nie zapytasz], wskaże ci drogę.  
 who-ACC not will-ask-2sg will-show-3sg you way  
 ‘Whoever you ask will show you the way.’
- (13) a. [<sub>FR</sub> **S kime** god budeš pričao] osvojiće šampionat.  
 with who ever be-fut talked will-win-3sg championship  
 ‘Whoever you talk with will win the championship.’
- b. [<sub>FR</sub> **Kome** god budeš pomogao] osvojiće šampionat.  
 who-DAT ever be-fut helped will-win-3sg championship  
 ‘Whoever you help will win the championship.’

We see that subject free relatives in all *pro*-drop languages considered so far do not have to obey the matching requirement.<sup>10</sup> Both Suñer (1983, 1984) and Harbert (1983) relate this generalization to *pro*-licensing. Next I present briefly their accounts and in section 5 I offer an alternative analysis of the correlation between non-matching subjects and *pro*-drop.

### 3 The *pro* Head Analysis

Suñer (1983, 1984) assumes a version of the COMP Hypothesis according to which the free relative is a regular relative clause modifying an empty head. She proposes that the phonologically non-overt head of all free relatives is *pro*. The empty category of *pro* needs to be determined (licensed and identified) and *pro*-determination is achieved through case-matching. Thus she proposes the following condition:

- (14) The Case-Matching Condition:  
*pro* is non-distinct in case from the *wh*-phrase (in Spec, CP).

In languages like Spanish and Catalan, when the free relative is in subject position, *pro* is already determined by Infl, so the Case-Matching Condition does not apply. In English, German, and French, Infl does not determine *pro* so free relatives in subject position need to meet the Case-Matching Condition in order for their *pro*-head to be licit.

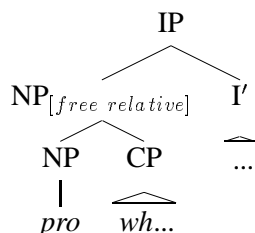
Harbert (1983) also assumes the null-head version of the COMP hypothesis in suggesting that PRO is the head of matching free relatives. Since PRO has to be ungoverned (assuming the PRO-theorem), it cannot satisfy the subcategorization requirements of the governing head in the matrix clause (presumably because subcategorization requirements are met under government). Instead, the *wh*-phrase in COMP must meet the subcategorization requirements of the matrix verb or Infl. The following schema summarizes Harbert’s proposal:

- (15) [<sub>NP</sub> PRO [<sub>CP</sub> *wh* ...]]  
 a. \*  $V_{matrix}$  s(subcategorization)-governs PRO.  
 b.  $V_{matrix}$  s(subcategorization)-governs the *wh*- phrase.

The lack of matching effects in subject position in Spanish and Catalan is accounted for in the following way. The head of the subject free relative in this case is *pro* instead of PRO. It is the *pro* that satisfies the subcategorization requirements of the governing verb in the matrix clause; thus the *wh*-word is free to vary in case and category, similarly to headed relatives. English, German, and French disallow *pro*; that’s why the head of the free relatives in subject position is PRO, and thus matching is required.

In summary, both Suñer and Harbert propose that the head of non-matching free relatives is *pro*. Because *pro* is allowed as subject only in languages like Spanish and Catalan and not in English, German, or French, non-matching is acceptable in subject position only in the former languages but not in the latter. The Suñer-Harbert account is schematically represented in (16):

(16) The *pro*-Head Analysis



The *pro*-Head account raises a number of questions. Both Suñer’s and Harbert’s versions need to introduce special mechanisms that are not used elsewhere in the grammar. But more problematic is the necessary stipulation of a structural variability in free relatives depending on syntactic position and type of language. It is not clear for instance what the status of object free relatives is on this account. The initial assumption would be that the internal structure of object and subject free relatives is the same; thus they would have a *pro*-head in Suñer’s account and a PRO-head (since they are always matching) in Harbert’s account. Positing a *pro*- or a PRO-head in object free relatives, however, is objectionable because none of the languages discussed allows *pro* or PRO in object position. But if object free relatives do not have a *pro*- or PRO-head, the proposal would amount to the claim that free relatives in different syntactic positions have different internal syntax. Harbert’s version proposes a further distinction in the structure of free relatives depending on whether the language they occur in is *pro*-drop or not. This clearly is not the simplest assumption possible; an analysis that derives the variability in the behavior of free relatives from independent facts about *pro*-drop without postulating variability in the structure of free relatives is to be preferred.

In the next section I present some facts that challenge the *pro*-Head hypothesis. In particular, I give examples of focused and post-verbal subject free relatives that obligatorily exhibit matching effects. The *pro*-Head hypothesis cannot account for these examples and is therefore empirically inadequate.

## 4 Obligatorily Matching Subjects

The generalization that *pro*-drop languages never require matching in subject position is not correct. In at least two cases subject free relatives in Slavic need to be matching: when they are focused and when they appear post-verbally. In this section I will simply present the facts of obligatory matching of subjects; the syntactic implications of these facts will be discussed in the next section.

Consider first (17). The sentences in (17a,b,c) (all from Bulgarian) are answers to the question *Who won the race*. In all three cases the free relative subject is the new information. In isolation, (17a) and (17b) are fully acceptable, yet they are inappropriate answers in the given context. In exactly the same circumstances, a matching free relative subject is fully acceptable, as evident from (17c).

- (17) Who won the race?
- a. #<sub>[FR]</sub> **Kogoto** celuna] spečeli sâstezanieto.  
 who-ACC kissed-2sg won the-race  
 ‘The person whom you kissed won the race.’
  - b. #<sub>[FR]</sub> **Na kogoto** pomogna] spečeli sâstezanieto.  
 to whom helped-2sg won the-race  
 ‘The person whom you helped won the race.’
  - c. <sub>[FR]</sub> **Kojto** trâgna posleden] spečeli sâstezanieto.  
 who-NOM left-3sg last won-3sg the-race  
 ‘The person who left last won the race.’

Similarly, when subject free relatives are the associate of focus-sensitive adverbs like *only* or *even*, they have to be matching. This is illustrated in examples (18) and (19) (both from Bulgarian). The (a) sentences show that in principle subject free relatives can be the associate of focusing adverbs. Note that in this case the free relatives are matching. Non-matching free relatives are not acceptable in the same position, as evident from the (b) and (c) sentences.

- (18) a. Samo <sub>[FR]</sub> **kojto** e pokanen] može da dojde.  
 only who-NOM is invited may to come  
 ‘Only who is invited may come.’
- b. \* Samo <sub>[FR]</sub> **za kogoto** glasuvame] može da dojde.  
 only for whom vote-1pl may to come  
 ‘Only who we vote for may come.’
- c. \* Samo <sub>[FR]</sub> **kogoto** pokanim] može da dojde.  
 only who-ACC invite-1pl may to come  
 ‘Only who we invite may come.’
- (19) a. Dori <sub>[FR]</sub> **kojto** se uči] njama da spoluči.  
 even who-NOM refl studies will-not to succeed  
 ‘Even who studies will not succeed.’
- b. \* Dori <sub>[FR]</sub> **na kogoto** pomogneš] njama da spoluči.  
 even to whom help-2sg will-not to succeed  
 ‘Even who you help will not succeed.’
- c. \* Dori <sub>[FR]</sub> **kogoto** nasârčavaš] njama da spoluči.  
 even who-ACC encourage-2sg will-not to succeed  
 ‘Even who you encourage will not succeed.’

Constituent negation also has a focusing function (cf. Jackendoff 1972, among others). When free relative subjects are the associate of constituent negation, they have to be matching, as the contrast in the following Bulgarian sentences shows:

- (20) a. Ne <sub>[FR]</sub> **kojto** e naj-dobâr] šte spečeli konkursa, (a <sub>[FR]</sub> **kojto** ima  
 not who-NOM is the-best will win the-competition but who-NOM has  
 vrâzki).  
 connections  
 ‘It’s not the one who is the best that will win the competition (but the one who has connections).’

- b. \* Ne [<sub>FR</sub> s **kogoto** se poznaváš] šte spečeli konkursa, (a [<sub>FR</sub> **kojto** ima not with whom refl know-2sg will win the-competition but who-NOM has vrâzki])).  
connections  
'It's not the one who you know that will win the competition, (but the one who has connections).'
- c. \* Ne [<sub>FR</sub> **kogoto** predpočitaš] šte spečeli konkursa, (a [<sub>FR</sub> **kojto** ima not who-ACC prefer-2sg will win the-competition but who-NOM has vrâzki])).  
connections  
'It's not the one who you prefer that will win the competition, (but the one who has connections).'

Example (20a) is grammatical because its free relative subject meets the category- and case-matching requirements. When either one of these is violated, as seen in (20b) and (20c), respectively, the sentences become unacceptable.

Finally, morphological markers of focus cannot be attached to non-matching free relative subjects. The following examples from Bulgarian illustrate that while the focusing (question) particle *li* can accompany a matching free relative subject, it cannot felicitously take a non-matching free relative as its associate.<sup>11</sup>

- (21) a. [<sub>FR</sub> **Kojto** se uči] li šte spoluči?  
who-NOM refl studies Q-foc will succeed  
'Is the one who studies the one who will succeed?'
- b. \* [<sub>FR</sub> **Na kogoto** pomagat] li šte spoluči?  
to whom help-3pl Q-foc will succeed  
'Is the one who is helped the one who will succeed?'
- c. \* [<sub>FR</sub> **Kogoto** nasârčavat] li šte spoluči?  
who-ACC encourage-3pl Q-foc will win  
'Is the one who is encouraged the one who will succeed?'

Obligatory matching is also found with post-verbal subjects. It is not easy, however, to determine whether the post-verbal appearance of subjects plays a role with respect to obligatory matching, since in Slavic post-verbal subjects are typically focused. This is why the following set of examples from Bulgarian concerns the behavior of post-verbal free relatives in questions: the interrogative pronoun is necessarily the focus, leaving the post-verbal free relative subject as part of the background. Now we can be certain that the observed pattern of required matching is not the effect of focusing but is due to the post-verbal position of the subject.

- (22) a. Kakvo šte poluči [<sub>FR</sub> **kojto** pobedi na finala]?  
what will receive-3sg who wins at the-final  
'What will the one who wins in the final receive?'
- b. \* Kakvo šte poluči [<sub>FR</sub> **za kogoto** glasuvame]?  
what will receive-3sg for whom vote-1pl  
'What will the one who we vote for receive?'
- c. \* Kakvo šte poluči [<sub>FR</sub> **kogoto** pobedjat na finala].  
what will receive who-ACC defeat-3p at the-final  
'What will the one who is defeated in the final receive?'

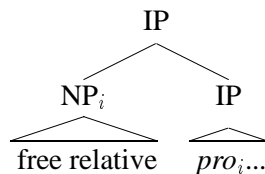
In summary, in this section I have discussed cases where, contrary to what is expected, subject free relatives in Slavic have to be obligatorily matching. The *pro*-Head Analysis cannot account for these new facts, as it has no way of distinguishing between focused and non-focused subjects, nor between pre- and post-verbal ones. Therefore the *pro*-Head Analysis has to be rejected; we need to find an account that is able to integrate the new facts about the behavior of focused and post-verbal subjects and still capture the correlation between (non-)matching in subject position and *pro*-drop observed by Hirschbühler and Rivero (1981, 1983), Suñer (1983, 1984), and Harbert (1983). This is the task of the next section where I propose a different syntactic placement for obligatorily matching and non-matching subject free relatives.

## 5 The Syntax of Matching and Non-Matching Free Relatives in Subject Position

A solution to the problems posed by the behavior of subject free relatives can be found if one accepts that matching is observed in argument positions only.<sup>12</sup> Thus I propose that sentences with non-matching subjects and those whose subjects are obligatorily matching have different syntax. In particular, non-matching subjects are base-generated outside the IP, while obligatorily matching subjects are base-generated in argument position. The (non-)matching effects then immediately follow from the syntactic position in which the free relative is base-generated.

Let us examine this proposal in more detail. Sentences with non-matching subjects involve a left-dislocated free relative and a resumptive *pro* inside IP.<sup>13</sup> The relevant syntactic structure is illustrated in (23):<sup>14</sup>

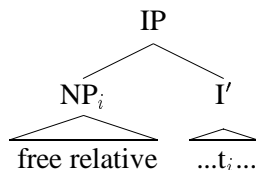
(23)



Such free relatives are exempt from the matching requirement because they are not in argument position but are generated in a dislocated position. The difference in structure is concealed by *pro*-drop.

Obligatorily-matching subjects, on the other hand, appear both pre- and post-verbally. The post-verbal position, as in (22), could in principle be Spec of VP, if one assumes the VP-internal subject hypothesis (Koopman and Sportiche 1991, among others), or alternatively, the post-verbal free relatives could be extraposed to the right of the VP.<sup>15</sup> The exact syntactic position of post-verbal subject free relatives is not essential, what is important is that they are in an argument position inside IP or are linked to an argument position through a movement chain. In the case of movement, reconstruction at LF to the argument position could be held responsible for the application of matching. Pre-verbal subjects which show matching effects are similarly linked to a trace in argument position. The representation in (24) illustrates the syntax of sentences with obligatorily-matching subjects; for concreteness I have identified the surface position of the pre-verbal free relative as Spec of IP.

(24)



As expected according to the proposal that matching is required of arguments, a sentence with the structure in (23) can have a non-matching subject, whereas the structure in (24) will necessarily have a matching subject. This correlation between (non-)matching and syntactic position is not immediately obvious because the structures in (23) and (24) are indistinguishable in their surface word order. In the former case the argument position is occupied by *pro*, in the latter case by a trace, both phonologically null. Yet despite the fact that the two structures result in the same word order, the position that non-matching subject free relatives are left-dislocated can be empirically tested. The reality of (23) is revealed once *pro* is made overt, as in (25) from Bulgarian. As expected, the free relative can be non-matching:

- (25) [<sub>FR</sub> **Kogoto** celuneš], toj šte spečeli sâstezanieto.  
who-ACC kiss-2sg he will win the-race  
'Whoever you kiss will win the race.'

The proposal also makes the prediction that topicalized phrases should be able to appear following left-dislocated subject free relatives. This is what happens in the following Serbo-Croatian example from Mikić and Škara (1992):<sup>16</sup>

- (26) [<sub>FR</sub> **Koga** je zmija ujela], i gušterice se boji.  
whom-ACC is snake bitten and lizard refl fears  
'Whoever a snake has bitten, fears even a lizard.'

Similarly, non-matching free relative subjects can precede fronted *wh*-phrases, which shows that these free relatives are in a left-dislocated position (note the contrast between (27) and (22c)):

- (27) [<sub>FR</sub> **Kogoto** pobjedjat na finala] kakvo šte poluči?  
who-ACC defeat-3p at the-final what will receive  
'What will the one who is defeated in the final receive?'

The observation made in section 4 that focused subjects need to be matching now receives an explanation. In order for a subject free relative to be non-matching, it has to be in a left-dislocated position. Focused elements (such as the new information in question-answer pairs, the associates of constituent negation and of adverbs like *only* and *even*) cannot be left-dislocated by definition; left-dislocation is a strategy for backgrounding discourse entities.

The correlation between (non-)matching and *pro*-drop is accounted for under the proposal put forward here: the structure in (23) is available only in null-subject languages. In non *pro*-drop languages the free relative subject has to be generated in argument position for case- and theta-role purposes, and thus it always has to be matching.<sup>17</sup> The fact that sometimes subjects in *pro*-drop languages have to be matching is also accounted for: obligatorily matching free relative subjects are base-generated in argument position (as in (24) or its rightward-movement/VP-internal analogue for post-verbal subjects).

The proposal advanced here does not add new mechanisms or structures to handle the behavior of free relative subjects. Independent work on the status of subjects in *pro*-drop languages has recognized the

existence of two positions for pre-verbal subjects. Iatridou (1988) discusses cases in Modern Greek in which the subject is left-dislocated with case and theta-role being assigned to *pro*.<sup>18</sup> Vallduví (1992) and Fontana (1993) hold that in Catalan and Spanish, respectively, subjects that are part of the background are generated adjoined to IP and co-indexed with a *pro* in argument position.<sup>19</sup> Thus the position that the availability of the structures in (23) and (24) is what is responsible for the (non-)matching effects exhibited by subjects in *pro*-drop languages makes the theory simpler; the *pro*-Head analysis has to make further claims about the internal structure of free relatives and also invoke specific mechanisms (like the Case-Matching Condition or the government of the *wh*-phrase) not necessary in other components of the grammar.

The present proposal has a further advantage in that it reduces the behavior of subject free relatives in *pro*-drop languages to that of left-dislocated free relatives in general. It is known (e.g. Hirschbühler and Rivero 1981, 1983, among others) that left-dislocated free relatives (with a resumptive pronoun) need not observe the matching requirement. The following sentences, from Polish and Russian, respectively, illustrate the absence of matching effects with dislocated objects in Slavic:<sup>20</sup>

(28) [<sub>FR</sub> **Z kimkolwiek** Jan rozmawia]<sub>i</sub>, Maria go<sub>i</sub> lubi.  
 with whoever Jan talks Maria him likes  
 ‘Whoever Jan talks to, Maria likes him.’

(29) [<sub>FR</sub> **Kto** včera solgal]<sub>i</sub>, tomu<sub>i</sub> i zavtra ne poverjat.  
 who-NOM yesterday lied him and tomorrow not will-believe-3pl  
 ‘Who lied yesterday will not be believed tomorrow.’

In the above examples the left-dislocated free relatives are coindexed with argument pronouns inside the sentences. In the Polish case the free relative is linked to a direct object, yet it is not matching, as seen from the fact that its *wh*-phrase is a PP. In the Russian example, the free relative is coindexed with an indirect object, but its *wh*-pronoun is nominative, so it too is non-matching. Thus the present proposal reveals that subject free relatives in *pro*-drop languages are not special in any way; they can be non-matching because they can be left-dislocated, just like object free relatives in *pro*-drop and non-*pro*-drop languages alike.

## 6 Conclusions

Following the work of Grimshaw (1977), a number of researchers have been concerned with the matching effects in free relatives. This paper continues the general line of investigation into the nature of matching looking specifically into the correlation established by Hirschbühler and Rivero (1981, 1983) and others, between (non-)matching effects in subject position and *pro*-drop. Here new data was discussed which shows that the relationship between (non-)matching and *pro*-drop is not as straightforward as previously thought. In particular, the paper demonstrated that subject free relatives in Slavic, a family of null-subject languages, cannot always be non-matching. It was established that matching in category and case is required when the free relative is in argument position or is linked to one through a movement chain. The non-matching subjects were shown to be left-dislocated with *pro* satisfying the subcategorization requirements of the verb.

The proposal made here offers an alternative to the *pro*-Head account of Suñer (1983, 1984) and Harbert (1983) that captures their insight into the relationship between *pro*-drop and the absence of matching in subject position but also accounts for the obligatory matching subjects in *pro*-drop languages. Another advantage is that a unified account is offered of the absence of matching effects in subject and left-dislocated positions. Since the proposal utilizes only independently established facts about the nature

of the pre-verbal subject position in *pro*-drop languages, it does not burden the grammar with construction-specific mechanisms. Rather it establishes that free relatives in *pro*-drop and non-*pro*-drop languages are not different, accounting for the variation in their behavior by the sole parameter of *pro*-drop.

The present analysis has a number of implications. It establishes that although the facts of matching have always been central in the debate between the proponents of the Head Hypothesis (the claim that the *wh*-word is the head of the free relative) and the COMP Hypothesis (the claim that the *wh*-word is in Spec of CP) the facts of (non-)matching in subject position show no evidence in favor of the one or the other approach to the internal syntax of free relatives. Note that while the *pro*-Head account has to assume the Null-Head version of the COMP Hypothesis, the analysis offered here does not have to choose between the various possible accounts of the structure of free relatives. Thus it is shown that the facts of matching in *pro*-drop languages tell us nothing about the internal syntax of free relatives. Another issue raised by the present proposal is the relationship between matching and argumenthood. The position taken here is that matching is a property of arguments only. Thus the behavior of subject free relatives under the present interpretation provides evidence relevant to the larger question about the nature of matching.

## Notes

<sup>1</sup> A version of this paper, discussing data from Modern Greek as well as from Slavic, is to appear in the proceedings of ESCOL'95, published by DMLL Publications, Cornell University, under the title "(Non-)Matching Effects in Free Relatives and *pro*-drop". I want to thank Rajesh Bhatt, Alexis Dimitriadis, and Spyridoula Varlokosta for the numerous discussions that we have had on free relatives. Thanks are also due to Željko Bošković, Wayles Browne, Dave Embick, and Marc Greenberg for their helpful comments. I am also grateful to Sabine Iatridou and Tony Kroch whose Fall of 1994 seminar on *wh*-constructions made me interested in the topic of free relatives.

<sup>2</sup> Though Hirschbühler and Rivero (1983) use the term *headed free relative* to refer to constructions in which the *wh*-word is in the head position, as in Bresnan and Grimshaw's (1978) proposal.

<sup>3</sup> I am staying away here from issues concerning the exact phrase structure of headed relative clauses. It is still a controversial question whether or not restrictive and non-restrictive relative clauses have different syntax. See Partee (1975) and Jackendoff (1977), among others, for a proposal that restrictive relatives are attached at the level of N' while appositives are adjoined to the NP. As the motivation for such a distinction is primarily semantic, it is important to consider the argument in Bach and Cooper (1978) that an NP attachment can handle the semantics of both restrictive and non-restrictive relatives. Yet see also Srivastav (1991) for additional arguments in favor of the syntactic distinction.

<sup>4</sup> The Polish examples in the text are taken from Borsley (1984).

<sup>5</sup> The differences in the internal syntax of NPs and pronouns are irrelevant here. I will also not be concerned with the DP-level in the phrase-structure of nominals.

<sup>6</sup> Instances of case syncretism show that matching looks at the *form* of the *wh*-word. In conversational Bulgarian nominative *wh*-pronouns can be used instead of accusative. Because of that, free relatives with nominative *wh*-words are permitted in object position:

- (i) a. ??Šte celuna [<sub>FR</sub> **kogoto** dojde prāv].  
       will kiss-1sg     who-ACC comes first  
       'I will kiss whoever comes first.'
- b. Šte celuna [<sub>FR</sub> **kojto** dojde prāv].  
       will kiss         who-NOM comes first  
       'I will kiss whoever comes first.'

Similar examples from English and German are discussed in Suñer (1984) and Groos and van Riemsdijk (1979), respectively.

<sup>7</sup> The exact mechanism of case realization (*assignment* by the verb vs. *checking* in a functional projection) is not essential for the discussion here.

<sup>8</sup> No satisfactory answer has been provided for why matching should obtain in some languages and not in others. Another debated question is the relevance of matching for the phrase structure of free relatives. The Head Hypothesis holds that matching is to be expected since it is the features on the head (the *wh*-word) that determine the features on the projection. The advocates of the COMP

Hypothesis have to provide various mechanisms to make the phenomenon of matching compatible with the proposed syntactic structure of free relatives. The general approach is to make the lexically filled Spec, CP accessible to the matrix requirements in cases when the head is null (or altogether absent).

<sup>9</sup>As Wayles Browne pointed out to me, the use of free relatives in English is somewhat restricted, irrespective of matching, and the presence or absence of *-ever* can have an effect (cf. (ia) and (ib)).

- (i) a. ?? [<sub>FR</sub> Who left first] arrived last.
- b. [<sub>FR</sub> Whoever left first] arrived last.

What is important for our purposes is that the non-matching (7) is significantly worse than (ia), and also that the use of *-ever* does not have an effect on the ungrammaticality of (7):

- (ii) \* [<sub>FR</sub> **With whoever** I talked] arrived last.

<sup>10</sup>As far as the Slavic languages are concerned, this generalization applies to derived subjects (of unaccusatives and passives) as well.

<sup>11</sup>See Rudin (1993), King (1994), among others, for arguments that *li* is a head (C<sup>0</sup>) and that when constituents move to its specifier position, they receive focused interpretation. Since I will be arguing for a difference in structural position between matching and non-matching free relative subjects, the syntax of *li* is relevant.

<sup>12</sup>This is basically the idea behind the analyses of Hirschbühler and Rivero (1981, 1983), and others, who propose that matching is required in subcategorized positions only and therefore also hold that the subject position in *pro*-drop languages is not subcategorized.

<sup>13</sup>I leave open the question of whether *pro* is in Spec of VP or Spec of IP.

<sup>14</sup>The subject free relative is illustrated here as adjoined to IP but it could also appear adjoined to CP.

<sup>15</sup>In the presence of objects or subcategorized adverbials, the preference for the free relative is to appear after the VP-internal material, which indicates that the free relative is extraposed. The extraposition seems to be akin to heavy-NP shift.

<sup>16</sup>Thanks to Wayles Browne for this example.

<sup>17</sup>This is not to say that subjects in general and free relative subjects in particular cannot be left-dislocated in non-*pro*-drop languages. When this happens, however, the argument position in the clause has to be filled by an overt resumptive pronoun (cf. the French example (i) from Hirschbühler and Rivero 1983) and therefore such constructions are unambiguously recognizable as ones involving left-dislocation.

- (i) [<sub>FR</sub> Qui l'on invite le samedi], il faut qu'il parte le dimanche.  
       who one invites Saturday it is-necessary that-he go Sunday  
       'Whoever we invite on Saturday, he must leave on Sunday.'

<sup>18</sup>She treats these cases as instances of a more general Clitic Left-Dislocation strategy.

<sup>19</sup>King (1993) adopts a somewhat similar position for Russian. She proposes that subjects do not need to raise to Spec, IP for case-reasons and that they can be A'-moved and adjoined to IP.

<sup>20</sup>See also Rudin (1986) for examples and discussion of non-matching left-dislocated free relatives in Bulgarian.

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