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(Non-)Matching Effects in Free Relatives and *pro*-Drop

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1. Introduction

Free relatives are relative clauses that are not NP modifiers. As an illustration, consider the sentences in (1). Unlike the relative clause in (1a), which modifies and is syntactically associated with the NP *the movie*,¹ the relative clause in (1b), a free relative, does not modify an NP; rather it is an argument of the matrix verb.²

- (1) a. I'll see the movie *which you recommend me*.
b. I'll see *whichever movie you recommend me*.

In many languages the *wh*-phrase of a free relative has to be of the appropriate category (and case, if case is marked overtly on *wh*-pronouns) for the position where the free relative appears. This phenomenon, first discussed in Grimshaw (1977), is known as the MATCHING EFFECT; it is summarized in (2):^{3,4,5}

- (2) The Matching Effect:
a. Case Matching: $[_{FR} \mathbf{wh-CASE}_i \dots]\text{-CASE}_i$
b. Categorical Matching: $[_{FR} [\mathbf{wh}]_{XP_i} \dots]_{XP_i}$

This paper focuses on the special status of subject free relatives with respect to matching. The discussion is centered around the correlation found between (non-)matching in subject position and *pro*-drop. It has been noted that in Spanish and Catalan, otherwise matching languages, matching is not required 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 analyses proposed to handle this variation relate it to the phenomenon of *pro*-drop. In particular, Hirschbühler and Rivero propose that matching is a property of subcategorized positions only and that the subject position in null-subject languages is not subcategorized. Suñer and Harbert (whose approach is known as the *pro*-HEAD ACCOUNT) take the position that the head of non-matching free relatives is *pro*, and thus non-*pro*-drop languages always 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. My proposal assumes the essentials of Hirschbühler and Rivero's analysis but also introduces

some modifications necessary to accommodate the new observations that I make regarding matching and *pro*-drop. I show that the generalization that *pro*-drop languages never require matching in subject position is not correct. In particular, I demonstrate that in Modern Greek and 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 constituent negation or a focus-sensitive adverb), the matching requirement is obligatorily observed. Similarly, when the subject free relative is post-verbal, it is necessarily matching. To account for these new findings as well as for the previously known correlation between (non-)matching and *pro*-drop, I propose that matching and non-matching subject free relatives appear in different syntactic positions. Non-matching subjects are left-dislocated clauses, coindexed with a resumptive *pro* in the main clause, i.e., they are in an unsubcategory position as in Hirschbühler and Rivero's analysis. Focused and post-verbal subjects, on the other hand, are linked to an argument position through a movement chain. This proposal, in addition to explaining the previously unknown restrictions on non-matching subjects in *pro*-drop languages, is also in conformity with the observation in Hirschbühler and Rivero, Suñer, and Harbert, that left-dislocated free relatives in Spanish, Catalan, German, and English alike need not exhibit matching effects.

2. Matching Effects in Subject Position

In languages like English and German free relatives in subject position have to meet the matching requirement, just like object free relatives. The English (3) is ungrammatical because the *wh*-phrase of the free relative is a PP and it does not match the requirements for the category of the matrix subject. The German example in (4) (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.

(3) * [_{FR} **With whom** I talked] arrived last.

(4) * [_{FR} **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.'

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). Example (5), from Catalan (Hirschbühler and Rivero 1981), illustrates this point. The *wh*-phrase is a PP, thus of an inappropriate category for a free relative that is in subject position, yet the sentence is acceptable.

(5) [_{FR} **A qui** has parlat] està malalt
 to whom have-2sg spoken is sick
 'The one to whom you have spoken is sick.'

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 and German, require matching in subject position.

Examples (6), from Serbo-Croatian, and (7), from Modern Greek, show that in these *pro*-drop languages as well subject free relatives do not have to obey the matching requirement.⁶ 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.

- (6) a. [_{FR} **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. [_{FR} **Kome** god budeš pomogao] osvojiće šampionat.
who-DAT ever be-fut helped will-win-3sg championship
‘Whoever you help will win the championship.’
- (7) a. [_{FR} **Me opion** milisis] tha su pi oti o Yiorgos ine tembelis.
with who talk-2sg will you tell that the George is lazy
‘Whoever you talk to will tell you that George is lazy.’
- b. [_{FR} **Opianu** milisis] tha kerdisi to vravio.
who-GEN talk-2sg will win-3sg the prize
‘Whoever you talk to will win the prize.’

Suñer and Harbert relate the correlation between (non-)matching and *pro*-drop to conditions on *pro*-licensing. Next I briefly present their accounts and in section 5 I offer an alternative analysis, modifying Hirschbühler and Rivero’s proposal to accommodate the new facts I discuss in section 4.

3. The *pro*-Head Analysis

Suñer and Harbert assume a version of the COMP Hypothesis according to which the free relative is a regular relative clause modifying an empty head. Suñer proposes that the 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 according to the Case-Matching Condition which states that *pro* must be non-distinct in case from the *wh*-phrase in Spec, CP. In 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 and German, 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. For Harbert 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 (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 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, as in headed relatives. English and German 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 a subject only in languages like Spanish and Catalan and not in English or German, non-matching is acceptable in subject position only in the former languages but not in the latter. The Suñer-Harbert *pro*-head account is schematically represented in (8):

(8) [_{IP} [_{NP} *pro* [_{CP} *wh*...]] [_{I^o} ...]]

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. Even more problematic is the stipulation of 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 syntax 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 (a *pro* vs. a PRO head). Clearly, an analysis that derives the variability in the behavior of free relatives from a single parameter is to be preferred.

In the next section I give examples of subject free relatives that obligatorily exhibit matching effects. These facts present a challenge to the *pro*-Head hypothesis. They also cannot be straightforwardly accounted for under Hirschbühler and Rivero's proposal that subjects in *pro*-drop languages are not subcategorized. An account that integrates the facts of obligatory matching with the previously observed correlation between (non-)matching and *pro*-drop is offered in section 5.

4. Obligatory 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 and Modern Greek 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 (9) and (10), from Bulgarian and Modern Greek, respectively. All sentences are to be considered as answers to the question *Who won the race?*. In all cases the free relative subject is the new information. In isolation, (9a, b) and (10a, b) are acceptable, yet they are inappropriate as answers in the given context. In exactly the same circumstances, a matching free relative subject is acceptable, as evident from (9c) and (10c).

- (9) a. #_[FR] **Kogoto** celuna] spečeli sâstezanieto.
 who-ACC kissed-2sg won the-race
 ‘Who you kissed won the race.’
- b. #_[FR] **Na kogoto** pomogna] spečeli sâstezanieto.
 to whom helped-2sg won the-race
 ‘Who you helped won the race.’
- c. _[FR] **Kojto** trâgna posleden] spečeli sâstezanieto.
 who-NOM left-3sg last won-3sg the-race
 ‘Who left last won the race.’
- (10) a. #_[FR] **Opianu** milises] kerdise ton agona.
 who-GEN talked-2sg won-3sg the race
 ‘Who you talked to won the race.’
- b. #_[FR] **Me opion** milises] kerdise ton agona.
 with whom talked-2sg won-3sg the race
 ‘Who you helped won the race.’
- c. _[FR] **Opios** efige telefteos] kerdise ton agona.
 who-NOM left-3sg last won-3sg the race
 ‘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 the Bulgarian example (11) and the Modern Greek (12). 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.

- (11) a. Dori _[FR] **kojto** se uči] njama da spoluči.
 even who-NOM refl studies will-not to succeed
 ‘Even who studies will not succeed.’
- b. *Dori _[FR] **na kogoto** pomogneš] njama da spoluči.
 even to whom help-2sg will-not to succeed
 ‘Even who you help will not succeed.’
- c. *Dori _[FR] **kogoto** nasârčavaš] njama da spoluči.
 even who-ACC encourage-2sg will-not to succeed
 ‘Even who you encourage will not succeed.’

- (12) a. Mono [_{FR} **opios** milisi] tha kerdisi to vravio.
 only who-NOM talk-3sg will win the prize
 ‘Only who talks will win the prize.’
- b. * Mono [_{FR} **se opion** milisis] tha kerdisi to vravio.
 only to who talk-2sg will win the prize
 ‘Only who you talk to will win the prize.’
- c. * Mono [_{FR} **opianu** milisis] tha kerdisi to vravio.
 only who-GEN talk-2sg will win the prize
 ‘Only who you talk to will win the prize.’

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:

- (13) a. Ne [_{FR} **kojto** e naj-dobâr] šte spečeli konkursa,
 not who-NOM is the-best will win the-competition
 a [_{FR} **kojto** ima vrâzki].
 but who-NOM has connections
 ‘It’s not the one who is the best that will win the competition but the one who has connections.’
- b. * Ne [_{FR} **s kogoto** se poznaváš] šte spečeli konkursa, ...
 not with whom refl know-2sg will win the-competition
 ‘It’s not the one who you know that will win the competition, ...’
- c. * Ne [_{FR} **kogoto** predpočitaš] šte spečeli konkursa, ...
 not who-ACC prefer-2sg will win the-competition
 ‘It’s not the one who you prefer that will win the competition, ...’

Example (13a) is grammatical because its free relative subject meets the category- and case-matching requirements. When either one of these is violated, as seen in (13b) and (13c), respectively, the sentences become unacceptable. The same facts obtain in Modern Greek:

- (14) a. Oxi [_{FR} **opios** ine o kaliteros] tha nikisi,
 not who-NOM is the best will win
 ala [_{FR} **opios** exi diasindesis].
 but who-NOM has connections
 ‘Not the one who is the best will win but the one who has connections.’
- b. * Oxi [_{FR} **me opion** milisis] tha nikisi, ...
 not with whom talk-2sg will win
 ‘Not the one that you talk to will win, ...’
- c. * Oxi [_{FR} **opion** protimas] tha nikisi, ...
 not who-ACC prefer-2sg will win
 ‘Not the one that you prefer will win, ...’

Finally, focus markers 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.

- (15) a. [_{FR} **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. * [_{FR} **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. * [_{FR} **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 and Modern Greek post-verbal subjects are typically focused. This is why, the following set of examples from Bulgarian and Modern Greek 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.

- (16) a. Kakvo šte poluči [_{FR} **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 [_{FR} **za kogoto** glasuvame]?
 what will receive-3sg for whom vote-1pl
 ‘What will the one who we vote for receive?’
- c. * Kakvo šte poluči [_{FR} **kogoto** pobedjat na finala].
 what will receive who-ACC defeat-3pl at the-final
 ‘What will the one who is defeated in the final receive?’
- (17) a. Ti tha kerdisi [_{FR} **opios** nikisi stus telikus]?
 what will get-3sg who-NOM wins at the-final
 ‘What will the one who wins in the final receive?’
- b. * Ti tha kerdisi [_{FR} **me opion** milisume]?
 what will get-3sg with whom speak-1pl
 ‘What will the one with whom we speak receive?’
- c. * Ti tha kerdisi [_{FR} **opion** nikisume stus telikus]?
 what will get-3sg who-ACC win-1pl at the-final
 ‘What will the one whom we defeat in the final receive?’

In summary, in this section I have discussed cases where, contrary to what is expected, subject free relatives in *pro*-drop languages like the Slavic languages and Modern Greek 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. Hirschbühler and Rivero's proposal also cannot accommodate the new facts without some modification. Therefore we need to find an account that is able to integrate the facts about the behavior of focused and post-verbal subjects and still capture the correlation between (non-)matching in subject position and *pro*-drop. 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 Subject Free Relatives

I assume with Hirschbühler and Rivero (1981, 1983), and others, that matching is observed in argument positions. The facts of the Spanish and Catalan non-matching subjects led Hirschbühler and Rivero to propose that the subject position in *pro*-drop languages is not subcategorized. In their analysis, subject free relatives in *pro*-drop languages are in a Topic position, and therefore allowed to be non-matching. Here I follow the basic insight of Hirschbühler and Rivero's account in proposing that non-matching subjects are base-generated outside the IP. I further propose that sentences whose subjects are obligatorily matching have different syntax, namely their free relative subjects are base-generated in argument position. On this view the subject position in *pro*-drop languages need not be considered a non-subcategorized position.

Let us examine the proposal in more detail. Sentences with non-matching subjects involve a left-dislocated free relative clause and a resumptive *pro* inside IP (cf. (18)). In such sentences *pro* is the actual subject, receiving theta-role and case.⁷

(18) $[IP [NP \text{ free relative}]_i [IP \text{ pro}_i \dots]]$

Such free relatives are exempt of the matching requirement because they are not arguments but are generated in a dislocated position. The difference in structure is concealed by *pro*-drop. Obligatorily-matching subjects, on the other hand, are arguments. When they appear post-verbally, as in (16), they may be in Spec, VP, or alternatively, they may be extraposed to the right of the VP.⁸ 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 (19) 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, IP).

(19) $[IP [NP \text{ free relative}]_i [I^o t_i \dots]]$

The (non-)matching effects then immediately follow from the syntactic position in which the free relative is base-generated. A sentence with the structure in (18) can have a non-matching free relative as a ‘subject’, whereas the structure in (19) will necessarily have a matching subject. This correlation between (non-)matching and syntactic position is not immediately obvious because the structures in (18) and (19) 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 (18) is revealed once *pro* is made overt, as in (20) and (21), from Bulgarian and Modern Greek, respectively. As expected, the free relative can be non-matching:

(20) [_{FR} **Kogoto** celuneš], toj šte spečeli sâstezanieto.
 who-ACC kiss-2sg he will win the-race
 ‘Whoever you kiss will win the race.’

(21) [_{FR} **Opcion** filisis], aftos tha kerdisi ton agona.
 who-ACC kiss-2sg he will win the race
 ‘Whoever you kiss will win the race.’

Similarly, non-matching free relative subjects can precede fronted *wh*-phrases (cf. The Bulgarian (22) and the Modern Greek (23)), which shows that these free relatives are in a left-dislocated position (note the contrast with (16c) and (17c)):

(22) [_{FR} **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?’

(23) [_{FR} **Opcion** nikisume stus telikus] ti tha kerdisi?
 who-ACC win-1pl at the-final what will get-3sg
 ‘What will the one whom we defeat 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. Since the focused subjects originate in an argument position, they have to be matching. The previously known correlation between (non-)matching and *pro*-drop is also accounted for: the structure in (18) 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.⁹

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*. 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. They also propose that operator-like subjects (i.e. quantified NPs) are arguments that are A'-moved to Spec, IP. Thus the position that the availability of the structures in (18) and (19) 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.

Rejecting the *pro*-head account and adopting a version of Hirschbühler and Rivero's analysis has a further advantage: 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, among others) that left-dislocated free relatives need not observe the matching requirement. The following sentences illustrate the absence of matching effects with dislocated objects in Russian and Modern Greek:^{10,11}

- (24) [_{FR} **Kto** včera solgal]_i, tomu_i i zavtra ne poverjat.
 who-NOM yesterday lied him and tomorrow not will-believe-3pl
 'Who lied yesterday will not be believed tomorrow.'
- (25) [_{FR} **Se opion** dosis to vravio]_i, tha ton_i pandrefto.
 to who give-2sg the prize will him marry-1sg
 'Whom you gave the prize I will marry him.'

In the above examples the left-dislocated free relatives are coindexed with argument pronouns inside the sentences. In the Greek 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 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 is discussed which shows that the relationship between (non-)matching and *pro*-drop is not

as straightforward as previously thought. In particular, the paper demonstrates that subject free relatives in Slavic and Modern Greek, which are null-subject languages, cannot always be non-matching. It is 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 are shown to be left-dislocated with *pro* satisfying the subcategorization requirements of the verb.

The proposal made here builds on the account of Hirschbühler and Rivero and offers an alternative to the *pro*-head analysis of Suñer (1983, 1984) and Harbert (1983) in a way that captures the correlation between *pro*-drop and the absence of matching in subject position but also accounts for the obligatory matching subjects in *pro*-drop languages. It also unifies 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 and COMP Hypotheses 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. 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 allows us to accept the proposal that matching is a property of arguments. Thus the behavior of subject free relatives under the present interpretation provides evidence relevant to the larger question about the nature of matching.

Endnotes

*A version of this paper, discussing only data from Slavic, is to appear in *Formal Approaches to Slavic Linguistics: The Cornell Meeting, 1995* under the title “Subject Free Relatives in Null-Subject Languages: Evidence from Slavic”. I want to thank Sabine Iatridou and Tony Kroch, whose seminar on *wh*-constructions made me interested in the topic of free relatives. I am also grateful to Rajesh Bhatt, Željko Bošković, Alexis Dimitriadis, and Spyridoula Varlokosta for the helpful discussions.

¹The exact phrase structure of headed relative clauses is controversial. For Partee (1975) and Jackendoff (1977), among others, restrictive relatives are attached at the level of N' while appositives are adjoined to NP. The motivation for such a distinction is primarily semantic, but Bach and Cooper (1978) show 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.

²The internal syntax of free relatives has been a matter of some disagreement. For Bresnan and Grimshaw (1978) the *wh*-phrase is the head of the free relative and pronoun deletion is responsible for the gap in the rest of the clause. This approach is known as the HEAD HYPOTHESIS. An alternative 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 moved to Spec, CP of the free relative; the head is either phonologically null or altogether absent. Some mixed analyses have also been proposed, e.g. by Hirshbühler (1976) and Bonneau (1990), according to which the *wh*-phrase moves from Spec, CP to the head position (in the overt syntax or at LF).

³Here I will illustrate the matching effect with examples from Slavic and Modern Greek. These languages will figure in the later discussion of (non-)matching and *pro*-drop and it is important to establish that they are indeed matching languages. (See Borsley 1984 and Rudin 1986 for discussion of matching in Polish and Bulgarian, respectively.) The categorial matching effect is illustrated in (i), from Serbo-Croatian, and (ii), from Modern Greek. Because the matrix and embedded verbs have different subcategorization requirements, (ia) and (iia) are not acceptable. The free relatives are well-formed, but the category of their *wh*-phrase, PP, does not match the one required of the matrix object, namely NP. When the matrix verb is changed to a one taking a PP complement, the sentences become grammatical, as in (ib) and (iib).

- (i) a. *Unajmiću [_{FR} s **kime** god budeš pričao].
 will-hire-1sg with who ever be-fut talked
 ‘I will hire whoever you talk with.’
- b. Pričaću [_{FR} s **kime** god ti budeš pričao].
 will-talk-1sg with who ever you be-fut talked
 ‘I will talk with whoever you talk.’
- (ii) a. *Tha proslavo [_{FR} **se opion** milisis].
 will hire-1sg to whom talk-2sg
 ‘I will hire whoever you talk to.’
- b. Tha miliso [_{FR} **se opion** milisis].
 will talk-1sg to whom talk-2sg
 ‘I will talk to whoever you talk.’

The Slavic languages and Modern Greek exhibit case matching effects as well. Consider the Serbo-Croatian examples in (iii) first. The matrix verb takes a dative indirect object. (For the present discussion it is immaterial whether case is assigned by the verb or checked in a functional projection.) When the *wh*-phrase is dative, the free relative is not well-formed because the embedded verb requires a nominative argument and the sentence is ungrammatical. When the case of the *wh*-phrase meets the requirements of the embedded verb, 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. (iiib)):

- (iii) a. * Pomoći će [FR **kome/ ko** god dodje prvi].
 help will-3sg who-DAT/ who-NOM ever comes first
 ‘He will help whoever comes first.’
- b. Pomoći će [FR **kome** god oni pomognu].
 help will-3sg who-DAT ever they help
 ‘He will help whoever they help.’

Free relatives in Modern Greek behave the same with respect to the case matching requirement. The free relatives in the examples in (iv) are in a position where accusative case is assigned. When the *wh*-phrase in (iva) is accusative-marked, it is inappropriate as the object of the genitive-assigning embedded verb and (iva) is ungrammatical. When the *wh*-phrase is genitive and hence the free relative is well-formed, there is a clash with the case-requirements of the matrix verb and (iva) remains unacceptable. (ivc) is grammatical because the *wh*-phrase of the free relative matches the case assigned by the matrix verb.

- (iv) a. * Tha apoliso [FR **opion/ opianou** aresis].
 will fire-1sg who-ACC/ who-GEN please-2sg
 ‘I will fire whoever likes you.’
- b. Tha apoliso [FR **opion** proslavis].
 will fire-1sg who-ACC hire-2sg
 ‘I will fire whoever you hire.’

⁴Instances of case syncretism show that matching is affected by the *form* of the *wh*-word. See Suñer (1984) and Groos and van Riemsdijk (1979) for examples.

⁵Failure of matching results in ungrammaticality in languages like English, Dutch, German, French, Catalan, Spanish. Languages like Latin, Classical Greek, Archaic German, Old Spanish, and Old English do not exhibit matching effects (cf. Bresnan and Grimshaw 1978, Groos and van Riemsdijk 1979, Hirschbühler and Rivero 1981, 1983, Harbert 1983, Suñer 1983, 1984, among others).

⁶As far as these languages are concerned, the generalization applies to derived subjects (of unaccusatives and passives) as well.

⁷I leave open the question of whether *pro* is in Spec, VP or Spec, IP. Also, the subject free relative is illustrated here as adjoined to IP but it could also appear adjoined to CP.

⁸In 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.

⁹This 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 a resumptive pronoun (cf. the French (i) from Hirschbühler and Rivero 1983) and therefore such constructions are unambiguously recognizable as ones involving left-dislocation.

- (i) [FR **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.’

¹⁰See also Borsley 1984 and Rudin (1986) for examples of non-matching left-dislocated free relatives in Polish and Bulgarian, respectively.

¹¹It still remains to be explained, however, why in French even dislocated free relatives have to be matching (cf. Hirschbühler and Rivero). Apparently, matching is required of arguments but not of arguments only.

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