

## Free Relatives as DPs with a Silent D and a CP Complement

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### 1. Free Relative Clauses (FRs): a Definition

Free relative clauses (henceforth, FRs) are embedded clauses with a gap in an argument or adjunct position and a clause initial *wh*-element. The FRs I will focus on in this paper are always tensed and occur in an argument or adjunct position, with a distribution that looks like the distribution of DPs.<sup>1</sup> Some examples of these FRs are given in (1), together with the sentences resulting from replacing the FRs with DPs.

- (1) a. I appreciate [<sub>FR</sub> what you did for me].  
a'. I appreciate [<sub>DP</sub> your help].
- b. [<sub>FR</sub> Who couldn't sleep enough] felt tired the following morning.  
b'. [<sub>DP</sub> The insomniacs] felt tired the following morning.
- c. You can't smoke [<sub>FR</sub> where the kids are sleeping].  
c'. You can't smoke [<sub>DP</sub> there].
- d. He opened the door [<sub>FR</sub> when I was about to knock].  
d'. He opened the door [<sub>DP</sub> then].

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<sup>1</sup> This definition excludes FRs that are introduced by *-ever wh*-elements like *whoever*, *whatever*, etc. (cf. Tredinnick 1993), FRs that occur in dislocated positions (cf. Groos and van Riemsdijk 1981 for right-dislocated FRs in German and Dutch, and Suñer 1984 and Hirschbühler and Rivero 1983 for topicalized FRs in Spanish and Catalan), FRs that behave like free clausal adjuncts (cf. Izvorski 2000a), and FRs that are tenseless (cf. Grosu 1994, Izvorski 2000b). All these FRs show relevant syntactic and semantic differences with the FRs I am considering here.

## 2. FRs and Headed Relative Clauses (HRs)

(2) a. FR: I like [<sub>FR</sub> \_\_\_\_\_ what you bought].  
 b. = HR: I like [<sub>HR</sub> the thing(s) which you bought].

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### (3) Matching effects

- ### 3. FRs and Embedded Wh- Interrogatives (wh-Qs)

I will now compare FRs and embedded wh- interrogative clauses or, in brief, wh- questions (wh-Qs). These two constructions can look identical in form. However, they always differ in meaning. For instance, the FR in (4)a *what you bought* looks identical to the wh-Qs in (4)b *what you bought*, but they are

interpreted differently. (4)a can be paraphrased with (4)a' *I like the things you bought*, while (4)b can be paraphrased with (4)b' *I wonder which things you bought*.

- (4) a. I like [<sub>FR</sub> what you bought].  
 a'. = I like [the thing(s) you bought].  
 b. I wonder [<sub>wh-Q</sub> what you bought].  
 b'. = I wonder [which thing(s) you bought].

Focusing their attention on this identity in form, a few scholars (Acquaviva 1989, Rooryck 1994, Donati 1997)<sup>2</sup> argue that FRs have the same syntactic structure as wh-Qs, that is FRs are bare CPs. The problem for this approach is that something ad hoc must be postulated in order to account for the crucial syntactic differences that there are between FRs and wh-Qs. In particular, FRs never allow extraction out of them, while wh-Qs may, as shown in (5) for Italian. Second, FRs show matching effects as we have already seen, while wh-Qs do not, as shown in (6) for English<sup>3</sup>.

(5) Extraction (in Italian)

- a. FR: \* Queste sono le ragazze<sub>i</sub> che odio [<sub>FR</sub> chi ha invitato e<sub>i</sub>].  
 These are the girls<sub>i</sub> that I hate [who invited e<sub>i</sub>].  
 c. wh-Q: Queste sono le ragazze<sub>i</sub> che so [<sub>wh-Q</sub> chi ha invitato e<sub>i</sub>].  
 These are the girls<sub>i</sub> that I know [who invited e<sub>i</sub>].

(6) Matching effects

- a. FR: \* I bought [<sub>DP</sub> [<sub>PP</sub> with what] you could wrap it].  
 b. wh-Q: I wondered [<sub>CP</sub> [<sub>PP</sub> with what] you could wrap it].

<sup>2</sup> I just received a copy of Izvorski 2000b and I have not had the time to read it carefully yet. From what I have seen so far, she argues that the FRs we are considering are CP/DP. More precisely, when the wh- phrase of FRs moves to Spec of CP, the head C does not project a maximal category, but it is the wh- phrase itself to project its maximal category DP. This is the crucial difference that distinguishes FRs from wh- interrogatives.

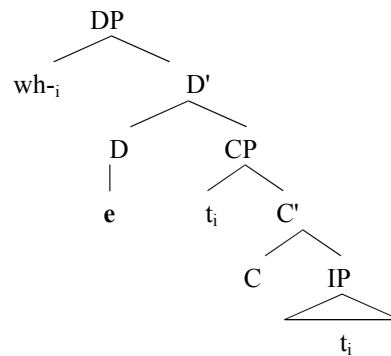
<sup>3</sup> Rizzi (1982: pp. 75-76, fn. 32) notices a further difference between FRs and wh-Qs in Italian. Gapping is allowed wh-Qs are conjoined (cf. a), while it is not when FRs are conjoined (cf. b):

- (a) Non ho ancora capito chi ha telefonata a Maria e chi (**ha telefonato**) a Giuliana.  
 'I haven't understood yet who called Maria and who (called) Giuliana.'  
 (b) Ho punito chi ha telefonata a Maria e chi **\*(ha telefonato)** a Giuliana.  
 'I haven't understood yet who called Maria and who (called) Giuliana.'

#### 4. Proposal: FRs = D + CP

Getting to my proposal, I think that the idea that FRs and wh-Qs are syntactically very similar is correct. What I am going to propose is a more articulated formulation of this idea, which can also account for the syntactic differences between FRs and wh-Qs. I would like to suggest that FRs, like wh-interrogatives, are wh-CPs. But, unlike interrogatives, they are not just wh-CPs. Their structure is slightly more complex: FRs are DPs with a covert D that takes the wh-CP as its complement.<sup>4</sup> This is the structure that is shown in (7).

(7) The structure of FRs



Since D is covert, it must be licensed by some agreement configuration. Following Koopman 2000 among the others, I assume that covert elements must enter in a Spec-Head relation with overt material in order to be licensed. Thus, the wh- phrase of FRs further moves from the specifier of CP to the specifier of DP in order to license the covert head D.

#### 5. Wh- Words Crosslinguistically

A cross-linguistic look at the use of wh-words seems to support the idea that FRs are closely related to wh-Qs.

The phenomenon of wh- elements introducing (free or headed) relative constructions is quite common in Indo-European (cf. Smits 1989), and less common among other language families (cf. the survey in von Bremen 1987).

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<sup>4</sup> While I was finishing working on this talk, I found out that Alexiadou and Varlokosta (1996) suggest a very similar syntactic structure for FRs in Modern Greek. Wilder (1998) assumes this proposal to discuss a kind of FR that he labels “Transparent Free Relatives”.

Focusing on Indo-European languages, an interesting generalization seems to arise, the one in (8):

- (8) *Crosslinguistic Generalization on Wh- Words*  
Whenever a language allows the wh- elements that introduce wh-Qs to introduce also relative constructions, it always does so with FRs<sup>5</sup>. HRs, instead, can be introduced by elements that are morphologically unrelated to interrogative wh- words.

In other words, you can find either languages like English<sup>6</sup> that use basically the same set of wh- elements to introduce FRs, HRs and wh-Qs, or languages like German and Italian that use wh- elements to introduce FRs and wh-Qs, while HRs are introduced by morphologically unrelated elements. Crucially, you never find languages that use wh- elements with wh-Qs and HRs, but not with FRs.

These crosslinguistic observations suggest at least two conclusions. First, FRs cannot be just a subset of HRs, otherwise we would expect them to be introduced by exactly the same class of elements in all languages. Second, FRs seem to be directly related to wh-Qs since they are introduced by the same elements in all languages, while HRs are not.

## 6. Other DPs with a CP Complement

Let's now go back to the assumption that DPs can also take CP as their complements. I would like to show that there is quite a bit of evidence that this option is independently made available by the grammar for other constructions.

### 6.1. Spanish

Spanish, for instance, has a construction where a definite determiner is immediately followed by the complementizer *que*, as shown in (9).

- (9) [DP [D EI] [CP que no trabaja]] no come.  
the-MASC-SG that not works not eats  
'The one who does not work does not eat.'

The distribution and interpretation of this construction are very similar to those of FRs, as you can see comparing (9) with the corresponding FR in (10).

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<sup>5</sup> In a few languages, the wh- elements of FRs can or have to carry an affix that looks like the definite article (e.g. Modern Greek and Bulgarian).

<sup>6</sup> Diachronically, FRs are already attested in Old English at the beginning 13<sup>th</sup> century, while restrictive HRs introduced by wh-elements become common in the 16<sup>th</sup> (cf. von Bremen 1987).

- (10) [DP [D **e**] [CP quien no trabaja]] no come.  
           who not works   not   eats  
       'The one who does not work does not eat.'

Although Spanish pronouns can be homophonous with definite determiners, there is evidence that D in (9) is a definite determiner and not a pronoun (cf. Plann 1980). For instance, *lo* in (11) can be interpreted only as [-human]. The same is true for the definite determiner *lo* in (12). The homophonous pronoun *lo* in (13), instead, has different properties, since it can be both [-human] and [+human].

- (11) [DP [D **Lo**] [CP que tu crees]] no es cierto.  
           the    that you believe   not is certain  
       'The thing(s) you believe is/are not certain'
- (12) **lo** bueno  
       the good  
       'the good things'
- (13) **Lo** ví.  
       it/him saw-1sg  
       'I saw it/him'

## 6.2. Wolof

A second interesting piece of evidence comes from Wolof, a West-Atlantic language spoken in Senegal and Gambia. Wolof has headless relative clauses that can optionally occur with definite determiners, as shown in (14) (Harold Torrence p.c.). This construction really looks like a D with a CP complement, if you consider that definite determiners are always post-nominal in Wolof.

- (14) door-naa [DP [CP ki nga       begg] [D (**ki**)]]  
       hit-1sg       rel 2sg.subj love    the  
       'I hit who you love'

## 6.3. Other languages

More generally, it has been claimed that in many languages an overt D can combine with CP to form a DP, especially in argument position. For instance, this what Williamson 1987 for some constructions in Lakhota, Zaring 1992 for *ce que* constructions in French, Roussou 1994 for Greek, Donati 1995 for factive

clauses in Spanish, Adger & Quer 1999 for Basque. Also, Kayne 1994 and Bianchi 1995 argue that headed relative clauses are DPs with an overt D that takes a CP complement.

In conclusion, there seems to be independent evidence that the option for some determiners to take a CP complement is independently available in the grammar.

## 7. Deriving the Syntactic Properties of FRs

In the last part of this paper, I would like to show how some of the properties of FRs I mentioned at the beginning can be accounted for by the syntactic structure I am proposing. Let's start with the distributional facts.

### 7.1. Distribution

Earlier we noticed that FRs have the same distribution as DPs. Now we can easily explain why. FRs have the same distribution as DPs because they are DPs.

#### 7.1.1. PP free relatives?

The FRs introduced by *where* and *when* are not counterexamples to this claim. It is true that they can occur where only PPs can occur, as shown in (15), but they can also occur in positions where DPs are usually preferable, as shown in (16):

- (15) a. He was born [<sub>FR</sub> where I grew up].  
a' He was born [<sub>PP</sub> in my hometown]/ \* [<sub>DP</sub> my hometown].  
  
b. I went to Paris [<sub>FR</sub> when I was young].  
b'. I went to Paris [<sub>PP</sub> in my childhood]/ \* [<sub>DP</sub> my childhood].
- (16) a. [<sub>FR</sub> Where I grew up] was a really small town.  
a' [<sub>DP</sub> My hometown]/ \* [<sub>PP</sub> In/To my hometown] was a really small town.  
  
b. I thought about [<sub>FR</sub> when I was young].  
b'. I thought about [<sub>DP</sub> my childhood]/ \* [<sub>PP</sub> in my childhood].

The FRs introduced by *where* and *when* seem to behave like the expressions *there*, *yesterday*, *last year*, *this morning*, *the day before*, etc. These expressions can act as both DPs and PPs, depending on the context. Like DPs, they can be complements of a preposition, as shown in (18). But they can also occur where overt PPs can, as shown in (17).

- (17) a. He was born [<sub>DP</sub> there].  
 a' He was born [<sub>PP</sub> in my hometown]/ \* [<sub>DP</sub> my hometown].
- b. I went to Paris [<sub>DP</sub> last year].  
 b'. I went to Paris [<sub>PP</sub> in my childhood]/ \* [<sub>DP</sub> my childhood].
- (18) a. [<sub>DP</sub> There] is really small.  
 a' [<sub>DP</sub> My hometown]/ \* [<sub>PP</sub> in my hometown] is really small.
- b. I thought about [<sub>FR</sub> yesterday].  
 b'. I thought about [<sub>DP</sub> my childhood]/ \* [<sub>PP</sub> in my childhood].

Following Larson 1985, I conclude that these expressions are DPs that also allow an adverbial interpretation. The same, I think, it is true for FRs that are introduced by *where* and *when*. Syntactically, they are DPs; semantically, they can be interpreted as either DPs or PPs.

## 7.2. Extraction

About extraction, we noticed earlier that no element can be extracted out of a FR. Now we have a reason for that. FRs are "complex nominals", that is they are DPs with a CP inside. Extraction out of "complex nominals" is always blocked, as already noticed by Ross 1967. Any principle that would account for this generalization would also account for the ban on extraction out of FRs.

## 7.3. Matching effects

Let's now go back to the "matching effects" that I briefly mentioned at the beginning of the talk. Unlike HRs and wh-Qs, FRs must satisfy a restriction that is usually labeled as categorial matching. In brief: only wh- phrases of category DP can occur in FRs. In other words, the syntactic category of the FR and the syntactic category of its wh- phrase have to match. For instance, (19)a *I bought what I need* is well formed since the wh- element of the FR *what I need* is the DP *what*. (19)b *I bought with what I'll wrap it*, instead, is ungrammatical because the wh- element of the FR *with what I'll wrap it* is the PP *with what*.

- (19) a. I bought [<sub>DP</sub> [<sub>DP</sub> what] I needed].  
 b. \* I bought [<sub>DP</sub> [<sub>PP</sub> with what] I'll wrap it].

How can we account for categorial matching? As we already saw, the covert head D of FRs must be licensed by some phrase in its Spec position. Now, it is plausible that D can only be licensed by a phrase of the same category, that is something of category D. It follows that the wh- phrase of FRs, the only available licenser for D, must be a DP.



## 8. On the Nature of the Covert D of FRs

Before concluding, I would like to speculate a little bit on the nature of the covert D that I assume occurs in FRs. My tentative hypothesis is that the covert D occurs in FRs for purely syntactic reasons, like some sort of expletive determiner. The reason may be that bare CPs can occur inside IP only if they are specifically selected as such, as in the case of wh-Qs.

This hypothesis predicts that if a language allows FRs to occur in positions where DPs can not occur or do not need to, we should observe at least two consequences. 1) Since those FRs would no longer need a covert D, they would be plain wh- CPs and we would expect them not to show matching effects. 2) Since the covert D is an expletive, it is semantically empty and we would expect those FRs to receive the same interpretation as the FRs with a covert D.

These predictions seem to be borne out, at least for Spanish and Catalan. Topicalized free relatives in Spanish and Catalan (cf. Hirschbühler and Rivero 1983; Suñer 1984) allow matching effects to be violated and are interpreted similarly as the FRs in non-dislocated positions, as shown in the example below.

- (20) *Spanish* (Suñer (1984: 365))  
[<sub>DP</sub> [<sub>PP</sub> Con quien] me quiero casar] ése ni me da la hora.  
with whom me want to-marry that-one not-even me gives the time  
'The one I want to get married to, that one does not even know that I exist.'

## 9. Conclusion

In this paper I suggested that a certain kind of FR, the ones that are tensed, have bare wh- elements, and do not occur in dislocated positions, these FRs have the syntactic structure of DPs with a covert D and a wh- CP complement.

I showed that this approach can directly account for the distribution of FRs, the ban on extraction and matching effects, since all these properties are related to the presence of the covert head D.

## References

- Acquaviva, P. 1989. Aspetti della complementazione frasale. Tesi di Laurea, Università di Pisa.
- Albright, A. 1997. Case Attraction and the Head-Raising Analysis of Relative Clauses. Ms., UCLA.
- Adger, D. & J. Quer. 1999. The syntax and semantics of Unselected Embedded Questions. Ms. University of York and Universitat Autònoma de Barcelona.
- Alexiadou, A. & S. Varlokosta. 1996. "The syntactic and semantic properties of Free Relatives in Modern Greek", *ZAS Papers in Linguistics*, 5: 1-32.
- von Bremen, K. 1987. *English wh-Relativization: Cross-Linguistic Perspectives, Diachrony, Synchrony and Linguistics Theory*. Bloomington: Indiana University Linguistics Club.
- Bianchi, V. 1995. Consequences of Antisymmetry for the syntax of headed relative clauses. Ph.D. Dissertation, Scuola Normale Superiore, Pisa.
- Bresnan, J. & J. Grimshaw. 1978. "The Syntax of Free Relatives in English", *Linguistics Inquiry*, 9: 331-391.
- Donati, C. 1995. "Il *que* relativo spagnolo", *Lingua e Stile*, 30: 565-595.
- Donati, C. 1997. Elementi di sintassi della comparazione. Ph.D. Dissertation, Università di Firenze.
- Groos, A. & H. van Riemsdijk. 1981. "Matching Effects in Free Relatives: a Parameter of Core Grammar". In A. Belletti, L. Brandi, L. Rizzi (eds.), *Theory of Markedness in Generative Grammar*. Pisa: Scuola Normale Superiore, 171-216.
- Grosu, A. 1994. *Three Studies in Locality and Case*, London-New York: Routledge.
- Hirschbühler, P. & M.-L. Rivero. 1983. "Remarks on Free Relatives and Matching Phenomena", *Linguistic Inquiry*, 14: 505-520.
- Izvorski R. 2000a. "Free Adjunct Free Relatives", *Proceedings of WCCFL XIX*, Boston: Cascadilla Press.
- Izvorski R. 2000b. Free relatives and related matters. Ph.D. Dissertation, University of Pennsylvania.
- Kayne, R. 1994. *The Antisymmetry of Syntax*. Cambridge, MA: The MIT Press.
- Koopman, H. 2000. "The Spec Head Configuration". In H. Koopman, *The Syntax of Specifiers and Heads: Collected Essays of Hilda J. Koopman*, London-New York: Routledge.
- Larson, R. 1985. "Bare-NP Adverbs", *Linguistic Inquiry*, 16: 595-621.
- Larson, R. 1987. "'Missing Prepositions' and the Analysis of English Free Relatives", *Linguistic Inquiry*, 18: 239-266.
- McCreight, K. 1988. Multiple Case Assignments. Ph.D. Dissertation, MIT.
- Plann, S. 1980. *Relative Clauses in Spanish Without Overt Antecedents and Related Constructions*. Berkeley/Los Angeles: University of California Press.
- Rizzi, L. 1982. *Issues in Italian Syntax*. Dordrecht: Foris.
- Rooryck, J. 1994. "Generalized Transformation and the Wh- Cycle: Free Relatives as Bare Wh-CPs", *Groninger Arbeiten zur germanistischen Linguistik*, 37: 195-209.
- Ross, J.R. 1967. Constraints on Variables in Syntax. Ph.D. Dissertation, MIT.
- Roussou, A. 1994. "Nominalized Clauses in the Syntax of Modern Greek", *UCL Working Papers in Linguistics*, 3: 77-100.

- Rudin, C. 1986. *Aspects of Bulgarian Syntax: Complementizers and WH Constructions*. Columbus, OH: Slavica Publishers.
- Smits, R.J.C. 1989. *The Relative and Cleft Constructions of the Germanic and Romance Languages*. Dordrecht: Foris.
- Suñer, M. 1984. "Free Relatives and the Matching Parameter", *The Linguistic Review*, **3**: 363-387.
- Taraldsen, K. 1981. "Case-conflict in Norwegian Topicalization". In *NELS 11*: 377-398.
- Tredinnick, V. 1993. "On the distribution and interpretation of the suffix *-ever* in English free relatives", *Proceedings of CONSOLE II*.
- Wilder, C. 1998. "Transparent Free Relatives", *Proceedings of WCCFL 18*.
- Williamson, J. 1987. "An indefiniteness restriction on relative clauses in Lakhota". In E. Reuland and A.G.B. ter Meulen (eds.) *The representation of indefinites*, Cambridge, MA: The MIT Press.
- Zaring, L. 1992. "French *ce* as a clausal determiner", *Probus*, **4.1**: 53-80.

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