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On Mixed Categories: The Case of Free Relatives

Abstract[1]

Free Relatives (FRs) are constructions that share the essentials of core relative sentences but have no lexical antecedent (i.e. they are headless) and are subject to a matching condition which forces the relative operator to satisfy the selectional restrictions of both the matrix and the embedded verb. This paper focuses on nominal FRs in English and in Spanish, and proposes a syntactic analysis of the construction as a mixed category made out of a CP layer and a DP layer connected through a nominalizer SWITCH, the functional category NomP. FRs are therefore treated here as complex nominals whose underlying structure coincides with that of headed and semiheaded relatives (i.e. the so-called Semifree Relatives in Spanish), and whose structural peculiarities follow from the particular role that the WH-constituent plays in the activation and interpretation of the nominalizer.

1. Introduction

Standard syntactic analyses canonically make use of a number of lexical categories (VP, NP, AP, etc.) implemented by some functional projections that encode their relevant grammatical features (tense, aspect…). However, one should also consider certain categories that are not uniform (i.e. consistently verbal, nominal, adjectival…) but combine properties of two or more lexical projections. This seems to be the case of Free Relatives (FRs), which are constructions that, despite their sentential structure, display a nominal distribution and can actually appear in syntactic positions excluded to canonical sentential categories (cf. Huddleston 2002: 1069):

(1) SAI:
Is [*what she suggests* / that idea / *that she proposes to go alone] unreasonable?

[1] I am indebted to the anonymous reviewers of the journal for very insightful comments and suggestions. Needless to say, all remaining errors are my own.

(2) Complement of a preposition:
I am sorry for [*what I did* / that situation / *that you were inconvenienced]

(3) Subject of a Small Clause:
They considered [[*what she suggested* / that idea / *that she proposes to go alone] unreasonable]

As the examples above show, FRs (in italics) appear in DP positions and are subject to the same structural requirement than standard DPs, i.e. the need to appear in Case sensitive positions. This explains why they cannot be extraposed (4), and also why they can be the complement of a preposition as in (2), but not of a non Case licensing category such as an adjective (5):

(4) It is unreasonable **what she suggests* / *that idea / that she proposes to go alone.

(5) I am sorry *what I did / *that situation / that you were inconvenienced.

The main goal in this paper is to account for the distribution and syntactic peculiarities of FRs, analyzing them as mixed categories which combine a CP and a DP projection. In Section 2, I describe the main structural properties of the construction and the standard analyses that have attempted to account for them in the generative tradition. Section 3 presents my own analysis of FRs under a theory of mixed projections along the lines of Panagiotidis & Grohmann (2005), testing it on facts of both English and Spanish. Section 4 offers some conclusions.

2. Syntactic properties of FRs

Traditionally, the semantic typology of relative clauses has included basically two types, restrictives and non-restrictives. The former are always syntactically bound to a DP, and restrict the class of entities that can be denoted by this DP. As for non-restrictive relative clauses, they modify a wide range of categories adding further qualifications to their reference; however, they do not narrow down, nor expand, their extension. Despite their semantic and structural differences, what both types of headed relative clauses have in common is that they are introduced by a relative operator

which is anaphorically linked to the antecedent:[2]

(6) Please, return [the book$_x$ [which$_x$ [you have taken ~~which~~$_x$ from here]]]

As (6) shows, the relative clause has two occurrences of a variable X connected via the relative operator *which*, its (simplified) reading being 'Please, return the book X such that you have taken X from the library'. In this case the relative operator is lexical, but (restrictive) headed relative clauses may also allow for non-lexical operators in English when the relativization affects the object of a verb or a preposition in the subordinated clause:

(7) Please, return [$_{DP}$ the book$_x$ [Op$_x$ (that) [you have taken ~~Op~~$_x$ from here]]]

In the generative tradition, the relative operator has customarily been generated in its corresponding argumental position and moved to the left periphery of the clause for interpretative reasons (i.e. to be in a local relation to its antecedent). This left periphery is articulated in the sense of Rizzi (1997) and comprises at least two obligatory projections: ForceP, which encodes the illocutionary force of the clause and has a feature [REL] in relative clauses, and FiniteP, which signals its tense/mood features; for convenience, here I will use the standard term CP$_{[REL]}$ to subsume the relevant features of the two.

Free relatives are constructions which share the essentials of core relatives (i.e. they are sentential modifiers which involve a relative operator), but do not fit in the traditional binary typology. In particular, they differ from the canonical types in that they have no lexical antecedent (i.e. they are headless), and thus the relative operator has to satisfy a dual set of requirements: those of the matrix clause and those of the relative.

Two types of constructions have been most exhaustively described in the relevant literature under the term Free Relative: the so-called Concessive Free Relatives (CFRs) and Standard Free Relatives (FRs). Despite their label, it is rather misleading to treat the former as a subgroup of free relatives. They are sentence-level adjuncts introduced by a WH-element of the *-ever* type, but this is the only characteristic they have in common with proper free relatives:

[2] From now on I restrict to restrictive relative clauses (and accordingly the term *headed relative* will just apply to them), since only these are structurally and semantically connected to free relatives.

(8) *Whatever you buy in that store, you always pay too much.*

As the example in (8) shows, the WH-*ever* phrase in the concessive sentence does not satisfy any semantic/syntactic requirement of the matrix predicate, a defining property of FRs, as will be argued below. Besides, as van Riemsdijk (2006) has noted, they can even contain multiple WH-phrases, a possibility attested in questions, but not in relative clauses of any kind (see Bošković 2002 for an account of multiple WH-fronting cross-linguistically):

(9) *Whichever CD you buy in whatever store, you always pay too much.*

Therefore I will not treat these concessive structures on a par with the other type of FRs and simply assume that they have a uniform sentential structure (i.e. that they are CP modifiers).

As for Standard Free Relatives, Bresnan & Grimshaw (1978) define them as pluri-categorial constructions, relying on data such as (10)–(14) below, where the relative operator (and, according to the authors, the whole FR) is a DP (10)–(11), an AP (12), an AdvP (13), or a PP (14):

(10) *Please, return what you have taken from here.*

(11) *I'll sing whichever songs you want me to sing.*

(12) *I'll sing however erect you want me to sing.*

(13) *I'll sing however carefully you want me to sing.*

(14) *I'll sing in whatever town you want me to sing.*

Larson (1987, 1998) argues against this view and proposes that FRs can only be nominal, analyzing examples like (12) and (13) as "free comparatives", and (14) as a preposition with a nominal FR complement. I will ignore the controversy here (see Grosu 2003 for details) and merely focus on Nominal Standard Free Relatives, because they are the best exponent of the core properties of the construction; I will accordingly

restrict the term FR to refer to them.[3]

Schematically, the derivation of FRs will be as in (15):

(15) Please, return [what$_x$ [you have taken ~~what~~$_x$ from here]]

The relative pronoun *what* in the sentence is not only understood as the internal argument of *taken*, but also as the complement of the matrix verb *return*; that is, it plays the same role that the antecedent *the book* has in headed relatives like (6). However, despite this nominal interpretation (and distribution; cf. (1)–(5)), FRs still bear a close structural resemblance to embedded WH-Questions like (16):

(16) I wonder [what$_x$ [you have taken ~~what~~$_x$ from here]]

Although WH-Questions describe states of affairs and not entities, the internal structure of the complement of *wonder* in (16) basically coincides with that of the FR in (15). Both are sentential categories which comprise a thematic layer (roughly vP and VP), an inflectional layer (crucially TP) and an illocutionary layer (an articulated CP). Derivationally, they are both subject to a movement operation which moves an operator of a given kind (interrogative or relative) to the left periphery of the clause, that is, to CP. It should be noted that there are languages like English, Spanish, or Finnish (cf. Manninen 2003) that basically have the same set of (WH-) elements to introduce headed relatives, FRs and WH-Questions. However, there are others, like German, which use WH-elements only to introduce FRs and WH-Questions, whereas their headed relatives are inaugurated by morphologically unrelated elements; FRs pattern in these languages with WH-Questions and not with headed relatives in this particular respect.

In view of the above, one could claim that FRs are a subset of relatives with much in common with embedded questions and with clear DP-like properties. Together with this mixed syntactic nature, another salient characteristic of FRs is the so-called *matching effect*, that is, the fact that the WH-phrase has to satisfy the selectional restrictions of both the matrix and the embedded verb:[4]

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[3] There is yet another group, the so-called Transparent Free Relatives, as in *He made what may appear to be a radically new proposal*. See Grosu (2003) for an analysis that treats this construction as a special case of nominal FR.

[4] In languages with a rich Case system WH-phrases also match in Case, but this seems to be a surface phenomenon tightly linked to the morpho-phonological form of the word

(17) English:

a. *I will take whatever you give me.*

b. **I will take for whatever you ask.*

(18) Spanish:

a. *Prefiero* *a* *quien* *conocí* *ayer.*
prefer.PRESENT.1SG at[ACC-mark] who meet.PAST.3SG yesterday
'I prefer whom I met yesterday.'

b. **Prefiero* *con* *quien* *viniste* *ayer.*
prefer.PRESENT.1SG with who come.PAST.2SG yesterday
'I prefer the one with whom you came yesterday.'

The examples in (17) and (18) show that the WH-phrase functions as a constituent shared and selected by two predicates, one in the embedded FR and another in the main clause and this peculiarity, along with the mixed categorial status of the construction, has been dealt with differently in the relevant literature.[5]

In general, formal analyses of FRs have adopted two different approaches to explain them:

A the FR is a complex nominal with an antecedent and a subordinate clause.

B the FR is a clausal constituent with a WH-phrase which can be somehow accessed from outside.

Among the A type analyses, there have been two competing views. On the one hand, the so-called *Head-Hypothesis* (cf. Bresnan & Grimshaw 1978; Larson 1987, 1998; Citko 2002), where the WH-phrase is considered the antecedent of the FR, either because it is externally merged in its surface position outside CP (with the gap inside the FR being occupied by a pronominal element deleted under referential identity with the WH-phrase, as in (19a), or because it raises from inside the CP to occupy a position outside, as in (19b):

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in question (cf. Groos & van Riemsdijk 1981; Suñer 1984; van Riemsdijk 2006; Graĉanin-Yuksek 2008, among others). In fact, as van Riemsdijk (2006) notes, Case mismatches are quite readily tolerated whenever they can be resolved under syncretism or Case attraction.

[5] Since, as stated above, I restrict here to Nominal Standard FRs, the matching condition implies that the FR must be introduced by a DP compatible with the selectional restrictions of both, the matrix and the subordinate predicates.

(19) a. Please, return [[$_{DP}$what$_i$] [$_{CP}$ [you have taken ~~pro~~$_i$ from here]]]
b. Please, return [[$_{DP}$what$_i$] [$_{CP}$ ~~what~~ [you have taken ~~what~~$_i$ from here]]]

On the other hand, the *COMP Hypothesis* (cf. Harbert 1983; Suñer 1983, 1984; Grosu & Landman 1998; Grosu 2003), where the link between the relative clause and the matrix predicate is not direct because there is an empty head (PRO or pro) that acts as the antecedent. The WH-phrase in these analyses eventually occupies the specifier position of the CP, as it would in headed relatives:

(20) Please, return [[$_{DP}$PRO/pro]$_i$ [$_{CP}$ what$_i$ [you have taken ~~what~~$_i$ from here]]]

As for the B type analyses, the underlying assumption is that the FR is not a complex nominal, but a sentential category, that is, structurally equivalent to embedded interrogatives. Initially, it was defended that what makes FRs syntactically different to interrogative clauses is that the specifier of CP could be accessed and, therefore, potentially selected from outside (cf. the *COMP accessibility* hypothesis of Groos & Vam Riemsdijk 1981; Hirschbühler & Rivero 1981, 1983):

(21) Please, return [$_{CP}$ what [you have taken ~~what~~ from here]]

But an analysis like (21) runs counter the standard assumptions on thematic restrictions since a single argument, the WH-phrase, would have to be connected to two different predicates. This is why more recent analyses do not approach the accessibility of the WH-phrase in terms of selection into CP, but in terms of the role that WH-phrase plays in the connection between that CP and the matrix predicate. For example, van Riemsdijk (2006) proposes a multidimensional structure where the WH-phrase is shared by the matrix predicate and the relative CP; Citko (2011) implements his approach, proposing that this structure undergoes a further Merge operation whereby the WH-phrase eventually occupies a CP-external position (the final structure being then a variant of the *Head-Hypothesis*).

Other authors focus on how the WH-phrase directly contributes to the final interpretation of the relative CP as a nominal. In this respect, Donati (2006) argues that the WH-element moves as a head into C^0 to check the WH-feature present there and in doing so endows the clause with the D-feature required for its nominal interpretation. Similarly, Ott (2011) assumes that the WH-constituent is responsible for the relabeling of the FR

into a nominal category, not because it moves as a head, but as the result of the cyclic transfer of syntactic structure. Her proposal is that the WH-category as a phrase moves to the edge of a CP whose head C^0, contrary to what happens in interrogative sentences, bears no interpretable formal features. This forces C^0 to be transferred, together with its complement, to the interface components (in order for the remaining syntactic object to conform to the principle of Full Interpretation), and leaves the WH-constituent as the only visible element at the next phase. In this analysis, the WH-phrase will also be selected by two different predicates but at two different derivational cycles, thus circumventing the conflict with the thematic-criterion provided this is understood as an interface condition that applies at the vP phase level.

In general, all the analyses above seek to offer a principled explanation of the main properties of Free Relatives (i.e. their DP-like properties and the matching condition), but only A type relates headed relatives and FRs structurally. Since the relation between (6) and (10) is quite straightforward, an analysis that captures their syntactic parallelism seems preferable in principle.[6] However, such an analysis must also formalize the role of the WH-phrase, which cannot be the structural antecedent of the relative clause in its internal structure but must serve to identify it and, at the same time, connect the subordinate CP to the matrix predicate.[7] This implies that the WH-phrase must somehow contribute to the relabeling of CP into a nominal category, as B type analyses presuppose. Significantly, this situation (i.e. a category of a given type turning into a DP) has been attested cross-linguistically in a number of constructions, and therefore the analysis of FRs can be plausibly undertaken under a more general theory of such mixed projections. This is what I would like to propose here: an analysis of FRs that connects them a) with headed restrictive relatives and b) with other nominalized

[6] Apart from their semantic and distributional equivalence, FRs have also been proved to pattern with headed relatives, and not with embedded questions, with respect to reconstruction effects (cf. Citko 2002).

[7] If the WH-constituent were the structural antecedent of the relative clause, one would have to provide ad hoc mechanisms to prevent sentences like (i) or (ii), which should be possible under current assumptions on relativization:

i) *Please, return *what.*
(cf. Please, return *the book.*)

ii) *Please, return *what that* you have taken from here.
(cf. Please, return *the book that* you have taken from here.)

constructions, while still accounting for the crucial syntactic properties of the construction (among them, the matching effect).

3. The mixed category analysis of Free Relatives

Mixed categories are those that combine properties typically associated with two distinct grammatical projections. Quite recently Panagiotidis & Grohmann (2005) have drawn on previous analyses of non-uniform projections (cf. Bresnan 1997; Borsley & Kornfilt 2000; Malouf 2000, among others) to investigate the exact nature of the constituents that make them up. They crucially rely on two notions: a) the existence of a SWITCH and b) the principle of Phrasal Coherence (as initially defended in Bresnan (1997) and Malouf (2000)).

A SWITCH is a recategorizer which allows the transition from one category to another, and which constitutes a syntactic (functional) category itself. As for the principle of Phrasal Coherence, it implies that the two parts of the mixed category connected through the SWITCH must be phrasally coherent; that is, the SWITCH must relate two categorially uniform subtrees. This way, mixed categories need not be ruled by extraordinary conditions on projection, since they just consist of two standard categories "glued" together by a SWITCH.

In their study, Panagiotidis & Grohmann (2005) focus on the size and the nature of the categorially uniform constituents that make up mixed projections. They argue that SWITCHes can only take complements of the size of a Prolific Domain, this being understood as a sub-part of the derivation that spans projections sharing contextual information (cf. Grohmann 2003):

> Prolific Domains:
> a) Thematic domain (Θ-Domain): the verbal projections, roughly vP and VP
> b) Agreement domain (Φ-Domain): the inflectional projections, crucially (a split) TP
> c) Discourse domain (Ω-Domain): the illocutionary projections, an articulated CP

As for the grammatical status of the SWITCH itself, they note that there is a conspicuous absence of mixed projections in which the SWITCH takes a nominal complement and converts it into a verbal one. This implies that SWITCHes are in fact nominalizers which recategorize a non-nominal

Prolific Domain into a DP:[8]

[DP [SWITCH([CP([TP[vP

Panagiotidis and Grohmann (2005) also contend that the SWITCH has a dual categorial specification from which the dual character of the mixed projection derives: it has an uninterpretable [*u*V] feature that makes it a probe searching for a V target to agree with (and entails that it will not appear without a verbal/clausal complement), and also possesses an interpretable [N] feature that renders it as a nominalizer and guarantees the nominal behaviour of the whole projection and its selection by a DP. They therefore see the SWITCH as a functional category which allows from the transition from one (verbal) category to another, but they do not provide any mechanism to restrict its appearance and the particular complements it may have.

Since it is clearly not the case that any Prolific Domain may serve as the complement of a SWITCH (i.e. not every verbal or clausal complement can be nominalized), I would like to propose here that for a nominalizer SWITCH to be possible (i.e. activated), it must be licensed by a nominal category of some sort in an adequate agreement configuration, a necessary move to render it a legible object at the interfaces. Besides, since the resulting DP needs to conform to the principle of Full Interpretation, it must also be somehow provided with relevant semantic features.

In what follows, I will analyze FRs along this view, treating them as mixed categories made up of a clause (the biggest possible Prolific Domain in Grohmann's (2003) classification) switched into a DP under the conditions just explored. In particular, I suggest that the derivation of a FR will schematically be as follows:

[8] Panagiotidis & Grohmann (2005) explore different constructions which could exemplify the combination of the SWITCH with a) a thematic domain (POSS-*ing* gerunds in English, or Dutch nominal infinitives) b) an agreement domain (clausal gerunds in English or Spanish nominal infinitives) and c) a discourse domain (Greek nominalized clauses). As mixed categories, Nominal Free Relatives will group with the latter, since they also result from the nominalization of the biggest possible Prolific Domain.

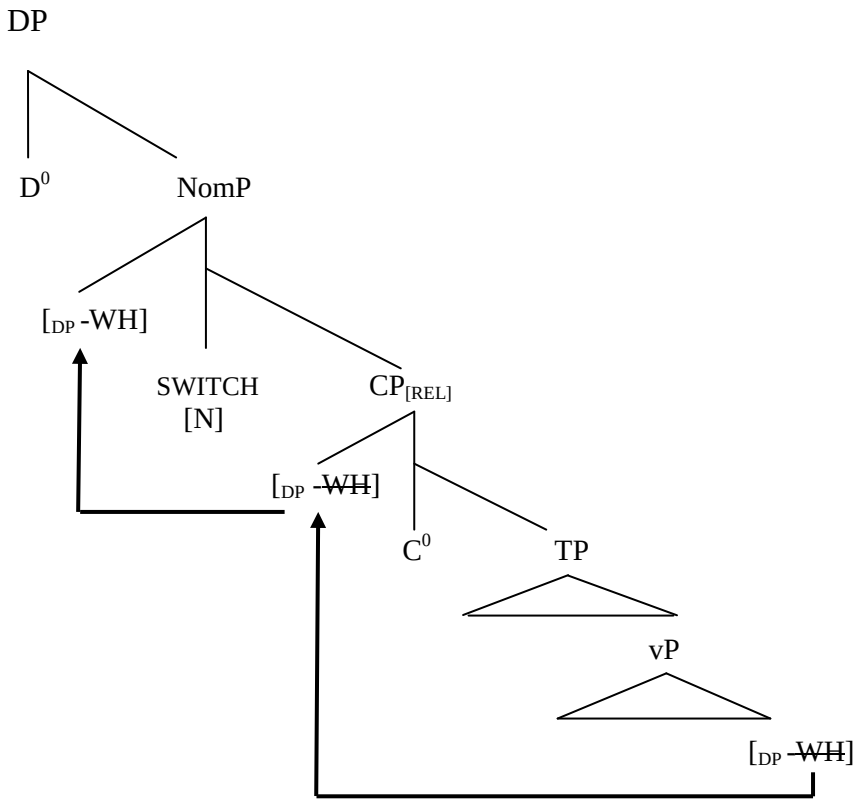

Figure 1

FRs consist of two categories, a DP and a CP, connected through a nominalizer SWITCH that I will call NomP. The complement of NomP is a full clause with a relative operator that moves to Spec-CP under current assumptions, and this is what the FR has in common with headed relatives and with embedded WH-Questions.

However, FRs crucially involve a further step in the derivation: the WH-element must land in Spec-NomP and enter in a Spec-head relation there to license (and thus activate) the SWITCH. Since the head of NomP has a [N] feature, the class of WH-phrases that can sit here will be restricted to those which are nominal; therefore only WH-DPs occur in Nominal FRs, the matching condition following from this (see fn. 5). Besides, unless the language has some other independent means to do so, the WH-phrase will have to provide NomP with relevant semantic features: this is what forces this constituent to be a referential (non-anaphoric) expression itself, a restriction that equates the type of introductory elements in FRs with those in interrogative clauses. This need to identify the functional category NomP semantically may also be the reason why D-linked relatives (i.e. relative pronouns which require a nominal restriction;

cf. Citko 2004) are excluded.[9]

One of the advantages of the analysis just sketched is that it allows for a unified treatment of headed and free relative sentences. Both types of relative sentences consist, under this view, of a $CP_{[REL]}$ attached to a nominal category (a lexical NP or a functional NomP, respectively) complement of a functional DP projection:[10]

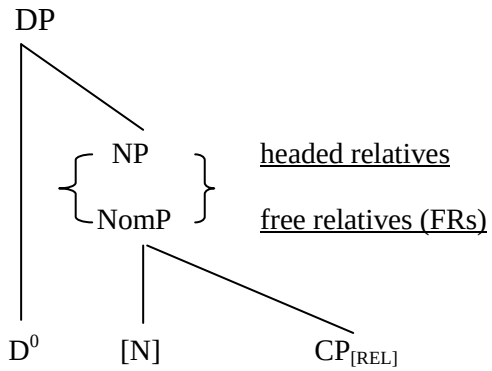

Figure 2

The process of relativization is also the same for both: the WH-phrase moves to Spec, CP to check the [REL] feature there, and FRs only differ from headed relatives in that they involve a further movement into Spec, NomP for interpretative reasons. Predictively it will also be possible for FRs to employ a covert operator under appropriate conditions (cf. (6) and (7)), a situation that is found in Spanish, as I will discuss in Section 3.2.[11]

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[9] This explains why FRs introduced by relative specifiers like *whose* or *which* are not grammatical in English:

i) **I shall buy which books / whose books I like.*

The forms *whatever* and *whichever*, in their use as specifiers, constitute apparent exceptions to the generalization that D-linked relatives cannot appear in FRs (cf. *I shall buy whatever books / whichever books I like*. (See Donati 2008 and references therein for a particular account of the issue.) In fact, FRs with WH forms of the *-ever* type (or their equivalent *-quiera* in Spanish) differ from FRs with plain forms in significant ways. Since I will not deal with the issue here, I refer the reader to Jacobson (1995), Dayal (1997), Grosu & Landman (1998), Grosu (2002) and van Riemsdijk (2006), among others, for precise accounts of their properties.

[10] An analysis of this sort where the relative clause attaches just to the NP, excluding the determiner, has been standardly defended in the literature for restrictive relative clauses (cf. Ross 1967; Partee 1976; Smits 1989, among others).

[11] Caponigro (2002) and Citko (2004), among others, defend an analysis of FRs where the relative clause directly attaches to a DP which has a covert head and an empty

3.1 FRs in English

Assuming the analysis of FRs as mixed categories that I have proposed above, the derivation of a sentence as (10) would be as follows:

(10) *Please, return what you have taken from here.*
Please, return [**DP** $_{[u\text{Acc}]}$ [**NomP** [$_{\text{DP}}$ what]$_{\text{x}}$ Nom$_{[\text{N}]\ [u\text{V}]}$ [**CP** ~~what~~$_{\text{x}}$ C$_{[\text{REL}]}$ [TP you have [vP taken$_{[\text{V}]}$ ~~what~~$_{\text{x}}$ from here]]]]]

The complement of NomP is a full clause with a relative DP *what*, which moves to Spec-CP under current assumptions, and then to Spec-NomP where it licenses the SWITCH. As argued, *what* also provides the covert category NomP with the grammatical features [3rd person] and [singular], and the semantic feature [non-human]. As for the DP subtree of the mixed category, it has an uninterpretable Case feature that needs to be valued in one of the positions accessible to Case valuation, that is, in Subject or Object position, thus ensuring the nominal distribution of the FRs.

This analysis thus accounts for the double nature (nominal and clausal) of FRs. The other salient property of the construction, the matching effect, also follows from the DP status of FRs and from the aforementioned Spec-head relation between the WH-phrase and the head of NomP with no need to weaken the thematic criterion, since the matrix DP is selected (and assigned Case) inside the matrix clause and the WH-phrase inside the relative clause. To license the nominalizer, this WH-phrase must be a nominal category (DP). When this situation holds, as in (10), a grammatical sentence results; otherwise ungrammaticality is expected, as in (17b) (repeated here for convenience), with a PP in Spec-NomP:[12]

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specifier to which the WH-phrase eventually moves. In my approach there exists a nominalizer NomP in between the two, which apparently makes the structural representation less economical. But, as argued above, this category NomP serves to capture the syntactic relationship that exists between FRs and headed relatives, on the one hand, and FRs and other nominalized constituents, on the other. Besides, the analysis posited here does not need to weaken the c-selection requirements of DP, which in English always takes a NP complement.

[12] As reflected in (10) and (22), the derivation will be convergent in the narrow syntax if the specifier and the head of NomP agree in syntactic features. The syntactic object is then sent to the PF component and will only be legible at that level if the morpho-phonological shape of the WH-phrase matches the requirements of the matrix clause (or if mismatches are resolved in an appropriate way; see fn. 4).

(22) **I'll take for whatever you ask.*

I'll take [**DP** $_{[u\text{Acc}]}$ [**NomP** [$_{\text{PP}}$ for whatever]$_x$ Nom$_{[\text{N}]\,[u\text{V}]}$ [**CP** ~~for whatever~~$_x$ C$_{[\text{REL}]}$ [TP you [vP ask$_{[\text{V}]}$ ~~for whatever~~$_x$]]]]]

In English, one can also find FRs after verbs that select PPs as complements (cf. van Riemsdijk 2006):

(23) *Tomorrow I will speak to whomever you spoke last night.*

(24) *Children worry about whatever their parents worry.*

The analysis of FRs as mixed categories will imply a derivation of (23)–(24) along the following lines:

(25) I will speak *to*$_i$ [**DP** $_{[u\text{Acc}]}$ [**NomP** [$_{\text{DP}}$ whomever]$_x$ Nom$_{[\text{N}]\ [u\text{V}]}$ [**CP** ~~whomever~~$_x$ C$_{[\text{REL}]}$ [TP you [vP spoke$_{[\text{V}]}$ [[~~to~~]$_i$ ~~whomever~~$_x$]]]]]]

(26) Children worry *about*$_i$ [**DP** $_{[u\text{Acc}]}$ [**NomP** [$_{\text{DP}}$ whatever]$_x$ Nom$_{[\text{N}]\ [u\text{V}]}$ [**CP** ~~whatever~~$_x$ C$_{[\text{REL}]}$ [TP their parents [vP worry$_{[\text{V}]}$ [[~~about~~]$_i$ ~~whatever~~$_x$]]]]]]

The matrix preposition takes a FR as its complement. Since for the Spec-head agreement to be preserved in NomP the relativization process can only involve WH-DPs, the preposition in the relative clause will have to be stranded. My analysis thus coincides, *mutatis mutandis*, with the approach defended in Larson (1987, 1998) for this construction (see Grosu 1996, 2003 for an alternative view). Subsequently, the preposition can be optionally deleted under matching conditions (or understood as elliptical and reconstructed in the sense of Larson (1987)).[13]

Lastly, a stranded preposition (covert this time) also seems to be involved in the derivation of FRs introduced by *where(ever)* or *when(ever)*. As is well known, in English there are a number of constituents that can be considered *adverbial DPs*, that is, locative and temporal DPs (*that day, yesterday, home etc.*) that can have an adverbial reading as if they were the object of a preposition (cf. Emonds 1976, 1987; Bresnan & Grimshaw

[13] As van Riemsdijk (2006) notes, this preposition-stranding analysis is substantiated by the variants of examples (23) and (24) where the preposition has not been deleted:

i) *Tomorrow, I'll speak to whomever you spoke to.*

ii) *Children worry about whatever their parents worry about.*

1978; Larson 198; McCawley 1988, among others); this lexically restricted class of adverbial DPs can license not only Nominative or Accusative Case, but also Oblique Case in contexts like those in (28):

(27) He frequently remembered [$_{DP}$ that day]

(28) They met [$_{PP}$ [$_{P}$ Ø] [$_{DP}$ that day]]

Significantly, FRs introduced by *where* or *when*, behave distributionally (and semantically) like adverbial DPs (examples from Caponigro & Pearl 2009: 156):

(29) *Lily adores where this very tree grows.* (i.e. FR understood as a DP: 'that place')

(30) *Lily napped where this very tree grows.* (i.e. FR understood as a P + DP: 'in that place')

If one assumes with Caponigro & Pearl (2009) that *where* and *when* are bare DP adverbs, the possibilities in (29) and (30) follow from my analysis of FRs with no further stipulation:

(31) Lily adores [**DP** $_{[u\text{Acc}]}$ [**NomP** [$_{DP}$ where]$_x$ Nom$_{[N]\ [u\text{V}]}$ [**CP** ~~where~~$_x$ C$_{[REL]}$ [TP this very tree [vP grows$_{[V]}$ [[$_{P}$e] ~~where~~$_x$]]]]]]

(32) Lily napped [$_{P}$e] [**DP** $_{[u\text{Oblique}]}$ [**NomP** [$_{DP}$ where]$_x$ Nom$_{[N]\ [u\text{V}]}$ [**CP** ~~where~~$_x$ C$_{[REL]}$ [TP this very tree [vP grows$_{[V]}$ [[$_{P}$e] ~~where~~$_x$]]]]]]

The WH-phrase *where* is base generated as the object of an empty preposition which will be necessarily stranded for the Spec-head agreement to be preserved in NomP.[14] There *where* identifies the nominal projection as [locative]; as a [locative] DP, the FR will now be able to license not only Accusative Case, as in (31), but also Oblique Case in contexts like (32).

3.2 FRs in Spanish

Free Relatives in Spanish share most of their structural and semantic

[14] As in the case of (23) and (24) above, examples where the stranded preposition is lexical empirically support an analysis along these lines: *Jack dislikes where we just ran past* (cf. Caponigro & Pearl 2009).

properties with English FRs and therefore can be approached under the same lines, that is, as mixed categories involving a Discourse Domain (CP), a SWITCH (NomP) and a resulting DP. The clause contains a relative operator which, as in English, is lexical; it moves to Spec-CP in the usual fashion, and then to Spec-NomP, where it has to identify the [N] feature of the head. This is what forces it to be nominal itself (a DP), and thus explains the matching restrictions that exist with respect to the matrix predicate (cf. examples in (18), repeated here for convenience).[15] The only non-anaphoric non D-linked WH-DP in Spanish is *quien* ʻwho' (and its plural form *quienes*), which identifies NomP as a singular/plural [human] entity:[16]

(33) Prefiero a [**DP** $_{[u\text{Acc}]}$ [**NomP** $[_{\text{DP}}$ quien$]_x$ Nom$_{[\text{N}]\ [u\text{V}]}$ [**CP** ~~quien~~$_x$ C$_{[\text{REL}]}$ [TP pro [vP conocí$_{[\text{V}]}$ a ~~quien~~$_x$ ayer]]]]]

(34) *Prefiero [**DP**$_{[\text{DEF}]\ [u\text{Acc}]}$ [**NomP** $[_{\text{PP}}$ con quien$]_x$ Nom$_{[\text{N}]\ [u\text{V}]}$ [**CP** ~~con quien~~$_x$ C$_{[\text{REL}]}$ [TP pro [vP viniste$_{[\text{V}]}$ ~~con quien~~$_x$ ayer]]]]]

As English, Spanish also has a set of adverbial WH-DPs (*donde*$_{[\text{locative}]}$ ʻwhere', *cuando*$_{[\text{temporal}]}$ ʻwhen', *como*$_{[\text{manner}]}$ ʻhow', *cuanto*$_{[\text{quantity}]}$ ʻhow much/many'), and here again the FR they introduce may behave distributionally (and semantically) like a DP or a PP. The structure involved coincides with the one proposed for the English examples in (29) and (30):

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[15] The FR can be non-matching in Spanish in subject or left dislocated positions, that is, in positions which are not subcategorized, but even there their status tends to be rather marginal (see RAE 2010 where they are legislated again, favoring instead the headed version of the relative):

i) *Me gusta con quien viniste ayer.*
me like.PRESENT.3SG with whom come.PAST.2SG yesterday
'I like the one with whom you came yesterday.'

If my analysis is on the right track, these non-matching FRs must be understood as non-nominalized CP constituents (cf. Caponigro 2002 for an approach along the same lines).

[16] Spanish relatives include not only *quien(es)* but also *Art (el/la/los/las) + cual(es)* ʻthe which' and *cuyo, -a, -os, -as* ʻwhose', but of the three *quien* is the only non D-linked WH-element that can be non-anaphoric, as required in FRs (and accordingly, the only one that can also introduce WH-Questions). For a justification of the D-linked nature of *el cual,* see Ojea (1992).

(35) *No me gusta donde vive.*
no me like.PRESENT.3SG where live.PRESENT.3SG
'I don't like where (s)he lives.'

No me gusta [**DP** $_{[u\text{Nominative}]}$ [**NomP** $[_{DP}$ donde$]_x$ $\text{Nom}_{[N]\ [uV]}$ [**CP** ~~donde~~$_x$ $C_{[REL]}$ [TP pro [vP $\text{vive}_{[V]}$ [[$_P$e] ~~donde~~$_x$]]]]]]

(36) *Vive donde nació.*
live.PRESENT.3SG where be.born.PAST.3SG
'(S)he lives where (s)he was born.'

Vive [$_P$e] [**DP** $_{[u\text{Oblique}]}$ [**NomP** $[_{DP}$ donde$]_x$ $\text{Nom}_{[N]\ [uV]}$ [**CP** ~~donde~~$_x$ $C_{[REL]}$ [TP pro [vP $\text{nació}_{[V]}$ [[$_P$e] ~~donde~~$_x$]]]]]]

Together with this, Spanish allows for a construction, sometimes termed Semifree Relative (SFR), whose interpretation and distribution is equivalent to that of FRs. It consists of the definite article in any of its possible grammatical forms (*el* [MASC, SG], *la* [FEM, SG], *lo* [NEUTER, SG], *los* [MASC, PL], *las* [FEM, PL]), followed by a clause introduced by the complementizer *que*:

(37) *Prefiero el que vino ayer.*
prefer.PRESENT.1SG the.MASC.SG that come.PAST.3SG yesterday
'I prefer the one [= male/thing] that came yesterday.'

(38) *Prefiero la que vino ayer.*
prefer.PRESENT.1SG the.FEM.SG that come.PAST.3SG yesterday
'I prefer the one [= female/thing] that came yesterday.'

(39) *Prefiero lo que vi ayer.*
prefer.PRESENT.1SG the.NEUT.SG that see.PAST.1SG yesterday
'I prefer the one [= thing] that I saw yesterday.'

FRs and SFRs can be freely coordinated:

(40) *Saludó a los que llegaron pronto*
greet.PAST.3SG at(ACC-mark) the.MASC.PL that arrive.PAST.3PL early
y a quienes entraron más tarde.
and at(ACC-mark) who.PL enter.PAST.3PL more late
'He greeted those that arrived early and those who entered later.'

And they are alternative options in all contexts:[17]

(41) *Prefiero* *quien/el* *que* *vino* *ayer.*
prefer.PRESENT.1SG who.SG/the.MASC.SG that came.PAST.3SG yesterday
'I prefer who/the one that I saw yesterday.'

This is why grammatical tradition from Bello(1981) [1847] to the RAE (2010) has customarily treated this construction as a special case of FR (see also Plann 1980; Ojea 1992; Brucart 1999, among others). In fact, SFRs structurally occupy a position intermediary between headed and headless relatives, sharing with the former the type of introductory elements they allow for, and with the latter the fact they are subject to the matching condition:[18]

[17] Actually, non-adverbial FRs in Spanish necessarily refer to human entities since, as argued above, they can only be introduced by *quien(es)* 'who'. This implies that SFRs have to be employed otherwise, and, consequently, will serve to translate all the sentences with a FR introduced by *what* in English:

i) *Please, return WHAT you have taken from here.*

ii) *Por favor, devuelve LO QUE has cogido de aquí.*

[18] Citko (2004) argues for a distinct group of relative clauses, which she calls "Light-headed relatives", with the following properties: a) they have a (semantically light) lexical head, b) can be interpreted as definite, indefinite or negative, c) show the same introductory elements than FRs and d) are not subject to the matching requirement. Contrary to what she contends, SFRs do not belong to this class, since, as noted, they do not share any of these properties; in particular, they are always interpreted as definite, they have the same introductory elements than headed relatives and they are subject to the matching condition. It is precisely this matching requirement that distinguishes SFRs from other relative constructions with light heads which could more accurately be grouped with those described by Citko (2004) for Polish:

i) **El* *con* *quien* *vino.*
The with whom come.PAST.3SG
'The one with whom she came.'

ii) *Ese* *con* *quien* *vino.*
That with whom come.PAST.3SG
'That one with whom she came.'

Table 1. Types of (restrictive) relative clauses in Spanish

Type of relative				Matching effects
	DP	NP	Introductory elements in CP	
Headed relative	Overt	Overt	$OP_{[REL]}$ que *quien / *el cual P + quien / P + el cual donde/cuando/como	NO
Semifree relative	Overt	Covert	$OP_{[REL]}$ que *quien / *el cual *P + quien / *P + el cual *donde/*cuando/*como	YES
Free relative	Covert	Covert	*$OP_{[REL]}$ que quien / *el cual *P + quien / *P + el cual donde/cuando/como	YES

As Table 1 shows, Spanish has a complementizer *que* 'that' which is obligatorily projected in the head of CP in relative sentences whenever the relative operator is covert ($OP_{[REL]}$), and excluded otherwise. The conditions that force the relative operator to be covert in headed relatives in Spanish do not coincide with those that apply in English. In English, the relative operator may optionally be covert depending on the syntactic function that it plays in the subordinate clause (cf. 7). In Spanish, it is the category of this operator that forces the option, and thus DP relative operators must always be covert in headed relatives unless they are the complement of a preposition (that can never be stranded in Spanish):[19]

(42) **Prefiero el candidato quien vino ayer.*
prefer.PRESENT.1SG the candidate who come.PAST.3SG yesterday
'I prefer the candidate who came yesterday.'

[19] Accordingly, adverbial DPs can only introduce headed relatives when they have an adverbial reading in the subordinate clause (i.e. when they are the complement of an empty abstract preposition in the terms explained above):
i) *Me gusta el lugar donde nació.*
me like the place where be.born.PAST.3SG
'I like the place where he was born.'

(43) *Prefiero* *el* *candidato* $OP_{[REL]}$ *que* *vino* *ayer.*
prefer.PRESENT.1SG the candidate $OP_{[REL]}$ that come.PAST.3SG yesterday
'I prefer the candidate that came yesterday.'

(44) *Prefiero* *el* *candidato* *con* *quien* *viniste* *ayer.*
prefer.PRESENT.1SG the candidate with whom come.PAST.2SG yesterday
'I prefer the candidate with whom you came yesterday.'

This situation is reversed in the case of FRs. The reason for this, as I argued above, is that the operator in this construction needs to be lexical, not only to license NomP but also to endorse it with the relevant semantic features. But if a mechanism existed which could ensure that once licensed (i.e. categorially identified) NomP could be adequately interpreted, the option of the covert operator would again be the most economical, and thus the one to be predicted. This is precisely the case of SFRs in Spanish.

Assuming a common structure for all types of restrictive relative clauses (i.e. those with a lexical antecedent, those with a partially lexical antecedent and those with a non-lexical antecedent), the syntactic configuration of SFRs will be (Figure 3), repeated here for convenience:

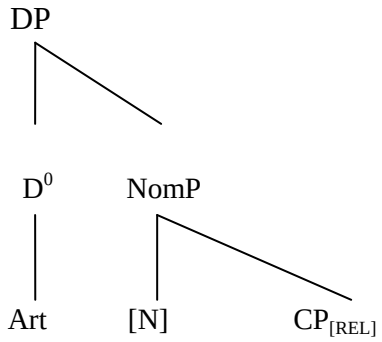

Figure 3

For the nominalizer NomP to be activated it must enter into an agreement relation with a nominal category. This implies that only DP operators can move into its specifier (matching condition), and, in this, SFRs coincide with FRs:

(45) **Prefiero* *el* *con* *quien* *viniste* *ayer.*
prefer.PRESENT.1SG the.MASC.SG with whom come.PAST.2SG yesterday
'I prefer the one with whom you came yesterday.'

However, even if this matching restriction holds, the operator cannot be

lexical, as shown by the impossibility of (46):

(46) **Prefiero* *el* *quien* *vino* *ayer.*
prefer.PRESENT.1SG the.MASC.SG who come.PAST.3SG yesterday
'I prefer the one who came yesterday.'

The reason for this is that in SFRs DP projects an agreeing determiner which allows its complement NomP to be properly interpreted at the interface. This means that the relative operator will only have to license the SWITCH categorially, the covert option being the most economical for the purpose:

(47) Prefiero [**DP** $_{[Acc]}$ el$_{masc,\ sing}$ [**NomP** [$_{DP}$ Op$_{wh}$] Nom$_{[N][uV]}$ [**CP** ~~Op~~$_{[REL]}$ que

[TP [vP ~~Op~~$_{wh}$ vino$_{[V]}$ ayer]]]]

English, more impoverished morphologically, lacks agreeing determiners of this sort and therefore SFRs are not a possible option here:

(48) **I prefer the that came yesterday.*

Finally, since the definite article in Spanish only possesses (and transfers) the phi-features of gender and number, SFRs will ambiguously be interpreted as [human], as in (37) and (38), unless the determiner is [neuter] (as in 39). For the same reason, the article cannot identify NomP as [locative], [temporal], [manner] or [quantity], and therefore SFRs equivalent to the FRs in (35) and (36) do not exist:

(49) **Vive* *en* *el* *que* *nació.*
live.PAST.3SG in the.MASC.SG that be.born.PAST.3SG
'He lives where he was born.'

4. Concluding remarks

Free Relatives have proven to be a fertile ground for research given the particularities of their structure. Here I have treated them as complex nominals on a par with other restrictive relative sentences and I have posited a unified analysis of all the possible types, namely headed, partially

headed and headless. I have contended that they share not only the same underlying structure (repeated here as Figure 4), but also the same process of relativization, including the possibility to employ in that process a lexical or a non-lexical operator given appropriate conditions:

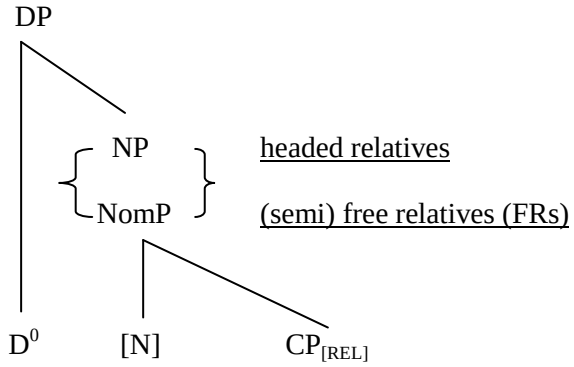

Figure 4

I argue that what makes FRs different from the other types of relatives generated by the structure in Figure 4 is the role that the WH-constituent plays in the activation and interpretation of NomP, a nominalizer SWITCH. In this respect, my analysis also captures the intuition behind most of the proposals that treat FRs as sentential categories with the same underlying structure than embedded interrogatives: that the WH-phrase introducing them is responsible for the relabeling of CP into a nominal category.

Assuming the existence of a SWITCH in FRs, my proposal also integrates them into a wider group of constructions with which they share a mixed nature as verbal-sentential categories with DP properties. This means that, despite the many overt differences existing among them, FRs will be grouped with constructions like POSS-*ing* gerunds in English or nominalized infinitives in Spanish, among others (see fn. 8). In this respect, I have adopted the basic tenants in Panagiotidis & Grohmann (2005) to approach mixed projections in terms of a SWITCH which takes a verbal category of the size of a Prolific Domain and allows its transition as a DP. However, I have implemented their analysis, proposing that this nominalizer SWITCH must be restricted to those contexts where it can be licensed by a [N] category of some sort that enters with it into an agreement relation. Ideally, the contexts for this relation will be reduced to Spec-head agreement, as in the case of FRs, and head-head agreement,

probably the case in other constructions.[20] Of course, many details of an integrating account like this remain to be worked out, but hopefully further cross-linguistic research into the exact nature of mixed projections will help to clarify them.

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[20] In this respect, a superficial look at some nominalized constructions reveals that the complement of the SWITCH may be headed by a category with a nominal origin (e.g. the *-ing* participle in English or the infinitive in Spanish), and thus susceptible of being characterized as [N].

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