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In defense of what(ever) free relative clauses they dismiss: A reply to Donati and Cecchetto (2011)

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Abstract. I argue that the version of phrase structure theory proposed by Donati and Cecchetto (2011) falls short of accounting for the attested patterns of free relative clauses not only in English but crosslinguistically in general. In particular, I show that free relative clauses can be introduced not only by *wh*-words like *what* or *where*, which is what Donati and Cecchetto predict, but also by *wh*-phrases like *what books* or *whatever books* and their equivalents in other languages, which Donati and Cecchetto explicitly predict not to be possible.

Keywords: free relative clauses, *-ever* free relative clauses, headed relative clauses, *wh*-words

Donati and Cecchetto (2011) (henceforth, D&C) propose a version of phrase structure theory according to which a lexical item that is “internally merged” (i.e., moved) “can turn a clause into a nominal phrase” (p. 519). In other words, they argue that “there is a type of movement, head movement, which has the property of relabeling the structure it merges with” (D&C p. 552). In particular, if the internally merged “lexical item is a *wh*-word, a free relative results; if it is an N, a full relative results; if it is a non-*wh* D, a pseudorelative results” (p. 519).¹ Although most of D&C’s examples and arguments are from English, their proposal aims at generality. In this reply, I focus exclusively on how their proposal falls short of accounting for the attested patterns of free relative clauses (henceforth, FRs) in English and crosslinguistically. In particular, I show that FRs can be introduced not only by *wh*-words like *what* or *where*, which is what D&C predict, but also by *wh*-phrases like *what books* or *whatever books*, which D&C explicitly predict not to be possible.

This reply is structured as follows. In Section 1, I briefly introduce FRs. In Section 2, I sketch D&C’s analysis. In Section 3, I present data and arguments against their prediction

I am very grateful to Daniel Kane for his invaluable help and to Anamaria Fălăuș and Carson Schütze, as well as to two anonymous reviewers for their insights and suggestions. I am solely responsible for any remaining mistakes.

¹A first version of this analysis of free relative clauses was presented in Cecchetto and Donati (2010), while Cecchetto and Donati (2015) reprises the version in D&C.

that FRs cannot be introduced by *wh*-phrases, showing that this option is available in English and other languages as well. Section 4 concludes.

1. Introducing free relative clauses

FRs are non-interrogative *wh*-clauses whose distribution resembles those of constituents like nominal (D), prepositional (P), adjectival (Adj), and adverbial (Adv) phrases. The (a) examples of (1)–(5) illustrates FRs, while the (b) examples provide rough paraphrases using DPs, PPs, AdjPs, and AdvPs.

- (1) a. He read [what Luca read].
b. He read [_{DP} the stuff Luca read].
- (2) a. I worked [when the kids were playing].
b. I worked [_{PP} during the time the kids were playing].
- (3) a. Sleep [wherever you find a bed].
b. Sleep [_{PP} in any place you find a bed].
- (4) a. He can be [however late he wants].
b. He can be [_{AdjP} as late as he wants].
- (5) a. I can drive [however fast you can drive].
b. I can drive [_{AdvP} as fast as you can drive].

The FRs in (1) and (2) are introduced by plain *wh*-words, that is, *wh*-words without any morphological enrichment that form a full constituent by themselves without any further material (*what*, *when*). I call these FRs **plain FRs**. The FRs in (3)–(5) are introduced by a *wh*-word (*wherever*) or a *wh*-phrase (*however late*, *however fast*) with the suffix *-ever*. I use the label ***wh*-phrases** to refer to phrases containing a *wh*-word and other lexical material, and the label ***wh*-expressions** to refer to both *wh*-words and *wh*-phrases. I follow the common usage and call FRs introduced by *-ever wh*-expressions ***-ever FRs***. As their labels suggest, the bracketed *wh*-clauses in (1)–(5) have all been assumed to be instances of the same construction—FRs—from as early as Jespersen’s (1909–1949) first description, Bresnan and Grimshaw’s (1978) first syntactic analysis, and Jacobson’s (1995) and Dayal’s (1997) seminal semantic analysis.² D&C radically depart from this unifying approach, as I summarize in the next section.

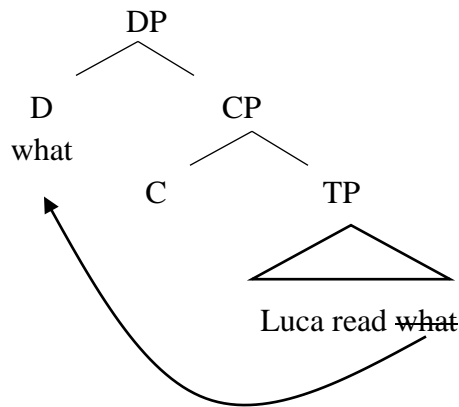
² See van Riemsdijk (2006) for an overview of the syntax of FRs and Šimík (to appear) for an overview of their semantics.

2. Donati and Cecchetto (2011) on free relative clauses

It is well-known that a *wh*-clause like *what Luca read* is syntactically and semantically ambiguous: it can be an FR and refer to the things Luca read, if embedded in a sentence like (1)a, or it can be an embedded *wh*-interrogative clause and refer to the question about the identity of the things Luca read in a sentence like *I wonder what Luca read*.

D&C argue that FRs and *wh*-interrogative clauses result from two different syntactic processes. The *wh*-word *what* is assumed to be a head D in both cases, and in both cases it is internally merged above the head C via head movement. The crucial difference is in the labeling process of the smallest constituent dominating both *what* and C. This constituent can inherit the D features of *what* and be a DP, that is, an FR, as shown in (6). The same constituent can, instead, inherit the features of C and be a CP, that is, an interrogative clause, as shown in (7).³

(6) *Syntactic structure of an FR introduced by a wh-word according to D&C:*

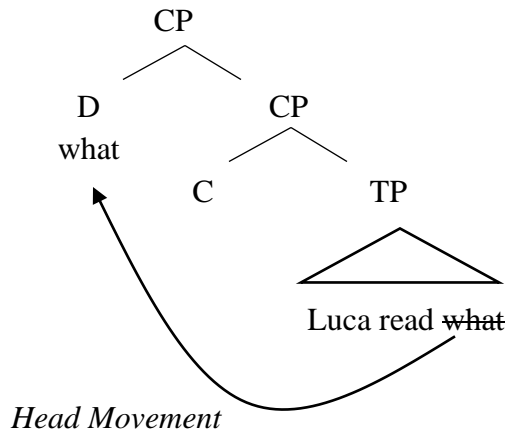


Head Movement

(adapted from D&C: ex. 5b and 22b)

³ D&C are not fully consistent in their labeling of the top node. They use either C or CP depending on the tree (D&C: ex. 5, 6, 22). In Cecchetto and Donati (2015), they again use C or CP as well as T or TP (Cecchetto and Donati 2015: p. 46, ex. 3, 4; p. 58, ex. 51a; p. 95, ex. 16). I decided to retain the more traditional labeling CP and TP for the mother nodes for clarity. Nothing crucial hinges on this assumption as far as my remarks are concerned.

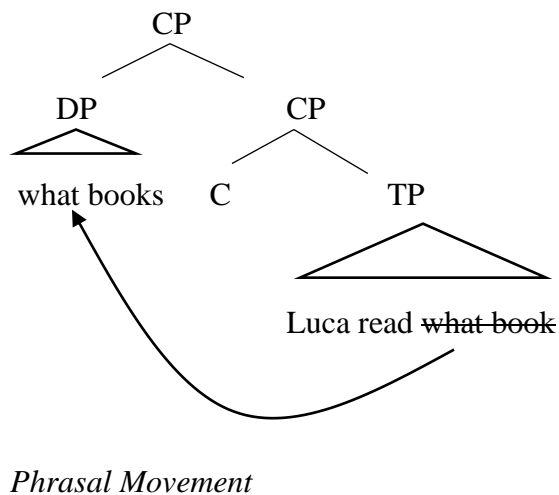
- (7) *Syntactic structure of a wh-interrogative clause introduced by a wh-word according to D&C:*



(adapted from D&C: ex. 5b)

D&C also claim that a *wh*-clause introduced by a DP *wh*-phrase like *what books Luca read* in a sentence such as *He read what books Luca read* can only be a *wh*-interrogative clause (CP), as shown in (8). The *wh*-phrase *what books* has been internally merged above the head via phrasal movement. Therefore, only the head C can transmit its feature to the constituent dominating both C and the DP *wh*-phrase, producing a CP. This is the case because D&C's proposal is built on the crucial assumption that DPs (or any other phrases) cannot transmit their syntactic features or labels—only heads can.

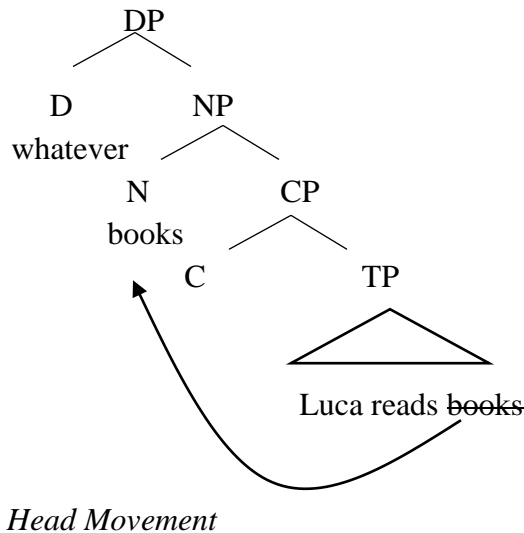
- (8) *Syntactic structure of a wh-interrogative clause introduced by a wh-phrase according to D&C:*



(adapted from D&C: ex. 6b)

Finally, D&C (pp. 552-555) argue that *-ever FRs* are not FRs syntactically, but rather headed relative clauses. They sketch an analysis for *-ever FRs* along the lines of the one in (9) for the *-ever FR* *whatever books Luca reads* in *He reads whatever books Luca reads* (see D&C: ex. 111 and related discussion).

(9) *Syntactic structure of an -ever FR according to D&C:*



(adapted from D&C: ex. 111)⁴

The nominal *books* in (9) is base-generated as the object in the relative clause and then internally merged above C via head movement. The resulting constituent is an NP since it inherits the features of N. The NP combines with its D sister *whatever* via external merge, that is, *whatever* does not undergo *wh*-movement (or any other movement), but is base-generated as the sister of the NP. This is the very same analysis D&C argue for with regard to headed relative clauses (see D&C: ex. 22b).

3. Counterexamples to Donati and Cecchetto's (2011) prediction about free relative clauses

D&C's proposal makes a strong prediction: unlike *wh*-words, *wh*-phrases can never introduce FRs. There is compelling evidence that this prediction is not borne out and that FRs can indeed be introduced by *wh*-phrases. I first provide clear examples of plain FRs that are introduced by *wh*-phrases in English and other languages (Sec. 3.1). I then show

⁴ In (D&C: ex. 111) the constituent right above N after N has internally merged is actually CP, rather than an NP. I assume it to be a typo given D&C's immediately preceding statement that an *-ever* item like *whatever* is a determiner and the noun accompanying it does not form a constituent with it but acts as the "head" of a standard headed relative clause.

that the arguments that D&C provide to support their claim that *-ever* FRs are not FRs syntactically do not warrant their conclusion (Sec. 3.2).

3.1. Plain FRs can be introduced by *wh*-phrases

D&C exemplify their discussion of plain FRs with English data, although their proposal aims at generality. English alone is enough to provide counterexamples. In varieties of American English, the *wh*-phrases *what* + NP and *how much* + NP can introduce plain FRs, as shown in (10) and (11).⁵

(10) He read [**what books** she read].

(11) I drank [**how much wine** you drank].

D&C do not mention data like (11) in which a plain FR is introduced by the *wh*-phrase *how much* + NP. They do make reference to examples like (10) with a plain FR introduced by *what* + NP. They suggest that *what* is actually *whatever* with a silent *-ever* (see their example (117) and related discussion). Therefore, *wh*-clauses like the one in (10) are not plain FRs, but *-ever* FRs, which for D&C are not FRs at all. In Sec. 3.2, I discuss and refute the claim that *-ever* FRs are not FRs. Here, I show that (10) is a plain FR introduced by a plain *wh*-phrase, rather than a (covert) *-ever wh*-phrase. I use Baker's (1995:216) and Dayal's (1997: ex. 29a–b) *namely* test for *-ever* FRs: while a plain FR (like the definite description that paraphrases it) can be followed by *namely* and the list of the individuals in the set that the FR is associated to (12), an *-ever* FR cannot (13).

(12) He read [**what** she read], namely, *Lolita* and *A Clockwork Orange*.

(13) *He read [**whatever** she read], namely, *Lolita* and *A Clockwork Orange*.

Both sentences in (10) and (11) pass the *namely* test, as shown in (14) and (15), respectively. Their *-ever* counterparts do not, however, as shown in (16) and (17). It follows that the *wh*-words in (10) and (11) are plain *wh*-words rather than *-ever wh*-words. Therefore, plain *wh*-phrases can introduce FRs, at least in these varieties of American English.⁶

⁵ The judgments are from one native speaker of American English from Washington State, one from Maryland, and one from Georgia. (10) closely resembles Jacobson's (1995: ex. 60) example *I'll read what(ever) books John read*, and two naturally occurring examples I found with a non-systematic search: *We drank what wine we had left* (Austin 2012:223) and *King read what books by Gandhi he could get hold of* (<https://lareviewofbooks.org/article/what-king-learned-from-gandhi/>; published on 16 January 2017; accessed on 28 March 2017).

⁶ An anonymous reviewer suggests that an analogous contrast is revealed by the adverb *exactly* immediately preceding the *wh*-expression: *He read exactly what(*ever) she read*, *He read exactly what(*ever) books she read*, and *I drank exactly how(*ever) much wine you drank*.

- (14) He read [**what books** she read], namely, *Lolita* and *A Clockwork Orange*.
 (15) I drank [**how much wine** you drank], namely, two glasses.
 (16) *He read [**whatever books** she read], namely, *Lolita* and *A Clockwork Orange*.
 (17) *I drank [**however much wine** you drank], namely, two glasses.

I leave a more careful investigation of which plain *wh*-phrases can introduce plain FRs in which varieties of English for future research. Regardless, the examples above suffice to refute the prediction of D&C's proposal.⁷

The same pattern is attested crosslinguistically. In Romanian, a Romance language, all complex *wh*-phrases can introduce plain FRs.⁸

- (18) Am citit [**ce carte/ce cărți** ai citit și tu].
 have.1SG read what book/what books have.2SG read also you
 'I read what book(s) you read.'
 (19) Am alergat [**cât de repede/bine** ai alergat și tu].
 have.1SG run how.much of fast well have.2SG run also you
 'I ran as fast/well as you ran.'
 (20) Am dormit [**câte ore** ai dormit și tu].
 have.1SG slept how.many hours have.2SG slept also you
 'I slept as many hours as you did.'

Melchor Ocampo Mixtec, an Oto-Manguean language spoken in the Guerrero state of Mexico, exhibits a similar pattern:

- (21) xèko=i [**ndá burro** kúú ri xìnú] (Caponigro *et al.* 2013: ex. 76)
 sell.POT=1SG what donkey COP PRN.ANM run.CMP
 'I will sell the donkeys that ran.'
 (22) kaʔv=i [**nasá libru** sata=ú] (Caponigro *et al.* 2013: ex. 10)
 read.POT=1SG how_many book buy.CMP=2SG
 'I will read as many books as you bought.'

To sum up, crosslinguistic evidence shows that plain FRs can be introduced by *wh*-phrases, contra D&C's prediction.

⁷ Cinque (2017:Sec. 4) challenges D&C's account of plain FRs by discussing evidence from "paucal free relatives" like *What beer we found was flat*, originally presented in Andrews (1975:75).

⁸ Thanks to Anamaria Fălăuș for the Romanian data in (18)–(20).

3.2. *-ever* FRs are free relative clauses

In English, *-ever* FRs can be introduced by all *wh*-phrases occurring in *wh*-interrogative clauses, once enriched with the suffix *-ever*: *whatever/whichever* + NP, *however* + Adj/Adv, *however much/many* + NP, as shown in (23)–(26).

(23) The internal head and the external head are not part of a movement chain, but are related by [**whatever mechanism** links an elided constituent and its antecedent in ellipsis cases].⁹

(24) I can drive [**however fast** you drive].

(25) He can be [**however late** he wants].

(26) She can provide [**however much financial support** is needed].

All the examples in (23)–(26) above counter D&C's prediction that FRs cannot be introduced by *wh*-phrases, if *-ever* FRs are indeed FRs syntactically. D&C do not discuss them in the main body of their article, but in an extensive appendix they argue that *-ever* FRs are not FRs, but some kind of headed relative clause, which they label "pseudo free relative" (D&C: 552) (see ex. (9) above and related discussion). They borrow their conclusion, the label, and five supporting arguments from Battye's (1989) discussion of the morpho-syntactically equivalent construction in Italian. D&C follow Battye in discussing the Italian construction, although they explicitly state that "the analysis for Italian can be extended to English" (D&C: p. 555).

The overall gist of their arguments is that there are differences between *-ever* FRs and plain FRs showing that they are different syntactic creatures. Below I discuss and reject their five arguments by focusing on English, which is the language that D&C rely on in the main body of their article.

Difference 1. The first difference that D&C discuss is that *-ever wh*-expressions can have an absolute use, that is, they can be used without introducing a *wh*-clause (27), while plain *wh*-expressions cannot (28) (D&C: pp. 552–553).

(27) I can eat {whatever is in the fridge}/{whatever}.

(28) I can eat {what is in the fridge}/*{what}.

They interpret this contrast as indicating that *-ever wh*-expressions are always "quantificational DPs" that are syntactically unrelated to plain *wh*-expressions: they do not undergo *wh*-movement and are base-generated in the position in which they are spelled out not only in their absolute use but also, and crucially, in their use in *-ever* FRs (D&C: p. 555). Historical data do not support this conclusion. In English (and in Italian,

⁹ Example from D&C (2011:520), main text; bracketing and boldfacing are mine.

Romanian, and Dutch), the absolute use of *-ever wh*-expressions is attested much later than their use in *-ever* FRs (see Caponigro and Fălăuș 2018 for examples and references). This would be unexpected if *-ever wh*-expressions were non-*wh* quantificational DPs that could optionally be used as heads of headed relative clauses. On the other hand, if they are true *wh*-expressions, they are expected to introduce *wh*-clauses. Their absolute use would be a later development in which the *-ever wh*-phrase dropped its clausal argument.

This later development may have been favored by the semantic properties of *-ever wh*-phrases, which are crucially different from those of plain *wh*-expressions (see the *namely* test above and related discussion). Although the meaning of *-ever wh*-expressions (and *-ever* FRs) is an open issue and seems to vary crosslinguistically,¹⁰ there is general consensus that an *-ever wh*-expression behaves like some form of a (possibly modalized) quantifier taking the FR and the matrix clause as its arguments. A plain *wh*-word in a plain FR, on the other hand, has been argued to be non-quantificational and act as a set restrictor: it applies to the set associated with the FR to return a subset (Jacobson 1995, Dayal 1996, 1997, Caponigro 2003, 2004). An absolute use of an *-ever wh*-expression with the loss of one of its FR arguments would turn the *-ever wh*-expression into a monoargumental quantifier—a semantic object for which there is large independent evidence. For instance, *whatever* in its absolute use would be similar in argument structure to *anything* or *something*. On the other hand, *what* in a hypothetical absolute use could maintain its original meaning as a set restrictor or, maybe, could be simplified to denote a plain set. Regardless, it would not be able to combine with its predicate because of type mismatch. As a set restrictor, it would be roughly similar to an adjective in English without the noun that it restricts: **I read what/interesting*. As a plain set, it would behave more or less like a singular count noun in English without a determiner: **I read what/book*.

Differences 2 and 3. I discuss the second and third differences together because they touch on the same issue: relative markers. D&C (p. 553) claim that, unlike plain FRs, *-ever* FRs allow for relative markers, just as headed relative clauses do: the complementizer *that* and relative pronouns. If correct, this pattern would be easily accounted for if *-ever* FRs were headed relative clauses, rather than FRs. The actual empirical picture looks different, though. D&C provide only two examples with (the Italian morphosyntactic equivalent of) *-ever* FRs to substantiate their claim. In both cases, the *-ever* FR is introduced by the Italian equivalent of the *wh*-phrase *whatever/whichever* + NP and contrasted with a plain FR that is introduced by a *wh*-word.

¹⁰ See Dayal (1997), von Stechow (2000), Condoravdi (2015) a.o. for the semantics of *-ever* FRs in English; and see Caponigro and Fălăuș (2017) for a different semantics for the morphosyntactic equivalents of *-ever* FRs in Italian and Romanian.

Let's start with the complementizer case. (29) shows that the complementizer *that* can optionally occur between *whatever books* and the *-ever* FR that it introduces, while (30) shows that this option is not available for *what* and the plain FR that it introduces.¹¹

(29) You can read [whatever books (**that**) are on the table].

(30) You can read [what 's/***that's** on the table].

However, the behavior of the *-ever* FR in (29) does not resemble the behavior of a headed relative clause either. A true headed relative clause with a relativized subject like (31) requires the complementizer *that* in English; it becomes unacceptable without it. (29), instead, is acceptable with or without *that*.

(31) You can read [any book **that's/*is** on the table].

Also, the *-ever* FR that is syntactically closer to the plain FR in (30)—that is, the *-ever* FR introduced by the *wh*-word *whatever* without an NP—is degraded if followed by the complementizer, as shown in (32).

(32) You can read [whatever **is/??that's** on the table].

The examples in (33)–(35) show that sentences with an *-ever* FR introduced by other *wh*-words like *whoever*, *wherever*, and *however* disallow the complementizer as well.

(33) I can talk to [whoever **is/??that's** on the phone].

(34) He can sleep [wherever (***that**) he likes].

(35) I'll do it [however (***that**) you do it].

On the other hand, the corresponding sentences with headed relative clauses replacing *-ever* FRs exhibit a different pattern, as shown in (36)–(38).

(36) I can talk to [the person **that's/*is** on the phone].

(37) He can sleep [in any place (**that**) he likes].

(38) I'll do it [in the way (**that**) you do it].

(36), which has a headed relative clause relativizing a subject, requires the complementizer, while the corresponding sentence with an *-ever* FR in (33) disallows it. (37) and (38), which have relative clauses relativizing non-subject constituents, are fully acceptable with or without the complementizer, while the corresponding sentences with *-ever* FRs in (34) and (35) are unacceptable with the complementizer.

¹¹ See Jacobson (1995:461, ex. 29 and 30) for similar remarks.

Plain FRs, instead, closely resemble *-ever* FRs as far as the distribution of the complementizer *that* is concerned, as shown in (39)–(41).

(39) I can take care of [what 's/***that**'s on the table]. (cf. (33))¹²

(40) He can sleep [where (***that**) he likes]. (cf. (34))

(41) I'll do it [how (***that**) you do it]. (cf. (35))

Interestingly, *-ever* FRs introduced by *wh*-phrases, rather than *wh*-words, allow for the complementizer. We already saw an *-ever* FR introduced by the *wh*-phrase *whatever* + NP in (29). (42) shows an example with an *-ever* FR introduced by the *wh*-phrase *however much* + NP.

(42) She can provide [however much financial support **is/that**'s needed].

At the end of this section, I elaborate more on why *-ever* FRs introduced by *wh*-phrases containing a nominal allow for an optional complementizer. Still, what is crucial for countering D&C's claim that *-ever* FRs are headed relative clauses is that the corresponding sentences with headed relative clauses exhibit a different pattern: they require a complementizer and are unacceptable without one, as shown in (31) and (43).

(43) She can provide [the amount of financial support **that**'s/***is** needed].

Plain FRs introduced by *wh*-phrases like (10) and (11) differ from both *-ever* FRs and headed relative clauses in that they do not allow for the complementizer at all, as shown in (44) and (45), respectively.

(44) He read [what books (***that**) she read].

(45) I drank [how much wine (***that**) you drank].

This contrast can be taken as further evidence, in addition to the *namely* test in Section 3.1, against D&C's claim that FRs like (44) are actually *-ever* FRs with silent *-ever* morphemes. It also shows that FRs like (44) and (45) are not headed relative clauses either. At the end of this section, I suggest a way to reconcile this contrast between plain FRs and *-ever* FRs with the claim that they are both FRs.

Let's now consider the argument that D&C build using relative pronouns. They point to a contrast like the one between (46) and **Error! Reference source not found.** to argue that all *-ever* FRs are actually headed relative clauses.

¹² This plain FR is introduced by the *wh*-word *what* and does not fully match the corresponding *-ever* FR in (33), which is introduced by the *wh*-word *whoever*. This is due to the degraded status of plain FRs introduced by *who* in English, regardless of the presence or absence of the complementizer (see Patterson and Caponigro 2016 for further discussion).

(46) [Whatever books for which she writes reviews] are likely to become bestsellers.¹³

(47) *[What for which she writes reviews] is likely to become a bestseller.

What (46) shows is that *whatever* + NP can be followed by a relative pronoun like *for which*, while the plain *wh*-word *what* cannot. Still, the pattern in (46) does not seem to generalize, not even to other instances of *whatever* + NP, if they are followed by different relative pronouns, as shown in (48)–(52).

(48) I'll talk to [whatever students (***who**) are problematic].

(49) I'll talk to [whoever (***who**) is problematic].

(50) He can sleep [wherever (***where**) he likes].

(51) You can do it [however (***in which**) you want].

(52) I can handle [however many people (***who**) are here for help].

To sum up, *-ever* FRs disallow relative markers (complementizers or relative pronouns), regardless of the constituent that is relativized. This pattern is close to that of plain FRs, while it contrasts with that of headed relative clauses, which require relative markers when the subject is relativized and optionally allow for them in other cases. Therefore, the distribution of relative markers in *-ever* FRs not only does not support the conclusion that *-ever* FRs are headed relative clauses—it in fact provides further evidence that *-ever* FRs are syntactically close to plain FRs.

The only exception seems to be *-ever* FRs introduced by *wh*-phrases, like the examples in (29), (42), and (46). The optionality of the complementizer in (29) and (42) may be the result of two different syntactic analyses for the bracketed clause in each example, which in turn may be due to the fact that *-ever wh*-phrases, unlike plain *wh*-phrases, allow for an absolute use (see Difference 1 above). When *that* is present, the bracketed clause is a headed relative clause. The *-ever wh*-phrase occurs in its absolute use (without an *-ever* FR) and behaves like the head of a headed relative clause modifying the nominal within the *wh*-phrase. When *that* is absent, the bracketed string is a true *-ever* FR. Its *-ever wh*-phrase behaves like a true *wh*-constituent that has been internally merged and prevents a complementizer from co-occurring—a well-known restriction in English.¹⁴ *-ever wh*-words, instead, are DPs or PPs without further internal structure. In particular,

¹³ D&C (ex. 102) presents an Italian sentence that is structurally similar to (46) as fully acceptable. My consultants find (46) significantly degraded (“??”). The very same consultants find [*The books for which she writes reviews*] are likely to become bestsellers fully acceptable.

¹⁴ An anonymous reviewer suggests an analogy between *-ever* FRs lacking a relative marker and subject contact relative clauses like *There's someone wants to see you* in Irish English (Doherty 2000:xii). This possibility would have to be restricted to *-ever* FRs introduced by *whatever* + NP and *however much/many* + NP. They are the only *-ever* FRs that optionally allow for a relative marker, similarly to the optionality that is observed in languages with subject contact relative clauses.

they do not contain any nominal that can be modified by a headed relative clause. As a result, they can only introduce a clause by being internally merged, that is, by forming an *-ever* FR.

If this suggestion is on the right track, then why is the same dual behavior not observed in *-ever wh*-phrases containing a nominal that are followed by the relative pronoun *who*, as in (48) and (52)? I leave this question, together with a more extensive and controlled assessment of the data, to future research. Still, the emerging general picture is clear: *-ever* FRs do not behave like headed relative clauses as far as relative markers are concerned. The morphosyntactic equivalent of *-ever* FRs in Italian, with which D&C exemplify their discussion, exhibits the same pattern (see data and discussion in Caponigro and Fălăuş 2018).¹⁵

Difference 4. The fourth difference that D&C discuss concerns the fact that *-ever wh*-clauses that look identical to *-ever* FRs on the surface are used as clausal adjuncts, as in (53)a and (54)a (D&C: p. 553). Plain FRs do not allow this use, as shown in (53)b and (54)b.

- (53) a. [Whatever you say], I won't change my mind.
 b. *[What you say], I won't change my mind.
- (54) a. [Wherever you go], I'll be here waiting for you.
 b. *[Where you go], I'll be here waiting for you.

These *-ever wh*-clauses exhibit a different syntactic and semantic behavior than *-ever* FRs (see Izvorski 2000; Rawlins 2013 a.o.). They occur in a dislocated position without playing the usual role of an argument or a standard adjunct of the matrix clause and trigger a concessive interpretation of the whole sentence, which resembles the semantic behavior of clausal adjuncts starting with *no matter* rather than *-ever* FRs. D&C take the contrast above

¹⁵ An anonymous reviewer points out the contrast in (i) and (ii), inspired by examples in Jacobson (1995: 462).

- (i) I will fire [**whoever's signature** (*that) appears on this list].
 (ii) *I will fire [**anybody's signature** (that) appears on this list].

The *-ever* FR in (i) is introduced by a *wh*-phrase (*whoever's signature*). The whole sentence is degraded with a complementizer after the *wh*-phrase, which would make the *-ever* FR a headed relative clause without any doubt. (ii) looks almost identical to (i) except that *whoever* is replaced by *anybody*, a non-*wh* free choice item that is very close in meaning. (ii) is degraded no matter what, while (i) is acceptable without the complementizer. Also, **I will fire {whoever/anybody}'s signature*, with the absolute use of the *wh*-phrase, is completely unacceptable. This is unexpected if *whoever's signature* in (i) behaved like the head of a relative clause. Overall, these data provide further support for the conclusion that *-ever* FRs cannot be analyzed as headed relative clauses.

as support for their conclusion that *-ever* FRs are not FRs but headed relative clauses. Still, regular headed relative clauses cannot be used as clausal adjuncts either, as shown in (55) and (56).

(55) * [Any/all the/those things you say], I won't change my mind.

(56) * [Anywhere/Everywhere/Those places you go], I'll be here waiting for you.

In conclusion, clausal-adjunct *-ever wh*-clauses do not behave like *-ever* FRs either syntactically or semantically, despite looking identical. Even if a principled explanation of how to derive one from the other is found, it will not support the conclusion that *-ever* FRs are headed relative clauses because the latter cannot be used as clausal adjuncts.

Difference 5. The last difference that D&C discuss concerns the fact that *-ever* FRs cannot be infinitival, while D&C claim that plain FRs can. Here, I show that there is no evidence that true plain FRs can be infinitival, while headed relative clauses can be. Therefore, the lack of an infinitival form brings *-ever* FRs closer to plain FRs and further away from headed relative clauses, contra what D&C argue for. In this case, I need to discuss D&C's Italian examples since English does not have anything similar. (57) contains an infinitival *-ever wh*-clause in Italian and the sentence is judged unacceptable (D&C: ex. 106; glosses adapted and translation added). (58) is claimed to be an example of an (almost) fully acceptable infinitival plain FR (D&C: ex. 107; glosses and translation adapted).

(57) *Cerco [qualunque studente mandare al mio posto].
 search.1SG whichever student send.INF to.the my place
 ('I am looking for whichever student to send in my place.')

(58) ?Cerco [quanti mandare al mio posto].
 search.1SG how.many send.INF to.the my place
 'I am looking for someone to send in my place.'

The bracketed string in (58) is not a plain FR, though; rather, it is what has been called a "modal existential *wh*-construction" (Grosu 2004, Šimík 2011) or an "existential FR" (Caponigro 2003, 2004). Despite differences in their analyses, all these authors agree that this construction is not a DP, but rather a CP. Šimík (2011) shows convincingly that existential FRs are mainly infinitival across languages, or in the subjunctive form when the infinitival form is not available in the language. Also, existential FRs are more naturally paraphrased with indefinite noun phrases, while plain FRs have been shown to pattern like definite noun phrases. The *wh*-clause in (58) behaves like an indefinite, as its paraphrase makes clear ("someone to send in my place"). The set of *wh*-words that introduce plain FRs is not necessarily the same as those introducing existential FRs. In Italian, for instance, *quando* 'when' and *come* 'how' can introduce plain FRs only, while *di che* 'of what' can introduce existential FRs only. Although widely attested across languages, existential FRs are not attested in all languages that have plain FRs, English being an example of a

language that has one but not the other. On the other hand, the fact that *-ever* FRs cannot be infinitival does not make them closer to headed relative clauses. Headed relative clauses can be infinitival in Italian, as shown in (59), while I am not aware of any plain FRs in Italian (or in English) that are infinitival.

- (59) Cerco [qualche studente da mandare al mio posto].
 search.1SG some student to send.INF to.the my place
 ‘I am looking for some students to send in my place.’

In conclusion, the fact that *-ever* FRs cannot be infinitival does not bring them closer to headed relative clauses. If anything, it makes them resemble plain FRs.

To sum up, the five alleged differences between *-ever* FRs and plain FRs that D&C present as evidence for their proposal do not hold up under closer scrutiny. They not only do not support D&C’s claim that *-ever* FRs are headed relative clauses, but in fact further support the standard assumption that *-ever* FRs are FRs.¹⁶

4. Conclusion

D&C’s proposal on phrase structure theory and (re)labeling through merging makes the strong prediction that languages may have FRs that are introduced by *wh*-words, but that no language should allow for FRs that are introduced by *wh*-phrases. I have shown that this prediction is not borne out. Plain FRs can be introduced by *wh*-phrases, as shown with examples from varieties of English, Romanian, and Melchor Ocampo Mixtec. *-ever* FRs are FRs, and can be introduced by *wh*-phrases as well.

D&C and the literature they rely on may be correct in highlighting an asymmetry in the level of productivity of *wh*-phrases within FRs: *wh*-phrases often introduce *-ever* FRs, while they more rarely introduce plain FRs. At least, this is the pattern found in the relatively small number of languages with both kinds of FRs that have been studied so far. For instance, as shown above, *what* + NP can introduce plain FRs in some varieties of English, while *which* + NP cannot introduce plain FRs in any varieties I know of. On the other hand, both *whatever* + NP and *whichever* + NP can introduce *-ever* FRs in all the varieties of English I am familiar with. The same pattern is observed in Romanian and Melchor Ocampo Mixtec. In Nieves Mixtec, instead, the *wh*-word equivalent to *which/what* cannot be used to form a *wh*-phrase introducing plain FRs, but it can be used to introduce *-ever* FRs, once enriched with the equivalent of *-ever* (see Caponigro *et al.* 2013). In English, *who* is fairly restricted in plain FRs, while its Italian and Spanish

¹⁶ Cinque (2017:Sec. 4) too argues against D&C’s proposal that *-ever* FRs are headed relative clauses. He discusses further crosslinguistic data, including data from Polish (Borsley 1984, Citko 2009) and from Croatian (Gračanin-Yuksek 2008).

equivalents are not. On the other hand, *whoever* and its counterparts in Italian and Spanish are all fully productive in introducing FRs (see Patterson and Caponigro 2016). If this asymmetry is eventually confirmed by a detailed and typologically balanced study of FRs crosslinguistically that is still lacking, there should be general reasons why this is the case. They cannot be of the kind invoked by D&C, though.

D&C's proposal does not leave room for any gradience or crosslinguistic variation: true FRs introduced by *wh*-phrases are not expected to exist in any form in any language because they would violate general and non-gradient properties of grammar like the operation of labeling after internal merging. On the other hand, gradience characterizes the pattern of FR formation, as sketched above. The explanation is unlikely to be a syntactic one, because it is not obvious what the syntactic difference between a possible *what* + NP FR and an impossible *which* + NP FR would be. Similarly, there is no evidence that *-ever* FRs are syntactically different from plain FRs, as I argued above. Still, *whichever* + NP FRs are allowed, while *which* + NP FRs are not.

A semantic explanation may be more promising. We know independently from interrogative clauses that *what* + NP and *which* + NP exhibit semantic differences with respect to each other and to other *wh*-words. Intuitively, *which* triggers the presupposition that the set denoted by its NP complement must be contextually salient ("discourse-linked," according to Pesetsky's (1987) characterization; see also Heim 1987). Such a meaning component is missing in all other *wh*-words. *What* carries no semantic restriction or presuppositional content. All the other *wh*-words are characterized by some semantic features (*who* [+human], *where* [+location], *how many* [+number], etc.). Finally, the suffix *-ever* changes the meaning of a *wh*-expression, as shown by the differences in meaning between plain FRs and *-ever* FRs in English and across languages. A detailed study of how these differences in lexical meaning interact with the rules of meaning composition that apply to FRs may offer insights into which *wh*-expressions can occur in FRs.

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