

A slightly different version will appear in *Linguistic Inquiry*.

Still Free to Have a *Wh*-Phrase: A Reply to Donati, Foppolo, Konrad, and Cecchetto 2022

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Abstract

Donati et al. (2022) aim at supporting the theoretical and empirical claims in Donati and Cecchetto 2011 about the grammar and free relative clauses by responding to the new data and criticism presented in Caponigro 2019. I critically examine the data and arguments in Donati et al. 2022, provide new data and arguments against the core theoretical proposal and the analyses advanced in Donati and Cecchetto 2011 and endorsed in Donati et al. 2022, and suggest a different approach, based on Citko 2008, Ott 2011, and Chomsky 2013, 2015. My overall conclusion is that there are theoretical reasons and rich crosslinguistic evidence supporting the view that the grammar allows for free relative clauses that are introduced by varieties of *wh*-phrases, rather than just *wh*-words, pace Donati and Cecchetto 2011 and Donati et al. 2022.

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

Donati et al. (2022) aim at supporting the theoretical and empirical claims in Donati and Cecchetto 2011 about the grammar and free relative clauses (henceforth, FRs) by responding to the new data and criticism presented in Caponigro 2019. In the present article, I critically examine the data and arguments in Donati et al. 2022, provide new data and arguments against the core theoretical proposal and the analyses advanced in Donati and Cecchetto 2011 and endorsed in Donati et al. 2022, and suggest a different approach, based on Citko 2008, Ott 2011, and Chomsky 2013, 2015. My overall conclusion is that there are theoretical reasons and rich crosslinguistic evidence supporting the view that the grammar allows for FRs that are introduced by varieties of *wh*-phrases, rather than just *wh*-words, pace Donati and Cecchetto 2011 and Donati et al. 2022. I start by

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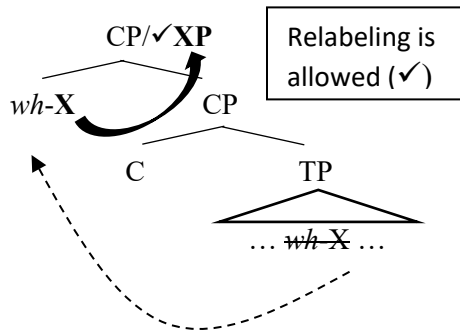
summarizing the main theoretical and empirical issues at stake in the two articles just mentioned plus Caponigro 2019.

1 Summarizing the Theoretical and Empirical Issues

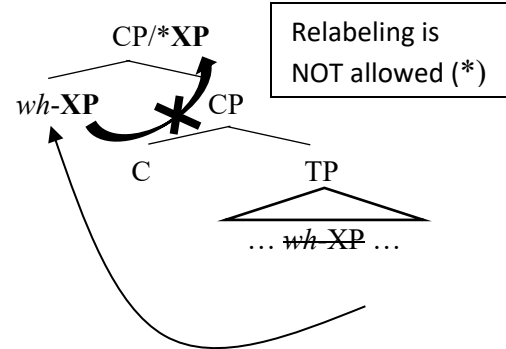
The central theoretical claim in Donati and Cecchetto 2011 is a version of phrase structure theory and its labeling algorithm according to which “there is a type of movement, head movement, which has the property of relabeling the structure it merges with” (Donati and Cecchetto 2011:552). Among other consequences, the grammar is assumed to allow that a moved *wh*-head/word X can optionally transmit its syntactic features to its landing CP and “relabel” it as an XP, as schematized in (1)a, while this relabeling option is not available for a moved *wh*-phrase XP, as schematized in (1)b.

- (1) *Contrast in relabeling options between wh-heads/words and wh-phrases according to Donati and Cecchetto (2011)*

a. *Wh*-head movement



b. *Wh*-phrase movement



Applied to relative clauses, Donati and Cecchetto’s (2011) proposal predicts that, 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” (Donati and Cecchetto 2011:519). As a consequence, Donati and Cecchetto’s (2011) proposal predicts that languages can allow for FRs introduced by simple *wh*-words (or *wh*-heads) like *what* or *whatever* in English and their equivalents across languages, like those shown in (2).¹ On the other hand, Donati and Cecchetto’s (2011) proposal crucially bans

¹ See van Riemsdijk 2006 and Šimik 2020 for thorough reviews of the syntax and semantics of FRs, respectively, and relevant definitions and generalizations. The idea that FRs involve a reprojecting movement was previously proposed by Larson (1998), Bury (2003), Donati (2006), and Citko (2008). See section 2 for further discussion.

FRs introduced by *wh*-phrases like *what* + NP or *whatever* + NP in English and their equivalents across languages, like those shown in (3) and (4).²

(2) Frida read [**what/whatever** Lucero wrote].

(3) *Frida read [**what book** Lucero wrote].

(4) Frida read [**whatever books** Lucero wrote].

Donati and Cecchetto (2011) argue that the unacceptability of (3) supports their proposal, while they deal with the unpredicted acceptability of (4) by proposing that all clauses introduced by *whatever* + NP and equivalents across languages (henceforth, *whatever* + NP clauses, regardless of the language) are actually headed relative clauses, with the NP as their head and *whatever* as a plain determiner—a D head.

In Caponigro (2019), I reply to Donati and Cecchetto (2011) and argue that crosslinguistic evidence does not support their ban on FRs introduced by *wh*-phrases and, therefore, their phrase structure theory is empirically inadequate. I first show that FRs like (3) that are introduced by *what* + NP and equivalents across languages are fully acceptable in Romanian, an Indo-European language, and Melchor Ocampo Mixtec, an Oto-Manguean language. I also shows that both those languages and varieties of American English allow for FRs introduced by *what* + NP like those in (5) and (6) as well, and for FRs introduced by *wh*-phrases like *how much/many* + NP, as shown in (7) and (8) (Caponigro 2019:sec. 3.1).

(5) Frida bought [**what books** Lucero bought].

(6) Frida drank [**what wine** Lucero drank].

(7) Frida bought [**how many books** Lucero bought].

(8) Frida drank [**how much wine** Lucero drank].

I then argue that *whatever* + NP clauses in English and Italian should sometimes be analyzed as headed relative clauses (as proposed in Donati and Cecchetto 2011), while other times they are

² *Equivalent* is used loosely with the meaning of ‘exhibiting the same core morpho-syntactic features and possibly some of the core semantic features’. For instance, the equivalent of *whatever* + NP in Italian is assumed to be *qualunque* + NP, which consists of *quale* ‘which’ plus the free choice suffix *-unque*. The semantic contributions of the suffixes *-ever* in English and *-unque* in Italian are not the same, though, as discussed in Caponigro and Fălăuş 2018.

better analyzed as FRs (contra Donati and Cecchetto 2011), providing tests to distinguish one from the other (Caponigro 2019:sec. 3.2).

Donati et al. (2022) reply to Caponigro 2019 with novel experimental and corpus data about *whatever* + NP clauses in Italian and English to argue that none of those clauses is an FR, rather they are all and only headed relative clauses. They adopt Donati and Cecchetto's (2011) analysis of *whatever* + NP clauses for Italian, but propose a different analysis for English, according to which *whatever* + NP clauses in English are headed relative clauses "with a twist" (Donati et al. 2022:545). Donati et al. (2022) only briefly touch on another main piece of evidence raised in Caponigro 2019 raises against Donati and Cecchetto's (2011) proposal: FRs introduced by *what* + NP, like those in (5) and (6) above. They sketch an analysis for those clauses in English that postulates that they are headed relative clauses and a different analysis for Romanian that postulates that they are FRs headed by a silent demonstrative (Donati et al. 2022:sec. 9). They provide no account for those clauses in Melchor Ocampo Mixtec.

In what follows, I reply to Donati et al. 2022. In section 2, I argue that Chomsky's (2013, 2015) theory of labeling after merging makes it untenable that the grammar does not allow for FRs introduced by *what/whatever* + NP, which is the main theoretical claim advanced in Donati et al. 2022 (borrowed from Donati and Cecchetto 2011). I then propose a new approach to FRs, based on Citko 2008, Ott 2011, and Chomsky 2013, 2015, which can account for FRs introduced by *wh*-phrases. Therefore, the issue that Donati et al. (2022) raise narrows down to the empirical question of whether clauses introduced by *what/whatever* + NP and related constructions like those in (2)–(8) are true FRs or some kind of headed relative clause. My answer is positive, and I justify it in the two sections that follow.

In section 3, I argue that Donati et al.'s (2022) novel experimental data support the conclusion that *whatever* + NP clauses can be headed relative clauses—a conclusion Donati and Cecchetto (2011) and I (Caponigro 2019) already agreed on. On the other hand, the experimental data in Donati et al. 2022 fail to shed new light on the crucial facts Donati and Cecchetto (2011) and I (Caponigro 2019) disagree on—that *whatever* + NP clauses can also be FRs. I also examine Donati et al.'s (2022) new analysis of *whatever* + NP clauses in English in detail and conclude that it is ad hoc and empirically problematic. Finally, I support my claim in Caponigro 2019 that *whatever* + NP clauses can be FRs too by demonstrating how my new syntactic proposal for FRs applies to *whatever* + NP clauses.

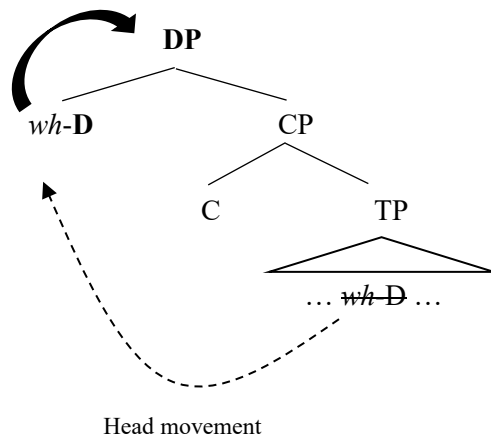
In section 4, I show that Donati et al.'s (2022) analysis of clauses introduced by *what* + NP for English and the analysis for Romanian are both stipulative, do not account for the full data pattern, and make incorrect predictions. I also add further crosslinguistic support for the existence of FRs introduced by *wh*-phrases by discussing FRs introduced by *wh*-phrases other than *what/whatever* + NP and novel data from a large investigation of FRs and other headless relative

clauses across Mesoamerican languages in Caponigro, Torrence, and Zavala Maldonado 2021. I show that the new analysis of FRs that I am proposing fits these *wh*-clauses as well. Section 5 concludes.

2 Reframing the Theoretical Issue: the Syntax of Free Relative Clauses and the Grammar

Donati and Cecchetto's (2011) main theoretical goal is to argue for the labeling algorithm in (1). Following Chomsky (2008), they assume that an internally merged head can trigger (re)labeling, while an internally merged phrase cannot. Applied to FRs, their proposal results in the syntactic analysis schematized in (9).

(9) *Syntactic structure of FRs according to Donati and Cecchetto (2011)*



Donati and Cecchetto (2011) propose that FRs are introduced only by *wh*-words like *who*, or *what*, or their equivalents across languages—never by *wh*-phrases like *whatever book*, or *whatever expensive old book*, or their equivalents across languages. According to their analysis, the *wh*-word of an FR is a D that head-moves above C to merge with CP and project its D label. The result is a DP with the *wh*-D as its head and the CP as its complement.

Chomsky (2013), though, argues for a different algorithm, which allows for a merged phrase to trigger labeling, regardless of whether it is a case of Internal Merge or External Merge, as long as the merged phrases and the phrase it merged with agree in relevant features:³

³ Many thanks to an anonymous reviewer for highlighting this issue.

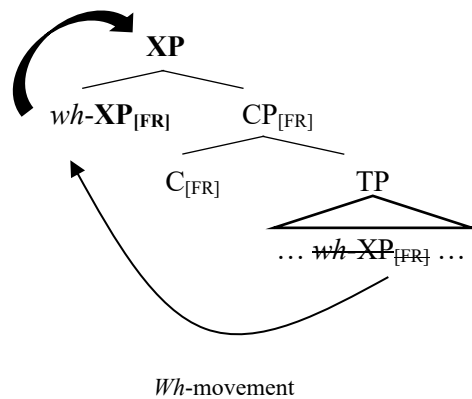
Suppose SO [syntactic object] = {H, XP}, H a head and XP not a head. Then LA [labeling algorithm] will select H as the label, and the usual procedures of interpretation at the interfaces can proceed.

The interesting case is SO = {XP,YP}, neither a head (we return to the only other possibility, {H, H}). Here minimal search is ambiguous, locating the heads X, Y of XP, YP, respectively. There are, then, two ways in which SO can be labeled: (A) modify SO so that there is only one visible head, or (B) X and Y are identical in a relevant respect, providing the same label, which can be taken as the label of the SO. These are the two cases that are prominently found. (Chomsky 2013:43)

Chomsky (2015) further elaborates and rephrases:

The interesting cases are {XY,XP}, neither a head, in which case LA finds {X,Y}, the respective heads of XP and YP, and there is no label, unless they agree. In that case, the label is the pair of the agreeing elements. (Chomsky 2015:7)

Donati et al. (2022:secs. 1 and 10) explicitly endorse the labeling algorithm in Donati and Cecchetto 2011 without either mentioning the developments in Chomsky 2013, 2015 or discussing why the labeling algorithm in Donati and Cecchetto 2011 should still be preferred. Since I see no reason to prefer Chomsky's (2008) old labeling algorithm, I am recasting the discussion in light of Chomsky's (2013, 2015) new labeling algorithm. This algorithm freely allows for FRs introduced by *wh*-phrases. In fact, the result of Internal Merge of a *wh*-phrase XP with a CP can be labeled, as long as the two phrases agree in relevant feature(s). Chomsky 2013 seems to suggest that the label is the feature that the *wh*-phrase XP and the CP share, while Chomsky 2015 seems to indicate that the label results from combining the heads of the two agreeing phrases, something like {X,C}. Citko (2008) and the work she builds on (Larson 1998, Bury 2003) may point at another solution, within Chomsky's (2013, 2015) framework. Her "Project Goal" labeling option "allows for a derivation [...] in which the *wh*-pronoun [like *whatever* or *whatever books*] undergoes *Internal Merge* with C and projects as the label of the newly formed constituent" (Citko 2008:928) because it is the goal. Ott (2011) too argues for an analysis of FRs that allows a *wh*-phrase to introduce an FR and project its own syntactic category as the label of the whole FR. Although his assumptions are not identical to either Citko's (2008) or Chomsky's (2013, 2015), they are related to Chomsky's. I adopt the space of possibility that these authors have created to formulate my proposal in (10), which owes greatly to those previous proposals.

(10) *New proposal about the syntactic structure of FRs*

In (10), *XP* stands for any kind of *wh*-phrase that I have so far found in FRs across languages: DP, PP, AdjP, AdvP. *[FR]*, instead, stands for [free relative]. This is the feature that is shared by both the *wh*-phrase of an FR and its CP sister, the feature in which they both agree and that drives *wh*-movement with the *wh*-phrase as the goal and C as the probe. This is the feature that uniquely characterizes the C of FRs from that of *wh*-interrogative clauses.⁴ Evidence for a specific feature on *wh*-words/phrases in FRs that distinguishes them from those in interrogative clauses and headed relative clauses comes from the distribution of *wh*-words: the *wh*-words that occur in FRs in a given language form a (proper) subset of the set of *wh*-words that occur in *wh*-interrogative clauses in the same language—a subset that can vary across languages and in a given language is often different from the subset of *wh*-words occurring in headed relative clauses in the very same language (see section 4.1 and Caponigro 2021, 2022 for further data and discussion).

The proposal in (10) is not meant to be the final answer to the syntax of FRs, which I believe is still very much an open issue with several puzzling features (including case and categorial matching). My proposal should be taken more as a direction of investigation that is alternative to the one that

⁴ The proposal in (10) is essentially the same as the one in Citko 2008:928, (46). Still, it is new in its generality, since Citko's formulation is restricted to only the case in which XP is a DP. It is also new in adopting Chomsky's (2013, 2015) labelling algorithm, which was not available at the time of Citko's writing. Finally, it is new in assuming an [FR] feature characterizing FRs, since Citko (2008:929) explicitly assumes the same [WH] feature, triggering *wh*-movement in *wh*-interrogative clauses. Ott (2011) instead proposes a structure in which the CP label in (10) is fully replaced by the DP label, so that the CP is missing in the final structure (like Citko, Ott formulates his proposal only for the case in which XP is identical to DP). Like (10), Ott's proposal relies on an [FR] feature in order to trigger *wh*-movement, although Ott further assumes that it is an uninterpretable edge feature, following Chomsky (2008).

is advanced in Donati and Cecchetto 2011 and endorsed in Donati et al. 2022—a direction that allows for the existence of *whatever* + NP FRs and FRs introduced by other *wh*-phrases. According to the proposal in (10), FRs are always introduced by a *wh*-phrase, whether it has just a *wh*-word or a more complex constituent; only standard *wh*-movement is required; and there is no need for special long-distance head movement, unlike in Donati and Cecchetto’s (2011) and Donati et al.’s (2022) proposal.⁵

This different approach to the syntax of FR and the revised theoretical framework behind it no longer allow labeling considerations to be used to motivate the conclusion that clauses introduced by *wh*-phrases cannot be FRs, contra Donati and Cecchetto 2011 and Donati et al. 2022:

We conclude by stressing a point on which Caponigro is right: “D&C’s [Donati and Cecchetto’s (2011)] 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 nongradient properties of grammar like the operation of labeling after internal merging” (2019:369). (Donati et al. 2022:549)

The theoretical question of whether the grammar allows for FRs with *wh*-phrases can now receive a positive answer: some version of the merging-and-labeling option in (1)b, excluded by Donati and Cecchetto (2011) and Donati et al. (2022), is actually fully available in the grammar.

On the other hand, the empirical question of whether *whatever* + NP clauses and other non-interrogative *wh*-clauses introduced by *wh*-phrases are syntactically FRs or headed relative clauses is still open. This is the question I turn to in the remainder of the article. I examine *whatever* + NP clauses in section 3 and clauses that are introduced by other kinds of *wh*-phrases in section 4. I show that they are all FRs and can all be accounted for by the new syntactic analysis in (10), while Donati and Cecchetto’s (2011) and Donati et al.’s (2022) evidence to the contrary and their related arguments do not hold up to scrutiny.

⁵ *Wh*-movement in FRs is not clause-bound, as shown in (i):

(i) Luca would take **what** he thought [he needed ___].

While we have independent evidence that *wh*-phrases can cross clause boundaries (e.g., from *wh*-interrogative clauses), I am not aware of similar independent evidence for head movement across clause boundaries. See Citko 2008:930–936 and Ott 2011:sec. 5 for further criticism of the analysis of FRs in Donati and Cecchetto 2011 in the form of arguments against an almost identical analysis in Donati 2006.

3 *Whatever* + NP clauses can be Free Relative Clauses in Italian and English

What is the correct syntactic analysis of *whatever* + NP clauses in Italian and English? This is the empirical question that Donati et al. (2022) dedicate most of their article to. They argue that *whatever* + NP clauses in Italian always have the syntactic structure of headed relative clauses, while those in English have a slightly different variant of the same basic structure. As in Caponigro 2019, I argue, instead, that *whatever* + NP clauses in Italian and English can be either headed relative clauses or FRs. It is the presence vs. the absence of the complementizer *che* or *that* that plays a crucial role in determining the syntactic structure of a given *whatever* + NP clause.

I structure the discussion following Donati et al. 2022. Before focusing on the actual syntactic proposals for *whatever* + NP clauses, I examine the data supporting those proposals. First, I further develop the description of the facts concerning the presence vs. the absence of complementizers, the conclusions that I draw from them, and how my conclusions differ from those in Donati and Cecchetto 2011 and Donati et al. 2022 (section 3.1). This discussion sets the stage for my critical remarks about Donati et al.'s (2022) experimental investigation on complementizers in *whatever* + NP clauses (section 3.2) and their corpus study on *-ever wh*-expressions when used absolutely, that is, without introducing a clause (section 3.3). Finally, I present Donati et al.'s (2022) specific syntactic proposals for *whatever* + NP clauses in Italian and English, propose an alternative analysis based on the syntactic analysis of FRs in (10), and raise a series of issues concerning the explicit or implicit assumptions that Donati et al. (2022) rely on and the problematic predictions their proposal makes that they do not discuss (section 3.4).

3.1 *The Presence vs. Absence of Complementizers in whatever + NP Clauses*

The bracketed strings in (11)a and (12)a provide examples of *whatever* + NP clauses in English and Italian, respectively, while the corresponding headed relative clauses are given in brackets in (11)b and (12)b.⁶

- (11) a. The newspapers will criticize [whatever writer (**that**) wins the prize].
 b. The newspapers will criticize [every writer *(**that**) wins the prize].

⁶ Examples (12)a,b are from Donati et al. 2022:524, (7)–(8) with changes to the glosses and the addition of bracketing in both examples, and parentheses and grammaticality judgments in (12)b.

- (12) a. I giornali criticheranno [qualsunque scrittore **(che)** vincerà il
the newspapers criticize.FUT.3PL whichever writer that win.FUT.3SG the
premio].
prize⁷
'The newspapers will criticize whatever writer that wins the prize.'
- b. I giornali criticheranno [*ogni scrittore* ***(che)** vincerà il
the newspapers criticize.FUT.3PL every writer that win.FUT.3SG the
premio].
prize
'The newspapers will criticize every writer that wins the prize.'

Despite the similarities, the two constructions exhibit a crucial contrast, which is marked in boldface and parentheses: the optionality vs. obligatoriness of the complementizer. Examples (11)b and (12)b show that the complementizers *that* and *che* are obligatory in the headed relative clauses, while examples (11)a and (12)a show that they are optional in the *whatever* + NP clauses in both languages. Donati and Cecchetto (2011) ignore this contrast when they argue that *whatever* + NP clauses are headed relative clauses. In Caponigro 2019, I instead use this contrast to argue that *whatever* + NP clauses are headed relative clauses when they occur with the complementizer, while they are FRs when they occur without.⁸ The latter claim is supported by the evidence that plain FRs—that is, FRs introduced by *wh*-words like *what* in English or *chi* 'who' in Italian (without extra morphological marking like the suffixes *-ever* or *-unque*)—never allow for the complementizer, as shown in (13) and (14), respectively.⁹

- (13) The newspapers will criticize [*what* ***(that)** the government makes].

⁷ Unless otherwise indicated, abbreviations follow *The Leipzig Glossing Rules – List of Standard Abbreviations*, updated on 31 May, 2015. <https://www.eva.mpg.de/lingua/pdf/Glossing-Rules.pdf> (retrieved on 2 June, 2019).

⁸ Citko (2008:931–932) uses the presence vs. absence of the complementizer to make a similar point. She also discusses two other diagnostics—extraposition in German and case matching effects in Polish—that cannot be applied to Italian or English.

⁹ The examples of FRs in (13) and (14) make use of two different *wh*-words even if they are meant to exemplify the same pattern in English and Italian because of language idiosyncratic restrictions. The Italian equivalent of *what* in interrogative clauses, *che cosa*, can never introduce FRs in Italian. On the other hand, FRs introduced by *who* are often degraded in English (see Patterson and Caponigro 2015, Stockwell and Schütze 2021).

- (14) I giornali criticheranno [*chi* (***che**) vincerà il premio].
 the newspaper criticize.FUT.3PL who that win.FUT.3SG the prize
 ‘The newspapers will criticize {the one}/{those} who wins/win the prize.’

A similar contrast between headed relative clauses and *whatever* + NP clauses is observed with the use of relative pronouns in both languages (see Caponigro 2019:sec. 3.2, Differences 2 and 3 for details). Based on this pattern, I conclude in Caponigro (2019) that *whatever* + NP clauses should be analyzed as headed relative clauses when they occur with the complementizer or a relative pronoun and as FRs when they occur without either.¹⁰ Donati et al. (2022) instead follow Donati and Cecchetto (2011) and claim that *whatever* + NP clauses are never FRs, but all and only headed relative clauses.

Table 1 presents the configurations that I take to characterize and distinguish *whatever* + NP clauses that are FRs from those that are headed relative clauses.

Table 1 makes it clear that, if one is interested in determining whether a *whatever* + NP clause can be an FR in both English and Italian, then the crucial configuration is the one in Row 1, “FRs”—in particular, the subcase in which the subject is relativized and no complement or relative pronoun occurs in the clause. This is the only configuration that is clearly impossible for headed relative clauses in either language, while fully acceptable for plain FRs in both languages, as already shown in (11)–(14). The approach in Caponigro 2019 predicts *whatever* + NP clauses to be acceptable in this configuration only as FRs. Donati and Cecchetto’s (2011) and Donati et al.’s (2022) approach instead predicts the configuration in row 1 to be unacceptable, since *whatever* + NP clauses are never allowed to be FRs. In Caponigro 2019, I also provide informally collected judgments on data like (11)a and (12)a supporting my prediction.¹¹

¹⁰ In Caponigro 2019:366, I explicitly formulate and defend this conclusion about *whatever* + NP clauses. Therefore, Donati et al.’s (2022) criticism is not justified: “[I]ncidentally, this means that, for a subset of data, he [Caponigro (2019)] does adopt D&C’s [Donati and Cecchetto’s (2011)] approach, which is his polemical target” (Donati et al. 2022:525) and “Note that Caponigro’s analysis assumes that the *ever*+NP relatives in (13) and (14) are *not* free relatives, even though he criticizes D&C for making the same claim” (Donati et al. 2022:526). My main criticism in Caponigro 2019 is not about *whatever* + NP clauses ever being headed relative clauses, but about Donati and Cecchetto’s (2011) claim that they are never FRs.

¹¹ Donati et al. (2022:sec. 5.3) touch on infinitival headed relative clauses introduced by a regular DP or *whatever* + NP vs. alleged infinitival FRs in Italian. They show that *whatever* + NP clauses can pattern like headed relative clauses, which is expected by the proposals in both Donati and Cecchetto 2011 and Caponigro 2019 about *whatever* + NP clauses in Italian and in general. They also claim to show that FRs introduced by *chi* ‘who’ allow for a different infinitival form (Donati et al. 2022:539, (26), and related remarks). Unfortunately, their choice of matrix predicate is problematic: *cercare* ‘to look for’ and its equivalents across languages have been shown to be among those predicates licensing Modal Existential

Table 1. Factors distinguishing *whatever* + NP clauses that are free relative clauses (FRs) from those that are headed relative clauses in English and Italian

<i>Whatever</i> + NP clauses are ...	English	Italian	
1 FRs	<ul style="list-style-type: none"> • SUBJECT is relativized • NO complementizer • NO relative pronoun 	<ul style="list-style-type: none"> • ANY POSITION is relativized • NO complementizer • NO relative pronoun 	Crucial testing case
2 Headed relative clauses	<ul style="list-style-type: none"> • ANY POSITION is relativized • Complementizer OR relative pronoun is present 	<ul style="list-style-type: none"> • ANY POSITION is relativized • Complementizer OR relative pronoun is present 	
3 Either FRs or headed relative clauses	<ul style="list-style-type: none"> • ANY POSITION BUT SUBJECT is relativized • NO complementizer • NO relative pronoun 	N/A ^a	

^a Italian headed relative clauses always require the complementizer or a relative pronoun.

3.2 Problems with the Experiments on *whatever* + NP Clauses in Italian and English in Donati et al. 2022

Donati et al. (2022) aim at challenging Caponigro's (2019) conclusion that *whatever* + NP clauses can also be FRs rather than just headed related clauses by conducting four acceptability judgment experiments. As it happens, they choose to test only the uncontroversial configuration in table 1, row 2 "Headed relative clauses". They conduct two experiments to examine *whatever* + NP clauses with the complementizer in Italian and English and two similar studies with *whatever* + NP clauses with relative pronouns. Their results confirm the informal acceptability judgments in Donati and

Constructions (Šimík 2011, 2017). The three sentences condensed in (i) have matrix predicates that do not license Modal Existential Constructions and all sound much more degraded than Donati et al. 2022:539, (26).

- (i) ??/* Vorrei assumere/intervistare/incontrare al più presto
 want.COND.1SG hire.INF/interview.INF/meet.INF at_the more soon
 [chi mandare al mio posto].
 who send.INF at_the my place
 ('I'd like to hire/interview/meet the person to replace me ASAP.')

Cecchetto 2011 and Caponigro 2019: unlike plain FRs, *whatever* + NP clauses allow for the complementizer or a relative pronoun and, therefore, can be headed relative clause. On the other hand, their findings shed no light on the core claim in Caponigro 2019 that *whatever* + NP clauses can be FRs as well. In order to do that, they should have tested *whatever* + NP clauses with subject relativization without the complementizer (see table 1, row 1) and compared them with the corresponding headed relative clauses and plain FRs, like the examples in (11) and (12).¹²

In the experimental studies with a relative pronoun in English, Donati et al. (2022) choose to build their test sentences with *which*, the relative pronoun that is judged less degraded in *whatever* + NP clauses than *who* or *where*, according to Caponigro (2019:365–366, (46)–(52)). Still, *which* turns out to be less acceptable than Donati et al. (2022) predict with *whatever* + NP clauses, producing judgments that are significantly lower than those for the corresponding headed relative clauses, although still significantly higher than those for the corresponding plain FRs. No such contrast is found in Italian. In order to account for their unexpected findings, Donati et al. (2022) propose a new analysis for *whatever* + NP clauses in English, which moves away from the unified analysis that was originally provided in Donati and Cecchetto 2011 and treats *whatever* + NP clauses in English and Italian differently. I discuss Donati et al.’s (2022) new analysis in section 3.4.

3.3 Problems with the Corpus Studies on *whatever* + NP Clauses in Italian and English in Donati et al. 2022

Donati et al.’s (2022) last two quantitative studies are from newspaper corpora. Donati et al. (2022) collect occurrences of the string *whatever* + NP in English and its closest Italian equivalent *qualunque* + NP when they introduce a clause and when they do not (i.e., when they are used “absolutely,” on their own). The examples in (15) and (16) show the absolute use of *whatever/qualunque* + NP, together with the absolute use of quantificational D (*ever/ogni*) + NP and deictic D (*that/quell*) + NP, in sharp contrast with the unacceptability of the absolute use of *what/quale* + NP.¹³

(15) I want to go back to coaching at **{whatever/every/that/*what} level**.

¹² By confirming informal acceptability judgments, Donati et al.’s (2021) findings provide further support for the line of research that has shown the reliability of informal acceptability judgments when compared with formal and systematic collection of acceptability judgments (see, e.e., Sprouse and Almeida 2012, 2017). Since native speakers’ informal acceptability judgments about the contrasts in (11) and (12) are sharp and strong, an experimental investigation is likely to just confirm them.

¹³ Examples (15) and (16) are adapted from Donati et al. 2022:540, (33)–(34).

- (16) Per mesi ho rifiutato {**qualunque/ ogni/ quell’/*quale**} **impegno**.
 for months have.1SG rejected whichever/ every/ that which commitment
 ‘I have rejected any/every/that commitment for months.’

The data and the contrast above matter for the issue under discussion because, if *wh*-phrases of the kind *wh* + NP can act as heads of relative clauses like a regular D + NP, then they should also be able to occur on their own, “absolutely,” without introducing a relative clause, like a regular D + NP.

Donati et al. (2022) consider only the first 200 occurrences of *whatever/qualunque* + NP in each corpus, out of 1,000 hits in the English corpus (no total number of hits is provided for the Italian corpus). Since 20 of their 28 instances of absolute *whatever* + NP occur inside the PP *for whatever reason*, they conclude that *for whatever reason* is a frozen form and *whatever* + NP is not productive in its absolute use, unlike its Italian counterpart. This conclusion is not warranted by the facts. First, *whatever* + NP is productive in English, as shown by the examples in (17), which the native speakers I have consulted with judged fully acceptable.

- (17) a. You can buy **whatever car**. I don’t care.
 b. Tweet at **whatever actor**, but don’t complain when they block you.
 c. I’m not picky at all. I’m used to sleeping in **whatever bed**.

Second, Donati et al. (2022) do not take into consideration two possible relevant differences between *whatever* + NP and *qualunque* + NP in their absolute uses. One difference is that Italian *qualunque* (partially) overlaps with the semantic space of at least three different determiners in English: *whatever*, *whichever*, and free choice *any*, as shown in (18).

- (18) a. You can buy **whichever car**. I don’t care. (cf. (17)a)
 b. Talk to **any professor**. They are all nice in that department.

So, the count of the absolute uses of *whatever* + NP should be paired with the counts of the absolute uses of *whichever* + NP and *any* + NP as well, in order for the comparison between the two languages to be more reliable.

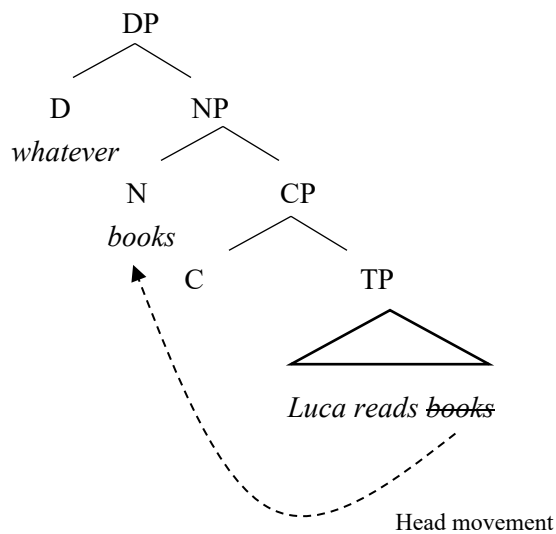
A second difference is that, unlike *qualunque* + NP in Italian, *whatever* + NP in its absolute use is perceived as more colloquial and informal than, for instance, *any* + NP. This contrast in register may have played a role in Donati et al.’s (2022) findings of small number of instances of *whatever* + NP, given the nature of the English corpus they relied on—written English from newspapers.

Given these considerations, caution is needed in drawing any strong conclusion about Donati et al.'s (2022) findings, let alone about the syntactic analysis for *whatever* + NP clauses in English that they put forward, to which I turn next.

3.4 Problems with the Syntactic Analysis of *whatever* + NP clauses in English in Donati et al. 2022

Donati and Cecchetto (2011) propose that *whatever* + NP clauses in English and Italian are all and only plain headed relative clauses. As exemplified in (19), they assume that *whatever* acts as the D and that the head N of its NP complement plays the role of the head of the relative clause.¹⁴

(19) *Syntactic structure of whatever + NP clauses as headed relative clauses in English and Italian according to Donati and Cecchetto (2011)*¹⁵



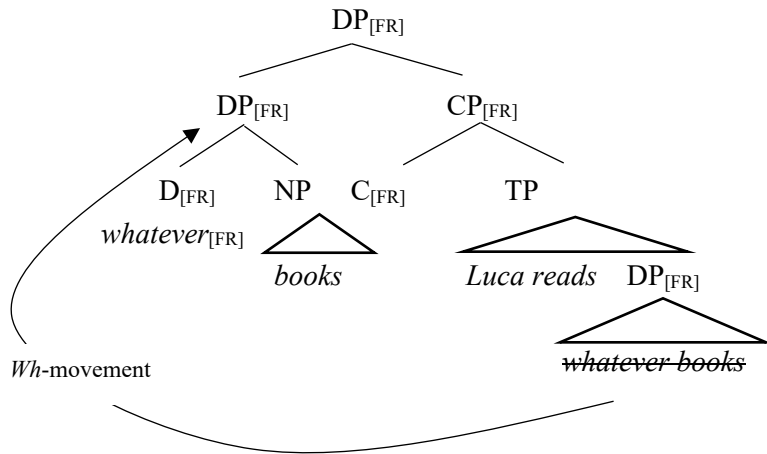
I agree that *whatever* + NP clauses in Italian and English can be headed relative clauses, without necessarily committing to Donati and Cecchetto's (2011) specific analysis of headed relative

¹⁴ Donati and Cecchetto's (2011) analysis is a variant within the family of analyses of headed relative clauses that goes by the name *raising analyses* according to which the nominal head of a relative clause is base-generated inside the relative clause itself and then moved. The other main family of analyses, which historically comes first, assumes that the head of a relative clause is base-generated outside the relative clause. See Cinque 2020 for an extended overview and detailed discussions and analyses.

¹⁵ From Caponigro 2019:359, (9), adapted from Donati and Cecchetto 2011:534, (111).

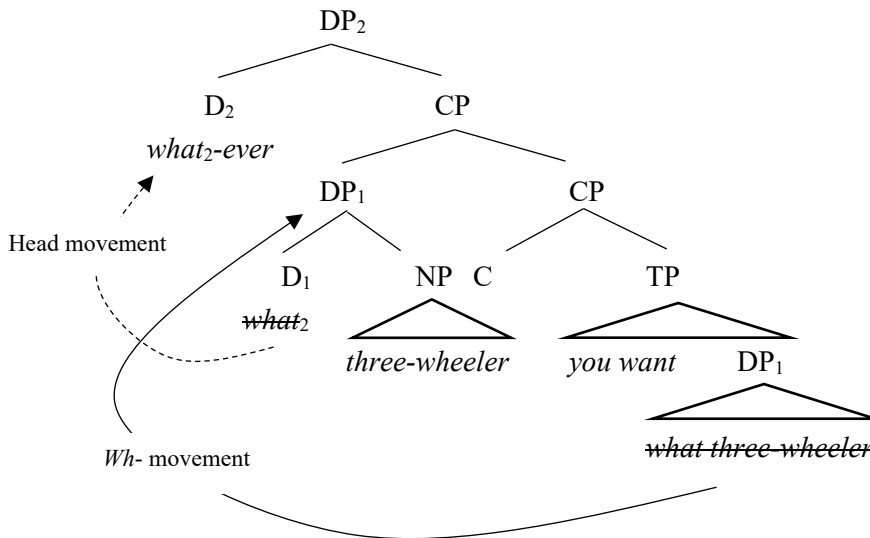
clauses in (19). In Caponigro 2019, I argue that *whatever* + NP clauses in Italian and English can also be realized as FRs, as in (20), adopting the syntactic proposal for FRs in (10).

(20) *The syntactic structure of whatever + NP clauses in English and Italian when they are FRs according to the proposal in (10)*



Donati et al. (2022) fully endorse Donati and Cecchetto’s (2011) analysis of *whatever* + NP clauses in (19), but only for Italian. For English, they propose the new analysis in (21).¹⁶

(21) *Syntactic structure of whatever + NP clauses in English according to Donati et al. (2022)*



¹⁶ Based on the bracketed structure in Donati et al. 2022:544, (44), and related discussion.

According to (21), *whatever* is not base-generated as the determiner D_1 in the matrix clause, unlike Donati and Cecchetto's (2011) proposal in (19), since *whatever* is not even treated like a single lexical item. Rather, it is "a syntactically derived determiner" (Donati et al. 2022:544). The *wh*-phrase *what* + NP is base-generated as an argument within the *wh*-clause, with the *wh*-word *what* being a plain relative pronoun. The whole *wh*-DP₁ *what three-wheeler* moves to Spec,CP. From there, the D_1 head *what* further undergoes head movement to the c-commanding D_2 head *ever*. It is D_2 that gives the whole clause its DP features, rather than the relabeling of the CP by its DP₁ specifier.

Donati et al. (2022) conclude that *whatever* + NP clauses in general "are headed relatives but in Standard English they involve an additional step (the D to D movement) that ordinary headed relatives do not require. ... Stated differently, *ever*+NP relatives [i.e., *whatever* + NP clauses] in English are headed relatives but with a twist—namely, the external determiner *whatever* is syntactically derived. *Ever*+NP relatives in Italian are headed relatives with no twist" (Donati et al. 2022:544,545).

Donati et al. (2022:544) also claim that their analysis in (21) is "natural," while rejecting the proposal in Caponigro 2019 that *whatever* + NP clauses can be both FRs and headed relative clauses as "not parsimonious." Still, Donati et al.'s (2022) analysis in (21) implies at least the following six assumptions, even though they discuss only Assumptions 1 and 6, and those only partially.

Assumption 1. *Whatever* in *whatever* + NP is not an actual lexical item, rather the product of syntactic movement, as shown in (21). The only piece of evidence that is provided to support this assumption is the analysis that Johnson's (2015) handout sketches for Appalachian English. All Johnson shows, though, is that Appalachian English allows for the forms *ever-who* and *ever-what* to be used to introduce FRs, in alternation with the forms *who-ever* and *what-ever*. Johnson does not discuss *whatever* + NP or any other *wh*-phrases. So, it is unknown whether the string *everwhat* + NP is even possible in Appalachian English, which would be the most relevant piece of evidence for Donati et al.'s (2022) assumption.

Assumption 2. *Ever* is a determiner that always and only selects for a *wh*-CP complement with a *wh*-phrase in its specifier. No independent evidence is provided for this assumption.

Assumption 3. The *wh*- D_1 *what* in (21) obligatorily undergoes head movement from within the *wh*-DP *what* + NP to the c-commanding D_2 position across DP₁ and CP, which both dominate it. No independent evidence is provided supporting the existence of this kind of head movement or its obligatoriness for *wh*- D_1 *what*.

Assumption 4. The *wh*-word *what* within a *what* + NP phrase can move to the c-commanding D_2 head only when *ever* is base-generated in D_2 ; such movement of *what* is blocked with any other

determiner, as shown by the unacceptability of strings like **what-some/*what-every/*what-no*. No independent evidence for this restriction is provided either.¹⁷

Assumption 5. Only the *wh*-word *what* within a *what* + NP phrase can move to the D head. This option is blocked for *wh*-words like *whoever* or *wherever*, which must occur without an NP complement. In fact, Donati et al. (2022) assume that all these words introduce true FRs, a fact that provides crucial support for Donati and Cecchetto’s (2011) general proposal on phrase structure theory. No independent evidence for this further restriction is provided. Actually, this assumption goes directly against the analysis in Johnson 2015, as mentioned in Assumption 1 above.

Assumption 6. The descriptive restriction that goes under the name of Doubly Filled Comp Filter conveys the fact that languages like English do not allow a *wh*-expression and a complementizer to cooccur overtly in the same CP, as shown by the unacceptability of the bracketed embedded *wh*-interrogative clause in (22) and the bracketed headed relative clause in (23).

(22) *Frida wonders [*what book that/if* is on the table].

(23) *You can read the book [*which that* is on the table].

Donati et al. (2022) argue that if the *wh*-word moves out of its own *wh*-DP within the CP, then “a weak Doubly Filled Comp Filter effect” (p. 546) is triggered, which accounts for the acceptability of *whatever* + NP clauses with the complementizer *that* like the bracketed one in (24) (adapted from (11)a).

(24) The newspapers will criticize [*whatever writer that* wins the prize].

No independent evidence is provided to support the assumption that the Doubly Filled Comp Filter effect is gradient or that a *wh*-phrase with a moved *wh*-word triggers a weaker effect. On the other hand, both Donati and Cecchetto’s (2011) syntactic proposal in (19) and my proposal in (20) have a straightforward explanation for the acceptability of (24) and similar sentences in which a complementizer occurs with a *whatever* + NP clause: they are just headed relative clauses and, as

¹⁷ An anonymous reviewer suggests that Assumptions 2–4 would be less problematic if an extra assumption were made: that *-ever* is an affixal D head in need of a host. Another anonymous reviewer suggests (without endorsing it) that a better alternative analysis would be to treat the D head as a clitic in need of a host. It would have to be an extremely flexible suffix/clitic, though, able to combine with *wh*-words of different syntactic categories to produce *wh*-phrases of different syntactic categories (*what*, *where*, *when*, *how*, *how much/many* + NP, *how* + AdjP/AdvP). It should also be able to behave like an infix, to account for *how-ever* + *much/many* + NP (see discussion in section 4.1).

such, they don't violate the standard Doubly Filled Comp Filter for the same reason that standard headed relative clauses do not.

On top of these six assumptions lacking independent evidence, Donati et al.'s (2022) analysis in (21) makes at least five problematic predictions.

Prediction 1. Although this prediction is not formulated explicitly, Donati et al.'s (2022) analysis predicts that, without further assumptions, the string *whatever* + NP in English cannot be used absolutely (i.e., without introducing an embedded clause), because *what* is base-generated inside the embedded clause. This prediction is not borne out: absolute uses of *whatever* + NP are fully acceptable, as already shown in (17). Donati et al.'s (2022) interpretation of their corpus data aligns with this incorrect prediction: “the absolute use [of *whatever* + NP in English] appears to be neither frequent nor entirely productive. Quite the opposite holds for Italian” (Donati et al. 2022:541). I have raised issues with their interpretation of their corpus data in section 3.3.

Prediction 2. Donati et al.'s (2022) analysis cannot straightforwardly account for coordinated or nested *whatever* + NPs, as in (25) and (26). If *ever* in *whatever* + NP is always the highest D c-commanding the whole clause, how can more than one *whatever* + NP occur within the same clause?

(25) Frida enjoys [[**whatever music** and **whatever lyrics**] are combined together by Maria].

(26) Maria would buy [[**whatever painting** of **whatever exotic flower**] is on display at that gallery].

On the other hand, my proposal in (20), which treats the *whatever* + NP clauses in (25) and (26) as FRs and *whatever* as a lexical item (rather than as the result of a syntactic process), can account for the acceptability of (25) and (26) straightforwardly: before moving to Spec,CP, the complex *wh*-phrases would be base-generated inside the CP of the FRs by coordination, as in (25), or embedding, as in (26), of smaller *wh*-phrases—an option that is available for other complex *wh*-phrases as well, like those in the interrogative clauses in (27) and (28).

(27) Frida wonders [[**what music** and **what lyrics**] are combined together by Maria].

(28) Maria knows [[**what painting** of **what exotic flower**] is on display at that gallery].

Prediction 3. As discussed in Assumption 6 above, Donati et al.'s (2022) analysis assumes that the Doubly Filled Comp Filter can be weakened in order to explain why *whatever* + NP clauses with the complementizer *that* are judged acceptable. On the other hand, Donati et al.'s (2022) analysis in (21) should explicitly and categorically exclude the occurrence of a standard relative pronoun in

whatever + NP clauses in English, since the *wh*-word *what* is assumed to be their relative pronoun. In fact, Donati et al. (2022:546) claim: “It is very natural to explain the ungrammaticality of [(29)] by extending the Doubly Filled Comp Filter, which would also exclude the cooccurrence of a *wh*-phrase and a relative pronoun.”

(29) *They will remember [*what* **which** our decision depends on].¹⁸

This prediction is not borne out. A quick Google search returned the examples in (30)–(33), whose full acceptability has been confirmed by native speakers of American English. The *whatever* + NP clauses are in brackets, while the *whatever* + NP strings are underlined and the relative pronouns are in boldface.

(30) I suspect the example predates O’Reilly’s PDF publishing era and was deleted for subsequent editions of [*whatever book* **in which** it was published].¹⁹

(31) We have all dealt with computer programs that dictate the manner in which material is input and require that data be included in certain fields in order to proceed with completing the form or [*whatever document* **on which** one is working].²⁰

(32) A good deal of ad hoc translation must have taken place during the war, in function of [*whatever individual* **who** had the necessary linguistic skills was available].²¹

(33) I was kind of born into restaurants, and then worked in restaurants—actually getting paid to do it, after my mother made me work at [whatever place **where** she was].²²

Donati et al. (2022) briefly touch on this issue with the following claim:

¹⁸ Donati et al. 2022:546, (52) (bracketing, underlining, and boldface added).

¹⁹ <https://ask.metafilter.com/328519/Seeking-obscure-out-of-print-OReilly-Perl-code-example> (accessed on May 9, 2021).

²⁰ <https://ecfsapi.fcc.gov/file/2069070001.pdf> (accessed 9 May, 2021).

²¹ Gilbert 2014:92. Caponigro 2019:365, (48), contains the string *whatever student who*: it is judged degraded by native speakers, and a nonsystematic Google search returned no reliable hit. The contrast with the acceptability of (26) deserves further investigation.

²² <https://stories.zagat.com/posts/adrienne-cheatham-on-the-visibility-of-black-chef-mentors> (accessed 9 May, 2021).

This explanation [i.e., the Doubly Filled Comp Filter explanation] allows us to account for the intermediate status of [*whatever* + NP clauses with a relative pronoun in English] by applying the same rationale applied above to explain the marginal compatibility with the complementizer: in the course of its derivation, [a *whatever* + NP clause with a relative pronoun in English] violates the Doubly Filled Comp Filter, but the offending configuration is destroyed by the D-to-D movement forming *whatever*, hence its marginal status. (Donati et al. 2022:546).

Donati et al. (2022) seem to assign a relative pronoun the same syntactic status as the complementizer by invoking “the same rationale” (see Assumption 6 above). At the same time, they are assuming a raising analysis of relative clauses according to which a relative pronoun is base-generated in an argument or adjunct position within the clause and then moved to its Spec,CP. So, the string *what book in which* within *whatever book in which* in (30) has to be base-generated as a VP adjunct. If *what* in *what book in which* is assumed to be a relative pronoun, as Donati et al. (2022) explicitly do in (21), then *in which* cannot be a relative pronoun as well nor can it be a complementizer, given its syntactic size larger than a simple head: a preposition (*in*) together with a *wh*-determiner (*which*). Also, I am aware of languages that can violate the Doubly Filled Comp Filter by allowing the relative pronoun and the complementizer to cooccur, but I have never encountered a language that allows for two relative pronouns to cooccur in the same headed relative clause.²³

Under the analysis in (20) that I am arguing for, the acceptability of sentences like those in (30)–(33) is fully expected. The bracketed *whatever* + NP clauses are analyzed as plain headed relative clauses with the underlined *whatever* + NP string as their head and with their boldfaced *wh*-expression as the relative pronoun linking the head to the remainder of its relative clause.

Prediction 4. The analysis in (21) is proposed for English, but it is an open issue whether it can be extended to any other language. Donati et al. (2022) crucially claim that it does not extend to Italian, since clauses introduced by *qualunque* + NP are assumed to be plain headed relative clauses with *qualunque* behaving as a regular lexical determiner, rather than resulting from the head movement of a D head *qual* to a higher D head *unque*. On the other hand, they do not mention any reason why Italian would not allow for both options nor do they suggest any other language their analysis for English could be extended to.

Prediction 5. Last, Donati et al.’s (2022) analysis of *whatever* + NP clauses in Italian as headed relative clauses predicts that they should exhibit the very same pattern as ordinary headed relative clauses as far as the distribution of the complementizer is concerned, including when the subject is

²³ See Citko and Gračanin-Yuksek 2016:sec. 3 for discussion on the empirical and theoretical aspects of this ban in headed relative clauses and FRs.

relativized. This is not the case, as shown in (12)a,b and related discussion: the complementizer *che* ‘that’ is obligatory when the subject of ordinary headed relative clauses is relativized, while it is optional in *whatever* + NP clauses in Italian. Donati et al. (2022) do not even comment on this crucial contrast.

In conclusion, Donati et al.’s (2022) proposal for *whatever* + NP clauses in English and Italian requires two different analyses, one for each language, needs at least six assumptions lacking independent support, and makes at least five predictions that are not borne out or are at least problematic. Therefore, their claim that their analysis is natural and parsimonious is unjustified. On the other hand, the approach in Caponigro 2019 only relies on the hypothesis that *whatever* + NP clauses can be either headed relative clauses or FRs across languages, without the need for construction specific proposals in any language. The syntactic proposal I suggested in (20) provides an actual, although tentative, example of how *whatever* + NP clauses can be analyzed as FRs, while *whatever* + NP clauses as headed relative clauses can be handled by any standard analysis of headed relative clauses with no extra assumptions.²⁴

4 Free Relative Clauses Can Be Introduced by *wh*-Phrases other than *whatever* + NP

In Caponigro 2019, I add further crosslinguistic data to the debate by presenting *wh*-clauses that are introduced by *wh*-phrases of the kind *wh* + XP, where either the *wh*-word is different from *whatever/whichever* and/or the XP is different from an NP. All these clauses are almost completely ignored by Donati and Cecchetto (2011) and Donati et al. (2022), despite being highly problematic for their theory of phrase structure.

In the next two sections, I expand the data presented in Caponigro 2019 and sketch how they fit my syntactic proposal for FRs in (20). I discuss English data in section 4.1 and crosslinguistic data beyond English in section 4.2.

²⁴ Donati et al. (2022:sec. 8.5) quickly touch on “unconditional clauses” (also called “free adjunct free relative clauses”) like *Whatever move the government makes (the opposition will protest)* (Donati et al. 2022:547, (54), parentheses in the original) to postulate that English allows for a second kind of D *ever*, a D with an “adverbial use.” which they do not specify further. This claim is tantamount to restating what has already been recognized in the literature: that there are two *wh-ever* clausal constructions, one occurring as an argument or adjunct inside a matrix clause, the other occurring at the left periphery and behaving like a clausal adjunct (see, e.g., Izvorski 2000, Rawlins 2013).

4.1 Clauses Introduced by Other *wh* + *XP* in English

English allows for *wh*-clauses that are introduced by *however much/many* + NP, as shown in (34) and (35). Donati et al.'s (2022) analysis of *whatever* + NP clauses in English in (21) cannot be extended to these other constructions without further assumptions. The alleged D head *ever* would occur within a *wh*-word in *however much/many*, since *how much/many* do form a morphosyntactic and semantic unit.

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

(35) You can hire [**however many extras** you need].

English also allows for *wh*-clauses that are introduced by *however* + AdjP, as shown in (36), or *however* + AdvP, as shown in (37). These *wh*-clauses exhibit the distribution and interpretation of AdjP and AdvP, respectively. On the other hand, Donati et al.'s (2022) analysis crucially requires them to combine with a high D head *ever* and therefore turns them into DPs, rather than AdjPs or AdvPs.

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

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

The following data are even more problematic for Donati and Cecchetto's (2011) and Donati et al.'s (2022) proposals. Sentences like (38)–(44) contain embedded *wh*-clauses that are introduced by *wh*-phrases containing a *wh*-word without the *-ever* morpheme, followed by an NP, an AdjP, or an AdvP. Although there may be variation depending on speakers and registers, my consultants find (38)–(44) fully acceptable. Since these clauses and their *wh*-phrases lack *-ever*, Donati et al.'s (2022) analysis in (21) does not apply without further ad hoc assumptions. Donati et al. (2022) address sentences like (38) and (39) in only a few words and do not consider any of the *wh*-clauses in (40)–(44).²⁵

(38) He truly enjoyed [**what songs** she sang].

(39) I gave him [**what money** I had].²⁶

²⁵ Examples similar to (36)–(39) have been previously reported in Caponigro 2003, Tredennick 2005, and Citko 2010.

²⁶ Donati et al. 2022:548, (63), reported as originally in Huddleston and Pullum 2002:1068.

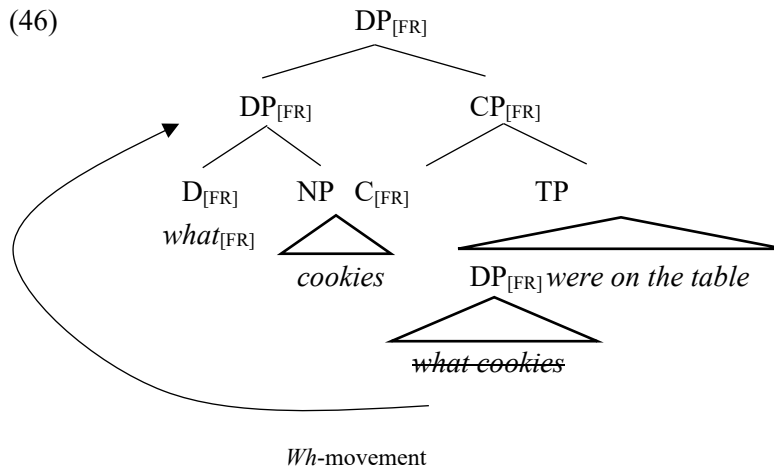
- (40) I shared [**what few ideas** I had].
- (41) I drank [**how much wine** YOU drank]. I got drunk, you didn't.²⁷
- (42) I reviewed [**how many books** YOU reviewed]. You got an A in the seminar, I didn't.
- (43) I was [**how cold** YOU were], but I didn't complain.
- (44) I was going [**how fast** YOU were going]. The police stopped ME, but not YOU.

Donati et al. (2022:548) “conjecture that for speakers who accept free relatives introduced [sic] like the ones in [(38)] and [(39)], *what* has a double life as a non-*wh*-determiner selecting plural/mass nouns,” recognizing that “more research is needed.” This is a stipulative assumption with no independent empirical support, which is equivalent to, but less transparent than, the plain description of the facts: *what* + NP can introduce non-interrogative *wh*-clauses in English only if the NP is plural or mass. Also, Donati et al.'s (2022) stipulation about clauses introduced by *what* + NP in English incorrectly predicts that these clauses should fully behave like ordinary headed relative clauses as far as the distribution of the complementizer *that* is concerned. While a headed relative clause with a relativized subject requires the overt complementizer, as shown in (45)a, the corresponding clause with *what* + NP bans this option completely, as shown in (45)b.

- (45) a. He ate [*the cookies* *(**that**) were on the table].
 b. He ate [*what cookies* (***that**) were on the table].

Since Donati et al. (2022) assume *what* to be a non-*wh* D head, the contrast in (45) is unexpected. On the other hand, my analysis would predict the contrast. The bracketed clause in (45)b is simply an ordinary headed relative clause with a relativized subject. As such, it requires *that*. On the other hand, the bracketed clause in (45)a is an FR, and nothing else, with the syntactic structure shown in (46).

²⁷ Our consultants prefer contrastive focus on the subject of the *wh*-clause in this example and those below in which capitalized *YOU* has been used.



The *wh*-phrase in (46) is sister to CP, which blocks the occurrence of *that* because of the Doubly Filled Comp Filter, as in *wh*-interrogative clauses (in English). A similar contrast is observed between clauses introduced by the *wh*-phrase *how much/many* + NP and the corresponding headed relative clauses, as shown in (47)a vs. (47)b.

- (47) a. I drank [*how much wine* **(*that)** was left].
 b. I drank [*the wine* ***(that)** was left].

If Donati et al. (2022) postulated that *how much/many* in a clause like the bracketed one in (47)a is a non-*wh* D head as well and that the whole clause is a headed relative clause, they would not be able to explain the contrast in (47). My analysis, instead, treats the bracketed clause in (47)a as an FR and assigns it the same syntactic structure as (46), with *how much* replacing *what* as the *wh*-D. The contrast in (47) is then explained in the same way as the contrast in (45).

Despite all these drawbacks of their analysis, Donati et al. (2022) criticize the kind of approach I am proposing as follows:

Theories that allow free relatives to be introduced by a *wh*-phrase face the challenge of explaining this odd restriction on plurality/mass. These theories must also explain why (alleged) free relatives introduced by a *wh*-phrase are exceedingly rare crosslinguistically. (Donati et al. 2022:548)

It is unclear why the restriction to plural/mass NPs is a challenge for the theories that argue that clauses introduced by *what* + NP are FRs, while it is not for Donati et al.'s. (2022). Crosslinguistic investigation over the past two decades has provided considerable independent evidence that, even

in languages that allow for FRs, (i) not all *wh*-words that introduce *wh*-interrogative clauses can introduce FRs as well, with variation from language to language (see Caponigro 2003, 2004, 2021 and references therein). For instance, *why* and *which* cannot introduce FRs in English, while *who* is highly restricted. In Italian, instead, *chi* ‘who’ is extremely productive in FRs, while *che cosa* ‘what’, *perché* ‘why’, and *quale* ‘which’ can never introduce FRs. Also, the *wh*-word *quanto* roughly means ‘what’ when introducing an FR, as shown in (48)a, while it means ‘how much’ when introducing an interrogative clause, as shown in (48)b.

- (48) a. Ho letto con attenzione [FR **quanto** hai scritto].
 have.1SG read with attention what have.2SG written
 ‘I read carefully what you wrote.’
- b. Ho chiesto [INTERROGATIVE **quanto** hai scritto].
 have.1SG asked how_much have.2SG written
 ‘I asked how much you wrote.’

Last, Romanian allows for all *wh*-words and *wh*-phrases to introduce FRs, including *ce* ‘what’ + NP and *de ce* ‘why’, with only one exception: *care* ‘which’ + NP.²⁸

The main conclusion that emerges from this articulated crosslinguistic pattern is that it is not enough to distinguish between languages that allow for FRs vs. languages that do not. Even languages that allow for FRs require each *wh*-word to be licensed to occur in an FR. This diachronic licensing process opens up the space for individual *wh*-words to undergo meaning changes, depending on the *wh*-constructions in which they are licensed, with possible variation from language to language as well. The restriction to plural or mass nouns in FRs introduced by *what* + NP in English can then be seen as an instantiation of this general diachronic process. On the other hand, it is unclear what independent evidence could support Donati et al.’s (2022) conjecture that English has a highly specialized determiner *what* that (a) never occurs as the D head of an independent DP, but (b) only occurs with a plural or mass noun that (c) must always be modified by a relative clause that (d) never allows for the complementizer (or a relative pronoun), unlike all other headed relative clauses in English.

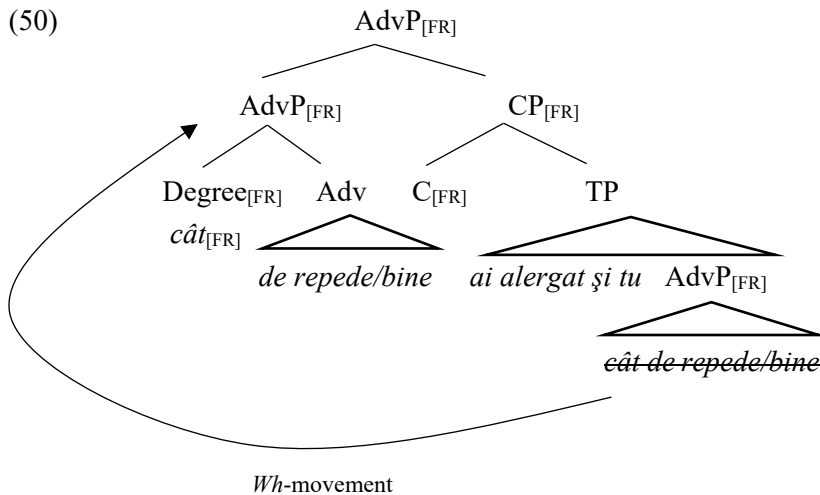
²⁸ See Caponigro and Fălăuș to appear a, to appear b, for the distribution and semantic details about FRs introduced by *ce* ‘what’ + NP and *de ce* ‘why’ and the ban on FRs introduced by *care* ‘which’ + NP in Romanian.

4.2 Clauses Introduced by Other *wh* + *XP* in languages Other than English

Donati et al. (2022:548) claim that FRs introduced by *what* + NPs or other plain *wh*-phrases without extra morphosyntactic marking “are exceedingly rare crosslinguistically.” This claim too is incorrect. In Caponigro (2019), I already reported relevant data from Romanian, a Romance language, and Melchor Ocampo Mixtec, an Oto-Manguean language.²⁹ Both languages allow for FRs introduced by *what* + NP and *how many* + NP. I enrich this evidence with the Romanian data in (49), showing that FRs introduced by *how much* + AdvP are possible too.

- (49) 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.’

The syntactic analysis of FRs that I am arguing for would account for examples like (49) by assigning the syntactic structure in (50)—just another instantiation of the general schema in (20).



The chapters in Caponigro, Torrence, and Zavala Maldonado 2021 add considerable new, relevant data across languages and language families. They investigate FRs and other headless relative clauses in fifteen languages from five language families, all Mesoamerican but one. Some of their findings are summarized in table 2 and show that FRs introduced by *what* + NP are fully productive in at least seven languages from three language families (table 2, top shaded row), while FRs

²⁹ Caponigro 2019:361, (18)–(20), for Romanian, and (21)–(22) for Melchor Ocampo Mixtec (the latter two examples are originally from Caponigro, Torrence, and Cisneros 2013:77, (76) and 65, (10), respectively).

introduced by *how much/many* + NP are fully productive in at least nine languages from four language families (table 2, bottom shaded row).³⁰

Table 2. Use of *wh*-expressions in free relative clauses across the languages investigated in Caponigro, Torrence, and Zavala Maldonado 2021

	UTO-AZT		OTO-MANGUEAN				MAYAN						M-Z	CHI
	Te	Na	AO	Ma	IM	SZ	K'	Q'	Cj	Cl	TT	YM	SP	Pe
'who'	√	√	√	√	%	√	√	√	√	√	√	√	√	*
'what'	√	√	√	√	*	√	√	√	√	√	√	√	√	*
'where'	√	√	√	√	√	√	√	√	√	√	√	√	√	√
'when'	√	*	*	*	√	--	*	√	*	√	√	--	√	*
'why'	√	--	*	√	√	√	*	--	%	*	*	*	*	*
'how'	√	√	√	√	√	√	√	√	√	√	√	√	√	*
'what/which' (+NP)	*	√/*	*	*	√	√	√	√	√	(√)	*	√	√	*
'how much/many' (+NP)	√	*	*	*	√	√	√	√	√	√	?	√	√	*

Source: Caponigro 2021:33, table 1.2

Note: **Marks:** √: attested; *: not attested; ?: unclear if attested; --: no simple *wh*-word conveying the relevant meaning; %: speaker variation. **Language family name abbreviations:** UTO-AZT: Uto-Aztecan; MI-ZO: Mixe-Zoquean; CHI: Chibchan. **Language name abbreviations:** Te: Southeastern Tephuan; Na: Tlaxcala Nahuatl; AO: Acazolco Otomi; Ma: Matlatzinca; IM: Iliatenco Me'phaa; SZ: San Pedro Mixtepec Zapotec; K': K'iche'; Q': Q'anjob'al; Cj: Chuj; Cl: Ch'ol; TT: Tsotsil and Tseltal; YM: Yucatec Maya; SP: Sierra Popoluca; Pe: Pesh.

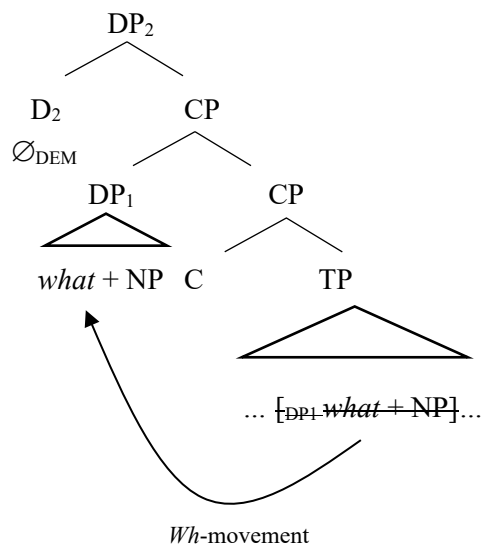
While I assign the Romanian *wh*-clauses that are introduced by *what* + NP, like the one in (51), the same syntactic structure as (46) in English, Donati et al. (2022:sec. 9) propose another ad hoc solution to handle this example.

³⁰ See Caponigro 2021, which is the introductory chapter of Caponigro, Torrence, and Zavala Maldonado 2021, and data and discussion therein. Caponigro, Torrence, and Zavala Maldonado 2021 does not investigate *how* + AdjP/AdvP.

- (51) 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.’

They agree that those clauses are FRs, but add the crucial assumption that those FRs must occur as the complement of a silent demonstrative D head taking a CP as its complement, as shown in (52).

- (52) *Syntactic structure of FRs introduced by what + NP in Romanian according to Donati et al. (2022)*



The Spec,CP in (52) contains the *wh*-phrase *what + NP*, which has *wh*-moved from its base-generated position within the clause. The silent demonstrative D_2 head turns the whole clause into a DP without need for any relabeling from the Spec,CP, which is therefore free to be realized by a *wh*-phrase, rather than a *wh*-word.

The only alleged piece of evidence in support of this proposal that Donati et al. (2022) provide is sentence (53).

- (53) Imi place *ceea* **ce** ai cumparat.³¹
 1SG.DAT like.PRS DEM what AUX.PRS.2SG buy.PST.PTCP
 Lit. ‘I like the what you bought.’

Donati et al. (2022) take (53) to show that “an overt demonstrative can precede the *wh*-word in free relatives” (Donati et al. 2022:547) in Romanian and, from there, they conclude that “[i]t is only natural to analyze” (Donati et al. 2022:548) (51) and (53) as having the same structure—the one in (52). This proposal is stipulative and inconsistent with existing literature about Romanian.

If the two *wh*-clauses are really the same, why can (51) occur only with a silent demonstrative, since the string with an overt demonstrative is completely unacceptable, as shown in (54)?

- (54) *Am citit [*ceea/cele* [**ce carte/ce cărți** ai citit și tu]].
 have.1SG read DEM.F.SG/PL what book/what books have.2SG read also you
 (‘I read that/those what book(s) you read.’)

Also, if the construction in (53) is really an FR introduced by a D head and *wh*-word (rather than a *wh*-phrase), shouldn’t an overt demonstrative cooccur with the *wh*-word *cine* ‘who’ as well, since *cine* can also introduce FRs? The strings *cel* ‘DEM.M.SG’/*cea* ‘DEM.F.SG’ *cine* ‘that who’ are completely unacceptable, though.³²

Last, what independent evidence supports the claim that a certain language allows for FRs to be introduced by a silent demonstrative D head? If the overt occurrence of just one demonstrative with one *wh*-word suffices, then why wouldn’t the same analysis extend to English, since *those who like Frida* and *that which you argued for* are both well-formed strings? This would predict English to

³¹ Example, glosses, (the ungrammatical) literal translation, and the lack of a grammatical translation are as in Donati et al. 2022:547, (61). Note that *place* should be fully glossed as *like.PRS.3SG* and that the correct spelling of the last word is *cumpărat*. (I have added boldface and underlining for consistency with other examples in this article.) Donati et al. (2022) attribute their example to Dobrovie-Sorin & Giurgea 2013:638. This book is the first volume of a grammar of Romanian that Carmen Dobrovie-Sorin and Ion Giurgea edited. The cited page 638 is part of chapter 10, “Relative Clause Constructions and Unbounded Dependencies” by Alexander Grosu (Grosu 2013). Donati et al.’s (2022) example (61) does not appear on page 638 or anywhere else in Grosu 2013, nor do Donati et al. (2022) explicitly refer to Grosu’s (2013) extensive discussion of this construction.

³² Unlike Romanian, Polish is a language that productively allows for overt demonstratives (and other D heads) to introduce non-interrogative *wh*-clauses, as persuasively shown by Citko (2004), who labels them “light-headed relative clauses.”

fully behave like Romanian as far as FRs introduced by *wh*-phrases are concerned, which is not the case.

Grosu (2013) extensively discusses examples similar to (53) and the construction they illustrate. He concludes that the whole expression *ceea ce* (not just *ce*) “is not necessarily construable as an RC[relative clause]-external demonstrative [*ceea*] followed by a (contracted) relative complementizer [*ce*] ..., but can (also) be analyzed as a relative pronoun” (Grosu 2013:647). Neither hypothesis analyzes *ce* alone as a *wh*-word or a relative pronoun nor is either one compatible with *ce* taking an NP complement.

To wrap up, in this section I have enriched the empirical landscape in Caponigro 2019 about FRs that are introduced by *wh* + XP other than *whatever* + NP with further data from Romanian and the rich set of data from Mesoamerican languages in Caponigro, Torrence, and Zavala Maldonado 2021. At the same time, I have pointed out that Donati et al. (2022) almost completely fail to address these data. Even when they touch on FRs introduced by *what* + NP in English and Romanian, their proposals lack independent support and make incorrect predictions.

5 General Conclusions

I have argued that the grammar, as in Chomsky 2013, 2015, allows for the option of generating FRs that are introduced by *wh*-phrases, contra the claim advanced in Donati and Cecchetto 2011 and endorsed in Donati et al. 2022 that only *wh*-words/heads can introduce FRs. In doing so, I have narrowed down the debate in Donati and Cecchetto 2011, Caponigro 2019, and Donati et al. 2022 from a broad theoretical one—whether the grammar allows for FRs introduced by *wh*-phrases—to a narrower, empirical one: whether *whatever* + NP clauses and other clauses introduced by *wh*-phrases are FRs.

The answer I have provided to this empirical question is positive, with rich evidence from Italian, English, Romanian, and many Mesoamerican languages. In particular, I have highlighted data and arguments supporting the conclusion that *whatever* + NP clauses can be FRs in Italian and English, and not just headed relative clauses. I have also argued that Donati et al.’s (2022) novel experimental data do not shed any new light on this crucial issue. Last, I have discussed the stipulative nature and empirical inadequacy of Donati et al.’s (2022) novel analysis of *whatever* + NP clauses in English as headed relative clauses “with a twist” and the problems facing their analysis of *whatever* + NP clauses in Italian exclusively as headed relative clauses.

I have also provided new arguments and data that support the conclusion that FRs can be introduced by *wh*-phrases other than *whatever* + NP, as argued in Caponigro 2019. I have shown that *what* + NP, *how(ever) many/much* +NP, *how(ever) + AdjP/AdvP* can introduce FRs in English and/or in other languages from different language families, including Romanian and Mesoamerican

languages. Donati et al. (2022) briefly discuss only a small subset of these data. Still, I have argued that their proposals, which are limited to just FRs introduced by *what* + NP in English and Romanian only, lack independent justification and make predictions that are not borne out.

Overall, there is strong and articulated crosslinguistic evidence supporting the conclusion that the grammar allows for FRs that are introduced by varieties of *wh*-phrases.

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