

‘What’ clauses can and ‘which’ cannot: a Romanian puzzle

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1. The puzzle

Romanian exhibits a puzzling contrast that, to the best of our knowledge, hasn’t yet been noticed in the language nor has it been attested in any other Romance or Indo-European language. Romanian interrogative *wh*-clauses can be introduced by the complex *wh*-phrases *ce* ‘what’ + NP or *care* ‘which’ + NP, as shown in (1).¹

(1) *Interrogative clauses introduced by ‘what’/ ‘which’ + NP*

Ana se întrebă [**ce/ care**] {**carte/cărți/ mâncare**} i-ar plăcea].
Ana REFL wonders what/ which book/ books/ food CL.DAT-would like
‘Ana wonders {what/which} {book/books/food} she would like.’

By contrast, only one of these two options is available for non-interrogative *wh*-constructions whose distribution and interpretation resemble those of nominals or prepositional phrases: Maximal Free Relative Clauses (henceforth, Max-FRs), which have been argued to semantically behave like definites, and Existential Free Relative Clauses (henceforth, Ex-FRs), which only occur as complements of a restricted class of predicates and have been argued to semantically behave like narrow scope indefinites.² Both *wh*-clauses are extremely productive in Romanian: they can be introduced by all the simple *wh*-words and complex *wh*-phrases that can introduce interrogative *wh*-clauses (see Grosu 2013, Caponigro & Fălăuș 2018, a.o.). This includes *ce* ‘what’ + NP, as shown in (2) and (3) with a singular count, a plural count, and a mass NP complement.

¹ Glosses follow The Leipzig Glossing Rules – List of Standard Abbreviations, Updated on May 31, 2015 (<https://www.eva.mpg.de/lingua/pdf/Glossing-Rules.pdf>; retrieved on June 2, 2019) with the following additions: CL: clitic.

² See Jacobson (1995), Dayal (1996), Caponigro (2003, 2004) for the semantics of Max-FRs. They all argue that Max-FRs are *wh*-clauses that denote the unique maximal individual of a set like definite DPs, borrowing from the analysis of definite DPs in Sharvy (1980) and Link (1983). Their proposals differ in the semantics they assume for *wh*-words in Max-FRs. See Šimík (2020) for a detailed and complete overview of generalizations and proposals about Max-FRs and free relative clauses in general. See Izvorski (1998), Caponigro (2003, 2004), Grosu (2004), and Šimík (2011, 2013) for Ex-FRs. Their analyses are significantly different: Izvorski treats them as interrogative *wh*-clauses syntactically; Caponigro treats them as a subgroup of free relative clauses; Grosu and Šimík, instead, argue that they are not necessarily clausal and, therefore, prefer to treat them as a separate construction (“Modal Existential Construction”). See Šimík (2017) for an overview of the work on this construction. See Caponigro *et al.* (2021) for further generalizations and crosslinguistic evidence about Max-FRs and Ex-FRs from fifteen Mesoamerican languages.

(2) *Max-FRs introduced by ‘what’ + NP*
 Ana a luat [**ce** {**carte/ cărți/ mâncare**}a luat și Maria].
 Ana has taken what book books food has taken also Maria
 ‘Ana took the book/books/food Maria took as well.’

(3) *Ex-FRs introduced by ‘what’ + NP*
 Maria nu are [**ce** {**carte/ cărți/ mâncare**} să ia].
 Maria not has what book books food SBJV take.3SG
 ‘Maria doesn’t have any book/books/food to take.’

There’s only one exception: *care* ‘which’ + NP, which cannot introduce either Max-FRs nor Ex-FRs regardless of the kind of NP complement occurring with the *wh*-determiner, as shown in (4) and (5).³ We are not aware of any variation about these judgments across Romanian varieties or speakers.

(4) *Max-FRs introduced by ‘which’ + NP*
 a. *Ana a luat [**care** **carte/ mâncare** a luat-o și Maria].
 Ana has taken which book/ food has taken-CL.ACC.3SG also Maria
 b. *Ana a luat [**care** **cărți** le-a luat și Maria].
 Ana has taken which books CL.ACC.3PL-has taken also Maria

(5) *Ex-FRs introduced by ‘which’ + NP*
 *Maria nu are [**care** **carte/ cărți/ mâncare** să (o/le) ia].
 Maria not has which book books food SBJV CL.3SG/CL.3PL take.3SG

Unlike the pattern in the interrogative *wh*-clause in (1), the pattern in Max-FRs and Ex-FRs in (2)–(5) doesn’t generalize to other Indo-European languages. A systematic investigation of these two options in either construction across Indo-European languages is still lacking. There is at least one Romance language, namely Italian, where neither option is allowed in either construction. The incorrect generalization of this language-specific restriction to all languages with Max-FRs has led to theories of labelling that erroneously predict the impossibility of ‘what’ + NP in Max-FRs in any language (e.g., Donati & Cecchetto 2011 and the critical remarks in Caponigro 2019). Germanic languages do not seem to have Ex-FRs at all. On the other hand, English has a productive system of Max-FRs, including those introduced by *what* + NP. The latter exhibit a behavior that is partially different from and less clear-cut than the behavior of their Romanian counterpart, though. Andrews (1975) reports them as acceptable with a plural or mass NP complement, but unacceptable with a singular count NP complement, as shown in (6)a,b.⁴

³ This contrast is not explicitly mentioned in previous work, but can be inferred from the description of Romanian FRs in Grosu (2013: 645) and the fact that *care* is missing from this list: “The relative elements that can head a DP (i.e., relative determiners) are *ce* ‘what’, *orice* ‘whatever’ and *oricare* ‘whichever’”.

⁴ (6)a is adapted from Andrews (1975: p. 76, ex. 76b,c) and (6)b from Andrews (1975: p. 76, ex. 77b,c). Andrews (1975) calls the bracketed clauses in (6)a,b “internally headed relative clauses.” See de Vries (2002: Ch. 2), in particular Sec. 6.3.2, for a thorough discussion and morpho-syntactic and semantic arguments supporting our claim that the bracketed clauses in (6)a,b and in the Romanian examples in (2) and (3) are free relative clauses, rather than internally headed relative clauses or correlative clauses.

- (6) a. I drank [**what beer**]/[***what glass of milk**] was provided].
 b. Fred hid [***what weapon was**]/{**what weapons were**} on the table].
- (7) % Ana took [**what {book/books/food}** Maria took].

The English native speakers we asked confirmed Andrews' judgments, but found (7)—the English equivalents of the fully acceptable Romanian examples in (2)—either all degraded or all acceptable, regardless of the NP complement. This variation in acceptability of Max-FRs introduced by *what* + NP depending on the examples and the speakers needs a study on its own. On the other hand, FRs introduced by *which* + NP, which Andrews (1975) doesn't mention, are all less acceptable than their *what* + NP counterpart without any kind of variation, at least according to our consultants.

We focus on the puzzle in (2)–(5) showing that, in Romanian, 'what' + NP can introduce Max-FRs without restrictions, while 'which' + NP cannot. We suggest a line of explanation that links this puzzle to a meaning difference in D-linking or discourse anaphoricity between 'what' + NP and 'which' + NP in interrogative clauses—a meaning difference that we show is even sharper in Romanian than in English and makes 'which' + NP in Romanian resemble the partitive construction 'which of the' + NP. The fact that 'what' + NP can introduce Max-FRs and Ex-FRs follows as the default option for a language like Romanian that has a productive system of *wh*-clauses, where all *wh*-words and *wh*-phrases can be used, unless some extra factor intervenes and blocks this extension. We suggest that this is exactly the case for 'which' + NP.⁵ The strong presuppositional anaphoric requirement for its NP to refer to a set that has already been explicitly introduced in the discourse clashes with the non-anaphoric nature of Max-FRs and Ex-FRs.

The remainder of the paper is structured as follows. In Section 2, we show the discourse-anaphoric contrast between 'what' + NP and 'which' + NP in interrogative clauses in Romanian building on insights from the literature on D-linking and Dayal (2017, *in preparation*). In Section 3, we use the findings in Section 2 to suggest an account for the contrast in Max-FRs and Ex-FRs in (2)–(5). Section 4 concludes with some general remarks and outstanding issues.

2. 'What' + NP versus 'which' + NP in interrogative clauses

We are not aware of any systematic comparative investigation of *ce* 'what' + NP vs. *care* 'which' + NP in interrogative clauses in Romanian. The literature on Romanian seems to imply a difference between the two *wh*-determiners that is usually cast in terms of D-linking (e.g., Pesetsky 1987, Dayal 2016). Specifically, it is assumed that the *wh*-determiner *care*, but not *ce*, comes with a contextual salience/familiarity presupposition (see Comorovski 1996, Rațiu 2011, Giurgea 2013, Giurgea & Grosu 2019, a.o.).⁶

⁵ Both *ce* and *care* have other uses in Romanian, e.g., they can be used without NP complements (much like English *what*). In these other uses, they exhibit different properties from those characterizing their use as *wh*-determiners with an overt NP complement (see e.g., Pană Dindelegan 2013). In this paper, we focus exclusively on the use of *ce* and *care* with NP complements and leave the possible connections between the existing uses for future investigation.

⁶ In the case of direct objects, D-linking in Romanian is also reflected by clitic doubling: while *ce* + NP never allows for clitic doubling, *care* + NP is obligatorily clitic doubled (Comorovski 1996, Giurgea & Grosu 2019). Since this difference is orthogonal to our discussion, we set it aside in the rest of the paper.

Accordingly, *care* can only be used “when the domain of entities from which values are to be selected is contextually available” (Farkas 2013: 220).

In this section, we probe the D-linking/discourse-anaphoric properties of *care* + NP and *ce* + NP by applying some of the tests that Dayal (2017, *in preparation*) develops to distinguish between *which* + NP and the phrasal *what* (without an NP complement) in English. We conclude that *care* + NP carries a strong presuppositional requirement: the set denoted by its NP must have been explicitly introduced in the discourse in a way that makes it akin to the partitive construction ‘which of the’ + NP. On the other hand, *ce* + NP carries no presuppositional restriction whatsoever.

Let’s start by considering a context in which the set denoted by the NP complement of *care* or *ce* is part of common knowledge, but it is not introduced explicitly, like the one in (8). Both Ana and Maria know that every year there is a list of nominees for the Nobel prize. Still this shared knowledge is not enough to license the use of *care* in the absence of some explicit overt introduction of the set of relevant authors in the discourse. The partitive construction *care dintre* ‘which of’ + NP patterns alike in being infelicitous in this context; *ce* + NP, instead, is fully felicitous.

- (8) CONTEXT: *Ana just said that the Nobel prize for literature was finally announced. The list of nominees has not been introduced in the discourse. Maria asks:*
{**Ce autor**}/#{**Care autor**}/#{**Care dintre autori**} a câștigat
what author which of authors has won
premiul Nobel anul acesta?
prize-the Nobel year-the this
‘{What author}/ {Which author}/ {Which of the authors} won the Nobel prize this year?’

Let’s now consider Context 1 in (9), in which the set denoted by the NP complement of *care* or *ce* is not mentioned explicitly but it can be inferred from other pieces of information that are provided. Ana’s mentioning her trip to the nearby bookstore to buy a book for Lia makes it clear that that book is a member of the set of books in that bookstore. Still, this is not enough to license the use of *care* + NP or the closely related partitive construction, whereas *ce* + NP is fully acceptable, as shown in (9)a–c. If we slightly change the scenario as in Context 2 in (9), and have Ana explicitly mention a list of books Maria is familiar with, then *care* + NP and the partitive construction join *ce* + NP in being felicitous, as shown in (9)a–c. Neither (9)b nor (9)c would be acceptable if Ana explicitly mentioned a list of books that Maria is not familiar with.

- (9) CONTEXT 1: *Ana says: “I went to the nearby bookstore and got a book for Lia”.*
Maria asks:
 CONTEXT 2: *Ana says: “I went to the nearby bookstore and got a book for Lia out of the list you recommended”.* *Maria asks:*
- | | |
|--|------------------|
| a. Ce carte ai luat? | √ (in Context 1) |
| what book have.2SG taken | √ (in Context 2) |
| ‘What book did you get?’ | |
| b. Care carte ai luat-o? | # (in Context 1) |
| which book have.2SG taken-CL.3SG | √ (in Context 2) |
| ‘Which book did you get?’ | |
| c. Care dintre cărți ai luat-o? | # (in Context 1) |
| which of books have.2SG taken-CL.3SG | √ (in Context 2) |
| ‘Which of the books did you get?’ | |

The same pragmatic constraint holds for embedded interrogative *wh*-clauses that are introduced by *care* + NP. In the example in (1), *care* + NP can be used felicitously only if the discourse makes it clear that Ana has a certain set of books in mind and the speaker is aware of that. On the other hand, *ce* + NP doesn’t exhibit this restriction and can be used regardless of the availability of a contextually salient/familiar set.

To sum up, we have shown that *care* + NP in interrogative clauses in Romanian is subject to very strict discourse conditions: the set denoted by its NP is presupposed to have been previously introduced in the discourse explicitly.⁷

If we assume Karttunen’s (1977) semantics for interrogative *wh*-clauses, we can extend his treatment of *wh*-words as existential generalized quantifiers to *ce* + NP and *care* + NP as in (10) and (11), respectively.

(10) ce_{INTERR} ‘what’ $\sim \lambda P \lambda Q \exists y [P(y) \wedge Q(y)]$

(11) $care_{\text{INTERR}}$ ‘which’ $\sim \lambda P \lambda Q: \mathbf{P} \in \mathbf{D}_{\text{REF.}} \exists y [P(y) \wedge Q(y)]$

While *ce* semantically behaves like a plain indefinite determiner, *care* introduces the presuppositional requirement that the set P—the denotation of its NP complement—be already a member of the set of discourse referents.⁸

Some of the contexts above that do not license *care* + NP in Romanian may, instead, be appropriate for *which* + NP in English (e.g., Context 1 in (9)). Similarly, the contexts licensing *ce* + NP may not be exactly the same as those licensing *what* + NP (e.g., Context 2 in (9)). These possible crosslinguistic differences deserve further investigation. Here we just want to raise the general issue that, even if the repertoire of complex *wh*-phrases in a language includes some form of ‘what’ + NP and ‘which’ + NP, it should not be taken for granted that the way these two complex *wh*-

⁷ A possible source for this presuppositional component may be the fact that in old Romanian *care* is the only *wh*-word that incorporates the enclitic definite determiner—*carele* (M.SG), *carii* (M.PL), *carea* (F.SG), *carele* (F.PL) (Pană Dindelegan 2016).

⁸ The logical translation in (11) assumes that a set and its intensional counterpart (a property) can act as referents in the discourse (see Nouwen 2003). It is also possible to reformulate the presuppositional content in (11) without such an assumption, as shown in (i), with the referent being the maximal individual of the set P rather than P itself.

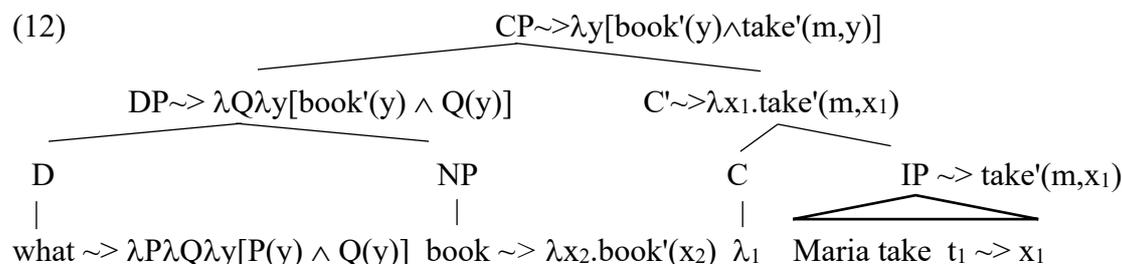
(i) $care_{\text{INTERR}} \sim \lambda P \lambda Q: \iota x \mathbf{P}(x) \in \mathbf{D}_{\text{REF.}} \exists y [P(y) \wedge Q(y)]$

phrases are sensitive to discourse conditions and the way they differ from each other in this respect are necessarily identical across languages. Consequently, they should be carefully investigated in each language.

3. Back to the puzzle

Let's now return to the puzzle in (2)–(5) we started with. In this section, we suggest a solution in light of the observations and conclusion in Sections 1 and 2. We first provide an explicit semantics for 'what' + NP in Max-FRs and Ex-FRs in Romanian and then speculate on why a similar move does not extend to 'which' + NP.

As mentioned in Section 1, Max-FRs behave like definite DPs semantically, while Ex-FRs resemble narrow scope indefinites (see references in fn. 2). Still, we argue they share most of their semantic derivation, including the meaning of their *wh*-phrases. Let us look at the concrete example in (12), showing the semantic derivation of the CP of the Max-FR in (2) and the Ex-FR in (3) with lexical entries in English and the verbal form 'take' standing for both the indicative form in the Max-FR and the subjunctive form in the Ex-FR in the Romanian original clauses.



The logical translation of C' in (12) denotes the set of objects that Maria took or can take. This is the standard semantic contribution of a *wh*-clause in general right before combining with its *wh*-phrase. The logical translation of the NP is standard as well, denoting a set of individuals. The crucial new assumption is about the meaning of the *wh*-determiner *ce* 'what' in a free relative clause (henceforth, FR), regardless whether it is a Max-FR or an Ex-FR. The logical translation of the determiner *ce* in an FR (henceforth, ce_{FR}) is repeated in (13), while the resulting translation for the whole *wh*-phrase is given in its general form in (14), with NP' standing for the logical translation of the NP complement of *ce*.

$$(13) \quad ce_{FR} \text{ 'what' } \rightsquigarrow \lambda P \lambda Q \lambda y [P(y) \wedge Q(y)]$$

$$(14) \quad [DP \text{ } ce_{FR} + NP] \rightsquigarrow \lambda Q \lambda y [NP'(y) \wedge Q(y)]$$

ce_{FR} semantically behaves like a purely functional/logical element: it applies to two sets of individuals to return their intersection. Once it combines with its NP complement, the whole DP turns into a set restrictor: it applies to a set of individuals Q to return the subset of Q containing those members that are in the denotation of the NP complement as well. In (12), ce_{FR} combines with 'book' to return the function that restricts whatever set it applies to next to its subset containing books. When the *wh*-DP combines with the C' denoting the set of individuals that Maria took or can take, it returns the subset of those individuals that are books, as shown by the logical translation of CP in (12). This set is existentially closed by the matrix existential predicate in an Ex-FRs, while it is

type-shifted into its maximal individual in a Max-FR (see above mentioned references for details).

If we compare the semantic contribution of ce_{FR} in FRs in (13) to the one of ce_{INTERR} in interrogative *wh*-clauses in (10), we can see that both *wh*-words apply to two sets and trigger their intersection. ce_{FR} doesn't do anything else semantically, while ce_{INTERR} existentially quantifies over the intersection. In other words, ce_{INTERR} semantically behaves like a plain existential determiner (e.g., *a* in English or *un(M)/o(F)* in Romanian). This meaning change from existential quantification to λ -abstraction/set-formation applies not just to ce_{FR} , but to all the *wh*-words that can occur in FRs. It is possible to provide a semantics for interrogative *wh*-clauses that assumes the same set-restrictor meaning for *wh*-words as the one in FRs, as sketched in Caponigro (2003: Ch. 6) and discussed extensively in George (2011). This approach would account even more easily for the fact that all *wh*-words in interrogative clauses can occur in FRs as well in Romanian, with the exception of *care*, to which we now turn.

If it is so natural for *wh*-words in Romanian to occur in FRs, what prevents *care* from joining all its *wh*-colleagues in FRs? In other words, why doesn't Romanian allow for a $care_{FR}$ whose logical translation would look like the one in (15)?

(15) * $care_{FR}$ 'which' $\sim \lambda P \lambda Q \lambda y: \mathbf{P} \in \mathbf{D}_{REF}. [P(y) \wedge Q(y)]$

(15) contains exactly the same presuppositional discourse-requirement as $care_{INTERR}$ in (11) minus the existential quantifier, i.e., the meaning change we have argued to take place with all other *wh*-words in Romanian when they occur in an FR. But $care_{FR}$ is not an actual lexical item of Romanian—this is why it is starred in (15).

We suggest that the lack of $care_{FR}$ may be due to a clash between its presuppositional requirement and the semantic properties of an FR. Specifically, an FR, like any headless relative clause, is a device that allows natural language to define a set of individuals by means of the informational richness of a clause without relying on clausal modification of a nominal head, as in headed relative clauses. As shown in (12), the CP of an FR always ends up denoting a set—the set of the books Maria takes in (12)—by a purely compositional semantic mechanism, rather than relying on the speaker's and listener's familiarity with that set. On the other hand, the core property of a discourse-anaphoric element is to refer back to a referent that has already been introduced in the discourse and, therefore, needs not to be described: the personal pronoun *he* refers back to the only contextually salient male, while the demonstrative pronoun *that* refers back to the only contextually salient object.

Ex-FRs may add further evidence for the ban of anaphoric $care_{INTERR}$ in FRs. Remember that Ex-FRs very naturally occur as the complement of the existential predicate *a avea* 'to have'. It looks like $care_{INTERR}$ cannot be base-generated in this syntactic position, as shown in (16)a. On the other hand, ce_{INTERR} exhibits no such restriction while triggering a 'kind' interpretation, as shown by the acceptability of the interrogative clause in (16)b and the 'kind' answer it licenses.

- (16) a. ***[Care prieteni]** îi ai __?⁹
 which friends CL.3PL have.2SG
 ('Which friends do you have?')
- b. **[Ce prieteni]** ai __?
 what friends have.2SG
 'What kind of friends do you have?'
 (ANSWER 1: × 'The friends you met yesterday.'; ANSWER 2: ✓ 'Friends that I can fully trust.')

If existential 'have' existentially quantifies over its set-denoting complement triggering the assertion of its non-emptiness, it would trigger infelicity if combining with a complement that anaphorically refers to a set of individuals, which is already well-established as a discourse referent and, as such, non-empty.

Going back to the discourse-anaphoric elements *he* and *that*, both pronouns can introduce a different kind of headless relative clauses in English, known as light-headed relative clauses. This use matters for our investigation because it shows that, when followed by rich clausal descriptions, both pronouns lose their anaphoric properties: neither *he* in (17) nor *that* in (18) triggers reference to any contextually-salient individual and they are both followed by *wh*-clauses.

- (17) **He** who laughs last, laughs best.
 (18) A very small part of acting is **that** which takes place on the stage! (T.S. Eliot, *The Sacred Wood*)

The option of losing anaphoric features depends on the individual lexical item. It is permitted with *he*, although sounding archaic or proverb-like, but it is completely banned with a personal pronoun like *it* (cf. **it that* or **it which*). It is fully productive with *that which* (or *those who*), while it is not possible with *this* or *these*.

- (19) ***These** who laugh last, laugh best. (cf. **Those** who laugh last, laugh best.)
 (20) *A very small part of acting is **this** which takes place on the stage!

What this pattern suggests is that anaphoricity and rich descriptive content clash. Therefore, *care* in Romanian would need to lose its anaphoric features to be able to occur in a non-interrogative clause. This is indeed the case when *care* introduces non-interrogative *wh*-clauses other than Max-FRs and Ex-FRs. For instance, the bracketed clause in (21), taken from Braşoveanu (2008: 49), is a correlative clause.

⁹ Our consultants find (i) acceptable, with *care* obligatorily preceded by the preposition *de* 'of'. As made clear by the translation of the matrix interrogative *wh*-clause and by its only possible answer, *care* in this use only allows for a 'kind' interpretation without any discourse anaphoricity. This is the same semantic behavior as the interrogative clause with *ce* in (16)b.

- (i) **De care prieteni** ai ?
 of which friends have.2SG
 'What kind of friends do you have?'
 (ANSWER 1: × 'The friends you met yesterday.'; ANSWER 2: ✓ 'Friends that I can fully trust.')

- (21) [Pe care om l-a interogat Securitatea], în *acela*
 ACC which person CL.ACC.3SG-has interrogated Security-the in DEM.3M.SG
 nu mai am încredere.
 not anymore have.1SG trust
 ‘I don’t trust any person interrogated by the secret police anymore.’

It occurs left dislocated, while Max-FRs and Ex-FRs occur clause-internally, as arguments or adjuncts. Also, it licenses the italicized demonstrative pronoun in the matrix clause, which can be optional in subject position (Romanian is subject pro-drop). Last, the bracketed clause in (21) cannot be replaced by nor interpreted as a definite nor an indefinite DP. Its semantic contribution adds a universal or free choice component to the interpretation of the whole sentence (see Braşoveanu 2008).

The bracketed clause in (22), instead, is a kind of *wh*-clause originally discussed in Rudin (1986) and recently described in Caponigro & Fălăuş (2020).

- (22) A mâncat [care copil ce a vrut].
 has eaten which child what has wanted
 ‘Every child ate whatever they wanted.’

It obligatorily involves a *wh*-clause with more than one *wh*-phrase, each of which is related to an argument of *both* the matrix and the embedded predicate. For instance, in (22) the children eating are the ones that want to eat and the things they eat are the things they want to eat. Crucially, *care* + NP can only be replaced by a universally quantified DP or the free choice *wh*-DP *oricare/orice copil* ‘any child’ in order to obtain a sentence that is roughly truth-conditional equivalent to the original one.

The free-choice/quantified interpretation of the bracketed *wh*-clauses introduced by *care* in (21) and (22) exhibits no anaphoric component. Why can’t that *care* introduce Max-FRs or Ex-FRs as well then? The syntactic and semantic differences between the constructions in (21) and (22) on the one hand, and Max-FRs and Ex-FRs on the other indicate that we are dealing with different constructions and possibly different *care*, each of which has to be specifically licensed for that construction. If *care* in (21) and (22) contributes to the free choice/quantificational interpretation those constructions receive, then that *care* would not be able to occur in Max-FRs and Ex-FRs, whose interpretations are incompatible with free choice or universal quantification.

Typologically, it is common to observe variation across non-interrogative *wh*-constructions within the same language with respect to the subset of *wh*-words introducing them (Caponigro 2003, 2021). We are not aware of any general account of this variation within a language and the crosslinguistic variation in the use of *wh*-words would disfavor such a general approach. Language specific or idiosyncratic restrictions are likely to be at play.

In the specific case of Romanian, if the *wh*-determiner *care* had undergone a meaning change in order to be licensed in Max-FRs and Ex-FRs, it would have become fully identical to *ce_{FR}* ‘what’ + NP in (13). Some form of blocking may disfavor a lexical item from assuming exactly the same meaning as another lexical item with exactly the same distribution (see Embick & Marantz 2008 and references therein for the general notion of blocking and Chierchia 1998 for blocking applied to semantic rules and type shifting). Also, *care* would have to change its meaning along two dimensions (loss of

existential quantification and loss of anaphoricity) in order to be able to occur in Max-FRs and Ex-FRs, while *ce* loses its existential strength only. Although neither ban is absolute, the combination of both may be harder to overcome and explains the lack of *care*_{FR}. Interestingly, *care* + NP in the non-interrogative *wh*-clauses in (21) and (22) cannot be replaced by *ce* + NP: the result is judged degraded and only a kind reading is marginally available. This pattern may be taken as showing blocking as well, although in the reverse direction: the meaning switch that has taken place with the *care* occurring in those constructions blocks *ce* from doing exactly the same.

4. Conclusions

We have presented a previously unnoticed and puzzling contrast between the unconstrained productivity of ‘what’ + NP in Max-FRs and Ex-FRs and the complete ban on ‘which’ + NP from the same two constructions in Romanian—a language in which both constructions are highly productive and can be introduced by all the other *wh*-words and *wh*-phrases that are attested in interrogative clauses. We have also shown that ‘which’ + NP in interrogative clauses in Romanian clearly exhibit strong discourse-anaphoric requirements, unlike ‘what’ + NP. We have connected the two findings by suggesting that discourse anaphoricity and set formation out of a complex expression may not be compatible. Lexical blocking and further restrictions on the complement of existential predicates may play a role as well.

The constraints we have invoked (and their interplay) are neither absolute nor exhaustive. Some languages may apply further constraints and ban both ‘what’ + NP and ‘which’ + NP from introducing FRs. This would be the case for Italian, as mentioned earlier. Others may ban ‘which’ + NP from FRs and allow ‘what’ + NP in FRs, but with restrictions, rather than as freely as in Romanian. This would be the case for English, if Andrews’ (1975) generalizations hold under further scrutiny: ‘what’ + NP in Max-FRs in English would apply to two sets to return not their intersection, but rather a kind—the kind that is instantiated by the members of the intersection of those two sets.¹⁰ Because these constraints are “soft”, there may be languages that overcome the ban on complex anaphoric descriptions and/or semantic lexical blocking and allow for ‘which’ + NP in FRs. We have no clear evidence of any language of this kind yet.¹¹

We hope that our paper will encourage further language-specific and crosslinguistic/typological investigation on clauses introduced by ‘what’ + NP and ‘which’ + NP, with special attention to the semantic/pragmatic properties that these *wh*-phrases exhibit in interrogative clauses and the way these properties transfer to FRs and non-interrogative *wh*-constructions in general.

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¹⁰ Heim (1987) suggests that *what* + NP in interrogative clauses in English licenses a variable ranging over subkinds of the kind denoted by its NP complement, while *which* + NP is inherently partitive and licenses a variable ranging over individuals.

¹¹ Royer (2021) reports that in Chuj (Mayan) Max-FRs can be introduced by both ‘what’ + NP and ‘which’ + NP (Royer 2021: ex. 49 and 50); the only example with ‘which’ seems to be heavily discourse dependent, based on its translation, but it lacks an overt NP complement.

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