

Additive free choice items

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In this paper, we aim to account for the distribution and interpretation of a novel class of free choice items in Romanian, to which we refer as ADD-FCIs. We show that the internal composition of ADD-FCIs, as well as their distribution, differs from that attested for other free choice paradigms discussed in the literature. Morphologically, ADD-FCIs are a more complex variant of the regular universal FCIs, by virtue of an additional morpheme. This morpheme plays an additive role when it functions as a stand-alone particle, and we propose its role is similarly additive when it functions as an infix in ADD-FCIs. Couched in an exhaustification framework, we put forward a novel compositional account that can derive the interpretation of these ADD-FCIs. Distributionally, these elements are only found in the presence of the conditional mood, as well as unconditional structures. We show how our analysis, coupled with the Viability constraint used to explain the distribution of regular FCIs, can also account for their restricted distribution. In doing so, we further show how the pattern we investigate opens new perspectives regarding the licensing of free choice items in unconditionals.

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1 Data of interest

In this paper, we aim to account for the distribution and interpretation of a novel class of free choice (FC) items in Romanian, i.e. the elements illustrated in (1), to which we will refer as ADD-FCIs. We will show that the internal composition of ADD-FCIs, as well as their distribution, differs from that attested for other free choice paradigms discussed in the literature.

- (1) a. Orişicine ar suna azi, sunt ocupată.
ADD-FCI COND.3SG call today am busy
'Whoever may call today, I'm busy.'
b. Orişicum ai da-o, situaţia e gravă.
ADD-FCI COND.2SG give-it situation is dire
'However you may look at it, the situation is dire.'

Morphologically, ADD-FCIs have the internal composition in (i), which is a more complex variant of the regular universal free choice items (whose composition is given in (ii)):

- (i) ADD-FCIs: the disjunction *ori* + the additive/scalar particle *şi* + a *wh*-word.
(ii) FCIs: the disjunction *ori* + a *wh*-word.

Before we discuss the properties of ADD-FCIs, let us take a closer look at each of their components. *Ori* is a disjunctive particle and can occur either on its own or be reduplicated to express a disjunctive utterance; it can disjoin any syntactic constituents, including questions.

- (2) Ana a mâncat (ori) salată ori supă.
Ana has eaten DISJ salad DISJ soup
'Ana ate (either) salad or soup.'

As shown in (ii) above, the disjunctive element *ori* can productively combine on its own with a *wh*-word, giving rise to universal free choice items (FCIs) like *oricine*=DISJ+who 'anyone' or *orice*=DISJ+what 'any(thing)' (e.g., Farkas 2013, Caponigro and Fălăuş 2018).

- (3) a. Oricine poate veni la petrecere.
FCI can come to party
'Anyone can come to the party.'
b. Alege orice carte îţi place!
pick.IMP.2SG FCI book you.DAT like
'Pick any book you like!'

Note that in Romanian bare *wh*-phrases in non-interrogative contexts cannot act as quantifiers, i.e. Romanian doesn't allow sentences like **Poate veni cine*, lit. 'can come who' (see Caponigro and Fălăuş 2018 for discussion). A morphologically richer paradigm has to be used instead, e.g. *Poate veni oricine* 'Anyone can come', with a *wh*-based FCI, or *Poate veni cineva* 'Someone can come', with the *wh*-based *-va* existential series such as *cineva* 'someone'.

The second element entering the composition of ADD-FCIs is the particle *şi*. This particle can function as a conjunctive element (which can conjoin any syntactic constituents and can also be reduplicated) (4a), but also as an additive particle (4b) and as a scalar particle¹ (4c). Anticipating our analysis, we gloss this element as ADD throughout.

¹This scalar meaning can be strengthened via the addition of a concessive particle *până/chiar* 'really'.

- (4) a. Ana a mâncat (și) salată și supă.
 Ana has eaten ADD salad ADD soup
 'Ana ate (both) salad and soup.'
- b. Ana a mâncat și salată.
 Ana has eaten ADD salad
 'Ana ate salad too.'
- c. Și Ana a venit la petrecere.
 ADD Ana has come to party
 'Even Ana came to the party.'

Unlike *ori*, the particle *și* cannot, on its own, morphologically combine with a *wh*-word (**și-cine*). The particle *și* can combine with a *wh*-word only as long as the disjunctive particle is also present (DISJ+ADD+WH). This pattern is fully productive in Romanian—all FCIs double as ADD-FCIs:

<i>wh</i> -word	FCIs (DISJ+WH)	ADD-FCIs (DISJ+ADD+WH)
<i>cine</i> 'who'	<i>oricine</i>	<i>orișicine</i>
<i>care</i> 'which'	<i>oricare</i>	<i>orișicare</i>
<i>ce</i> 'what'	<i>orice</i>	<i>orișice</i>
<i>când</i> 'when'	<i>oricând</i>	<i>orișicând</i>
<i>cum</i> 'how'	<i>oricum</i>	<i>orișicum</i>
<i>cât</i> 'how much'	<i>oricât</i>	<i>orișicât</i>
<i>unde</i> 'where'	<i>oriunde</i>	<i>orișiunde</i>
<i>de ce</i> 'why'	✗	✗

Table 1: *Wh*-based free choice paradigms in Romanian

Turning now to their distribution, ADD-FCIs and universal FCIs partially overlap in their distribution, as illustrated by their acceptability in unconditional structures:

- (5) a. Oricine/ Orișicine ar suna azi, sunt ocupată.
 FCI ADD-FCI COND.3SG call today am busy
 'Whoever may call today, I'm busy.'
- b. Oricum/ Orișicum ai da-o, situația e gravă.
 FCI ADD-FCI COND.2SG give-it situation is dire
 'However you may look at it, the situation is dire.'

Meaning-wise, the difference is that ADD-FCIs have an emphatic effect, conveying that even extreme or unlikely cases should be considered, an aspect that we will discuss in more detail in Section 4. For instance, the use of ADD-FCIs in (5a) is conveying that even if the queen of England were to call, I still wouldn't be available.

In addition to this meaning difference, there are also distributional differences. First, unlike regular FCIs, ADD-FCIs are ruled out from typical free choice environments, such as (6a) with a possibility modal verb. Second, even in unconditional constructions, ADD-FCIs require conditional mood marking², as attested by the contrast between their acceptability in (5) and their unacceptability in an unconditional with the indicative future in (6b), where the regular

²According to reference grammars, the Romanian verbal system marks the following moods: the indicative, the subjunctive, the conditional, and the imperative (see a full description in e.g. Pană Dindelegan 2013: Chapter 2). Present conditional forms are made up of an auxiliary form (which most authors take to originate in the verb *a avea* 'to have'), fully inflected for person and number, plus the bare infinitive form of the verb, e.g. *aș veni* 'I would come'. The forms of the perfect conditional are made up of the conditional auxiliary, followed by the infinitive of *fi* 'be' and the invariable participle of the verb, e.g. *aș fi venit* 'I would have come'.

FCI is licensed:

- (6) a. Poți alege orice/ *orișice îți place.
can.2SG choose FCI ADD-FCI you.DAT like
'You can choose anything you like.'
b. Oricine/ *orișicine va suna azi, sunt ocupată.
FCI ADD-FCI will.3SG call today am busy
'Whoever is going to call today, I'm busy.'

Finally, let us note that for most of our informants the conditional mood on its own is not sufficient to license ADD-FCIs; these speakers find (7) unacceptable, an otherwise ideal licensing environment for a plain FCI.

- (7) Aș vorbi cu oricine/ *orișicine la telefon acum.
COND.1SG talk with FCI ADD-FCI on phone now
'I would talk with anyone on the phone right now.'

Taking stock, ADD-FCIs have two puzzling distributional properties: (i) restriction to conditionals, and (ii) obligatory use of conditional mood. In the following, we offer a compositional account ADD-FCIs and argue that their restricted distribution and interpretation result from a requirement introduced by the element that sets them apart from regular FCIs, i.e. the particle *și*.

The paper is organized as follows: in Section 2, we situate the pattern under investigation with respect to other free choice paradigms discussed in the literature. In Section 3, we adopt an alternative-based theory of FCIs and discuss their licensing in unconditionals. Section 4 offers a compositional account for ADD-FCIs, which derives their emphatic meaning and the conditional mood requirement. Section 5 concludes with a number of open questions for future research.

2 The relevance of ADD-FCIs

The properties of ADD-FCIs in Romanian are, to our knowledge, unattested elsewhere in the realm of free choice or *wh*-based elements. We will show that they can further our understanding of the meaning contribution of various kinds of particles across polarity-sensitive paradigms, as well as that of the relation between unconditionals and typical free choice environments. To see the relevance of ADD-FCIs more clearly, it will be useful to look briefly at the use of particles in the internal composition of FCIs attested cross-linguistically, as well as the distribution of FCIs in unconditionals discussed in the literature. This will help flesh out the issues raised by the ADD-FCI paradigm investigated in this paper.

2.1 Particles and free choice paradigms

It is by now well-documented that quantificational and polarity-sensitive paradigms cross-linguistically include various connectives, as well as additive and scalar particles (e.g., Haspelmath 1997, Lahiri 1998, Chierchia 2013, Szabolcsi et al. 2014, Szabolcsi 2018, Mitrović forthcoming). Their frequent use in similar paradigms across typologically unrelated languages has led to compositional analyses which aim to provide a unified semantics for these particles in their various roles. As far as FCIs (some of which double as negative polarity items) are

concerned, they fall under two main morphological patterns.³ One group is represented by languages with FCIs where a disjunctive particle combines with an indefinite or a *wh*-word, a pattern we have already illustrated with the Romanian plain FCIs in Table 1 above. Haspelmath (1997:166) mentions a few other languages where FCIs include a *wh*-word and an element translatable as ‘or’: Korean, Russian, Basque, Latvian, Ossetic, Hausa, and West Greenlandic. The other group is represented by FCIs that include an indefinite or a *wh*-word plus a conjunctive or a focus-sensitive particle (additive ‘also, too’ or scalar ‘even’). Well-known examples include Hindi *ek bhii*, lit. *also/even+one*, Malayalam *aarum* lit. *and/also/even+who*, Hungarian *akárki*⁴, lit. *even+who* (see e.g. Haspelmath 1997, Lahiri 1998, Jayaseelan 2001, Slade 2011, Szabolcsi 2018 for discussion and further examples).

Some of the existing analyses of these free choice patterns derive their meaning compositionally and explain the meaning contribution of the particle (see e.g. Caponigro and Fălăuș 2018 for Romanian or Szabolcsi 2019 for Hungarian). A common feature of these analyses is that the free choice behavior is ultimately attributed to the disjunctive or the conjunctive/additive particle, although the exact implementation of this idea varies. The pattern we discuss in this paper is more complex and involves a previously unobserved combination of particles, with both a disjunctive and an additive particle. Consequently, none of the current accounts of the semantic contribution of particles across polarity-sensitive paradigms applies straightforwardly. If both the disjunctive and the additive particle can trigger free choice behavior, what happens when they combine? The challenge in the case of ADD-FCIs is twofold: on the one hand, we need to understand how the different elements combine and end up affecting the restricted distribution of ADD-FCIs; on the other hand, we want to determine how the meaning of the disjunctive and the additive particle at the word-internal level compares with their meaning elsewhere in the language.

2.2 Unconditionals and free choice

In the previous section, we have seen that both FCIs and ADD-FCIs in Romanian are licensed in unconditionals, i.e. sentences like those in (8):

- (8) Whoever comes to the party, it will be fun.

Rawlins (2008, 2013) uses the term ‘constituent unconditional’ to describe this type of structure, while the typological literature (e.g. Haspelmath and König 1998) refers to them as ‘universal concessive clauses’.⁵

There seems to be quite a lot of variation in the way unconditionals are realized cross-linguistically (see Haspelmath and König 1998 for an overview of strategies used in the languages of Europe). However, there are a number of recurring morpho-syntactic elements, which will turn out to be relevant for our understanding of ADD-FCIs. The first one is the presence of an adjunct *wh*-clause, with a (bare or modified) *wh*-word that is obligato-

³Here we focus on word-level composition and set aside more complex paradigms, such as free choice constructions involving various verbal forms, e.g. ‘want/please’ (Spanish *cualquiera*), ‘it may be’ (French *wh + que ce soit*, Italian *qualsiasi*), ‘no matter’ (French *n’importe + wh*), see e.g. Haspelmath (1997).

⁴ See however Bende-Farkas 2015, Halm 2016 for evidence that *akár* is at its origin a disjunction.

⁵Rawlins also discusses other well-documented types of unconditionals across languages, e.g. so-called headed unconditionals, e.g. *No matter/Regardless of who comes to the party, it will be fun.* and alternative unconditionals, e.g. *Whether Alfonso or Joanna comes to the party, it will be fun.* To this, we can add doubling unconditionals, e.g. *Venga quien venga, estaré contento* ‘Whoever comes, I’ll be happy’, most recently discussed in Šimík (2019). In Romanian, all these types of unconditionals are realized by constructions that are unrelated to free choice items, so we will set them aside in the rest of the paper. Accordingly, we use the term ‘unconditionals’ as an abbreviation for ‘constituent unconditionals’.

rily fronted. The second ingredient that is pervasive in unconditionals across languages is a focus-sensitive particle akin to ‘also’ or ‘even’, e.g. Dutch *ook*, German *auch*, Greek *ke*, Bulgarian *i*.⁶ Finally, many languages use conditional or subjunctive mood in unconditionals. These elements do not necessarily co-occur, although they might. For instance, in addition to the fronted (bare) *wh*-word, the Dutch unconditional in (9a) uses the focus-sensitive particle *ook* (but no special mood), the French one in (9b) uses the subjunctive mood (but no particle), whereas in Greek and Kannada, we see both the particle and the mood markers (10a-b).

- (9) a. Dutch (Haspelmath & König 1998: 611)
 Waar ze ook maar heen gaat, hij zal haar nooit verlaten.
 where she also only to goes he will her never leave
 ‘Wherever she goes, he will never leave her.’
 b. French
 Quoi que (ce soit que) je fasse, la situation reste compliquée.
 what that it be.SUBJ.3SG that I do.SUBJ the situation stays complicated
 ‘Whatever (it is that) I do, the situation is complicated.’
- (10) a. Greek (Haspelmath & König 1998: 611)
 Opudipote ke na pi, afts pot den ta tin engatalpsi.
 REL-where-ever also SUBJ goes he ever not FUT her will.leave
 ‘Wherever she goes, he will never leave her.’
 b. Kannada (Haspelmath 1997: 136)
 Avalu estu heei-d-ar-uu keel-al-ee illa.
 she how.much tell-PAST-COND-even listen-INF-EMPH NEG
 ‘However much she was told, she didn’t listen.’

The Romanian data we investigate in this paper has all these ingredients, although the internal composition of ADD-FCIs (with an additive particle as an infix in a *wh*-based free choice item) is, to our knowledge, previously unobserved. We will show that each one of these elements ends up contributing to the interpretation and the restricted distribution of ADD-FCIs.

Moving to the interpretation of unconditionals, Rawlins (2008) identifies a number of key semantic properties in his detailed study of English unconditionals. Most notably, they come with an implication that the choice of alternative in the antecedent does not matter, a property referred to as ‘relational indifference’. A related observation is that unconditionals entail their consequent, i.e. (8) for example entails that the party will be fun. Finally, unconditionals can have a speaker-ignorance implication, as evidenced by the incompatibility with a *namely* continuation (a test first used in Dayal 1997 for *-ever* free relative clauses):

- (11) Whoever comes to the party (# namely Alfonso), it will be fun.

The way these inferences are derived varies in the literature, depending on whether unconditionals are assumed to be akin to questions (Rawlins 2008, 2013, Hirsch 2016) or rather to free relatives (Izvorski 2000, Bhatt and Pancheva 2017, Šimík 2019, Šimík 2020). The compositional

⁶Constituent unconditionals should also be distinguished from concessive conditional clauses, like those in (9), which contain an overt conditional clause preceded by a scalar particle:

(i) Even if someone uninvited comes, the party will be fun.

We will not discuss the differences between the two constructions in this paper (but see Haspelmath and König 1998, Quer 2001, Balusu 2019, Erlewine 2020 for relevant discussion). We will simply note that in Romanian, both FCIs and ADD-FCIs are ruled out from this type of conditional.

details differ, but the standard view is that unconditionals are ultimately equivalent to a set of conditionals, where the consequent remains constant across alternatives: the unconditional in (8) for example comes out as true if all conditionals of the form *If x comes to the party, it will be fun* (where *x* refers to each relevant individual in the context) are true.

The work on the modal inferences characterizing unconditionals has led to a recent line of investigation exploring unified analyses of unconditionals and free choice phenomena across languages (Szabolcsi 2019, Gonzalez and Lohiniva 2020, Balusu 2019). This is empirically supported by the fact that most *wh*-based indefinites used in unconditionals are also acceptable in typical free choice environments (and sometimes negative polarity contexts as well). We already illustrated this for regular FCIs in Romanian above (6) and (12) provides further examples from English and French, where the free choice elements *whoever* and *quoi que ce soit*, which can be used in unconditionals, are licensed by a possibility modal:

- (12) a. You can invite whoever you want to the party.
 b. Marie peut lire quoi que ce soit.
 Marie can read what that it be.SUBJ.3SG
 ‘Marie can read anything.’

Interestingly however, the connection between free choice items and unconditionals is not free of restrictions. In particular, it has been observed that FC *any* cannot be used, or is at best marginal in unconditionals (Szabolcsi 2019):

- (13) a. You may bring anything you like to the potluck.
 b. ??Anything you bring to the potluck, the guests will be happy.
 c. ??Anyone you invite to the party, it will be fun.

This paper brings to light the opposite pattern: Romanian ADD-FCIs are items that are licensed only in unconditionals and are ruled out from typical free choice environments, e.g. modal contexts, generic statements, imperatives. The cross-linguistic picture that needs to be accounted for thus looks as follows:

	FC environments	Unconditionals
<i>whoever</i> (En), <i>oricine</i> (Rom), <i>akárki</i> (Hun), <i>quoi que ce soit</i> (Fr), <i>qualunque</i> (It) etc.	✓	✓
<i>anything</i> (En)	✓	✗
<i>orişicine</i> (Rom)	✗	✓

Table 2: The distribution of free choice items

This distribution raises a number of questions: what makes unconditionals so suitable licensing environments for FCIs across languages? What is responsible for the more restricted patterns observed for English *any* and Romanian ADD-FCIs? More generally, can the investigation of free choice items lead to a better understanding of the semantics of unconditionals?

3 A compositional account of FCIs

Our analysis of ADD-FCIs builds on recent alternative-based approaches to free choice phenomena and free choice items (e.g. Dayal 2013, Chierchia 2013, Szabolcsi 2019, see Alonso-Ovalle and Menéndez-Benito 2020 for a recent overview). Before we develop an explicit account for the restricted distribution of ADD-FCIs, we introduce our assumptions about regular FCIs, focusing on two core properties: (i) the universal-like interpretation (Section 3.1) and

(ii) the restricted distribution to modal contexts (Section 3.2). We then turn to the licensing of FCIs in unconditionals (Section 3.3).

3.1 Deriving the universal component

We couch our analysis within the grammatical approach to deriving implicatures and adopt the approach in Fox (2007) for deriving free choice inferences for disjunctions and existential quantifiers (see Meyer 2020 for a more recent overview of the phenomenon). To offer a quick recap, the puzzle posed by free choice inferences is that the use of disjunction in the scope of a possibility modal like in (14a) gives rise to a stronger quasi-conjunctive reading, as in (14b). This FC inference cannot be derived by standard semantic or even pragmatic machinery.

- (14) a. Jenny can visit Anna or Betty. $\Diamond(p \vee q)$
 b. Jenny can visit Anna and she can visit Betty. $\Diamond p \wedge \Diamond q$

The general schema corresponding to such inferences is provided in (15): an assertion of a sentence as in (15a) gives rise to the FC inference in (15b). This is a useful generalization to have since the role of *OP* can also be played by plurals, *there* constructions, negated universal quantifiers, etc.⁷

- (15) a. $OP(A \vee B)$
 b. $OP A \wedge OP B$

Fox (2007) has argued that the FC inference can and should be derived in the grammar, on a par with scalar implicatures. Within the grammatical approach to scalar implicatures, as laid out in Chierchia, Fox, and Spector (2012), implicatures arise as the result of a syntactic ambiguity resolution in favor of an LF which contains a covert exhaustivity operator *EXH* (building on work in Groenendijk and Stokhof 1984, Chierchia 2004, Spector 2006, Fox 2007, among others). Scalar elements activate alternatives and the grammar integrates these alternatives within the meaning of the utterance by means of this exhaustification operator which is similar to overt *only* in that it negates all stronger alternatives. There are two important caveats: (i) unlike *only*, this operator also asserts its prejacent, and (ii) stronger alternatives are negated but only as long as no contradiction results when their negation is conjoined with the assertion. These two points are encoded in its semantics below where $\mathcal{IE}(p, \text{Alt}(p))$ is meant to pick out those alternatives which are innocently excludable, that is, whose negation does not lead to a contradiction:

- (16) $\text{EXH}(p) = p \wedge \forall q [q \in \mathcal{IE}(p, \text{Alt}(p)) \rightarrow \neg q]$
 where $\mathcal{IE}(p, \text{Alt}(p)) = \cap \{C' \subset \text{Alt}(p) : C' \text{ is a max subset of } \text{Alt}(p) \text{ s.t. } \{ \neg q : q \in C' \} \cup \{p\} \text{ is consistent}\}$

In the case of a disjunction, the first question to ask is what the relevant alternatives are. In order to derive its scalar implicature, the conjunctive alternative becomes relevant, and the result of applying *EXH* is the strengthened exclusive interpretation that only one of the disjuncts is true.

- (17) LF: $\text{EXH} [p \vee q]$

⁷It is crucial to note that one other set of operators that fit the schema above are anti-additive operators which also license inferences from (15a) to (15b). The main difference between these sets of operators, however, is the fact that the inference with anti-additive operators is a logical entailment ($\neg(p \vee q) \rightarrow \neg p \wedge \neg q$) whereas the inference with FC operators is not ($\Diamond(p \vee q) \not\rightarrow \Diamond p \wedge \Diamond q$).

- a. $\text{Alt}(p \vee q) = \{p \vee q, p, q, p \wedge q\}$
- b. $\llbracket \text{EXH}[p \vee q] \rrbracket = (p \vee q) \wedge \neg(p \wedge q)$

Turning back to the FC inference of modalized disjunctive sentences, the relevant alternatives have been argued to be the individual disjuncts (Sauerland 2004, Alonso-Ovalle 2006). Unlike in the case above, however, these alternatives cannot be negated without giving rise to a contradiction, as shown in (18).

- (18) LF: $\text{EXH}[\Diamond[p \vee q]]$
- a. $\text{Alt}(\Diamond(p \vee q)) = \{\Diamond(p \vee q), \Diamond p, \Diamond q\}$
 - b. $\llbracket \text{EXH}[\Diamond[p \vee q]] \rrbracket = \Diamond(p \vee q) \wedge \neg \Diamond p \wedge \neg \Diamond q = \perp$

Following an insight by Kratzer and Shimoyama (2002) that the strengthened, implicature-enriched meanings of the individual alternatives are actually relevant, Fox (2007), as well as Alonso-Ovalle (2006) and Chierchia (2006) albeit within a different framework, proposes that the relevant LF is one employing recursive exhaustification, as in (19). The enriched, pre-exhaustified, alternatives are those in (19a) and amount to saying that it's only the case that p is possible, and it's only the case that q is possible. Taking as a concrete example (14), the alternatives would be that Jenny can visit Anna but not Betty and that Jenny can visit Betty but not Anna. Negating these alternatives, in conjunction with the assertion amounts to the conjunctive FC interpretation that Jenny can visit Anna and she can visit Betty.

- (19) $\text{EXH}[\text{EXH}[\Diamond[p \vee q]]]$
- a. $\text{Alt}(\text{EXH}(\Diamond(p \vee q))) = \{\text{EXH}\Diamond(p \vee q), \text{EXH}\Diamond p, \text{EXH}\Diamond q\}$
 $= \{\Diamond(p \vee q), \Diamond p \wedge \neg \Diamond q, \Diamond q \wedge \neg \Diamond p\}$
 - b. $\text{EXH}(\text{EXH}(\Diamond(p \vee q))) = \Diamond(p \vee q) \wedge \neg(\Diamond p \wedge \neg \Diamond q) \wedge \neg(\Diamond q \wedge \neg \Diamond p)$
 $= \Diamond p \wedge \Diamond q$

For the purposes of deriving the FC inference we disregarded the scalar implicature but note that its presence is crucial. The reason for this is that in its absence we would predict FC implicatures to arise just as easily for non-modalized sentences; in other words, we would derive a conjunctive interpretation for plain disjunctive sentences. If, however, the scalar implicature is computed, the negation of the enriched alternatives cannot be added consistently: *not only p* and *not only q* are inconsistent with *p or q and not both*. Crucially this inconsistency does not arise in the case above where the disjunction is embedded under a possibility modal.

- (20) $\text{EXH}[\text{EXH}[p \vee q]]$
- a. $\text{Alt}(\text{EXH}((p \vee q))) = \{\text{EXH}(p \vee q), \text{EXH } p, \text{EXH } q, \text{EXH}(p \wedge q)\}$
 $= \{(p \vee q) \wedge \neg(p \wedge q), p \wedge \neg q, q \wedge \neg p\}$
 - b. $\text{EXH}(\text{EXH}(p \vee q)) = (p \vee q) \wedge \neg(p \wedge q) \wedge \neg(p \wedge \neg q) \wedge \neg(q \wedge \neg p)$
 $= \perp$

So far we have discussed the case of FC implicatures with disjunction. The same mechanism as above can be employed to derive the universal implicature for existential quantifiers in modalized contexts, an implicature that is optional with plain existentials (such as the simple indefinite *a* in English) and obligatory with FCIs (such as *any*) (21a)-(21b).

- (21) a. Jenny can visit *a*/any friend.
 b. Jenny can visit Anna, she can visit Betty and she can visit Carla.

The only difference in this case is that the alternatives are taken to be sub-domain alternatives: if the existential quantifies over a contextually relevant domain D , the alternatives will be the smaller domains D' .

To illustrate our assumptions about FCIs, let us go through a concrete example. We assume that universal FCIs are, at their base, existential quantifiers following Chierchia (2013), Dayal (2013), Szabolcsi (2019) and pace Dayal (2004), Menéndez-Benito (2010), Aloni (2019) (see Alonso-Ovalle and Menéndez-Benito 2020 for a recent overview on free choice items). In the case of a universal FCI like *any*, which has the denotation in (22a), the relevant scope configuration is one where the existential quantifier takes scopes above the modal, as in (22b). The interpretation is provided in (22c), which for a domain with three individuals amounts to a three-way disjunction, abbreviated as on the last line where a, b, c stand in for the corresponding propositions.

- (22) Jenny can visit any friend.
- a. $\llbracket \text{any} \rrbracket = \lambda P. \lambda Q. \exists x \in D [P(x) \wedge Q(x)]$, where $D = \{\text{Anna, Betty, Carla}\}$
 - b. LF: $\llbracket \text{any friend}_i \llbracket \text{Jenny can visit } t_i \rrbracket \rrbracket$
 - c. $\llbracket \text{Jenny can visit any friend} \rrbracket = \exists x \in D [\text{friend}(x) \wedge \Diamond \text{visit}(\text{Jenny}, x)]$
 $= \Diamond a \vee \Diamond b \vee \Diamond c$

What sets FCIs (and more generally items that are polarity-sensitive) apart from plain existentials is the obligatory activation of alternatives, which triggers obligatory exhaustification. In the case at hand, the relevant alternatives are the sub-domain alternatives, which look as in (23a). Using the same procedure as above and the pre-exhaustified alternatives in (23b), we derive the strengthened universal interpretation in (23c), represented as $\llbracket \dots \rrbracket^+$.

- (23) a. Domain Alternatives: $\exists x \in D' [\text{friend}(x) \wedge \Diamond \text{visit}(\text{Jenny}, x)]$, where $D' \subset D$
- $$\left\{ \begin{array}{ccc} & \Diamond a \vee \Diamond b \vee \Diamond c & \\ \Diamond a \vee \Diamond b & \Diamond b \vee \Diamond c & \Diamond a \vee \Diamond c \\ \Diamond a & \Diamond b & \Diamond c \end{array} \right\}$$
- b. Exhaustified Alternatives: $\text{EXH}[\exists x \in D' [\text{friend}(x) \wedge \Diamond \text{visit}(\text{Jenny}, x)]]$, where $D' \subset D$
- $$\left\{ \begin{array}{ccc} & \Diamond a \vee \Diamond b \vee \Diamond c & \\ \Diamond a \vee \Diamond b \wedge \neg \Diamond c & \Diamond b \vee \Diamond c \wedge \neg \Diamond a & \Diamond a \vee \Diamond c \wedge \neg \Diamond b \\ \Diamond a \wedge \neg \Diamond b \wedge \neg \Diamond c & \Diamond b \wedge \neg \Diamond a \wedge \neg \Diamond c & \Diamond c \wedge \neg \Diamond a \wedge \neg \Diamond b \end{array} \right\}$$
- c. $\llbracket \text{Jenny can visit any friend} \rrbracket^+ = \forall x \in D [\text{friend}(x) \rightarrow \Diamond \text{visit}(\text{Jenny}, x)]$
 $= \Diamond a \wedge \Diamond b \wedge \Diamond c$

This procedure strengthens an existential to a universal. The end result is identical in the case of the universal FCIs we discussed in Romanian. The denotation of the Romanian equivalent of *anyone*, i.e. *oricine*, is as in (24a). However, due to the morphological make-up of FCIs (disjunction + *wh*-word), their internal composition is different. Here, we adopt Caponigro and Fălăuș (2018)'s account of FCIs in Romanian and assume that on their non-interrogative uses, *wh*-words lack quantificational force and behave like (vacuous) set restrictors, as illustrated in (24b) for the *wh*-word *cine* 'who'. The alternative-triggering component is the prefix *ori-*, which turns the *wh*-word from a non-quantificational item into a full-fledged existential FC element, which needs to be exhaustified.⁸

⁸This is a simplification, which abstracts away from the fact that *oricine* and the other FC *wh*-words can come in two variants: one in which they are part of so-called free choice free relatives (e.g. *I like whoever/anyone you like*, where the relative clause *you like* would be an extra-argument of the FCI) and one in which they can be used

- (24) a. $\llbracket \text{oricine}_{\langle et, t \rangle} \rrbracket = \lambda Q. \exists x \in D[\text{human}(x) \wedge Q(x)]$
 b. $\llbracket \text{cine}_{\langle et, et \rangle} \rrbracket = \lambda P. \lambda x. [\text{human}(x) \wedge P(x)]$
 c. $\llbracket \text{ori-} \rrbracket = \lambda R_{\langle et, et \rangle}. \lambda Q_{\langle e, t \rangle}. \exists x \in D[R(x) \wedge Q(x)]$

3.2 Deriving the restricted distribution of FCIs

Let us now turn to the other defining property of FCIs, namely their restricted distribution. Typical environments include possibility modals (as illustrated in the previous section), generic statements and imperatives. Crucially however, they cannot occur in episodic or necessity modal statements unless they are subtriggered (LeGrand 1975), as shown in (25). Subtriggering a FCI amounts to including a post-nominal modifier, usually in the form of a relative clause.

- (25) a. Jenny visited any friend *(that came to the party).
 b. Jenny must visit any friend *(that came to the party).

There are different proposals that account for this distributional restriction and which are compatible with the alternative-based approach to FCIs adopted here. The prevailing intuition in the literature has been that the set of individuals in the intersection of the nominal and the verbal property must vary across the worlds of the modal base (a requirement that Dayal (2009) calls ‘fluctuation’). More recent variants of this requirement, have been proposed by Dayal (2013) and adopted by Szabolcsi (2019) in a slightly different formulation which we reproduce below. The presupposition in (26) is a modified version of the Viability constraint proposed in Dayal (2013), which requires that each exhausted alternative be true in some world.

(26) **Viability presupposition**

$$\forall q \in \text{Alt}(p) [\exists w' \in \text{Acc}_w. q_{w'} \wedge \exists w' \in \text{Acc}_w. \neg q_{w'}]$$

[... FCI ...] is felicitous if each alternative proposition is true in some world and false in some world.

In episodic sentences, i.e. in the absence of a modal, there is only one accessible world, the world of evaluation. Accordingly, Viability cannot be satisfied. What about modal contexts? Viability is evaluated at the smallest propositional constituent containing the FCI. If the FCI were interpreted under the modal, there would be only one world of evaluation, just like in episodic sentences, and so Viability would not be satisfied. But recall from the previous section that the FCI takes scope above the modal (see (22)). After exhaustification (assuming once again $D = \{a, b, c\}$), the enriched meaning of the modal statement looks as in (27a) for a sentence with a possibility modal and as in (27b) for a sentence with a necessity modal.

- (27) a. $\forall x \in D[\text{friend}_w(x) \rightarrow \exists w' \in \text{Acc}_w \text{visit}_{w'}(\text{Jenny}, x)]$ $\Diamond a \wedge \Diamond b \wedge \Diamond c$
 b. $\forall x \in D[\text{friend}_w(x) \rightarrow \forall w' \in \text{Acc}_w \text{visit}_{w'}(\text{Jenny}, x)]$ $\Box a \wedge \Box b \wedge \Box c$

Let us start with the possibility modal and assume the models in (28). This statement would be true in a model like M1, but Viability would not be satisfied (as *a* is true in all worlds). Similarly for M2. No such problem arises in M3, where the assertion is true and Viability is satisfied. Turning now to a case where the FCI co-occurs with a necessity modal, it is easy

independently, without a free relative (e.g. *I can talk to anyone*). We refer the interested reader to Caponigro and Fălăuş (2018) for extensive discussion, and limit ourselves to pointing out the role of the disjunctive particle in the free choice behavior of *oricine*.

to see that none of the three models would work: the assertion is false in M1 and M3, and M2 does not satisfy Viability. More generally, for a sentence with the enriched interpretation in (27b), there is no model in which the strengthened assertion and Viability can both be satisfied since they are incompatible with each other.

- (28) $W = \{w_1, w_2, w_3\}; \forall w \in W, \text{friend}_w = \{a, b, c\}$
- a. M1: **jenny.visits** = $\{\langle w_1, \{a, c\} \rangle, \langle w_2, \{a\} \rangle, \langle w_3, \{a, b, c\} \rangle\}$
 - b. M2: **jenny.visits** = $\{\langle w_1, \{a, b, c\} \rangle, \langle w_2, \{a, b, c\} \rangle, \langle w_3, \{a, b, c\} \rangle\}$
 - c. M3: **jenny.visits** = $\{\langle w_1, \{a\} \rangle, \langle w_2, \{b\} \rangle, \langle w_3, \{c\} \rangle\}$

In subtriggering contexts, such as (25), it is argued that the post-nominal quantifier contains a covert modal (which in many languages is made salient by the use of subjunctive mood, as discussed in Quer 2001 among others). The pre-exhaustification interpretation of (25a) is provided in (29a), followed by the exhaustified final interpretation in (29b). We skip over the steps of the computation here but refer the interested reader to Dayal (2013).

- (29) a. $\exists x \in D \exists w' \in \text{Acc}_w [[\text{friend}_w(x) \wedge \text{at-the-party}_{w'}(x)] \wedge \text{visit}_{w'}(\text{Jenny}, x)]$
 b. $\forall x \in D \exists w' \in \text{Acc}_w [[\text{friend}_w(x) \wedge \text{at-the-party}_{w'}(x)] \rightarrow \text{visit}_{w'}(\text{Jenny}, x)]$

This amounts to modalizing the statement with respect to the speaker's beliefs about the friends who were at the party (rather than with respect to the set of friends in the actual world). This is meant to leave room for uncertainty on the part of the speaker about friends who may not have been at the party. Accordingly, Viability is satisfied by allowing the set of friends who were at the party and are visited by Jenny to vary across worlds.

Finally, let us also discuss the licensing of FCIs in generic statements such as (30):

- (30) a. Any student works hard.
 b. LF: $[\text{any student}_i [\text{GEN } [t_i] [\text{works hard}]]]$

As before, the FCI takes wide scope, meaning that the LF looks as in (30b). The generic operator arguably involves universal quantification. So the question is why the FCI is licensed here, but not in a statement with a necessity modal such as (25b). The intuition is that the statement in (30a) is not about students in the actual world (i.e. a fixed domain), but rather a statement where the domain of students can vary across worlds. Evidence in favor of this comes from the unacceptability of a generic statement with a partitive, which arguably anchors the interpretation to a fixed domain, e.g., *Any of these students works hard*. This intuition is implemented by assuming that the world variable on *student* is existentially bound. The initial assertion thus looks as in (31a) and the enriched meaning, computed after exhaustification, as in (31b):

- (31) a. $\exists x \in D \exists w' \in \text{Acc}_w [\text{student}_{w'}(x) \wedge \text{GEN}_{w''} \in \text{Acc}_{w'} [\text{student}_{w''}(x) \rightarrow \text{work-hard}_{w''}(x)]]$
 b. $\forall x \in D \forall w' \in \text{Acc}_w [\text{student}_{w'}(x) \rightarrow \text{GEN}_{w''} \in \text{Acc}_{w'} [\text{student}_{w''}(x) \rightarrow \text{work-hard}_{w''}(x)]]$

Once we allow students to vary across worlds, we have models like M4, with worlds like w_2 in which the only student is *a* and worlds like w_3 in which the only student is *b*. The enriched meaning requires that any student in any world is such that they work hard in all accessible worlds. Viability is satisfied in this model, e.g. all the worlds in which *a* is a student are worlds in which *a* works hard, but there are also worlds such as w_3 in which *a* is not a student. This captures the licensing of the FCI in generic contexts.

- (32) M4: **student** = $\{\langle w_1, \{a, b\} \rangle, \langle w_2, \{a\} \rangle, \langle w_3, \{b\} \rangle\}$;
work-hard = $\{\langle w'_1, \{a, b\} \rangle, \langle w'_1, \{a, b\} \rangle, \langle w'_2, \{a\} \rangle, \langle w'_2, \{a\} \rangle, \langle w'_3, \{b\} \rangle, \langle w'_3, \{b\} \rangle\}$

Note that the configuration above, where the world variable on the noun is existentially bound, amounts to having two layers of modality. The same mechanism is at work in sentences where the generic is replaced with an overt modal, e.g. *Any student must work hard* (once again in contrast with the unacceptability of the partitive version *Any of these students must work hard*).

Taking stock, we see that on Dayal's account a statement involving universal quantification over worlds (i.e. generic or necessity modal) works only in cases where both the domain associated with the NP and the one associated with the VP are able to vary. If something blocks this variation, e.g. the partitive in **Any of these students must work hard* or some other indexical element, as in **Any pilot must be flying this plane* (where the presence of 'this plane' anchors the VP to the actual world), Viability is not satisfied and the FCI is not licensed. Among the operators that can provide the plurality of worlds that FCIs require, we also find aspectual and mood markers (see e.g. Quer 2000), as illustrated by the licensing of the Romanian *ori*- FCIs by the imperfective in (33a) or the conditional mood in (33b):

- (33) a. Pe vremea aia, mergeam la orice petrecere.
on time that go.IMPV.1SG to FCI party
'In those days, I would go to any party.'
b. Aş mânca orice desert.
COND.1SG eat FCI dessert
'I would eat any dessert.'

The licensing of FCIs by the imperfective in (33a) is not surprising, given that it is often taken to bring in a habitual/modal operator (see e.g. Quer 2000, Hacquard 2009). Let's turn next to the conditional mood in (33b). Notice that in the absence of the mood marker, with the present indicative, we have a generic-like statement in (34), which receives a parallel interpretation as that provided for (30) in (31b).

- (34) Mănânc orice desert.
eat FCI dessert
'I eat any dessert.'

The contribution of the conditional mood is similar to that commonly attributed to the subjunctive mood in that it affects the set of accessible worlds. Specifically, we follow Schlenker (2005) (see also the discussion in Silk (forthcoming) in connection with the composition of weak necessity modals like *ought*) who takes the indicative to carry a presupposition that the worlds under consideration, say the set of accessible worlds, are only those in the context set, whereas a non-indicative mood carries no such presupposition. The idea is that the conditional mood allows us to consider a different modal base, e.g., in (33) worlds compatible with the speaker's desires.⁹ We represent the contribution of the conditional mood by changing the modal base to C-Acc in the generic-like interpretation of (33b) provided below.

- (35) $\forall x \in D \forall w' \in C\text{-Acc}_w [\text{dessert}_{w'}(x) \rightarrow \forall w'' \in C\text{-Acc}_{w'} [\text{dessert}_{w''}(x) \rightarrow \text{eat}_{w''}(I, x)]]$

We will not discuss here further how Viability is satisfied in other environments licensing

⁹See Quer (2001) for a similar analysis of the subjunctive mood in Catalan and Spanish, as well as Howell (2012) for on the French *conditionnel*.

FCIs, and simply refer the interested reader to Dayal (2013), Szabolcsi (2019), as well as Chierchia (2013) for a different implementation of this constraint (which also relies on the interplay between two modal bases, but unlike the proposal we sketched here makes use of scalar alternatives). Having seen how to derive the universal force of FCIs (via recursive exhaustification) and how to capture their restricted distribution (via the viability requirement), we now turn to the way in which this alternative-based approach captures the behavior of FCIs in unconditionals.

3.3 Deriving the use of FCIs in unconditionals

Recall the basic intuition behind the interpretation of an unconditional as spelled out by Rawlins: an unconditional amounts to the conjunction of as many conditionals as there are individuals in the domain of the FCI. Specifically, a sentence like (36a) has the same interpretation as the conjunction in (36b):

- (36) a. Whoever will come, it will be nice.
 b. If Jenny will come, it will be nice, and if Betty will come, it will be nice, and . . .

The existing approaches to the interpretation of unconditionals differ with respect to the way they derive the relevant conditional propositions and the way they see the connection between the adjunct clause in unconditionals and other *wh*-clauses, e.g. interrogatives and free relative clauses (see Rawlins 2013 for a detailed compositional account, as well as Hirsch 2016, Šimík 2019, Gonzalez and Lohiniva 2020 for recent discussion of the relevant issues).

In this paper we adopt the approach to unconditionals put forward by Szabolcsi (2019), who tailors her analysis of *akár* expressions in Hungarian to mirror the analysis outlined earlier for deriving the universal interpretation of free choice items in modal environments. The gist of her proposal is as follows: an unconditional denotes, at its core, an existential over conditionals (37a) and this existential statement undergoes obligatory recursive exhaustification, delivering the enriched conjunctive interpretation schematized in (37b).

- (37) a. $\llbracket \text{whoever will come, it will be nice} \rrbracket = \exists x \in D [\forall w \in \text{Acc}_w [p_w(x) \rightarrow q_w]]$
 b. $\llbracket \text{whoever will come, it will be nice} \rrbracket^+ = \forall x \in D [\forall w \in \text{Acc}_w [p_w(x) \rightarrow q_w]]$

The trick underlying this proposal is establishing how the existential quantifier, otherwise embedded in the *wh*-clause acting as the antecedent of a conditional, can escape it and take wide scope over the conditional, similarly to the way the FCI outscopes its licensing modal operator. Without wide scope for the existential, the strengthened, conjunctive interpretation would not be derived. One piece of support for assuming that the existential quantifier does indeed take exceptional wide scope is the obligatory fronting of the FCI in unconditionals: *akár* expressions, and similarly *ori(și)* expressions overtly move to a position whereby they can take higher scope than otherwise. Consider (38) versus (39); the (a) examples have the FCI fronted whereas the (b) examples leave it in situ. Note that while for an unconditional only the fronted version is acceptable, for a regular FC structure both versions are acceptable since Romanian word order is relatively free (but changes with respect to the standard SVO and VSO word order trigger modifications of the intonation contour and correlate with various pragmatic and discourse effects, see e.g. Pană Dindelegan 2013: Chapter 13).

- (38) a. Orice aș mânca, voi fi fericită.
 FCI COND.1SG eat FUT.1SG be happy
 ‘Whatever I may eat, I’ll be happy.’

- b. *Aş mânca orice, voi fi fericită.
COND.1SG eat FCI FUT.1SG be happy
- (39) a. Orice aş mânca.
FCI COND.1SG eat
'I would eat anything.'
- b. Aş mânca orice.
COND.1SG eat FCI
'I would eat anything.'

This movement is crucially not available for *any* in English but it is for *wh*-based elements, hence the unacceptability of *any* in unconditionals, which we illustrated in (13), repeated below.

- (40) a. ??Anything you bring to the potluck, the guests will be happy.
b. ??Anyone you invite to the party, it will be fun.

We postpone a discussion of the compositional derivation for the following section, turning now instead to the following question: What is it about unconditionals that licenses FCIs? In order to understand this, we need to determine at what level Viability is checked and what it means for it to be satisfied in such structures. Recall that in typical FC licensing environments, Viability is evaluated at the level of the constituent containing the FCI, which amounts to checking it at the matrix level. Szabolcsi argues that in unconditionals Viability cannot be checked on the conditional statement underlying each alternative, since if it were, Viability would require there to be worlds where *if Betty comes, it will be nice* is true and worlds where it is not, i.e. worlds in which Betty comes and it will not be nice. Intuitively, however, that is not what Viability seems to be after. Instead, the variation seems to be with respect to the antecedent clause alone, thus requiring there to be worlds where Betty comes, and worlds where she doesn't. The enriched meaning simply says that all worlds where Betty comes are such that the consequent *it will be nice* stays true. And similarly for any other alternative in the context, thus yielding the strengthened conjunctive meaning.

The intuition underlying the parallel between the licensing of FCIs in unconditionals and in typical modal environments is that unconditionals are inherently modalized, i.e. they convey ignorance or indifference, even in the absence of an overt modal operator (see e.g. Rawlins 2008, 2013). What we see in unconditionals then is very similar to what we see in generics (see e.g. (30)), namely that the set of individuals associated with the FCI must vary across (epistemically accessible) worlds, a feature that in Dayal's system is captured via covert modality¹⁰. Accordingly, unconditionals are not episodic statements: even unconditional sentences that use an episodic past trigger modal inferences, with either an ignorance flavor, as in the Hungarian sentence in (41a), or an iterative/indifference one, as in the Romanian example in (41b):

- (41) a. Akárki jött be az imént, nem ismertem meg.
AKAR-who came in the just-now not recognized PRT
'Whoever entered a minute ago, I didn't recognize her.'
- b. Orice prieten a venit, Ana s-a bucurat.
FCI friend has come Ana REFL-was pleased
'Whichever friend came, Ana was happy.'

¹⁰Szabolcsi (2019) alludes to the presence of a covert modal in unconditionals, but does not formally implement this idea. Instead, she captures variation by resorting to quantification over world-event pairs, without spelling out the details of the proposal.

One way to formalize this intuition is to say that the adjunct *wh*-clause contains a covert modal, illustrated in the boxed portion below in (42a). The final strengthened interpretation seems to require that for all friends and all worlds in which that friend came, Ana was happy.

- (42) a. $\boxed{\exists x \in D \exists w' \in \text{Acc}_w [\text{friend}_{w'}(x) \wedge \text{came}_{w'}(x)]} \wedge \forall w'' \in \text{Acc}_{w'} [\text{friend}_{w''}(x) \wedge \text{came}_{w''}(x) \rightarrow \text{happy}_{w''}(\text{Ana})]$
 b. $\forall x \in D \forall w' \in \text{Acc}_w [[\text{friend}_{w'}(x) \wedge \text{came}_{w'}(x)] \rightarrow \forall w'' \in \text{Acc}_{w'} [\text{friend}_{w''}(x) \wedge \text{came}_{w''}(x) \rightarrow \text{happy}_{w''}(\text{Ana})]$

Assuming that Viability is checked at the level of the adjunct clause amounts to checking that, for every individual x in the relevant domain D , there are accessible worlds where x is a friend who came and worlds where x is not a friend who came. More concretely, the presupposition in (43) needs to be satisfied.

- (43) **Viability Presupposition for (42)**
 $\forall q \in \text{Alt}(p) [\exists w' \in \text{Acc}_w. q_{w'} \wedge \exists w' \in \text{Acc}_w. \neg q_{w'}]$
 where $\text{Alt}(p) = \{\lambda w. \exists w' \in \text{Acc}_w [\text{friend}_{w'}(x) \wedge \text{came}_{w'}(x)]: x \in D\}$

This condition would not be satisfied in M_2 , but it would be satisfied in M_3 , as for each x in D , there are worlds where x came and worlds where x didn't come.

- (44) a. $M_2: \{\langle w_1, \{a, b, c\} \rangle, \langle w_2, \{a, b, c\} \rangle, \langle w_3, \{a, b, c\} \rangle\}$
 b. $M_3: \{\langle w_1, \{a\} \rangle, \langle w_2, \{b\} \rangle, \langle w_3, \{c\} \rangle\}$

Note the crucial difference between the licensing of the FCI in the adjunct *wh*-clause in an unconditional and its unacceptability in the corresponding episodic sentence **Orice prieten a venit* 'Any friend came'. Intuitively speaking, the difference between the two comes from the fact that the adjunct in an unconditional structure contains a covert modal which provides the variation needed to satisfy Viability, whereas the plain episodic does not.

This briefly illustrates how once we assume Viability is checked at the level of the adjunct *wh*-clause, the licensing of the FCI in unconditionals can be viewed as very similar to its licensing in typical modal environments, thus capturing the frequent use of FCIs in unconditionals. The compositional details will be discussed more thoroughly once we take into account the contribution of the additive particle *și* in the licensing of the ADD-FCIs in unconditionals.

4 A compositional account of additive FCIs

In the previous section we showed how the universal interpretation of *oricine* comes about in modalized sentences as well as in unconditional sentences in a uniform manner, namely by assuming an underlying existential interpretation for the quantifier and having its host proposition undergo obligatory recursive exhaustification. The goal of this section is to understand how ADD-FCIs are interpreted in light of what we know about regular FCIs. Recall from Section 1 that ADD-FCIs differ from regular FCIs both with respect to their interpretation (emphatic meaning) and their distribution (restriction to unconditionals using the conditional mood). We argue that these differences can be derived from the meaning contribution of the additive particle *și*.

4.1 The contribution of *și*

In this subsection we discuss the contribution of the particle *și* in ADD-FCIs and the way it relates to its uses as a stand-alone particle. We propose that *și* makes the same contribution, both as an infix and as a stand-alone particle. Recall that *și* can function as a conjunctive particle (45a), an additive particle (45b) and a scalar particle (45c).

- (45) a. Ana a mâncat (*și*) salată *și* supă.
 Ana has eaten ADD salad ADD soup
 ‘Ana ate (both) salad and soup.’
 b. *Și* Ana a mâncat salată.
 ADD Ana has eaten salad
 ‘Ana ate salad too.’
 c. *Și* Ana a venit la petrecere.
 ADD Ana has come to party
 ‘Even Ana came to the party.’

We argue that the baseline interpretation of the particle *și* is that of an additive, rather than of a scalar particle; the conjunctive interpretation is essentially the same as the additive while the scalar interpretation is the result of a further possibly covert scalar operator. The contribution of the additive particle *și* in (45b) is that someone else ate. Following Nicolae (2020) and building on Mitrović and Sauerland (2016) and Szabolcsi (2017), we propose that this inference can be derived via exhaustification of the assertion with respect to its pre-exhaustified variant, as in (46a); the alternative is derived by replacing the focus associate of *și*, namely *Ana*, with a relevant alternative. The result of exhaustification is derived in (46b), namely that the prejacent and a relevant alternative are both true.

- (46) Let $p = \lambda w. \text{ate}_w(\text{Ana})$; $q = \lambda w. \text{ate}_w(\text{Betty})$.
 a. $\llbracket \text{și Ana a mâncat} \rrbracket = p$
 b. $\llbracket \text{și Ana a mâncat} \rrbracket^+ = \llbracket \text{EXH} \rrbracket(\llbracket \text{și Ana a mâncat} \rrbracket)$
 c. $\text{Alt}(\text{și Ana a mâncat}) = \{p, \text{EXH } p\} = \{p, p \wedge \neg q\}$
 d. $\llbracket \text{și Ana a mâncat} \rrbracket^+ = \llbracket \text{EXH} \rrbracket(\llbracket \text{și Ana a mâncat} \rrbracket)$
 $= p \wedge \neg (p \wedge \neg q)$
 $= p \wedge q$

Now what happens when *și* functions as an infix, i.e. what is its meaning contribution in the ADD-FCI in the unconditional in (47a) and how does this sentence differ from (47b), with the regular FCI?

- (47) a. Orișicine ar veni, va fi frumos.
 ADD-FCI COND.3SG come, will be nice
 ‘Whoever may come, it will be nice.’
 b. Oricine ar veni, va fi frumos.
 FCI COND.3SG come, will be nice
 ‘Whoever may come, it will be nice.’

When *și* functions as an infix, we propose that its focus associate is the FC existential quanti-

fier.¹¹ The exhaustification happens with respect to the pre-exhaustified prejacent, the alternatives for which are larger domains such as $D'=\{a,b,c,d,e\}$, as in (48c); the distinct alternative is that there is something only in D. Exhaustification with respect to a larger domain, as in (48d), will deliver the intuitively correct meaning that ADD-FCIs are, at their core, existential quantifiers over domains larger than those of the corresponding FCI *oricine*; there is something in D and it's false that there is only something in D, which can only be true if there is something in a larger domain D' .

- (48) Let $p(x) = \lambda w. \exists w' \in \text{Acc}_w \text{ came}_{w'}(x)$, and $D \subseteq D'$
- a. $\llbracket \text{oricine ar veni} \rrbracket = \llbracket \text{oricine ar veni} \rrbracket = \exists x \in D [p(x)]$
 - b. $\llbracket \text{oricine ar veni} \rrbracket^+ = \llbracket \text{EXH} \rrbracket(\llbracket \text{oricine ar veni} \rrbracket)$
 - c. $\text{Alt}(\text{oricine ar veni}) = \{\exists x \in D [p(x)], \text{EXH}[\exists x \in D [p(x)]]\}$
 $= \{\exists x \in D [p(x)], \exists x \in D [p(x)] \wedge \neg \exists x \in D' [p(x)]\}$
 - d. $\llbracket \text{oricine ar veni} \rrbracket^+ = \exists x \in D [p(x)] \wedge \neg [\exists x \in D [p(x)] \wedge \neg \exists x \in D' [p(x)]]$
 $= \exists x \in D [p(x)] \wedge \exists x \in D' [p(x)]$

The only way to increase the domain of quantification of an existential quantifier is by including marginal entities, which by their very nature will correspond to entities not thought to be relevant or likely. This straightforwardly delivers the fact that the use of ADD-FCIs is associated with an emphatic effect, akin to the scalar presupposition accompanying scalar particles like *even*. Note that another option would be to have the alternatives be distinct domains, e.g. have $D'=\{d,e\}$. Ultimately this would deliver the same interpretation, namely an existential over a larger domain $D''=D \cup D'$.

4.2 The mood restriction

Recall the contrast from the introduction, repeated below in (49), which shows that the conditional mood is necessary to license ADD-FCIs.

- (49) a. *Oricine / *oricine va suna azi, sunt ocupată.*
FCI ADD-FCI FUT.3SG call today am busy
‘Whoever is going to call today, I’m busy.’
- b. *Oricine / Oricine ar suna azi, sunt ocupată.*
FCI ADD-FCI COND.3SG call today am busy
‘Whoever may call today, I’m busy.’

Why do ADD-FCIs require the conditional mood? The source of the problem in (49a) seems to be the following: the additive *și* forces us to consider remote or unlikely alternatives. For ADD-FCIs to be licensed, like for regular FCIs, Viability needs to be satisfied, thus ensuring the existence of worlds where for each alternative there are worlds where it is true and worlds where it is false, which we repeat below:

- (50) **Viability presupposition for (49a)**
 $\forall q \in \text{Alt}(p) [\exists w' \in \text{Acc}_w. q_{w'} \wedge \exists w' \in \text{Acc}_w. \neg q_{w'}]$
where $\text{Alt}(p) = \{\lambda w. \exists w' \in \text{Acc}_w \text{ call}_{w'}(x): x \in D\}$

¹¹We speculate that **și-cine* does not exist because infix *și* needs to combine with a quantifier and *wh*-words are set restrictors.

The intuition we want to pursue is that with the indicative mood there will be no worlds in which the unlikely/remote alternatives, provided in (51b), are true (as indicated by the fact that here we are talking about D' rather than D), meaning that Viability would not be satisfied in a model like M_5 (although it would be satisfied with respect to the initial domain D , cf. (44)). In contrast, the conditional mood allows us to access a set containing even unlikely worlds (labeled as C-Acc below), thereby allowing the alternatives associated with those individuals activated by *și* to be true in some worlds and false in others, as in (51a) and the model M_6 below. Simply put, the conditional mood provides the variation needed to satisfy Viability for the larger domain D' .

(51) **Viability Presupposition for (49b)**

- a. $\forall q \in \text{Alt}(p) [\exists w' \in \text{C-Acc}_w. q_{w'} \wedge \exists w' \in \text{C-Acc}_w. \neg q_{w'}]$
- b. $\text{Alt}(p) = \{\lambda w. \exists w' \in \text{Acc}_w \text{ call}_{w'}(x): x \in D'\}$

(52) $\text{Acc} = \{w_1, w_2, w_3\}; D_{w'} = \{a, b, c\}, \text{C-Acc} = \{w_1, w_2, w_3, w_4, w_5\}; D'_{w'} = \{a, b, c, d\}$

- a. $M_5: \{\langle w_1, \{a, d\} \rangle, \langle w_2, \{b, d\} \rangle, \langle w_3, \{c, d\} \rangle\}$
- b. $M_6: \{\langle w_1, \{a, b\} \rangle, \langle w_2, \{b\} \rangle, \langle w_3, \{c\} \rangle, \langle w_4, \{d\} \rangle, \langle w_5, \{b, d\} \rangle\}$

If we think of the contribution of *și* as widening the domain of individuals, then its use has to be accompanied by the corresponding widening of the domain of possible worlds. If anything interferes with the widening of either domain, ADD-FCIs will not be licensed. We have seen this to be the case in unconditionals using the indicative mood (49a), whose use restricts the set of worlds to those in the context set. A similar clash obtains if ADD-FCIs are used in contexts where the domain of individuals is fixed, as illustrated by the unacceptability of partitive ADD-FCIs in (53) (in contexts where plain FCIs are felicitous):

- (53) a. Oricare dintre colegii mei ar suna azi, sunt ocupată.
FCI among colleagues.DEF my COND.3SG call today am busy
'Whichever of my colleagues may call today, I'm busy.'
- b. *Orișicare dintre colegii mei ar suna azi, sunt ocupată.
ADD-FCI among colleagues.DEF my COND.3SG call today am busy
'Whichever of my colleagues may call today, I'm busy.'

Now that we have settled on the semantics of *și* as an infix and the meaning component of the conditional mood that renders the use of ADD-FCIs felicitous, we will present a way to formalize these intuitions and derive the licensing of ADD-FCIs in a compositional manner.

4.3 Putting all the pieces together

In this section we turn to the step-by-step derivation of unconditional structures containing both plain and additive FCIs. Recall that we assume, with Szabolcsi, that unconditionals denote disjunctions of conditionals which undergo recursive exhaustification to deliver the conjunction of conditionals interpretation associated with unconditionals. In order to derive the initial disjunction, the FCI, an existential quantifier at its core, needs to escape the antecedent clause so as to scope over the conditional.

There are different proposals to derive this exceptional wide scope. Szabolcsi herself follows Kratzer and Shimoyama (2002) and takes quantificational particles like the disjunctive particles in Hungarian *akár* or Romanian *ori* to signal a silent higher existential quantifier in the structure. At the level at which the disjunctive element enters the computation a set of propositions is created for each element in the domain of the quantificational particle. This

set combines pointwise with the rest of the clause until it hits the existential quantifier. The quantifier takes the set, in this case a set of conditionals, and returns the proposition denoting the disjunction over every member in that set. We provide the step-by-step derivation for an unconditional like *Oricine ar veni, va fi frumos* ‘Whoever may come, it will be nice’ below.

1. The adjunct clause *oricine ar veni* ‘whoever may come’ denotes a set of propositions, as many propositions as there are individuals in the domain of the existential quantifier, (54a); this set undergoes existential lift (\exists -lift) into an existential quantifier over propositions, (54b):¹²

$$(54) \quad \begin{array}{ll} \text{a.} & \llbracket \text{oricine ar veni} \rrbracket = \lambda p. \exists x \in D [p = \lambda w. \exists w' \in \text{Acc}_w \text{ came}_{w'}(x)] \\ \text{b.} & \llbracket \text{oricine ar veni} \rrbracket = \lambda P. \exists x \in D [P(\lambda w. \exists w' \in \text{Acc}_w \text{ came}_{w'}(x))] \end{array}$$

2. The consequent clause *va fi frumos* ‘it will be nice’ is lifted into an object that can act as the consequent of a conditional looking for an antecedent:

$$(55) \quad \llbracket \text{va fi frumos} \rrbracket = \lambda r. \forall w' \in \text{Acc}_w [r_{w'} \rightarrow \text{be nice}_{w'}]$$

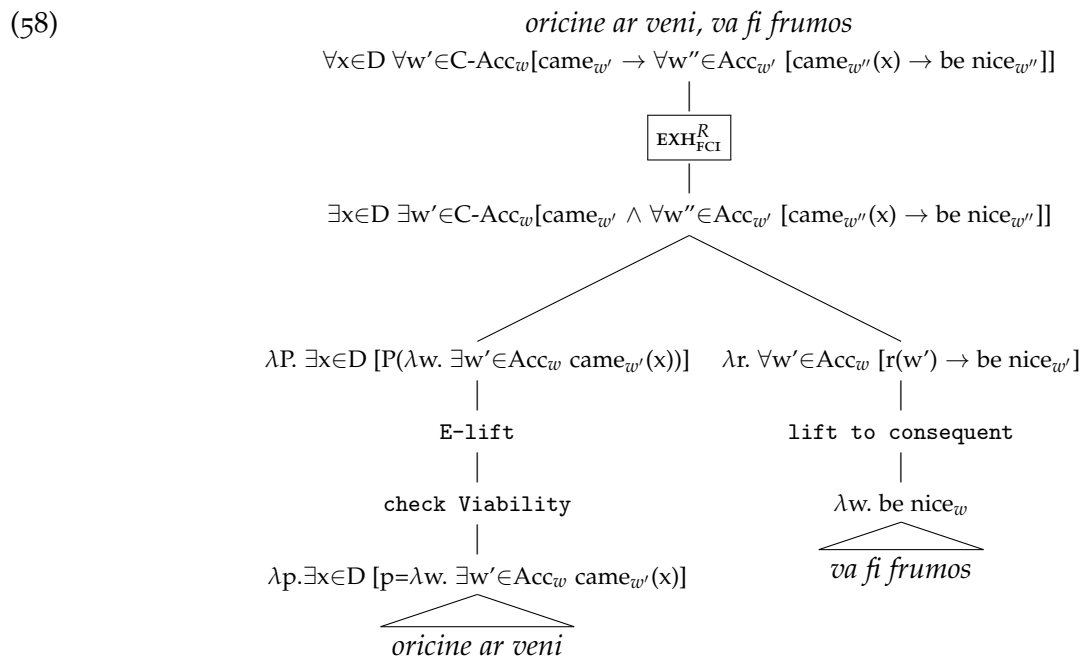
3. Functional application delivers an existential over conditionals.

$$(56) \quad \begin{array}{l} \llbracket \text{oricine ar veni} \rrbracket (\llbracket \text{va fi frumos} \rrbracket) \\ = \exists x \in D \exists w' \in \text{Acc}_w [\text{came}_{w'}(x) \wedge \forall w'' \in \text{Acc}_{w'} [\text{came}_{w''}(x) \rightarrow \text{be nice}_{w''}]] \end{array}$$

4. This disjunction undergoes recursive exhaustification delivering a conjunction:

$$(57) \quad \llbracket (56) \rrbracket^+ = \forall x \in D \forall w' \in \text{Acc}_w [\text{came}_{w'}(x) \rightarrow \forall w'' \in \text{Acc}_{w'} [\text{came}_{w''}(x) \rightarrow \text{be nice}_{w''}]]$$

For ease of presentation, we also illustrate the steps above visually (the steps follow those provided by Szabolcsi in her tree in ex. (6/23)).



¹²Since we are discussing an unconditional bearing the conditional mood, the set of worlds under discussion could in fact be C-Acc. However, since this switch from Acc to C-Acc is not necessary to satisfy Viability, as it would be with the additive particle, we continue to use Acc in plain FCI examples.

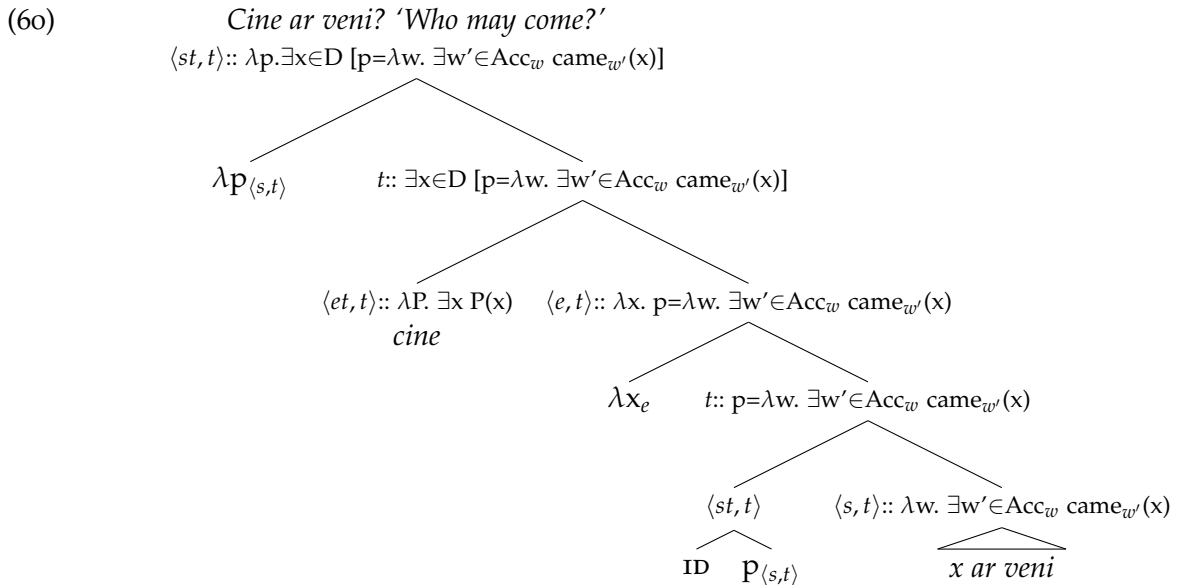
Turning now to the **licensing of the FCI**, recall that Szabolcsi proposes that Viability is checked on the bare FC clause, namely the adjunct clause. More specifically, Viability requires each proposition in (54a) to be true in some world and false in some other world. She does not spell out what the domain of quantification for these worlds is however, but we assume it is anchored to the set of accessible worlds, the context set.

In the case of the ADD-FCI, in a sentence like *Orişicine ar veni, va fi frumos*, we need to identify **where the exhaustification associated with the additive particle occurs**. Recall that the exhaustification operator is defined to act on propositions. Looking at the derivation put forward by Szabolcsi, we note that the only propositional node (c-commanding the ADD-FCI) is the topmost node, where the exhaustification operator associated with the FCI adjoins. This leads us to the following conclusion: the exhaustification called for by the additive particle can only occur at the matrix level. This means that at the point where Viability is checked, namely the adjunct clause, the set of propositions over which Viability is checked will be the same with or without *şi*. If we maintain that Viability must be checked at the adjunct level, Viability will then be blind to the contribution made by *şi*. We are thus left with a puzzle as to how to make the contribution of *şi* (which in turn we take to be responsible for the conditional mood requirement) visible to Viability.

The solution to this puzzle rests on how the set of propositions at the core of the meaning of the *wh*-adjunct phrase is derived. Capitalizing on the observation that *wh*-adjuncts in unconditionals and interrogatives have a common core, we propose that the set of propositions is derived similarly as in questions. Specifically, we will adopt Fox's (2012) indirect approach to deriving sets of propositions (see also von Stechow 1996, Sauerland 1998). In this method, the interrogative complementizer, *ID*, first composes with a propositional variable, abstracted over at the root node, and then with the question nucleus, to derive a type *t* object. This method makes it possible for a quantifier over individuals, namely the *wh*-phrase, to take scope above *ID*. The role of *ID*, provided below in (59), is thus to form a set of propositions, delivering the interpretation of the question nucleus.

$$(59) \quad \llbracket ID \rrbracket = \lambda p_{\langle s,t \rangle} \cdot \lambda q_{\langle s,t \rangle} \cdot p = q$$

In (60) we provide the step by step indirect method for deriving the core interpretation of a question, namely a set of propositions.



The next step in the derivation is what distinguishes interrogative constructions from exceptional wide scope existential constructions, which involve a FC particle, such as the disjunction *ori*. This set of propositions is turned into a scope-taker (i.e. an existential quantifier) by merging it with an \exists head, as in (61) (Charlow, 2019, Demirok, 2019).

$$(61) \quad \llbracket \exists \rrbracket = \lambda P_{\langle st,t \rangle} \cdot \lambda Q_{\langle st,t \rangle} \cdot \exists p [P(p) \wedge Q(p)]$$

Applied to the set obtained in (60b), we derive the quantifier in (62) as the denotation of the *wh*-adjunct:

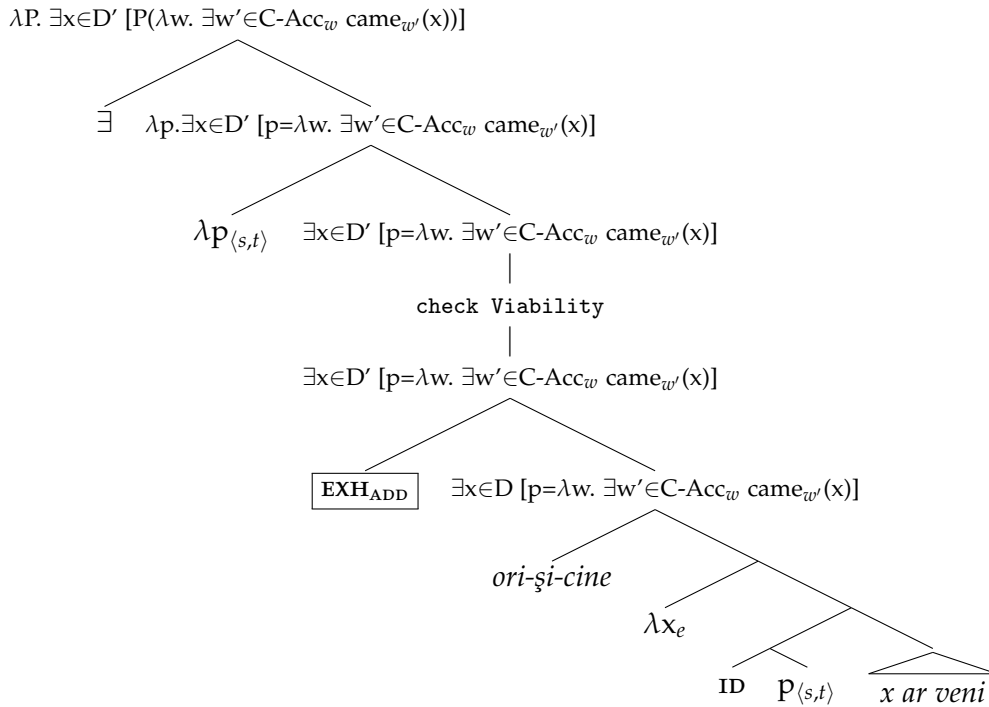
$$(62) \quad \llbracket \text{oricine ar veni} \rrbracket = \lambda P. \exists p [\exists x \in D [p = \lambda w. \exists w' \in \text{Acc}_w \text{ came}_{w'}(x)] \wedge P(p)]$$

This is in fact equivalent to what Szabolcsi derives via existential lift, repeated in (63). In other words, the steps above essentially unpacked the first two steps in the derivation provided by Szabolcsi.

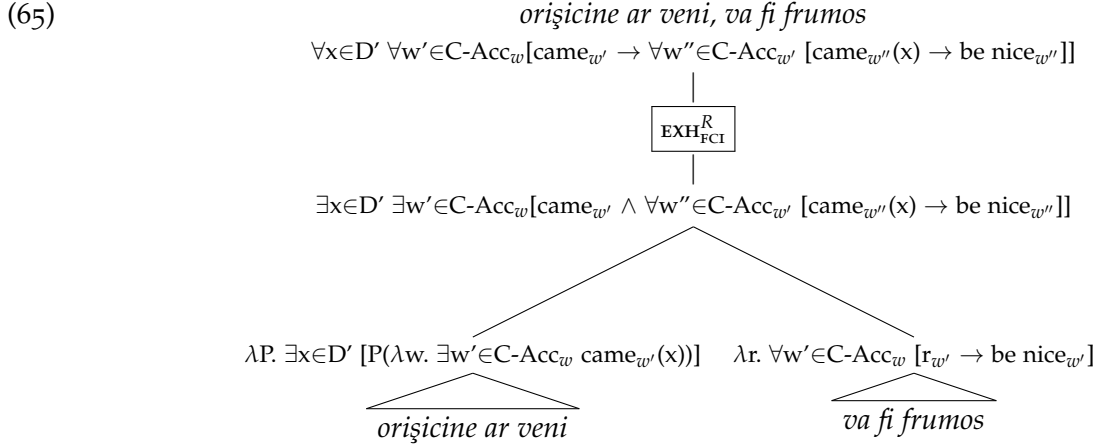
$$(63) \quad \llbracket \text{oricine ar veni} \rrbracket = \lambda P. \exists x \in D [P(\lambda w. \exists w' \in \text{Acc}_w \text{ came}_{w'}(x))]$$

We are now in a position to return to the question posed earlier in this section, namely **where the exhaustification associated with the additive particle occurs**. Note that we now have two possible scope positions where EXH can adjoin. The relevant position for us is above the FCI. We indicate this exhaustifier with the subscript *ADD*, to indicate that it associates with the additive particle. Recall that the contribution of this operator is to increase the domain of the existential, from *D* to a larger domain *D'*. Since Viability is checked at the level of the adjunct clause, we argue it happens right after the exhaustifier has applied. For this reason, the only way to satisfy Viability is by considering the larger C-Acc rather than Acc, as indicated by the conditional mood.

$$(64) \quad \llbracket \text{orişicine ar veni} \rrbracket^+ = \lambda P. \exists x \in D' [P(\lambda w. \exists w' \in \text{C-Acc}_w \text{ came}_{w'}(x))]$$



Putting everything together, we derive the correct final interpretation.



5 Summary and open issues

Taking stock, in this paper we brought to light a new FC paradigm, namely ADD-FCIs. They display a previously unobserved internal composition (i.e. DISJ+ADD+WH) and are restricted to unconditionals using the conditional mood. We provided a compositional account of their meaning, couched in an alternatives-and-exhaustification framework, and we attributed the more restricted distribution to a requirement brought in by the additive particle *şi*, which leads to the consideration of a domain which includes marginal entities. We argued that this obligatory emphatic meaning in turn explains the mood requirement, given that the conditional mood lets us consider remote worlds, which is necessary in order for Viability to be satisfied and thus for the ADD-FCI to be licensed.

Going forward, there are a number of questions and open issues. An obvious question is what about sentences like (66), where the conditional mood is present, but the ADD-FCI is outside of an unconditional structure?

- (66) %Aş vorbi cu orişicine la telefon acum.
 COND.1SG talk with ADD-FCI on phone now
 ‘I would talk with anyone on the phone right now.’

Our analysis predicts these to be acceptable. As mentioned in Section 1, there is speaker variation with respect to the acceptability of ADD-FCIs in these contexts, but the extent of this variation is still a matter of empirical investigation. However, it is important to note that even for speakers who accept (66), the unconditional variant is a better licenser. No such contrast can be observed for regular FCIs. The question then is what it is about unconditionals that makes them such hospitable environments for ADD-FCIs.

We do not have an answer to this question at this point, but this is clearly a broader question about the semantics of unconditionals, which goes beyond ADD-FCIs. More generally, there is growing cross-linguistic evidence that unconditionals act as licensors of various otherwise ruled out configurations, a tendency which emphasizes the need for a better understanding of the properties of unconditionals. In addition to ADD-FCIs, other examples discussed in the literature include indeterminates in Japanese, which normally need a particle like *-ka/-mo* to acquire a quantificational meaning, but can occur bare in unconditionals, as shown in (67) (see Hiraiwa and Nakanishi 2020 for details).

- (67) Dare-ga ko-yooga(-*mo/*ka), Taro-wa yorokob-u daroo.
 who-NOM come-SUBJ-MO/KA Taro-TOP please-PRES will
 'Whoever will come, Taro will be pleased.'

The same is true of Spanish doubling structures, like those in (68), which do not seem to be allowed elsewhere in the language besides unconditionals (more recently analyzed in Šimík 2019).

- (68) Venga quien venga, estaré contento.
 come.SUBJ.3SG who come.SUBJ.3SG be.FUT.1SG happy
 'Whoever comes, I'll be happy.'

These constructions, like ADD-FCIs, involve alternative-triggering existentials. In order to explain the mechanisms underlying the licensing of the examples in (67)-(68), we need to determine how alternatives get introduced and how they combine in unconditionals, versus other related structures, e.g. conditionals, questions or free relatives. We hope that a closer cross-linguistic investigation of the behavior of free choice elements in unconditionals can further our understanding of these issues.

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