Additive free choice items in unconditionals

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Data of interest

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Novel free choice paradigm in Romanian (ADD–FCI):

(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.'

This FCI has a previously unattested internal composition:

- ADD-FCI: disjunction *ori* + additive particle *şi* + wh-word *cine/cum/*. . . .

This FCI has a puzzling restricted distribution:

- ADD-FCI can only occur in unconditional constructions in the conditional mood.

Internal composition of ADD-FCIs

The first element entering the composition of ADD-FCIs is the disjunctive particle *ori*:

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

The second element entering the composition of ADD-FCIs is the particle *și*:

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

Anticipating our analysis of ADD-FCIs, we will label *și* as additive.

When the disjunctive particle *ori* combines with a *wh*-word, the result is a regular universal FCI (e.g., Farkas 2013, Caponigro and Fălăuş 2018):

(4) a. Oricine poate veni la petrecere.
       FCI   can   come to party
       'Anyone can come to the party.'

   b. Alege   orice carte îți   place!
      pick.IMP.2SG FCI   book you.DAT like
      'Pick any book you like.'

The particle *şi* cannot, on its own, combine with a *wh*-word, **şicine*.

ADD-FCIs are a morphologically complex version of the regular FCIs

wh-word	FCIs (DISJ+WH)	ADD-FCIs (DISJ+ADD+WH)
cine 'who'	*oricine*	*orişicine*
care 'which'	*oricare*	*orişicare*
ce 'what'	*orice*	*orişice*
când 'when'	*oricând*	*orişicând*
cum 'how'	*oricum*	*orişicum*
cât 'how much'	*oricât*	*orişicât*
unde 'where'	*oriunde*	*orişiunde*
de ce 'why'	✗	✗

The interpretation and distribution of ADD-FCIs

Both FCIs and ADD-FCIs can occur in unconditionals:

(5) Oricine/ Orişicine ar   suna azi,   sunt ocupată.
     FCI   ADD-FCI COND.3sg call today   am   busy
     'Whoever may call today, I'm busy.'

There is a meaning difference:

- ADD-FCIs have an emphatic effect, whereby even unlikely cases should be considered.

There are also distributional differences:

- ADD-FCIs are ruled out from typical free choice environments:

  (6) Poţi   alege orice/ *orişice îţi   place!
       can.2SG choose FCI   ADD-FCI you.DAT like
       'You can choose anything you like.'

- ADD-FCIs require the unconditional mood:

  (7) Oricine/ *orişicine va   suna azi, sunt ocupată.
       FCI   ADD-FCI will.3SG call today am   busy
       'Whoever will call today, I'm busy.'

Relevance of ADD-FCIs

Meaning contribution of particles across quantificational and polarity-sensitive paradigms (e.g., Haspelmath 1997, Slade 2011, Szabolcsi et al. 2014, Mitrović forthcoming)

FCIs cross-linguistically:

- wh-word/indefinite + focus-sensitive particle:
  Hindi *ek bhii*, Malayalam *aarum*, Hungarian *akarki*
- wh-word/indefinite + disjunctive particle:
  Basque *edonor*, Romanian *oricine*

ADD-FCIs instantiate a previously unattested pattern:

- wh-word/indefinite + disjunctive particle + focus-sensitive particle:
  Romanian *orişicine*

Relevance of ADD-FCIs

Unification of FC and unconditionals (e.g., Szabolcsi 2019, Gonzalez and Lohiniva 2020)

- There are FC elements that occur in both unconditionals and typical FC environments:

  (8) a.   Whoever comes to the party, it will be fun.
       b.   You can invite whoever you want to the party.

- As well as FCIs like *any* that are not used in unconditionals:

  (9) a.   You may bring anything you like to the potluck.
       b. ??Anything you bring to the potluck, the guests will be happy.

- Romanian ADD-FCIs instantiate the opposite pattern: FCIs that can only be used in unconditionals:

	FC environments	Unconditionals
oricine (Rom), akárki (Hun), whoever etc.	✓	✓
anything	✓	✗
orișicine (Rom)	✗	✓

We adopt an alternative-based approach to FCIs as existentials with obligatorily active alternatives that captures:

- the universal-like interpretation of FCIs
- the licensing of FCIs in modal environments and unconditionals

We propose that the contribution of infix *și* in ADD-FCIs is the same as that of the stand-alone additive particle and derive:

- the emphatic interpretation
- the conditional mood requirement

A compositional account of FCIs

Scalar implicatures are derived in the grammar (Chierchia, Fox, and Spector, 2012)

(10)   Scalar implicature
         Jenny invited Ana or Betty.
         → Jenny invited exactly one of Ana and Betty.

These inferences are derived via a covert exhaustivity operator (EXH).

- EXH negates stronger alternatives.
- the relevant alternative is the conjunctive alternative.

(11) $\left\{ \begin{array}{ll} \text{Jenny invited Ana or Betty} & \text{A}\lor\text{B} \\ \text{Jenny invited Ana and Betty} & \text{A}\land\text{B} \end{array} \right\}$

(12) $[\![\text{EXH}[\text{A}\lor\text{B}]]\!] = [\![\text{A}\lor\text{B}]\!] \land \neg [\![\text{A}\land\text{B}]\!]$

(13)   Free Choice implicature
     Jenny can invite Ana or Betty.
     → Jenny can invite Ana and she can invite Betty.

FC inferences, like SIs, are derived in the grammar (Fox, 2007).

- the relevant alternatives are pre-exhaustified domain alternatives.

(14)
$$\left\{\begin{array}{ll} \text{Jenny can invite Ana or Betty} & \Diamond[A \lor B] \\ \text{Jenny can invite only Ana} & \text{EXH}[\Diamond A] = \Diamond A \land \neg \Diamond B \\ \text{Jenny can invite only Betty} & \text{EXH}[\Diamond B] = \Diamond B \land \neg \Diamond A \end{array}\right\}$$

(15) $[\![\text{EXH EXH}[\Diamond[A \lor B]]]\!] = [\![\Diamond[A \lor B]]\!] \land \neg [\![\text{EXH}[\Diamond A]]\!] \land \neg [\![\text{EXH}[\Diamond B]]\!]$

                   $= [\![\Diamond A]\!] \lor [\![\Diamond B]\!] \land \neg [\![\text{EXH}[\Diamond A]]\!] \land \neg [\![\text{EXH}[\Diamond B]]\!]$

                   $= [\![\Diamond A]\!] \land [\![\Diamond B]\!]$

Deriving the universal interpretation for FCIs

(16)   Obligatory universal interpretation for FCIs
       Jenny can invite any friend.
       → Jenny can invite Ana and she can invite Betty.

The parallel with disjunctions is straightforward given that existential quantifiers amount to disjunctions over sub-domains, (17).

(17) $[\![$Jenny can visit any friend$]\!] = \exists x \in D \ [friend(x) \wedge \Diamond visit(Jenny, x)]$
       $[\![$Jenny can visit any friend$]\!] = [\![\Diamond A]\!] \vee [\![\Diamond B]\!]$

The alternatives are existential quantifiers over smaller domains, (19).

(18) $Alt(\text{Jenny can visit any friend}) = \exists x \in D' \subseteq D \ [friend(x) \wedge \Diamond visit(Jenny, x)]$

The strengthened FC interpretation is a conjunction of as many propositions as there are individuals in the domain:

(19) $[\![$Jenny can visit any friend$]\!]^+ = \forall x \in D \ [friend(x) \rightarrow \Diamond visit(Jenny, x)]$
       $[\![$Jenny can visit any friend$]\!] = [\![\Diamond A]\!] \wedge [\![\Diamond B]\!]$

Deriving the restricted distribution

Typical environments include possibility modals, generic statements and imperatives, but not episodic or necessity statements unless they are subtrigged (Legrand 1975).

(20) a. Jenny can visit any friend.
   b. Ana likes any dessert.
   c. Invite anyone!
   d. Jenny visited any friend *(that came to the party).
   e. Jenny must visit any friend *(that came to the party).

The viability constraint (VC)	(Dayal, 2009, 2013, Szabolcsi, 2019)
A FCI is felicitous if each alternative is true in some world and false in some world.	

In $\diamond$ sentences, the necessary variation can easily be accomplished. → VC is satisfied.

In episodic sentences there is only one accessible world. → VC is violated.

In $\square$ sentences, the FC implicature and the necessary variation cannot both be satisfied since they are incompatible with each other. → VC is violated.

Unconditionals

The interpretation of unconditionals

The interpretation of an unconditional amounts to a conjunction over conditionals.

(21) a. Whoever will come, it will be nice.
   b. If Ana will come, it will be nice and if Betty will come it will be nice, . . .

There are two main approaches, both assume that you create a set of conditionals, but they differ in how you arrive at the conjunction over these conditionals.

Rawlins (2008) derives (21-b) by positing:

- a high conjunctive operator takes the intersection of these conditionals.

Szabolcsi (2019) draws a parallel between unconditionals and typical FC constructions:

- an unconditional denotes existential quantification over a set of conditionals.
- obligatory recursive EXH delivers the strengthened conjunctive interpretation.

(22)   Whoever will come, it will be nice.

In unconditionals the Viability Constraint is checked on the adjunct *wh*-clause alone, rather than on the conditional statement underlying each alternative (Szabolcsi, 2019):

- for every alternative $x \in D$, there need to be accessible worlds where x will come and worlds where x will not come.

Question: what provides the relevant set of worlds?

Tentative answer: there is a covert epistemic modal operator in the adjunct *wh*-clause.

- Support for this comes from the fact that apparent "episodic" unconditionals have a generic/habitual flavor.
- This is similar to what people assume for subtrigging configurations (e.g., Dayal 2013, Chierchia 2013, Gonzalez and Lohiniva 2020).

A compositional account of ADD-FCIs

The semantics of additive 'şi'

We take the basic interpretation of the particle *şi* to be that of an additive.

(23)　　Şi　Ana a　mâncat.
　　　　ADD Ana has eaten
　　　　'Ana ate too.'

> **The intuition**
>
> The use of *şi* signals that the exhaustified alternative, e.g. *only p*, is not true.
>
> Conjoining *p* with *not only p* derives the conjunctive interpretation.

The particle *şi* is itself vacuous but signals obligatory exhaustification.
(Bade 2015, Mitrović and Sauerland 2016, Szabolcsi 2017, Nicolae 2020)

- The exhaustification is with respect to the pre-exhaustified alternative, which is derived by replacing the focus associate *Ana* with other individuals, (24-b).

(24) a.　$[\![$şi Ana ate$]\!] = p$　　　　where $p = \lambda w.$ Ana ate in w; $q = \lambda w.$ Betty ate in w.

　　 b.　$\mathrm{Alt}($şi Ana ate$) = \{p, \mathrm{EXH}\ p\} = \{p, p \wedge \neg q\}$　　　　　　$\{p, \text{only } p\}$

　　 c.　$[\![$şi Ana ate$]\!]^{+} = [\![\mathrm{EXH}]\!]([\![$şi Ana ate$]\!])$
　　　　　$[\![$şi Ana ate$]\!] = p \wedge \neg(p \wedge \neg q)$　　　　　　p and not only p
　　　　　$[\![$şi Ana ate$]\!] = p \wedge q$

(25)   Orişicine ar veni, va fi frumos.
       'Whoever may come, it will be nice.'

Claim

şi makes the same contribution, both as an infix and as a stand-alone particle.

The focus associate is the domain associated with the existential quantifier.

The relevant alternatives are other non-overlapping domains D'.

The result is existential quantification over a larger domain, (26).

(26) $[\![\text{orişicine may come}]\!]^{+} = [\![\text{EXH}]\!](\exists x \in D\ [p(x)])$
       $[\![\text{orişicine may come}]\!] = \exists x \in D\ [p(x)] \wedge \neg[\exists x \in D\ [p(x)] \wedge \neg \exists x \in D'\ [p(x)]]$
       $[\![\text{orişicine may come}]\!] = \exists x \in D\ [p(x)] \wedge \exists x \in D'\ [p(x)]$

The source of the emphatic effect

Comes for free since we need to make reference to a domain of individuals distinct from the one made available by the plain existential quantifier.

To increase the domain of quantification we need to include marginal entities.

Putting everything together

The *wh*-clause composes with the consequent, resulting in an existential quantifier over conditionals:

(27) $[\![\text{orişicine may come, it will be nice}]\!] = \exists x \in D'[\forall w \ [p_w(x) \rightarrow q_w]]$

At the matrix level, the (recursive) exhaustification associated with *ori* occurs, delivering a universal quantifier over conditionals:

(28) $[\![\text{orişicine may come, it will be nice}]\!]^+ = \forall x \in D'[\forall w \ [p_w(x) \rightarrow q_w]]$

Note that the difference between *oricine* and *orişicine* is solely in the size of the domain of individuals ($D \subset D'$).

(29) $[\![\text{oricine may come, it will be nice}]\!]^+ \ = \forall x \in D[\forall w \ [p_w(x) \rightarrow q_w]]$

Recall the contrast from the introduction, repeated below in (30), which shows that the conditional mood is necessary to license ADD-FCIs.

(30) a. Orişicine ar suna azi, sunt ocupată.
      ADD-FCI COND.3sg call today am busy
      'Whoever may call today, I'm busy.'

   b. *Orişicine va suna azi, sunt ocupată.
      ADD-FCI will.3SG call today am busy
      'Whoever will call today, I'm busy.'

Viability Constraint: each alternative is true in some worlds and false in others.

The source of the problem

The additive *şi* forces us to consider remote alternatives, for which the Viability Constraint will not be satisfied with the indicative mood since there will be no worlds in which they are true.

The intuition

The conditional mood increases the set of accessible worlds to include even unlikely worlds, thereby allowing those individuals activated by *și* to be satisfied.

Crucially, we assume that the VC is checked after the contribution of *și* is taken into account, i.e., with respect to the larger set of entities.

A possible implementation:

- The indicative mood carries a presupposition that the worlds under consideration are only those in the context set (CS), whereas a non-indicative mood carries no such presupposition (Schlenker, 2005).
- The presence of *și* makes the use of the indicative mood in the unconditional construction lead to a presupposition failure.

Recap and open issues

Recap

We brought to light a new FC paradigm:

- wh-word + disjunctive particle + additive particle:
  Romanian *orișicine*

We showed how to derive its emphatic meaning compositionally.

- the infix *și* forces one to consider marginal entities.

We showed why its distribution is reliant on the conditional mood.

- the conditional mood lets us consider remote worlds, which is necessary in order for the VC to be satisfied (and thus the ADD-FCI to be licensed).

Open issues

But what about non-unconditional sentences, where the conditional mood is present?

(31)   %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.
- There is speaker variation wrt the acceptability of ADD-FCIs in these contexts. The extent of this variation is still a matter of empirical investigation.
- Even for speakers who accept (31), the unconditional is a better licensor.
- What is it about unconditionals that makes them such suitable environments?

There is growing cross-linguistic evidence that unconditionals act as licensors of otherwise ruled out configurations, e.g., bare indeterminates in Japanese:

(32)   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.'   (Nakanishi and Hiraiwa 2019)

What roles do these particles play in polarity-sensitive paradigms across languages?

Do these particles have a uniform meaning contribution across their various uses?

The current cross-linguistic picture of particles used in FCIs:

(33) a.   wh-word/indefinite + focus-sensitive particle:
       Hindi *ek bhii*, Malayalam *aarum*, Hungarian *akarki*   **FCIs/NPIs**

     b.   wh-word/indefinite + disjunctive particle:
       Basque *edonor*, Romanian *oricine*   **FCIs**

     c.   wh-word/indefinite + disjunctive particle + focus-sensitive particle:
       Romanian *orișicine*   **FCIs**

Something similar to (33-c) also exists in Hungarian, but not at the word level: *akárki is* and *valaki is*.

Thank you!

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