Unconditionals and free choice unified*

Anna Szabolcsi
New York University

Abstract   Rawlins (2013: 160) observes that both unconditionals and more classical free choice can be meta-characterized using orthogonality, but does not actually unify the two. One reason may be that in English, different expressions serve in these roles. By contrast, in Hungarian, AKÁR expressions serve as NPIs, FCIs, and unconditional adjuncts, but not as interrogatives or free relatives. This paper offers a unified account of the Hungarian data, extending Chierchia 2013 and Dayal 2013. The account produces the same unconditional meanings that Rawlins derives from an interrogative basis. This result highlights the fact that sets of alternatives arise from different morpho-syntactic sources and are utilized by the grammar in different ways, but the results may fully converge.

Keywords: unconditional, free choice, fluctuation, scope, focus, Hungarian

1   Introduction

Rawlins's (2013) seminal analysis of the English unconditional is based on the insight that the adjunct in the construction is a question, which presents a set of alternatives and feeds each alternative as an antecedent to a conditional, whose consequent is the main clause. A silent universal quantifier that tops off the logical form ensures that each ⟨antecedent, consequent⟩ pair is true.

(1) a. Whoever shows up, the party will be fun.
     b. Whether Alonso or Josephine shows up, the party will be fun.

Rawlins's work inspired the investigation of unconditionals in a number of languages in which the adjunct has a somewhat different morpho-syntax than in English.[1] The Hungarian pattern differs from all of them in that the adjuncts in (2) are neither questions, nor free relatives.

---

[1] Haspelmath & König 1998, Quer & Vicente 2009, Rubinstein & Doron 2014, Balusu 2017b, Caponigro & Fălăuş 2018, Lohiniva 2019, and so on. Some of the authors adopted and others modified Rawlins's analysis.

Outside unconditionals, AKÁR expressions are dedicated universal free choice (3) and negative polarity items (4).

(2) a. <u>Akárki   telefonált,</u> elbeszélgettünk.   UNC.ADJ
       AKÁR-who   called   chatted.we
       `Whoever called, we chatted'

    b. <u>Akár   Kati   (telefonált), akár Mari telefonált,</u> elbeszélgettünk.
       AKÁR K   called   AKÁR M   called   chatted.we
       `Whether K or M called, we chatted'

(3) a. <u>Akárki   telefonál</u>hat. $\forall$-FCI
       AKÁR-who   call.may
       `Anyone may call'

    b. <u>Akár   Kati   (telefonálhat), akár   Mari   telefonál</u>hat.
       AKÁR K   call.may   AKÁR M   call.may
       `Either K or M may call'

(4) a. Nem hiszem, hogy <u>akárki   telefonált.</u>[2]   NPI
       not   think-I   that   AKÁR-who   called
       `I don't think that anyone called'

    b. Nem hiszem, hogy <u>akár K (telefonált), akár M telefonált.</u>
       not   think-I   that AKÁR K called   AKÁR M called
       `I don't think that either K or M called'

They are unacceptable in non-licensing environments, e.g. (5).

(5) a. * Akárki   telefonált.
       AKÁR-who   called

    b. * Akár   Kati   (telefonált), akár   Mari   telefonált.
       AKÁR   K   called   AKÁR M   called

Our fundamental assumption is that a compositional analysis must take into account the fullest possible distribution of the expressions involved.[3] In that spirit, the AKÁR paradigm above calls for an approach that can place NPIs, FCIs, and UNC.ADJs under the same umbrella. First, we need a theory that brings negative polarity and free choice together. Next, we extend the treatment of universal free choice to unconditionals with minimal modifications; most crucially, by swapping

---

[2] AKÁR expressions are positive polarity items: they are anti-licensed by clause-mate negation. Their role as NPIs is optionally disambiguated by the particle *is* `too/even' (not indicated here).

[3] But we must set aside how *akár* teams up with other particles to build scalar *akár (csak) Kati is* that serves as an NPI and an $\exists$-FCI, but not in unconditionals (Abrusán 2007, Szabolcsi 2017).

the modal in the former for a conditional in the latter. Universal force and existential presupposition will carry over. Additional elements of the analysis are supplied by independent properties of the language, e.g. identificational focus.

The following derivation of (2a,b) anticipates the main aspects of our analysis.

(6) { Akárki / akár K akár M } telefonált, elbeszélgettünk.
  `{Whoever / Whether K or M} called, we chatted'

$\forall$w,e **[call(k)(w,e)] [chat(w,e)]** $\land$ $\forall$w,e **[call(m)(w,e)] [chat(w,e)]**

  strengthening

λP[P(λw,e. call(k)(w,e)) $\lor$ P(λw,e. call(m)(w,e))**]** (λr[$\forall$w,e[r(w,e)] [chat(w,e)]])

  = $\forall$w,e **[call(k)(w,e)] [chat(w,e)]** $\lor$ $\forall$w,e **[call(m)(w,e)] [chat(w,e)]**

  quantifying-in

λP[P(λw,e. call(k)(w,e)) $\lor$ P(λw,e. call(m)(w,e))] λr[if (r) (λw,e. chat(w,e))] =

  λr[$\forall$w,e[r(w,e)] [chat(w,e)]]

$\exists$-lift lift to consequent

{ akárki telefonált / akár K akár M telefonált } *elbeszélgettünk*

λp[p=λw,e. call(k)(w,e) $\lor$ p=λw,e. call(m) (w,e)] λw,e. chat(w,e)

Fluctuation presupposition

$\forall$q [q $\in$ λp[p=λw,e. call(k)(w,e) $\lor$ p=λw,e. call(m)(w,e)]]

  [$\exists$w,e. q(w,e) $\land$ $\exists$w,e.¬q(w,e)]

The structure of the discussion will be as follows. Section 2 takes a closer look at clauses with the particle *akár,* including morpho-syntactic composition, interpretation, and scope taking in overt syntax. Section 3 briefly recaps Chierchia's (2013) theory of negative polarity and universal free choice that serves as the background for our analysis. Section 4 introduces Dayal's (2013) Viability condition and modifies it somewhat (i) in view of an exhaustification problem caused by symmetrical predicates, and (ii) in anticipation of the needs of unconditionals. Section 5 applies the free choice analysis to the unconditional case. It comments on some technical details of (6), and compares them with Rawlins 2013. Sections 6-7 discuss speaker ignorance and the role of identificational focus. Section 8 asks why English uses *wh-ever* and *whether_or* in unconditionals, instead of *any*-items.

2 The composition and scope behavior of AKÁR expressions

Hungarian interrogatives employ bare indeterminate pronouns (*ki* `who,' *mi* `what,' etc.). Relative pronouns have a prefixed definite marker (*aki* `who, rel.' and *ami* `what, relative'). The particle *akár* cannot be added to either of these.

This section provides some background on the morpho-syntactic and semantic composition of AKÁR expressions that the rest of the paper will assume. For a detailed description, see Szabolcsi 2018.

Akár belongs to a family of particles that build quantifier words from indeterminate pronoun bases or, alternatively, reiterate at the left edge of each proposition in a Junction Phrase, JP (den Dikken 2006). Each JP may contain two or more propositions. Besides *akár*, the members of the particle family are *mind* `all,' *vala/vagy* `some/or,' and *sem* `n-or,' a strict NCI.[4] For example,
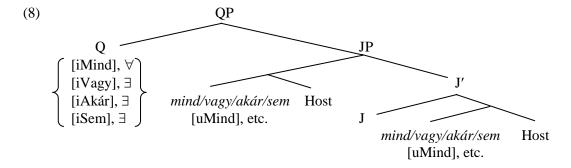
(7) a. Minden-ki telefonált.
         all-who   called
         `Everyone called'

     b. Mind Kati   (telefonált),   mind Mari   telefonált.
         all   K   called   all   M   called
         `Each of K and M called'

     c. Mind a nap   kisütött, mind a szél   elállt.
         all   the sun came.out   all   the wind   stopped
         `Each of {the sun came out, the wind stopped} is true'

It is possible to elide a segment under identity, as in (2b, 3b, 4b, 7b); the propositions may also be fully distinct, as in (7c). The same holds for JPs with *akár* and the other particles.

In the spirit of Beghelli & Stowell 1997 and Kratzer & Shimoyama 2002, the overt particles are taken to be meaningless and to merely check features with higher, silent quantifiers, interpreted as $\exists$ (*akár, vala/vagy, sem*) or $\forall$ (*mind*).

B&S and K&S do not discuss reiterations such as (2b, 3b, 4b) and (7b,c) but, with the assumption of propositional quantification, their analyses suit reiterations particularly well. The "hosts" are full propositions, and the identical particles at the left edges cannot all be true quantifiers with the same meaning, so it is natural to attribute the semantic action to a higher, silent quantifier.

---

[4] All Hungarian quantifier words are built in this way. The concessive particle *bár* also builds universal free choice items (*bárki*, etc.). Unlike the other particles mentioned in the text, *bár* does not reiterate but has a life as a connective. *Bár* will not be discussed in this paper, but see Halm 2016. Halm analyzes free choice in terms of Giannakidou 2001, and also makes important observations about what we call unconditionals.

(8)

```
                            QP
          Q                           JP
    ⎧ [iMind], ∀ ⎫
    ⎪ [iVagy], ∃ ⎪                                      J′
    ⎨ [iAkár], ∃ ⎬    mind/vagy/akár/sem   Host
    ⎩ [iSem], ∃ ⎭        [uMind], etc.          J
                                           mind/vagy/akár/sem   Host
                                               [uMind], etc.
```

(9)   ∃(℘) = the proposition that is true when some p∈℘ is true

(10)   ∀(℘) = the proposition that is true when all p∈℘ are true

The sets of propositions ℘ that ∃ and ∀ quantify over are defined with the help of an indeterminate ("wh") pronoun, or by enumeration. JP is understood to do nothing more than enumerate the members of such a set; in and of itself it is neither a conjunction nor a disjunction (Winter 1995, Szabolcsi 2015).

(11)   a.   ℘ = { p: ∃x[human(x) ∧ p=λw.called(x)(w)] }

         b.   ℘ = { λw.called(kati)(w), λw.called(mari)(w) }

         c.   ℘ = { λw.out(sun)(w), λw.stopped(wind)(w) }

It may be good to underscore that (11a,b,c) are not "question meanings," although they would figure in the interpretation of questions. They are just sets of propositions, waiting to be used in one way or another. In the case of negative polarity, free choice, and unconditionals, they will serve as sets of alternatives that undergo exhaustification.

K&S use Hamblin semantics to define the set in (11a) by projecting alternatives from indeterminate pronouns. Instead, we assume that (11a) is defined as in Karttunen 1977, by shifting a single proposition to a set of propositions and quantifying the indeterminate pronoun into that set using function composition.[5]

The Karttunen-style definition of (11a) is especially appropriate for our data. In Hungarian, the scopes of both interrogative wh-phrases and QPs are largely encoded by overt movement. For a quick overview of the clause-internal overt scope facts and their treatment along the lines of Beghelli & Stowell, see Szabolcsi 2010: 121-129 and 180-185. On that approach, the scope positions of QPs are specifiers of silent functional heads interpreted as ∃ or ∀.

In the context of the present paper, it is important to add that Hungarian QPs can also move to scope positions in a higher clause, observing the same island

---

[5] Charlow 2018 shows how the island-free scope of in-situ indefinites that often motivates the use of Hamblin semantics can be replicated employing type-shifters with a Karttunen-style semantics.

constraints as overt wh-movement. In (12), *mindenkitől* overtly moves to the matrix clause, to a position next to the silent ∀ that performs distributive quantification. The landing site of *mindenkitől* corresponds to the scope of the Karttunen-style existential quantifier that defines the set of alternatives to be quantified over, cf. (11a).

(12) Mindenkitől$_i$ más-más   zsűritag akarta,
      everyone-from other-other   juror   wanted
      hogy levonjunk   egy   pontot   __$_i$.
      that   deduct.subj.1pl   one   point-acc
      `For everyone x, a different juror wanted that we deduct a point from x'

Similarly, AKÁR expressions can acquire the desired scope by overtly moving out of their own clause, next to a silent ∃. (13) illustrates the case of an unconditional, (14) of universal free choice, and (15) of negative polarity. The desired meanings would not be available if *akárkivel* stayed in its source clause.

(13) Akárkivel$_i$ kérték, hogy táncolj   __$_i$,   nemet mondtál.
      AKÁR-who-with   asked.3pl that dance.imp.2sg   no-acc said.2sg
      `Whoever they asked that you dance with, you said no'

(14) Akármelyik   pohárba$_i$ lehet,   hogy   mérget   tettek   __$_i$.
      AKÁR-which   glass-into possible   that   poison-acc put.past.3pl
      `Any of the glasses can be such that they put poison into it'
      (Lit. into any of the glasses it is possible that they put poison)

(15) Nem   hiszem, hogy akárkivel$_i$ kérték,   hogy táncolj   __$_i$.
      not   think.1sg that AKÁR-who-with asked.3pl that dance.imp.2sg
      `I don't think that anyone is such that they asked that you dance with him'

The same works for reiterations (*akár Kati, akár Mari*), with a more complex syntax including across-the-board movement and ellipsis; not illustrated.

The overt scope-taking of AKÁR expressions is significant in comparison with English. Why is it that *anyone* is an NPI and a ∀-FCI, but in unconditional adjuncts, it gives way to *whoever*? We conjecture that the reason lies in the inability of *any*-items to scope high and piped pipe alternatives over the antecedent of a conditional − something that English *whoever* and Hungarian *akárki* can do.

3 Recap: Chierchia 2013 on negative polarity and universal free choice

Our goal is to unify Hungarian unconditionals, universal free choice and negative polarity, as demanded by the identity of AKÁR expressions in these roles. Un-

conditionals and free choice could be unified in various attractive ways, but not all of them offer a natural connection to polarity. English *any* and Hungarian *akár* are rather common in serving both in free choice and in (some subset of) polarity items. Chierchia 2013 is a theory that brings them together. Presupposing familiarity with it, this section merely recaps some of the assumptions without arguing for them.

Chierchia 2013 proposes that negative polarity items and free choice items are existentials/disjunctions with grammaticized, active alternatives that must be exhaustified. The alternatives may be sub-domain or scalar alternatives. The exhaustifier relevant to us is the silent operator **O**[nly], which negates alternatives not entailed by the literal assertion.

Let a proposition with an NPI schematically assert $p \lor q$; its sub-domain alternatives are p and q. Exhaustification yields a contradiction: $\mathbf{O}(p \lor q) = p \lor q \land \neg p \land \neg q$. Contradiction is averted if $p \lor q$ is originally within the immediate scope a decreasing operator $\downarrow$. In that case $\downarrow(p \lor q)$ entails the sub-domain alternatives $\downarrow p$ and $\downarrow q$, and so **O** does not get to negate them: $\mathbf{O}\downarrow(p \lor q) = \downarrow(p \lor q)$. See Chierchia 2013: Ch 1 for details.

Existential and universal FCIs both come with pre-exhaustified sub-domain alternatives, so an application of **O** to the whole proposition will amount to recursive exhaustification in the sense of Fox 2007.

$\exists$-FCIs (*irgendein NP* and *un NP qualsiasi*) occur within the scope of a modal: $\Diamond > \exists$, so the assertion is $\Diamond(p \lor q)$. Now $\mathbf{O}\Diamond(p \lor q)$ negates both the pre-exhaustified subdomain alternatives and the scalar alternative, and yields $\Diamond p \land \Diamond q \land \neg \Diamond(p \land q)$. See Chierchia 2013: Ch 5.

$\forall$-FCIs *(any NP* and *qualsiasi NP*)* scope immediately above a possibility modal: $\exists > \Diamond$, so the assertion is $\Diamond p \lor \Diamond q$. First consider just exhaustification with respect to the pre-exhaustified sub-domain alternatives $\mathbf{O}\Diamond p$ and $\mathbf{O}\Diamond q$. The conjunction of $\Diamond p \lor \Diamond q$ with $\neg \mathbf{O}\Diamond p = \neg(\Diamond p \land \neg \Diamond q)$ and $\neg \mathbf{O}\Diamond q = \neg(\Diamond q \land \neg \Diamond p)$ yields $\Diamond p \land \Diamond q$. See Chierchia 2013: Ch 6.

We just strengthened disjunction to conjunction (an existential to a universal). The result is the Universal Free Choice implicature. It will be referred to as Universal Force below, so as to remain agnostic regarding implicatures.

$\forall$-FCIs however are not universals, although they have Universal Force. They have another crucial property that Dayal 2009 called Fluctuation: the realized options cannot be kept constant across worlds. Chierchia recasts Fluctuation by utilizing the stronger, scalar alternative, here $\Diamond p \land \Diamond q$. The negation of the scalar alternative is conjoined with the result of exhaustifying the domain alternatives (as is done in the case of $\exists$-FC). But now the resulting $\Diamond p \land \Diamond q \land \neg(\Diamond p \land \Diamond q)$ is a contradiction − unless, Chierchia points out, the modal bases used in the two computations are different. If modal base SC $\subset$ modal base FC, there need not be a con-

tradiction. He refers to that subset relation as Modal Containment, MC. See Chierchia 2013: 316-317 for discussion of the two modal bases SC and FC.

Hungarian AKÁR expressions are NPIs and ∀-FCIs, so Chierchia's treatment of English *any NP* can be adopted for them. We add, as a reminder, that while English *either_or* is not a dedicated NPI or FCI, Hungarian reiterated *akár_akár* has the same behavior as the combination of *akár* with an indeterminate pronoun. Those reiterations are also subsumed.

4 More on Fluctuation

Dayal (2013) adopts Chierchia's derivation of universal force via strengthening, but proposes to eliminate reference to a scalar implicature. Instead, she reinstates the intuition behind Fluctuation. The new constraint, called Viability, is a presupposition:

(16)   Viability constraint
        [...FCI...] is felicitous iff there exists a model M, a world w, and a conversational background g(w) such that each exhaustified alternative is true at w, wrto to some subset of ∩g(w).

See Dayal 2013 for the working and the advantages of Viability, which we find convincing. However, the formulation of Viability encounters a problem, versions of which had haunted the free choice literature. We add symmetrical predicates to the problem cases. The requirement for each *exhaustified* alternative to be true in some world is analogous to the requirement in certain theories of donkey anaphora for there to be a minimal situation that provides a *unique* antecedent for the donkey pronoun. It is well-known that such a requirement may fail to be satisfiable.

(17)   If a bishop meets a bishop, he blesses him.
        ☞ `Every minimal situation with a bishop meeting a bishop extends to one where the unique bishop in the situation ...' (Elbourne 2005)

(18)   Any bishop may meet a bishop.
        ☞ presupp. `There exists a world in which only bishop A meets a bishop'

The ☞ affixed to an interpretation expresses that the linguistic example is perfect, but the proposed interpretation is not satisfiable, and so it cannot be correct. Elbourne's (2005) solution to the unique antecedent problem with predicates that are truth-conditionally, but not syntactically, symmetrical is to import syntactic prominence into the semantics; effectively, he uses structured propositions.

On the other hand, Chierchia's proposal with SC⊂FC, which does not require the truth of exhaustified alternatives, works fine for symmetrical predicates:

(19)   ∃w[ACC-**FC**(w*, w) & ∃x[bishop-A meets bishop-x in w]   &

        ∃w'[ACC-**FC**(w*, w') & ∃x[bishop-B meets bishop-x in w']   &

        ¬(∃w''[ACC-**SC**(w*, w'') & ∃x[bishop-A meets bishop-x in w'']   &

          ∃w'''[ACC-**SC**(w*, w''') & ∃x[bishop-B meets bishop-x in w'''])

Suppose FC={w1, w2, w3, w4} and SC={w4}. Bishops meet other bishops in w1, w2, and w3, but not in w4.

    To have our cake and eat it too, we combine the two proposals in a way that is intuitively closer to Dayal's and technically to Chierchia's. We trade reference to the truth of exhaustified alternatives for truth not being uniform across worlds.

(20)   Revised Viability presupposition
        [... FCI ...] is felicitous if each alternative is true in some world and false in some world.

Reading "true in some world and false in some world" as "true in some but not all worlds," (20) may even be regarded as negating a scalar alternative of some sort.

    Rather than closing the discussion here, let us introduce a further modification that will be critical in the extension of universal free choice to unconditionals. It is stated with reference to AKÁR.

(21)   Fluctuation presupposition for AKÁR, a second revision of Viability
        A free choice reading involving AKÁR is felicitous if each alternative described by the bare AKÁR clause is true in some but not all worlds [or events, in unconditionals].

(22)   The bare AKÁR-clause is one that does not yet contain a modal
        [or conditional, in unconditional adjuncts].

In the case of (3a), each alternative described by the bare AKÁR clause is an element of ℘ as defined in (11a), i.e. has the form λw.call(a)(w), for some individual a. ∃$_{AKÁR}$(℘) scopes over the modal to yield the schematic assertion ◊p∨◊q.

(3)   a.   <u>Akár-ki   telefonál</u>-hat.
        akár-who   call-may
        `Anyone may call'

    To summarize, Universal Force is computed for the whole sentence, strengthening ◊p∨◊q to ◊p∧◊q (as in the literature). But Fluctuation will be directly tied to the segment that the AKÁR expression invariably contributes on its various uses.[6]

---

[6] The intuition is that Fluctuation is a property of AKÁR. Ideally, AKÁR expressions would have a "fluctuate if you can" property in all their roles. If Fluctuation were a scalar implicature, it would

The bifurcation does not make a difference for traditional universal free choice, where a possibility modal is involved either way. It will make a big difference in the case of unconditionals, where the bare AKÁR clause is the adjunct.

5   Unconditionals as a special case of universal free choice

To take stock, we assume that the NPI and $\forall$-FCI readings of AKÁR expressions are accounted for along the lines of Chierchia 2013, with some modification regarding the implementation of Fluctuation, given in (21)-(22). We are now ready to turn to unconditionals.

The basic idea is this. In universal free choice, the existential/disjunction scopes over a possibility modal; in unconditionals, it scopes over the "if" of a conditional. Strengthening and Fluctuation carry over, accounting for most of the properties that Rawlins 2013 derives for unconditionals. Partition effects do not follow, but we will argue that only some Hungarian unconditionals exhibit them and that they correlate with identificational focus.
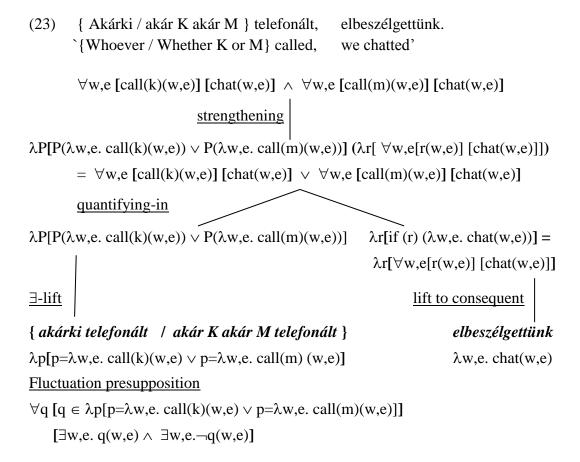
Apart from the fact that Rawlins takes the unconditional adjunct to be a question and we do not, there is an overall technical difference between his derivation and ours. Rawlins uses pointwise Hamblinian composition both in building the adjunct and in combining the adjunct with the main clause. In contrast, we use a scope taking mechanism in both cases, following Karttunen 1977 and Charlow 2018. Over and beyond other advantages, thinking about universal free choice and unconditionals in terms of scope makes it easy to see the central parallelism: AKÁR expressions scope over a possibility modal in the former case, and over "if" in the latter.

5.1   Overview of the derivation

With this in mind, consider the derivation of (2a,b), given in (6) and repeated on the next page as (23).

Working from bottom up, ***akárki telefonált*** `whoever called' and ***akár K (telefonált) akár M telefonált*** `whether K (called) or M called' are composed and interpreted as sets of propositions, as was detailed in Section 2. Note that if Kati and Mari are the only relevant individuals, both are based on the same set of propositions, {^Kati called, ^Mari called}. The elements of this set of propositions are the alternatives whose truth the <u>presupposition</u> associated with AKÁR requires to <u>fluctuate</u>, cf. (21)-(22). The (world, event) pairs will be motivated in Section 6.

---

not arise in a decreasing context, explaining why it is not observed in NPIs. But Fluctuation, when in action, imposes a stronger, presuppositional requirement. We leave open the question of how to extend Fluctuation to AKÁR NPIs.

(23)   { Akárki / akár K akár M } telefonált,   elbeszélgettünk.
         `{Whoever / Whether K or M} called,   we chatted'

$\forall$w,e **[call(k)(w,e)] [chat(w,e)]** $\wedge$ $\forall$w,e **[call(m)(w,e)] [chat(w,e)]**

       <u>strengthening</u>

λP[P(λw,e. call(k)(w,e)) $\vee$ P(λw,e. call(m)(w,e))] (λr[$\forall$w,e[r(w,e)] [chat(w,e)]])

    = $\forall$w,e **[call(k)(w,e)] [chat(w,e)]** $\vee$ $\forall$w,e **[call(m)(w,e)] [chat(w,e)]**

    <u>quantifying-in</u>

λP[P(λw,e. call(k)(w,e)) $\vee$ P(λw,e. call(m)(w,e))] λr[if (r) (λw,e. chat(w,e))] =

                                                λr[$\forall$w,e[r(w,e)] [chat(w,e)]]

<u>$\exists$-lift</u>   <u>lift to consequent</u>

{ akárki telefonált   / akár K akár M telefonált }   ***elbeszélgettünk***

λp[p=λw,e. call(k)(w,e) $\vee$ p=λw,e. call(m) (w,e)] λw,e. chat(w,e)

<u>Fluctuation presupposition</u>

$\forall$q [q $\in$ λp[p=λw,e. call(k)(w,e) $\vee$ p=λw,e. call(m)(w,e)]]

    [$\exists$w,e. q(w,e) $\wedge$ $\exists$w,e.¬q(w,e)]

The step labeled <u>$\exists$-lift</u> existentially quantifies over the above set, spelling out the truth-conditional contribution of the silent AKÁR discussed in Section 2, and lifts the result to a generalized quantifier over propositions, prepping it for getting quantified into the conditional antecedent.

Elbeszélgettünk `we chatted' morphs into the consequent of a conditional looking for an antecedent via <u>lift to consequent</u>. The fact that propositional variable *r* in the restriction of the universal that interprets the conditional is immediately abstracted over facilitates the quantifying-in of the AKÁR clause. Given these preparations, quantification in the next step is just functional application.

Finally, the step <u>strengthening</u> corresponds to recursive exhaustification of the sub-domain alternatives of the whole sentence, endowing it with Universal Force, following Chierchia 2013 on $\forall$-FCIs, cf. Section 3.

Naturally, <u>$\exists$-lift</u> and <u>lift to consequent</u> could be broken into multiple steps, but the compressed presentation makes the tree more legible.

In the rest of this section and in Sections 6 and 7 we comment on and flesh out

details of the derivation, adding brief pointers to Rawlins 2013 for English.[7]

5.2   The locus of quantifying-in

The AKÁR clause is quantified into the conditional right above "if," to obtain the same scope configuration as the famous (24):

(24)   If a relative of mine dies, I inherit a house.

Charlow 2018 develops a Karttunen-inspired, scope-based method of alternative management, with the specific aim of catering to in-situ indefinites. His Fig. 6 spells out the derivation of (24) with alternative percolation out of a scope island, without movement out of the island. The indefinite shifts into a scope-taker, moves to the edge of the island, then pied-pipes the island to a scope position over the conditional. Our derivation in (23) performs the exact same tasks, but much of it is overt, given the properties of Hungarian summarized in Section 2. Recall that Hungarian *akárki* moves to, and the reiterating particle *akár* is attached to, the left edge of their clauses (and invoke silent ∃ propositional quantifiers right above). They take scope overtly and are in a canonical position to pied-pipe. The quantifying-in step feeds each alternative into the antecedent of a separate conditional.

In sum, the scope-taking analysis is well-motivated and can be accomplished with or without overt movement, depending on the language or on the expressions involved; compare *a relative of mine* with *whichever relative of mine* in English.

5.3   Universal force

Unconditionals present the alternatives in the adjunct as antecedents of separate conditionals, with the main clause as the consequent. Strikingly, each of these conditionals is claimed to be true. On our account, Universal Force in unconditionals comes about in the same way as in universal free choice. We adopted Chierchia's theory that strengthens the original disjunctive/existential semantics

---

[7] For reference, Rawlins (2013: 172) summarizes his derivation for English as follows:

(i) Disjunction or a wh-<u>ever</u> item introduces alternatives into the composition.

(ii) The question operator introduces exhaustiveness and mutual exclusivity presuppositions.

(iii) Alternatives compose pointwise with the main clause via Hamblin pointwise functional application – one modal claim for each alternative.

(iv) A conditional adjunct (whatever its content) restricts the domain of a main clause modal.

(v) The modal imposes an existence presupposition or entailment on its domain, leading to a distribution effect.

(vi) A default Hamblin universal operator collects alternatives.

of the whole sentence that comes from the wide-scoping AKÁR expression, to a conjunctive / universal one, via recursive exhaustification. But any other theory of free choice that also subsumes negative polarity would do.

Rawlins achieves universality in unconditionals by postulating a silent universal quantifier on top of the logical form, which is not known from elsewhere in the grammar. The free choice analysis does not require a stipulated universal.[8]

5.4 Fluctuation: its benefits and the size of the unit that it pertains to

Moving from vanilla universal free choice with a possibility modal to unconditionals highlights an important point regarding the size of the unit that Fluctuation pertains to.

Chierchia 2013 and Dayal 2013 implement Fluctuation differently but, on both accounts, Fluctuation pertains to the same domain as the recursive exhaustification that produces Universal Force: the whole sentence. This leads to a conflict unless the sets of worlds that bear out universality and fluctuation are carefully managed. However, if we wish to subsume unconditionals under the umbrella of universal free choice, it seems that keeping the two domains identical just will not do. Consider:

(25) Akár Kati, akár Mari telefonált, elbeszélgettünk.
    `Whether Kati or Mari called, we chatted'

Intuitively, fluctuation does not consist in there being worlds where Kati called and we didn't chat. Even if the sets of worlds are managed in such a way that this does not contradict universality, it does not seem right. What we want is for there to be worlds where Kati called and others where Kati didn't call. This can be achieved if Fluctuation is restricted to the bare AKÁR-clause (here, the adjunct). Big thanks are due to Y. Xiang for pointing out problems and to V. Dayal for offering the solution. So,

(26) a. By presupposed Fluctuation
    $\forall q \ [q \in \lambda p[p=\lambda w,e. \ call(k)(w,e) \vee p=\lambda w,e. \ call(m)(w,e)]]$
        $[\exists w,e. \ q(w,e) \wedge \exists w,e. \neg q(w,e)]$
    b. By strengthening to Universal Force
    $\forall w,e \ [call(k)(w,e)] \ [chat(w,e)] \ \wedge \ \forall w,e \ [call(m)(w,e)] \ [chat(w,e)]$

Suppose Mari calls at (w1,e1) but not at (w2,e2), and Kati calls at (w2,e2) but not at (w1,e1). Fluctuation is satisfied, and this state of affairs is entirely compatible

---

[8] Simplification of disjunctive antecedents would naturally derive universality (cf. Alonso-Ovalle 2004) but it offers no link to negative polarity. It also would not predict the presupposition that each disjunct in the antecedent is true somewhere; see Section 5.4.

with Universal Force, i.e. that at every (w,e) pair where Mari called, we chatted, and at every (w,e) pair where Kati called, we chatted.

As Dayal 2013 explains, *Anyone called* without a modal is unacceptable, because we have only a single accessible world, so fluctuation is not possible. When the FCI scopes over a possibility modal, the modal provides a space of worlds for fluctuation. When *akár Kati, akár Mari telefonált* scopes over a conditional, we have the same benefit: each of *Kati telefonált* and *Mari telefonált* gets a chance to be true in some worlds and false in others.

Restricting fluctuation to the bare AKÁR-clause that serves as the adjunct furthermore has the benefit of deriving properties of unconditionals pointed out by Rawlins. Each alternative in the unconditional adjunct must be true at some event or, in the case of ignorance, in some epistemically accessible world. This is one of the things that distinguishes (27) from (28), a conditional with a flat disjunction in its antecedent:

(27)   Whether Kate or Mary or Sue calls, we'll chat.
(28)   If Kate or Mary or Sue calls, we'll chat.

Fluctuation also plays a role in accounting for speaker ignorance in unconditionals pertaining to a single event; see the discussion of flavors in Section 6.

It is desirable to apply Fluctuation uniformly in unconditionals and traditional universal free choice. Therefore, in Section 4, anticipating the present discussion, we proposed that Fluctuation originates with AKÁR (or, in general, with particles responsible for free choice) and always pertains to what we called the bare AKÁR clause, cf. (21)-(22). This does not seem to make a big difference for traditional free choice; it only affects where the existential quantifier over worlds comes from: the possibility modal in the scope of the FCI, or the Fluctuation constraint.

5.5   The unmarked conditional

A mysterious property of unconditionals is their conditional semantics in the absence of the usual morpho-syntactic hallmarks of conditionals. The literature is generally silent on where the conditional meaning is anchored. In (23), we assumed that *elbeszélgettünk* `we chatted' morphs into the main clause of a conditional; an ad hoc step. It is remarkable, though, that according to Haspelmath 1997 and Haspelmath & König 1998, in one type of languages, free-choice indefinites as well as scalar, alternative, and universal concessive conditionals are formed with the particles IF + EVEN. See Balusu (2017a,b) and Sarath Chandran & Balusu (2019). It is not implausible then that it is the bare AKÁR-clause that should morph into the antecedent in a conditional. Another possible connection is to what Klinedinst & Rothschild (2012) call the non-truth-tabular use of *and* (here, silent), which is equivalent to a conditional: *Mary calls, we'll chat.*

6 Unconditional flavors and (world, event) pairs

Rawlins 2013 recognizes three modal flavors in English unconditionals: circumstantial, epistemic, and totally realistic. Hungarian unconditionals exhibit the same flavors, which makes the data directly comparable. Below, the characterization in modal terms and the remarks on indifference and ignorance come from Rawlins. The multiple-event and single-event labels are our own, as are the English and Hungarian examples that illustrate what we consider felicitous uses.

(29)   Multiple events, circumstantial modal base, at-issue relational indifference

{ Whoever / whether K or M } entered,   we chatted.
{ Akárki / akár K akár M } **jött be**,   elbeszélgettünk.

(30)   Single event, epistemic modal base, presupposed speaker ignorance [9]

{ Whoever / whether K or M } entered a minute ago, I didn't recognize her.
{ Akárki (is) / akár K akár M } **jött be** az imént,   nem ismertem meg.

(31)   Material unconditional [≈ totally realistic modal base, empty ordering
source], multiple events, no ignorance or indifference effects

{ Whoever / whether K or M } entered,   the floor squeaked.
{ Akárki / akár K akár M } **be jött**,   nyikorgott a padló.

Rawlins (2013: 163) observes that "the presence of ignorance implications in unconditionals and free relatives obeys a constraint discovered by Giannakidou and Cheng (2006) and Reynolds (2007) for free relatives. In particular, in both constructions ignorance implications fail to appear in non-episodic contexts. (The inverse is not fully true: in episodic contexts, unconditionals must have an ignorance reading, but FRs may alternatively have a FR-indifference reading, depending on the details of the context and sentence.)" But he states that the tie between ignorance and episodicity remains beyond the scope of his analysis.

In the labels attached to (29)-(30)-(31), we distinguished multiple-event and single-event cases. The intuition that unconditionals with a circumstantial modal flavor pertain to multiple events is very strong. The adjunct is readily (perhaps not accurately) paraphrased using *whenever*, and the main clause pertains to the same event or a related event. So it seems that events should play a role in the semantics, over and beyond a circumstantial, "as far as the facts are concerned" modal base. (Material unconditionals also involve multiple events; the difference between (29) and (31) is taken up in Section 7.) In contrast, we propose that the key property of episodicity is that the sentence pertains to a single event. This promises to tie together single-event cases and speaker ignorance. Informally, Fluctua-

---

[9] The optional particle *is* seems to correlate with the ignorance reading, with some cross-speaker variation. This paper will not attempt to address this role of *is*.

tion requires that each proposition in the set $\wp$ for the bare AKÁR clause (here: the adjunct) be true "somewhere" and false "somewhere (else)". This entails that there must be at least two instances of "somewhere" under consideration.[10] In (23), we used quantification over (world, event) pairs. The intuition is that unconditionals primarily look for multiple events to satisfy Fluctuation. If the sentence clearly pertains to a single event, then multiple ways of viewing that event are invoked. That is, if the event component of (w,e) is firmly fixed, the world component must vary. The primacy of events may be reinforced by the fact that in Tamil and Telugu, unconditionals do not have ignorance readings (R. Balusu, p.c.). If those unconditionals are syntactically based on free relatives, then this may tie in with the finding in Šimík 2018 that "*ever* free relatives" in many languages are purely quantificational and lack the ignorance and indifference readings that they exhibit in English. Šimík proposes to factor modality out of the basic account of *ever* free relatives.

Our formalization in terms of quantification over (w,e) pairs is preliminary and heavy-handed, but here we will leave it at that, and refrain from engaging with the complications of epistemic modality and alternating modal bases. To match, we formalize the conditional as universal quantification over (w,e) pairs, without a silent modal.

7   Are the alternatives mutually exclusive? If yes, what is the source?

It is a well-established intuition that unconditionals present mutually exclusive and jointly exhaustive alternatives. Rawlins 2013 postulates a Q operator with partition semantics in the derivation of unconditional meanings.[11]

Hungarian unconditionals only exhibit mutual exclusivity effects in the circumstantial and the epistemic flavors (29)-(30). The reason why we can safely distinguish these from the material unconditional flavor (31) is that, given the appropriate choice of the verb, they differ in word order. In Sections 1 through 5, we used the prefixless verb *telefonál* `call', so as to abstract away from this issue. In (29)-(30)-(31), however, it was replaced with the prefixed verb *be-jön* `enter, lit. in-come', so as to make the flavors trackable. Now notice that in (29)-(30), the order is Verb Prefix *(jött be)*, whereas in (31), it is Prefix Verb *(bejött)*. The significance of the word order difference is that it unambiguously signals that *akárki* (likewise, *Kati / Mari*) is in identificational focus in (29)-(30) but not in (31).

---

[10] Hirsch 2016 derives ignorance from the partition semantics for questions and the non-triviality presupposition pertaining to the epistemic modal base. While we do not use these ingredients, our intuition seems to be similar to his.

[11] In recent years the partition semantics for questions has been abandoned, so even if unconditionals are based on questions, the availability of a partitional Q operator is not automatic.

When a Hungarian sentence has identificational focus (É. Kiss 1998), the focus-accented phrase occurs in an immediately preverbal position. Remarkably, when the verb has a prefix, identificational focus triggers prefix/verb inversion (*be jött > jött be*). According to Horvath 2010, the syntactic representation is as in (32). EI-Op is a null operator in complementary distribution with *csak* `only' that associates with a focus-accented phrase and drags it to the specifier of the clause-level EI head (EI for Exclusion-by-Identification).

(32)   [$_{EI-P}$ [EI-Op MARI [EI^0 [$_{TP}$ come+T$_{past}$ [~~MARI~~ ~~come~~ in]]]]]

What is important for us is that identificational focus is easily made visible and it has both presuppositional and truth-conditional impact (Szabolcsi 1994).

(33)   a.   MARI jött   be
              M   came   in
              ca. `It was Mari who entered (in the contextually relevant set)'

        b. ιx[entered(x) & $\forall$y[entered(y) $\rightarrow$ y$\leq$x]] = mari

When *akárki* functions as an NPI or FCI, it is never in identificational focus; but in unconditionals with a circumstantial/epistemic flavor, it must be.[12] So maybe a partitional operator in unconditionals forces identificational focus? That cannot be correct, because in material unconditionals such as (31), there is no identificational focus. The reason why we know that (31) is indeed an unconditional and not a plain conditional that for some reason lacks *ha* `if' is that (31) exhibits the existential presupposition that is characteristic of unconditionals but is absent from plain conditionals. Below, (34)=(31).

(34)   {Akárki / akár Kati akár Mari} bejött, nyikorgott a padló.   cf. (27)
        `{Whoever / whether K or M} entered, the floor squeaked'
(35)   **Ha** {akárki / akár Kati akár Mari} bejött, nyikorgott a padló.   cf. (28)
        `**If** {anyone / either K or M} entered, the floor squeaked'

Corresponding to the presence of identificational focus, (29)-(30) only consider mutually exclusive alternatives. Situations in which Kati and Mari entered together are not under consideration. This is straightforwardly accounted for by the fact that identificational focus in the adjunct creates exclusive alternatives:

(36)   { λw.ιx[entered(x)(w) & $\forall$y[entered(y)(w) $\rightarrow$ y$\leq$x]] = kati,
          λw.ιx[entered(x)(w) & $\forall$y[entered(y)(w) $\rightarrow$ y$\leq$x]] = mari }

In contrast, given the absence of identificational focus, (31) says that there was

---

[12] Halm 2016 makes the same observations about *bárki*, cf. fn. 5. Note that the +/−focus facts are always the same, the use of a prefixed verb merely makes them visible in a written sentence.

coming and going by individuals, alone or in arbitrary combinations. This jibes with Dayal's observations about universal free choice. "It is sometimes thought that English sentences like [*Bill may read any of these books*] do not have a reading in which the permission extends to the full set of books. I believe this is incorrect. If one utters [that sentence] and Bill reads all the books, he has not exceeded his mandate. The present account allows for this" (Dayal 2013).

It appears, therefore, that unconditionals do not have a partition semantics per se. When the adjuncts have identificational focus, we have exclusivity effects, and when they do not, we do not. What explains the correlation (traceable in Hungarian) between the "modal" unconditionals and focus? We conjecture that identity is under discussion in those cases (and the unconditional states that it should not matter). Identificational focus is not only exclusive, it is also identificational; probably that is the reason why it is employed in these cases.

It is possible that a similar division exists in other languages that do not make identificational focus as visible as Hungarian does, and so unconditionals whose alternatives are not mutually exclusive (like our (31)) escape attention.

The joint exhaustivity aspect of partition semantics is more difficult to check, because questions, unconditionals, focus, etc. are all subject to contextual domain restriction.

Section 8 Why is the territory of Hungarian AKÁR divided between *any* and and wh-*ever* in English?

This paper does not undertake the analysis of unconditionals in any language other than Hungarian. However, it is reasonable to wonder why English does not use *any* in unconditionals.

At the end of Section 2, we conjectured that the reason lies in the inability of *any*-items to scope high and piped pipe alternatives over the antecedent of a conditional – something that English *whoever* and Hungarian *akárki* can do.

Outside the normative register, English *any* can form unconditionals. Here the *any*-item is obligatorily fronted, and some speakers can add *that*. [13,14]

(37) a. <u>Anything</u> Pat did, Kim questioned it.
      b. <u>Anything that</u> Pat did, Kim questioned it.

These syntactic traits and the fact that the ignorance reading is absent suggest that (37) belongs to the class of purely quantificational free relatives (Šimík 2018) – unlike the Hungarian AKÁR-clauses investigated in this paper.

---

[13] If the *any*-item is not fronted, it is just an NPI: *You drink any more tequila, (and) you'll pass out* (Klinedinst & Rothschild 2012: (16)).

[14] We thank the version with *that* to A. Warstadt, who also finds it in COCA and BNC.

References

Abrusán, Márta. 2007. EVEN and free choice ANY in Hungarian. In Estela Puig-Waldmüller (ed.), *Sinn und Bedeutung* 11, 1-15. Barcelona: Universitat Pompeu Fabra. https://semanticsarchive.net/Archive/TVkNTE2O/sub11proc.pdf.

Alonso-Ovalle, Luis. 2004. Simplification of disjunctive antecedents. In Keir Moulton & Matthew Wolf (eds.), *North East Linguistic Society* 34. UMass, Amherst, MA, 1–15. http://people.linguistics.mcgill.ca/~luis.alonso-ovalle/papers/alonso-ovalle_NELS2004.pdf.

Balusu, Rahul. 2017a. PPI effects with an NPI/FCI in Telugu. In Andrew Lamont & Katerina Tetzloff (eds.), *North East Linguistic Society 47,* 65-75. UMass, Amherst, MA. https://ling.auf.net/lingbuzz/003940.

Balusu, Rahul. 2017b, Free-choice relatives in Telugu. In Vera Hohaus & Wanda Rothe (eds.), *TripleA 3*. Universität Tübingen. http://dx.doi.org/10.15496/publikation-15364.

Beghelli, Filippo & Timothy Stowell. 1997. Distributivity and negation: the syntax of EACH and EVERY. In Anna Szabolcsi (ed.), *Ways of scope taking*, 71-108. Dordrecht: Springer. https://doi.org/10.1007/978-94-011-5814-5_3.

Cable, Seth. 2010. *The Grammar of Q. Q-particles, Wh-movement, and Pied Piping*. Oxford University Press.

Caponigro, Ivano & Anamaria Fălăuş. 2018. Free choice free relative clauses in Italian and Romanian. *Natural Language & Linguistic Theory*, *36*(2). 323-363. https://doi.org/10.1007/s11049-017-9375-y.

Charlow, Simon. 2018, The scope of alternatives: Indefiniteness & islands. To appear in *Linguistics and Philosophy*. http://ling.auf.net/lingbuzz/003302.

Chierchia, Gennaro. 2013. *Logic in Grammar*. *Polarity, Free Choice, and Intervention.* Oxford University Press.

Dayal, Veneeta. 2009. Variation in English free choice items, in Rajat Mohanty & Mythili Menon (eds.), *Universals and Variation: GLOW in Asia VII.* 237-257. https://www.academia.edu/224451/Universals_and_Variation._Proceedings_of_the_7_GLOW_in_Asia.

Dayal, Veneeta. 2013. A viability constraint on alternatives for free choice. In In Anamaria Fălăuş (ed.), *Alternatives in semantics*, 88-122. Palgrave Macmillan, London. https://doi.org/10.1057/9781137317247_4.

den Dikken, Marcel. 2006. EITHER-float and the syntax of co-OR-dination. *Natural Language & Linguistic Theory*, *24*(3). 689-749. https://doi.org/10.1007/s11049-005-2503-0.

Elbourne, Paul. 2005. *Situations and individual*s. MIT Press, Cambridge.

Fox, Danny. 2007. Free choice and the theory of scalar implicatures. In Uli Sauer-land & Penka Stateva (eds.), *Presupposition and Implicature in Composition-al Semantics*, 71-120. London: Palgrave Macmillan. https://doi.org/10.1057/9780230210752_4.

Giannakidou, Anastasia. 2001. The meaning of free choice. *Linguistics and Phi-losophy* 24(6). 659-735. https://doi.org/10.1023/A:1012758115458.

Giannakidou, Anastasia & Lisa Lai-Shen Cheng 2006. (In)definiteness, polarity, and the role of wh-morphology in free choice. *Journal of Semantics* 23(2). 135–183. https://doi.org/10.1093/jos/ffl001.

Halm, Tamás. 2016. *The grammar of free-choice items in Hungarian*. PhD Dis-sertation, Péter Pázmány Catholic University, Piliscsaba. lingbuzz/004490.

Haspelmath, Martin. 1997. *Indefinite pronouns*. Oxford University Press.

Haspelmath, Martin & Ekkehard König. 1998. Concessive conditionals in the languages of Europe. In Johan van der Auwera (ed.), *Adverbial constructions in the languages of Europe*, 563-640. Berlin: de Gruyter. http://hdl.handle.net/11858/00-001M-0000-0010-0B33-8.

Hirsch, Aron. 2016. A compositional semantics for wh-ever free relatives. In Na-dine Bade, Polina Berezovskaya & Anthea Schöller (eds.), *Sinn und Bedeutung 20*, 341-358. https://semanticsarchive.net/sub2015/SeparateArticles/Hirsch-SuB20.pdf.

Horvath, Julia. 2010. "Discourse features", syntactic displacement and the status of contrast. *Lingua* 120(6). 1346-1369. https://doi.org/10.1016/j.lingua.2008.07.011.

Karttunen, Lauri. 1977. Syntax and semantics of questions. *Linguistics and Phi-losophy* 1(1). 3–44. https://doi.org/10.1007/BF00351935.

É. Kiss, Katalin. 1998. Identificational focus vs. information focus. Language 47(2). 245-273. https://doi.org/10.2307/417867.

Klinedinst, Nathan & Daniel Rothschild. 2012. Connectives without truth tables. *Linguistics and Philosophy* 20(2). 137-175. https://doi.org/10.1007/s11050-011-9079-5.

Kratzer, Angelika & Junko Shimoyama. 2002. Indeterminate pronouns: the view from Japanese. In Yukio Otsu (ed.), *The proceedings of third Tokyo confer-ence in psycholinguistics*, 1-25. Tokyo: Hituzi Shyobo. https://doi.org/10.1007/978-3-319-10106-4_7.

Lohiniva, Karoliina. 2019, Two strategies for forming unconditionals: Evidence from disjunction. To appear in *North East Linguistic Society* 49. http://cornell2018.nelsconference.org/files/abstracts/NELS%2049%20Abstract%20290.pdf

Quer, Jospeh & Luis Vicente. 2009. Semantically triggered verb doubling in Spanish unconditionals. *19th Colloquium on Generative Grammar, Vitoria-Gasteiz, Spain*. 2009. https://www.researchgate.net/publication/228794343.

Rawlins, Kyle. 2013. (Un)conditionals. *Natural Language Semantics* 21(2). 111-178. https://doi.org/10.1007/s11050-012-9087-0.

Reynolds, N. 2007. *Whatever* and free choice: Beyond episodicity. M.A. thesis, UCSC.

Rubinstein, Aynat & Edit Doron. 2014. Varieties of alternative unconditionals. *IATL* 30, 101-115. http://www.iatl.org.il/wp-content/uploads/2015/10/IATL30proceedings-07-rubinstein_doron.pdf

Sarath Chandran, Manthodi & Rahul Balusu. 2019. NPI/FCIs of Malayalam: Division of labour between WH-ENGIL-UM & WH-UM. *TripleA 6*, MIT. https://triplea6.mit.edu/sites/default/files/Manthodi%2BBalusu_TripleA-6.pdf.

Šimík, Radek. 2018. Ever free relatives crosslinguistically. In Uli Sauerland & Stephanie Solt (eds.), *Sinn und Bedeutung* 22. https://semanticsarchive.net/sub2018/Simik.pdf.

Szabolcsi, Anna. 1994. All quantifiers are not equal: The case of focus. *Acta Linguistica Hungarica* 42(3/4). 171-187. https://www.jstor.org/stable/44306737.

Szabolcsi, Anna. 2010. *Quantification*. Cambridge University Press.

Szabolcsi, Anna. 2015. What do quantifier particles do? *Linguistics and Philosophy* 38(2). 159–204. https://doi.org.10.1007/s10988-015-9166-z.

Szabolcsi, Anna. 2017. Additive presuppositions are derived through activating focus alternatives. In Alexandre Cremers, Thom van Gessel & Floris Roelofsen (eds.), *21st Amsterdam Colloquium*, 455-465. http://events.illc.uva.nl/AC/AC2017/Proceedings/.

Szabolcsi, Anna. 2018. Two types of quantifier particles: Quantifier-phrase internal vs. heads on the clausal spine. *Glossa* 3(1), 69. https://doi.org/10.5334/gjgl.538.

von Fintel, Kai. 2000. Whatever. In Brendan Jackson & Tanya Matthews (eds.), *Semantics and Linguistic Theory* 10, 27–40. Ithaca, NY:CLC Publications. http://dx.doi.org/10.3765/salt.v10i0.3101.

Winter, Yoad. 1995. Syncategorematic conjunction and structured meanings. In Mandy Simons & Teresa Galloway (eds.), *Semantics and Linguistic Theory* 5, 387-404. Ithaca, NY: CLC Publications. http://dx.doi.org/10.3765/salt.v5i0.2704.

Anna Szabolcsi
Department of Linguistics
New York University
10 Washington Place
New York, NY 10003, USA
as109@nyu.edu