ON EXHAUSTIVE CONDITIONAL CLAUSES IN MODERN STANDARD ARABIC

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There is a semantic distinction between universal ECs and alternative ECs.

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(2) a. whether you go or not
     b. whether you go to Paris or to Berlin
     c. whether you go to Paris or to Berlin or Rome

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Governed EC involve a clause which is a dependent of an element such as *no matter*.

(3) a. wherever you go   (ungoverned EC)
      b. no matter where you go   (governed EC)

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The two distinctions seem relevant to many languages (Haspelmath & König 1998), and this includes Modern Standard Arabic (MSA).

In MSA it is not just the internal structure of ECs that is of interest but also their distribution.

This is more like that of simple conditionals than their English counterparts.

Aim – To explore both the internal structure and the distribution of MSA ECs, and develop analyses within HPSG.

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MSA has **ungoverned universal ECs**, involving just a clause and referring to all conditions of a certain form, which are broadly similar to their English counterparts:

(5) [mahmɑ   faʕala-t   l-llajnat-u]   sa-taðˤallu
      whatever   do.PST.3SGF   DEF-committee-NOM]   will-continue
     l-ʔintiqɑːdat-u   tuwajjah   ʔilay-hɑ
     DEF-criticisms-NOM   directed.PASS   to-it.3SGF
     'Whatever the committee does, criticism will be directed at it.'

The initial constituent may be nominal or adverbial:

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(6) [matamɑ   takun   l-ħaflat-u]   ʔaðhab
      whenever be.JUSS.3SGM   the-party-NOM   go.JUSS.1SG
     ʔilay-haa
     to-3SGF
     'Whenever the party is, I'm going to it.'

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     to-3SGF
     'Whenever the party is, I'm going to it.'

Like their English counterparts, they appear to be head-filler phrases with one of a small set of lexical items in the filler.

In addition to the items already illustrated, they may contain the following:

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(7) Ɂayy   'whoever'
     Ɂaynama   'wherever'
     ħayθuma   'wherever'
     kullama   'whenever'
     kayfamaː   'however'

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(8) a. [[min ?ayy-i   dawlat-in]   qadim-ta]   ?anta
        from whichever-GEN country-GEN came-2SGM   2SGM
        muraħab-un   bi-ka
        welcome-NOM with-2SGM
        'Whichever country you come from; you are welcome.'

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        muraħab-un   bi-ka
        welcome-NOM with-2SGM
        'Whichever country you come from; you are welcome.'
     b. [[ʔayy-a   kitɑːb-in] taqraʔ]   lan   tastafiːda
        whichever-ACC   book-GEN read.2SGM NEG   benefit.2SGM
        min-hu
        from-it
        'Whichever book you read; you won't benefit from it.'

In English, ungoverned universal ECs look like free relatives and it has sometimes been proposed that they are free relatives. (See Rawlins 2008: 2.1.3 for critical discussion).

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In MSA, they sometimes look like free relatives:

(9) [mahmɑɑ: tured]   ʔaʃtɑr-hu
     whatever   want.JUSS.2SGM   buy.JUSS.1SG.M/F-it.3SGM
     la-ka
     for-2SGM
     'Whatever you want, I will buy it for you.'

But free relatives are often quite different:

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(10) saʔaχtɑːru   [ʔallað   turiːdu / turiːdu-hu].
     will-choose.1SGM   COMP   want.2SGM / want.2SGM-it
     'I will choose whatever you want.'

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The free relative in (10) is identical to an ordinary relative clause.

(11) saʔaχtaːru   l-kitaːb-a   [ʔallað turiːdu /
     will-choose.1SGM   DEF-book-ACC   COMP want.2SGM
     turiːdu-hu]
     want.2SGM-it
     'I will choose the book you want.'

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There are no ECs like this.

Thus, there is no reason to consider a free relative analysis for ungoverned universal ECs in MSA.

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In MSA, ungoverned universal ECs cannot be *wh*-interrogatives because they have a different set of lexical items in the filler. The following are not possible interrogatives:

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In MSA, ungoverned universal ECs cannot be *wh*-interrogatives because they have a different set of lexical items in the filler. The following are not possible interrogatives:

(12) a. *mahmɑ   faʕala-t   l-llajnat-u
        whatever   do.PAST.3SGF DEF-committee-NOM
        'Whatever does the committee do?'
     b. *matamɑ   takunu   l-ħaflat-u
        whenever   be.3SGM   DEF-party-NOM
        'Whenever is the party?'

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(13) a. maɑː   faʕala-t   l-llajnat-u
         what   do.PAST.3SGF DEF-committee-NOM
         'What does the committee do?'
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But although MSA ungoverned universal ECs are not *wh*-interrogatives, they are like *wh*-interrogatives in identifying a set of possible situations.

They indicate that all the situations are ones in which the modified clause is true.

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(14) a. [ʔa-ðahab-ta   ʔilaɑː baris ʔam   lam taðhab]
        (Q)-go.PAST-2SGM   to   Paris or   not go.PRES.2SGM
        sa-taqdˤiiː   waqt-an   mumtiʕ-an
        will-have.2SGM time-ACC   good-ACC
        'Whether you go to Paris or not, you'll have a good time.'

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       will-have.2SGM time-ACC   good-ACC
       'Whether you go to Paris or not, you'll have a good time.'

   b. [ʔa-ðahab-ta   ʔilaɑː baris   ʔam   ʔilaɑː ruːmɑː]
       (Q)-go.PAST-2SGM   to   Paris   or   to   Rome
       sa-taqdˤiiː   waqt-an   mumtiʕ-an
       will-have.2SGM time.ACC   good-ACC
       'Whether you go to Paris or Rome, you'll have a good time.'

c. [ʔa-ðahab-ta   ʔilɑː baris ʔam   ʔilɑː ruːmɑː ʔam
   (Q)-go.PAST-2SGM   to   Paris or   to   Rome   or
   ʔilɑː berliːn]   sa-taqdˤiiː   waqt-an   mumtiʕ-an
   to   Berlin   will-have.2SGM time.ACC   good-ACC
   'Whether you go to Paris or Rome or Berlin, you'll have a good
   time.'

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(15) a. (ʔa)-ðahab-ta ʔilaɑː baris ʔam lam taðhab
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        (Q)-go.PAST.2SGM   to   Paris or   not   go.PRES.2SGM
        'Did you go to Paris or not?'

    b. saʔaluuːn-iː   [(ʔa)-ðahab-ta   ʔilaɑː baris ʔam
        ask.PAST.3PLM-1SGM/F Q-go.PAST-2SGM   to   Paris   or
        lam taðhab]
        not go.PRES.2SGM
        'They asked me whether you went to Paris or not.'

Ungoverned alternative ECs identify two or more possible situations in the same way as alternative interrogatives and indicate that all the situations are ones that make the modified clause true.

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(16) a. [sawɑːʔ-un [(ʔa)-ðahab-ta   ʔilaɑː baris ʔam lam
       same-NOM Q-go.PAST-2SGM   to   Paris or   not
       taðhab]]   sa-taqdˤiiː   waqt-an   mumtiʕ-an
       go.PRES.2SGM   will-have.2SGM time-ACC   good-ACC
       'No matter whether you go to Paris or not, you'll have a good time.'

MSA also has **governed alternative ECs**, involving *sawaːʔ-un* 'same' followed by an alternative interrogative:

(16) a. [sawɑːʔ-un [(ʔa)-ðahab-ta   ʔilɑː baris   ʔam lam
      same-NOM Q-go.PAST-2SGM   to   Paris   or   not
      taðhab]]   sa-taqdˤiiː   waqt-an   mumtiʕ-an
      go.PRES.2SGM   will-have.2SGM time-ACC   good-ACC
      'No matter whether you go to Paris or not, you'll have a good time.'

   b. [sawɑːʔ-un   [(ʔa)-ðahab-ta   ʔilɑː baris   ʔam   ʔilɑː
      same-NOM   (Q)-go.PAST-2SGM   to   Paris   or   to
      ruːmɑː]] sa-taqdˤiiː   waqt-an   mumtiʕ-an
      Rome   will-have.2SGM time.ACC   good-ACC
      'No matter whether you go to Paris or Rome, you'll have a good time.'

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(17) [Ihan   sama   [mitä   hän   sanoo]],   mies   psyy   vaiti.
    quite   same   what   she   says   man   stays   silent
    'No matter what she says, he keeps quiet.'

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Haspelmath & König also give similar examples from Polish and Romani.

The appearance of a word meaning 'same' clearly reflects the fact that the main clause is true in all of the situations identified by the EC. Hence, they are all equally good, or the same.

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(18) a. *[sawɑːʔ-un [maɑː faʕala-ta]],   sa-taqdˤiiː   waqt-an
      same-NOM   what do.PAST-2SGM   will-have.2SGM time.ACC
    mumtiʕ-an]
    good-ACC
    'No matter what you do, you will have a good time.'

   b. *[sawɑːʔ-un [matɑː ðahab-ta]],   sa-taqdˤiiː
      same-NOM   when go.PAST-2SGM   will-have.2SGM
    waqt-an   mumtiʕ-an]
    time.ACC   good-ACC
    'No matter whenever you go, you will have a good time.'

It seems, then, that MSA has no governed universal ECs.

The distribution of ECs

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(19) ʔiðɑː   ʔaχtˤaʔa -t   l-llajnat-u]
     if   makes a mistake.PAST.3SGF DEF-committee-NOM
     sa-tuwajjah   l-ʔintiqɑːdat-u   ʔilay-hɑ
     will-directed.PASS DEF-criticisms-NOM   to-it.3SGF
     'If the committee makes mistake, criticisms will be directed at it.'

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    sa-tuwajjah   l-ʔintiqaːdat-u   ʔilay-hɑ
    will-directed.PASS DEF-criticisms-NOM to-it.3SGF
    'If the committee makes mistake, criticisms will be directed at it.'

(20) [ħiːna/ ħiːnamɑː tuχtˤiʔu   l-llajnat-u]
    when   makes a mistake.PRES.3SGF   DEF-committee-NOM
    tuwajjahu   l-ʔintiqaːdat-u   ʔilay-hɑ
    directed.PASS   DEF-criticisms-NOM to-it.3SGF
    'When the committee makes a mistake, criticism is directed at it.'

The adjunct clause can precede or follow the clause it modifies:

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(21) sa-taðˁallu   l-ʔintiqɑːdat-u   tuwajjah   ʔila
      will-continue   DEF-criticisms-NOM directed.PASS   to
      l-llajnat-i   [mahmɑ   faˁala-t]
      DEF-committee-GEN   whatever   do.PAST.3SGF
      'Criticism will be directed at the committee, whatever it does.'

The adjunct clause can precede or follow the clause it modifies:

(21) sa-taðˤallu   l-ʔintiqɑːdat-u   tuwajjah   ʔila
     will-continue   DEF-criticisms-NOM   directed.PASS   to
     l-llajnat-i   [mahmɑ   faʕala-t]
     DEF-committee-GEN   whatever   do.PAST.3SGF
     'Criticism will be directed at the committee, whatever it does.'

(22) sa-taðˤallu   l-ʔintiqɑːdat-u   tuwajjah   ʔila
     will-continue   DEF-criticisms-NOM   directed.PASS   to
     l-llajnat-i   [ʔiðɑː ʔaχtˤaʔa -t]
     DEF-committee-GEN   if   makes a mistake.PAST.3SGF
     'Criticism will be directed at the committee, if it makes a mistake.'

(23) tuwajjahu   l-ʔintiqɑːdat-u   ʔila   l-llajnat-i
     directed.PASS   DEF-criticisms-NOM   to   DEF-committee-GEN
     [ħiːna/ ħiːnamɑː   tuχtˤiʔu]
     when   makes a mistake.PRES.3SGF
     'Criticism is directed at the committee, when it makes a mistake.'

In MSA, as in English, simple conditionals can also modify a clause with a special marking which cannot stand alone. Thus, the following is possible:

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(24) ʔiðaː   ʔaχtˤaʔa -t   l-llajnat-u]
     if   makes a mistake.PAST.3SGF DEF-committee-NOM
     fa-sa-tuwajjah   l-ʔintiqaːdat-u   ʔilay-hα
     then-will-directed.PASS   DEF-criticisms-NOM to-it.3SGF
     'If the committee makes mistake, then criticisms will be directed at it.'

In MSA, ECs too can modify a marked clause. This illustrates for ungoverned universal ECs:

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(25) [mahmɑɑː   faʕala-t   l-llajnat-u]
     whatever   do.PAST-3SGF   DEF-committee-NOM
     fa-sa-taðʕallu   l-ʔintiqɑːdat-u   tuwajjah
     then-will-continue   DEF-criticisms-NOM   directed.PASS
     ʔilay-hɑ.
     to-it.3SGF
     'Whatever the committee does, criticisms will be directed at it.'

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(26) [ʔa-ðahab-ta   ʔilaɑː baris   ʔam   lam taðhab]
      (Q)-go.PAST-2SGM to   Paris   or   not go.PRES.2SGM
      fa-sa-taqdˤiiː   waqt-an   mumtiʕ-an
      then-will-have.2SGM   time-ACC   good-ACC
      'Whether you go to Paris or not, you'll have a good time.'

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(26) [ʔa-ðahab-ta   ʔilɑː baris ʔam   lam taðhab]
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    fa-sa-taqdˤiiː   waqt-an   mumtiʕ-an
    then-will-have.2SGM   time-ACC   good-ACC
    'Whether you go to Paris or not, you'll have a good time.'

(27) [sawɑːʔ-un [(ʔa)-ðahab-ta   ʔilɑːbaris   ʔam lam taðhab]]
     same-NOM Q-go.PAST-2SGM to   Paris   or   not go.PRES.2SGM
    fa-sa-taqdˤiiː   waqt-an   mumtiʕ-an
    then-will-have.2SGM   time-ACC   good-ACC
    'No matter whether you go to Paris or not, you'll have a good time.'

Whereas both simple conditionals and ECs can follow as well as precede an unmarked clause, they can only precede a marked clause:

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(28) *fa-sa-taðˤallu   l-ʔintiqɑːdat-u   tuwajjah   ʔila
     then-will-continue   DEF-criticisms-NOM   directed.PASS   to
     l-llajnat-i   [ʔiðɑː   ʔaχtˤaʔa-t]
     DEF-committee-GEN   if   makes a mistake.PAST.3SGF
     'Criticism will be directed at the committee, if it makes a mistake.'

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(28) *fa-sa-taðˤallu   l-ʔintiqaːdat-u   tuwajjah   ʔila
     then-will-continue   DEF-criticisms-NOM   directed.PASS   to
     l-llajnat-i   [ʔiðaː ʔaχtˤaʔa-t]
     DEF-committee-GEN   if   makes a mistake.PAST.3SGF
     'Criticism will be directed at the committee, if it makes a mistake.'
(29) *fa-sa-taðˤallu   l-ʔintiqaːdat-u   tuwajjah   ʔilay
     then-will-continue   DEF-criticisms-NOM   directed.PASS   to-it
     l-llajnat-i   [mahma   faʕala-t]
     DEF-committee-GEN   whatever   do.PST.3SGF
     'Criticisms will be directed at the committee, whatever it does.'

3. Analyses

3. Analyses

The distribution of ECs.
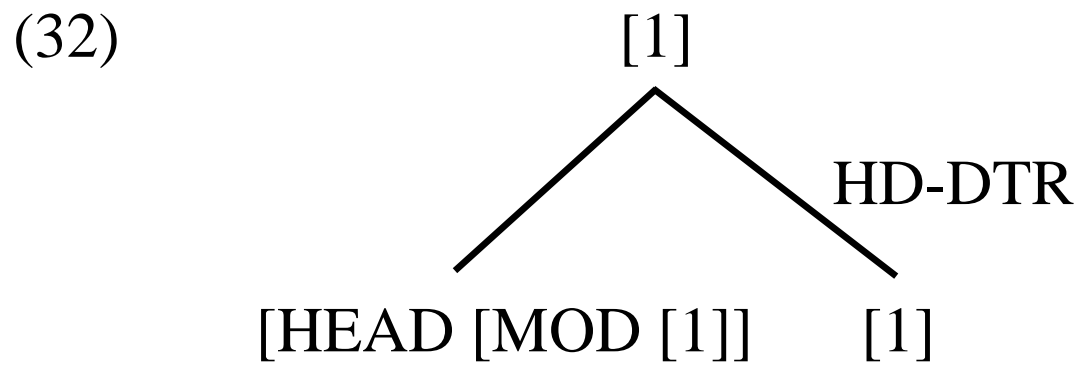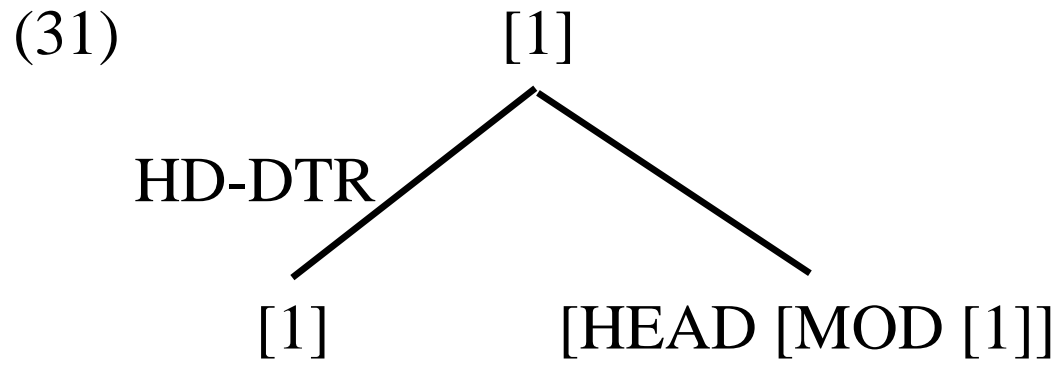
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$$(30) \quad \textit{hd-adj-ph} \Rightarrow \begin{bmatrix} \text{DTRS} & < [1][\text{SS }[2]], [\text{HEAD }[\text{MOD }[2]]] > \\ \text{HD-DTR }[1] \end{bmatrix}$$

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$$

Assuming some general constraint, e.g. the Generalized Head Feature Principle of Ginzburg & Sag (2000), requires a phrase and its head to normally have the same syntactic and semantic properties, this will give structures of the following form (where the daughters may appear in either order):

(31)

```
                    [1]
                   /  \
         HD-DTR   /    \
                 /      \
               [1]    [HEAD [MOD [1]]]
```

(31)

```
                        [1]
                       /   \
              HD-DTR  /      \
                     /        \
                   [1]      [HEAD [MOD [1]]
```

(32)

```
                        [1]
                       /   \
                      /      \ HD-DTR
                     /        \
         [HEAD [MOD [1]]      [1]
```
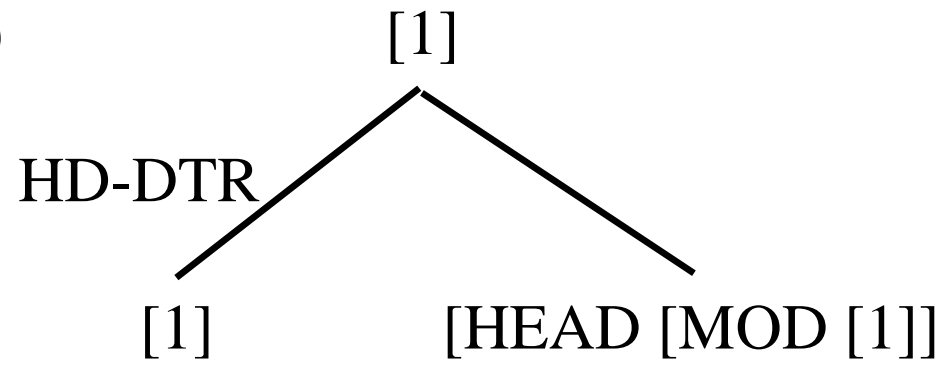
Combinations of simple conditional or EC and a clause marked by *fa-* are more challenging.

Combinations of simple conditional or EC and a clause marked by *fa-* are more challenging.

If they were analysed as ordinary head-adjunct structures, they would have the same SYNSEM value as the *fa*-clause, which would leave us without an explanation for the fact that such combinations are ordinary main clauses which can stand on their own but *fa*-clauses are not.

Alqurashi & Borsley (2014) show that MSA simple conditionals are one of a number of types of correlative clause, in which an adverbial clause and main clause and both have some distinctive marking and that means that the main clause cannot appear on its own.

(33) [bimaa   ʔannka   taqraʔu   ʔakθar]   [ʔiðann
     as/since COMP.2SGM   read-IMPF.2SGM more   so
     sa-tafhamu   ʔakθar]
     will-understand.IMPF.2SGM   more
     'As/since you read more, so you will understand more.'

(33) [bimaa   ʔannka   taqraʔu   ʔakθar]   [ʔiðann
     as/since COMP.2SGM   read-IMPF.2SGM more   so
     sa-tafhamu   ʔakθar]
     will-understand.IMPF.2SGM   more
     'As/since you read more, so you will understand more.'

(34) [kullamã   qaraʔta   ʔakθar]   [kullamã
      whenever   read.PERF.2SGM more   whenever
      fahimta   ʔakθar]
      understand.PERF.2SGM more
      'Whenever you read more, you understood more.'
      'The more you read, the more you understood.'

Such examples need not be a problem if general constraints can be overridden by more specific constraints since this means a constraint can require a phrase and its head to differ in some respects.

Such examples need not be a problem if general constraints can be overridden by more specific constraints since this means a constraint can require a phrase and its head to differ in some respects.

Following e.g. Alqurashi & Borsley (2014) (cf. also Abeillé & Chaves 2021: 3.3), we assume that a number of types of clause with a distinctive form have a value other than *none* for a feature a CORREL, while ordinary clauses which can stand alone are [CORREL *none*].

We propose that there is a subtype of *head-adjunct-phrase* called *correlative-clause*, and that it has a number of subtypes, including *ʔiðaa-fa-clause*:

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(35)   *head-adjunct-phrase*
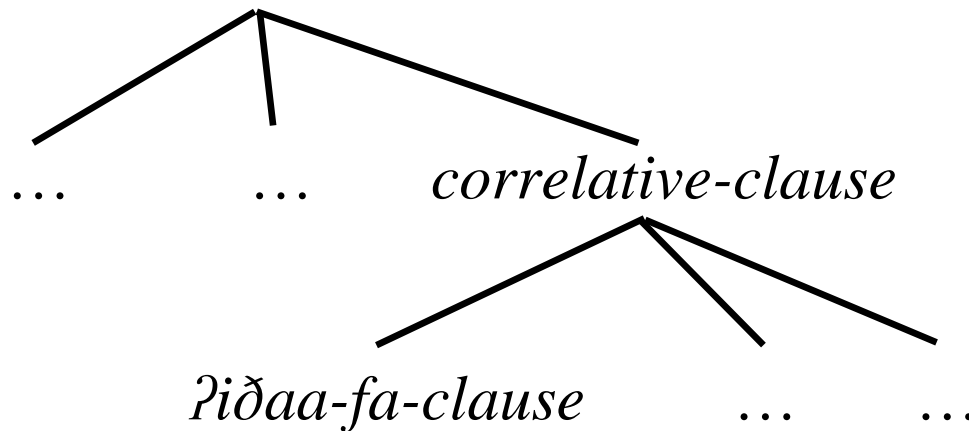
We propose that *correlative-clause* and *ʔiðaa-fa-clause* are subject to the following constraints:

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(36)   *correlative-cl* $\Rightarrow$

$$\begin{bmatrix} \text{CORREL } none \\ \text{DTRS} < [\text{CORREL } \neg none], [\text{CORREL } \neg none] > \end{bmatrix}$$

We propose that *correlative-clause* and *ʔiðaa-fa-clause* are subject to the following constraints:

(36)   *correlative-cl* $\Rightarrow$

$$\begin{bmatrix} \text{CORREL } \textit{none} \\ \text{DTRS } < [\text{CORREL } \neg\textit{none}], [\text{CORREL } \neg\textit{none}] > \end{bmatrix}$$

(37)   *ʔiðaa-fa-cl* $\Rightarrow$ [DTRS <[CORREL *fa*], [CORREL *ʔiðaa*]>]

Together they give clauses with structures with following form:

Together they give clauses with structures with following form:
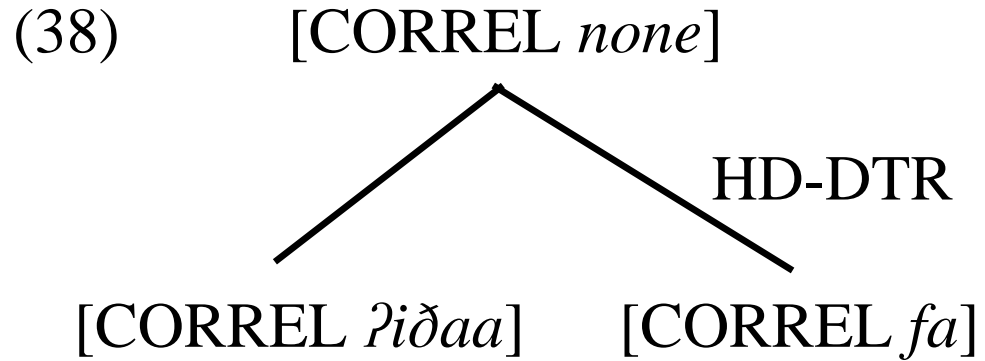
(38)   [CORREL *none*]

        [CORREL *ʔiðaa*]   [CORREL *fa*]

(with HD-DTR label on the right branch)

Together they give clauses with structures with following form:

(38)   [CORREL *none*]
                   /\
                  / \ HD-DTR
                 /   \
      [CORREL *ʔiðaa*] [CORREL *fa*]

Together they give clauses with structures with following form:

(38)   [CORREL *none*]

                                      HD-DTR

[CORREL *ʔiðaa*]   [CORREL *fa*]
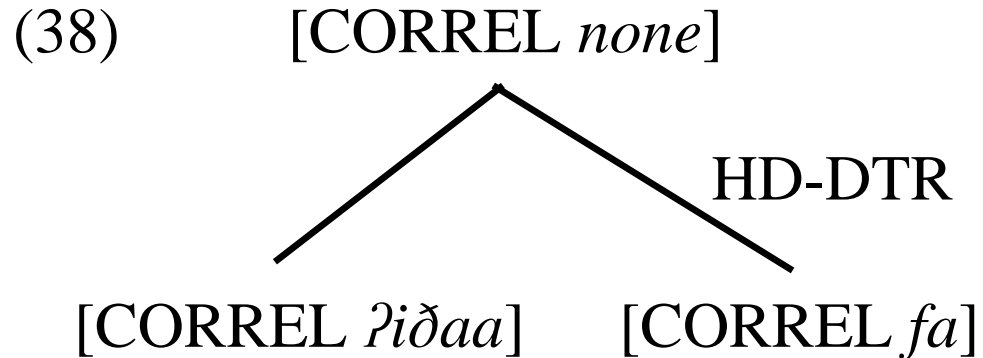
If both simple conditionals and ECs are [CORREL *ʔiðaa*], they will appear in these clauses.

Together they give clauses with structures with following form:
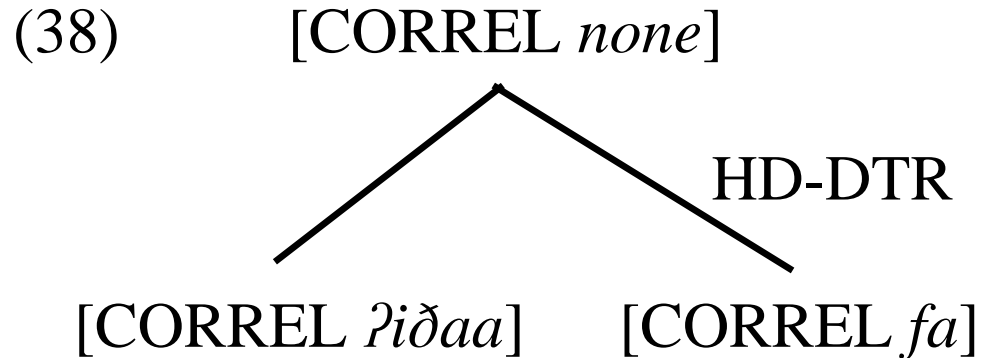
(38)   [CORREL *none*]

                                        HD-DTR

        [CORREL *ʔiðaa*]   [CORREL *fa*]

If both simple conditionals and ECs are [CORREL *ʔiðaa*], they will appear in these clauses.

This means that [CORREL *ʔiðaa*] clauses do not always contain the lexeme *ʔiðaa*, but the following suggests that [CORREL *if*] clauses do not always contain the lexeme *if*:

Together they give clauses with structures with following form:
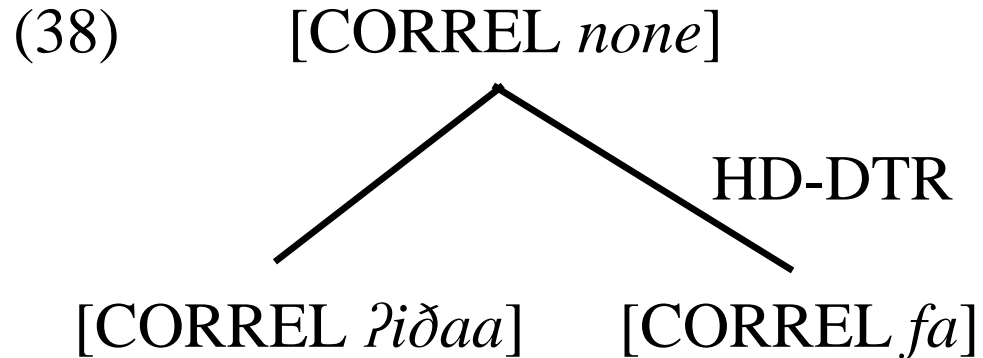
(38)   [CORREL *none*]

If both simple conditionals and ECs are [CORREL *ʔiðaa*], they will appear in these clauses.

This means that [CORREL *ʔiðaa*] clauses do not always contain the lexeme *ʔiðaa*, but the following suggests that [CORREL *if*] clauses do not always contain the lexeme *if*:

(39) Had I been there, then I would have seen you.

The following constraint will ensure that the main clause, marked with *fa-*, comes second in correlative clauses, including *ʔiðaa-fa* clauses:

The following constraint will ensure that the main clause, marked with *fa-*, comes second in correlative clauses, including *ʔiðaa-fa* clauses:

$$
(40) \quad \textit{correlative-cl} \Rightarrow \begin{bmatrix} \text{PHON} \ [1] \oplus [2] \\ \text{DTRS} < \begin{bmatrix} \text{PHON} \ [2] \end{bmatrix}, \begin{bmatrix} \text{PHON} \ [1] \end{bmatrix} > \end{bmatrix}
$$

The internal structure of ECs

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Governed alternative ECs.

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Governed alternative ECs.

Like *no matter*, as discussed in Arnold and Borsley (2014), *sawa:ʔ-un* can be analysed as a head which takes an interrogative and derives a conditional meaning from it, but unlike *no matter*, it only takes an alternative interrogative.

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Given the approach just proposed, ECs and hence *sawa:ʔ-un,* must be [CORREL *ʔiðaa*].

This means structures of the following form:

This means structures of the following form:

(41)

$$
\begin{bmatrix}
\text{CORREL } ʔiðaa \\
\text{MOD } [1]S \\
\text{COMPS} < [] >
\end{bmatrix}
$$

$$
\begin{bmatrix}
\text{CORREL } ʔiðaa \\
\text{MOD } [1] \\
\text{COMPS} < [2] >
\end{bmatrix}
\qquad [2]S
$$
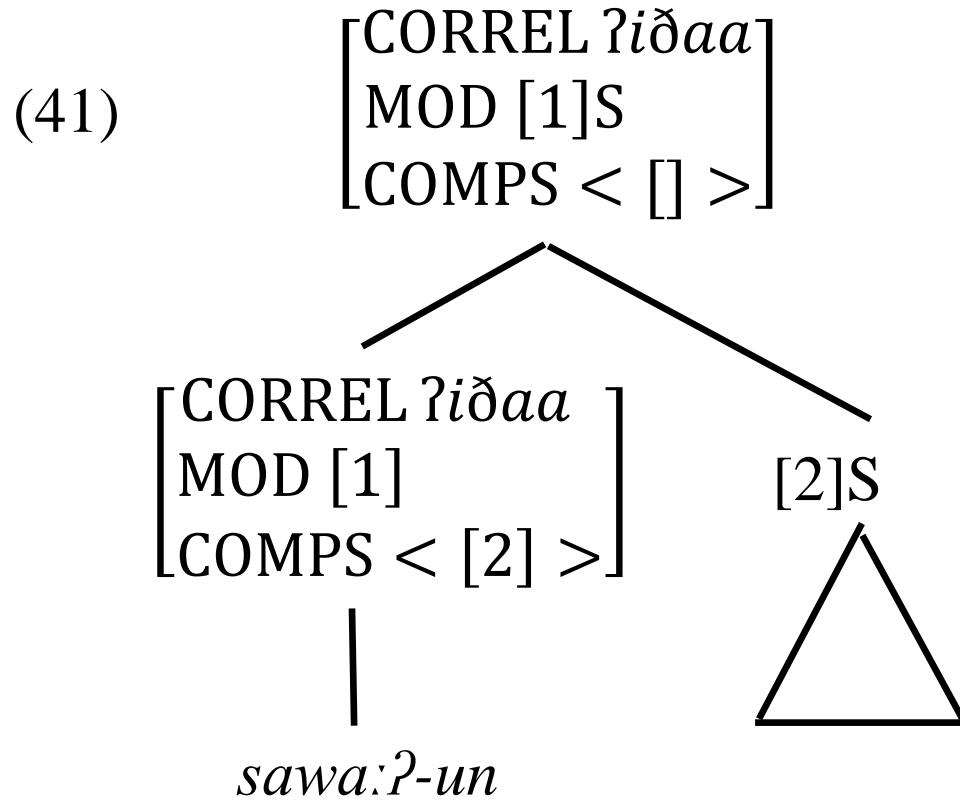
sawa:ʔ-un

It means an analysis of the following form for *sawa:ʔ-un*:

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(42)

$$
\begin{bmatrix}
\text{SS|LOC} \begin{bmatrix} \text{CAT} \begin{bmatrix} \text{HEAD} \begin{bmatrix} noun \\ \text{MOD S: [1]} \end{bmatrix} \\ \text{CORREL } ʔiðaa \end{bmatrix} \\ \text{CONT } ex\text{--}cond \ ([2],[1]) \end{bmatrix} \\
\text{ARG--ST } \langle \begin{bmatrix} \text{LOC} \begin{bmatrix} \text{CAT S} \\ \text{CONT [2]]} \end{bmatrix} \end{bmatrix} \rangle
\end{bmatrix}
$$

It means an analysis of the following form for *sawa:ʔ-un*:

$$
(42) \quad
\begin{bmatrix}
\text{SS|LOC} \begin{bmatrix}
\text{CAT} \begin{bmatrix}
\text{HEAD} \begin{bmatrix} noun \\ \text{MOD S: [1]} \end{bmatrix} \\
\text{CORREL } \textit{ʔiðaa}
\end{bmatrix} \\
\text{CONT } ex\text{--}cond \, ([2], [1])
\end{bmatrix} \\
\text{ARG--ST } \langle \begin{bmatrix} \text{LOC} \begin{bmatrix} \text{CAT S} \\ \text{CONT [2]]} \end{bmatrix} \end{bmatrix} \rangle
\end{bmatrix}
$$

Following Arnold and Borsley (2014), *ex-cond* ([2], [1]) is a condition which holds just in case [1] holds in every situation identified by [2].

It means an analysis of the following form for *sawaːʔ-un*:

$$(42) \quad \begin{bmatrix} \text{SS|LOC} & \begin{bmatrix} \text{CAT} & \begin{bmatrix} \text{HEAD} & \begin{bmatrix} noun \\ \text{MOD S: [1]} \end{bmatrix} \\ \text{CORREL } \text{?}i\eth aa \end{bmatrix} \\ \text{CONT } ex\text{-}cond \ ([2],[1]) \end{bmatrix} \\ \text{ARG–ST} \ \langle \begin{bmatrix} \text{LOC} & \begin{bmatrix} \text{CAT S} \\ \text{CONT [2]]} \end{bmatrix} \end{bmatrix} \rangle \end{bmatrix}$$

Following Arnold and Borsley (2014), *ex-cond* ([2], [1]) is a condition which holds just in case [1] holds in every situation identified by [2].

Nothing here ensures that the complement is an alternative interrogative. This should probably be done with an appropriate CONT value, perhaps drawing on the analysis of Yoo (2000).

There is no need to specify what the modified S can be. The grammar will allow either an S[CORREL *none*] in an ordinary head-adjunct clause or a *fa*-clause in an *Ɂidaa-fa* clause
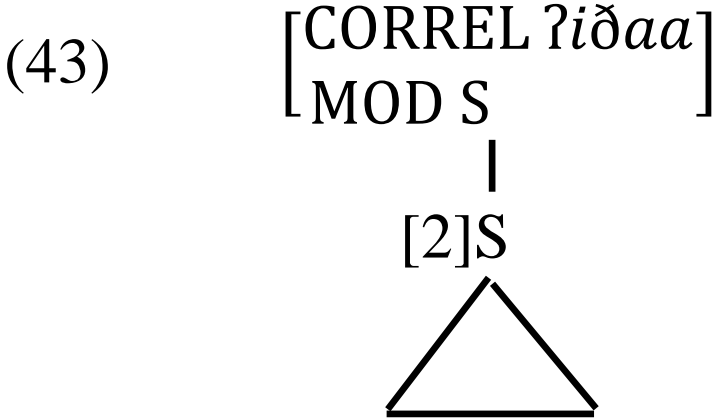
Ungoverned alternative ECs

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One possibility for ungoverned alternative ECs would be an analysis involving a phonologically null counterpart of *sawa:ʔ-un*.

Ungoverned alternative ECs

One possibility for ungoverned alternative ECs would be an analysis involving a phonologically null counterpart of *sawa:ʔ-un*.

But if one prefers to avoid empty elements, the obvious alternative is a unary branching analysis in which the daughter has an interrogative meaning just like the complement of *sawa:ʔ-un* and the mother derives a conditional meaning from it in essentially the same way as *sawa:ʔ-un* does.

This means structures of the following form:

This means structures of the following form:

(43) $\begin{bmatrix} \text{CORREL } \textit{ʔiðaa} \\ \text{MOD S} \end{bmatrix}$

               |

            [2]S

           △

To license such structures, we propose a phrase type *ungoverned-alternative-ec* subject to the following constraint:

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(44)   *ungoverned-alternative-ec* $\Rightarrow$

$$
\begin{bmatrix}
\text{SS}|\text{LOC} \begin{bmatrix} \text{CAT} \begin{bmatrix} \text{HEAD [MOD S: [1]]} \\ \text{CORREL } \text{ʔ}i\eth aa \end{bmatrix} \\ \text{CONT } ex\text{--}cond\ ([2], [1]) \end{bmatrix} \\
\text{DTRS } \left\langle \begin{bmatrix} \text{LOC} \begin{bmatrix} \text{CAT S} \\ \text{CONT [2]} \end{bmatrix} \end{bmatrix} \right\rangle
\end{bmatrix}
$$

To license such structures, we propose a phrase type *ungoverned-alternative-ec* subject to the following constraint:

(44)   *ungoverned-alternative-ec* $\Rightarrow$

$$
\begin{bmatrix}
\text{SS|LOC} \begin{bmatrix} \text{CAT} \begin{bmatrix} \text{HEAD [MOD S: [1]]} \\ \text{CORREL } \textit{ʔiðaa} \end{bmatrix} \\ \text{CONT } \textit{ex–cond} \text{ ([2], [1])} \end{bmatrix} \\
\text{DTRS } \left\langle \begin{bmatrix} \text{LOC} \begin{bmatrix} \text{CAT S} \\ \text{CONT [2]} \end{bmatrix} \end{bmatrix} \right\rangle
\end{bmatrix}
$$

As with the complement in (42), it needs to be specified that the daughter is an alternative interrogative, probably with an appropriate CONT value.

Ungoverned universal ECs

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If they were *wh*-interrogatives like their English counterparts, it would be reasonable to propose a unary branching analysis like that proposed for ungoverned alternative ECs.

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If they were *wh*-interrogatives like their English counterparts, it would be reasonable to propose a unary branching analysis like that proposed for ungoverned alternative ECs.

It is clear that they are not *wh*-interrogatives. However, the analysis of *wh*-interrogatives is still of some relevance.

We propose that they involve a special of *head-filler-phrase*, which we will call the subtype *universal-ec*, which has then following properties:

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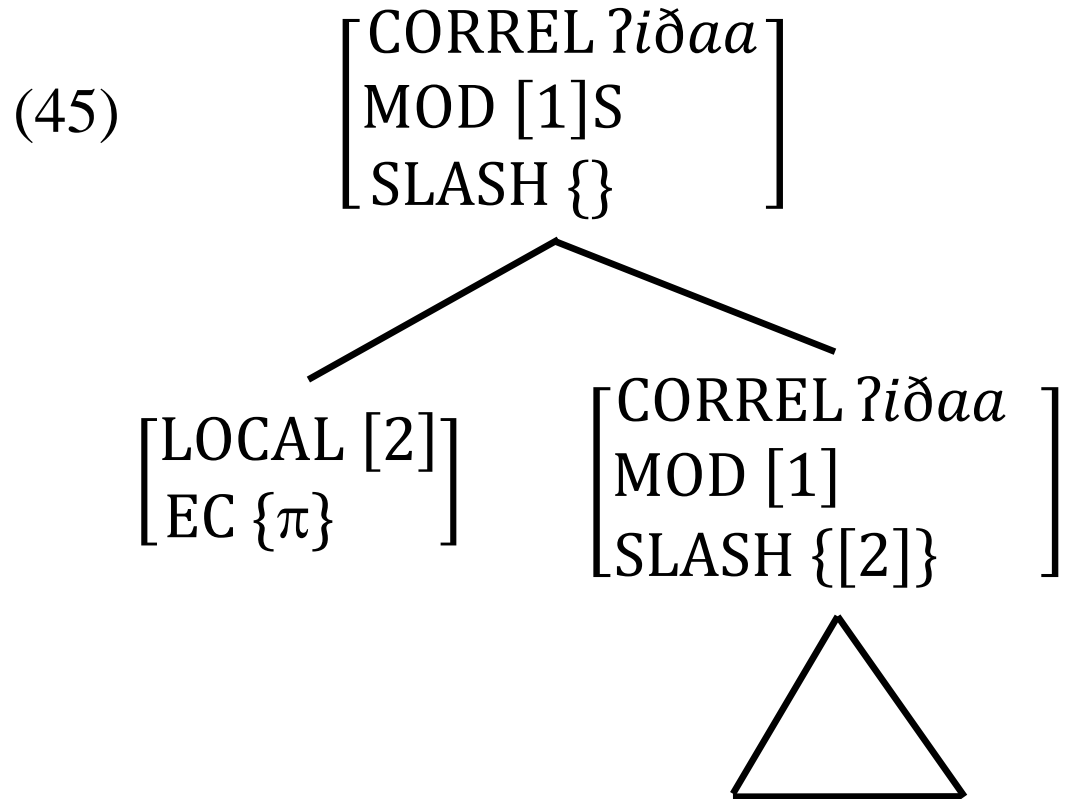
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- It modifies a clause.

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- It has a filler with one of a small number of EC words.
- It modifies a clause.
- It is [CORREL *ʔidaa*].

We propose that they involve a special of *head-filler-phrase*, which we will call the subtype *universal-ec*, which has then following properties:

- It has a filler with one of a small number of EC words.
- It modifies a clause.
- It is [CORREL *ʔidaa*].
- It has conditional semantics.

This means structures of the following form:

This means structures of the following form:

(45)

$$
\begin{bmatrix} \text{CORREL } \textit{ʔiðaa} \\ \text{MOD [1]S} \\ \text{SLASH \{\}} \end{bmatrix}
$$

$$
\begin{bmatrix} \text{LOCAL [2]} \\ \text{EC \{π\}} \end{bmatrix}
\qquad
\begin{bmatrix} \text{CORREL } \textit{ʔiðaa} \\ \text{MOD [1]} \\ \text{SLASH \{[2]\}} \end{bmatrix}
$$

This has an EC feature where *wh*-interrogatives have WH.

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Like WH, its value is a set containing a single parameter, a combination of an index and a restriction.

We propose that *universal-ec* is subject to the following constraint:

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(46)　　*universal-ec* $\Rightarrow$

$$
\begin{bmatrix}
\text{SS|LOC} \begin{bmatrix} \text{CAT} \begin{bmatrix} \text{HEAD [MOD S: [1]]} \\ \text{CORREL } \textit{ʔidaa} \end{bmatrix} \\ \text{CONT } \textit{ex--cond} \ (\lambda\{\pi, \dots\}[\lambda\mathbf{X}[\mathbf{Y}](\mathbf{Z})], [1]) \end{bmatrix} \\
\text{DTRS } \langle \begin{bmatrix} \text{EC } \{\pi\} \\ \text{CONT } \mathbf{Z} \end{bmatrix}, \begin{bmatrix} \text{SLASH } \{[\text{CONT } \mathbf{X}]\} \\ \text{CONT } \mathbf{Y} \end{bmatrix} \rangle
\end{bmatrix}
$$

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(46) *universal-ec* $\Rightarrow$

$$
\begin{bmatrix}
\text{SS|LOC} \begin{bmatrix}
\text{CAT} \begin{bmatrix} \text{HEAD [MOD S: [1]]} \\ \text{CORREL } \textit{ʔidaa} \end{bmatrix} \\
\text{CONT } \textit{ex--cond } (\lambda\{\pi, \dots\}[\lambda\mathbf{X}[\mathbf{Y}](\mathbf{Z})], [1])
\end{bmatrix} \\
\text{DTRS } \langle \begin{bmatrix} \text{EC } \{\pi\} \\ \text{CONT } \mathbf{Z} \end{bmatrix}, \begin{bmatrix} \text{SLASH } \{[\text{CONT } \mathbf{X}]\} \\ \text{CONT } \mathbf{Y} \end{bmatrix} \rangle
\end{bmatrix}
$$

Building on Sag's (2010: 5.3) analysis of *wh*-interrogatives, the semantics involves a propositional abstract constructed from the semantics of the daughters.

We propose that *universal-ec* is subject to the following constraint:

(46)   *universal-ec* ⇒

$$
\begin{bmatrix}
\text{SS|LOC}
\begin{bmatrix}
\text{CAT}
\begin{bmatrix}
\text{HEAD [MOD S: [1]]} \\
\text{CORREL } \textit{ʔidaa}
\end{bmatrix} \\
\text{CONT } \textit{ex–cond } (\lambda\{\pi, \dots\}[\lambda\mathbf{X}[\mathbf{Y}](\mathbf{Z})], [1])
\end{bmatrix} \\
\text{DTRS } \langle
\begin{bmatrix}
\text{EC } \{\pi\} \\
\text{CONT } \mathbf{Z}
\end{bmatrix},
\begin{bmatrix}
\text{SLASH } \{[\text{CONT } \mathbf{X}]\} \\
\text{CONT } \mathbf{Y}
\end{bmatrix}
\rangle
\end{bmatrix}
$$

Building on Sag's (2010: 5.3) analysis of *wh*-interrogatives, the semantics involves a propositional abstract constructed from the semantics of the daughters.

But unlike with *wh*-interrogatives, this is the first argument of *ex-cond*, and the modified clause is the second argument as before.

This is also somewhat like Sag's (2010: 5.4) analysis of *wh*-relatives, in which a modifying semantics is based on a clausal semantics.

4. Conclusions

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- Ungoverned universal ECs involve a subtype of head-filler phrase, which derives a conditional meaning from its daughters.

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