ON EXHAUSTIVE CONDITIONAL CLAUSES IN MODERN STANDARD ARABIC

Abeer Alsulami, King Saud University, Riyadh
Robert D. Borsley, University of Essex and Bangor University

1. Introduction

Simple conditional clauses, exemplified in English by *if*-clauses, identify a condition under which the main clause they modify is true. What are known as exhaustive conditionals (ECs) (or unconditionals), identify a set of two or more conditions on which the status of the clause depends. Universal ECs, such as English *wherever you go*, refer to all conditions of a certain form (of the form *you go to x* in this case), while alternative ECs, such as *whether you go or not*, essentially list the conditions. Separate from this semantic distinction is a formal distinction, highlighted in Huddleston and Pullum (2002: 761-765), between ungoverned ECs such as those just presented, which involve just a clause of some kind, and governed ECs, exemplified in English by *no matter where you go*, involving a clause which is a dependent of an element like *no matter*. These two distinctions seem relevant to many languages (Haspelmath & König 1998), and this includes Modern Standard Arabic (MSA). But it is not only the internal structure of ECs that is of interest in MSA. Their distribution, which is more like that of simple conditionals than their English counterparts, is also of interest. In this paper, we will explore both the internal structure and the distribution of MSA ECs, and develop analyses within HPSG. We will concentrate on syntax, but will also say something about semantics.

2. The basic data

We begin with **ungoverned universal ECs**, which involve just a clause and refer to all conditions of a certain form. They are broadly similar to their English counterparts, and may be nominal or adverbial:

(1) a. [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, criticisms will be directed at it.'

b. [matamɑ takun l-ħaflat-u] ʔaðhab ʔilay-haa
whenever be.JUSS.3SGM the-party-NOM go.JUSS.1SG 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 illustrated in (1), they may contain ʔayy, 'whoever', *ʔaynama*, *ħayθuma* 'wherever', *kullama*, 'whenever', and *kayfamaː* 'however'. They may also have more complex fillers, as the following shows:

(2) [[min ʔayy-i dawlat-in] qadim-ta] ʔanta murаħab-un
from whichever-GEN country-GEN came-2SGM 2SGM welcome-NOM
bi-ka
with-2SGM
'Whichever country you come from; you are welcome.'

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). In MSA they sometimes look like free relatives, but free relatives are often quite different (Alqurashi 2012):

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

b. saʔaχtɑːru [ʔallað turiːdu].
will-choose.1SGM COMP want.2SGM
'I will choose whatever you want.'

The free relative in (3b) looks just like a relative clause, In English, it has been argued by Huddleston and Pullum (2002: 761-765) and Rawlins (2008: 2.1.3, 2013: 3.1) that ungoverned universal ECs are *wh*-interrogatives. In MSA, they cannot be *wh*-interrogatives because they have a different set of lexical items in the filler. Thus, the following correspond to the examples in (1):

(4) a. maɑː faʕala-t l-llajnat-u
what do.PST.3SGF DEF-committee-NOM
'What does the committee do?'
b. matɑː takunu l-ħaflat-u
when be.3SGM DEF-party-NOM
'When is the party?'

But although MSA ungoverned universal ECs are not *wh*-interrogatives, they are like *wh*-interrogatives in identifying a set of possible situations, and they indicate that all the situations are ones in which the modified clause is true.

Turning to **ungoverned alternative ECs**, we have examples like the following, which look quite like their English translations:

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

These ECs are in fact identical to alternative interrogatives, which have the same form in both main clauses and complement clauses:

(6) a. (ʔa)-ðahab-ta ʔilaɑː baris ʔam lam taðhab
(Q)-go.PAST.2SGM to Paris or not go.PRES.2SGM
'Did you go to Paris or not?'
b. saʔaluːn-iː [(ʔa)-ðahab-ta ʔilaɑː baris ʔam lam taðhab]
ask.PAST.3PLM-1SGM/F Q-go.PAST-2SGM to Paris or 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.

Finally, there are **governed alternative ECs**, which involve *sawaa'un* 'same' followed by an alternative interrogative:

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

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. These ECs look rather like English ECs with *no matter*. However, unlike the English construction, the MSA construction can only contain an alternative interrogative. Thus, the following is ungrammatical:

(8) *[sawɑ:ʔ-un [maɑ: faʕala-ta]], sa-taqdˁii: 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.’

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

We turn now to **the distribution of ECs**. As we have seen, they are like other adjunct clauses modifying an ordinary clause that can stand alone. In MSA, as in English, simple conditionals can also modify a clause with a special marking which cannot stand alone. Thus, both the following are possible:

(9) a. [ʔiðaɑ: ðahab-ta hunɑ:k] ʔanta ʃujɑ:ʕ-un
if go.PAST-2SGM there you.2SGM brave-NOM
‘If you go there, you are brave.’
b. [ʔiðaɑ: ðahab-ta hunɑ:k] fa-ʔanta ʃujɑ:ʕ-un
if go.PAST-2SGM there then-you.2SGM brave-NOM
‘If you go there, then you are brave.’

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

(10) [mahmɑɑ: faʕala-t l-llajnat-u] fa-sa-taðˁallu
whatever do.PAST-3SGF DEF-committee-NOM then-will-continue
l-ʔintiqɑ:dat-u tuwajjah ʔilay-hɑ.
DEF-criticisms-NOM directed.PASS to-it.3SGF
‘Whatever the committee does, criticisms will be directed at it.’

Other types of EC are the same. Both simple conditionals and ECs can follow as well as precede an unmarked clause, but they can only precede a marked clause:

(11) ʔanta ʃujɑ:ʕ-un [ʔiðaɑ: ðahab-ta hunɑ:k]
you.2SGM brave-NOM if go.PAST-2SGM there
‘You are brave, if you go there.’
(12) sa-taðˁallu l-ʔintiqɑ:dat-u tuwajjah ʔilay l-llajnat-i
will-continue DEF-criticisms-NOM directed.PASS to-it DEF-committee-GEN
[mahmɑ faʕala-t]
whatever do.PST.3SGF
‘Criticisms will be directed at the committee, whatever it does.’
(13) *fa-ʔanta ʃujɑ:ʕ-un [ʔiðaɑ: ðahab-ta hunɑ:k]
then-you.2SGM brave-NOM if go.PAST-2SGM there
‘You are brave, if you go there.’
(14) *fa-sa-taðˁallu l-ʔintiqɑ:dat-u tuwajjah ʔilay
then-will-continue DEF-criticisms-NOM directed.PASS to-it
l-llajnat-i [mahmɑ faʕala-t]
DEF-committee-GEN whatever do.PST.3SGF
‘Criticisms will be directed at the committee, whatever it does.’

3. Analyses

We will begin with **the distribution of ECs**. Combinations of simple conditional or EC and an ordinary clause can be analysed as head-adjunct structures similar to other combinations of adverbial clause and main clause. 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 alone, while *fa*-clauses are not. But this need not be a problem if general constraints can be overridden by more specific constraints since this means that a constraint can require a phrase and its head to differ in some respect.

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*, subject to the constraint in (15), and that it has a number of subtypes with daughters which are not [CORREL *none*], including *ʔidaa-fa-clause*, which is subject to the constraint in (16):

(15) *correlative-cl* ⇒ [CORREL *none*]
(16) *ʔidaa-fa-cl* ⇒ [DTRS <[CORREL *fa*], [CORREL *ʔiðaa*]>]

Together these give clauses which are [CORREL *none*] with daughters which are [CORREL *fa*] and [CORREL *ʔiðaa*]. If both simple conditionals and ECs are [CORREL *ʔidaa*], they will appear in these clauses. The following constraint will ensure that the main clause, marked by *fa-*, comes second in correlative clauses, including *ʔidaa-fa* clauses:

(17) *correlative-cl* ⇒ $\begin{bmatrix} \text{PHON } [1] \oplus [2] \\ \text{DTRS} < [\text{PHON } [2]], [\text{PHON } [1] > \end{bmatrix}$

Turning to the internal structure of ECs, the most straightforward case is **governed alternative ECs**. Like *no matter*, as discussed in Arnold and Borsley (2014), *sawaa'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. Given the approach just proposed, ECs and hence *sawaa'un*, must be [CORREL *idaa*]. We propose an analysis of the following form:

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

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 *ʔidaa-fa* clause

Turning to **ungoverned alternative ECs**, one possibility would be an analysis involving a phonologically null counterpart of *sawaa'un*. But if one is sceptical about empty elements, the obvious alternative is a unary branching analysis. This requires a phrase type where the daughter has an interrogative meaning just like the complement of *sawaa'un* and the mother derives a conditional meaning from it in essentially the same way as *sawaa'un* does. The following seems plausible:

(19) *ungoverned-alternative-ec* $\Rightarrow$ $\begin{bmatrix} \text{SS|LOC} \begin{bmatrix} \text{CAT} \begin{bmatrix} \text{HEAD [MOD S: [1]]} \\ \text{CORREL } \textit{ʔidaa} \end{bmatrix} \\ \text{CONT } \textit{ex–cond} \ ([2], [1]) \end{bmatrix} \\ \text{DTRS} \ \langle \begin{bmatrix} \text{LOC} \begin{bmatrix} \text{CAT S} \\ \text{CONT [2]} \end{bmatrix} \end{bmatrix} \rangle \end{bmatrix}$

As with the complement in (18), it needs to be specified that the daughter is an alternative interrogative, probably with an appropriate CONT value.

Finally, we turn to **ungoverned universal ECs** (which are the only type of universal EC). These involve head-filler phrases in which the filler contains one of a small number of EC words. 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, but, the analysis of *wh*-interrogatives is still of some relevance. We propose that they involve a special subtype of *head-filler-phrase* which has a filler with one of a small number of EC words, modifies a clause, is [CORREL *ʔidaa*], and has conditional semantics. We will call the subtype *universal-ec* and propose the following constraint:

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

Here, we have an EC feature where *wh*-interrogatives have WH, and building on Sag's (2010: 5.4) analysis of *wh*-interrogatives, we propose that 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.

REFERENCES

Abeillé, Anne & Rui P. Chaves (2021), Coordination. In Stefan Müller, Anne Abeillé, Robert D. Borsley & Jean- Pierre Koenig (eds.), *Head-Driven Phrase Structure Grammar: The Handbook*, 725–776. Berlin: Language Science Press.

Alqurashi, Abdulrahman (2012), An HPSG approach to free relatives in Arabic. In Stefan Müller (ed.), *Proceedings of the 19th International Conference on Head-Driven Phrase Structure Grammar*, 6–25. Stanford: CSLI Publications.

Alqurashi, Abdulrahman & Robert D. Borsley (2014), The comparative correlative construction in Modern Standard Arabic. In Stefan Müller (ed.), *Proceedings of the HPSG14 Conference*, 6–26. Stanford: CSLI Publications.

Arnold, Doug & Robert D. Borsley (2014), On the analysis of English exhaustive conditionals. In Stefan Müller (ed.), *Proceedings of the HPSG14 Conference*, 27–47. Stanford: CSLI Publications.

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: Mouton de Gruyter.

Huddleston, Rodney & Geoffrey K. Pullum (2002), *The Cambridge Grammar of the English Language*. Cambridge: Cambridge University Press.

Rawlins, Kyle (2008), *An Investigation in the Syntax and Semantics of Conditional Structures*. PhD dissertation, University of California, Santa Cruz.

Rawlins, Kyle (2013), (Un)conditionals, *Natural Language Semantics* 21(2). 111–178.

Sag, Ivan (2010), English filler-gap constructions, *Language* 86. 486–545.

Yoo, Eun-Jung (2000), A constraint-based approach to alternative questions in English. *Language Research* 36, 19–42.