THE COMPARATIVE CORRELATIVE CONSTRUCTION IN MODERN STANDARD ARABIC

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1. Introduction

Since Culicover and Jackendoff (1999), the comparative correlative (CC) construction, exemplified by *The more I read, the more I understand*, has been an important focus of syntactic research. Culicover and Jackendoff suggest that languages vary significantly in this area and are ‘forced to “cobble together” some kind of mechanism to express’ the CC meaning (1999: 569). In a reply, Den Dikken (2005) shows that a number of languages have constructions which are broadly similar to the England construction. However, Abeillé and Borsley (2008) argue that Den Dikken seriously underestimates the extent of cross-linguistic variation. In this paper, we investigate the CC construction of Modern Standard Arabic (MSA) and show that it provides further evidence that there is more cross-linguistic variation in this domain than Den Dikken assumes. We will show, however, that it is possible to develop a detailed analysis within the Head-driven Phrase Structure Grammar (HPSG) framework, building on the ideas of Borsley (2004, 2011).

2. The MSA construction

A CC construction is not just any construction which expresses the CC meaning. English examples such as *If I read more, then I understand more* and *As I read more, so I understand more* are not examples of CC constructions because they exemplify constructions which can also express other meanings. A CC construction is a construction which can only express the CC meaning. MSA can express the CC meaning with sentences containing ئَيْنِ ‘if’ and *کَلْلَامَ ‘whenever’, but not surprisingly both can be used to express other meanings. The following show that *کِلْلَامَ can express both a CC meaning and other meanings:

(1) [کِلْلَامَ قِرْأَتَنا ْابَتَ ْاکَثَرَ] [تَفَهَّمَ ْاکَثَرَ]  
‘Whenever you read more, you understand more.’

(2) [کِلْلَامَ قِرْأَتَنا ْاکَثَرَ] [تَفَهَّمَ ْاکَثَرَ]  
‘Whenever you read more, you understood more.’

(3) [کِلْلَامَ قِرْأَتَنا ْاکَثَرَ] [فَهِمَتَا ْاکَثَرَ]  
‘The more you read, the more you understood.’

*کِلْلَامَ introduces a clause which is verb-initial and perfective. The main clause which it modifies may be verb-initial or subject-initial and may be perfective or imperfective. Interestingly, MSA also has examples in which both clauses are introduced by *کِلْلَامَ, and these can only express the CC meaning, as the following contrast shows:

(3) [کِلْلَامَ قِرْأَتَنا ْاکَثَرَ] [کِلْلَامَ فَهِمْتَا ْاکَثَرَ]  
‘Whenever you read more, you understood more.’

‘The more you read, the more you understood.’
Whenever you read this book, you understood the idea.

Both clauses are verb-initial and perfective. As one might expect, neither clause can appear without the other:


As one might also expect, the two clauses have a fixed order. Thus, (6) has a different meaning from (3):

(6) [kullamā fahimta ?akθar] [kullamā qaraʔta]
whenever understand.PERF.2.M.SG more whenever read-PERF.2.M.SG ?akθar]
more
‘The more you understand, the more you read.’

It seems, then, that (3) illustrates a CC construction but one that is very different from the English construction and the other similar constructions highlighted by Den Dikken.

Although the MSA construction is different from many other CC constructions, it is like a number of other MSA constructions. Here are three:

(7) [ʔiðaa qaraʔta ?akθar] [fa-sa-tafhamu ?akθar]
if read-PERF.2.M.SG more then-will-understand.IMPF.2.M.SG more
‘If you read more, then you will understand more.’
(8) [bimaa ?annka taqraʔu ?akθar] [ʔiðann
as/since COMP.2.M.SG read-IMPF.2.M.SG more so
sa-tafhamu ?akθar]
will-understand.IMPF.2.M.SG more
‘As/since you read more, so you will understand more.’
(9) [biqadri-maa taqraʔ] [biqadri-maa tafham]
‘As much as you read, so much you understand.’

In all three, neither clause can appear without the other, and the order of the clauses is fixed. As with the CC construction, we have related examples where an adjunct clause with some distinctive form modifies an unmarked main clause:

(10) [ʔiðaa qaraʔta ?akθar] [sa-tafhamu ?akθar]
if read-PERF.2.M.SG more will-understand.IMPF.2.M.SG more
‘If you read more you will understand more.’
(11) [bimaa ?annaka taqraʔu ?akθar] [ʔiðann
as/since COMP.2.M.SG read-IMPF.2.M.SG more so
sa-tafhamu ?akθar]
will-understand.IMPF.2.M.SG more
‘As/since you read more, you will understand more.’
(12) [biqadri-maa taqraʔ] [tafhamu]
as much as read-IMPF.2.M.SG understand.IMPF.2.M.SG
‘As much as you read, you understand.’
It seems, then, that the CC construction is one of a number of special constructions, which we will call correlative clauses. In each the component clauses have a distinctive form, appear in a fixed order, and neither can appear without the other, and in each case, we have related examples, in which an adjunct clause combines with an ordinary main clause.

3. Towards an analysis

Central to our analysis is the idea that correlative clauses are special head-adjunct-phrases, where the head has a special feature specification reflected in its distinctive form, as a result of which it cannot appear without the adjunct. We assume the following system of types:

(13) \[ \text{hd-adj-ph} \]

\[ \ldots \text{correlative-cl} \]

\[ \text{cc-cl} \quad \text{?i-f-cl} \quad \text{b-?i-cl} \quad \text{b-b-cl} \quad \ldots \]

We also assume that kullamā and the other clause-initial elements are complementizers. Thus, while examples like (1), (2), (10), (11) and (12) involve a CP modifying an S, the correlative clauses involve a CP modifying a CP. We will use a feature CORREL(ATIVE) to identify the key words in the various correlative clauses and the constituents they head. All other words and phrases will be [CORREL none], including kullamā in examples like (1) and (2). Thus, while (1) and (2) will have the structure in (14), (3) will have that in (15).

(14) \[
S \\
\quad \text{[MOD none]}
\quad \text{[CORREL none]}
\quad \text{[MOD [1]S]}
\quad \text{[CORREL none]} \quad \text{[MOD none]}
\quad \text{[CORREL none]}
\]

(15) \[
S \\
\quad \text{[MOD none]}
\quad \text{[CORREL none]}
\quad \text{[MOD [1]CP]}
\quad \text{[CORREL kullamā]}
\quad \text{[MOD none]}
\quad \text{[CORREL kullamā]}
\]

In examples like (1) and (2), kullamā will have the following properties, where we indicate the meaning informally with ‘whenever’.
Other complementizers which introduce adjunct clauses such as ḡin ‘if’ will have similar descriptions.

We assume the constraint in (17) for head-adjunct-phrases and the constraints in (18) and (19) for correlative clauses.

$$(17) \quad hd-adj-ph \rightarrow [DTRS < [l][SS[2]], [HEAD[MOD[2]]] > \begin{array}{c} \text{HD-DTR[1]} \end{array}]$$

$$(18) \quad correlative-cl \rightarrow [\begin{array}{c} \text{HEAD} \vphantom{DTRS[2]} \text{MOD none} \end{array}]$$

$$(19) \quad correlative-cl \rightarrow [\begin{array}{c} \text{PHON[1]} @ [2] \text{DTRS} < [\text{PHON}[2]], [\text{PHON}[1]] > \end{array}]$$

(18) requires correlative clauses to be verbal, to be [MOD none], and to be [CORREL none]. (It may that the last of these stipulations is unnecessary since it is probable that all head-adjunct-phrases are [CORREL none].) (19) requires the first member of the daughters list, which, given (17), is the head, to be second in the phonology. For c-c-clauses, we propose the following constraint:

$$(20) \quad c-c-cl \rightarrow [DTRS < [\text{CORREL kullamā}], [\text{CORREL kullamā}] >]$$

This ensures that the two daughters in a c-c-clause are [CORREL kullamā]. We will have similar constraints on the other subtypes of correlative clause. We assume that the first kullamā in a c-c-clause has the properties in (21) and the second the properties in (22). In both cases we represent the fact that the complement must be comparative with the informal CONT value ‘comparative’.

$$(21) \quad \begin{bmatrix} \text{comp} \\
\text{HEAD} \text{CORREL kullamā} \\
\text{MOD CP} \\
\text{SUBJ} < > \text{COMPS} < S[\text{ASPECT perf, INV +, CONT 'comparative']}> \\
\text{CONT 'whenever'} \end{bmatrix}$$
The first kullamā has the same CONTENT value as kullamā in an ordinary adjunct clause, while the second has the same CONTENT value as its complement and hence is meaningless. We will have broadly similar descriptions for the pairs of complementizers in other correlative clauses.

Assuming the constraints and lexical descriptions set out above, we will have the following structure for (3).

A central feature of this analysis is three different descriptions for kullamā: (16), (21), and (22). There are important similarities between them. In particular, (16) and (21) have the same CONTENT value, and (21) and (22) have the same complement requirements. The similarities and differences can be captured by postulating the following system of lexical types, where kullamā-1 is (16), kullamā-2 (21), and kullamā-3 (22):

The properties that all three forms of kullamā share can be associated with the type kullamā, the properties that (16) and (21) share with the type meaningful-kullamā, and the properties that (21) and (22) share with correlative-kullamā. The idiosyncratic properties of the versions of kullamā can be associated with the three maximal types.
REFERENCES


