SIMPLE AND COMPLEX COMPARATIVES IN MODERN STANDARD ARABIC

Abeer Alsulami, King Saud University, Riyadh, University of Essex
Doug Arnold, University of Essex
Robert D. Borsley, University Essex

1. Introduction

Like many languages, Modern Standard Arabic (MSA) has simple comparatives with a comparative form of an adjective and complex comparatives with two separate elements:

(1) a. heya ʔaTwal-u min xalid-in
she taller.MASC.SG.NOM from Khalid-GEN
'She is taller than Khalid.'

b. ʔanaa ʔakthar-u thakaʔ-an min ali-in
I.1SG.MASC more-NOM intelligence.ACC from Ali-GEN
'I am more intelligent than Ali.'

(These are verbless sentences. Past tense counterparts would contain a past tense copula.) Superficially, these examples are much like their English translations and like simple and complex comparatives in other languages., but as the translation of (1b) makes clear, *thakaʔ-an* is not an adjective but what we will call an adjectival noun. (In traditional Arabic grammar it is known as masdar.) An adjective is not possible:

(2) *ʔanaa ʔakthar-u thakay-an min ali-in
I.1SG.MASC more-NOM intelligent.ACC from Ali-GEN
'I am more intelligent than Ali.'

MSA simple comparatives are much like their counterparts in other languages. However, there is evidence that MSA complex comparatives are a quite different construction from the complex comparatives of many other languages and that they require a rather different analysis.

2. Basic data

Simple adjectival comparatives involve what is known as the elative form of an adjective and a PP headed by *min* 'from' (a *min*-phrase) expressing the standard of comparison. As one might expect, *min* may have either an NP, as in (1a), or an elliptical clause, as in (3), as its complement:

(3) kamal-un ʔakbar-u mi-maa kaan ʔab-uu-hu
kamal-NOM older-NOM from-what was father-NOM-his
'Kamal is older than his father was.'

Simple comparatives can be used predicatively, as in (1a) and (3), or attributively, as in the following:

(4) kamal-un rajul-un ʔakbar-u min ali-in
kamal-NOM man-NOM older-NOM from Ali-GEN
'Kamal is an older man than Ali.'

Some MSA adjectives do not have a comparative form, and for them a comparative meaning can only be expressed by a complex comparative involving one of a small number of general comparative words and an accusative adjectival noun. As one would expect, these constructions also have attributive uses:

(5) qaabal-tu rajul-an ʔakthar-a thakaʔ-an min xalid-in
met-1SGM man-ACC more-ACC intelligence-ACC from Khalid-GEN
'I met a man more intelligent than Khalid.'

As one might also might expect, there are similar examples with *ʔaqall* 'less' and an adjectival noun:

(6) ʔanaa ʔaqall-u thakaʔ-an min ali-in
I.1SG.MASC less-NOM intelligence-ACC from Ali-GEN
'I am less intelligent than Ali.'
(7) qaabal-tu rajul-an ʔaqall-a thakaʔ-an min xalid-in
met-1SGM man-ACC less-ACC intelligence-ACC from Khalid-GEN
'I met a man less intelligent than Khalid.'

The adjectival noun in a complex comparative is always accusative, but the case of the comparative word reflects the position of the construction. Thus, it appears that the complex comparative is a head-complement structure, in which the comparative word is a head and the adjectival noun and the *min*-phrase its complements. It seems surprising that it contains an adjectival noun and not an adjective. However, there is evidence that this is not at all surprising. It is also possible to have an ordinary noun instead of the adjectival noun, as in the following:

(8) ʔanaa ʔakthar-u maal-an min-ka
I more-NOM money-ACC from-you
'I have more money than you.'
(9) qaabal-tu rajul-an ʔakthar-a kutub-an min ali-in
met.1SGM man-ACC more.ACC books-ACC from Ali-GEN
'I met a man with more books than Ali.'

It is clear that these examples involve the same construction as the examples with an adjectival noun. Thus, we have a construction in which a comparative adjective takes an accusative nominal complement, which may be either an ordinary noun or an adjectival noun. We have translated the examples with an ordinary noun with 'have' when used predicatively and with 'with' when used attributively. Examples with an adjectival noun could be translated in the same way. That is, we could have 'He has more intelligence' and 'a man with more intelligence' rather than 'he is more intelligent' and 'a more intelligent man'.

Essentially any comparative can combine with an ordinary noun in a complex comparative. Here are a few relevant examples:

(10) a. ʔanaa ʔakbar-u sinn-an min ali-in
I.1SG.MASC older-NOM age.ACC from Ali-GEN
'I am older in age than Ali.'
b. ʔanaa ʔafSaH-u lisaan-an min ali-in
I.1SG.MASC more fluent-NOM tongue-ACC from Ali-GEN
'I have a more fluent tongue than Ali.'

Only a small number of comparatives can combine with an adjectival noun, but we asume this is just a matter of semantics, of what makes sense.

MSA has another construction in which an adjective takes a nominal complement, the adjectival construct construction (Ryding 200: 253-4, Al-Sharifi and Sadler 2009), illustrated by the following:

(11) ’anta azīm-u -l-hazz-i
you great-NOM the-fortune-GEN
‘You have great luck’/’You are very lucky’

(12) imra-at-un ğamīl-at-u -l-wağh-i
woman-F-NOM beautiful-F-NOM the-face-GEN
‘a woman with a beautiful face’

These have a non-comparative adjective and the nominal complement is genitive and definite, but they seem to have the same basic structure and essentially the same type of meaning, ‘have’ when used predicatively and ‘with’ when used attributively.

3. HPSG analyses

An analysis of adjectives needs to accommodate both predicative and attributive uses. Assuming that predicative adjectives have a non-empty SUBJ value reflecting the first member of the ARG-ST list and are [MOD *none*] and that attributive adjectives have a value for the MOD feature coindexed with the first member of the ARG-ST list and are [SUBJ <>], the following constraint can be proposed:

(13)

$$\begin{bmatrix} word \\ \text{HEAD } adj \end{bmatrix} \rightarrow \begin{bmatrix} \text{HEAD [MOD } none\text{]} \\ \text{SUBJ} < [1] > \\ \text{ARG-ST} < [1] > \oplus \text{L} \end{bmatrix} \vee \begin{bmatrix} \text{HEAD [MOD N'}_{[i]}\text{]} \\ \text{SUBJ} <> \\ \text{ARG-ST} < []_{[i]} > \oplus \text{L} \end{bmatrix}$$

This will apply both to basic adjectives and to adjectives which are the product of a lexical rule.

We propose that simple comparative adjectives are the product of the following lexical rule:

(14) Simple comparative lexical rule

$$\begin{bmatrix} \text{HEAD} \begin{bmatrix} adj \\ \text{AFORM } pos \end{bmatrix} \\ \text{ARG-ST [1]} \end{bmatrix} \Rightarrow \begin{bmatrix} \text{HEAD} \begin{bmatrix} adj \\ \text{AFORM } comp \end{bmatrix} \\ \text{ARG-ST [1]} \oplus < \text{PP}[min] > \end{bmatrix}$$

This changes the value of AFORM from *pos*(*itive*) to *comp*(*arative*) and adds PP[*min*] to the end of the ARG-ST list.

We assume that complex comparatives involve an adjective with a nominal complement, which may be an adjectival noun or an ordinary noun and must be accusative and indefinite. The complement has essentially the same role as the first argument of a basic comparative. We assume, therefore, that adjectives in a complex comparative have an extra argument as the first member of their ARG-ST list, which is the subject if it is predicative or is coindexed with the

modified NP if it is attributive. Given these assumptions, we will have lexical descriptions of the following form:

(15)

$$\begin{bmatrix} \text{HEAD} \begin{bmatrix} adj \\ \text{AFORM } comp \end{bmatrix} \\ \text{ARG-ST} < \text{NP}, \text{NP}[\text{DEF} -, \text{CASE } acc], \ldots \text{PP}[min] > \end{bmatrix}$$

Descriptions like this can be derived from descriptions for simple comparative adjectives by the following lexical rule:

(16) Complex comparative lexical rule

$$\begin{bmatrix} \text{HEAD} \begin{bmatrix} adj \\ \text{AFORM } comp \end{bmatrix} \\ \text{ARG-ST} < []_{[i]} > \oplus [1] \end{bmatrix} \Rightarrow \left[\text{ARG-ST} < \text{NP} > \oplus < \text{NP}[\text{DEF} -, \text{CASE } acc]_{[i]} > \oplus [1]\right]$$

This adds an extra argument to the beginning of the ARG-ST list and marks the original initial argument, which is now the second argument, as [DEF –] and [CASE *acc*]. [1] will often contain just PP[*min*], but where the basic non-comparative adjective has a complement, there will be another member.

Adjectival constructs also involve an adjective with a nominal complement, which must be genitive and definite. As in complex comparatives, the complement has essentially the same role as the first argument of a basic adjective, and the adjective has an extra argument as the first member of its ARG-ST list. This means lexical descriptions of the following form:

(17)

$$\begin{bmatrix} \text{HEAD} \begin{bmatrix} adj \\ \text{AFORM } pos \end{bmatrix} \\ \text{ARG-ST} < \text{NP}, [\text{DEF} +, \text{CASE } gen], \ldots > \end{bmatrix}$$

Descriptions like this can be derived from descriptions like for simple adjectives by the following lexical rule:

(18) Construct adjective lexical rule

$$\begin{bmatrix} \text{HEAD} \begin{bmatrix} adj \\ \text{AFORM } pos \end{bmatrix} \\ \text{ARG-ST} < []_{[i]} > \oplus [1] \end{bmatrix} \Rightarrow \left[\text{ARG-ST} < \text{NP} > \oplus < \text{NP}[\text{DEF} +, \text{CASE } gen]_{[i]} > \oplus [1]\right]$$

This adds an extra argument to the beginning of the ARG-ST list and marks the original initial member as [DEF +] and [CASE *gen*]. [1] will often but not always be the empty list.

The construct adjective lexical rule and the complex comparative lexical rule are obviously quite similar. Both add an extra argument to the beginning of an ARG-ST list and turn the original initial member into the second member so that it is realized as a complement. They differ in whether they apply to [AFORM *pos*] or [AFORM *comp*] adjectives and in whether

they require the original initial member the ARG-ST list be indefinite and accusative or definite and genitive. It is natural to ask whether the two lexical rules could be combined. We can do this as follows:

(19)

$$\left[\begin{array}{l}\text{HEAD}\left[\begin{array}{l}adj\\ \text{AFORM}\ [1]\end{array}\right]\\ \text{ARG-ST} < []_{[i]} > \oplus [2]\end{array}\right] \Rightarrow \left[\text{ARG-ST} < \text{NP} > \oplus < \text{NP}[\text{DEF}\,[3]\,\text{CASE}\,[4]]_{[i]} > \oplus [2]\right]$$

$$([1] = comp\ \&\ [3] = -\ \&\ [4] = acc) \vee ([1] = pos\ \&\ [3] = +\ \&\ [4] = gen)$$

Here we have a rule with an attached disjunctive statement of the possible values of the features AFORM, DEF and CASE. The first disjunct specifies the values for complex comparatives and the second gives the value for construct adjectives. This is quite complex, but it does capture the similarity between the two sets of words.

4. A further issue

Where the noun in a complex comparative takes a PP complement, this may follow the *min*-phrase. Here is an example with an ordinary noun:

(20)	ʔanaa	ʔakthar-u	Kutub-an	min	ali-in	fi	n-naHw-i
	1SG.MAS	more-NOM	books-ACC	from	Ali-GEN	at	the-syntax-GEN

'I have more books than Ali about syntax.'

There are similar examples with adjectival nouns. Such examples might suggest that an argument composition analysis would be appropriate for complex comparatives. However, there is evidence from examples like the following that this is a more general phenomenon not specifically connected with complex comparatives:

(21)	ʔa-ʕTaa	kamal-un	kitaab-an	ʔila	ali-in	fi	n-naHw-i
	3SG.MAS-gave	Kamal-NOM	book-ACC	to	Ali-GEN	at	the-syntax-GEN

'Kamal gave a book to Ali about about syntax.'

Both types of example can be analysed with the EXTRA mechanism applied by Kay and Sag (2012) to a variety of English types of extraposition.

REFERENCES

Al-Sharifi, B. and L. Sadler (2009), The adjectival construct in Arabic, in M. Butt and T. H. King, (eds.) *Proceedings of the LFG09 Conference*. CSLI Publications, Stanford, CA, pp. 26-43.

Ryding, K. (2005), *A Reference Grammar of Modern Standard Arabic*. Cambridge: Cambridge University Press.

Kay, P. and I. A. Sag (2012), Cleaning up the big mess: Discontinuous dependencies and complex determiners, in Boas and Sag (eds.), *Sign-Based Construction Grammar*, Stanford: CSLI Publications, 229-256.