ON COMPLEX ADJECTIVAL PHRASES IN STANDARD ARABIC

We advance an analysis which brings several syntactic properties of complex adjectival phrases in Standard Arabic into harmony with the compositional derivation of their meaning. The empirical focus is on constructions such as (1), which have not, to the best of our knowledge, been studied systematically.

(1) ra?ay-tu at$^{\text{ʕ}}$-t$^{\text{ʕ}}$aalib-a t$^{\text{ʕ}}$-t$^{\text{ʕ}}$awiilat-a qaamat-u-hu
see.PRF-1s the-student.M-ACC the-tall.F-ACC figure.F-NOM-his
'I saw the tall student'

We make three observations about this sentence: (i) it presupposes that there is exactly one tall student but does not presuppose that there is exactly one student and exactly one tall person; (ii) it shows a misalignment in case and agreement: **t$^{\text{ʕ}}$-t$^{\text{ʕ}}$awiil-a** 'tall' has the same case as the preceding but not the following XP, and has the same ϕ-features as the following but not the preceding XP; (iii) it contains a resumptive pronoun, **hu**, whose presence is required: removing it from the sentence gives rise to ungrammaticality, as evidenced by (2).

(2) *ra?ay-tu at$^{\text{ʕ}}$-t$^{\text{ʕ}}$aalib-a t$^{\text{ʕ}}$-t$^{\text{ʕ}}$awiilat-a qaamat-u
see.PRF-1s the-student.M-ACC the-tall.F-ACC figure.F-NOM

To account for these three observations, we first propose the following structure for (1). We use English words in small caps to represent the corresponding morphemes in Standard Arabic.

(3) SEE $[_\alpha$ THE $[_\beta$ STUDENT $[_\gamma$ 7 $[_\delta$ TALL $[_\epsilon$ HIS$_7$ FIGURE]]]]]

The arrow represents wh-movement of the index on HIS. The output of this movement, γ, is interpreted by the rule of Predicate Abstraction which says that $[\![n\ X]\!]^g = [\lambda x.[\![X]\!]^{g[x/n]}]$ if n is a moved index (Heim and Kratzer 1998). This means that $[\![\gamma]\!]^g = [\lambda x.x$'s figure is tall], the set of tall people. The denotation of β is derived by Predicate Modification which says that $[\![X\ Y]\!]^g = [\lambda x.[\![X]\!]^g(x) = [\![Y]\!]^g(x) = 1]$ if both $[\![X]\!]^g$ and $[\![Y]\!]^g$ are elements of $D_{<e,t>}$ (Heim and Kratzer 1998). This means that $[\![\beta]\!]^g = [\lambda x.x$ is a student $\wedge$ x's figure is tall], the set of tall students. Composing this set with the standard (Fregean) meaning of THE, we get the presupposition that there is exactly one tall student and not the presupposition that there is exactly one student and exactly one tall person (Heim 1991). Observation (i) is thus accounted for. Observation (iii) also follows straightforwardly: removing the resumptive pronoun **hu** from (2) will yield (4), where TALL and FIGURE, as well as γ and STUDENT, are forced to compose by Predicate Modification, resulting in $[\![\beta]\!]^g = [\lambda x.x$ is tall $\wedge$ x is a figure] and $[\![\alpha]\!]^g = [\lambda x.x$ is tall $\wedge$ x is a figure $\wedge$ x is a student$] = \emptyset$, which means further composition of α with THE gives rise to infelicity since the existence presupposition of THE is not satisfied (Heim 1991).

(4) SEE $[_\alpha$ THE $[_\beta$ STUDENT $[_\gamma$ TALL FIGURE]]]

Observation (ii) can be accounted for in terms of the following two generalizations: (A) arguments of predicates of type <e,<e,t>>, the type of transitive verbs, receives ACC, whereas arguments of predicates of type <e,t>, the type of intransitives, receives NOM; (B) nodes of type t are barriers for agreement. From (A) it follows, for (3), that α receives ACC and ϵ receives NOM, which means, given familiar locality constraints, that all heads in α would bear ACC except those in ϵ which would bear NOM. This is what we see in (1). From (B) it follows that there can be no agreement between something which is a subconstituent of δ and something which is not, or more specifically, between TALL and STUDENT. This is also what we see in (1). Note that given (B), we make the following prediction: if instead of γ we just have the predicate TALL, agreement between the head noun STUDENT and TALL would occur. This prediction is correct, as shown by (5).

(5) ra?ay-tu at$^{\text{ʕ}}$-t$^{\text{ʕ}}$aalib-a t$^{\text{ʕ}}$-t$^{\text{ʕ}}$awiil-a
see.PRF-1s the-student.M-ACC the-tall.M-ACC

It remains to derive generalizations (A) and (B). We propose that composition of the <e,t> predicate with its argument is mediated by a copula. Thus, δ in (3) is actually a copula clause containing a covert T head, which exlains NOM on **qaamat-u-hu** 'his figure'. ACC on **at$^{\text{ʕ}}$-t$^{\text{ʕ}}$aalib-a** 'student' is assigned by **ra?ay-tu** 'see' in the usual way. Now suppose the copula sentence, δ, is a phase, then generalization (B) follows (cf. Chomsky 2001, 2005). The aparently puzzling ACC on **t$^{\text{ʕ}}$-t$^{\text{ʕ}}$awiilat-a** 'tall' turns out to be what is expected, assuming this XP has moved to the edge of δ as part of the nominalization process. Note that this explanation raises the issue of whether case and agreement are two sides of the same coin, and tips the scale towards a negative answer (cf. Bobaljik and Wurmbrand 2005, Bobaljik 2008).

Our analysis can be extended to account for judgements on more complex adjectival phrases such as those which contains ditransitive predicates, for example (6).

(6) ra?ay-tu at$^{\text{ʕ}}$-t$^{\text{ʕ}}$aalib-a l-maanih-a khal-u-hu t-taalibat-a
see.PRF-1s the-student.M-ACC the-giver.M.ACC uncle.M-NOM-his the-student.F-ACC
al-kitaab-a
the-book.M.Acc
'I saw the male student whose uncle gave the female student the book'

Details about the nominalization process as well as the distribution of the [+definite] feature within the whole nominal phrase will be discussed in the paper/talk.

References

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