

Syntactic Asymmetries between the Comparative and Superlative in Arabic

Peter Hallman, University of Vienna

Abstract: This article reports on differences in the behavior of the comparative and superlative in modern Syrian Arabic. Both are expressed by the elative template $aC_1C_2aC_3$, by default *aktar*, from the adjective *kṭiir* (*much*). In both uses, *aktar* may be linearly separated from the associated scalar term. This survey finds, however, that the comparative is more restricted than the superlative in both its surface distribution and its semantic scope. The superlative morpheme may occur pre-nominally, a non-canonical position for noun modifiers, while the comparative may not. Further, the superlative may escape from an NP containing it at LF, while the comparative may not. The fact that the superlative has a wider distribution than the comparative in both surface structure and LF is reminiscent of Bobaljik’s (2012) Containment Hypothesis, which asserts that the superlative is morphologically external to the comparative at the word-level.

1. Introduction

It is my aim in paper to demonstrate that both the comparative and superlative morpheme may be displaced from its scalar associate in Syrian Arabic, but that the superlative can be displaced further than the comparative. This fact replicates, at some distance from the scalar associate, Bobaljik’s (2012) observation that in languages that allow comparative and superlative morphemes to ‘stack’ on an adjectival stem, the superlative morpheme is always linearly outside the comparative morpheme, i.e., scopally more distant from the stem. This study treats contemporary spoken Syrian Arabic in detail, which is representative of the Levantine dialects. References to ‘Arabic’ refer to Syrian Arabic unless specified otherwise.¹

¹ I am grateful to the Syrian native speaker consultants for this project Maria El-Fadel, Fadi Al-Khoury and Mahfoud Alibrahim. The transcription reflects the preservation of the uvular stop “qaaf” in their speech for most lexical items, a feature typical of rural dialects of Levantine Arabic. This research was supported by grant #M-1397 G23 of the Lise Meitner Program of the Austrian Science Fund.

2. Comparative and Superlative in Syrian Arabic

A striking aspect of Arabic is the fact that the superlative and comparative are not morphologically distinguished. Both comparative and superlative are expressed by the morphological template $aC_1C_2aC_3$, where the consonant positions C_{1-3} represent the three radicals of the morphological root of the associated adjective. I refer to this morphological form as the ‘elative’ form of the adjective, though in specific contexts of use I refer to it as the ‘comparative’ or ‘superlative’ form depending on its function in that context. Regular morphological processes sometimes obscure the phonemic form of the template, which I do not treat here.

Adjectives in Arabic typically follow the noun they modify. The definite article *al* is prefixed to the noun and copied onto any adjectives modifying the noun. The segment *l* assimilates to a following coronal consonant. The indefinite is unmarked. A post-nominal elative adjective is interpreted as comparative when the noun it modifies is indefinite, and as superlative when the noun it modifies is definite. In the indefinite/comparative case, the adjective may occur with a standard-setting phrase introduced by the preposition *min* (*from*), more on which below. Example (1a) is the base for the comparative in (1b) and the superlative in (1c). In section 2.1 below, the superlative is treated in more detail, and in section 2.2 the comparative. The examples in (1) illustrate the ‘comparative/superlative of quality’, in which a quality-denoting adjective contributes the scale of comparison. The examples in (2) illustrate the ‘comparative/superlative of quantity’, in which a plurality contributes the scale. Sections 3 and 4 discuss asymmetries in the distribution of the comparative and superlative and their morphosyntactic significance.

- (1) a. maahir laqa şadfe hilwe řa-f-řařř
mahir found shell pretty on-the-beach
“Mahir found a pretty shell on the beach.”
- b. maahir laqa şadfe ařla min řadfit nuha řa-f-řařř
mahir found shell pretty_{ELV} than shell nuha on-the-beach
“Mahir found a prettier shell than Nuha’s shell on the beach.”
- c. maahir laqa ř-şadfe l-ařla řa-f-řařř
mahir found the-shell the-pretty_{ELV} on-the-beach
“Mahir found the prettiest shell on the beach.”
- (2) a. maahir laqa řadfaat ktiira řa-f-řařř
mahir found shells many on-the-beach
“Mahir found many shells on the beach.”
- b. maahir laqa řadfaat aktar min řadfaat nuha řa-f-řařř
mahir found shells many_{ELV} than shells nuha on-the-beach
“Mahir found more shells than Nuha’s shells on the beach.”
- c. maahir laqa ř-řadfaat l-aktar řa-f-řařř
mahir found the-shells the-many_{ELV} on-the-beach
“Mahir found the most shells on the beach.”

2.1 The Superlative

Example (1c) is ambiguous between two readings, just like its English translation there. It may mean that Mahir found a shell which is prettier than any other shell on the beach. Szabolcsi (1986) refers to this reading as the ‘absolute’ reading. On this reading, we compare shells on the beach with one another in terms of prettiness. The ‘comparison set’ of shells that we compare Mahir’s shell to is defined by the description *shell on the beach*. The other reading presupposes the existence of a group of individuals who also found shells on the beach, and asserts that Mahir found a shell that is prettier than any shell anyone else in this implicit set of shell finders found. In this case, we compare Mahir with other shell finders; the comparison

set is defined by the description *found a shell on the beach*. This is referred to as the ‘relative’ reading of the superlative. Szabolcsi (1986) and Heim (1995/1999) present a unified analysis of the two readings, in which the superlative morpheme has the denotation in (3) (from Heim 1995/1999). By this definition, the superlative asserts of individual x and degree relation R that there is a degree to which x bears R to which no y other than x bears R . Degree relations are assumed here to be downward monotonic, meaning that if an individual bears a relation R to degree d , it bears R to every lesser degree than d .

- (3) Let x be an individual, R a relation between individuals and degrees. Then:
 $-est(x, R) \Leftrightarrow \exists d (R(x,d) \ \& \ \forall y [y \neq x \rightarrow \neg R(y,d)])$

The difference between the absolute and relative readings, on this account, relates to the scope of the superlative morpheme at LF (its surface position is invariant in English). On the absolute reading of (1c), the superlative morpheme occurs as sister to the NP *ṣadif ḥilwe* (*shell pretty*), schematized in (4a). The NP is interpreted as a property-denoting term in this case, that is, the phrase’s surface definiteness is ‘cancelled’ in the logical form (Szabolcsi 1986, Heim 1995/1999). On the relative reading of (1c), the superlative morpheme occurs as sister to VP at LF, schematized in (4b). Both configurations require degree-predicate abstraction at the level of the superlative morpheme. I refer to constituents with a nominal head as “NPs” and do not treat their internal structure here. This convention is abbreviatory and not intended to suggest that they do not contain functional structure related to definiteness or number, e.g. “DP”. See Fassi Fehri (1999) on Arabic DP structure and McNabb and Kennedy (2011) on comparative DPs in particular.

- (4) a. Mahir found [est [λdλx x is a d-pretty shell]]
 b. Mahir [est [λdλx x found a d-pretty shell]]

It is of some significance in light of this analysis of the superlative, that the superlative morpheme can be displaced in the surface structure in Arabic either with or without its adjectival base. The relative adjective in (1c) can appear before the noun it modifies, as in (5a). Alternatively, the relative template can appear before the noun with the dummy morphological base *ktiir*, meaning *much* or *many*, leaving the associated adjective in its canonical post-nominal position, illustrated in (5b). The term *aktar* in this usage is parallel to English *most*. No article appears on either the adjective or noun. The construction is both morphologically indefinite and semantically indefinite according to Heim and Szabolcsi. Both alternants of (1c) shown in (5) have the interpretation of (1c). They are ambiguous between an absolute and a relative reading.

- (5) a. maahir laqa aħla řadfe řa-f-řařř
 mahir found pretty_{ELV} shell on-the-beach
 “Mahir found the prettiest shell on the beach.”
 b. maahir laqa aktar řadfe ĥilwe řa-f-řařř
 mahir found most shell pretty on-the-beach
 “Mahir found the prettiest shell on the beach.”

Example (5b) is particularly significant because it has the exact surface syntactic form attributed by Szabolcsi and Heim to the *logical* form of the corresponding English superlative NP *the prettiest shell*. The covert displacement required to derive the English absolute reading is an optional surface form in Arabic.

In the ‘superlative of quantity’, the superlative associates with a quantity scale provided by a plural noun. The term *aktar* is used for this case, once again analogous to English *most*. Here too, if the superlative follows the noun, both are marked

definite, but if it precedes, neither is. The latter case is marginal or ungrammatical for some speaker, who prefer the adverbial superlative for this purpose, discussed below.

Both variants are semantically indefinite according to the Szabolcsi/Heim analysis.

Like the English translations below, both variants have only a relative reading available to them, in which we compare Mahir to other shell-seekers.

- (6) a. maahir laqa ş-şadfaat l-aktar
mahir found the-shells the-most
“Mahir found the most shells.”
- b. %maahir laqa aktar şadfaat
mahir found most shells
“Mahir found the most shells.”

Just as *aktar* may bind the degree argument of an adjective contained in its NP sister (5b), so may it bind the quantity argument of an NP contained in its NP sister, for example, in a relative clause (7).

- (7) maahir laqa aktar maħaara fii-haa lu?lu?
Mahir found most oyster in-it pearls
“Mahir found the oyster with the most pearls in it.”

Since the superlative morpheme may bind a degree argument at some distance, it is does not come as a surprise that the adverbial (VP-adjunct) superlative *aktar fi* (literally *most thing*, corresponding to English *the most*) may bind the quantity argument of a plural NP in the VP (see Hallman 2013 on the internal structure of *aktar fi* and in particular the role of the nominal particle *fi*, which is not relevant to the scope facts at issue here). Example (8b) illustrates this use. I use a ditransitive verb with an indirect object intervening between *aktar fi* and its plural associate *warid* (*flowers*) to clarify that *aktar fi* occurs at the VP edge there, like an adverb, and does

not form a constituent with its plural associate (as it must in English). Example (8a) demonstrates the canonical use of the *aktar fi*, where it binds the degree argument of a degree verb. Speakers prefer *aktar fi* to express the superlative of quantity, and, as mentioned in connection with (6b), find adnominal *aktar* marginal or ungrammatical in this usage (8c). To the extent it is grammatical, only a relative reading is available in (8c), where *aktar* has scope over the VP.

- (8) a. maahir ḍaḥik aktar fī
 mahir laughed most thing
 “Mahir laughed the most.” (e.g. the loudest or on the most occasions)
- b. maahir ṣaṭa warid la-nuha aktar fī
 mahir gave flowers to-nuha most thing
 (i) “Mahir gave the most flowers to Nuha.”
 (ii) “Mahir gave flowers to Nuha the most.”
- c. %maahir ṣaṭa aktar warid la-nuha
 mahir gave most flowers to-nuha
 “Mahir gave the most flowers to Nuha.”

In addition to a reading corresponding to English *Mahir gave flowers to Nuha the most*, meaning he gave flowers to Nuha on more occasions than anyone else did, (8b) has another reading meaning that he gave more flowers to Nuha than anyone else did, i.e., one where we compare how many flowers each individual in the comparison set gave to Nuha, not the number of occasions. Here, the adverbial superlative *aktar fi* binds the quantity argument of *warid* (*flowers*) at a distance, like *aktar* binds the degree argument of *ḥilwe* (*pretty*) at a distance in (5b). These do not exhaust the readings of (8b), but are the most important for the discussion to follow.

It is also significant for the discussion to follow that the syntactic relationship between *aktar fi* and the quantity/degree variable it binds may not cross an NP boundary. While *aktar fi* may bind the quantity argument of the nominal head of the

NP *warid* in (8b), it may not reach into that NP and bind the degree argument of an adjective modifying the nominal head, as the ungrammaticality of the relevant reading of (9) shows. Adnominal *aktar* may bind the degree argument of an adjective, as in (5b), because it itself is within the NP containing the adjective.

- (9) maahir ṣaṭa warde ḥilwe la-nuha aktar fi
 mahir gave flower pretty to-nuha most thing
 (i) *"Mahir gave the prettiest flower to Nuha."
 (ii) "Mahir gave a pretty flower to Nuha the most."

In summary, adnominal *aktar* at the NP edge may bind the degree argument of a scalar term within the NP. Similarly, adverbial *aktar fi* may bind the degree argument of a scalar term within VP, bounded by NP. See Hallman (2013) for a more detailed exposition of this constraint in a variety of syntactic contexts.

2.2 The Comparative

As mentioned previously, the comparative form of an adjective is formed by the elative template; the comparative and superlative forms of an adjective are identical in Arabic. Used as a comparative morpheme, the elative template optionally co-occurs with a standard of comparison introduced by the preposition *min* (*from*). The *min*-phrase is interpreted as a degree predicate as described in more detail below. The comparative morpheme combines with two degree predicates, one of which is the *min*-phrase and the other the syntactic sister of the comparative morpheme at LF, the adjective *hilwe* in (1b). I analyze the comparative as denoting the assertion that its syntactic sister is true of a degree that the *min*-phrase is not, defined in (10), a variation on definitions in Seuren (1973) and Heim (1985). R1 is either AP or VP in

the examples below; I assume these contain a trace or PRO that saturates the external argument, yielding a predicate of degrees. To the extent this definition and that of the superlative in (3) can be improved upon, the details do not affect the observations to come about the relative scope of the comparative and superlative.

- (10) Let R1, R2 be predicates of degrees (relations between degrees and truth values). Then:
 $-er(R1, R2) \Leftrightarrow \exists d [R1(d) \ \& \ \neg R2(d)]$

As with superlatives (cf. (5b)), the comparative morpheme can be morphologically separated from the associated adjective, in which case it occurs in the default form *aktar*, illustrated in (11) (cf. (1b)).

- (11) maahir laqa şadfe hilwe aktar min şadfit nuha ʕa-f-faʕ
 mahir found shell pretty more than shell nuha on-the-beach
 “Mahir found a prettier shell than Nuha’s shell on the beach.”

Like its English counterpart *than*, the *min*-phrase can contain either a simple NP or a clause beginning with the particle *ma*, which Shlonsky (2004) analyses as a complementizer, illustrated in (12). See also McNabb and Kennedy (2011). The interpretation of *min*-phrases containing a simple NP is revealing for the scope of the comparative, and represents the focus of the remarks to follow.

- (12) maahir laqa şadfe aħla mim-ma laqat nuha
 mahir found shell pretty_{ELV} than-that found nuha
 “Mahir found a prettier shell than Nuha found.”

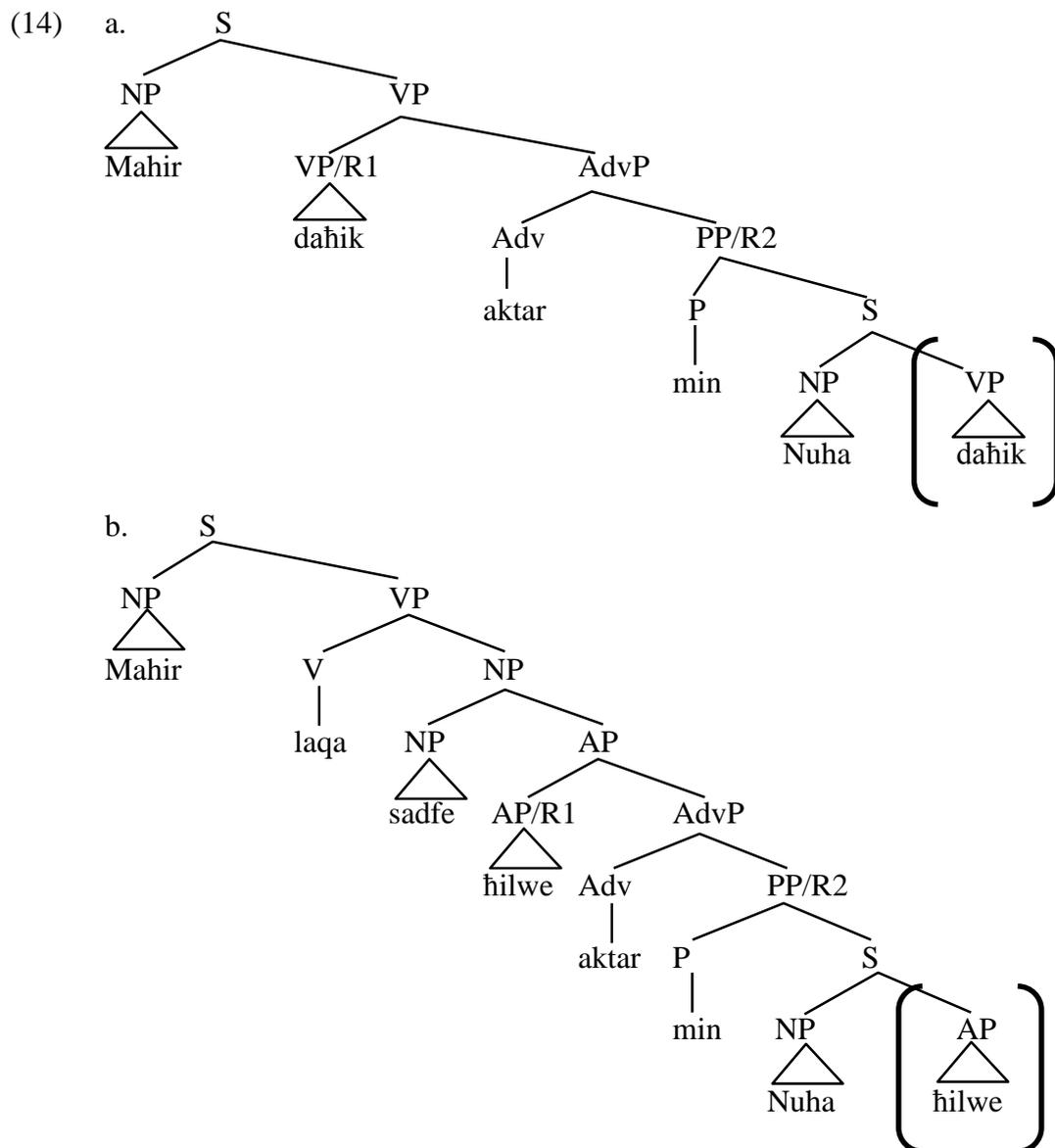
In both (11) and its counterpart in (1b) with morphological fusion of the superlative template with *hilwe* (*pretty*), the standard to which the prettiness of the

shell that Mahir found is compared is the prettiness of a certain shell that Nuha has. The adjective *hilwe* (pretty) does not occur overtly in the standard clause *min šadfit nuha* (than Nuha's shell), but the following observations indicate that it is syntactically present there, but elided. Like its English translation, the sentence in (13a) is odd because it asserts that the shell that Mahir found is prettier than Nuha *is*. That is, it compares Mahir's shell to Nuha herself, which is an odd standard of comparison for a seashell. The adverbial superlative in (13b), however, is not understood as the nonsensical assertion that Mahir laughed more than Nuha *is*, but rather that Mahir laughed more than Nuha *did* (like its English translation). Note that *fi* is absent in the adverbial comparative; it appears only in the superlative.

- (13) a. maahir laqa šadfe aħla min nuha
 mahir found shell pretty_{ELV} than nuha
 "Mahir found a shell prettier than Nuha is."
- b. maahir ḡaħik aktar min nuha
 mahir laughed more than nuha
 "Mahir laughed more than Nuha laughed."

Since the phrase *min nuha* is the same in (13a) and (13b), the difference in interpretation must relate to the difference in distribution between the adverbial and adjectival comparative. The interpretation of the adverbial comparative suggests it is a VP-adjunct, in which case the VP with denotation $\lambda d\lambda x [x \text{ laughed } d\text{-much}]$ occurs in the scope of the *min*-phrase. This predicate is just what we compare Mahir to Nuha in terms of in (13b). Conversely, the absence of a reading for (13a) in which we compare Mahir and Nuha in terms of how pretty a shell they found suggests that the *min*-phrase cannot scope out of the NP *šadfe aħla min nuha* (a shell prettier than Nuha) in (13a). The *min*-phrase is adjoined to the comparative adjective and cannot leave this

position. I conclude from these remarks that (13b) has the structure schematized in (14a), while the only structure available to (13a) is that in (14b), in which *aktar* may optionally fuse with the adjective *hilwe* (*pretty*). In each case, the parenthesized material is elided from the *min*-clause under LF identity with the structural sister of the AdvP headed by the comparative morpheme *aktar*. On the relationship between scope and comparative clause ellipsis, see especially Williams (1974) and Sag (1976), as well as Bresnan (1973), Cresswell (1976), Heim (1985, 2001), and Bhatt and Pancheva (2004), among others.



And like the Arabic adverbial superlative, the adverbial comparative can bind the quantity argument of a plural contained in the VP, as the paraphrase in (ii) for (15a) below shows, as well as its standard adverbial reading where it talks about the number of giving occasions, paraphrased in (i). The comparative phrase *aktar min muʿiin* (*more than Muʿin*) is separated from the plural by the indirect object *la-nuha* (*to Nuha*), and therefore not adjoined to the plural noun in the surface structure. Also like the superlative, the possibility for the comparative morpheme to bind a quantity/degree variable is bounded by NP, for which reason a reading for (15b) in which *aktar* compares the prettiness of the flowers Mahir and Muʿin gave Nuha is not available.

- (15) a. maahir ʕaṭa warid la-nuha aktar min muʿiin
 mahir gave flowers to-nuha more than muʿin
 (i) “Mahir gave flowers to Nuha more often than Muʿin did.
 (ii) “Mahir gave more flowers to Nuha than Muʿin did.
- b. maahir ʕaṭa warde ḥilwe la-nuha aktar min muʿiin
 mahir gave flower pretty to-nuha more than muʿin
 (i) “Mahir gave a pretty flower to Nuha more often than Muʿin did.
 (ii) * “Mahir gave a prettier flower to Nuha than Muʿin did.

As in the case of the superlative, the use of the adverbial comparative to express the comparative of quantity is preferred to the NP-internal placement of the comparative morpheme, illustrated in (16a). As in the case of the superlative, speakers prefer (15a) to (16a) and some find (16a) ungrammatical. Note the similar structure reported in (2b), repeated below as (16b), is grammatical because the *min*-phrase contains the NP *ʕadfaat nuha* (*Nuha’s shells*), not just *Nuha*, and borrows only an implicit local predicate of numerosity from the matrix context, and does not require

VP-level scope. It can be paraphrased as ‘Mahir found more (i.e. many-er) shells than Nuha’s shells are many’. The analogous reading of (16a) asserts Mu’in is not as numerous as the flowers that Mahir gave Nuha. This reading is unsurprisingly not very salient.

- (16) a. %maahir řařa warid aktar min muřiin la-nuha
 mahir gave flowers more than mu’in to-nuha
 ‘Mahir gave more flowers to Nuha than Mu’in did.
- b. laqa maahir řadfaat aktar min řadfaat nuha řa-ř-řař
 found mahir shells more than shells nuha on-the-beach
 ‘Mahir found more shells than Nuha’s shells on the beach.’”

Lastly, note that although the adverbial comparative morpheme may bind a plural in its scope, comparative *aktar* may not occur pre-nominally like superlative *aktar*, even with an explicit *min*-clause that disambiguates the comparative from the superlative, cf. (5b), (6b). That is, the comparative can in principle be linearly displaced from its scalar associate but yet does not have the pre-nominal position available to it that the superlative has.

- (17) a. *maahir laqa aktar řadfe řilwe min nuha
 mahir found more shell pretty than nuha
 (‘Mahir found a prettier shell than Nuha found.’)
- b. *maahir laqa aktar řadfaat min nuha
 mahir found more shells than nuha
 (‘Mahir found more shells than Nuha found.’)

In summary, the comparative phrase *aktar min* may occur adjoined to an adjective (1b) (which may feed morphological fusion of *aktar* with the adjective as shown there) or be used adverbially, adjoined to VP (13b), (15a). In its adverbial use,

it may bind the degree argument of a scalar term in VP, bounded by NP, like the superlative *aktar fi*. Unlike the superlative, it may not occur pre-nominally.

3. Scopal asymmetries between the comparative and superlative

On the basis of the composition of the implicit degree predicate in the comparative (identification of the elided material in the *min*-clause) and the superlative (identification of the contrast set), the Arabic superlative of quality displays greater freedom of distribution at LF than the comparative of quality. The quality comparative is for the most part locked into its surface position, while the quality superlative may be displaced over some distance at LF. This asymmetry shows up in the surface distribution of the comparative and superlative of quality as well. The superlative may be separated from its scalar associate over a greater distance in the surface structure than the comparative.

Specifically, (1c) has a relative reading, in which the superlative moves to a position outside the VP, and the VP serves as the degree relation that Mahir is compared to others in the contrast set with respect to. This wide scope interpretation is not available to the comparative *aktar min nuha* in (13a), since the *min*-phrase cannot be understood as containing the VP *laqa šadfe hilwe* (*find a pretty shell*), as discussed there. The comparative relation cannot be displaced from its surface position adjoined to the adjective; only the adjective is available to form the standard of comparison.

In effect, the quality comparative is subject to the same restriction in the surface structure as it is subject to at LF. We observed that both the adverbial comparative (15a) and the adverbial superlative (8b) may bind a non-adjacent degree

variable. The superlative may also be displaced over this same distance at LF from a surface position adjacent to the degree variable it binds, seen in the relative reading of (1c). The comparative may not. In this respect, LF movement of the comparative is restricted in a way that LF movement of the superlative is not. LF movement of the comparative may not cross an NP boundary, while LF movement of the superlative may.

It seems likely that the fact that the superlative can cross over an NP boundary at LF is related to the fact that the superlative morpheme may occur at the left NP edge in the surface structure (5a-b), while the comparative cannot (17). If the left NP edge contains an ‘escape hatch’ in Chomsky’s (1986) terms, i.e., a position from which an NP-internal constituent may escape the from NP, the availability of this position to the superlative helps explain why the superlative may display NP-external scope in contexts where the comparative cannot. This explanation leaves open the question of why this NP-peripheral position is available to *aktar* as superlative but not to *aktar* as comparative. I return to this matter in the following section.

The remarks above do not seem at first glance to apply to the superlative and comparative of quantity, which appear to show parallel distribution at PF and LF. To the extent it is grammatical (for some speakers), the noun-adjacent comparative in (16a) has scope over VP (though again the adverbial comparative is preferred in this usage), which is evident in the fact that the VP may form the basis of comparison, i.e., it may fill in the elided material in the standard clause. Likewise, a noun-adjacent superlative has only a relative reading (8c), the reading corresponding to VP-level scope according to Heim (1995/1999). This apparent parallelism between the comparative and superlative of quantity arises because the distance between the comparative/superlative and the degree variable it binds is not as great as in the case

of the comparative/superlative of quantity. In the former case, the degree variable is the quantity argument of a local noun, an immediate constituent of the VP sister of the comparative/superlative morpheme at LF. In the latter case, the degree variable is the degree argument of an adjective contained inside a local NP. The comparative and superlative differ in their ability to cross over this NP boundary at LF. In the surface structure, both the superlative (*aktar fi*) and the comparative (*aktar min...*) may bind the quantity argument of the VP-internal NP in the structure schematized in (18a), while neither may bind the degree argument of the NP-internal AP in (18b). But the configuration in (18b) is available to the superlative at LF, derived by covert movement, but it is not available to the comparative. Note that *fi* does not actually occur in the surface structure corresponding to the scope for the superlative shown in (18b), since *aktar* originates in an adnominal position in that case, nor is *min nuha* (*than Nuha*) grammatical at all, since as just mentioned, the comparative cannot have the scope shown in (18b) at either PF nor LF.

- (18) a. maahir [aktar_x {*fi* / min nuha} [VP V ... NP_x ...]]
 maahir [most_x {thing / than nuha} [VP V ... NP_x ...]]
- b. maahir [aktar_x {*fi* / min nuha} [VP V ... [NP NP AP_x ...]]]
 maahir [most_x {thing / than nuha} [VP V ... [NP NP AP_x ...]]]

It can be shown that the superlative and comparative of quantity are subject to the same constraint on displacement and display the same asymmetry as the superlative and comparative of quality. Consider a case in which adverbial superlative and comparative occur within a modifier of a noun, as in (19a) and (19b) respectively.

- (19) a. maahir laqa l-maħaara illi fii-haa aktar fi lu?lu?
 mahir found the-oyster REL in-it most thing pearls
 “Mahir found the oyster with the most pearls in it.”

- b. #maahir laqa maħaara fii-haa lu?lu? aktar min muʕiin
 mahir found oyster in-it pearls more than muʕin
 #“Mahir found an oyster with more pearls in it than in Muʕin.”

(19a) asserts that Mahir found an oyster with more pearls in it than any oyster anyone else found. It compares oyster-finders in terms of how many pearls their oysters contained, meaning the superlative *aktar fi* in (19a) has scope over the matrix VP. No analogous reading is available for (19b). The reading would assert that Mahir found an oyster with more pearls in it than any oyster that Muʕin found. But instead it non-sensically compares Mahir’s oyster with Muʕin himself in terms of how many pearls they contain. This means that the comparative *aktar min muʕiin* in (19b) cannot have scope over the matrix VP, since the matrix VP cannot fill in the missing material in the standard clause *min muʕiin* in that example. Here we see in the case of the adverbial comparative that it is unable to cross over an NP boundary at LF, while the adverbial superlative in (19a) may do so.

In summary, the syntactic dependency between superlative *aktar (fi)* and the degree/quantity variable it binds may not cross over an NP boundary at PF, but it may at LF. For example, adverbial *aktar fi* may cross over the NP boundary headed by *maħaara* (oyster) in (19a) at LF (covertly) to achieve matrix-VP level scope, and the superlative morpheme morphologically embedded in *aħla* in (1c) may cross out the NP containing it at LF, giving the superlative VP-level scope, generating the relative reading of that example. However, a matrix adverbial superlative *aktar fi* may not bind a degree/quantity variable within an NP it c-commands, as the unavailability of the quality superlative reading of (9) illustrates. Recall that when *aktar fi* binds the quantity argument of the head of NP, as in (8b), the binding dependency does not cross over the NP boundary, since the variable in question is an argument of the head

of NP, not of a term contained in the NP. Overt superlative displacement is more strongly restricted than covert superlative displacement.

In contrast, the syntactic dependency between comparative *aktar min...* and the degree/quantity variable it binds may not cross over an NP boundary at all, either at PF or LF. For this reason, we cannot compare Mahir with Mu'in in terms of how many pearls the shells they found contained in (19b), since this reading would require displacement of *aktar min muṣi'in* across the NP boundary headed by *maḥaara* (*oyster*) at LF (covertly). Similarly, (15b) does not have a reading that asserts that Mahir gave a prettier flower to Nuha than Mu'in did, since this reading requires us to interpret the matrix adverbial comparative *aktar min muṣi'in* as binding the degree argument of *ḥilwe* (*pretty*); this dependency would cross over the NP boundary headed by *warid* (*flowers*) at PF (overtly). The distinction in the scope possibilities for the comparative and superlative at PF and LF is summarized in (20).

(20) Displacement across the NP-boundary in Arabic:

	PF	LF
superlative	*	√
comparative	*	*

4. Discussion

This difference between the comparative and superlative instantiates at some level of abstraction a generalization discussed in detail in Bobaljik (2012). Bobaljik points out that in every language that has suppletion of the comparative morpheme with an adjectival stem, that suppletive form turns up in the superlative as well.

English illustrates this generalization. The positive adjectival stem *good* becomes

bett- in the comparative *better*, and it is this form that functions as the stem of the superlative *best*. In no language is it the case that the comparative selects an irregular stem of an adjective while the superlative occurs with the regular positive form of that adjective. Bobaljik concludes that the occurrence of the superlative morpheme is contingent on the co-occurrence of the comparative morpheme, and the comparative is closer to the stem than the superlative, schematized in (21), which he terms the ‘Containment Hypothesis’.

(21) [ADJ [COMPARATIVE [SUPERLATIVE]]]

This view is supported by the fact that in many languages the superlative morpheme obligatorily contains the comparative, as in Persian, which has the comparative suffix *-tar* which in the superlative occurs obligatorily between the stem and the superlative suffix *-in*, as in *kam* (*little*), *kamtar* (*littler*), *kamtarin* (*littlest*).

Though the containment hypothesis itself is not morphologically evident in Arabic, since Arabic makes use of the same morpheme in both the comparative and superlative, the fact that the superlative has wider scope available to it (at LF) than the comparative syntactically mirrors the morphological superiority of the superlative in other languages. Further, the Arabic superlative has a position available to it at the left NP periphery, which is a syntactically higher position than the adjective-adjacent position available to the comparative. As mentioned in section 2.1, this NP-level position for the superlative morpheme, seen in (5b), is a direct surface reflection of the logical form of the absolute reading of the superlative, the reading where we compare seashells on the beach in terms of prettiness in that example. It is of interest in this connection that movement of the superlative morpheme to derive the relative

reading (where we compare seashell finders) gives the noun-adjacent superlative the same scope that the adverbial superlative *aktar fi* has in the surface structure. This is of interest because the adverbial superlative contains the noun *fi* (*thing*) analyzed in Hallman (2013) as a set-denoting expression that denotes the contrast set for the evaluation of the superlative. This occurrence of superlative *aktar* as a pre-nominal modifier (of either a lexical noun or *fi*) in both its adnominal and adverbial usages lends credence to Heim's semantic characterization of the adnominal superlative as an NP-adjunct. The obligatory occurrence of *fi* in the adverbial superlative suggests that even there, superlative *aktar* functions as an NP-adjunct, and this NP is used adverbially there. Even in English, the occurrence of the definite article *the* in adverbial *the most* (as in *John laughed the most*) implicates the occurrence of a null noun in that construction that is not present in the comparative *more than so-and-so*. In Arabic, the comparative never displays the nominal characteristics of the superlative. It cannot occur pre-nominally, nor does it occur with a noun in its adverbial use. While superlative *aktar* may occur morphologically fused with an adjective in the canonical post-nominal position of the adjective, it cannot, according to Szabolcsi and Heim, stay there at LF. It must move at least to the pre-nominal position, if not further. We have seen that the comparative morpheme, on the other hand, may never occur pre-nominally, and never has pre-nominal scope: only the adjective it is adjoined to in the surface structure is a suitable antecedent for the gap in the *min*-clause. These observations imply that just as the adverbial use of the superlative has a nominal base (*fi*), the adverbial use of the comparative has an adjectival base, namely the adjective of quantity *ktiir* (*much/many*), and the adverbial use of the phrase *aktar min...* (*more than...*) is an adverbial use of the adjective *ktiir* fused with the relative head $aC_1C_2aC_3$.

These remarks, though provisional, suggest an explanation for the containment hypothesis. The superlative is external to the comparative because the superlative is fundamentally an NP modifier, while the comparative is fundamentally an AP modifier. The containment that Bobaljik schematizes in (21) reflects a difference in the LF distribution of the comparative and superlative schematized in (22).

(22) [NP [AP+COMPARATIVE]]+SUPERLATIVE

It remains the case that both the comparative (1b) and superlative (1c) may occur morphologically fused with an adjectival scalar associate in post-nominal position in Arabic, a distribution unexpected for the superlative in light of Heim's analysis. What this suggests is that the position of the degree variable bound by the comparative/superlative is always a possible surface position for the binder (the only possible position in English), just as quantifiers may occur in argument positions in the surface syntax, positions in which they are arguably not interpreted (May 1985). I suggest that the containment hypothesis reflects a difference in the logical scope of the comparative and superlative, a difference that is reflected in their surface linear order in languages in which their relative order can be ascertained, either directly, as in Persian, or indirectly by virtue of suppletion patterns, as in English.

5. Conclusion

Both the comparative and superlative can be linearly separated from their scalar associate in Arabic. Surface displacement is bounded by NP in both cases. A difference emerges between the comparative and superlative at LF, however.

Comparative movement remains bounded by NP at LF, while superlative movement no longer is. In this sense, the superlative has a wider distribution at LF than the comparative, a contrast that is probably causally related to the fact that the superlative has a pre-nominal position available to it in the surface structure. This asymmetry is parallel to the morphological asymmetry between them identified by Bobaljik. Bobaljik's morphological considerations indicate that the comparative and superlative are not members of the same substitution class. The comparative occurs closer to the stem than the superlative. The superlative has, even at the word level, wider scope than the comparative.

Bibliography

- Bhatt, Rajesh and Roumyana Pancheva (2004). Late Merger of Degree Clauses. *Linguistic Inquiry* 35:1-45.
- Bobaljik, Jonathan (2012). *Universals in Comparative Morphology*. MIT Press, Cambridge, Mass.
- Bresnan, Joan (1973). The Syntax of the Comparative Clause Construction in English. *Linguistic Inquiry* 4:275-343.
- Chomsky, Noam (1986). *Barriers*. MIT Press, Cambridge, Mass.
- Cresswell, Maxwell (1976). The Semantics of Degree. In Partee, Barbara (ed.) *Montague Grammar*, Academic Press, New York, pp. 261-292.
- Fassi Fehri, Abdelkader (1999). Arabic Modifying Adjectives and DP Structures. *Studia Linguistica* 53:105-154.
- Hallman, Peter (2013). The Superlative in Syrian Arabic. Ms., University of Vienna.
- Heim, Irene (1985). Notes on Comparatives and Related Matters. Ms., University of Texas, Austin.
- Heim, Irene (1995/1999). Notes on Superlatives. Ms., University of Texas, Austin.

- Heim, Irene (2001). Degree Operators and Scope. In Fery, Caroline and Wolfgang Sternefeld (eds.) *Audiatur Vox Sapientiae: A Festschrift for Arnim von Stechow*, Akademie Verlag, Berlin, pp. 214-239.
- May, Robert (1985). *Logical Form: Its Structure and Derivation*. MIT Press, Cambridge, Mass.
- McNabb, and Christopher Kennedy (2011). Extraction and Deletion in Palestinian Arabic Comparatives. In Broselow, Ellen and Hamid Ouali (eds.) *Perspectives on Arabic Linguistics XXII-XXIII*. John Benjamins Publishing Company, pp. 149-165.
- Sag, Ivan (1976). Deletion and Logical Form. Ph.D. Dissertation, MIT.
- Seuren, Pieter (1973). The Comparative. In Kiefer, Ferenc and Nicholas Ruwet (eds.) *Generative Grammar in Europe*, D. Reidel Publishing Company, Dordrecht, pp. 528-564.
- Shlonsky, Ur (2004). The Form of Semitic Noun Phrases. *Lingua* 114:1465-1526.
- Szabolcsi, Anna (1986). Comparative Superlatives. In Fukui, Naoki (ed.) *MIT Working Papers in Linguistics, vol. 8*, MIT Press, Cambridge, Mass., pp. 245-265.
- Williams, Edwin (1974). Rule Ordering in Syntax. Ph.D. Dissertation, MIT.