ISSN 1799-2591 (print); ISSN 2053-0692 (online)
Theory and Practice in Language Studies, Vol. 16, No. 11, pp. 3927-3936, November 2026
DOI: https://doi.org/10.17507/tpls.1611.25

Clausal Comparatives and Semantic Compositionality: With a Special Reference to Jordanian Arabic

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***Abstract*—This paper documents and analyzes two syntactic structures of clausal comparatives in Jordanian Arabic (JA) which involve free relative clauses in the standard of comparison. The paper shows that the two clauses in the standard of comparison are interpreted differently as both an individual-denoting and degree-description- denoting structure. The paper also provides two compositional semantic analyses for the two forms of clausal comparatives based on two different Schönfinkelizations [1] of the comparative –er morpheme in grammar.**

***Index Terms*—individuals vs. degree descriptions, Schönfinkelization, clausal standard of comparison**

I. Introduction

The expressive power of human language allows for communicating comparison in almost all human languages (Sapir, 1941; Beck et al., 2004, 2009, 2012). English, for example, utilizes complex syntactic structures for clausal comparatives in which the 'than' particle takes as its complement a (reduced) clause of category CP or TP in structure (Kennedy, 2009; Tiemann, 2009; Bhatt & Takahashi, 2011; Bochnak, 2025).

(1) a. Fatima is taller than Omar is.
b. Fatima reads more linguistics books than Omar does.

It has been standardly assumed that clausal comparatives correspond to the degree-based mode of comparison (von Stechow, 1984; Bhatt & Takahashi, 2011). For example, the comparative sentence in (1a) has the denotation true if and only if the maximal degree of the target degree description to which *Fatima* is tall exceeds that of the standard degree description to which *Omar* is tall (See Abu Helal, 2024). As argued in Bhatt and Takahashi (2011), this denotation of the clausal comparative in (1a) follows from the fact that the degree head –er functions as a 2-place predicate which relates clauses that denote degree descriptions. This analysis is formalized using the following semantic derivation based on von Stechow (1984), Heim (2001) and Abu Helal (2024).[2]

(2) Lexical entries
a. ⟦ than Omar is ⟧=: λd∈ D_d. Op_1 than Omar is d-tall
b. ⟦ -$er_{2\text{-PLACE}}$ ⟧=: λP ∈ $D_{<d,t>}$,λQ ∈ $D_{<d,t>}$. MAX(Q) < MAX(P)
c. ⟦ tall ⟧ =: λd∈ D_d.λx∈ D_e. TALL(x) ≥ d (Abu Helal, 2024)

(3) LF: [- er than Omar is λd] [Fatima is d- tall]]] (Abu Helal, 2024)

Truth conditions: ⟦ -$er_{2\text{-PLACE}}$ ⟧ ([λd'. Omar is d'-tall]) (λd. Fatima is d- tall)]
= TRUE iff MAX (λd'. Omar is d'-tall) < MAX (λd. Fatima is d-tall) (Abu Helal, 2024)

Quite interestingly, Jordanian Arabic (JA) makes use of two different syntactic structures in expressing clausal comparatives. In this language, the comparative particle *min* 'from' takes a free (relative) clause that is either headed by

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[1] In formal semantics Schönfinkelization refers to a technique of translating predicates into functions that can be integrated in the compositional meaning of logical form.
[2] This paper assumes the following basic ontological semantic type system: D_e = E (the set of individuals); D_d = K (the set of degrees); Dt = T (the set of truth values {True, False}); and $D_{\langle\alpha,\beta\rangle} = D_\beta^{D_\alpha}$ (Abu Helal, 2024).

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complementizer *illi* or *ma*.[3] The two forms of clausal comparatives are exemplified in (4) (See Abu Helal, 2024).

(4) a. *Fatima katab-t qaasˤidh ʔablaɣ min illi katab-ha Omar*
Fatima wrote-F a poem more-eloquent from ILL wrote-it Omar
'Fatima wrote a more eloquent poem than what Omar wrote.'
b. *Fatima katab-t qaasˤidh ʔablaɣ min ma katab Omar*
Fatima wrote-F a poem more-eloquent from MA wrote Omar
'Fatima wrote a more eloquent poem than what Omar wrote.'

The two forms of clausal comparatives (henceforth, *illi*- and *ma*-comparatives) are syntactically similar; both of them involve a free relative clause of category CP or TP in the standard of comparison. Under Bhatt and Takahashi (2011), it should be the case that the two forms of comparative constructions draw on comparison based on degree descriptions along the lines of the 2-place predicate analysis in (2). Despite appearances, this paper will show that this is not the case. More specifically, the paper will argue for the fact that while the *ma*-comparative involves a 2-place predicate –er operator that relates degree descriptions, the *illi*-comparative makes use of a 3-place predicate –er operator that relates individuals. The main finding of this paper is that intra-linguistically or at least in a language like JA, the interpretation of the clausal comparative may correspond to the individual- and degree-based mode of comparison depending on the type of the free relative selected by the comparative particle in the standard of comparison (See von Stechow, 1984; Bhatt & Takahashi, 2011).

This paper is organized as follows. Section two presents and demonstrates the theoretical framework which provides the basis of the eventual analysis of the two forms of clausal comparatives in JA. Section three argues that the clausal *ma*-comparative has a denotation that is interpreted in terms of degree comparison. The argument draws on empirical evidence that supports the presence of degree operator movement and degree abstraction in the standard of comparison. For this case, we present a compositional analysis with a Schönfinkelization of the 2-place comparative operator that relates degree descriptions. Section four discusses evidence confirming the fact that clausal *illi*-comparative involves an individual-based mode of comparison, rather than a degree mode of comparison. The section presents a compositional semantic analysis for the *illi*-comparative which draws on a Schönfinkelization of the comparative operator as a 3-place predicate that relates individual- denoting objects, rather than degree descriptions (e.g., Hankamer, 1973; Heim, 1985; Kennedy, 2009). The last section concludes the paper.

II. Theoretical Framework

The standard degree-based theory analyzes comparatives as sentences which denote relations between degree descriptions (von Stechow, 1984). The analysis makes use of a language L with the semantic type d that denotes degrees along with other types such as e and t which denote entities and truth values, respectively. The expressions of L are interpreted relative to a model M= {D_d, {TRUE, FALSE}, ⟦ ⟧} which comprises mutually disjoint degree sets SD (i.e., $D_d = \cap SD$) which is related by an ordering $>_d$ that is a total, asymmetric, transitive and reflexive relation (see von Stechow, 1995), the set of truth values {TRUE, FALSE} and the interpretation function ⟦ ⟧ which is a function that assigns interpretations to the lexical elements in composition (von Stechow, 1984; Beck, 2012; Abu Helal, 2019).

This approach has two main working assumptions about gradable adjectives: first, gradable adjectives (e.g., tall) denote relations of individuals and degrees (Seuren, 1973; Cresswell, 1976; von Stechow, 1984; Heim, 1999, 2001) as represented in (5) (Abu Helal, 2022a).

(5) ⟦ tall ⟧= λd.λx. TALL(x) ≥ d (Abu Helal, 2022a)

Second, this relation is downward monotonic with the following property:

(6) ∀x∀d∀d'. [TALL(d) (x) =1 ∧ d' < d → TALL(d') (x)=1] (Abu Helal, 2022b)

Syntactically, the degree argument of the gradable adjective is represented as a DegP that is projected as sister to the gradable adjective (Abu Helal, 2022b). Gradable adjectives get their degree argument saturated in two ways: first, they

[3] The two types of argumental clauses have one major interpretative difference: while an *illi*-clause has a substance-based reading with the denotation of individuals of type e or predicates of individuals of type <et>, the *ma*-clause has an amount reading which is standardly argued to denote degrees or predicate of degrees of type d or <dt>, respectively.

(i) *a. Omar ʔakal min illi tˤabxt-u Fatima*
Omar ate from ILLI cooked Fatima
'Omar ate some object of things that Fatima cooked.'
b. *Omar ʔakal min ma tˤabxt-u Fatima*
Omar ate from MA cooked Fatima
'Omar ate some amount of things that Fatima cooked.'

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can directly combine with degree-denoting measure phrases of type d via function application as in (7). [4]

(7) Bill is taller than 5 feet.

Second, the degree argument can be quantified over by a degree operator (e.g., comparative head –er, equative as or the superlative –est) as in (8) (Abu Helal, 2022a).

(8) a. Mary is taller than Bill.
b. Bill is the tallest guy.

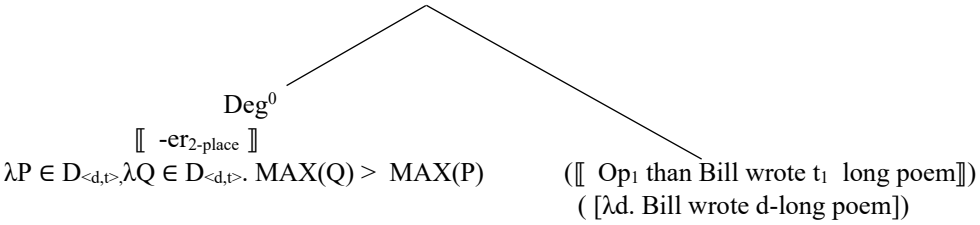
The comparative head in (8.a) can be given a 2-place or 3-place predicate analysis. The 2-place predicate analysis takes the comparative head as an operator that applies to two arguments: the derived predicate of degrees of the target of comparison and the degree abstraction structure of the standard of comparison. The output asserts that the maximal degree of the target degree description exceeds that of the standard degree description. The 2-place comparative operator has the following lexical entry (9) (Stechow, 1984; Heim, 2000; Bhatt & Takahashi, 2011; Beck, 2012).[5]

(9) $[\![\text{ -er}_{\text{2-PLACE}}]\!] =: \lambda P \in D_{<d,t>} \lambda Q \in D_{<d,t>}. \text{MAX}(Q) > \text{MAX}(P)$

On this analysis, the comparative structure in (10) has an LF with the following semantic composition. First, the comparative morpheme $[\![\text{ -er}_{\text{2-PLACE}}]\!]$ which is a quantifier of type <dt,<dt,t>> composes directly with the than-clause of type <d,t> as its first argument (Abu Helal, 2019). The resulting object is the generalized quantifier DegP of type <dt,t> (Abu Helal, 2019).[6]

(10) Mary wrote a longer poem than Bill did.

(11) $[\![\text{DegP}]\!] \quad \lambda Q [\text{MAX}(Q) > \text{MAX}(\lambda d.$ Bill wrote d-long poem)]



The LF in (11) presupposes a clausal degree abstraction structure for the standard of comparison (i.e., than clause): the than-clause has an (elided) CP complement that denotes predicates of degrees of type <d,t>. On this analysis, the than-clause CP complement necessarily involves operator movement that creates a degree binder abstracting over the degree argument of the gradable predicate (Abu Helal, 2019). This amounts to saying that the standard of comparison in English-like languages necessarily has degree abstraction (i.e., $\lambda d \in D_d$. P(d)), rather than individual abstraction (i.e., $\lambda x \in D_e$. P(x)) (Chomsky, 1977; von Stechow, 1984; Heim, 1985, 2001; Pancheva, 2006; Bhatt & Takahashi, 2011; Abu Helal, 2019). [7]

[4] We may take measure phrases as generalized quantifiers that denote predicates of predicates of degrees of type <dt,t>. Then, they can undergo Quantifier Raising and degree abstraction in such a way that the degree argument is quantified over just as other degree modifiers that function as degree quantifiers (Schwartzschild & Wilkinson, 2002; Abu Helal, 2022b).

[5] The 2-place predicate analysis has a wide range of applications: it generates attributive comparatives and sub-comparatives of degrees as well as phrasal comparatives with the standard of comparison that has a clausal source (see Beck et al., 2012).

[6] To derive the surface structure for the comparative with the LF structure in (11), we need to introduce some more assumptions about the syntax of the structure. Following Bresnan (1973), we may assume that the adjective undergoes head movement into the Degree head –er to form the suppletive form (e.g., taller). As for the surface structure, the representative literature on comparatives offers two solutions. The classical one is to assume that the than clause obligatorily extraposes in the phonology (Chomsky, 1977; Selkirk, 1970; Bresnan, 1973; Heim, 2000). Such an analysis is criticized on the grounds that rightward movement lacks motivation beyond the need to derive the surface structure. The other solution is to let the than clause merge counter-cyclically via late merge after the QR-ed -er morpheme has undergone right-adjunction into a scope position at a node of type t (Abu Helal, 2019).

[7] Beck et al. (2004, 2009) and Kennedy (2009) proposed the degree abstraction parameter which differentiates between those languages that have degree quantification in the syntax (e.g., English) and those languages that do not (e.g., Japanese).

(i) Degree abstraction parameter (DAP) (Beck et al., 2004).
A language does/does not have binding of degree variables in the syntax (Abu Helal, 2019).

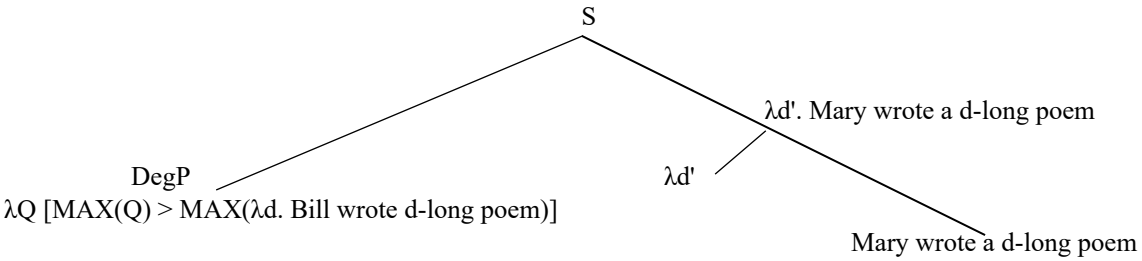
Kennedy (2009), based on previous crosslinguistic investigations, proposed the comparison type parameter which classifies languages with respect to whether or not they have degree abstraction and binding in the than-clause as defined in (ii).

(ii) Comparison type parameter (CTP) (Kennedy, 2009).

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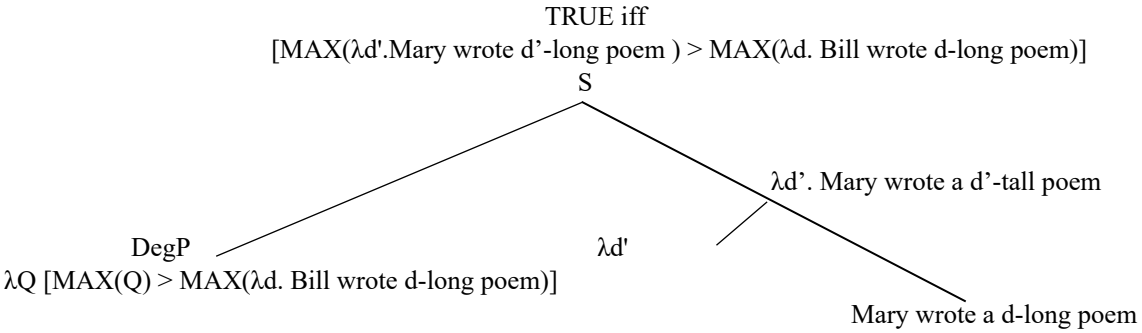
Second, since the DegP is not an element with an appropriate type to compose directly with the adjective, the generalized quantifier DegP in (10) undergoes Raising as Quantifier (QR) into a clause-level position (say Spec IP). QR leaves behind a trace of type d that saturates the degree argument of the gradable adjective and subsequently creates a degree abstraction structure in the main clause as in (12).

(12)



Finally, the generalized quantifier applies to the derived predicate of degrees in the matrix clause to yield the truth value TRUE if the maximal degree to which Mary wrote a long poem exceeds the maximal degree to which Bill wrote a long poem.

(13)



The 3-place comparative operator, on the other hand, involves a different mode of comparison: it compares individuals, rather than degrees. It takes as its arguments two individual-denoting objects and a gradable predicate and it asserts that one individual has the scalar property to a degree that exceeds that of the other individual. The postulation of 3-place operator presupposes the absence a deletion process in the standard of comparison (Hankamer, 1973; Heim, 1985; Kennedy, 2009).[8]

III. Clausal MA-Comparative

Like English clausal comparatives in (1), the *ma*-comparative should make use of a 2-place comparative operator –er which relates degree descriptions. To show this, we argue that the standard of comparison in clausal *ma*-comparatives is interpreted as a degree abstraction structure. Our argument is based on the following facts. First of all, the clausal *ma*-comparative is compatible with sub-deletion as in (14).

(14) *Fatima katab-t qasˤaaʔid ʔablaɣ min ma Omar katab riwayaat*
Fatima wrote-F poems more-eloquent from MA Omar wrote novels
'Fatima wrote more eloquent poems than Omar wrote novels.'

Second, the *ma*-comparative is sensitive to the islandhood conditions, including the negative islandhood condition. Consider the wh- and adjunct islands in (15) and the negative island condition (16).

(15) **Fatima katab-t qaasˤidh ʔablaɣ min ma saʔl l-staz*

A language either has both individual and degree comparison, or has only individual comparison (A language has both 2-place and 3-place comparative morphemes or has only the latter.) (Abu Helal, 2019).

These two parameters can be summarized in terms of the following implicational universal (iii).

(iii) A language may or may not have degree semantics in the expression of comparatives. If yes, a language has both 2-place and 3-place comparative morphemes or has only the latter.

[8] In the presence of his deletion process, a degree abstraction structure can be derived from a deleted CP in the standard of comparison and hence a 2-place comparative operator may apply with no need for the 3-place operator. There have been many suggestions for what kind of deletion it is. Lechner (2004) proposed that it is a kind of gapping or conjunction reduction. Merchant (2009), on the other hand, suggested that it is a TP-ellipsis.

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Fatima wrote-F poems more-eloquent from MA asked the-teacher
mta Omar nazzal-ha min l-net.
when Omar downloaded-it from the-net.
'Mary wrote more eloquent poems than what the teacher asked when Omar downloaded it from the net.'

(16) **qaasʿidt Fatima ʔablaɣ min ma wala waħid nazzal min l-net.*
Poem Mary more-eloquent from MA no one downloaded from the net
'Fatima's poem is more eloquent than nobody downloaded from the net.'

One more argument supporting the fact that the standard of comparison in the ma-comparative is a degree abstraction structure is the fact that the –er operator involved tends to exhibit scope interaction with other scope-bearing expressions in structure. Consider, for example, the intensionalized *ma*-comparative in (17). The sentence is ambiguous between two readings. On the surface reading in which the –er operator takes scope over the modal *lazim* 'must', the poem is exactly 15 line long in all possible worlds. On the inverted reading in which the modal *lazim* 'must' takes scope over the –er operator, the poem is exactly 15 lines where it is shortest in the accessible worlds. This fact indicates that the -er operator should be given a 2-place predicate analysis where it is expected to serve as a quantifier that raises to form a degree abstraction structure.

(17) *qaasʿidt Fatima 10 abyaat. bas lazim tkuun qaasʿidt Omar atʿwal min*
Poem Fatima 10 lines. But must be poem Omar longer from
ma katab-t Fatima bi 5 abyaat b-zaabtʿ
MA wrote-F Fatima by 5 lines exactly.
'Fatima's article is 10 pages long. But it must be the case that Omar's article is longer than that.'

(17') **a. ✓ surface scope: required > -er**
required [[5 lines -er than what Fatima wrote]1 [Omar's poem be t_1- long]]
∀w ∈Acc: max {d: $long_w$(lines, d)} = 15 lines (where Acc = the set of accessible worlds)
b. ✓ inverted scope: –er > required
[5 lines -er than Fatima wrote d-long poem]]1 [required [Omar's poem be t_1-long]]
max {d: ∀w ∈Acc: $long_w$(lines,d)} = 15 lines (See Bhatt and Pancheva, 2004)

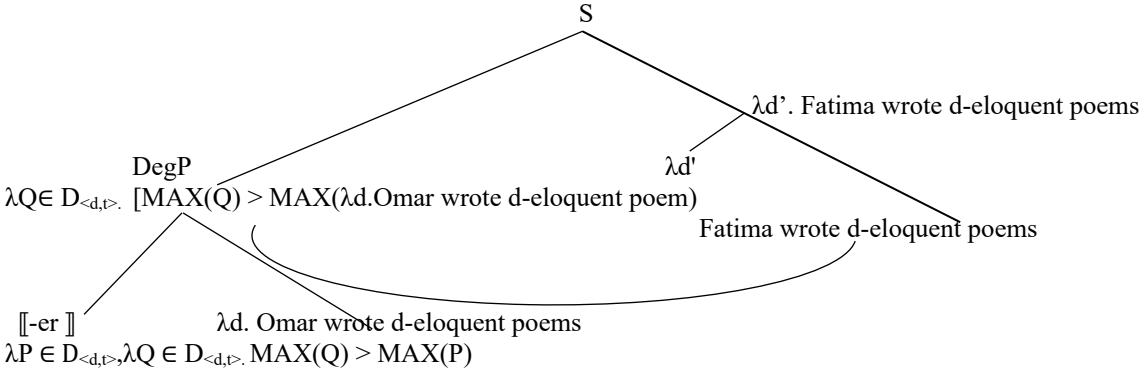
Given these facts, it should be the case that the clausal ma-comparative (e.g., 4.a), repeated as (18) is interpreted in terms of a 2-place predicate that relates degree descriptions.

(18) b. *Fatima katab-t qaasʿidh ʔablaɣ min ma katab Omar*
Fatima wrote-F a poem more-eloquent from MA wrote Omar
'Fatima wrote a more eloquent poem than what Omar wrote.

The following semantic analysis generates the truth conditions of the ma-comparative in (19) based on the 2-place predicate analysis which relates degree descriptions.

(19)

TRUE iff
[MAX(λd'. Fatima wrote d'-eloquent poems) > MAX(λd. Omar wrote d-eloquent poem)]



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IV. Clausal ILLI-Comparative

Unlike clausal ma-comparatives, the clausal illi-comparative involves an individual rather than degree mode of comparison. This section presents a set of arguments supporting the fact that the *illi*-comparative is a phrasal comparative which should be given a direct 3-place predicate analysis. More specifically, the section shows that the *illi*-clause is an individual-denoting free relative that lacks degree abstraction in the standard of comparison.

Consider first the facts in (20) and (21) (i.e., where # indicates ungrammaticality). It is found that the *illi*-comparative is insensitive to syntactic islandhood environments of adjunct and interrogative.

(20) #*Fatima katab-t qaasʿidh ʔablaɣ min illi saʔlat mta raħ tilqiha fi l-nadawah*
Fatima wrote-F a poem more-eloquent from ILLI she asked when will she recite in the seminar
'Fatima wrote a more eloquent poem than the one she asked when she will recite in the seminar.'

(21) #*Fatima katab-t qaasʿidh ʔablaɣ min illi ziʕlat. ʕaʃan Omar intaqadha*
Fatima wrote-F a poem more-eloquent from. ILLI she angry because Omar criticized it
'Fatima wrote a more eloquent poem than the one which she was angry because Omar criticized.'

With no movement in the standard, the ungrammaticality of (20) and (21) is unexpected if we assume the comparative operator to be a 2-place operator relating two (maxima of) degree predicates. Therefore, it should be the case that the standard of comparison in clausal *illi*-comparatives is based on individual-denoting rather than degree abstraction structures. Second, the *illi*-comparative is also indifferent to the negative island as shown in the grammaticality of (22).

(22) *l-qaasʿidh illi katabt-ha Fatima ʔablaɣ min illi wala waħid qaraʔha*
The-poem ILLI wrote-F Fatima more-eloquent from ILLI no one read-it
'The poem that Fatima wrote is more eloquent than the one that nobody read.'

Again, if the comparative operator ⟦ -er⟧ in (22) had a standard of comparison based on degree abstraction, it would have ruled out (22) as having an undefined standard of comparison.[9] Contrary to this, the sentence is grammatical.

Third, the *illi*-comparative does not involve sub-deletion. This also indicates that comparison does not involve degree abstraction that derives a predicate of degrees in the standard as in (23).

(23) **Fatima qaraʔ-t majalat ʔtʿwal min illi Omar qaraʔ riwyaat*
Fatima read-F magazines longer from ILLI Omar read novels
'Fatima read longer magazines than Omar read novels.'

Finally, the intensionalized *illi*-comparative in (24) does not induce scope interaction between the modal intensional operator *lazim tkuun* ' must be' and the comparative-er. The sentence in (24) is unambiguous and the only reading it has is the surface scope reading where the paper is exactly 15 page long in all possible worlds. [10] The inverted scope reading where that the paper is exactly 15 pages in the accessible worlds where it is shortest is absent.

(24) *qaasʿidt Fatima 10 abyaat. bas lazim tkuun qaasʿidt Omar atʿwal min*
Poem Fatima 10 lines. But must be poem Omar longer from that.
min illi katbt-ha Omar bi-5 abyaat b-zaabtʿ.
'Fatima's article is 10 page long. But it must be the case that Omar's article is longer than that.'
✓surface scope: required > -er
required [[5 pages -er than what Fatima wrote-it]1 [Omar's paper be t_1- long]]
∀w ∈Acc: max {d: longw(p,d)} = 15 pages
(where Acc = the set of accessible worlds)
✗inverted scope: –er > required
#[5 pages -er than Fatima wrote d-long paper]]1 [required [Omar's paper be t_1-long]]
max {d: ∀w ∈Acc: longw(p,d)} = 15 pages (See Bhatt & Pancheva, 2004)

The facts in (19-24) indicate that the *illi*-comparative does not involve a standard of comparison based on a degree abstraction structure. The clausal standard in *illi*-comparatives is then an individual-denoting object. To give a 3-place predicate analysis based on comparison of individuals, the *illi* free relative is to be analyzed as an individual-denoting

[9] As Rullmann (1995) put it, the maximality operator is incompatible with downward entailing contexts such as the negative. In (22), if nobody wrote a 10-page paper, it follows that nobody bought a 15-page paper, and so forth. We end up with no maximum degree to serve as the standard of comparison (Abu Helal, 2019).

[10] See Heim (2006), Barbiers et al. (2025), Bhatt and Pancheva (2004) and Beck et al. (2004) for examples from English.

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expression. In JA, the *illi-* relative clause in argumental position is necessarily a referential definite description. It acts as a nominal argument with the denotation of substance-based DP as exemplified in (25).[11]

(25) qara*ʔ-t* *(ya)illi* *katab-u Ali*
I read *what* *wrote Ali*
'I read what Ali wrote.'

The free relative DP has an individual-denoting unique or maximality reading. To see how this is the case, let us imagine the scenario where I read the unique book of philosophy written by Ali, for example. The answer to the question in (25); *illi katab-u Ali* ' what Ali wrote'; refers to the unique book of philosophy written by Ali. This is the 'uniqueness' reading of the *illi*-free relative in (25).

Now, let us imagine another scenario in which Ali has also written three books about physics, math and psychology. When asking the constituent interrogative question in (26) again, the constituent *illi katab-u Ali* ' what Ali wrote' would be the intuitive answer which refers to an exhaustive list of the books that Ali wrote: the list comprising four books written by Ali. This is the 'maximality' reading of the *illi*-free relative in (26).

(26) Q: *ʃu* *illi* *qaraʔt-u?*
What ILLI read. read-it?
'What did you read?'
A: *illi katab-u Ali*
ILLI wrote-it Ali
'What Ali wrote'

It follows then that an argumental *illi*-free relative may function as a referential expression of either atom or plural individual denoting objects. Abu Helal (2021, p. 15) analyzed the definite description meaning of *(ya)illi* free relative in (26) as a predicative structure interpreted as a choice function that maps each set of individuals of type <et> into singleton sets of type <et>, each of which consists of either an atom individual (i.e., uniqueness) or a plural individual (i.e., maximality) (Abu Helal, 2021).

(27) A function f of type <et,et> is a choice function CH(f) if and only if for any set of individuals E, f(E) ⊆ and f(E) ≠ ∅ (Abu Helal, 2021)

On this analysis, the definite description meaning of free *(ya)illi* relative in (27) can be analyzed as follows. First, the *illi* relative is interpreted as a choice function CH that takes the predicate 'λx. Ali wrote x.'and returns the singleton set that contains either a single atomic individual or a single plural individual (Abu Helal, 2021).

(28) CH (⟦ [λx. Ali wrote x] ⟧) ∈ $D_{<et>}$

On the assumption that the choice function in (28) gives singleton predicates with one and only one atomic /plural individual, an iota type shifting operation naturally applies (Abu Hela, 2021). This operation shifts singleton predicates of type <et> into objects of type e which refer to the unique atomic/ plural individual itself (Partee, 1987; Jacobson, 1995; Abu Helal, 2021).

(29) ⟦ *illi katab-u Ali* ⟧ =: ιCH (⟦ [λx. Ali wrote x] ⟧)∈ $D_{e.}$ (Abu Helal, 2021)

Given this analysis, the *illi*-free relative is now an individual-denoting argument. As an individual denoting standard, it should be the case that the illi-comparative involves a 3-place predicate analysis which relates individual-denoting objects rather than degree descriptions. To show this, let us calculate the truth conditions of (4.b), repeated as (30).

(30) *Fatima katab-t qaasʿidh ʔablaɣ min illi katab-ha Omar*
Fatima wrote-F a poem more-eloquent from ILLI wrote-it Omar
'Fatima wrote a more eloquent poem than what Omar wrote.'

Under the 3-place predicate analysis, the comparative –er operator may be Schönfinkelized as shown in (31) which is due to Heim (1985).

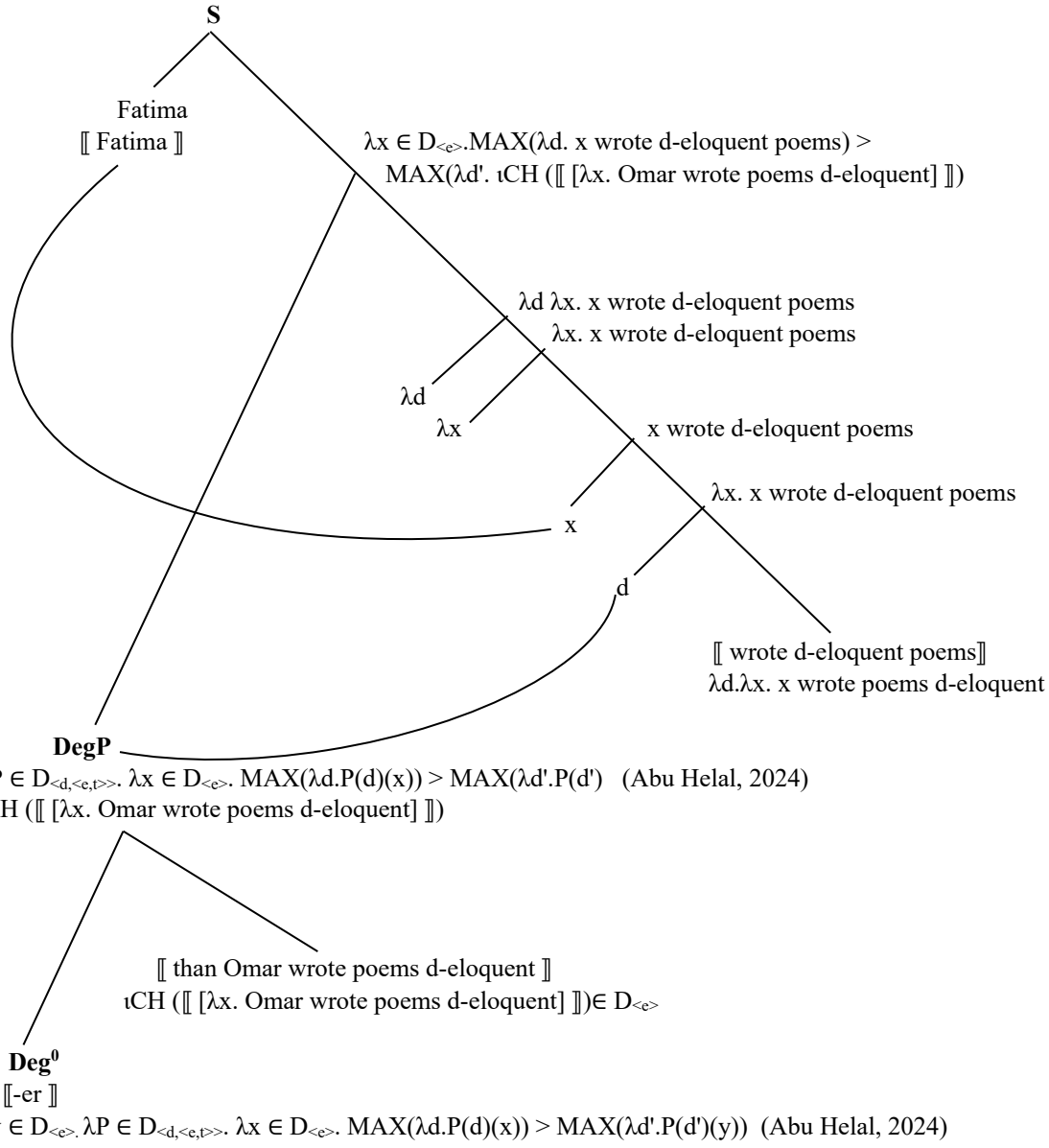
(31) ⟦$\text{-er}_{3\text{-PLACE}}$ ⟧=: λy ∈ $D_{<e>.}$ λP ∈ $D_{<d,<e,t>>}$. λx ∈ $D_{<e>}$. MAX(λd.P(d)(x)) > MAX(λd'.P(d')(y)) (Abu Helal, 2024)

[11] The complementizer *illi* consists of the definite article l 'D' which incorporates a bundle of φ- inflectional features ([+ gender], [+ person, [- number]) (Aoun & Choueiri, 1997; Aoun, 2000; Ouhalla, 2004).

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To derive the truth conditions of (31) using Heim's lexical entry, two invisible operator movements apply: first, the individual-denoting target of comparison moves and creates an individual λ-abstract. Second, the constituent [-er than phrase] undergoes Raising as Quantifier into a location that is between the individual-denoting target and its individual λ-abstract. The two covert operator movements create what is called ' Parasitic Scope' (Barker, 2007; Beck & Sauerland, 2000; Nissenbaum, 1998). Let us show how we can use this semantic analysis to derive the truth conditions of (31) based on comparison of individuals, rather than degrees or degree descriptions (Abu Helal, 2024).

(32) TRUE iff MAX(λd. Fatima wrote d-eloquent poems) >
MAX(λd'. ιCH (⟦ [λx. Omar wrote poems d-eloquent] ⟧)



V. Conclusion

This paper presented and analyzed two forms of clausal comparatives in JA with different semantic denotations, namely the *ma-* and *illi-* comparative. It discussed empirical evidence for the fact that the two forms of clausal comparative should be interpreted differently: while the *ma*-comparative involves comparison based on degree descriptions, the *illi*-comparative draws on comparison based on individual-denoting objects. The paper proceeded to provide two compositional semantic analyses for the two forms of clausal comparative with different Schönfinkelizations of the comparative –er operator. As involving a degree description standard of comparison, the *ma*-comparative is given a 2-place predicate analysis which relates degree descriptions. The *illi*-comparative, on the other hand, receives a 3-place predicate analysis in which the –er relates individual-denoting expressions. The main theoretical implication of the paper is that it contributed further evidence from Jordanian Arabic JA supporting the morphosyntactic approach to clausal

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comparatives in which language-specific morphosyntactic factors may conspire to impose the type of semantics the comparative -er head has (Bhatt & Takahashi, 2011).

ACKNOWLEDGEMENTS

"This research is fully funded by Zarqa University".

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