

**A CONTRASTIVE ANALYSIS
OF ENGLISH AND ARABIC IN RELATIVIZATION**

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1. Introduction

Relative clause formation in English and Modern Standard Arabic (henceforth MSA) appears to be similar in many constructions; however, there are certain aspects which are distinct. In this paper, a contrastive analysis will be undertaken to investigate points of comparison and contrast between relativization in English on the one hand and relativization in MSA on the other. The following major areas will be covered: relative clause formation, relative pronouns, resumptive pronouns, restrictive and non-restrictive relative clauses, nominal and verbal relative clauses, subject and object relative clauses, free / headless relative clauses, embedding and its types, and finally, the Noun Phrase Accessibility Hierarchy of Keenan and Comrie (1977) in relation to relativization in both English and MSA.

1.1. Relative Clause Formation

According to transformational grammar, a relative clause is a surface structure realization of an embedded sentence following a definite or an indefinite head noun phrase called the antecedent and containing an NP coreferential with this antecedent. The relative clause formation rule involves the deletion of the second identical NP, i.e., the NP of the embedded sentence, and its replacement by the appropriate relative pronoun. The relative clause formation rule is the same for both English and MSA. This rule is the following:

(1) X _____ [NP _____ [X _____ NP _____ Y]] Z
 NP S S NP

1 2 3 4 5 6
 1 2 4# 3 4 5# 6

[+ rel]
 [+ pro]

Condition: 2 = 4 (obligatory)

The position of the relative clause is postnominal in both English and MSA, i.e., the relative clause always follows the antecedent. However, there are basic differences between English and MSA as far as the relative pronoun is concerned. In English, the relative pronoun may follow either a definite antecedent or an indefinite antecedent as in (2) and (3) below:

(2) The boy who was running fast stumbled.

(3) A boy who was running fast stumbled.

In MSA, however, no relative pronouns follow an indefinite antecedent. Thus while (4) is grammatical in MSA, (5) is not:

(4) Raʔayt-u al-walad-a allaḏii faaz-a.
 'I saw the boy who won.'

(5) *Raʔayt-u walad-an allaḏii faaz-a.
 'I saw a boy who won.'

In MSA, if the relative clause refers to a definite noun, that noun is usually followed by a relative pronoun agreeing with it in gender, number, and case. Such a sentence is called *silah* 'relation' as in (6):

(6) Raʔayt-u al-rajul-a allaḏii jaaʔ-a.
 'I saw the man who came.'

There is no relative pronoun if the modified noun is indefinite as in (7):

(7) Raʔayt-u rajul-an jaaʔ-a.
 'I saw a man who came.'

Such a sentence is called *sifah* 'adjectival.'

1.2. Relative Pronouns

In English, the relative pronoun has five forms: *who*, *whom*, *whose*, *which*, and *that*, only two of which are marked for case: *whom* for the accusative and *whose* for the genitive. In MSA, the relative pronoun has the same base with phonological differences in masculine and feminine and various endings for case and number. The

form of the relative pronoun in MSA is determined by gender, number, and case. These forms are not distinct as English relative pronoun forms seem to be. Thus, we have eight different shapes of the relative pronoun in MSA. These forms and their distinctive features are given below:

1. *Allaḏii* = 'who, that, which'

[+ masculine]
 [+ singular]
 [+ nominative]

2. *Allatii* = 'who, that, which'

[- masculine]
 [+ singular]
 [+ nominative]

3. *Allaḏaani* = 'who, that, which'

[+ masculine]
 [+ dual]
 [+ nominative]

4. *Allataani* = 'who, that, which'

[- masculine]
 [+ dual]
 [+ nominative]

5. *Allaḏayni* = 'who, that, which'

[+ masculine]
 [+ dual]
 [- nominative]

6. *Allatayni* = 'who, that, which'

[- masculine]
 [+ dual]
 [- nominative]

7. *Allaḏiina* = 'who, that, which'

[+ masculine]
 [+ plural]
 [+ nominative]

8. *Allawaati* = 'who, that, which'

[- masculine]
 [+ plural]
 [+ nominative]

In addition to these eight shapes of the relative pronoun in MSA, the interrogative pronouns *ayyun* 'which' or 'what kind of', *ma* 'which', and *man* 'who' frequently function as relative pronouns as in (8), (9), and (10) below:

(8) ʔuḥibb-u ʔayyun tu-ḥibb.

'I like what you like.'

(9) *Ma* tazra9-a-hu al-yawm-a tajnii-hiyadan.

'What you sow today, you will reap tomorrow.'

(10) *Man* yadrus yanjah.

'He who studies succeeds.'

Unlike in English, in MSA the relative pronoun does not occupy the place of a subject or object, but acts like an adjective and agrees with the antecedent in gender, number, and case.

1.3. The Resumptive Pronoun

A basic difference between English and MSA in relativization is the appearance in MSA of a personal pronoun in the relativized site. This pronoun is called in MSA *al-damiir-u al-9aaʔidu* 'the returning pronoun' or the resumptive pronoun which agrees with the relativized NP in number, gender, and case. This resumptive pronoun

does not appear in the subject position as in (11), is optional in the direct object position as in (12), and is obligatory in the indirect object, object of preposition, genitive, and object of comparison positions as in (13), (14), (15), and (16) below. The resumptive pronouns in these sentences are italicised.

- (11) Al-*ta*alib-u allaḏii daras-a li-al-*im*tiḥaan-i najah-a.
'The student who studied for the exam succeeded.'
- (12) Al-*ki*taab-a allaḏii qaraʔt-u-*(hu)* muḥiid-un.
'The book that I read is useful.'
- (13) Al-*wal*ad-u allaḏii ʔa9tayt-u-*hu* al-*ki*taab-a raji9-a.
'The boy to whom I gave the book returned.'
- (14) Al-*xiz*aant-u allatii ʔada9-u fii-*ha* malabisi waasi9at-un.
'The wardrobe in which I put my clothes is large.'
- (15) Al-*fata*at-u allati saafar-a ʔabuu-*ha* ʔismu-*ha* samiira.
'The girl whose father travelled is called Samira.'
- (16) Al-*ra*jul-u allaḏii samiir-un atwal-u mim-*hu* faaz-a.
'The man that Samir is taller than won.'

The resumptive pronoun is cliticized to a verb as in (12) and (13), to a noun as in (15), and, finally, to a preposition as in (14) and (16). In English, at least in modern standard English, there are no resumptive pronouns in relativization; however, as researchers (Zobl 1980) point out, the resumptive pronoun appears in Old English and nonstandard dialects of English.

1.4. Restrictive Relative Clauses

There are restrictive as well as non-restrictive relative clauses in both English and MSA. A restrictive relative clause, according to Awwad (1973), is a surface structure realization of an embedded sentence which is directly dominated by an NP and which always has an NP coreferential with an NP in the matrix sentence. In MSA, the relativization rule (17) places a copy of the NP of the embedded sentence immediately after the matrix NP, and marks it as +Rel, +Pro:

- (17) X $\frac{\text{NP}}{\text{NP}}$ [NP $\frac{\text{S}}{\text{S}}$ [X $\frac{\text{NP}}{\text{NP}}$ Y]] $\frac{\text{Z}}{\text{S NP}}$
- \Rightarrow 1 2 3 4 5 6
 1 2 4# 3 4 5# 6 (obligatory)
- $\left[\begin{array}{l} + \text{rel} \\ + \text{pro} \end{array} \right]$
 Condition: 2 = 4

Item 4 of the derived structure of (17) above is rewritten as 0 if the antecedent is indefinite, or in the appropriate form of the relative pronoun according to the feature specifications of the antecedent (the matrix noun) for gender, number, and case (items 1-8).

1.5. Non-Restrictive Relative Clauses

The non-restrictive relative clause in both English and MSA is a surface structure realization of a conjoined sentence immediately preceded by an NP whose reference is unique to both speaker and hearer, and containing an NP coreferential with a uniquely specified antecedent. The information contained in the conjoined sentence is always known to the speaker, and can also be known to the hearer. The most important factor in determining whether a relative clause is restrictive or not is the feature specification of the antecedent.

Just like non-restrictive relative clauses in English, MSA non-restrictive relative clauses are derived from conjoined sentences. Before applying the relative clause transformation (17), a reordering transformation that places both the conjunction and the conjoined sentence immediately after the antecedent must be applied. This reordering transformation is formulated as in (18) below:

- (18) $\left[\left[\frac{\text{W}}{\text{S0}} \frac{\text{NP1}}{\text{S1}} \frac{\text{X}}{\text{S1}} \right] \text{Conjunction} \left[\frac{\text{Y}}{\text{S2}} \frac{\text{NP2}}{\text{S2}} \frac{\text{Z}}{\text{S2}} \right] \right] \frac{\text{S0}}{\text{S0}}$
- \Rightarrow 1 2 3 4 5 6 7
 1 2 # 4 5 6 7# 3 (obligatory)
- Conditions: (a) NP1 = NP2
 (b) 3 is not empty. If it is null, the rule does not apply because we already have the structural description.

1.6. Nominal Relative Clauses

In both English and MSA, we have nominal as well as verbal relative clauses. A nominal sentence in MSA is one that does not contain a verb. This is true of equational sentences. In nominal sentences where the predicate is either an adjective or a prepositional phrase, the resumptive pronoun and the copula verb *to be* do not appear. This is also the case with reduced relative clauses in MSA such as:

- (19) Al-*wal*ad-u al-ḏakiyy-u
'The smart boy'

As far as reduced relative clauses in English are concerned, several linguists (Selinker, Swain and Dumas 1975; Tarone, Frauenfelder and Selinker 1976) have argued that adjectives are, in fact, derived from reduced relative clauses. Thus (20) is derived from (21) below:

- (20) The round table
 (21) The table which is round

1.7. The Resumptive Pronoun in Nominal Relative Clauses

In MSA, the resumptive pronoun in the nominal relative clause is deleted if it is in the subject position. Otherwise, the pronoun is cliticized to a noun as in (22), to a preposition as in (23), and to a complementizer as in (24); a complementizer is a word such as *that*, *for*, and *to* that introduces complement sentences.

- (22) Al-walad-u allađii ša9r-u-hu ʔawiil-un
'The boy whose hair is long'
(23) Al-madinat-u allatii bi-ha jaami9at-un
'The city in which there is a university'
(24) Al-musaafir-u allađii ʔa9ataqid-u ʔanna-hu sa-ya9uud-u
'The traveller who I believe will return'

In all these types of sentences, the resumptive pronoun cannot be extracted or deleted. In this case, MSA is similar to English in the sense that the Island Constraint as proposed for English by Chomsky (1977) seems to be operating. An NP cannot be extracted or deleted out of another NP, out of a Prep P, or if it is adjacent to a complementizer:

- (25) *Al-walad-u allađii ša9r-u _____ ʔawiil-un
'The boy whose hair is long'
(26) *Al-madiinat-u allatii bi _____ jaami9at-un
'The city in which there is a university'
(27) *Al-musaafir-u allađii ʔa9ataqid-u ʔanna _____ sa-ya9uud-u
'The traveller who I believe will return'

1.8. Verbal Relative Clauses

A verbal sentence in MSA is one that contains a verb. In verbal relative clauses, the relativization process can affect NPs of different grammatical functions: subject, object of verb, indirect object, and oblique object:

- (28) Jaaʔ-a walad-un faaz-a fi al-musaabaqat-i
'A boy who won in the contest came'
(29) Al-walad-u allađii raʔayt-u-hu
'The boy whom I saw'
(30) Raʔayt-u al-rajul-a allađii ʔa9atayt-a-hu al-kitaab-a
'I saw the man whom you gave the book to'
(31) Al-funduq-u allađii qadayt-u al-laylat-a fii-hi
'The hotel in which I spent the night'

The deletion of the resumptive pronoun when it is the direct object is optional.

Unlike in English, prepositions cannot precede relative pronouns in MSA because this always yields ungrammatical results as attested by (32) below:

- (32) *Al-ʔustaađ-u smiθ ma9 allađii naaqašt-u al-wašl-a.
'Professor Smith with whom I discussed relativization'

1.9. Object and Subject Relative Clauses

In English as well as in MSA, there are two types of relativization: object relativization and subject relativization. Object relativization is the relativization of the direct object, the indirect object, or the object of a preposition. Here we have in MSA a resumptive pronoun coreferential with the lexical head of the relative clause.

- (33) Al-kitaab-u allađii qaraʔt-u-(hu).
'The book which I read'

The presence or absence of the resumptive pronoun in (33) above is optional. This is true of Hebrew also as pointed out by Chomsky (1977). The resumptive pronoun must always have the same index as the lexical head of the relative clause, i.e., the resumptive pronoun is bound to the lexical head noun in the sense that the resumptive pronoun is anaphorically related to and coreferential with the lexical head of the relative clause. A rule of coindexing similar to the one formulated for English by Chomsky (1980) is needed to coindex the resumptive pronoun in MSA with the antecedent.

The resumptive pronoun can never be interpreted as a variable; it must agree with the antecedent in number, case and gender. Thus (34) and (35) below are ungrammatical in both English and MSA:

- (34) *Al-kutub-u allatii qaraʔt-u-hu
*'The books that I read it'
(35) *Al-walad-u allađii raʔayt-u-hum
*'The boy that I saw them'

A gap in the original position of the relativized NP is not allowed in object relativization in MSA. A gap is an empty place showing the deletion of a constituent, e.g., a noun phrase or a verb phrase. Thus (36) is ungrammatical in MSA:

- (36) *Qalam-u al-walad-i allđii ʔaxađt-u ___ min al-maktab-i
'The boy's pencil which I took from the desk'

In subject relativization in MSA, the presence of a gap is acceptable as in (37) below:

- (37) Al-walad-u allađii _____ jaaʔ-a
'The boy who came'

The gap here is due to the deleted subject pronoun *huwa* 'he'. In both simple sentences and relative clauses, the subject pronoun is deleted subject to the condition

of the recoverability of deletion. However, in the absence of *allaḏii*, the deletion of the resumptive pronoun yields ungrammatical results as attested by (38) and (39):

(38) Haaḏa kitaab-un qaraʔt-u-*hu*
*Haaḏa kitaab-un qaraʔt-u
'This is a book I read'

(39) ḏaalika walad-un ʔa9rif-u-*hu*
*ḏaalika walad-un ʔa9rif-u
'This is a boy I know'

1.10. Free / Headless Relative Clauses

In both English and MSA, we have free or headless relative clauses as in (40) and (41) below:

(40) *Allaḏiina* ʔaxaḏuu al-iḥtiyaʔaat-i najaw min al-ʔi9ṣaar-i.
'Those who took precautions escaped from the hurricane.'

(41) *Man* yadrus yanjaḥ.
'He who studies succeeds.'

The presence of prepositions with the relative marker in free/headless relative clauses is acceptable as attested by the grammaticality of the following sentences:

(42) Yaṣrif-u al-ʔajuuz-u mimma ʔiddaxar-a.
'The old man spends from what he saved.'

Here *mimma* is derived from *min ma* 'from what' by the phonological process of bilabial assimilation.

(43) Tabarra9-a samiir-un bi-maa kaan-a fi jaybi-hi.
'Samir donated what was in his pocket.'

In free/headless relative clauses, *allaḏii* is neutral with regard to definiteness as well as to gender, number, and case inflections. The only feature that subcategorizes it is [+Human]. The resumptive pronoun may be deleted optionally in free/headless relative clauses as in (44):

(44) Hunaak-a maa zara9t-a-(hu) wa maa banayt-a-(hu).
'There is what you planted and what you built.'

1.11. Types of Embedding

Kuno (1974) indicates that there are two kinds of embedding in relative clauses: center embedding and right branching. This is also true of relativization in MSA, with the exception that right branching is in fact left branching because one writes in Arabic from the right to the left. An example of center embedding in MSA is (45):

(45) Al-ṣaḥn-u allaḏii saqaṭ-a 9ala al-ʔarḏ-i inkasar-a.
'The dish that fell on the floor broke in half.'

An example of right branching in MSA is (46):

(46) Tabhaḏ-u al-ṣurṭat-u 9ani al-liṣṣ-i allaḏii harab-a.
'Policemen are looking for the thief who escaped.'

In both English and MSA, it is possible to relativize into complex NPs where the antecedent is separated by other relative clauses. Thus we have multiple embeddings the number of which is limited by performance factors only. Here the complexity of the structure is directly related to the number of embeddings. An example of multiple embeddings in MSA is (47):

(47) ʔa9rif-u al-walad-a *allaḏii* ʔakal-a al-tuffaḥat-a *allatii* kaanat 9ala al-ṭaawilat-i *allatii* iṣṭaraa-ha samiir-un...
'I know the boy *who* ate the apple *that* was on the table *that* Samir bought...'

1.12. The Noun Phrase Accessibility Hierarchy

English relativization and MSA relativization are, to a large extent, similar with respect to the Noun Phrase Accessibility Hierarchy (NPAH) proposed by Keenan and Comrie (1977). Simply stated, Keenan and Comrie's NPAH stipulates that there is a universal set of grammatical relation or categories out of which relativization can take place. This NPAH is represented by the following order:

	SU > DO > IO > OBL > GEN > O COMP
where	> = more accessible than
	SU = Subject
	DO = Direct Object
	IO = Indirect Object
	OBL = Oblique Object (object of a preposition)
	GEN = Genitive (Possessive)
	O COMP = Object of a Comparative

The NPAH stipulates that higher levels in the NPAH are easier and more accessible to relativization than lower levels. The lower we go down the NPAH, the more difficult relativization becomes. Thus subject relativization is easier than direct object relativization which, in turn, is easier than indirect object relativization and so on until we reach the lowest level, the object of comparison level, which is the most difficult level to relativize on in all natural languages.

There are some differences between English and MSA with respect to the NPAH. First, while in MSA we have all the six categories of the NPAH, in English, as Keenan (1975) argues, we have only five. This is the case because the indirect object

position can be collapsed with the oblique object position since for the purposes of relative clause formation in English it behaves in the same way: a preposition *to* must be retained, and is either stranded or fronted with the relative pronoun.

Examples of the categories of the NPAH in MSA with their English counterparts are given below:

Subject position:

- (48) Al-rajul-u allaḏii ?ištara al-sayyaarat-a yaṇiyy-un.
'The man who bought the car is rich.'

Direct Object position:

- (49) Al-kitaab-u allaḏii qara?t-u-(*hu*) mumti9-un.
'The book (that) I read is interesting.'

Indirect Object position:

- (50) Al-walad-u allaḏii ?a9tayt-u-*hu* al-kitaab-a huna.
'The boy to whom I gave the book is here.'

Oblique Object position:

- (51) Al-qalam-u allaḏii katab-u bi-*hi* daa9-a.
'The pencil with which I wrote was lost.'

Genitive position:

- (52) Al-šayx-u allaḏii ?uytiil-a?axawaa-*hu* huwa al-šayx-u edward kanadii.
'The Senator whose two brothers were assassinated is Senator Edward Kennedy.'

Object of Comparison position:

- (53) Al-fataat-u allatii samiira ?ajmal-u min-*ha* tud9a salwa.
'The girl that Samira is more beautiful than is Salwa.'

Notice that (50) and (51) in English can be collapsed under one category because in both sentences a preposition precedes the relative pronoun. Second, as was pointed out earlier in this paper (see Section 1.3), a major difference between English and MSA in relativization is the presence of the resumptive pronoun in relativized sites in MSA. The resumptive pronoun is not required in the subject position as in (48), is optional in the direct object position as in (49), and is obligatory in the indirect object, oblique object, genitive, and object of comparison positions as in (50), (51), (52), and (53) above. A third difference between English and MSA with respect to the NPAH of Keenan and Comrie (1977) is given by Maxwell (1979) in this critique of Keenan and Comrie (1977). He suggests that English has a postnominal word order strategy in relativization while in MSA we have a postnominal pronoun strategy.

This is illustrated in sentences (48) through (53) (see above) where relativization in MSA involves postnominal resumptive pronoun retention while English relativization does not.

Finally, English and MSA behaves identically with respect to the three constraints placed on the NPAH of Keenan and Comrie (1977). The three NPAH Constraints are:

1. A language should be able to relativize the subject. This is true of both English and MSA.
2. The process of relativization should apply to a continuous segment in the NPAH. There should be no skipping of positions. This is also true of both English and MSA.
3. A strategy of relative clause formation may theoretically stop at any point in the NPAH. This applies to relativization in English as well as relativization in MSA.

1.13. Summary

To sum up, relative clause formation in English and MSA appears to be similar in many constructions; however, there are certain aspects which are distinct. The relativization process is basically the same in English and MSA. While English has five different forms of the relative pronoun, MSA has eight different shapes of the relative pronoun *allaḏii*. Unlike English, the relative pronoun in MSA agrees with the antecedent in number, gender, and case. The relative pronoun in MSA appears with definite antecedents only. A basic difference between English and MSA in relativization is the appearance in MSA of a personal pronoun in the relativized site. This pronoun is called the resumptive pronoun which agrees with the antecedent in gender, number, and case.

In English, as well as in MSA relativization, there are restrictive and non-restrictive relative clauses, nominal and verbal relatives, subject and object relatives, and free/headless relatives. Multiple embedding is also common in both English and MSA relativization. Finally, English relativization and MSA relativization are similar with respect to the noun Phrase Accessibility Hierarchy of Keenan and Comrie (1977). However, there are slight differences between English and MSA in this respect.

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