

# THE WH-MOVEMENT HYPOTHESIS: COUNTER-EVIDENCE FROM ARABIC

MOHAMMED FARGHAL  
*Yarmouk University, Irbid, Jordan*

## *1. Introduction*

Chomsky (1977) extends the Wh-movement rule to cover Relatives, Exclamations and Topicalization. Thus, the transformational component of grammar has been relegated to the rule of *Move  $\alpha$*  which can take the form of either *Move NP* or *Move Wh-element*. This analysis has gained a theorem status and has inarguably been assumed in subsequent linguistic literature embracing EST and its ramifications. This paper is designed to call into question the Wh-movement Hypothesis in these three areas. A reanalysis of English data will be advanced; besides, hard evidence from Arabic will be put forward against the hypothesis.

In terms of presentation, the paper is divided into three major parts. The first part questions the plausibility of positing Wh-movement in Relatives. It will be argued that English as well as Arabic Relatives have resumptive pronouns at D-structure. In the PF component, these resumptive pronouns are subject to obligatory deletion in Subject relatives and optional deletion in Object relatives in Arabic, whereas they undergo obligatory deletion in English Subject as well as Object relatives. Thus the resultant gap in relatives will be considered a direct consequence of resumptive pronouns' deletion rather than Wh-movement. The Relative clause structure will be assumed to involve a Comp that is universally introduced and specified as [+R].

The second part calls into question the assumption of Wh-movement in Exclamations. Exclamations will be argued to involve the introduction of a universal Comp that is specified as [+E] rather than Wh-movement. Arabic case-assignment facts are used as hard evidence for discriminating between some cases of exclamation and interrogation where ambiguity may arise in English. As regards the apparent gap in English Exclamations, it is suggested that it result from the Adjective Attraction Rule rather than Wh-movement.

The final part draws a fundamental distinction between Topicalization and Left-

dislocation. It will be argued that while the left-dislocated NP is base-generated, topicalized constituents are transformationally generated. As a result, constructions that fall under the rule of Topic will not involve Wh-movement. Rather, a topicalized constituent will leave a trace at the original site that is co-indexed with it; hence, the topicalized constituent will carry all the features of that trace.

## 2. Relative Clauses

Chomsky (1977) and subsequent literature assume that relative clauses involve Wh-movement. English provides some clear cases for the plausibility of this assumption. Observe the example below:

- (1) The man whom you criticized came this morning.

The sentence in (1) can be convincingly argued to be derived from the D-structure in (2) below via Wh-movement:

- (2) The man [ $\bar{S}_{[+Wh]}$  Comp [ $S$  you criticized whom]] came this morning.

The basic theoretical motivation behind Chomsky's assumption is that all-gap producing rules which display the same characteristics as Wh-movement should fall under Wh-movement and should be subject to Subjacency. To illustrate, observe the gap in the S-structure corresponding to (1) in (3) below:

- (3) The man [ $\bar{S}$  whom<sub>i</sub> [you criticized t<sub>i</sub>]] came this morning.

The sentence in (1) above, however, becomes problematic if a non-Wh relativizer is used as in (4).

- (4) The man that you criticized came this morning.

To maintain the Wh-movement hypothesis in relative clauses, Chomsky derives (4) from the D-structure in (5) below:

- (5) The man [[ $\bar{S}_{[+Wh]}$  Comp [that]] [ $S$  you criticized whom] came this morning.

According to this analysis, the Wh-element in (5) gets moved to the [+Wh] Comp; then, it subsequently undergoes obligatory deletion in order to derive the surface structure in (4) above. Apparently, Wh-movement in (4) is an ad hoc procedure, for there is no tangible evidence for the existence of "whom", and even if there is, the deletion rule remains implausible because it deletes material that has been introduced on abstract and/or theoretical grounds.<sup>1</sup> In terms of descriptive adequacy, therefore, the Wh-movement rule in (5) is devoid of any significance.

<sup>1</sup> Chomsky argues that the fact that Wh-movement in (5) obeys general constraints on movement rules constitutes empirical evidence for positing Wh-movement. It should be noted that this seemingly empirical evidence in this analysis is completely dependent on the introduction of the Wh-element on

It should be noted that (4) and (1) above are semantically synonymous. In terms of structure, they are identical except for the lexical item representing the relativizer, i.e., the relativizer is "whom" in (1), whereas it is "that" in (4). Moreover, they are in complementary distribution. Observe the ill-formedness of (6) and (7) below:

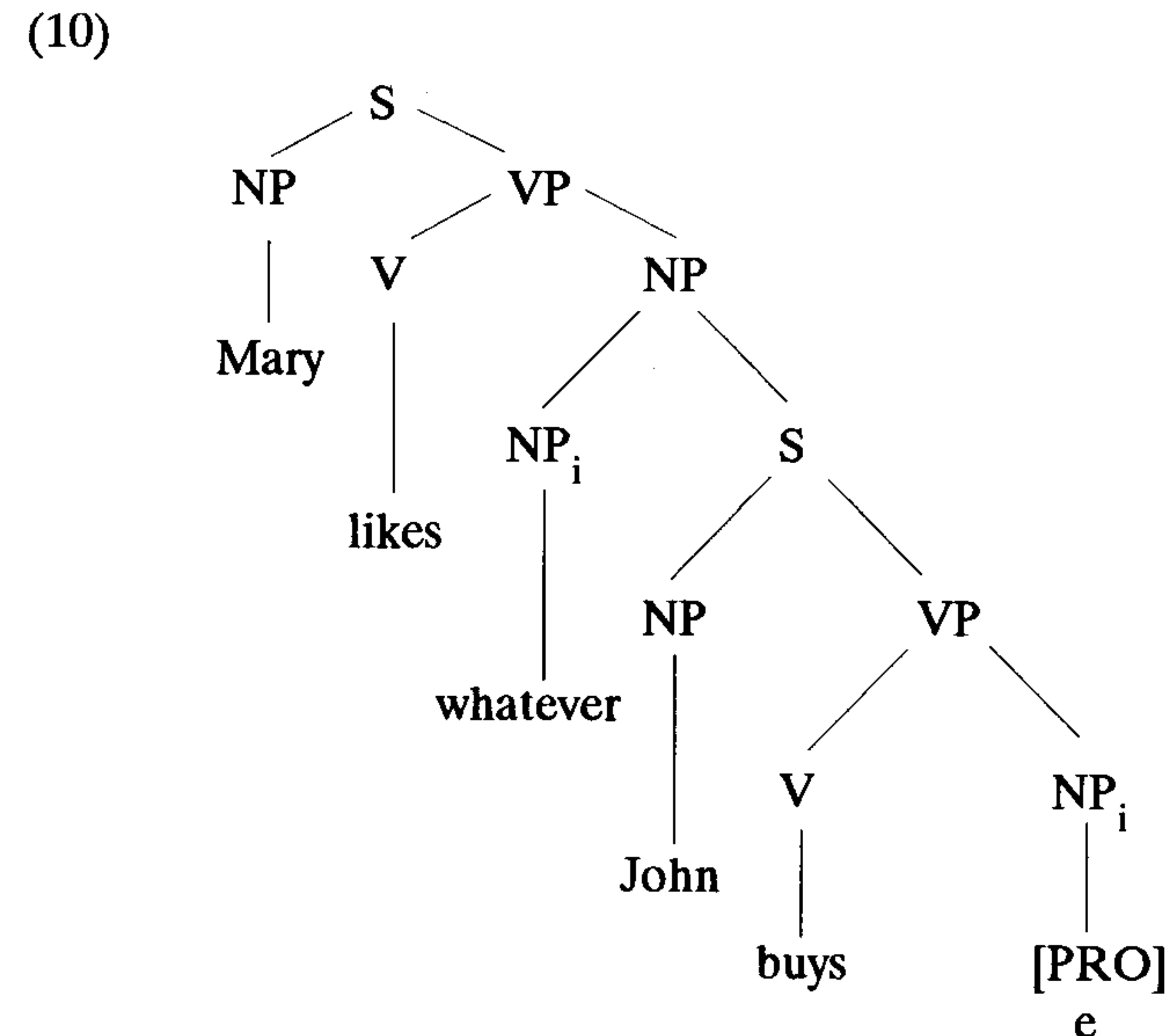
- (6) \*The man whom that you criticized came this morning.  
 (7) \*The man that who you criticized came this morning.

These facts and others concerning the nature of the Relative-that clearly point to the inadequacy of the Wh-movement hypothesis in relative clauses (for arguments considering Relative-that as a highly pronominal relativizer, see Auwera (1985)).

Furthermore, the Wh-movement hypothesis has been challenged in one type of relatives, that is, free relatives. Grimshaw (1977) and Bresnan and Grimshaw (1978) provide evidence for base-generating the Wh-elements introducing free relatives under major phrasal categories, i.e., Wh-elements constitute the heads of free relatives. Examine the example in (8) along with its D-structure in (9) below:

- (8) Mary likes whatever John buys.  
 (9) Mary likes [ $NP_i$  whatever<sub>i</sub> [ $S$  John buys [ $NP_i$  [ $PRO^e$ ]]]]

To illustrate, following is the phrase marker corresponding to (9) above:



theoretical grounds. This phenomenon can be accounted for straightforwardly by syntactic binding (for details, see Bresnan and Grimshaw (1978) and footnote (2) below).



To account for the gap produced in free relatives, Bresnan and Grimshaw advance what they term the "Controlled PRO deletion" which is still subject to Subjacency as interpreted in their (1978) paper.<sup>2</sup> In view of the preceding, Chomsky's Wh-movement hypothesis in relatives loses much of its theoretical attractiveness.

Before suggesting a different analysis for relatives, let us turn to Arabic relativization to see if there is any evidence for Wh-movement. The answer is negative in this regard because relativizing elements of *'allaḏī*-type can neither co-occur with Wh-elements nor undergo any deletion. To confirm this, observe the examples in (11) below:

- (11) a. *sāfara -l-mumaḏḏil-u -llaḏī qābala-(hu) ʿamr-un*  
travelled -def-actor-nom -who met -him Amr -nom  
The actor whom Amr met left.
- b. *\*sāfara- l-mumaḏḏil-u-llaḏī man qābala ʿamr-un*  
travelled-def-actor -nom-who who met Amr-nom  
\*The actor that whom Amr met left.
- c. *\*sāfara-l-mumaḏḏil-u man -illaḏī qābala ʿamr-un*  
\*The actor whom that Amr met left.
- d. *\*sāfara-l-mumḏḏil-u man qābala ʿamr-un*  
The actor whom Amr met left.

Clearly, the ill-formedness of (11b) and (11c) is due to the co-occurrence of the relativizing element *'allaḏī* with the Wh-element *man*. As for the ill-formedness of (11d), it is due to the deletion of the relativizing element *'allaḏī*. In point of fact, the convergence of Wh-relativizers and the that-relativizer in English relativization is absolutely non-existent in Arabic relatives, i.e., Wh-relativizers do not exist in Arabic relativization.<sup>3</sup> Consequently, the Object pronoun gap in Arabic

<sup>2</sup> Bresnan and Grimshaw (1978) suggest that Subjacency be a condition on syntactic binding of Comps rather than on the Wh-movement rule. By syntactic binding, it is meant the checking of the Wh-NP antecedent against the subjacent Comps. To merit co-indexing, the subjacent Comp has to be an unfilled Comp, i.e., it is an unco-indexed Comp. Once subjacent Comps meet this condition, syntactic binding or syntactic connectedness is obtained, hence the sentence will be well-formed.

<sup>3</sup> It should be remarked that what so-called Free Relatives, i.e., headless relatives at D-structure, are excluded here. As a matter of fact, Arabic uses only Wh-elements or quasi Wh-elements in such constructions. Observe the examples below:

- (i) *'aʿjabani mā faʿalta*  
liked+I what did+you  
I liked what you did.
- (ii) *'aynamā taḏhabu 'aḏhabu*  
wherever go+you go+I  
Wherever you go, I go.
- (iii) *man lam yaḥḏur sa- yuʿāqabu*  
who NEG come fut-punish+pass  
Whoever doesn't show up will be punished.

In terms of analysis, Wh-elements in Free Relatives are base-generated rather than moved by Wh-movement (for recent linguistic justification, see Bresnan and Grimshaw (1978)).

relativization can by no means be argued to be a result of Wh-movement. On the contrary, the Object pronoun gap can be convincingly argued to be a result of a late deletion rule that is carried out in the PF component. Thus Arabic relatives are assumed to have resumptive pronouns in their D-structure. It happens that Object resumptive pronouns are optionally deletable if the antecedent NP is specified as [+definite].

Interestingly, however, the Object resumptive pronoun deletion in Arabic relatives cannot cut across an  $\bar{X}$ -major category. Thus Object resumptive pronouns that originate in an  $\bar{X}$ -major category cannot be deleted. Observe the examples below:

- (12) a. *daʿawtu - r-raḏul-a -llaḏī takallama ʿan -hu ʿaliyy-un*  
invited-def-man -acc -who talked about-him Ali-nom  
I invited the man whom Ali talked about.
- b. *\*daʿawtu-r-raḏul-allaḏī takallama ʿan-ḏ ʿaliyy-un*
- (13) a. *jā'a-t -il -bint-u -llati 'aḥabba ʿaliyy-un 'uxt -a -hā*  
came-fem-def-girl-nom-who(fem) loved Ali -nom sister-acc-her  
The girl whose sister Ali loved came.
- b. *\*jā'a-t-il-bint-u-llati 'aḥabba ʿaliyy-un 'uxt-a-ḏ*

The ill-formedness of (12 b) and (13 b) is due to deleting the Object resumptive pronoun in an  $\bar{X}$ -major category. Moreover, there is no way to move an  $\bar{X}$ -major category by Wh-movement in (12) and (13) because the results are completely ungrammatical. Examine (14) and (15) below which correspond to (12) and (13) above after applying Wh-movement to  $\bar{X}$ -major categories in them:

- (14) *\*daʿawtu -r -raḏul-a ʿan man-illaḏī takallama ʿaliyy-un*  
invited+I-def-man -acc about who-who talked Ali-nom  
\*I invited the man about whom that Ali talked.
- (15) *\*jā'a-t -il -bint-u 'uxt -a man-illati 'aḥabba ʿaliyy-un*  
came-fem-def-girl-nom sister-acc who-who loved Ali-nom  
\*The girl whose sister that Ali loved came.

Independently, however, Wh-movement can move  $\bar{X}$ -major categories. Examine the two questions below:

- (16) *ʿan man takallama ʿaliyy-un?*  
about who talked Ali-nom  
About whom did Ali talk?
- (17) *'uxt-a man 'aḥabba ʿaliyy-un?*  
sister-acc who loved Ali-nom  
Whose sister did Ali love?

Clearly, the Wh-movement hypothesis in relatives faces serious problems in view of the above facts in Arabic. Moreover, we have already seen that Wh-move-

ment in English relatives faces problems that substantially weaken its descriptive as well as its theoretical adequacy. We would like now to advance an alternative analysis for relatives that has been hinted at in this section. Under this analysis, it is assumed, following Suaih (1980), that a [+R] Comp is universally introduced in relative clauses. As regards the gaps produced in relatives, they are viewed as the result of resumptive pronoun deletion that is carried out in the PF component. In Arabic relatives, the Subject resumptive pronoun is obligatorily deleted in compliance with the general Subject-pro drop rule in Arabic, whereas the Object resumptive pronoun originating in a non- $\bar{X}$ -major category can only be optionally deleted when the antecedent NP is definite<sup>4</sup>. Observe the following examples:

- (18) a. \*ra'aytu-l -bint-a -llati 'aḥabbat hiya <sup>c</sup>amr-an  
saw+I -def-girl-acc-who loved she Amr -acc  
\*I saw the girl who she loved Amr.  
b. ra'aytu-l -bint-a -llati 'aḥabbat <sup>c</sup>amr-an  
saw+I -def-girl-acc-who loved+she Amr -acc  
I saw the girl who loved Amr.  
c. \*ra'aytu bint-an 'aḥabbat hiya <sup>c</sup>amr-an  
saw+I girl-acc loved+she she Amr -acc  
\*I saw a girl she loved Amr.  
d. ra'aytu bint-an 'aḥabbat <sup>c</sup>amr-an  
saw+I girl-acc loved+she Amr -acc  
\*I saw a girl loved Amr.
- (19) a. ḵā'a-r -raḵul-u -llaḍī xada<sup>c</sup>a -hu <sup>c</sup>aliyy-un  
came-def-man -nom-who deceived-him Ali -nom  
\*The man whom Ali deceived him came.  
b. ḵā'a-r -raḵul-u -llaḍī xada<sup>c</sup>a <sup>c</sup>aliyy-un  
came-def-man -nom-who deceived Ali -nom  
The man whom Ali deceived came.  
c. ḵā'a raḵul-un xada<sup>c</sup>a -hu <sup>c</sup>aliyy-un  
came man -nom deceived-him Ali -nom  
\*A man whom Ali deceived him came.  
d. \*ḵā'a raḵul-un xada<sup>c</sup>a <sup>c</sup>aliyy-un  
came man -nom deceived Ali -nom  
A man whom Ali deceived came.

In (18) above, the Subject resumptive pronoun cannot surface in definite and non-definite relatives, hence the ungrammaticality of (18a) and (18c). As for (19),

<sup>4</sup> The general Subject-pro drop rule in Arabic can be formulated as in (i) below:

- (i) X V NP Y  
1 2  $\begin{bmatrix} +\text{pro} \\ +\text{nom} \end{bmatrix}$  3 4  $\rightarrow$  1 2  $\emptyset$  4 "obligatory"

the Object resumptive pronoun is optional in definite relatives and obligatory in non-definite relatives, hence the ungrammaticality of (19d).

English relatives, just like Arabic relatives, are assumed to have resumptive pronouns in their D-structure. These resumptive pronouns undergo obligatory deletion in the PF component, leaving a gap that carries the same index. To illustrate, observe the examples in (20) and (21) along with their D-structures in (22) and (23), respectively:

- (20) The student who passed the exam gave a party.  
(21) The girl that John loved left.  
(22) The student<sub>i</sub> [<sub>S</sub>[+R] Comp [he<sub>i</sub> passed the exam]] gave a party.  
(23) The girl<sub>i</sub> [<sub>S</sub>[+R] Comp [<sub>S</sub> John loved her<sub>i</sub>]] left.

To derive (20) from (22), the [+R] Comp is spelled out as "who" and the resumptive pronoun "he" gets obligatorily deleted in the PF component leaving a gap carrying the same index. As for (21), it is derived from (23) by spelling out the [+R] Comp as "that" and then obligatorily deleting the resumptive pronoun "her" in the PF component. It follows from this analysis that languages vary in respect to the deletability of resumptive pronouns.

### 3. Exclamations

English exclamations are subsumed under Wh-movement in current transformational theory (see Chomsky (1977), Grimshaw (1977), Radford (1981) and related works). Exclamations are thus assumed to involve Wh-fronting just like Wh-questions. Observe (24) and (25) along with their D-structures in (26) and (27):

- (24) How pretty the girl is!  
(25) How pretty is the girl?  
(26) [<sub>S</sub>[+Wh] Comp [<sub>S</sub> the girl is how pretty]]  
(27) [<sub>S</sub>[+Wh] Comp [<sub>S</sub> the girl is how pretty]]

As can be noted, the D-structures corresponding to (24) and (25) are identical. The distinction between them appears at S-structure where (25) is subject to Wh-movement and Subj-Aux inversion, whereas (24) is subject to Wh-movement only. Consider the S-structures of (24) and (25) in (28) and (29), respectively:

- (28) [<sub>S</sub> how pretty<sub>i</sub> [<sub>S</sub> the girl is t<sub>i</sub>]]  
(29) [<sub>S</sub> how pretty<sub>i</sub> [<sub>S</sub> is the girl t<sub>i</sub>]]

Thus questions are distinguished from exclamations by the application of the Subj-Aux Inversion rule to them at S-structure.



The uniformity of Wh-movement in exclamations breaks down in indirect exclamations because they cannot be formally distinguished from indirect interrogatives since there is no Subj-Aux Inversion in such interrogatives. This leads to structural ambiguity where the exclamatory reading is indistinguishable from the interrogative reading in English. To illustrate, observe the example in (30) along with its S-structure in (31):

(30) John didn't know how pessimistic Mary was.

(31) John didn't know [<sub>S</sub> how pessimistic<sub>i</sub> [<sub>S</sub> Mary was t<sub>i</sub>]]

The structural ambiguity of (30) can be resolved if we base-generate exclamatory Comps by allowing the grammar to universally introduce a [+E] Comp which may be spelled out as "how" in English. In light of this analysis, (30) will have two distinct D-structures as below:

(32) John didn't know [<sub>S</sub>[+E] Comp how [<sub>S</sub> Mary was pessimistic]]

(33) John didn't know [<sub>S</sub>[+Wh] Comp [<sub>S</sub> Mary was how pessimistic]]

By so doing, (32) can only be given the exclamatory reading. However, as it stands, (32) does not yield the surface structure in (30). Therefore, a subsequent rule in English must be formulated in order to attract the adjective in (32) to the [+E] Comp. The rule may be called the Adjective Attraction Rule and can be formalized as below:

(34) Comp X Adj  
1 2 3 → 132t "obligatory"

Condition: Comp is specified as [+E].

Thus the [+E] Comp will attract the adjective in (32). As for the interrogative reading, it is derivable by applying Wh-movement to (33) above.

Let us now turn to Arabic Exclamations which do not provide any evidence for the Wh-movement hypothesis; rather, they offer evidence that is incongruous with the hypothesis where plausible evidence might be used in English (cf. 24 and 25). The fact that Arabic is a Case-language makes a clear-cut distinction between the exclamatory reading and the interrogative reading of a sentence. To illustrate, observe the Arabic examples corresponding to (24) and (25) in (35) and (36) below:

(35) mā 'ajmal-a -l -bint-a!  
Ex. pretty-acc-def-girl-acc  
How pretty the girl is!

(36) mā 'ajmal-u -l -bint-i?  
What pretty-nom-def-girl-gen  
What is the prettiest in the girl?

Notably, the case-marking of the adjectival form following the Wh-element *mā* determines whether the sentence be assigned the exclamatory reading or the interrogative reading. This in turn suggests that the underlying structures of the exclamatory reading and the interrogative reading be distinct. The case-assignment of the interrogative reading is explainable in terms of Wh-movement, i.e., the Wh-element carries the case-marking along with it when it gets moved by Wh-movement, whereas the case-assignment of the exclamatory reading follows the base-generation of *mā* as a [+E] Comp in compliance with the analysis presented in this section. The [+E] Comp is a case-assigner in Arabic (for details about Arabic Case-assignment, see Farghal (1986:150-169)). Thus the D-structures corresponding to (35) and (36) look like (37) and (38), respectively:

(37) [<sub>S</sub>[Comp mā [<sub>S</sub> 'ajmal-a -l-bint-a]]

(38) [<sub>S</sub>[+Wh] Comp [<sub>S</sub> yakunu 'ajmal-u -l-bint-i māḍā]]

The derivation of (35) from (37) is accomplished by spelling out the [+E] Comp as *mā*. As for the derivation of (36) from (38), it involves the deletion of the Copula *yakunu* by the Copula-deletion rule and the conversion of *māḍā* to *mā* by a lexical rule.<sup>5</sup>

Moreover, another strategy of exclaiming in Arabic provides further evidence against the Wh-movement hypothesis. Here again, the case-markings of the nominal following the [+E] Comp and the [+Wh] Comp are distinct. Observe the two examples below along with their D-structures, respectively:

(39) kam film-in šāhada <sup>c</sup>aliyy-un!  
Ex. film-gen watched Ali -nom  
\*How many films Ali watched!

(40) kam film-an šāhada <sup>c</sup>aliyy-un?  
how many film-acc watched Ali -nom  
How many films did Ali watch?

(41) [<sub>S</sub>[+E] [<sub>Comp</sub> kam] [<sub>S</sub> film-in šāhada <sup>c</sup>aliyy-un]]

(42) [<sub>S</sub>[+Wh] Comp [<sub>S</sub> šāhada <sup>c</sup>aliyy-un kam film-an]]

<sup>5</sup> The Copula-deletion rule in Arabic can be formulated as (i) below:

(i) V NP { NP } Y → ø 2 3 4 "obligatory"  
1 2 3 4

Condition: 1 = Copula with present/ timeless reference. For recent linguistic justification, see Obeidat and Farghal (1992). It should also be noted that when the Copula deletion rule takes effect, the question-word *māḍā* is converted to *mā* via a lexical rule in order to meet the following lexical entries in Arabic grammar:

- (ii) māḍā [-V]  
(iii) mā [-N]

As can be noticed, the nominal following the [+E] Comp in (39) is genitive, whereas the nominal in the [+Wh] Comp in (40) is accusative. This gives further evidence for the implausibility of Wh-movement in Arabic exclamations.

#### 4. Topicalization

Chomsky (1977: 90-95) talks about two structure-types in English: topicalized and left-dislocated, which, to him, are both base-generated. To clarify, compare the two examples below:

(43) As for that red book, everybody should read it.

(44) That red book everybody should read.

Chomsky rightly asserts that in left-dislocation exemplified in (43), no transformational rule can introduce the structure "as for that red book" or even more complicated phrases that can appear in this position. Therefore, such material should be base-generated by a phrase structure rule of the form:

(45) a.  $\bar{S} \rightarrow \text{Top } \bar{S}$   
 b.  $\bar{S} \rightarrow \text{Comp } S$

He then notes the failure of the two rules in (45) to generate embedded left-dislocation cases as in (46) below:

(46) I informed the students that as far as this book is concerned, they would have definitely to read it.

To accommodate such cases, Chomsky reformulates (45) to look like (47):

(47)  $\bar{S} \rightarrow \text{Comp } \left\{ \begin{array}{l} \bar{S} \\ S \end{array} \right\}$

As for topicalization exemplified in (44), Chomsky also suggests an analysis that base-generates the topicalized NP, namely "that red book" in (44). The only difference between topicalization and left-dislocation is that the S in topicalization is a Wh-clause in which the Wh-phrase gets obligatorily deleted. That is to say, the Comp dominated by S in left-dislocation can be [Wh] depending on the availability of a Wh-element in the clause, whereas the Comp dominated by S in topicalization is always [+Wh] and subject to obligatory deletion. To illustrate, here are the D-structures corresponding to (43) and (44) above, respectively:

(48)  $[\bar{S} \text{ Top: as for that red book } [\bar{S} [\text{Comp}[-\text{Wh}]^e [S \text{ everybody should read it}]]]]$

(49)  $[\bar{S} \text{ Top: that red book } [\bar{S} [+Wh] \text{ Comp } [S \text{ everybody should read what}]]]]$

The Wh-element "what" gets moved to the [+Wh] Comp, and it subsequently gets deleted giving the surface structure in (44).

The above analysis of Topicalization in English predicts that Topicalization, like Left-dislocation, is possible within embedded clauses. To confirm this, Chomsky (1977: 93) gives the examples in (50) below:

(50) a. I believe that this book, you should read.  
 b. I believe that this book, you should give away.  
 c. I believe that his friends, John gave some books away to.

Chomsky, however, forgets to mention topicalized constituents in Cleft-structures where the Wh-element is obligatorily present rather than obligatorily deleted as in (44). Observe the example in (51) corresponding to (44) above:

(51) That red book is what everybody should read.

To base-generate "that red book" in accordance with Chomsky's analysis would entail the deletion of the Wh-element leading to an ill-formed output as in (52) below:

(52) \*That red book is everybody should read.

Consequently, to account for this structure a different analysis should be advanced for topicalization. To survive, such an analysis should do away with Wh-movement in a way such that the topicalized constituent is transformationally generated rather than base-generated. Note that (44) as well as (51) accept this analysis. To illustrate, (53) and (54) are the D-structures corresponding to (44) and (51), respectively:<sup>6</sup>

(53)  $[\bar{S} [\text{Comp} [+Wh]^e [S \text{ everybody should read that red book}]]]$

(54)  $[\bar{x} [\bar{S} [+R] [\text{Comp} \text{ what}] [S [\text{everybody should read}] \text{ is that book}]]]$

With regard to Arabic, it is absolutely implausible to group Left-dislocation and Topicalization under the same analysis. For the sake of illustration, the topicalized constituent will be marked as [+T] while the left-dislocated NP will be marked as [+L]. Observe the two examples below:

(55) 'al-ḥayyat-a[+T] qatala 'aliyy-un  
 def-snake -acc killed Ali -nom  
 \*The snake Ali killed.

(56) 'al-ḥayyat-u [+L] qatala-hā 'aliyy-un  
 def-snake -nom killed-it Ali -nom  
 The snake, Ali killed it.

The strongest argument against Chomsky's analysis is the difference in the case-

<sup>6</sup> It is beyond the scope of this paper to worry about the complete derivational aspects of structures like (54). This structure is only relevant as far as it relates to the Wh-movement hypothesis.



marking of the topicalized NP and the left-dislocated NP. Obviously, *'al-ḥayyat-a* in (55) is a topicalized NP because it still retains its original case, i.e., the accusative case. Therefore, it is implausible to base-generate it. Instead, the topicalized NP can be generated by a rule that preverbally preposes it as follows:

$$(57) \quad \begin{array}{ccccccc} \text{V} & \text{S} & \text{O} & [+T] & \longrightarrow & 3 & 1 & 2 & t \\ 1 & 2 & 3 & & & & & & \end{array}$$

The base-generation analysis involving Wh-movement is thus given up in favor of a movement rule generating the topicalized NP transformationally.

As for *'al-ḥayyat-u* in (56), it is a left-dislocated NP that can be convincingly argued to be base-generated since it has the nominative case rather than the accusative case due to the grammatical relation it holds in this kind of structure. The left-dislocated NP has an accusative resumptive pronoun clitic in the comment part of (56). Like English,<sup>7</sup> the left-dislocated NP can be embedded in Arabic. Observe the example below:

$$(58) \quad \begin{array}{l} 'a\dot{q}unnu 'anna \textsuperscript{c}amr-an \textsubscript{d}araba-hu \textsuperscript{c}aliyy-un \\ \text{think+I that Amr-acc beat -him Ali -nom} \\ *I \text{ think that Amr, Ali beat him up.} \end{array}$$

It should be noted that the correct case-marking of the left-dislocated NP, i.e., the nominative case, is overridden by the existence of the Case-assigner particle *'anna* which always assigns the accusative case to the NP immediately following it.

To further confirm the fundamental distinction between topicalization and left-dislocation in Arabic, observe the ill-formedness of embedded topicalization below which contrasts the well-formedness of embedded left-dislocation in (58) above:

$$(59) \quad \begin{array}{l} *'a\dot{q}unnu 'anna \textsuperscript{c}amr-an \textsubscript{d}araba \textsuperscript{c}aliyy-un \\ \text{think+I that Amr-acc beat Ali -nom} \\ *I \text{ think that Amr, Ali beat up.} \end{array}$$

Finally, topicalization and left-dislocation in Arabic behave differently in permitting syntactic phenomena. For instance, there is an asymmetry between topicalization and left-dislocation with respect to the permissibility of Contrastiveness and Wh-movement. On the one hand, topicalization permits Contrastiveness, while left-dislocation does not. On the other hand, left-dislocation allows Wh-movement, whereas topicalization does not. To confirm this, observe the examples below:

$$(60) \quad \begin{array}{l} \text{a. } 'al-\dot{h}ayyat-a \textsubscript{q}atala \textsuperscript{c}aliyy-un \textsubscript{w}a \textsubscript{l}aysa-n- \textsubscript{n}isr -a \\ \text{def-snake -acc killed Ali -nom and NEG -def- eagle-acc} \\ \text{Ali killed the snake, not the eagle.} \end{array}$$

<sup>7</sup> The ungrammaticality of the English rendering of (58) is attributable to language-specific differences. The correct rendering of (58) is below:

I think that as far as Amr is concerned, Ali beat him up.

$$(61) \quad \begin{array}{l} \text{b. } *'al-\dot{h}ayyat-u \textsubscript{q}atala-h\ddot{a} \textsuperscript{c}aliyy-un \textsubscript{w}a \textsubscript{l}aysa-n- \textsubscript{n}isr-a \\ \text{def-snake-nom killed-it Ali -nom and NEG -def- eagle-acc} \\ *The \text{ snake, Ali killed it, not the eagle.} \\ \text{a. } *'al-\dot{h}ayyat-a \textsubscript{m}an \textsubscript{q}atala? \\ \text{def-snake -acc who killed} \\ *The \text{ snake who killed?} \\ \text{b. } 'al-\dot{h}ayyat-u \textsubscript{m}an \textsubscript{q}atala-h\ddot{a}? \\ \text{def-snake-nom who killed-it} \\ \text{The snake, who killed it?} \end{array}$$

The ill-formedness of (60b) is due to the fact that left-dislocation does not permit Contrastiveness. As for the ill-formedness of (61a), it is ascribed to the restriction that Topicalization may not allow Wh-movement.

### 5. Conclusion

The present paper raises two theoretical questions: How much can we constrain the transformational component of grammar? And how plausible is the unified analysis of Wh-movement?

In answer to the first question, we have observed the advantages and disadvantages of constraining the transformational component. On the one hand, we have seen the merits of base-generating the left-dislocated NP, the [+R] Comp and the [+E] Comp in place in order to avoid the resultant complications in accounting for them transformationally. Thus the grammar is pruned by cutting out many unnecessary complications where another simpler analysis is feasible. On the other hand, we have observed the disadvantages of constraining the transformational component by base-generating topicalized constituents. Topicalization should therefore belong to the rule of Move rather than PS-rules. This theoretical conclusion calls into question the widely-accepted analysis of Topicalization in Chomsky (1977) and related literature. Thus, while the transformational component can be rightly constrained in some areas, it may not be constrained in others.

In response to the second question, the present study brings up hard evidence showing the implausibility of the unified Wh-movement analysis in Chomsky (1977) and subsequent works. Thus the Wh-movement rule is strictly restricted to the Wh-question construction. Consequently, the Wh-movement hypothesis in topicalization, relativization and exclamation is given up. While topicalization is argued to belong to the transformational component, relativization and exclamation are argued to be universally introduced by base-generated, lexically filled Comps. As concerns the gaps in topicalization, relativization, and exclamation, they are accounted for in terms of NP-traces, Resumptive Pronoun Deletion and Adjective Attraction Rule, respectively. This analysis can capture the facts of Arabic as well as English. Further investigation of these phenomena in other languages may well support this analysis.

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