Reconstruction in Jordanian Arabic Relative Clauses: An Experimentally-Based Syntactic Account

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Abstract: *This study aims at experimentally exploring whether reconstruction can actually be taken as a diagnostic of movement in JA. Three experiments were conducted. Experiment 1, an acceptability judgment task, investigated the availability of gap and resumption strategies in JA relative clause and wh-interrogative. Experiment 2, combining both forced-choice and acceptability judgment tasks, tested the availability of reconstruction effects in JA relative clauses regarding the type of the binding principles (A, C, and BVA), resumptive pronouns (Weak and Strong RPs), and islands (strong and weak islands). Adopting the same design of Experiment 2, Experiment 3 tested the availability of reconstruction effects in JA wh-interrogatives. The findings reveal that only resumption strategy is available in JA relative clauses. Furthermore, JA relative clauses do not exhibit sensitivity to islands; JA wh-interrogatives do. Reconstruction effects are available in JA relative clauses irrespective of the type of the binding principle, the type of the RP, and the type of the island, whereas the presence of strong islands blocks the availability of reconstruction effects in JA wh-interrogatives. The theoretical implications of these findings unravel that relative clauses in JA are derived via base-generation rather than A'-movement whereby the referentiality of the RP is achieved by binding.*

Key Words: binding, Jordanian Arabic, reconstruction, relative clauses, resumption

1. Introduction

Reconstruction encompasses intricate relationship between syntactic operations like movement and binding principles constraining semantic referential relationships among NPs. Syntactic reconstruction denotes movement of a fronted constituent back into its original site, namely, the position of a gap as in English or a resumptive pronoun (RP) as in Lebanese Arabic (LA). Movement before Spell-Out in syntax always operates upwards; syntactic reconstruction operates downwards for interpretation. Being invisible to the PF, it is considered as a covert movement at LF (Heim 1994; Katz, Kim and Winhart 1998; Sternefeld 2001). Reconstruction inverts scope relations as demonstrated in German topicalization presented below (Sternefeld 2001:1).

1. $[_{CP}\,[_{DP}$ ein haus$]_i$ besitzt$_j$ $[_{TP}$ jeder t_i t_j]]
   a house owns everyone

This example is ambiguous between a reconstructed and a non-reconstructed interpretation as the object *Ein Haus* 'a house' moves to Spec-CP, whereas the verb *besitzt* 'owns' moves to C. The non-reconstructed reading results from a wide

scope; the preferred reconstructed interpretation involves being in the scope of the Quantifier Phrase (QP) *jeder* 'everyone'.

Turning to the relevant semantic issues, the binding and scope principles are constrained by the "bedrock principle of syntactic theory" *c-command* (Lasnik 1976; Reinhart 1976; Barss 2001: 671).

2. A c-commands B *iff* the first branching node dominating A also dominates B, and A does not itself dominate B. (Equivalently: A c-commands B *iff* B is, or is contained within, a sister of A.) (Barss 2001: 671)

Below is a summary of the binding principles A and C of Chomsky's (1981; 1986) Binding Theory that are extensively investigated within previous literature on reconstruction (Barss 2001: 674)

3. Binding Principles:
   i. Principle A: If α is [+Anaphoric], α must be A-bound in the minimal CFC containing it, its governor, and a potential antecedent.
   ii. Principle C: If α is an R-expression (= [−Anaphoric], [−Pronominal]), α must be A-free (within the domain of the operator binding it).
4. Principle of Pronominal Binding - a principle of both Binding and Scop a pronoun can behave as a variable bound by X only if it can be interpreted in the scope of X giving the bound variable reading alluded to in the literature as BVA. (Sportiche 2006 :9)

Below is an illustration.

5. a. [Which photos of *herself*$_i$]$_j$ did Ann$_i$ like [~~which photos of herself~~]$_j$?
   b. *[Which photos of *Ann*$_i$]$_j$ did she$_i$ like [~~which photos of Ann~~]$_j$?
   c. [Which photos of *her*$_i$ son] did [$_{QP}$ every teacher]$_i$ like [~~which photos of her son~~]$_j$?

On the surface, these interrogatives represent counter-examples of *c-command*. However, their grammaticality has been explained by proposing that the fronted element has undergone LF movement downwards into its launching site, leaving a full copy there (Lebeaux 1991; Chomsky 1995; Sauerland 1998; Fox 2000; Barss 2001). The convention in literature is to assume that the material at issue **reconstructs** into the launching site (Barss 2001; Sportiche 2006). The anaphor *herself* in (5a) reconstructs into the original position as the object of the verb *like*, and so it is c-commanded by its antecedent satisfying Binding Principle A. Conversely, the intended, indexed interpretation by which the R-expression *Ann* co-refers with the pronoun *she* (5b) is ungrammatical. The ungrammaticality of this reading is explained by assuming that the fronted *wh*-phrase reconstructs into its base-generated site as the object of the verb and so the R-expression is bound by the pronoun violating Principle C as a result of reconstruction. Example (5c) illustrates BVA reconstruction. The preposed *wh*-phrase contains the pronoun *her*. The interpretation available in this sentence is the distributed reading by which every teacher has a set of photos of his/her son. This interpretation is captured by reconstruction, the pronominal element behaves as a bound variable (X) falls in the scope of the QP *every teacher* (Y).

In short, a fronted phrase containing an element that behaves as being in lower positions with respect to some semantic principles than its surface position is assumed to have reconstructed into this lower position manifesting reconstruction effects. Conventionally, reconstruction is mainly investigated as a diagnostic of A'-movement. There are other reconstruction effects like case and agreement properties and reconstruction can also be taken as a diagnostic of A-movement (Sportiche 2006); nonetheless, I restrict the discussion throughout the paper to reconstruction as a diagnostic of A'-movement due to its relevance to the discussion of JA relative clauses.

The paper is structured as follows. Section 2 reviews the main accounts of reconstruction as a diagnostic of A'-movement in Arabic. Section 3 presents the three experiments conducted investigating reconstructions in JA relative clauses and *wh*-interrogatives. Section 4 summarizes the results of the experiments. Section 5 concludes with an empirically-driven syntactic account of JA relative clauses.

2. Reconstruction in Arabic

This section sheds light on the oft-cited previous studies on reconstruction in Arabic to unmask the major observations and proposals. Aoun and Choueiri (1996) and Aoun, Choueiri, and Hornstein (2001) observed that reconstruction effects are attainable in restrictive relative clauses with definite relativized DPs when no island intervenes between the relativized DP and the related RP in LA as shown below (Aoun and Choueiri 1996: 20). (Throughout, the transcription of all the examples from other resources is modified according to the phonetic symbols used in the current paper.)

6. a. shifit [i<u>s</u>-<u>s</u>u:ra taba^{c} ibn-a_i]$_j$ yalli [kul muwazzafe]$_i$
saw.1sg [the-picture of son-her] that [every employee.f]
ʔa:lit innu badda it^{c}aliʔ-a_j bi-maktab-a
said.3sf that want.3sf hang.3sf-it in-office-her
'I saw the picture of her son that every employee said she wants to hang in her office.'

b. *shifit [i<u>s</u>-<u>s</u>u:ra taba^{c} ibn-a_i]$_j$ yalli zi^{c}il-tu laʔinnu
saw.1sg [the-picture of son-her] that upset.2pl because
[kul muwazzafe]$_i$ badda it^{c}aliʔ-a_j bi-maktab-a
[every employee.f] want.3sf hang.3sf-it in-the-office
'I saw the picture of her son that you were upset because every employee wants to hang it in the office.'

The pronoun *a-* 'her' inside the bracketed, relativized DP *i<u>s</u>-<u>s</u>u:ra taba ^{c}ibn-a* 'the picture of her son' is bound by the QP *kul muwazzafe* 'every employee' and this is revealed by the grammaticality of coindexation due to reconstruction. Consequently, the pronoun inside this DP is c-commanded and bound by the QP given the distributive reading of different pictures of the employees' sons. The reconstructed interpretation is unavailable in (6b) as the adjunct intervenes between the relativized DP and the RP. Upon these observations, Aoun and Choueiri proposed that definite relative clauses in LA are derived by A'-movement

On the other hand, Guilliot and Malkawi (2006) and Malkawi and Guilliot (2007) challenged using reconstruction as a diagnostic of A'-movement on the grounds that JA allows reconstruction in presence of strong islands, yet no reconstruction is unattainable in noisland structures. Instead, they argue that three criteria determine the availability of reconstruction effects in JA: the type of the resumptive pronouns, the type of the island, and the type of the binding condition. I detail their account below due to the eminent congruence of their proposal to the current study. Before delving into their account, adjunct island is considered a strong island while *wh*-island is a weak island in JA (Guilliot and Malkawi 2006). The type of the binding condition is intertwined with the type of island. The availability of reconstruction with strong RPs is sensitive to the type of island irrespective of the binding condition; conversely, its availability with weak RPs is sensitive to the type of the binding condition regardless of the type of the island. Consider the following examples (Malkawi and Guilliot 2007: 7-9).

7. a. [ṯa:lib-[ha]$_i$ l-kasu:l]$_j$ ma biddna nkhabbir [wala m^{c}almih]$_i$
student-her the-bad Neg want-1pl tell.1pl no teacher
innu l-mudi:rah kaḥshat-uh$_j$ / -uh huwwa$_j$ min l-madrasih
that the-principal expelled.3sgf-him /-him he from the-school
'Her bad student, we don't want to tell any teacher that the principal expelled him from school.'

b. [ṯa:lib-[ha]$_i$ l-kasu:l]$_j$ ma biddna nkhabbir [wala m^{c}almih]$_i$
student-her the-bad Neg want-1pl tell.1pl no teacher
innu huwwa$_j$/ ha-l-habilih$_j$ ghash bi-li- mtiḥa:n
that he/ this-the-idiot cheated.3sgm in-the-exam
'Her bad student, we don't want to tell any teacher that he/the idiot cheated in the exam.'

8. a. [^{c} alamit kari:m$_i$]$_j$ bitfakir innu *pro*$_i$ lazim iyghayyir-*ha*$_j$
Note Karim think.2sgm that- he must change- it
'The note of Karim, you think that he must change (it).'

b. *[ʔakhu layla$_i$]$_j$ *pro*$_i$ ga:lat innu huwwa$_j$/ ha-l-habilih$_j$ sa:far
brother Layla *she* said.3sgf that he/ this-the-idiot left.3sm
'The brother of Layla, she said that he/the idiot left.'

9. a. [ṯa:lib-[ha]$_i$ l-kasu:l]$_j$ ma biddku tisʔal-u [wala ma^{c}lmih]$_i$
student-her the bad Neg want-2plm ask-2plm no teacher
leish l-mudi:rah kaḥshat -uh$_j$ /-uh huwwa$_j$ min l-midrasih
why the-principal expelled-3sgf-him /-him he from the-school
'Her bad student, you don't want to ask any teacher why the principal expelled him from school.'

b. [ṯa:lib-[ha]$_i$ l-kasu:l]$_j$ ma biddku tisʔal-u [kul ma^{c}lmih]$_i$
student-her the bad Neg want-2plm ask-2plm every teacher
leish huwwa$_j$/ ha-l-habilih$_j$ ghash bi-li- mtiḥa:n
why he/ this-the-idiot cheated.3sgm in-the-exam
'Her bad student, you don't want to ask every teacher why he/the idiot cheated in the exam."

10. a. [ʔakhu layla$_i$]$_j$ *pro*$_i$ saʔalat leish l-mudi:rah taradit-uh$_j$
brother Layla *she* asked.3sgf why the-principal expelled.3sgf-him
'The brother of Layla, she asked why the director expelled him.'
b.*[ʔakhu layla$_i$]$_j$ *pro*$_i$ saʔalat l-maᶜlmih leish huwwa$_j$/
brother Layla *she* asked.3sgf the-teacher why he/
ha-l-habilih$_j$ ghash bi-li- mtiha:n
this-the-idiot cheated.3sgm in-the-exam
'The brother of Layla, she asked the teacher why he/the idiot cheated in the exam.'

11. a. [ta:lib-[ha]$_i$ l-kasu:l]$_j$ l-mudi:rah ziᶜlit laʔinnu [kul mᶜalmih]$_i$
student-her the-bad the-principal upset-3sgf because each teacher
sha:fat-uh$_j$/ -hu huwwa$_j$ ghash bi-li- mtiha:n
saw-3sgf-him/ -him he cheated.3sgm in-the-exam
'Her bad student, the principal got upset because every teacher saw him cheating in the exam.'
b. *[ta:lib-[ha]$_i$ l-kasu:l]$_j$ ma hakeina maᶜ [wala mᶜalmih]$_i$ gabl-ma
student-her the-bad Neg talked.1pl with no teacher before
huwwa$_j$ ha-l-ghabi$_j$ yisal
he the-idiot.3sm arrive.3sm
'Her bad student, we didn't talk to any teacher before he/ this idiot arrived.'

12. a. [ʔakhu layla$_i$]$_j$ *pro*$_i$ ziᶜlit laʔinnu l-mudi:rah
brother Layla *she* upset.3sgf because the-principal
taradit -uh$_j$/ -uh huwwa$_j$
expelled.3sgf-him/ -him he
'The brother of Layla, she got upset because the director expelled him.'
b. [ʔakhu layla$_i$]$_j$ *pro*$_i$ ziᶜ lit laʔinnu huwwa$_j$/ ha-l-habilih$_j$ sa:far
brother Layla *she* upset.3sgf because he/ this-the-idiot left.3sm
'The brother of Layla, she got upset because he/the idiot left.'

Malkawi and Guilliot (2007) claim that Binding Principle A is satisfied in noisland constructions with weak and strong RPs (7a-b). Per Condition C, the reconstructed reading with an embedded weak RP violates Condition C in absence of any island as in (8a) and co-reference is available; however, the co-reference between *Laila* and the embedded *pro* is ungrammatical in (8b) with embedded strong RP and revealing that reconstruction effects are available. On the other hand, the reconstructed reading is attainable with Principle A when the strong RP is embedded in a weak island (9b), but it is unavailable when strong RPs are embedded in a strong island (11b). Likewise, reconstruction in conditions testing Principle C is available when the strong RPs are embedded within a weak island (10b) but not within a strong island (12b). Turning to weak RPs, Malkawi and Guilliot (2007) argue that reconstruction effects are attainable in conditions targeting Principle A whether these RPs are embedded inside a weak island (9a) or a strong island (11a); it is not available in conditions testing Principle C regardless of whether the weak RPs occur inside a weak island (10a) or a strong island (12a).

Their observations concerning the availability of reconstruction in JA are summarized below.

Table 1: The (in)availability of reconstruction in JA

	Weak RPs		Strong RPs	
	Principle A	Principle C	Principle A	Principle C
NoIsland	✓	X	✓	✓
Weak Island	✓	X	✓	✓
Strong Island	✓	X	X	X

In a nutshell, the data concerning reconstruction in Arabic varieties unearth lack of consensus such that reconstruction is available in LA unless RPs occur inside islands, whereas reconstruction in JA does not align with islands as assumed for LA. Instead, other variables determine the availability of reconstruction in the sense that reconstruction is only attainable with weak RPs with binding conditions A regardless of the presence and type of islands while it is unavailable when strong RPs occur inside strong islands irrespective of the binding conditions. Therefore, I propose that a formally-designed, experimental study can provide empirically-based grounds to disambiguate the findings of previous theoretical studies. This, in turn, can yield important theoretical implications the syntactic derivation of relative clauses in JA.

3. The current study

This section reports on three experiments I conducted to propose an experimentally-based syntactic account of the derivation of relative clauses in JA, which is the focus of this study. I incorporated *wh*-interrogative dependency as a typical A'-movement construction (Aoun et al. 2010; Bakir 2018) only for the sake of comparison.

3.1. Experiment 1

To account for whether gap and resumption strategies really alternate in JA relative clauses, I conducted an acceptability judgment task as detailed below.

3.1.1. Design and material

I used a 2*2*3 factorial design with three independent variables whose levels are indicated within parentheses: STRUCTURE (relative clauses (RC) vs. *wh*-interrogative (WH)), TAIL (RP vs. Gap), and ISLAND (adjunct_island, *wh*_island, and noisland), resulting in (12) conditions. The experimental sentences were constructed according to these (12) conditions as represented below with an entire item set with lexically matched items. All relative clauses had the relative pronoun in JA, *ɪlli* 'that', and all *wh*-interrogatives were headed by the *wh*-filler *ayy*+ NP 'which + NP'.

13. a. [ayy muhandis] gultum innu yikhta:r-***uh***/_
[which engineer] said-2pl that choose.3sgm-***him***/_

ilmudi:r la-il-waTHi:fih?
the-boss for-the-position?
'Which engineer did you say that the boss chose him for the position?'

b. [ayy muhandis] rawwahtu gabilma: yikhta:r-***uh***/_
[which engineer] left-2pl before choose.3sgm-***him***/_
ilmudi:r la-il-waTHi:fih?
the-boss for-the-position?
'Which engineer did you leave before the boss chose him for the position?'

c. [ayy muhandis] saʔaltum leish ikhta:r-***uh***/_
[which engineer] asked-2pl why chose.3sgm-***him***/_
ilmudi:r la-il-waTHi:fih?
the-boss for-the-position?
'Which engineer did you ask why the boss chose him for the position?'

14. a. ga:bilit ilmuhandis illi gultum innu ikhta:r-***uh***/_
met-1sg the-engineer that said-2pl that chose.3sgm-***him***/_
imudi:r la-ilwaTHi:fih
the-boss for-the-position
'I met the engineer you said that the boss chose him for the position.'

b. ga:bilit ilmuhandis illi rawwahtu gabilma: yikhta:r-***uh***/_
met-1sg the-engineer that left-2pl before chose.3sgm-***him***/_
ilmudi:r la-il-waTHi:fih
the-boss for-the-position
'I met the engineer that you left before the boss chose him for the position.'

c. ga:bilit ilmuhandis illi saʔaltum leish ikhta:r-***uh***/_
met-1sg the-engineer that asked-2pl why chose.3sgm-***him***/_
ilmudi:r la-ilwaTHi:fih
the-boss for-the-position
'I met the engineer that you asked why the boss chose him for the position.'

Set (13) represents the experimental sentences tested *wh*-interrogatives where gaps and RPs occurred inside a noisland *innu* 'that' clause (13a), an adjunct island (13b), and a *wh*-island (13c). The other set exemplifies the target sentences on relative clauses with gaps and RPs inside a noisland *innu* 'that' clause (14a), an adjunct island (14b), and a *wh*-island (14c).

Each participant saw two tokens on each condition. I included fillers on a 2:1 ratio with respect to experimental items. The task involved (3) practice items, (24) experimental items, and (48) filler items. Fillers were distributed evenly into (24) grammatical and (24) ungrammatical items. (12) item sets were created and distributed into (12) lists. The same filler and practice items were included in all lists that differed only in the target sentences in order to control for any lexical confounds.

It is worth noting that JA is mainly a spoken variety of Arabic, but it has recently been employed in informal writing for chatting across all social media platforms like Facebook, Instagram, WhatsApp, etc. Therefore, the Jordanians are getting accustomed to JA being used in informal writing. Since the current study is concerned with the availability of interpretations that require deep thinking, I assume that presenting the material in all the experiments employed in the current study in the writing mode can be more appropriate. To make it natural for the participants, they were told plainly at the outset of all the experiments that these sentences were either taken from or constructed in light of actual conversations and comments in social platforms among Jordanians. The participants were presented with a written acceptability judgment task and they were required to rate them on their own pace on a 7-point Likert Scale with 7 for perfectly acceptable sentences and 1 for completely unacceptable sentences.

3.1.2. Participants

Fourty-seven participants volunteered to take part in the study. All were native speakers of JA, particularly, the variety spoken in Karak in the south of Jordan. None of them had relevant linguistic background. The age range was 18-39 (median age = 28). The data from forty-two participants were included in the statistical analysis because the remaining five participants returned the task inappropriately handled.

3.1.3. Results

The average rating and standard deviation of the task items were as follows: experimental sentences (mean = 3.30, *SD* = 1.23), the grammatical fillers (mean = 6.71, *SD* = 1.15), and the ungrammatical fillers (mean = 1.81, *SD* = 1.07). The ratings of all the experimental conditions were *z*-transformed. The means of the *z*-scores and standard deviations of the acceptability of the experimental conditions were tabulated below.

Table 2: Means and standard deviations of experimental conditions

	Wh-Interrogatives			Relative clauses		
	Strong Island	Weak Island	NoIsland	Strong Island	Weak Island	NoIsland
RP	2.33 (1.60)	5.51 (1.11)	6.08 (0.84)	5.58 (1.40)	6.01 (1.50)	6.27 (1.17)
Gap	2.25 (1.73)	5.17 (1.03)	6.41 (0.91)	1.81 (0.80)	1.89 (1.19)	1.93 (0.30)

A linear mixed-effects model was undertaken using SPSS IBM version 23 with STRUCTURE, ISLAND, and TAIL incorporated as fixed-effect factors, whereas items and subjects included as random-effect factors. The results revealed a main effect for STRUCTURE (estimate = 30.848, $F = 124.099$ (.000), $p < 0.05$) in that *wh*-interrogatives were rated higher than relative clauses, a main effect for ISLAND (estimate = 47.551, $F = 191.297$ (.000), $p < 0.05$), and a main effect for TAIL

(estimate = 141.352, F = 568.655 (.000), $p < 0.05$). The interactions were all significant. There was statistically a significant interaction effect of STRUCTURE*ISLAND (estimate = 14.282, F = 57.457 (.000), $p < 0.05$) which indicated that the overall rating of acceptability varied according to islands in *wh*-interrogatives but not in relative clauses. More precisely, adjunct island was rated much lower than *wh*-island and noisland conditions in *wh*-interrogatives. There was statistically a significant interaction effect of STRUCTURE*TAIL (estimate = 81.457, F = 327.698 (.000), $p <0.05$). This interaction delineated that resumption strategy was rated higher in relative clauses; gap strategy was rated much higher in *wh*-interrogatives. There was statistically significant interaction effect of STRUCTURE*TAIL*ISLAND (estimate = 5.934, F = 23.873 (.000), $p < 0.05$). The only insignificant interaction was TAIL*ISLAND (estimate = .263, F = 1.059 (.348), $p < 0.05$), which elucidated that gaps and RPs were rated similarly in strong islands, weak islands, and noisland conditions.

Overall, these findings unravel important generalizations. First, resumption is the only strategy available in relative clause dependency in JA; gap and resumption strategies alternate in *wh*-interrogatives. Second, relative clauses in JA are insensitive to islands, whereas both gaps and RPs manifest sensitivity to strong islands in *wh*-interrogatives. Within *wh*-interrogative dependency, there is no difference between gap and resumption strategies.

3.2. Experiment 2

3.2.1. Design and material

In accordance with previous literature on reconstruction on Arabic and JA, and the results of Experiment 1, I adopted a 2*3*3 factorial design with three independent variables along with their levels within parentheses: RESUMPTION_TYPE, ISLAND, and BINDING_PRINCIPLES. I did not include gaps because gap strategy is not available in relative clauses in JA as found in Experiment 1. The design resulted in (18) conditions. The experiment was divided into two parts. The first part methodologically was built upon Georgi, Salzmann, and Wierzba's (2019: 4) experimental investigation of Principle A reconstruction in German A'-movement. In their research, they employed a forced-choice paradigm whereby participants were confronted with a sentence and required to answer two yes-no questions as represented below.

15. Mary tells us how proud of herself Anna is.
    Can this sentence be interpreted such that ….
    …..someone is proud of Mary? Yes ( ) No ( )
    …..someone is proud of Anna? Yes ( ) No ( )

They argue that this task is natural (following also Bruening & Al Khalaf 2019) because it enabled them to elicit information about possibilities of coreference without explicitly using terms like (*co*)*refer*.

Along these lines, the second experiment of the current study is also a forced-choice task, yet possible paraphrased interpretations are used rather than just yes-

no questions as illustrated below. I assume that this modification is necessary in order to make the interpretations clearer.

16. shifit [maktab-***ha***$_i$ il-kabi:r]$_j$ illi ka:nat [kul muwaTHTHaffah]$_i$
saw.1sg office-her the-big which was-3sgf all employee.3sgf
bidha itzayyn-***uh***$_j$
wanted decorate-it
'I saw her big office which every employee wanted to decorate ***it***.'

A. fi:h maktab kabi:r wa:hid wa kul ilmuwaTHTHafa:t
There office big one and all employees
Bidhin yzayynanuh
wanted decorate it
'There is one big office and all employees wanted to decorate this big office.'

B. fi:h majmu:ᶜit maka:tib wa kul muwaTHTHafah
There group offices and each employee
bidha itzayyn maktabha
wanted to-decorate her office.
'There are a number of big offices and each employee wanted to decorate her office.'

Here, there is a pronominal element inside the bracketed relativized DP *maktab-**ha** il-kabi:r* 'her big office'. The fronted DP is related to a weak RP *-uh* 'it' in the direct object position of the transitive verb *itzayyn* 'decorate'. The interpretation in (16a) is a non-reconstructed reading by which there is a big office that all employees wanted to decorate. In contrast, the interpretation in (16b) encompasses the reconstructed (functional) reading by which there are several big offices and that each employee has her own office that she would like to decorate. Participants were instructed to write either *yes* if they accepted the interpretation or *no* if they did not perceive the interpretation as viable and acceptable.

The choices were randomized such that in half of the target items the reconstructed reading was Choice (a) and in the other half it was Choice (b) and the opposite was true for the unreconstructed interpretation to guarantee that the participants will not observe a fixed pattern and so answer without carefully considering the choices. They were instructed to appeal mainly to their intuition and indicate whether each interpretation sounded natural and acceptable to them.

Since I think that the acceptability or unacceptability of a certain interpretation may only vary to a lesser degree that cannot be indicated by binary choices that treat interpretations as either perfectly correct or entirely incorrect, I included another part in the experiment whereby a sentence was presented followed by two interpretations. Participants were required to read a given statement then to rate each given interpretation on a 7-point Likert scale with 1 indicating that the interpretation is entirely unacceptable and 7 indicating that the interpretation is perfectly acceptable. This modification is necessary to overcome the problem of the forced-choice task as the answers *yes* and *no* may provide an indication of the availability of interpretation but the extent of this availability cannot be elicited. That is why I think I need to compliment the methodology with this part where it

gives further, profound indication not only on the availability of reconstructed interpretation but the extent to which this availability is significant or just superficial.

Recall that the design involves (18) conditions, the task was designed in a way that a participant would see one sentence on each condition in each part, namely, they would see two experimental items on each condition to be rated in a different manner. Each part began with three practice items. Fillers were provided in a 1:1 ratio with experimental items in each part. In total, the participants were presented with (78) items in this experiment distributed as follows: (6) practice items, (36) experimental items, and (36) fillers, distributed evenly into the first and second parts. Below is a sample item set of the target sentences used to test the BVA Principle without the given interpretations that are left out for space limitation.

17. a. shifit [sayyarit ju:z*ha*$_i$]$_j$ illi gultum innu
saw-1sg [car husband-her] which said-2pl that
[kul muwaTHTHaffah]$_i$ sawwarat-ha$_j$
[every employee.3sgf photography-**it**
'I saw her husband's car which you said that every employee took a photo of **it**.'

b. shifit [sayyarit ju:z*ha*$_i$]$_j$ illi ruhtu: gabilma
saw-1sg [car husband-her] which left-2pl before
[kul muwaTHTHaffah]$_i$ itsawwar-**ha**$_j$
[every employee.3sgf photography-**it**
'I saw her husband's car which you left before every employee took a photo of **it**.'

c. shifit [sayyarit ju:z*ha*$_i$]$_j$ illi saʔaltum leish
saw-1sg [car husband-her] which asked-2pl why
[kul muwaTHTHaffah]$_i$ sawwarat-**ha**$_j$
[every employee.3sgf photography-**it**
'I saw her husband's car which you asked why every employee took a photo of **it**.'

The bold italicized weak RPs are coindexed with the bracketed relativized DP which is assumed to be in the scope of the QP *kul muwaTHTHaffah* 'every employee'. The weak RP occurs inside an embedded noisland declarative clause (17a), an adjunct island (17b), and a *wh*-island (17c).

Similarly, the other target sentences were designed according to the same conditions but differed in the binding principle they tested. Below are two illustrative examples.

18. gabalit [bint ᶜabla$_i$]$_j$ illi gultum hiyyi$_i$
met-1sg [daughter Abla] whom said-2pl she
daᶜamat-ha$_j$ fi: il-musa:baqah
supported-***her*** in the-competition
'I met Abla's daughter whom you said that she supported (***her***) in the competition.'

19. shifit [su:rit ha:lha$_i$]$_j$ illi sala:m$_i$ ʔakhdhat-***ha*** fi: ilhaflih

saw-1sg [photo herself] which Salam took-***it*** in the-party
'I saw the photo of herself that Salam took (***it***) in the party.'

The bold italicized weak RP is co-indexed with the bracketed relativized DP that includes an R-expression to test Principle C in (18). However, it is co-indexed with the bracketed relativized DP that includes an anaphor to test Principle A in (19). Then, the same examples are modified so that the weak RP occurs in embedded adjunct and *wh*-islands.

I created 18 item sets to test reconstruction for each binding and scope principles under investigation in the current study. Each item set involved target sentences that were all lexically matched to control for any potential lexical confounds, so that each participant saw one token from each list on one condition in each part and never two tokens on each condition in any experiment. Those were distributed into 18 lists. The filler items included (18) grammatical sentences and (18) ungrammatical sentences presented in an even distribution across both parts of the task. Experimental items were distributed into (18) lists in a Latin-Square design that were pseudo-randomized on lists so that no consecutive items represented on the same condition, and the participants were evenly distributed into these lists. The task was presented in a written mode by which the participants judged the interpretations on their own pace and submitted them back once they finished them.

3.2.2. Participants

Fifty-eight native speakers of JA as spoken in Karak in the south of Jordan volunteered to participate in the study. Their age range was 19-59 (median age = 32). None of them participated in the other experiments. The data from subjects who answered incorrectly or chose two incorrect interpretations of the filler items were excluded and so only the data from (49) participants were included in the final analysis distributed into 26 males and 23 females.

3.2.3. Results

The results of the first part are displayed below in terms of the percentages of the reconstructed reading answer.

Table 3: The percentages of choosing the reconstructed interpretation in RC

	Strong Island		Weak Island		No Island	
	Weak_RP	Strong_RP	Weak_RP	Strong_RP	Weak_RP	Strong_RP
Principle A	89%	92.3%	96.5%	91.2%	90.5%	88%
Principle C	81.9%	85.1%	91.1%	87.3%	92.2%	90%
BVA	41.7%	36.9%	35.1%	39.3%	43%	47.2%

The percentages of choosing reconstructed interpretation that led to the satisfaction of Principle A and BVA but to Principle C violation clearly revealed a number of conclusions. First, both weak RPs and strong RPs patterned the same with respect to reconstruction regardless of the presence of islands (weak and strong island

conditions) or absence of islands (noisland conditions) and respecting binding principles at issue. The results obviously replicated, at least superficially, the claims of Guilliot and Malkawi (2006) and Malkawi and Guilliot (2007) that reconstruction as a diagnostic of A'-movement does not pattern with islands as assumed in previous literature (Lebeaux 1991; Chomsky 1995; Sauerland 1998; Fox 2000; Barss 2001). Rather, reconstruction was available in presence of strong islands contrary to the general assumption in previous literature (ibid). However, the findings of this study did not support Malkawi and Guilliot's (2007) claims that the type of RPs did matter with respect to reconstruction. The percentages of choosing the reconstructed interpretation were well above zero and the level of choosing by chance (50%) in all binding principles at issue (Principle A, Principle C, and BVA conditions) regardless of the type of islands (if any) and irrespective of the type of RPs. However, the percentage of choosing the reconstructed interpretation was around 50% which meant that it was chosen by chance. Therefore, its availability was doubtful even though this finding was mysterious as BVA should operate similarly to Principle A so it was predicted to show similar pattern.

The results of rating the reconstructed and unreconstructed interpretations in the second part of this experiment is presented below.

I adopted a linear mixed-effects model with BINDING_PRINCIPLE, RESUMPTION, and ISLAND as fixed-effect factors while items and subjects were included as random-effect factors. The results revealed main effects of BINDING_PRINCIPLE variable only (F = 47.485 (.000), $p < 0.05$). The means of rating reconstructed and unreconstructed interpretations demonstrated that the type of the binding principle mattered in reconstruction in relative clauses in JA such that reconstructed interpretations were significantly rated higher than unreconstructed interpretations in Principle A conditions wherein reconstructed reading was rated as significantly acceptable whereas unreconstructed reading was rated unacceptable. However, in Principle C conditions, both reconstructed as well as unreconstructed interpretations were moderately rated as acceptable but not significantly as high as other ratings of Principle C conditions, for instance. The results showed no interaction effects of BINDING_PRINCIPLE*RESUMPTION (F = .035 (.965), $p < 0.05$). This meant that the rating of the reconstructed interpretation was not affected by the type of the RP whether weak or strong, which in turn, was not affected in accordance with the binding principle. No statistically significant interaction effects of BINDING_PRINCIPLE*ISLAND_TYPE (F = 2.338 (.054), $p < 0.05$) were found and this showed that the rating of the acceptability of the reconstructed interpretation across the binding principles at issue was not affected by the type of island whether weak or strong. The remaining interactions of RESUMPTION*ISLAND_TYPE (F = 2.101 (.123), $p < 0.05$) and BINDING_PRINCIPLE*RESUMPTION*ISLAND_TYPE (F = 2.383 (.051), $p < 0.05$) were not statistically significant.

Table 4: The means and standard deviation of rating the acceptability of reconstructed (+R) and unreconstructed (-R) interpretations in RC in JA w.r.t binding principles A, B, BVA

	Strong Island				Weak Island				NoIsland			
	Weak RP		Strong RP		Weak RP		Strong RP		Weak RP		Strong RP	
	+R	-R	+R	-R	+R	-R	+R	-R	+R	-R	+R	-R
A	5.3 (.74)	2.21 (1.11)	5.5 (.99)	2.09 (1.13)	5.83 (.64)	3.00 (1.30)	6.01 (.99)	1.98 (.76)	6.37 (.64)	1.86 (.63)	6.40 (.76)	2.03 (.80)
C	5.39 (.74)	5.81 (1.04)	5.12 (.99)	5.62 (1.07)	5.97 (1.02)	6.02 (.82)	6.63 (.65)	6.11 (.94)	6.11 (.64)	6.23 (1.51)	6.03 (.65)	6.22 (1.19)
BVA	4 (.89)	4.5 (.75)	3.98 (.66)	4.3 (1.05)	3.99 (.45)	4.05 (1.06)	4.11 (.66)	4.04 (.79)	4.08 (.45)	4.18 (.81)	4.12 (1.01)	4.03 (1.13)

3.3. Experiment 3

3.3.1. Design, material, and procedure

The underlying objective of the third experiment was to compare the findings regarding the availability of reconstruction in relative clauses, the construction of interest, to the potential availability of reconstruction in a typical construction of A'-movement, viz. *wh*-interrogative. I adopted exactly the same design, method, and procedure employed in Experiment 2, but I modified the experimental material and levels of the independent variable, RESUMPTION_TYPE in light of the findings of Experiment 1 and 2. For the sake of brevity, below are only the details that differed from Experiment 2. All the experimental items were *wh*-interrogatives headed by the *wh*-filler *ayy*+NP 'which+NP'. I adopted a 2*3*3 factorial design with the same independent variables and their levels as in Experiment 2 except for the levels of the RESUMPTION_TYPE as the findings of Experiment 1 revealed that both resumption and gap strategies alternate in *wh*-interrogatives in JA and the findings of Experiment 2 showed that there was no difference between weak RPs and strong RPs in their behavior with respect to reconstruction, I chose the levels of this independent variable to be weak RPs and gaps. Below is an illustration of the conditions tested BVA.

20. a. [ayy sayyarit ju:z*ha*$_i$]$_j$ gultum innu
[which car husband-her$_i$]$_j$ said-2pl that
[kul muwaTHTHafih]$_i$ sawwarat-ha$_j$/ __?
[every employee]$_i$ photographed-***it***$_j$/_?
'Which husband's car did you say that every employee photographed (***it***)/_?'

b. [ayy sayyarit ju:z*ha*$_i$]$_j$ zi^{c}iltum laiʔnnu [kul
[which car husband-her$_i$]$_j$ upset-2pl because [every
muwaTHTHafih]$_i$ sawwarat-***ha***/ __?
employee]$_i$ photographed-***it***$_j$/_?
'Which husband's car did you get upset because every employee photographed (***it***)/_?'

c. [ayy sayyarit ju:z*ha*$_i$]$_j$ saʔaltum leish [kul
[which car husband-her$_i$]$_j$ asked-2pl why [every
muwaTHTHafih]$_i$ sawwarat-***ha***/ __?
employee]$_i$ photographed-***it***$_j$/_?
'Which husband's car did you ask why every employee photographed (***it***)/_?'

The bold italicized weak RPs are coindexed with the fronted DP which is assumed to be in the scope of the QP *kul muwaTHTHafih* 'every employee'. The weak RP occurs inside an embedded noisland declarative clause (20a), an adjunct island (20b), and a *wh*-island (20c).

The other experimental sentences were designed according to the same conditions but differed in the binding principle they tested. Below are two examples in the noisland conditions that are further constructed according to the other conditions but for space limitation, only noisland conditions are presented below.

21. [ayy bana:t ^{c}abla$_i$]$_j$ gultum innu hiyyi$_i$
[which daughters Abla] said-2pl that she
da camat-ha$_j$ fi: il-musa:baqah?
supported-***her*** in the-competition
'Which Abla's daughters did you say that she supported (***her***) in the competition?'

22. [ayy suwar ha:lha$_i$]$_j$ gultum innu sala:m$_i$
[which photos herself] said-2pl that Salam
ʔakhdhat-ha fi: ilhaflih
took-***it*** in the-party
'Which photos of herself did you that Salam took (***it***) in the party?'

The bold italicized weak RP is co-indexed with the bracketed fronted DP that includes an R-expression to test reconstruction for Principle C in (21). However, it is co-indexed with the bracketed fronted DP that includes an anaphor to test reconstruction for Principle A in (22). The same filler and practice items were used.

3.3.2. Participants

Fifty native speakers of JA as spoken in Karak district in the south of Jordan volunteered to participate in the current study. None of them had relevant linguistic background and none of them participated in the other experiments in the current study. The age range was 23-44 (median age = 35). The data from only (39) participants were included in the final statistical analysis because the data from the other (11) were excluded due to inappropriate completion of the task.

3.3.3. Results

The results of the first part are tabulated below in terms of the percentages of choosing the reconstructed interpretation.

Table 5: The percentages of choosing the reconstructed interpretation in WH

	Strong Island		Weak Island		No Island	
	Weak_RPs	Strong_RPs	Weak_RPs	Strong_RPs	Weak_RPs	Strong_RPs
Principle A	7.3%	9.9%	83%	81.9%	90.4%	91%
Principle C	10%	5.7%	81.2%	79.8%	84.7%	89%
BVA	6.1%	15.4%	40.8%	41.3%	41%	42.9%

The percentages of choosing reconstructed interpretation unravelled a number of findings. First, reconstruction was not attainable in strong islands regardless of the binding principle (A, C, or BVA) or the RESUMPTION_TYPE (RP or Gap). Second, reconstruction was significantly available in the weak and noisland conditions regardless of the binding principle or the type of the dependency-resolving strategy. Additionally, the availability of reconstruction in *wh*-interrogative dependency in JA aligned with the type of island contra to relative clauses in which the type of the island did not matter regarding the availability of reconstruction. RPs and gaps patterned similarly. Third, the percentages of choosing the reconstructed interpretation with respect to BVA was close to 50%, at chance, in weak and noisland conditions, yet they were much lower and even close to zero in strong island conditions which meant that reconstruction was not attainable in this context.

Table 6: The means and standard deviation of rating the acceptability of reconstructed (+R) and unreconstructed (-R) interpretations in WH in JA w.r.t binding principles A, B, BVA

	Strong Island				Weak Island				NoIsland			
	Weak RP		Strong RP		Weak RP		Strong RP		Weak RP		Strong RP	
	+R	-R	+R	-R	+R	-R	+R	-R	+R	-R	+R	-R
A	1.88 (1.01)	5.20 (1.14)	2.13 (.98)	5.21 (.80)	5.11 (1.08)	2.07 (1.50)	5.75 (1.41)	1.98 (.95)	5.30 (1.12)	2.93 (.91)	5.91 (.84)	2.19 (.82)
C	2.05 (.79)	5.91 (.69)	2.03 (.81)	5.51 (1.15)	4.98 (.53)	5.12 (1.07)	5.20 (1.12)	5.15 (1.23)	5.91 (1.53)	5.86 (.89)	6.11 (.73)	6.12 (1.03)
BVA	1.85	5.91	1.96	5.73	4.44	4.18	3.98	4.12	4.50	4.05	3.89	4.07

	(1.09)	(1.13)	(.97)	(.78)	(.88)	(1.03)	(.86)	(1.53)	(1.71)	(1.35)	(1.17)	(1.39)

The results of Experiment 3 of *wh*-interrogatives in JA revealed significant main effects of BINDING_PRINCIPLE (F = 224.079 (.000), p<0.05) such that the reconstructed interpretation was rated as acceptable and significantly higher than the unconstructed reading in Principle A conditions, both interpretations were rated acceptable and at a high rate in Principle C conditions but at a low rate in BVA conditions. The results also delineated statistically significant main effect of ISLAND_TYPE (F = 229.373 (.000), p<0.05) whereby there was statistically significant impact of strong islands on the acceptability of reconstructed reading in that reconstructed interpretation was significantly rated as unacceptable in strong island conditions regardless of the type of the dependency-resolving strategy (RP or gap) or the type of the binding principle. These findings were supported by the statistically significant interaction effects of BINDING_PRINCIPLE*ISLAND_TYPE (F = 47.276 (.000), p<0.05). From this, reconstruction was found to be banned in strong island contexts in *wh*-interrogative dependency in JA. None of the other interactions such as BINDING_PRINCIPLE*TAIL (F = .761 (.468), p<0.05), TAIL*ISLAND_TYPE (F = .370 (.691), p<0.05), or BINDING_PRINCIPLE*TAIL*ISLAND_TYPE (F = .659 (.621), p<0.05) were statistically significant. The lack of statistically significant interaction effects clearly demonstrated that the type of the dependency-resolving strategies did not affect the availability of reconstruction in JA.

4. Conclusions and general discussion

Recall the kernel goal of the current study is to reconsider the association or lack of association between reconstruction and A'-movement in relative clauses in JA in light of previous relevant accounts in the literature (Aoun and Choueiri 1996; Aoun, Choueiri, and Hornstein 2001; Guilliot and Malkawi 2006; and Malkawi and Guilliot 2007) and what this diagnostic can reveal about how relative clauses are syntactically derived in JA. The *wh*-interrogative dependency, representing a typical instance of A'-movement, is purposefully tested in Experiment 1 and 3 only for the sake of comparison with relative clauses. Boiling down the findings of the three experiments together, a number of congruent conclusions can be drawn. First, gap and resumption strategies do not freely alternate in JA in both dependencies investigated as assumed in previous literature (Demirdache and Percus 2011 and references therein). In fact, gap strategy is not available at all in relative clauses in JA, yet it is available in *wh*-interrogatives along with resumption strategy. Second, weak RPs and strong RPs exhibit a similar pattern of behavior with respect to reconstruction in obvious contradiction to Guilliot and Malkawi's (2006) and Malkawi and Guilliot's (2007) claims. Guilliot and Malkawi (2006) assume that weak RPs involve pronominal clitic *-uh* 'him' or doubled clitic *-uh huwwa* while strong RPs encompass strong pronouns like *huwwa* 'he' and epithets like *ha-l-ghabi* 'this idiot'. In fact, their assumption regarding the doubled clitic casts doubts on their account. Indeed, the assumed doubled clitic is identical in form to the strong

pronoun that is referred to as a strong RP. This similarity evidently reveals that what they refer to as a doubled clitic is in fact a clitic followed by a strong pronoun. In accordance with this evident morphological similarity their assumption can be boiled down into a modified generalization reads as: strong pronouns when used with clitics allow reconstructed reading in strong islands, yet the same strong pronouns used without clitics ban reconstructed reading in strong islands. This actually brings into question the validity of considering the type of RPs as a determining criterion of reconstruction effects in JA.

A third significant conclusion is that relative clauses in JA do not manifest sensitivity to islands even to strong islands; however, *wh*-interrogatives do exhibit sensitivity to strong islands like adjunct island. This finding relates to the final conclusions regarding reconstruction. The binding principles matter regarding the availability of reconstruction. In JA, reconstruction effects are available for Principle A in relative clauses as well as *wh*-interrogatives irrespective of the absence or presence of islands and their types whether strong or weak. As far as Principle C is concerned, both reconstructed and unreconstructed interpretations are somehow equally highly rated as acceptable in relative clauses and *wh*-interrogatives except in the context of strong islands in *wh*-interrogatives in which the reconstructed reading was ruled out as unacceptable. With respect to BVA, reconstruction is available but neutrally in relative clauses as well as *wh*-interrogatives except in the context of strong islands in *wh*-interrogatives. Taken island sensitivity as a diagnostic of A'-movement, I would propose that *wh*-interrogatives are syntactically derived by A'-movement lending further support to previous syntactic accounts, whereas relative clauses in JA are derived by a different mechanism that clearly cannot be A'-movement. Only in the context of strong island in an A'-movement-derived construction, reconstruction fails regardless of the type of binding principles as predicted from previous literature given that it is not available in a context that bans A'-movement. This is the only context in which reconstruction intertwines with sensitivity to islands and functions as diagnostics of A'-movement (Lebeaux 1991; Chomsky 1995; Sauerland 1998; Fox 2000; Barss 2001). In all other cases, ratings and choices are similar in relative clauses and *wh*-interrogatives such that the binding principle is what actually matters. Reconstruction for Principle A is available in A'-movement (*wh*-interrogatives) constructions as well as non-A'-movement constructions (relative clauses in JA), whereas unreconstructed reading is ruled out except in the context of strong islands in A'-movement constructions even though unreconstructed reading leads to a violation of Principle A. Both reconstructed and unreconstructed interpretations are available even though the reconstruction leads to violation of Principle C, yet it is acceptable and at a high rate.

As the results of the three experiments do not show different behavior among gaps, weak RPs and strong RPs with respect to reconstruction and sensitivity to islands in JA, I would not adopt different mechanisms for deriving different types of resumption (Aoun and Choueiri 1996; Aoun, Choueiri, and Hornstein 2001; Guilliot and Malkawi 2006; and Malkawi and Guilliot 2007). Moreover, the availability of reconstruction for Principle A does not support the base-generation

proposal as the anaphor cannot be bound in the assumed base-generated position since it would not be c-commanded by its antecedent. The availability of the bound variable interpretation (reconstructed) in Principle A conditions indicates that the relativized DP starts lower in the derivation. Given the lack of sensitivity to islands in relative clauses in JA, A'-movement is not a potential deriving mechanism. I would adopt Guilliot and Malkawi's (2006:1) claim that "if an XP allows for reconstruction, a copy of that XP (rather than movement of the XP) should be present", yet instead of previous different mechanisms for obtaining copies for different types of RPs, I would propose different mechanisms for the different dependencies that are consistent regardless of the type of the dependency-resolving strategy be it a gap, a weak RP or a strong RP. More precisely, I would propose that *wh*-interrogatives are syntactically derived by the typical A'-movement operation, whereas relative clauses are derived by a different mechanism as detailed below.

The findings of the current study with regard to the syntax of relative clauses in JA demonstrates that the base-generation account seems to be the most plausible. In fact, a number of syntactic derivational accounts are proposed in previous literature on Arabic relative clauses. In more details, there are three main assumed syntactic derivations of Arabic relative clauses. The first proposal advances a base-generation account by which the relative pronoun and the definite relativized NP are base-generated in their surface positions and related to the RP via binding (Shlonsky 1992; Choueiri 2002; Aoun et al. 2010). This account is suggested on the grounds that resumption does not exhibit sensitivity to islands in relative clauses, and so A'-movement account is ruled out as inapplicable. Within this proposal, the relative clause is considered a CP and the dependency is established by base-generation. The referentiality between the definite relativized NP along with the relative pronoun, on one hand, and the RP in the variable site is achieved via binding. The second proposal involves a movement account that is advocated for relative clauses with gap and resumption strategies that exhibit sensitivity to islands whether in the form of overt movement (Choueiri 2018) or covert, LF, movement (Demirdache 1991). The third account is suggested by Ouhalla (2004) who argues that Arabic relative clauses are DPs rather than CPs for two empirical and morphological considerations. First, the relative pronouns in Arabic varieties, e.g., *illi*/*yalli* 'that' differs in form from the typical declarative complementiser *innu* 'that'. The second argument motivating his DP-account lies in the morphological composition of the relative pronoun in Arabic dialects, yet more evident in Standard Arabic (SA), in which the relative pronoun consists of the definite article *-al* 'the' with agreement inflections as in *allaði* 'the+sgm', *allati* 'the+sgf', *allaða:n* 'the+dlm'.

The experimentally-based findings in the current study have important theoretical implications to the potential syntactic account of how relative clauses in JA are derived. I would assume that relative clauses in JA are CPs that are derived via base-generation rather than A'-movement. This account is basically motivated by the following considerations. First, the lack of sensitivity to islands and the availability of reconstruction effects irrespective of the presence of strong islands reveal that relative clauses in JA are not derived by A'-movement. Furthermore,

empirical data from SA demonstrate that a relative clause in Arabic as a a CP rather than a DP P in contrast with Ouhalla's (2004) proposal since a relative pronoun can be identical in form to *wh*-phrases as illustrated below.

23. raʔay-tu man THanantu-***ha*** lan taʿu:d
saw.1sg who thought-1sg-***her*** not leave.3sgf
'I saw who I thought won't come back.'

The example above displays a relative clause with the relative pronoun *man* 'who' that is similar in form to the *wh*-filler headed the *wh*-interrogative CP. It, further, lacks the morphological composition of the definite article+agreement features typical of other relative pronouns. For these two pieces of evidence, I assume that relative clauses in JA are CPs rather than DPs.

Consequently, the findings concerning the availability of reconstructed interpretations in JA relative clauses with binding and scope principles investigated follow straightforwardly from the base-generation account by which the referential interpretation of the RP is maintained via binding. Consider the following examples.

24. shifit [ilhadiyyih lanafsha] illi gultum innu
saw-1sg [the-gift for-herself] which said-2plm that
muna ishtarat-***ha***
Muna bought-3sgf-***it***
'I saw the gift for herself which you said that she bought (***it***).'

25. gabalit [bint ʿabla$_i$]$_j$ illi gultum hiyyi$_i$
met-1sg [daughter Abla] whom said-2pl she
da camat-ha$_j$ fi: il-musa:baqah
supported-***her*** in the-competition
I met Abla's daughter whom you said that she supported (***her***) in the competition.

26. shifit [sayyarit ju:z*ha*$_i$]$_j$ illi gultum innu
saw.1sg [car husband-her$_i$]$_j$ which said-2pl that
[every employee]$_i$ photographed-***it***$_j$
[kul muwaTHTHafih]$_i$ sawwarat-ha
'I saw her husband's car which you said that every employee photographed (***it***).'

The italicized RP in the variable site gets its referentiality reading by being bound by the definite relativized NP *ilhadiyyih lanafsha* 'the gift for herself' in Example (24), *bint ʿabla* 'Abla's daughter' in Example (25), and *sayyarit ju:zha* 'her husband's car' in Example (26). This explains the acceptability of the reconstructed interpretations as follows. The anaphor *lanafsha* 'for herself' included in the relativized NP from which it gets its referentiality in Example (24) falls within the c-command domain of *muna* 'Muna' giving the reconstructed interpretation that satisfies Principle A. Similarly, the bold italicized RP in (25) is interpreted as referring to *bint ʿabla* 'Abla's daughter' giving the reconstructed interpretation that violates Principle C. Finally, the RP in (26) is interpreted as referring to *sayyarit ju:zha* 'her husband's car' yielding the reconstructed (distributive) bound variable reading of the presence of different cars of the employees' husbands.

To conclude, the findings of the current study lend further support to the significance and relevance of reconstruction as a diagnostic of A'-movement since the reconstruction effects are attained in presence of strong islands in constructions that are basically derived by A'-movement. The lack of alignment between the type of islands and reconstruction effects in relative clauses in JA can now be better understood because they are not syntactically derived by A'-movement in essence.

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References

Aoun, Joseph, and Lina Choueiri. (1996). Resumption and last resort. Unpublished manuscript, University of Southern California, Los Angeles, USA.

Aoun, Joseph, Lina Choueiri and Norbert Hornstein. (2001). 'Resumption, movement, and derivational economy'. *Linguistic Inquiry* (32): 371-403.

Aoun, Joseph, Elabbas Benmamoun and Lina Choueiri. (2010). *The Syntax of Arabic*. Cambridge: Cambridge University Press.

Bakir, Murtadha J. (2018). 'Agreement asymmetries and word order in Iraqi Arabic'. *International Journal of Arabic-English Studies (IJAES)*, 18(1): 197-210.

Barss, Andrew. (1986). Chains and anaphoric dependence. Unpublished PhD Dissertation, MIT, Cambridge, Massachusetts, USA.

Barss, Andrew. (2001). 'Syntactic reconstruction effects'. In Mark Baltin and Chris Collins' (eds.), *The Handbook of Contemporary Syntactic Theory*, 670-696. Massachusetts: Blackwell Publishers.

Bruening, Benjamin and Eman Al Khalaf. (2019). 'No argument-adjunct asymmetry in reconstruction for Binding Condition C'. *Journal of Linguistics*, 55: 247–276.

Chomsky, Noam. (1981). *Lectures on Government and Binding*. Dordrecht: Foris.

Chomsky, Noam. (1986). *Knowledge of Language: Its Nature, Origin, and Use*. New York: Praeger.

Chomsky, Noam. (1995). *The Minimalist Program*. Cambridge: MIT Press.

Choueiri, Lina. (2002). Issues in the syntax of resumption: Restrictive relatives in Lebanese Arabic. Unpublished PhD Dissertation, University of Southern California, Los Angeles, USA.

Choueiri, Lina. (2018). 'Resumption in varieties of Arabic'. In Elabbas Benmamoun and Reem Bassiouney (eds.), *the Routledge Handbook of Arabic Linguistics*, 131-154. Abingdon: Routledge.

Demirdache, Hamida. (1991). Resumptive chains in restrictive relatives, appositives, and dislocation structures. Unpublished PhD Dissertation, MIT, Cambridge, Massachusetts, USA.

Demirdache, Hamida and Orin Percus. (2011). 'Resumptives, movement and interpretation'. In Alain Rouveret (ed.), *Resumptive Pronouns at the Interfaces*, 369–393. Amsterdam: John Benjamins.

Elbourne, Paul. (2001). *Situations and Individuals*. Cambridge, MA.: MIT Press.

Fox, Danny. (2000). *Economy and the Semantic Interpretation*. Cambridge, MA.: MIT Press.

Georgi, Doreen, Martin Salzmann and Marta Wierzba. (2018). Condition C reconstruction in German: Methodological insights and theoretical implications. Paper presented at the Workshop on Condition C reconstruction, Queen Mary University, London.

Guilliot, Nicolas and Nouman Malkawi. (2006). 'When resumption determines reconstruction'. In Donald Baumer, David Montero and Michael Scanlon (eds.), *Proceedings of the 25th West Coast Conference on Formal Linguistics*, 168–176. Somerville, MA: Cascadilla.

Heim, I. (1994). 'Interrogative semantics and Karttunen's semantics for *know*'. In A. Mittwoch et al. (eds.) *Proceedings of the Israeli Association for Theoretical Linguistics*, 128-144.

Katz, Graham, Shin-Sook Kim and Heike Winhart. (eds). (1998). *Reconstruction*. Proceedings of the 1997 Tubingen Workshop. Arbeitspapiere des SFB 340, Bericht Nr. 127, University at Tubingen.

Lasnik, H. (1976). 'Remarks on coreference'. *Linguistic Analysis* (2):1-22.

Lebeaux, David. (1991). 'Relative clauses, Licensing and the nature of derivations'. In Susan Rothstein (ed.), *Perspectives on Phrase Structure: Heads and Licensing Series: Syntax and Semantics*, Vol. 25. BRILL.

Malkawi, Nouman and Nicolas Guilliot. (2007). 'Reconstruction and Islandhood in Jordanian Arabic'. In Mustafa Mughazy (ed.), *Perspectives on Arabic linguistics XX: Papers from the 20th Annual Symposium on Arabic linguistics*, 87-104. Amsterdam: John Benjamins.

Ouhalla, Jamal. (2004). 'Semitic relatives'. *Linguistic Inquiry*, 35: 288–300.

Reinhart, Tanya. (1976). The syntactic domain of anaphora. Unpublished Ph.D. Dissertation, MIT. [Distributed by MIT Working Papers in Linguistics, Cambridge, MA.]

Sauerland, Uli. (1998). *The Meaning of Chains*. Unpublished PhD Dissertation. MIT, Cambridge, USA.

Shlonsky, Ur. (1992). 'Resumptive pronouns as last resort'. *Linguistic Inquiry*, 23: 443–468.

Sportiche, D. (1992). *Clitic Constructions*. In Johan Rooryck and Laurie Zaring (eds.), *Phrase Structure and the Lexicon*, 213-277. UCLA: Kluwer Academic Publishers.

Sportiche, Dominique. (2006). 'Reconstruction, binding and scope'. In Martin Everaert and Henk van Riemsdijk (eds.), *The Blackwell Companion to Syntax*, 35–94. Oxford: Blackwell.

Sternefeld, Wolfgang. (2001). 'Semantic vs. syntactic reconstruction'. In Christian Rohrer, Antje Roßdeutscher, and Hans Kamp (eds), *Linguistic Form and its Computation*, 145–182, Stanford, CA: CSLI Publications.