Resumption, Movement, and Derivational Economy

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This article investigates the interaction between resumption and movement. Lebanese Arabic distinguishes between true resumption, where a pronoun or an epithet phrase is related to an Ā-antecedent via Bind, and apparent resumption, where the pronoun or the epithet phrase is related to its Ā-antecedent via Move. Only apparent resumption displays reconstruction effects for scope and binding. As resumptives, strong pronouns and epithet phrases cannot be related to a quantificational antecedent unless they occur inside islands. We account for this *Obviation Requirement* as follows: (a) (true) resumption is a last resort device, (b) strong pronouns and epithet phrases in apparent resumption contexts are generated as appositive modifiers of a DP, which is fronted to an Ā-position, and (c) appositive modifiers are interpreted as independent clauses. Obviation is reduced to the inability of quantifiers to bind a pronominal element across sentential boundaries.

Keywords: pronouns, epithets, bound variables, resumption, movement, reconstruction, appositives

1 Introduction

In this article we study the interaction between resumption and movement. Specifically, we discuss the role of the operation Move (= Copy and Delete) in generating constructions with strong pronouns and epithet phrases used as resumptive elements.

In Lebanese Arabic (LA) strong pronouns or epithet phrases resuming a quantificational element need to be separated from their antecedent by an island (*Obviation Requirement*).[1] In the cases represented below, this requirement results in the unacceptability of (1a) and the acceptability of (1b).

(1) a. *QP_i . . . [$_{DP}$ strong pronoun/epithet phrase]$_i$
    b. QP_i . . . [$_{Island}$ . . . [$_{DP}$ strong pronoun/epithet phrase]$_i$ . . .]

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[1] Strong pronouns are tonic pronouns, which can occur as independent morphemes. For the purposes of this article, we are using *weak* and *clitic* interchangeably to refer to a clitic pronoun, abstracting away from the tripartite distinction, argued for in Cardinaletti and Starke 1994, among *clitic, weak,* and *strong* pronouns.

We develop an analysis for the Obviation Requirement that challenges the view that resumptive constructions are not generated by movement (see Shlonsky 1992 and, in a different framework, Ross 1967, Chomsky 1977, Kroch 1981). Specifically, we propose the following:

(2) a. There are two kinds of resumptive pronouns: those relating to their antecedents via movement (*apparent resumptives*) and those relating to their antecedents via (a process similar to) binding (*true resumptives*).

    b. Resumptive elements must be generated by movement when they are not separated from their antecedent by an island.

    c. When movement is not available, a resumptive pronoun can be related to its antecedent via binding.

    d. Strong pronouns and epithet phrases occurring as resumptive elements in constructions generated by movement are interpreted as appositive modifiers.

The combination of (2a) and (2b) thus requires that (1a) be represented as (3) (irrelevant details omitted), a representation we shall call *apparent resumption*.

(3) *Apparent resumption*
QP_i . . . [$_{DP}$ QP_i [$_{DP}$ strong pronoun/epithet phrase]]

In (3) the sentence-initial QP is a copy (generated by movement) of the QP to which the strong pronoun or epithet phrase is adjoined in the sentence.

In the context of islands movement is prohibited, and therefore (1b) cannot be generated by movement. As a result, (2c) requires that the relation between antecedent and pronoun be mediated by binding. (1b) has the representation in (4) (irrelevant details omitted), which illustrates a case of *true resumption*.

(4) *True resumption*
QP_i . . . [$_{DP}$ strong pronoun/epithet phrase]$_i$

Only true resumptive strong pronouns and epithet phrases can resume a quantificational antecedent. (2d) allows us to derive this result: the DP consisting of the strong pronoun or epithet phrase adjoined to the QP in (3) is to be interpreted as an appositive structure. Thus, generalizing Emonds's (1979) analysis of appositive relative clauses as main clauses to all appositive modifiers, a sentence like (5a), which corresponds to (3), would have the interpretation in (5b).

(5) a. *No island*
    *kəll muttahame ʕrəfto   ʔənno ha-l-maʒduube nħabasit
    each suspect.SF know.2P that   this-the-idiot.SF imprisoned.3SF
    'Each suspect, you know that this idiot was imprisoned.'

    b. **Each suspect,* you know that she (= each suspect) was imprisoned. *She is the idiot.*

The unacceptability of (5a) results from a failure of the QP to bind the appositive epithet phrase across sentential boundaries, as indicated by the unacceptability of (5b). However, in (6), which has the representation in (4), binding of the true resumptive element is licit.

(6) *Island context*

    kəll   muttahame saʕalto   ʔəza   *ha-l-maʒduube* nħabasit

    each suspect.SF asked.2P whether this-the-idiot.SF imprisoned.3SF

    'Each suspect, you asked whether this idiot was imprisoned.'

A few additional remarks concerning the assumptions in (2) are in order. (2a–c) embody the claim that relating resumptive pronouns to their antecedents via movement is preferable to relating them via binding. This reflects the fact that true resumptive pronouns are licit only if apparent resumptive pronouns are not. In minimalist terms this suggests that there is an economy principle regulating the distribution of true versus apparent resumptive pronouns, the latter being less costly to use and hence potentially blocking the appearance of the former. In this article we present empirical evidence showing that apparent resumption does block the use of true resumptive elements within nonislands.

The article is organized as follows. In section 2 we establish the parallel behavior of strong pronouns and epithet phrases in resumptive constructions and provide an initial statement of the Obviation Requirement, which constrains the distribution of both types of elements in resumptive constructions. In section 3 we examine the morphological makeup of strong pronouns and epithet phrases used as resumptive elements, and we give a structural analysis that accounts for the similar distribution of strong pronouns and epithet phrases in resumptive constructions. In section 4 we present and support our explanation for the Obviation Requirement. In sections 5 and 6, respectively, we extend the analysis to the contrasting behavior of strong pronouns and epithet phrases in contexts of bound variable anaphora on the one hand and contexts of weak pronouns used as resumptive elements on the other. We conclude in section 7 with a brief summary of our findings and a discussion of their theoretical implications given minimalist assumptions.

2 The Obviation Requirement

2.1 Strong and Weak Pronouns

From a morphological point of view, pronouns in LA can be classified into two categories: weak pronouns, which are affixed to heads (V, N, P), and strong pronouns, which occur as independent morphemes. The weak pronouns occur in all nonsubject positions and are realized as clitics on a lexical head.

(7) a. karim ḍarab-ne/-na

     Karim hit.3SM-1S/-1P

     'Karim hit me/us.'

  b. kteeb-ak/-ik/-kun

     book-2SM/-2SF/-2P

     'your book'

  c. rəħte   maʕ-a/-o/-un

     went.2SF with-3SF/-3SM/-3P

     'You went with her/him/them.'

The strong or tonic pronouns usually occur in subject position.[2]

(8) a. zeena ftakarit   ʔənno ʔana/nəħna b-l-beet
       Zeina thought.3SF that   I/we   in-the-house
       'Zeina thought that I am/we are at home.'
   b. zeena ftakarit   ʔənno ʔənta/ʔənte/ʔənto   b-l-beet
       Zeina thought.3SF that   you.SM/you.SF/you.P in-the-house
       'Zeina thought that you are at home.'

Third person strong pronouns, which can be used as resumptive elements,[3] are given in (9) along with their weak counterparts.

(9) Third person pronoun paradigm

	Singular	Plural
Weak	-o(MASC)/-a(FEM)	-un
Strong	huwwe(MASC)/hiyye(FEM)	hənne

2.2 Strong Pronouns as Resumptives

As resumptive elements, strong pronouns distinguish between quantificational and nonquantificational antecedents. A strong pronoun can always be used as a resumptive element when it is related to a nonquantificational antecedent.[4]

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[2] Another context where strong pronouns can be found is the dislocated position. In such cases the strong pronoun is related to a weak pronoun in argument position within the sentence, as illustrated in (i).

(i) a. *huwwe* zeena ʃeefət-*o*
       he   Zeina saw.3SF-him
       'Him, Zeina saw him.'
    b. karim zeena ʃeefət-*o*
       Karim Zeina saw.3SF-him
       'Karim, Zeina saw him.'

[3] For present purposes it suffices to characterize a resumptive element as a locally Ā-bound DP.

[4] In particular, in LA strong pronouns related to a nonquantificational antecedent are acceptable in all contexts; they are not subject to the Highest Subject Constraint, which prohibits (strong) pronouns from being related to an antecedent occurring within the same CP.

(i) a. baʕrif   *l-walad* yalli *huwwe* nʃaħat   l-yom
       know.1s the-boy that   he   expelled.3SM today
       'I know the boy that was expelled today.'
    b. *χayy-e*   keen   *huwwe* raħ yinʃəħit   l-yom
       brother-my was.3SM he   FUT expelled.3SM today
       'My brother, he was going to be expelled today.'

This prohibition is at work in Egyptian (Eid 1983), Irish (McCloskey 1990), Hebrew (Borer 1984, Shlonsky 1992), and Palestinian Arabic (Shlonsky 1992).

(10) *No island*

ha-l-muttahame   ʕrəfto   ʔənno *hiyye* nħabasit
this-the-suspect.SF know.2P that   she   imprisoned.3SF
'This suspect, you know that she was imprisoned.'

(11) a. *Adjunct island*

ha-l-muttahame   tfeeʒaʔto   lamma/laʔanno ʕrəfto   ʔənno *hiyye*
this-the-suspect.SF surprised.2P when/because   know.2P that   she
nħabasit
imprisoned.3SF
'This suspect, you were surprised when/because you knew that she was imprisoned.'

b. Wh-*island*

ha-l-muttahame   badkun taʕrfo   miin bifakkir   ʔənno *hiyye* harabit
this-the-suspect.SF want.2P know.2P who think.3SM that   she   ran.away.3SF
'This suspect, you want to know who thinks that she ran away.'

c. *Complex NP island*

ha-l-muttahame   ʃəfto l-muħaame   yalli byaʕrif   ʔənno *hiyye*
this-the-suspect.SF saw.2P the-attorney.SM that know.3SM that   she
harabit
ran.away.3SF
'This suspect, you saw the attorney that knows that she ran away.'

However, when the antecedent is a quantificational element, it can be resumed by a strong pronoun only if this quantificational element and the strong pronoun are separated by an island. The sentences in (12) and (13) contrast minimally with those in (10) and (11): in (12)–(13) a dislocated quantificational antecedent replaces the dislocated DP in (10)–(11). (12) is unacceptable as it involves a strong pronoun subjacently far away from its quantificational antecedent. (13) is fine as the strong pronoun lies within an island.

(12) *No island*

*kəll   muttahame ʕrəfto   ʔənno *hiyye* nħabasit
each suspect.SF   know.2P that   she   imprisoned.3SF
'Each suspect, you know that she was imprisoned.'

(13) a. *Adjunct island*

kəll muttahame tfeeʒaʔto   lamma/laʔanno ʕrəfto   ʔənno *hiyye* nħabasit
each suspect.SF surprised.2P when/because   know.2P that   she   imprisoned.3SF
'Each suspect, you were surprised when/because you knew that she was imprisoned.'

b. Wh-*island*

kəll   muttahame badkun taʕrfo   miin bifakkir   ʔənno *hiyye* harabit
each suspect.SF want.2P know.2P who think.3SM that   she   ran.away.3SF
'Each suspect, you want to know who thinks that she ran away.'

   c. *Complex NP island*
     kəll muttahame ʃəfto l-muħaame   yalli byaʕrif   ʔənno *hiyye* harabit
     each suspect.SF saw.2P the-attorney.SM that know.3SM that   she   ran.away.3SF
     'Each suspect, you saw the attorney that knows that she ran away.'

The facts examined so far uncover the following generalization:[5]

(14) *Obviation Requirement (version I)*
     A strong pronoun can resume a quantificational antecedent only when it is separated
     from this quantificational antecedent by an island.

2.3 Epithet Phrases as Resumptives

We now investigate the nature of the Obviation Requirement in (14). The first fact we observe
is that this requirement applies to epithet phrases as well as strong pronouns. Epithet phrases in
LA, like strong pronouns, may function as resumptive elements (see Aoun and Choueiri 2000),
as illustrated in (15)–(16).[6]

(15) *No island*
     ha-l-muttahame   ʕrəfto   ʔənno *ha-l-maʒduube* nħabasit
     this-the-suspect.SF know.2P that   this-the-idiot.SF imprisoned.3SF
     'This suspect, you know that this idiot was imprisoned.'

(16) a. *Adjunct island*
      ha-l-muttahame tfeeʒaʔto   lamma/laʔanno ʕrəfto   ʔənno *ha-l-maʒduube*
      this-the-suspect.SF surprised.2P when/because know.2P that   this-the-idiot.SF
      nħabasit
      imprisoned.3SF
      'This suspect, you were surprised when/because you knew that this idiot was impris-
      oned.'

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   [5] Special restrictions on the distribution and interpretation of pronouns related to an antecedent in an Ā-position or
to quantificational antecedents are discussed in Aoun and Li 1990, Authier and Reed 1997, Chao and Sells 1983, Doron
1982, Eid 1983, Hoji 1991, McCloskey 1990, Montalbetti 1984, Saito and Hoji 1983, Sells 1984, and Shlonsky 1992.
   [6] The status of epithet phrases in resumptive constructions is also discussed in Demirdache 1991, Engdahl 1986,
McCloskey 1990, Safir 1999, and Shlonsky 1992.
   Epithet phrases and strong pronouns differ in their distribution: epithet phrases in LA are distinguished from strong
pronouns in that they are subject to Principle C of the binding theory (see Hornstein and Weinberg 1990, Lasnik 1991).

(i) a. **naadia ʔaalit   ʔənno ha-l-maʒduube* saχanit
    Nadia said.3SF that   this-the-idiot.SF was.sick.3SF
    'Nadia said that this idiot was sick.'
  b. *naadia ʔaalit   ʔənno hiyye* saχanit
    Nadia said.3SF that   she   was.sick.3SF
    'Nadia said that she was sick.'

An account for the ungrammaticality of (ia) in terms of (anti)logophoricity is given in Dubinsky and Hamilton 1998.

   b. Wh-*island*

      ha-l-muttahame badkun taʕrfo miin bifakkir ʔənno *ha-l-maʒduube*
      this-the-suspect.SF want.2P know.2P who think.3SM that this-the-idiot.SF
      harabit
      ran.away.3SF
      'This suspect, you want to know who thinks that this idiot ran away.'

   c. *Complex NP island*

      ha-l-muttahame ʃəfto l-muħaame yalli byaʕrif ʔənno *ha-l-maʒduube*
      this-the-suspect.SF saw.2P the-attorney.SM that know.3SM that this-the-idiot.SF
      harabit
      ran.away.3SF
      'This suspect, you saw the attorney that knows that this idiot ran away.'

As resumptive elements, epithet phrases can be related to quantificational antecedents only when they are separated from these quantificational antecedents by an island. This is reflected in the acceptability of the examples in (18) and the unacceptability of (17).[7] (17), which involves a quantificational antecedent for the epithet phrase, contrasts with (15). In the former the epithet is subjacently far away from a quantificational antecedent. It is *not* separated from its quantificational antecedent by an island. The sentences in (18) parallel those in (16).

(17) *No island*

    *kəll muttahame ʕrəfto ʔənno *ha-l-maʒduube* nħabasit
    each suspect.SF know.2P that this-the-idiot.SF imprisoned.3SF
    'Each suspect, you know that this idiot was imprisoned.'

(18) a. *Adjunct island*

      kəll muttahame tfeeʒaʔto lamma/laʔanno ʕrəfto ʔənno *ha-l-maʒduube*
      each suspect.SF surprised.2P when/because know.2P that this-the-idiot.SF
      nħabasit
      imprisoned.3SF
      'Each suspect, you were surprised when/because you knew that this idiot was imprisoned.'

   b. Wh-*island*

      kəll muttahame badkun taʕrfo miin bifakkir ʔənno *ha-l-maʒduube*
      each suspect.SF want.2P know.2P who think.3SM that this-the-idiot.SF
      harabit
      ran.away.3SF
      'Each suspect, you want to know who thinks that this idiot ran away.'

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[7] The contrast between (17)–(18) on the one hand and (15)–(16) on the other mirrors the contrast found with strong pronouns between (10)–(11) and (12)–(13).

c. *Complex NP island*
   kəll muttahame ʃəfto l-muħaame   yalli byaʕrif ʔənno *ha-l-maʒduube*
   each suspect.SF saw.2P the-attorney.SM that know.3SM that   this-the-idiot.SF
   harabit
   ran.away.3SF
   'Each suspect, you saw the attorney that knows that this idiot ran away.'

In light of those facts, the Obviation Requirement in (14) should be generalized to cover both strong pronouns and epithet phrases.

(19) *Obviation Requirement (version II)*
     Strong pronouns and epithet phrases can resume a quantificational antecedent only when they are separated from this quantificational antecedent by an island.

In what follows we aim to account for the generalization in (19).[8] As a first step we outline the similarities between strong pronouns and epithet phrases.

3 The Structure of Strong Pronouns and Epithets

The data discussed so far show a similarity between the distribution of strong pronouns and epithets used as resumptive expressions. Strong pronouns and epithets also share similarities with respect to their morphological makeup.[9]

Only epithet phrases that occur with the pronominal element *ha-* 'this/that' may be used as resumptive elements (see Aoun and Choueiri 2000): (20) contrasts with (15). Note the absence of *ha-* on the resumptive epithet in (20).

(20) *No island*
     *ha-l-muttahame ʕrəfto   ʔənno *l-maʒduube* nħabasit
      this-the-suspect.SF know.2P that   the-idiot.SF imprisoned.3SF
      'This suspect, you know that the idiot was imprisoned.'

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[8] We have illustrated this generalization using clitic-left-dislocated constructions. We will continue to do so in the interest of building a complete and consistent paradigm. However, the generalization in (19) is at work in other Ā-constructions—for example, in questions. For further details concerning the distribution of strong pronouns and epithet phrases in other Ā-constructions, see Aoun and Choueiri 2000 and Choueiri 2000.

[9] And with respect to their syntactic distribution. Thus, epithets as well as strong pronouns can function as bound variables (see Higginbotham 1992, Hornstein and Weinberg 1990, Lasnik and Stowell 1991).

(i) a. l-mʕallme   ma baʕatit *wala walad* ʕənd l-mudiira   ʔabl ma tnabbih *ha-l-maʒduub* ʕan
       the-teacher.SF NEG sent.3SF no boy   to   the-principal.SF before warn.3SF this-the-idiot.SM about
       l-ʔaṣaaṣ
       the-punishment
       'The teacher didn't send any boy to the principal before warning this idiot about the punishment.'
    b. l-mʕallme   ma baʕatit *wala walad* ʕənd l-mudiira   ʔabl ma *huwwe* yikʃuf   ʃu ʕimil
       the-teacher.SF NEG sent.3SF no boy   to   the-principal.SF before he   uncover.3SM what did.3SM
       'The teacher didn't send any boy to the principal before he uncovered what he did.'

The pronominal morpheme *ha-,* which occurs with epithet phrases used as resumptive elements, is to be equated with the one found in the third person strong pronoun paradigm.

(21) Third person strong pronouns

		Third person morpheme	ϕ-morpheme
Singular	Feminine	h-	iyye
	Masculine	h-	uwwe
Plural		h-	ənne

Strong pronouns can be factored into two components: the *h-,* a third person pronominal morpheme, and a coda, which provides the ϕ-features. Similarly, the morpheme *ha-* that appears with epithet phrases is a third person pronominal morpheme. Like the morpheme *h-, ha-* lacks number and gender specifications; its number and gender features are provided by the epithet.

(22) a. ha-l-kteeb
       3-the-book.SM
   b. ha-l-bineeye
       3-the-building.SF
   c. ha-l-wleed
       3-the-children.P

The following representations capture the (morphological) similarity between strong pronouns and the epithet phrases occurring with the pronominal *ha-*.

(23) a. [$_{DP}$ *ha-* D^0 [$_{NP}$ epithet]]
   b. [$_{DP}$ *h-* [$_D$ ϕ-morpheme]]

That is, both strong pronouns and epithet phrases occurring with the pronominal morpheme *ha-* 'this/that' are full DPs. The pronominal morpheme *h(a)-* occupies the specifier position of that DP. The number and gender features are provided by the epithet itself, which occupies the complement position of the DP or by a ϕ-morpheme realized on the D head.[10]

4 Analysis

So far we have examined the similarities between strong pronouns and epithet phrases in terms of both their syntactic distribution and their structural representation. The generalization in (19), repeated here, captures the distribution of strong pronouns and epithet phrases in resumptive constructions.

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[10] The ϕ-morpheme in (23) may alternatively be generated in Num(ber) P(hrase) or as an NP and then raised to D (see Benmamoun 2000, Ritter 1991).

(19) *Obviation Requirement (version II)*
    Strong pronouns and epithet phrases can resume a quantificational antecedent only
    when they are separated from this quantificational antecedent by an island.

We have traced the similar behavior of strong pronouns and epithet phrases to the occurrence
of the third person pronoun morpheme *ha-* with epithet phrases in resumptive constructions. Why
is it, then, that strong pronouns and epithet phrases resume a quantificational antecedent only in
island contexts? In the remainder of the discussion we develop an answer to this question. Specifi-
cally, we shall argue for the following analysis:

(24) a. There are two kinds of resumptive constructions: *apparent resumptive constructions*
        and *true resumptive constructions.*
    b. In apparent resumptive constructions the relation between the antecedent and the
        resumptive expression is mediated by movement. In true resumptive constructions
        it is not.
    c. True resumption is a last resort strategy in the sense that it is preferable to relate an
        antecedent with a resumptive expression via movement if possible; that is, apparent
        resumption is more economical than true resumption.
    d. In apparent resumptive constructions, which are generated by movement, the re-
        sumptive strong pronoun or epithet phrase is in fact an appositive modifier adjoined
        to a copy of the Ā-antecedent in the resumption site.

4.1 Movement in Resumptive Constructions

As we have shown, resumptive constructions involving strong pronouns and epithet phrases may
violate island constraints (and in fact, must do so when the antecedent of the resumptive element
is quantificational). This fact has generally been taken as an indication that resumptive construc-
tions do not involve movement (see Ross 1967). Using reconstruction as a diagnostic for move-
ment, we will now argue that movement distinguishes two kinds of resumptive elements: apparent
resumptives and true resumptives. Movement is involved in the generation of apparent resumptive
constructions, but not true resumptive constructions. In the latter case resumptive elements are
separated from their antecedents by islands.

4.1.1 Reconstruction and Bound Variable Anaphora   First consider the paradigm in (25) involv-
ing bound pronouns. These cases illustrate instances in which a pronoun interpreted as a bound
variable fails to be c-commanded by its quantificational antecedent in overt syntax. This suggests
that the relevant pronoun is c-commanded by its quantificational antecedent at LF, by reconstruc-
tion.

(25) a. *təlmiiz-[a]*ᵢ *l-kəsleen* ma baddna nχabbir [wala mʕallme]ᵢ ʔənno *ha-l-maʒduub*
        student-her the-bad NEG want.1P tell.1P no teacher that 3-the-idiot.SM
        zaʕbar   *b-l-faħṣ*
        cheated.3SM in-the-exam
        'Her bad student, we don't want to tell any teacher that this idiot cheated on the
        exam.'

b. *təlmiiz-[a]*ᵢ *l-kəsleen* ma baddna nχabbir [wala mʕallme]ᵢ ʔənno *huwwe*
   student-her the-bad NEG want.1P tell.1P   no   teacher   that   he
   zaʕbar   b-l-faħṣ
   cheated.3SM in-the-exam
   'Her bad student, we don't want to tell any teacher that he cheated on the exam.'

In (25a–b) the pronoun within the clitic-left-dislocated DP can be interpreted as bound by the negative QP *wala mʕallme* 'no teacher'. If bound pronouns must be c-commanded at LF by the elements that bind them (see Chomsky 1976, Higginbotham 1980), the bound reading in (25a–b) obtains under the assumption that the fronted phrases reconstruct below the negative QP. If reconstruction is understood as a property of chains created by movement (see Chomsky 1993), these data suggest that the generation of the sentences in (25a–b) involves movement of the dislocated phrases and that they have the LF representation in (26) in which a copy of the antecedent occurs in the movement site.

(26) [$_{Antecedent}$ . . . pro$_j$ . . .]$_i$ . . . QP$_j$ . . . [$_{DP}$ . . . pro$_j$ . . .]$_i$ - strong pronoun/epithet phrase

If this reasoning is sound, we expect pronoun binding to be unavailable in case the antecedent relates to a resumptive expression across an intervening island. In such cases movement is not licit. Reconstruction, being a function of movement, should not be available either. As a result, the pronoun will not be bound by its quantificational antecedent at LF, and its bound variable reading will be unavailable. This is illustrated in (27). Observe that in each set of cases the resumptive expression is inside an island and its antecedent, the expression containing the (potentially bindable) pronoun, is outside the island. The failure of the clitic-left-dislocated DP to reconstruct into the position occupied by the resumptive expression blocks binding of the pronoun. This accounts for the pronouns' lack of a bound variable reading in these examples.[11]

(27) *Adjunct islands*
   a. *təlmiiz-[a]*ᵢ *l-kəsleen* ma ħkiina   maʕ [wala mʕallme]ᵢ ʔabl-ma *ha-l-maʒduub*
      student-her the-bad NEG talked.1P with no   teacher   before 3-the-idiot.SM
      yuuṣal
      arrive.3SM
      'Her bad student, we didn't talk to any teacher before this idiot arrived.'
   b. *təlmiiz-[a]*ᵢ *l-kəsleen* ma ħkiina   maʕ [wala mʕallme]ᵢ ʔabl-ma *huwwe*
      student-her the-bad NEG talked.1P with no   teacher   before he
      yuuṣal
      arrive.3SM
      'Her bad student, we didn't talk to any teacher before he arrived.'

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[11] The minimal contrast between the sentences in (28)–(29) and those in (25) also indicates that, even if the LF position of the negative quantifier is higher than its overt position (as a result of QR), it cannot be responsible for the availability of the bound variable reading in (25). Otherwise, we would predict that this reading would also be available in (28)–(29), contrary to fact.

(28) Wh-*islands*

    a. *təlmiiz-[*a*]$_i$ *l-kəsleen* ma badkun tχabbro [wala mʕallme]$_i$ maʕ miin
       student-her the-bad NEG want.2P tell.2P no   teacher   with who
       ha-l-maʒduub zaʕbar   b-l-faħs
       3-the-idiot.SM cheated.3SM in-the-exam
       'Her bad student, you don't want to tell any teacher with whom this idiot cheated
       on the exam.'

    b. *təlmiiz-[*a*]$_i$ *l-kəsleen* ma badkun tχabbro [wala mʕallme]$_i$ maʕ miin *huwwe*
       student-her the-bad NEG want.2P tell.2P no   teacher   with who he
       zaʕbar   b-l-faħs
       cheated.3SM in-the-exam
       'Her bad student, you don't want to tell any teacher with whom he cheated on the
       exam.'

(29) *Complex NP islands*

    a. *təlmiiz-[*a*]$_i$ *l-kəsleen* ma badkun tχabbro [wala mʕallme]$_i$ ʕan   l-bənt
       student-her the-bad NEG want.2P tell.2P no   teacher   about the-girl
       yalli *ha-l-maʒduub* zaʕbar   maʕ-a   b-l-faħs
       that 3-the-idiot.SM cheated.3SM with-her in-the-exam
       'Her bad student, you don't want to tell any teacher about the girl with whom this
       idiot cheated on the exam.'

    b. *təlmiiz-[*a*]$_i$ *l-kəsleen* ma badkun tχabbro [wala mʕallme]$_i$ ʕan   l-bənt
       student-her the-bad NEG want.2P tell.2P no   teacher   about the-girl
       yalli *huwwe* zaʕbar   maʕ-a   b-l-faħs
       that he   cheated.3SM with-her in-the-exam
       'Her bad student, you don't want to tell any teacher about the girl with whom he
       cheated on the exam.'

The absence of reconstruction in these contexts comes as no surprise: an element generated within
an island cannot be extracted out of this island (Ross 1967, Chomsky 1986). Since we take
reconstruction effects to be the consequence of movement, we expect them to be unavailable
here. As a result, the negative QP in (27)–(29) will never be in a position to c-command the
pronoun contained within the clitic-left-dislocated DP. The sentences in (27)–(29) can be given
the representation in (30). Note that there is no copy of the antecedent in the position of the
resumptive expression, in contrast with (26).

(30) *[$_{\text{Antecedent}}$ . . . pro$_j$ . . .] . . . QP$_j$ . . . [$_{\text{Island}}$ . . . strong pronoun/epithet phrase . . .]

4.1.2 Principle C Effects   In the previous section we suggested that reconstruction—which we
have assumed to be a diagnostic for movement—may be involved in resumptive constructions
with strong pronouns and epithet phrases. In such cases the resumptive element and its antecedent
are not separated by an island. This proposal can be corroborated by the fact that resumptive
constructions that show reconstruction effects for scope, show parallel effects involving Principle
C.

(31) a. ʕaleemit karim fakkarto   ʔənno χabbarna kəll ʔəsteez ʔənno leezim titɣayyar
       grade.SF Karim thought.2P that   told.1P   each teacher that   should change.3SF
       'Karim's grade, you thought that we told each teacher that it should be changed.'

    b. ʕaleemit *karim* fakkarto   ʔənno χabbar kəll ʔəsteez ʔənno leezim titɣayyar
       grade.SF Karim thought.2P that   told.3SM each teacher that   should change.3SF
       'Karim's grade, you thought that he told each teacher that it should be changed.'

Consider (31a). This sentence is ambiguous between a reading where there is one grade that Karim has which is such that we told each teacher that it should be changed (nondistributive reading) and a reading where for each teacher, there is a (different) grade that Karim has which is such that we told the teacher that it should be changed (distributive reading). The LF operation of QR is a local operation (see Aoun and Hornstein 1985, Hornstein 1995, May 1985). For the distributive reading to obtain in (31a), the clitic-left-dislocated phrase *ʕaleemit karim* 'Karim's grade' has to reconstruct to a position c-commanded by the QP *kəll ʔəsteez* 'each teacher'.[12] The resumptive element—the strong pronoun or the epithet phrase—signals the position to which the clitic-left-dislocated phrase reconstructs (see Aoun and Benmamoun 1998). After reconstruction the DP *ʕaleemit karim* 'Karim's grade' is in a position c-commanded both by the QP *kəll ʔəsteez* 'each teacher' and by the pronominal subject of the verb 'tell'. Forcing the scope reconstruction

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[12] The QP *kəll ʔəsteez* 'each teacher' in (31a–b) cannot take scope over the clitic-left-dislocated DP *ʕaleemit karim* 'Karim's grade' via the LF operation of QR. First, if it could, we would expect the QP, which occurs in object position, to be able to bind a pronoun contained within the subject. As (i) shows, this is not the case.

  (i) *bənt-[o]ᵢ   fakkarit   ʔənno χabbarna [kəll ʔəsteez]ᵢ ʔənno leezim tənʒaħ
      daughter-his thought.3SF that told.1P   each teacher that   should pass.3SF
      'His daughter thought that we told each teacher that she should pass.'

Second, as was the case with the negative quantifier *wala* in (27)–(29), a universal QP cannot bind a pronoun within a clitic-left-dislocated DP when this clitic-left-dislocated element is related to a resumptive element inside an island.

  (ii) a. *Adjunct islands*
          *təlmiiz-[a]ᵢ l-kəsleen fakkarto   ʔənno ħkiina   maʕ [kəll mʕallme]ᵢ ʔabl ma *ha-l-maʒduub/huwwe*
          student-her the-bad thought.2P that talked.1P with each teacher   before 3-the-idiot.SM/he
          yuuṣal
          arrive.3SM
          'Her bad student, you thought that we talked to each teacher before this idiot/he arrived.'
      b. Wh-*islands*
          *təlmiiz-[a]ᵢ l-kəsleen fakkarto   ʔənno baddna nχabbir [kəll mʕallme]ᵢ maʕ miin *ha-l-maʒduub/huwwe*
          student-her the-bad thought.2P that want.1P tell.1P each teacher   with who 3-the-idiot.SM/he
          zaʕbar   b-l-faħṣ
          cheated.3SM in-the-exam
          'Her bad student, you thought that we want to tell each teacher with whom this idiot/he cheated on the exam.'
      c. *Complex NP islands*
          *təlmiiz-[a]ᵢ l-kəsleen fakkarto   ʔənno baddna nχabbir [kəll mʕallme]ᵢ ʕan l-bənt yalli
          student-her the-bad thought.2P that want.1P tell.1P each teacher   about the-girl that
          ha-l-maʒduub/huwwe zaʕbar   maʕ-a b-l-faħṣ
          3-the-idiot.SM/he   cheated.3SM with-her in-the-exam
          'Her bad student, you thought that we want to tell each teacher about the girl with whom this idiot/he cheated on the exam.'

These results are unexpected if the universal QP were to undergo long QR.

reading results in a Principle C effect that prevents the null subject of 'tell' from coreferring with *karim* in (31b). Hence, the sentence is unacceptable under the coreference reading.[13]

In the previous section we showed that reconstruction is available only when the resumptive elements are not separated from their antecedents by an island. The selective presence of reconstruction effects in sentences involving resumption led Aoun and Benmamoun (1998) to argue that constructions involving resumptive pronouns (32) do not form a uniform class. They actually correspond to two different representations: one where the resumptive element is related to a nominal phrase that undergoes movement (33a), which we have dubbed *apparent resumptive constructions,* and another where the resumptive element is related to a nominal phrase directly generated in sentence-initial position (33b),[14] which we have dubbed *true resumptive constructions.*

(32) antecedent_i ... $\text{resumptive element}_i$

(33) a. *Apparent resumption*
antecedent_i ... copy_i-[strong pronoun/epithet phrase]

   b. *True resumption*
antecedent_i ... [strong pronoun/epithet phrase]$_i$

(34) antecedent_i ... copy_i

Both strategies represented in (33), Aoun and Benmamoun suggest, are available for the generation of resumptive constructions. Cases of apparent resumption (33a) parallel the standard gap strategy (34), where movement is also available. In (33a) the Ā-antecedent is coindexed with its copy in the resumption site. In true resumption cases (33b), the antecedent, directly generated in sentence-

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[13] Note that the contrast between (31a) and (31b) with respect to Principle C effects shows that it is after reconstruction of the clitic-left-dislocated element that the distributive reading obtains; it is not enough for the universal quantifier to c-command the resumptive element related to the clitic-left-dislocated phrase to generate a distributive reading. This correlation between the availability of reconstruction and Principle C effects is also apparent in cases of true resumption. In contexts where resumptive elements are separated from their antecedent by an island, no reconstruction takes place and hence Principle C effects are totally absent.

(i) a. *Adjunct island*
ʕaleemit *karim* zəʕlit   l-mudiira   laʔanno χabbar kəll ʔəsteez ʔənno leezim titɣayyar
grade.SF Karim upset.3SF the-principal.SF because told.3SM each teacher that   should change.3SF
'Karim's grade, the principal was upset because he told each teacher that it should be changed.'

   b. *Wh-island*
ʕaleemit *karim* badda   taʕrif   l-mudiira   lee χabbar kəll ʔəsteez ʔənno leezim titɣayyar
grade.SF Karim want.3SF know.3SF the-principal.SF why told.3SM each teacher that   should change.3SF
'Karim's grade, the principal wants to know why he told each teacher that it should be changed.'

   c. *Complex NP island*
ʕaleemit *karim* ħkiito   maʕ l-mudiira   yalli btaʕrif ʔənno χabbar kəll ʔəsteez ʔənno leezim
grade.SF Karim talked.2P with the-principal.SF that know.3SF that   told.3SM each teacher that   should
titɣayyar
change.3SF
'Karim's grade, you talked with the principal who knows that he told each teacher that it should be changed.'

In all the sentences in (i), coreference between *karim* and the (null) pronoun subject of 'tell', which occurs inside an island, is possible.

[14] Different approaches to the interaction of movement and resumption are to be found in Choueiri 2000, Demirdache 1991, Engdahl 1986, Fox 1994, Georgopoulos 1985, Pesetsky 1998, Safir 1999, and Shlonsky 1992 (see also section 7).

initial position, is coindexed with the resumptive element—the epithet phrase or the strong pronoun.

4.2 Strong Pronouns and Epithets as Appositives

Recall now the Obviation Requirement that constrains the distribution of strong pronouns and epithet phrases.

(19) *Obviation Requirement (version II)*
     Strong pronouns and epithet phrases can resume a quantificational antecedent only when they are separated from this quantificational antecedent by an island.

In light of the previous discussion concerning the selective availability of movement for the generation of resumptive constructions, (19) can be reformulated as (35).

(35) *Obviation Requirement (final version)*
     Strong pronouns and epithet phrases can resume a quantificational antecedent only in contexts where movement is prohibited.

That is, a strong pronoun or an epithet phrase can resume a quantificational antecedent only if that strong pronoun or that epithet phrase is a true resumptive element.

When a quantificational antecedent is involved, the movement context is to be represented as in (36a). The sentence-initial operator in (36a) is a full copy of the operator adjacent to the strong pronoun or the epithet phrase. The structure resulting from merging the operator and the strong pronoun or the epithet phrase (i.e., two XPs) is an adjunction structure, as represented in (36b–c).[15]

(36) *Apparent resumption*
     a. operator$_i$ . . . operator$_i$-[strong pronoun/epithet phrase]
     b. [$_{DP_3}$[$_{DP_2}$ operator]$_i$ [$_{DP_1}$ *h*- [$_{NP}$ ϕ-features]]]
     c. [$_{DP_3}$[$_{DP_2}$ operator]$_i$ [$_{DP_1}$ *ha*- [$_{NP}$ epithet phrase]]]

In (36b–c) we suggest that the strong pronoun and the epithet phrase in DP$_1$ are to be interpreted as appositives (see Kim 1997), not as restrictive modifiers. This is illustrated in the glosses of (37a–b).

(37) a. *saami ha-l-maʒduub* nəse   l-mawʕad
        Sami 3-the-idiot.sᴍ forgot.3sᴍ the-appointment
        'Sami, this idiot, forgot the appointment.'
     b. *saami huwwe* nəse   l-mawʕad
        Sami he   forgot.3sᴍ the-appointment
        'Sami, he, forgot the appointment.'

---

[15] This analysis suggests that DPs in LA have only one specifier position. See Kayne 1994 for a similar suggestion about the absence of DP recursion in English.

Assuming that apparent resumptive constructions involve appositive structures allows us to reduce the unacceptability of sentences such as (38a) to whatever accounts for the unacceptability of (38b).

(38) a. *_kəll walad_ fakkarto ʔənno _huwwe/ha-l-maʒduub_ harab   mn l-madrase
          each boy   thought.2P that   he/3-the-idiot.SM   ran.away.3SM from the-school
          'Each boy, you thought that he/this idiot ran away from school.'

     b. *fakkarto   ʔənno _kəll walad huwwe/ha-l-maʒduub_ harab   mn l-madrase
          thought-2P that   each boy he/3-the-idiot.SM   ran.away.3SM from the-school
          'You thought that each boy, he/this idiot, ran away from school.'

Appositive relative clauses have been analyzed by Emonds (1979) as main clauses. We suggest extending this analysis to all appositive modifiers: the appositive DPs in (37a–b) are to be interpreted as in (39a–b).

(39) a. _Sami_ forgot the appointment and _he_ is _the idiot._
     b. _Sami_ forgot the appointment and _he_ is _the one._

In (39a–b) the minimal DP (i.e., DP_1 in (36)) containing the strong pronoun or the epithet phrase is interpreted as a small clause consisting of a(n) (open) predicate (namely, the NP containing the epithet phrase or the φ-morpheme) and a subject (namely, the specifier _h(a)-_).

We are now in a position to account for the ungrammaticality of the sentences in (38a), (12), and (17) (repeated here).

(12) *_kəll muttahame_ ʕrəfto   ʔənno _hiyye_ nħabasit
       each suspect.SF know.2P that she   imprisoned.3SF
       'Each suspect, you know that she was imprisoned.'

(17) *_kəll muttahame_ ʕrəfto   ʔənno _ha-l-maʒduube_ nħabasit
       each suspect.SF know.2P that 3-the-idiot.SF   imprisoned.3SF
       'Each suspect, you know that this idiot was imprisoned.'

In all of these sentences the antecedent of the apparent resumptive gets to clause-initial position by movement. Thus, the sentence-initial operators in (38a), (12), and (17) bind variables to which the apparent resumptive element is adjoined. As a result, in these sentences the apparent resumptive element is interpreted appositively. This leads, for example, to an interpretation like (40a) for a sentence like (38a), and an interpretation like (40b) for sentences like (12) and (17).

(40) a. _Each boy_ you thought x ran away from school and _he_ is _the one/the idiot._
     b. _Each suspect_ you thought x was imprisoned and _she_ is _the one/the idiot._

In (40a–b) the operators and the related pronouns occur in separate conjoined clauses. C-command between the operator and the pronoun does not obtain and binding fails (see Chomsky 1976, Higginbotham 1980). This accounts for the unacceptability of (38a). An identical account explains the unacceptability of (12) and (17), as interpreted in (40b).

Our proposal then is to account for the unacceptability of cases of apparent resumption with

the following generalization: an appositive DP cannot modify a strong QP like *kəll walad* 'each boy'. Another example of this generalization at work is the unacceptability of (41a), which is unacceptable for the same reason that (41b) is.[16]

(41) a. **wala muttahame ʕrəfto   ʔənno hiyye/ha-l-maʒduube nħabasit*
     no   suspect.SF know.2P that   she/3-the-idiot.SF   imprisoned.3SF
     'No suspect, you know that she/this idiot was imprisoned.'

  b. **ʕrəfto   ʔənno wala muttahame hiyye/ha-l-maʒduube nħabasit*
     know.2P that   no   suspect.SF she/3-the-idiot.SF   imprisoned.3SF
     'You know that no suspect, she/this idiot was imprisoned.'

One further point: We are proposing that when movement is available, strong pronouns and epithet phrases are to be analyzed as appositive modifiers. Like other appositives, they are interpreted as main clauses and cannot be bound by quantifiers occurring outside this clause. However, if this is correct, why is it that QPs can be related to strong pronouns or resumptive epithets when movement is not available? In nonmovement contexts, such as (13) or (18) (repeated here), we claim that there is no apposition and that binding of the true resumptive element is licit.

(13) a. *Adjunct island*
    kəll muttahame tfeeʒaʔto   lamma/laʔanno ʕrəfto   ʔənno hiyye nħabasit
    each suspect.SF surprised.2P when/because know.2P that   she imprisoned.3SF
    'Each suspect, you were surprised when/because you knew that she was imprisoned.'

  b. Wh-*island*
    kəll muttahame badkun taʕrfo   miin bifakkir ʔənno hiyye harabit
    each suspect.SF want.2P know.2P who think.3SM that   she ran.away.3SF
    'Each suspect, you want to know who thinks that she ran away.'

---

[16] Two remarks are in order here.

First, for completeness, (i) is acceptable since the strong pronoun and the epithet phrase are separated from their quantificational antecedent by an island.

  (i) *wala muttahame nbasaṭṭo   laʔanno hiyye/ha-l-maʒduube nħabasit*
    no   suspect.SF were.happy.2P because she/3-the-idiot.SF   imprisoned.3SF
    'No suspect, you were happy because she/this idiot was imprisoned.'

Second, observe that in (ii) the phrase *kəll l-muttahamin* 'all the suspects' can be modified by a plural strong pronoun or an epithet phrase.

  (ii) *kəll   l-muttahamin hənne/ha-l-mʒeedib nħabaso*
    every/all the-suspects they/3-the-idiots   imprisoned.3P
    'All the suspects, they/these idiots were imprisoned.'

We thus expect the strong pronoun or the epithet phrase to be able to resume the phrase *kəll l-muttahamin* 'all the suspects' even when the antecedent and the resumptive element are not separated by an island. This indeed is the case, as illustrated in (iiia). (iiia) is acceptable because the strong pronoun is interpreted not as a bound pronoun, but as an E-type pronoun (see Evans 1980). This is illustrated in (iiib).

  (iii) a. *kəll   l-muttahamin ʕrəfto   ʔənno hənne/ha-l-mʒeedib nħabaso*
      every/all the-suspects know.2P that   they/3-the-idiots   imprisoned.3P
      'All the suspects, you know that they/these idiots were imprisoned.'
    b. *All the suspects* you know that x were imprisoned and *they* are *the ones/the idiots.*

    c. *Complex NP island*

      kəll muttahame ʃəfto l-muħaame   yalli byaʕrif   ʔənno *hiyye* harabit

      each suspect.SF saw.2P the-attorney.SM that know.3SM that   she   ran.away.3SF

      'Each suspect, you saw the attorney that knows that she ran away.'

(18) a. *Adjunct island*

      kəll muttahame tfeeʒaʔto   lamma/laʔanno ʕrəfto   ʔənno *ha-l-maʒduube*

      each suspect.SF surprised.2P when/because know.2P that   3-the-idiot.SF

      nħabasit

      imprisoned.3SF

      'Each suspect, you were surprised when/because you knew that this idiot was imprisoned.'

    b. Wh-*island*

      kəll muttahame badkun taʕrfo   miin bifakkir   ʔənno *ha-l-maʒduube*

      each suspect.SF want.2P know.2P   who think.3SM that   3-the-idiot.SF

      harabit

      ran.away.3SF

      'Each suspect, you want to know who thinks that this idiot ran away.'

    c. *Complex NP island*

      kəll muttahame ʃəfto l-muħaame   yalli byaʕrif   ʔənno *ha-l-maʒduube*

      each suspect.SF saw.2P the-attorney.SM that know.3SM that   3-the-idiot.SF

      harabit

      ran.away.3SF

      'Each suspect, you saw the attorney that knows that this idiot ran away.'

Following Aoun and Benmamoun's (1998) proposal outlined in section 4.1.2, we can give the sentences in (13) and (18) the representation in (42), where the true resumptive element falls in the c-command domain of the operator, which allows binding.

(42) operator$_i$ . . . [$_{DP}$ strong pronoun/epithet phrase]$_i$

    To sum up, in order to rule out sentences like (12) and (17) we have suggested that these sentences are generated by movement. Namely, the apparent resumptive element in those sentences is in fact an appositive modifier and the argument position is occupied by a copy of the fronted operator. The unacceptability of those sentences was the result of the operator's failure to bind the appositive pronominal element. As the reader may have noted, such an analysis crucially relies on the assumption that the only derivation available for (12) and (17) is one that involves an instance of the Move operation. That is, true resumption is unavailable when Move can apply.[17] We shall now discuss the implications of this proposal.

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    [17] Our analysis extends to cases like (10) and (15) (repeated here as (ia–b)) where the strong pronoun or the epithet phrase is related to a nonquantificational antecedent.

(i) a. *ha-l-muttahame* ʕrəfto   ʔənno *hiyye* nħabasit

    3-the-suspect.SF know.2P that   she imprisoned.3SF

    'This suspect, you know that she was imprisoned.'

5 Strong Pronouns as Bound Variables

Our proposal concerning the derivation of apparent resumptives via movement will distinguish the behavior of strong pronouns so used from their use as bound variables. In the latter case strong pronouns are licensed even when not separated from their quantificational antecedents by an island. This is illustrated in (43).

(43) *No island*
    kəll   muttahame χabbarit l-ʔaaḍe   ʔənno *hiyye raħ təhrub*
    each suspect.SF told.3SF the-judge that   she   FUT run.away.3SF
    'Each suspect told the judge that she will run away.'

In (43) the quantifier that binds the strong pronoun is in an A-position. (43) contrasts with (12) (repeated here), in which the strong pronoun functions as an apparent resumptive expression.

(12) *No island*
    *kəll   muttahame ʕrəfto   ʔənno *hiyye nħabasit*
    each suspect.SF know.2P that   she imprisoned.3SF
    'Each suspect, you know that she was imprisoned.'

If we assume, as is standard, that movement in (43) from the position of the strong pronoun to the A-position occupied by the quantifier is prohibited, then the relation between the sentence-initial operator and the strong pronoun cannot be the result of movement.[18] The structure of (43) must be something like (44), in which the strong pronoun is directly related to the operator itself (or the variable it binds, if QR is taken to apply; see May 1985, Fox 1999). Crucially, the strong pronoun cannot be an appositive as in cases of apparent resumption.

(44) operator$_i$ . . . [$_{DP}$ strong pronoun]$_i$

In addition to island contexts, the contexts of bound variable readings provide another case where the absence of movement correlates with the possibility for a QP to bind a strong pronoun.[19] This

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    b. *ha-l-muttahame ʕrəfto   ʔənno ha-l-maʒduube nħabasit*
       3-the-suspect.SF know.2P that   3-the-idiot.SF imprisoned.3SF
       'This suspect, you know that this idiot was imprisoned.'

The sentences in (i) have the representation in (ii).

    (ii) [$_{DP}$ antecedent]$_i$ . . . [$_{DP}$[$_{DP}$ copy]$_i$ [$_{DP}$ strong pronoun/epithet phrase]]

They also have the following interpretations:

    (iii) a. *This suspect,* you know x is imprisoned and *she* is *the one.*
       b. *This suspect,* you know x is imprisoned and *she* is *an idiot.*

The acceptability of the sentences in (i) results from the fact that a nonquantificational DP can be related to a pronoun across sentence boundaries.

    [18] In (43) movement from the lower subject position to the matrix subject position is ruled out as a violation of the requirement to check Case features (Chomsky 1995): the subject QP, having checked its Case features in the embedded clause, cannot check the Case feature in the matrix TP.

    [19] This point cannot be made using epithet phrases in LA. The sentence in (i), which involves an epithet phrase

confirms that the statement of the Obviation Requirement should be made in terms of movement, as in (35), and not just in terms of islands, as in (19).[20]

6 Weak Pronouns and Resumption

Unlike strong pronouns and epithet phrases, weak pronouns used as resumptive elements can be related to a quantificational antecedent, whether they occur in an island (46) or not (45). (45) and (46) are the counterparts of (12) and (13), involving weak pronouns instead of strong pronouns.

(45) *No island*
kǝll mǝʒrim   fakkarto   ʔǝnno l-bolisiyye laʔaṭu-*u*
each criminal.SM thought.2P that   the-police.P caught.3P-him
'Each criminal, you thought that the police caught him.'

(46) a. *Adjunct island*
kǝll muttahame tfeeʒaʔto   lamma/laʔanno ħabasuw-*a*
each suspect.SF surprised.2P when/because   imprisoned.3P-her
'Each suspect, you were surprised when/because they imprisoned her.'

---

instead of a strong pronoun (see (43)), is unacceptable in LA. It violates Principle C of the binding theory, which regulates the distribution of epithet phrases in this language (see footnote 6).

(i) *kǝll muttahame χabbarit l-ʔaaḍe   ʔǝnno ha-l-maʒduube raħ tǝhrub
each suspect.SF told.3SF the-judge that   3-the-idiot.SF FUT run.away.3SF
'Each suspect told the judge that this idiot will run away.'

The sentences illustrating that epithet phrases can have a bound variable reading have the epithet phrases occurring inside an (adjunct) island (see footnote 9).

(ii) l-mʕallme   ma baʕatit *wala walad* ʕǝnd l-mudiira   ʔabl ma tnabbih *ha-l-maʒduub* ʕan
the-teacher.SF NEG sent.3SF no   boy to   the-principal.SF before warn.3SF 3-the-idiot.SM about
l-ʔaṣaaṣ
the-punishment
'The teacher didn't send any boy to the principal before warning this idiot about the punishment.'

Alternatively, sentence (iii), which involves no islands and avoids a Principle C violation, does not allow a bound variable reading in LA.

(iii) byikrah ʃaχṣ   mǝn *kǝll ḍayʕa ha-l-mazbale*
hate.3SM person from each village 3-the-dump
'Someone from each village hates this dump.'

In (iii) *ha-l-mazbale* 'this dump' cannot covary with *kǝll ḍayʕa* 'each village'.

[20] In the following sentence, involving an epithet phrase, the bound variable interpretation is also available:

(i) l-mʕallme   ma baʕatit *wala walad* ʕǝnd l-mudiira   ʔabl ma tnabbih *ha-l-maʒduub* ʕan
the-teacher.SF NEG sent.3SF no   boy to   the-principal.SF before warn.3SF 3-the-idiot.SM about
l-ʔaṣaaṣ
the-punishment
'The teacher didn't send any boy to the principal before warning this idiot about the punishment.'

In (i) the quantifier could not have been generated with the epithet phrase within the island and then moved to the object position. As in (43), only the base generation strategy represented in (ii) is possible for (i).

(ii) operator$_i$ . . . [$_{DP}$ epithet phrase]$_i$

b. *Wh-island*

kəll muttahame badkun taʕrfo   miin ħabas-*a*
each suspect.SF want.2P know.2P who imprisoned.3SM-her
'Each suspect, you want to know who imprisoned her.'

c. *Complex NP island*

kəll muttahame btaʕrfo l-muħaame   yalli raħ ydeefiʕ   ʕann-*a*
each suspect.SF know.2P the-attorney.SM that FUT defend.3SM of-her
'Each suspect, you know the attorney that will defend her.'

In all these sentences the weak resumptive pronoun can have, as an antecedent, a QP in sentence-initial position.

In that respect, quantificational antecedents behave like nonquantificational ones, as can be seen in (47)–(48) (which parallel (45)–(46)).

(47) *No island*

ha-l-məʒrim   fakkarto   ʔənno l-bolisiyye laʔaṭu-*u*
3-the-criminal.SM thought.2P that   the-police.P caught.3P-him
'This criminal, you thought that the police caught him.'

(48) a. *Adjunct island*

ha-l-muttahame tfeeʒaʔto   lamma/laʔanno ħabasuw-*a*
3-the-suspect.SF surprised.2P when/because   imprisoned.3P-her
'This suspect, you were surprised when/because they imprisoned her.'

b. *Wh-island*

ha-l-muttahame badkun taʕrfo   miin ħabas-*a*
3-the-suspect.SF want.2P know.2P who imprisoned.3SM-her
'This suspect, you want to know who imprisoned her.'

c. *Complex NP island*

ha-l-muttahame btaʕrfo l-muħaame   yalli raħ ydeefiʕ   ʕann-*a*
3-the-suspect.SF know.2P the-attorney.SM that FUT defend.3SM of-her
'This suspect, you know the attorney that will defend her.'

The distinction between strong pronouns and epithet phrases on the one hand and weak pronouns on the other hand derives from the fact that, within the DP containing them, weak pronouns occupy different positions than strong pronouns. Weak pronouns, unlike strong pronouns, are heads; they are generated in the D position of a DP (as argued in Franco 1991 and Sportiche 1992).

(49) [$_{DP}$[$_D$ weak pronoun]]

Thus, in constructions that appear to involve weak resumptive pronouns, the specifier of the DP headed by a weak pronoun may be occupied by a lexical DP, which later undergoes movement as illustrated in (50a). When movement is not available, the weak pronoun is a true resumptive element and is itself coindexed with the antecedent in sentence-initial position (50b).

(50) a. *Apparent resumption*
           lexical DP_i . . . [$_{DP}$ lexical DP_i [$_D$ weak pronoun]]
      b. *True resumption*
           lexical DP_i . . . [$_D$ weak pronoun]$_i$

The difference between resumptive constructions involving weak pronouns and those involving strong pronouns or epithet phrases derives from the fact that the specifier position of the DP headed by a weak pronoun is available. The merger of a weak pronoun with a full lexical DP results in a structure where the lexical DP occupies the specifier position of the weak pronoun, whereas the merger of a lexical DP with a strong pronoun or an epithet phrase results in an adjunction structure, the latter being the one that underlies apposition. In other words, only strong pronouns and epithet phrases as resumptive elements are interpreted as appositives.[21]

The availability of a structure such as the one in (50a) predicts the availability of reconstruction in resumptive constructions involving a weak pronoun. This prediction is borne out, as illustrated in (51).

(51) a. *təlmiiz-[a]*$_i$ *l-kəsleen* ma baddna nχabbir [wala mʕallme]$_i$ ʔənno l-mudiira
          student-her the-bad NEG want.1P tell.1P no   teacher   that the-principal.SF
          ʃaħaṭət-o   mn l-madrase
          expelled.3SF-him from the-school
          'Her bad student, we don't want to tell any teacher that the principal expelled him
          from school.'
      b. *təlmiiz-[a]*$_i$ *l-kəsleen* ma baddna nχabbir [wala mʕallme]$_i$ ʔənno l-mudiir
          student-her the-bad NEG want.1P tell.1P no   teacher   that the-principal
          baddo   yʔeebl-o   baʕd l-frṣa
          want.3SM meet.3SM-him after the-break
          'Her bad student, we don't want to tell any teacher that the principal wants to meet
          him after the break.'

In (51a–b) the pronoun contained within the clitic-left-dislocated DP can have the bound variable reading, as a result of reconstruction to the resumptive pronoun position. In contrast, when the resumptive pronoun is separated from its antecedent by an island, the bound variable reading is no longer available.

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[21] Alternatively, we might suggest a slight modification of the structure in (50a) along the lines of bare phrase structure (Chomsky 1994). In bare phrase structure terms, the structure in (50a) is one of complementation. That is, merging a nonbranching (pronominal) head with a full lexical DP gives rise to a structure involving the pronominal head taking the DP as complement instead of specifier, as illustrated in (i).

(i) lexical DP_i . . . [$_{DP}$[$_D$ weak pronoun] [$_{DP_i}$ lexical DP_i]]

In section 7 we develop a proposal along the lines of (i).

(52) a. *Adjunct island*

*tǝlmiiz-[a]*ᵢ *l-kǝsleen* ma zǝʕlit   [wala mʕallme]ᵢ laʔanno l-mudiira
student-her the-bad NEG upset.3SF no   teacher   because the-principal.SF

ʃaħaṭǝt-*o*   mn   l-madrase
expelled.3SF-him from the-school

'Her bad student, no teacher was upset because the principal expelled him from
school.'

b. Wh-*island*

*tǝlmiiz-[a]*ᵢ *l-kǝsleen* ma badda   taʕrif   [wala mʕallme]ᵢ lee
student-her the-bad NEG want.3SF know.3SF no   teacher   why

l-mudiira   ʃaħaṭǝt-*o*   mn   l-madrase
the-principal.SF expelled.3SF-him from the-school

'Her bad student, no teacher wants to know why the principal expelled him from
school.'

c. *Complex NP island*

*tǝlmiiz-[a]*ᵢ *l-kǝsleen* ma badkun tχabbro [wala mʕallme]ᵢ ʕan   l-bǝnt yalli
student-her the-bad NEG want.2P tell.2P   no   teacher   about the-girl that

seeʕadǝt-*o*   b-l-faħṣ
helped.3SF-him in-the-exam

'Her bad student, you don't want to tell any teacher about the girl that helped him
on the exam.'

The sentences in (52) have the representation in (50b), where the clitic-left-dislocated DP is base-generated in its surface position, binding a weak resumptive pronoun inside the island. In the absence of movement in island contexts, the unavailability of reconstruction in (52) comes as no surprise. This explains the absence of the reconstructed bound reading in (52).

7 Conclusion: Movement as the Primary Resumptive Strategy

Summarizing the results so far: We have identified two types of constructions, described in (53) and (55), and have argued that they have the properties in (54) and (56), respectively.

(53) Certain constructions that appear to involve resumption by a pronoun or an epithet phrase actually involve movement from a position within the maximal projection containing the pronoun or the epithet phrase *(apparent resumption)*.

(54) a. This movement cannot cross an island boundary.

b. When the apparent resumptive is a strong pronoun or an epithet phrase, the relation between the launching site and the apparent resumptive element is apposition. This excludes certain quantifiers from occurring in the launching site of such constructions.

c. When the apparent resumptive is a weak pronoun, the movement position is the specifier of the weak pronoun. This does not exclude quantifiers.

    d. The hypothesis that movement is involved in apparent resumption contexts is supported by reconstruction effects.

(55) Certain constructions that appear to involve resumption by a pronoun or an epithet phrase actually do involve resumption. No movement takes place from the position of the pronoun or the epithet phrase. An Ā-antecedent binds the resumptive element *(true resumption).*

(56) a. The antecedent-resumptive relation may cross an island boundary.
    b. In fact, it must cross an island boundary.
    c. Quantifiers are not excluded from being the Ā-antecedent of true resumptive elements.

A few remarks are in order concerning the grouping of strong pronouns and epithet phrases with appositional modifiers (54b). This is a natural move in the case of epithets, which clearly appear to modify their antecedents. Thus, (57b) is a good paraphrase of (57a).

(57) a. *saami ha-l-ʔazʕar*   Laila btiftikr-*o*   mariiḍ
       Sami 3-the-delinquent.sm Laila think.3sf-him ill.sm
       'Sami, this delinquent, Laila thinks he is ill.'
    b. *Sami,* Laila thinks *Sami* is ill. *He* is *the delinquent.*

Based on the structural and distributional similarities between strong pronouns and epithet phrases, our proposal extends the relation of apposition to include strong pronouns, where the semantic contribution of the appositive is less evident. Recall that strong pronouns, like epithet phrases, were argued to have a full DP structure, as in (23) (repeated here).

(23) a. $[_{DP}$ *ha-* D^0 $[_{NP}$ epithet$]]$
    b. $[_{DP}$ *h-* $[_D$ φ-morpheme$]]$

It is the structures in (23) that underlie the adjunction structure that obtains when a strong pronoun or an epithet phrase merges with a full lexical DP (see also (36)).

(58) a. $[_{DP_3}[_{DP_2}$ lexical DP$]$ $[_{DP_1}$ *h-* $[_{NP}$ φ-features$]]]$
    b. $[_{DP_3}[_{DP_2}$ lexical DP$]$ $[_{DP_1}$ *ha-* $[_{NP}$ epithet phrase$]]]$

Our use of the appositional structure has two empirical advantages. First, it allows us to account for the reconstruction effects evident in apparent resumptive constructions in LA by adverting to the copy left in situ by movement. The logic of this approach follows the by now familiar approach to reconstruction effects outlined in Chomsky 1993. Second, it allows us to exploit the semantics of apposition to weed out unacceptable cases involving quantifiers. In particular, the prohibition against quantificational binding across sentences prevents quantifiers from cooccurring with appositional phrases, including strong pronouns and epithet phrases.

    The reader may have noted that, so far, we have not provided an explanation for (56b). It is (56b) that underlies the idea that true resumptive elements are last resort expressions, in the sense that relating an antecedent to a resumptive element that it binds is a more costly operation

than relating an antecedent to a copy that it binds. This last resort approach to resumption is hardly novel (see Fox 1994, Kroch 1981, Shlonsky 1992). Nevertheless, it remains unclear how to treat this idea theoretically. The problem is compounded in a minimalist context in which derivational cost is a function of comparing alternative derivations of *identical* lexical arrays/ numerations, whereas our analysis relies on the following kind of last resort assumption: true resumption is possible just in case movement (or apparent resumption) cannot mediate the desired relation. An example will help clarify the intended point.

Consider our analysis of the contrast in (59) (where (59a) repeats (12) and (15), and (59b) repeats (13b) and (16b)).

(59) a. *Apparent resumption*

kəll muttahame ʕrəfto ʔənno hiyye/ha-l-maʒduube nħabasit
each suspect.SF know.2P that she/3-the-idiot.SF imprisoned.3SF
'Each suspect, you know that she/this idiot was imprisoned.'

b. *True resumption*

kəll muttahame badkun taʕrfo miin bifakkir ʔənno hiyye/ha-l-maʒduube
each suspect.SF want.2P know.2P who think.3SM that she/3-the-idiot.SF
harabit
ran.away.3SF
'Each suspect, you want to know who thinks that she/this idiot ran away.'

We accounted for the unacceptability of (59a) by analyzing the strong pronoun *hiyye* 'she' and the epithet phrase *ha-l-maʒduube* 'this idiot' in these sentences as appositional modifiers. Thus, the way that *kəll muttahame* 'each suspect' comes to be related to the apparent resumptive element is by first merging with it, thereby setting up the apposition, and then moving to the higher sentence-initial position. This contrasts with the derivation of (59b), in which *kəll muttahame* 'each suspect' comes to be related to the true resumptive elements not by Move as in (59a) but via a construal process; call it *Bind*.[22] We showed that these two cases of resumption have rather different properties with respect to reconstruction effects and that these differences are accounted for if apparent resumption is actually the result of movement while true resumption is not. What we propose to do in what follows is concentrate on the theoretical backdrop of our analysis.

For our account to function, the grammar cannot freely generate binding structures. For example, the grammar must be prevented from generating an antecedence structure via the construal mechanism Bind for the cases of apparent resumption, as in (59a), yet must be allowed to generate one in the cases of true resumption such as (59b). We attain this end if we require that the relation between the sentence-initial *kəll muttahame* 'each suspect' and the apparent resumptive elements be grammatically established via Move *if it can be.* Only if Move is unable to establish the desired relation is Bind available to establish the requisite link.

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[22] We return to what Bind entails below. For now, the reader should simply treat the term as a label for an operation or operations to be specified.

Two questions arise: (i) How is this to be implemented? (ii) Why is Bind more costly than Move?

Consider first the implementation question. A possible implementation is outlined below. First, allow Bind to apply in the following manner. It alters a phrase marker that has been generated by the operations Copy and Merge by *demerging* a previously merged expression, remerging it someplace else and substituting a (null) pronoun for the merged expression.[23] Thus, Bind is the composite of several operations: Demerge ($=$ Copy and Delete), Merge, and Pronominalize. In the case of (59b) the operation would proceed as follows. The structure prior to movement would be (60).

(60) $[_{CP_1}[_{ZP}$ badkun taʕrfo $[_{CP_2}$ miin bifakkir $[_{CP_3}$ ʔənno $[_{DP}[_{DP}$ kəll muttahame]
           want.2P know.2P   who think.3SM   that   each suspect.SF
  hiyye/ha-l-maʒduube] harabit]]]]
  she/3-the-idiot.SF   ran.away.3SF

In LA the clitic-left-dislocated DPs occupy a position below CP (see Aoun and Benmamoun 1998). Let us call this projection *ZP*. Assume that in dislocated constructions there is a feature in ZP (and/or *kəll muttahame* 'each suspect') that needs checking. This requires moving *kəll muttahame* 'each suspect' to the matrix [Spec, ZP]. However, this movement is illicit as it involves movement across the *wh*-island CP_2. Move cannot apply.[24] This permits Bind to apply. It does so in deriving (61).

(61) $[_{CP_1}[_{ZP}[_{DP}$ kəll muttahame]$_i$ badkun taʕrfo $[_{CP_2}$ miin bifakkir $[_{CP_3}$ ʔənno
             each suspect.SF   want.2P know.2P   who think.3SM   that
$[_{DP}$ pro $[_{DP}$ hiyye/ha-l-maʒduube]] harabit]]]]
    pro   she/3-the-idiot.SF   ran.away.3SF

(61) is derived from (60) by demerging *kəll muttahame* 'each suspect' and merging it in the matrix [Spec, ZP]. This merger allows the relevant features to be checked that would have remained unchecked in (60). As this feature checking, we assume, is required for convergence, (60) does not converge though (61) does. On this proposal, Bind is an operation that also involves substituting a (null) pronoun for the demerged expression that we wanted to move. We understand construal to be an interpretive reflex of this process of pronominalization.[25] The pronoun that is

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[23] One can think of *Demerge* as Copy and Delete. Thus, Demerge is a more complex operation than Merge.

[24] It is not entirely clear what makes islands impermeable for movement within a minimalist theory. For our purposes it does not matter why expressions cannot extract from islands so long as they cannot. For some discussion of islands in a minimalist context, see Chomsky 2000 and Uriagereka 1999.

[25] If we understand Pronominalize as similar to the process of pronominalization in the standard theory, then the featural identity between the antecedent and the bound pronoun is expected. Clearly the process we are proposing in which an expression is ''replaced'' by a pronoun invites the idea that this process is constrained to substitute a pronoun of the right type, that is, one that preserves the grammatical features of the target of substitution. In effect, Pronominalize encodes morphological similarity between the antecedent and the resumptive expression. This is why resumptives will bear the Case and trigger the agreement one would expect had they shared the entire derivational history of the Ā-expression that binds them. (This note was prompted by a reviewer's comments.)

substituted for the expression *kəll muttahame* 'each suspect' is interpreted as a bound variable whose antecedent is *kəll muttahame* 'each suspect'.

Given bare phrase structure, the position occupied by the strong pronoun or the epithet phrase in (61) is in fact the complement position of the null pronoun. In our discussion of weak pronouns in section 6, we noted that it is possible for the specifier position of the minimal DP headed by a weak pronoun to be occupied by a lexical nominal phrase ((50a) is repeated here).

(50) a. *Apparent resumption*
      lexical DP$_i$ . . . [$_{DP}$ lexical DP$_i$ [$_D$ weak pronoun]]

In bare phrase structure terms, the position occupied by the lexical DP in (50) is in fact a complement position, as illustrated in (62) (see also footnote 21).

(62) lexical DP$_i$ . . . [$_{DP}$[$_D$ weak pronoun] [$_{DP_1}$ lexical DP$_i$]]

The DP structure containing the strong pronoun or the epithet phrase in (61) is identical to the DP structure containing the weak pronoun in (62). The only thing to note is that the strong pronoun and the epithet phrase in (61) occupy the position that the lexical DP occupies in the DP structure given in (62). Recall that the structure of strong pronouns and epithet phrases argued for is the one in (23), whereby both strong pronouns and epithet phrases are full DPs. In bare phrase structure terms, merging these full DPs with other lexical DPs results in the adjunction structures in (58) and (60). When strong pronouns or epithet phrases merge with a weak/null pronoun, the structure that results is the one in (61), which parallels the structure in (62).[26] Importantly, the resulting DP structure in true resumption cases like (61), like the structure in (62), is not one of adjunction.

A derivation similar to the one in (61) is blocked in the case of (59a). Consider the details. To derive (59a), we first consider the phrase marker (63).

(63) [$_{CP_1}$[$_{ZP}$ ʕrəfto   [$_{CP_2}$ ʔənno [$_{DP}$[$_{DP}$ *kəll muttahame*] *hiyye/ha-l-maʒduube*]
         know.2P   that   each suspect.SF   she/3-the-idiot.SF
      nħabasit]]]
      imprisoned.3SF

There is a feature that must be checked by *kəll muttahame* 'each suspect' in the matrix ZP. Consequently, *kəll muttahame* 'each suspect' moves to the matrix [Spec, ZP] to check this feature.

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[26] If bare phrase structure is correct, then phrasal structure is relational, not intrinsic. Thus, we expect changing the expressions involved in a phrasal relation to be able to alter phrase structure. Weak pronouns, the elements we substitute in cases of Pronominalize, are simple heads. These cannot be modified by appositives in LA (i).

   (i) *ʃəft-[$_{DP}$[$_D$ o] [$_{DP}$ ha-l-maʒduub]]

Chomsky's (1995) discussion suggests that adjunction of an XP to a head is morphologically illicit in general. Thus, when substituting pro for the antecedent in a structure like (iia) (see (60)–(61)), we expect the phrase structure of the prior expression to be revised, along the lines of (iib), given that the elements composing the phrase have changed and given that phrasal relations are not intrinsic but relational.

   (ii) a. [$_{DP}$[$_{DP}$ lexical DP] [$_{DP}$ strong pronoun/epithet phrase]]
       b. [$_{DP}$[$_D$ pro] [$_{DP}$ strong pronoun/epithet phrase]]

This movement is perfectly licit; it allows the unwanted features to be checked, and the derivation converges with the structure in (64).

(64) [$_{CP_1}$[$_{ZP}$ *kəll muttahame* ʕrəfto   [$_{CP_3}$ ʔənno [$_{DP}$[$_{DP}$ *kəll   muttahame*]
           each suspect.SF know.2P   that   each suspect.SF
     hiyye/ha-l-maʒduube] nħabasit]]]
     she/3-the-idiot.SF   imprisoned.3SF

The fact that (64) is a licit derivation blocks the alternative derivation that would have derived it: starting with (63), demerge *kəll muttahame* 'each suspect', remerge it in the matrix, and merge a (null) pronoun in place of the demerged expression. The resulting structure would be (65).

(65) [$_{CP_1}$[$_{ZP}$ *kəll   muttahame* ʕrəfto   [$_{CP_2}$ ʔənno [$_{DP}$ pro [$_{DP}$ *hiyye/ha-l-maʒduube*]]
           each suspect.SF know.2P   that   pro   she/3-the-idiot.SF
     nħabasit]]]
     imprisoned.3SF

The main characteristic of our proposed implementation is that it piggybacks the derivation of pure resumption structures on the failed derivations of structures involving Move. Because of this, the former are more complex than the latter and so are more costly. The derivation of (64) from (63) involves Move (i.e., Copy and Merge). The derivation of (65) from (63) involves Demerge (i.e., Copy and Delete), Merge, and Pronominalize. The idea implemented here involves two notions of cost: the one familiar from Chomsky 1995, that shorter convergent derivations block longer ones, and the one in Chomsky 1991, that some kinds of operations are inherently more costly as they involve the use of expressions that are better avoided, in this case (null) pronouns. True resumptive constructions are both more costly to derive, in the sense of involving more operations, than those converging without their use, and they involve Pronominalize, which ceteris paribus is better avoided.

In sum, we can implement the idea that pure resumption is a last resort operation in economy terms by seeing Bind as the result of a more complex and costly set of local operations than Move. A reviewer asks how these derivations are comparable. Don't they involve different numerations? No; their numerations are the same. They differ in whether the antecedence relation to the strong pronoun or the epithet phrase is established via Move or Bind. The idea is that weak/null pronouns are grammatical formatives, and the ''cost'' of true resumption is now taken to reside also in the pronominalization process. This makes the use of weak/null pronouns entirely similar to the use of *do* in *do*-support contexts (see Chomsky 1991). Chomsky (1991) assumes that the use of certain expressions is to be avoided if possible; *do* is one such expression. We are suggesting that (weak/null) pronouns fall in the same category.[27] Note that for this proposal, these costly expressions are not elements in the numeration. Rather, they are grammatical formatives that the computational system can use, but at a cost. If they were part of the numeration, the

[27] This point is made in the context of *do*-support in Arnold 1995. For discussion of how this relates to pronouns, see Hornstein 2000.

derivations that involve them could not be compared against those that did not, at least if having common numerations is a necessary condition for derivational comparisons.

We are thus able to implement the preferred status of apparent resumption over true resumption by making the latter available only in case the former is not. We have done this by treating true resumption in terms of Bind and apparent resumption in terms of Move. We have suggested that the operations underlying Bind are more costly than those underlying Move. This implementation exploits some properties of bare phrase structure in ways that we find theoretically appealing.[28]

This, of course, is just a technical implementation.[29] We have handled things in this way because empirically this is the way the facts have turned out. However, this implementation does not explain *why* the use of resumptive pronouns is more costly than movement. In particular, we have not explained why resumption should be stated in terms of several operations like Demerge, Merge, and Pronominalize, rather than simply as Merge, or why it is that Pronominalize should be more costly than Copy and Merge. One can easily imagine a series of operations that would reverse the indicated cost and so make binding cheaper than movement or make them equally costly. Since each of these options could possibly be implemented, the question arises whether there is some theoretical reason, given minimalist background assumptions, for expecting things to turn out this way rather than the other imaginable ways. We believe that there is, though we provide only a brief sketch of our reasoning here.[30]

Chomsky (1993) has argued that Merge is a virtually conceptually necessary operation. In what sense is this so? Its conceptual necessity rests on its link to a very obvious feature of natural languages: sentences are composed of words that are arranged in larger phrasal structures. Given this fact, there must be some operation for composing words into phrases, and this operation is Merge. What makes Merge ''virtually conceptually necessary'' is that every theory needs an operation like it in order to accommodate this obvious fact about natural language.[31]

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[28] It is also used in Hornstein 2000:chap. 5 to account for Principle B effects.

In this implementation we treat cost partly as a function of pronoun usage. We could also have made the operation more costly by assuming that movement can take place out of islands but that a gap cannot be left behind within the island. Move always results in phonetic gaps (see Chomsky 1977 for discussion). It might be suggested that this is what is problematic about islands: the gap, not the movement per se. It is possible to treat true resumption as the combination of Move and Pronominalize. This makes it costlier than simple Move on economy grounds as well as because it uses an inherently costly element. Note one further interesting feature of this proposal. It would explain why islands could be affected by movement and resumption but not by just movement. The latter leaves a gap, and islands resist these. The former does not. For an account of *why* gaps due to movement from within islands are problematic but other operations from islands are not, see Berwick and Weinberg 1984. (This note was prompted by a reviewer's question: why does movement obey islands while Bind doesn't?)

[29] It is, to be precise, just the sketch of an implementation. Further details would be needed. For example, as a reviewer points out, Demerge might have to apply not merely to the head of the expression that would be coindexed but to all the copies in the derivation up to this point. This is a technical detail, we believe; and if it is required, it could be implemented. It is not clear whether this is indeed required. It would depend on many other technical details. For example, if one adopted Chomsky's (to appear) version of a chain, then demerging the head of a chain would automatically Demerge all other members of the chain. If so, then one application of Demerge would suffice. If one adopted other approaches to chains, then other technical implementation issues would arise. If the general idea that Bind is more expensive than Move is on the right track, then we believe these remaining issues could be ironed out.

[30] For further elaboration, see Hornstein 2000.

[31] This reasoning is based, in part, on Hornstein 2000:chap. 1, where it is further elaborated.

We believe that Copy is similarly conceptually necessary, in the sense of following from a very uncontroversial design feature of Universal Grammar. It rests on the fact that there is a (virtually unanimously held) distinction between the lexicon and the computational system and that words are accessed from the lexicon. How does Copy follow from this fact? It is universally assumed that the atoms manipulated by the computational system come from the lexicon. How does the computational system access the lexicon? It does so by *copying* elements from the lexicon to the computational system. That accessing the lexicon involves copying is clear from the fact that the lexicon gets no smaller when it is accessed and words are obtained for manipulation by the syntax. If this is correct, then grammars that distinguish the lexicon from the computational system conceptually presuppose an operation like Copy. As virtually every approach to grammar assumes something like a distinction between lexicon and grammar, Copy is a ''virtually conceptually necessary'' operation for much the same reason that Merge is. One last step. If Move is simply Copy and Merge, then movement too inherits conceptual necessity, at least if conjunctions of conceptually necessary operations are also conceptually necessary.[32]

Observe that both Merge and Move are operations for establishing intrasentential relations between expressions. If these operations are virtually conceptually necessary, then they would appear to be the optimal means for establishing those relations between expressions that need establishing. For example, the ''best'' way to encode a modificational dependency would be via Merge. The ''best'' way to encode an antecedence relation would be via Copy and Merge. If this line of reasoning can be maintained, it provides a rationale for why Bind (or Pronominalize) would be more expensive than Move. Bind (or its suboperations) is not a conceptually necessary operation.[33] If we assume that grammars try to go as far as they can given their conceptually required resources, then Bind should be an expensive operation and its use should be costly.[34]

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[32] This diverges from the vision of Move in Chomsky 1995. For a more elaborate discussion, see Hornstein 2000.

[33] A reviewer asks whether Delete would not also be ''conceptually necessary'' given its ubiquitous presence in grammars. In our view, the status of Delete is unclear. Note first that the motivation offered for Merge and Copy does not rely on their omnipresence in grammars. Rather, it rests on some rather obvious facts about language design: compositionality and the lexicon/grammar distinction. It is not clear that Delete can be similarly motivated. Delete is required in a grammar where Move involves copying plus the empirical fact that copies are not generally visible. However, this does not imply that a rule of deletion exists—only that when multiple copies occur, only one is generally phonetically overt. And this requirement has no widely accepted explanation (see Hornstein 2000 for discussion based on ideas originally proposed in Nunes 1995). In fact, it is quite unclear that a *rule* of deletion is needed at all. Rather, deletion might simply be the reflex of the fact that the interfaces interpret what they can, and in general all copies but one are uninterpretable at the PF interface (see Hornstein 2000:chap. 6 for discussion). So it is not clear that deletion, if it exists as a grammatical operation, is conceptually necessary. This of course does not mean to imply that it does not exist.

Second, say that Delete is conceptually required. This would not affect our proposal at all. Our chief claim is that movement preempts construal (Bind). This claim stands even if Delete is conceptually necessary. Our point is not that Merge and Copy are the only conceptually required grammatical operations but that Move (= Copy, Merge), where applicable, trumps Bind.

The privileged status of Move is understood along two dimensions. First, it is composed of necessary operations: Merge, Copy. Second, it involves fewer operations than Bind. Bind piggybacks on failed Move and so is a far more complex operation. This is why, we suggest, it is better to establish internominal dependencies via Move than via construal operations like Bind. This claim is independent of whether or not Delete is also in the inventory of conceptually required operations.

[34] This sort of argument is developed in Chomsky 1995 to explain why Merge is cheaper than Move. It is also implicit in theories that treat the use of certain elements like *do* as costly (see, e.g., Chomsky 1991). Note that it suggests that operations are ordered and that multiple uses of cheaper operations are more economical than even a single use of a costly one (see Chomsky 1991 for such a suggestion).

Consequently, the generation of structures involving pure resumptive expressions will have a last resort tinge and should only be permitted in cases where Move and Merge cannot deliver convergent derivations.

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