

Resumptive Pronouns and Competition

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A Minimalist hypothesis about resumptive pronouns is that they should be no different from ordinary pronouns (McCloskey 2006). The article substantiates this hypothesis with respect to a particular view of pronouns: pronouns are “elsewhere” elements. Just as the interpretation of ordinary pronouns, on this view, is determined by competition with anaphors, so the interpretation of resumptive pronouns is determined by competition with gaps. On the basis of new facts in Hebrew and systematic differences between optional and obligatory pronouns, I argue that the tail of a relative clause movement chain is realized as the least specified form available. Since their interpretive properties are fully determined by external factors, resumptive pronouns must be part of the syntactic derivation, not items merged from the (traditional) lexicon.

Keywords: resumptive pronouns, reconstruction, extraction from relative clauses, structural ambiguity of relative clauses, competition, economy

1 Introduction

What exactly are resumptive pronouns? Crosslinguistically, resumptive pronouns look exactly like ordinary pronouns. A Minimalist hypothesis, formulated in McCloskey 2006, is that the two kinds of pronouns should have just the same properties. This article substantiates McCloskey’s hypothesis with respect to a particular view of ordinary pronouns: pronouns are “elsewhere” elements (Pica 1984, Burzio 1991, Hornstein 2001, Safir 2004, Grolla 2005, Reuland 2011, Rooryck and Vanden Wyngaerd 2011). Just as the interpretation of ordinary pronouns, on this view, is determined by competition with anaphors, here I argue that the interpretation of resumptive pronouns depends on competition with gaps. I show that the properties exhibited by resumptive pronouns are fully determined by external factors. Two factors are involved. One is the structure in which the pronoun occurs, which determines whether reconstruction is possible. The other is whether the pronoun alternates with a gap, which determines which structure the pronoun may occupy. If resumptive pronouns have no inherent properties of their own, they arguably are not

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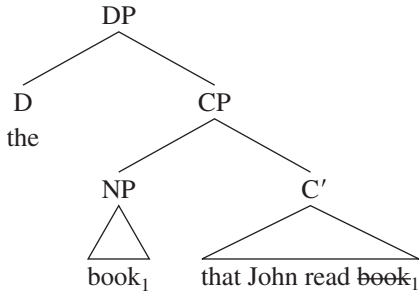
lexical items merged from the lexicon, and the term *resumptive pronoun* probably does not denote a grammatical primitive.

Much of the research on resumption in the last decade has focused on the possibility for reconstruction, and on the relationship between reconstruction and a movement derivation. The copy theory of movement (Chomsky 1993) implies that when there is movement, reconstruction effects will also be observed. Throughout the 1980s, and owing to the focus on locality and island repair (Borer 1984, McCloskey 1990), resumptives were taken to occur in relative clauses (henceforth, RCs), which do not involve movement. Now it is clear that this is incorrect, and that even within a single language the class of resumptive pronouns is not necessarily uniform (Aoun, Choueiri, and Hornstein 2001). Some resumptives exhibit reconstruction effects and are compatible with a movement derivation, while others do not and are not. This classification, however, does not exhaust the possibilities. There are resumptive pronouns that do not repair island violations, as in Welsh (Rouveret 1994); resumptive pronouns in island contexts that do allow reconstruction but do not involve movement, in French and Jordanian Arabic (Guilliot and Malkawi 2006, 2007); and resumptives that exhibit reconstruction effects only partially, at the tail of the chain (Rouveret 2002, 2008).

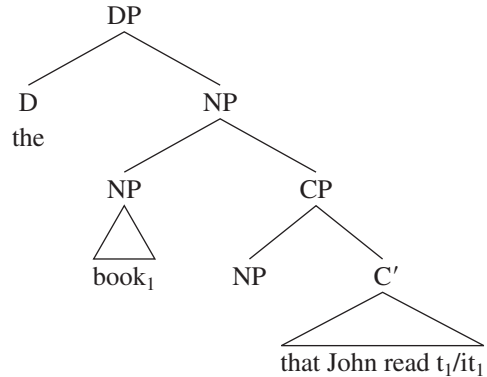
The heterogeneity of resumptive pronouns presents an additional challenge for McCloskey's hypothesis, that resumptive pronouns should be just like ordinary pronouns. Are all resumptives just like ordinary pronouns? How many kinds of resumptive pronouns are there? Are there general principles that determine which type of resumptive is found where? The present article focuses on two types of resumptives in nonisland contexts in Hebrew. Resumptive pronouns within PPs and NPs (henceforth pronouns in PP/NP) are obligatory and behave almost exactly like gaps, whereas direct object pronouns are typically optional and do not behave like gaps. This creates an opportunity for studying, within a single language and in nonisland contexts, the mechanisms that underlie at least some of the variation in the resumptive pronoun typology. The central question addressed is whether there is a general principle that determines how a pronoun will behave. I argue that there is, and that the generalization concerns whether the pronoun is obligatory or optional. Strikingly, in structures in which direct object pronouns are obligatory, they behave just like obligatory pronouns and gaps.

In the spirit of earlier Last Resort approaches to the distribution of resumptive pronouns (Shlonsky 1992, Pesetsky 1998, McDaniel and Cowart 1999), the first goal of this article is to argue for an Economy principle that states a preference for gap realization whenever possible. The proposed principle differs, however, from earlier Last Resort treatments in three ways. First, the principle applies selectively, to one type of RC. Following Grosu and Landman 1998, Sauerland 1998, 2004, Bhatt 2002, Bianchi 2004, and Hulsey and Sauerland 2006, among others (see also Schachter 1973, Vergnaud 1974, Carlson 1977, Kayne 1994 for earlier head-raising analyses), relative clauses are in principle ambiguous between two distinct structures, and I argue that resumptive pronouns may inhabit two RC structures. The raising structure, in (1a), resembles the structure of a question: the head of the RC has moved to Spec,CP from a position within IP. The

RC head is only interpreted within the RC and reconstruction is obligatory. In the head-external structure, in (1b), the RC head is generated externally and is interpreted in this position only. This is a nonmovement RC, in which the RC head is related to the pronoun via binding (e.g., Safir 1984, 1986, McCloskey 1990, Aoun, Choueiri, and Hornstein 2001).

(1) a. *Raising structure*

the λx . John read the_x book

b. *Head-external structure*

the book λx . John read it_x

I argue that the Economy principle is restricted to the movement derivation (1a) and requires the tail of the movement chain in the raising structure to be realized as a gap whenever possible. This accounts for optionality in resumptive pronoun realization, usually a challenge for classic Last Resort approaches. Gaps and obligatory pronouns may realize (1a), but optional pronouns are confined to (1b). Since only (1a) allows reconstruction, it follows that gaps and obligatory pronouns allow reconstruction, but optional ones do not. Optional pronouns are possible, on this account, because the head-external structure (1b) is not subject to Economy.

Second, whereas earlier studies of resumption focused on distribution and on what makes a given resumptive pronoun possible, necessary, or impossible, the current study takes the distribution as a given and examines the consequences for the syntax and semantics of resumptive pronouns. Obligatory pronouns may inhabit the raising structure, but since pronouns lose to gaps in this structure, optional pronouns are confined to the head-external structure and block reconstruction. I will remain neutral regarding the mechanisms that make a resumptive pronoun obligatory or optional and will offer little in the way of a derivational account.

Third, rather than applying to a binary alternation and stating an absolute preference for gaps, the proposed principle is scalar and states a preference for the least specified form available.

By incorporating the structural ambiguity of RCs and having the Economy principle apply selectively, to the raising structure, the article also provides evidence of an entirely new sort for the movement approach to reconstruction in RCs. The idea that reconstruction effects with resumptive pronouns are derived by movement is supported by Bianchi (2004), who shows that obligatory pronouns in nonisland contexts allow reconstruction whereas optional ones do not, and who

proposes that optional and obligatory resumptives inhabit different RC structures. In this, I follow Bianchi's lead. A number of more recent studies argue for other, nonmovement analyses of reconstruction effects with resumption (Rouveret 2002, 2008, Adger and Ramchand 2005, Guillot 2006, Guillot and Malkawi 2006, 2011). The second goal of the article is to provide new evidence for a movement analysis and for the structural ambiguity of relative clauses. The present proposal builds on the typology in Bianchi 2004 and further supports it. Extending work in Doron 1982, I show that the possibility for reconstruction correlates with the possibility for extraction from a relative clause. To the extent that extraction is purely syntactic, it follows that reconstruction (or some reconstruction) is also syntactic, derived by movement. This does not exclude the possibility that some pronouns may exhibit reconstruction that is not derived by movement.

The article is organized as follows. Section 2 presents a series of reconstruction asymmetries and shows that obligatory pronouns, like gaps, allow reconstruction but optional ones do not. Section 3 develops the head-external analysis for resumptives based on antireconstruction and Principle C. Section 4 addresses the scope of the Economy principle and the nature of competition in RCs, and section 5 presents new evidence from extraction asymmetries for the structural ambiguity of RCs. Obligatory pronouns and gaps permit extraction of another constituent from the containing RC, but optional pronouns do not, and it is suggested that raising RCs are not absolute islands for extraction. Section 6 concludes the article.

2 Interpretive Asymmetries

In nonisland contexts, Hebrew has both optional and obligatory resumptive pronouns. When a direct object or embedded subject is relativized, the pronoun is optional, and when the relativized position is within PP or NP, the pronoun is obligatory. This section establishes the generalization in (2) (see also Bianchi 2004).

- (2) Optional direct object resumptives block reconstruction; obligatory resumptive pronouns in PP/NP allow reconstruction.

The evidence for (2) comes from asymmetries between optional and obligatory resumptive pronouns in a variety of contexts. Section 2.1 introduces an asymmetry between direct object pronouns, which are optional in these contexts, and pronouns in PP/NP, which are always obligatory. Subject resumptives are optional, like direct object resumptives, and section 2.2 shows that they block reconstruction. Section 2.3 shows that the division has some crosslinguistic support. Section 2.4 returns to Hebrew, to contexts in which direct object resumptives are obligatory. In these contexts, direct object resumptives pattern with obligatory pronouns and allow reconstruction.

2.1 Direct Object Pronouns and Pronouns in NP/PP

Doron (1982) discovered an interpretive difference between a gap in direct object position and a pronoun in this position. The gap version allows both *de dicto* and *de re* readings, but in the presence of a resumptive pronoun the RC head is restricted to the *de re* reading. In (3b), there must be a particular woman who Dani is looking for.

- (3) a. dani yimca et [ha-iša₁ še-hu mexapes t₁]. (*de re/de dicto*)
 Dani will.find ACC the-woman that-he searches
 b. dani yimca et [ha-iša₁ še-hu mexapes ota₁]. (*de re*)
 Dani will.find ACC the-woman that-he searches her
 'Dani will find the woman he is looking for.'

The difference in the availability of *de dicto* readings is related to reconstruction. Assuming that the difference between the readings reflects relative scope, the *de dicto* reading would require the low copy to be interpreted, and this appears to be blocked in the presence of the pronoun. A variety of other reconstruction effects are similarly missing in the presence of the pronoun: anaphor binding, embedded idiomatic interpretation, and amount readings. The resumptive pronoun in direct object position blocks reconstruction for anaphor binding, in (4). When idiomatic interpretation of the RC head is associated with the embedded predicate, the idiomatic reading is blocked in the presence of a resumptive pronoun, in (5). RCs with direct object resumptives only have the literal meaning, in (6).¹

- (4) [ha-šmu'a al acmo₂]₁ [še-dani₂ hikxiš t₁ / *ota₁] hufca al yedey rani.
 [the-rumor about himself]₁ that-Dani₂ denied t₁ / *it₁ was.spread by Rani
 'The rumor about himself that Dani denied was spread by Rani.'
- (5) a. ha-tik₁ še-tafru t₁ / #oto₁ la-sar haya kašur le-nadlan.
 the-case₁ that-they.sewed t₁ / #it₁ for.the-minister was related to-real.estate
 'The case that they pinned on the minister was related to real estate.'
 b. tahalix ka-ze rak yagdil et ha-uga₁ še-yexalku t₁ / #ota₁ ben
 process that only enlarge ACC the-cake₁ that-will.divide t₁ / #it₁ among
 ha-sarim ba-kneset.
 the-ministers in.the-parliament
 'That sort of process will only enlarge the pie they divide among the ministers in the parliament.'
 c. biglal ha-xatul₁ še-hoci'u t₁ / #oto₁ me-ha-sak holxim legalot
 because the-cat₁ that-they.took t₁ / #it₁ from-the-bag going to.discover
 od harbe.
 more much
 'Because of the cat that was let out of the bag, they are going to discover much more.'

¹ Some speakers find the differences between pronouns and gaps in (5) to be subtle. A reviewer mentions the following example, with a resumptive pronoun, as compatible with an idiomatic interpretation:

- (i) me'uxar miday, kol xatul₁ še-toci'u ota₁ me-ha-sak axšav lo ya'acor et ha-projekt
 late too any cat that-you.take it from-the-bag now NEG stop ACC the-project
 ba-šalav haze.
 at.the-stage this
 'It's too late. Any cat that you pull out of the bag now cannot stop the project at this stage.'

The crucial comparison is between the direct object pronouns in (5) and the indirect object pronouns in (10). All speakers I have consulted find the difference between the two classes robust and obvious.

- (6) a. ha-tik₁ še-tafru t₁ / **oto**₁ la-sar haya yarok.
 the-case₁ that-they.sewed t₁ / it₁ for.the-minister was green
 ‘The case they sewed for the minister was green.’
 b. ha-uga₁ še-xilku t₁ / **ota**₁ ben ha-sarim hayta te’ima.
 the-cake₁ that-they.divided t₁ / it₁ between the-ministers was tasty
 ‘The cake that they divided between the ministers was tasty.’
 c. ha-xatul₁ še-hocenu t₁ / **oto**₁ me-ha-sak yilel.
 the-cat₁ that-we.took.out t₁ / it₁ of-the-bag meowed
 ‘The cat we took out of the bag was meowing.’

A further contrast is attested in the context of variable binding. When the RC head contains a variable, and the quantificational binder is within the RC, bound variable anaphora is blocked in the presence of the resumptive pronoun (Sells 1984, Sharvit 1999).

- (7) [ha-šmu’a al acmo₂]₁ [še-kol politikai₂ hikxiš t₁ / **#ota**₁] hufca
 [the-rumor about himself₂]₁ that-every politician₂ denied t₁ / #it₁ was.spread
 al yedey ha-yošev roš.
 by the-chair
 ‘The rumor about himself that every politician denied was spread by the chair.’

It is possible, however, that this contrast is not derived (exclusively) by reconstructing the RC head into the base position, in the scope of ‘every politician’. In the structure given for a raising relative in (1a), the definite article in the RC head is generated external to the RC (Kayne 1994). This implies that reconstruction of ‘rumor about himself’ would not yield the intended reading in which there could be multiple rumors, each one associated with a distinct politician (see Hulsey and Sauerland 2006). The idea that RC-internal quantifiers that take scope outside of the RC must involve Quantifier Raising (QR) of the binder was first expressed by Doron (1982) and more recently by Hulsey and Sauerland (2006) and Heim (2012). The challenge for this view has always been a syntactic one, since RCs are commonly assumed to be islands for all kinds of extraction, overt and covert. We will see in section 5 that some RCs in Hebrew do allow overt extraction, and this makes a QR analysis in examples such as (7) more feasible. Here, I remain neutral regarding the ultimate analysis of these cases (reconstruction, QR, or perhaps both) and simply note that variable binding patterns with other reconstruction effects and is blocked by a direct object resumptive.

The interpretive effect does not hold equally of all resumptive pronouns. When relativization takes place from a position within PP or NP, the resumptive pronoun is obligatory. Just as with the gap configuration in (3a), these pronouns do allow the *de dicto* reading for the head of the RC; see (8a) and (8b). Reconstruction for anaphor binding is possible, in (9), and so is embedded idiomatic interpretation, in (10). The idiomatic interpretation is salient in (10), in sharp contrast to the situation with direct object resumptives in (5).

- (8) a. dani yimca et [ha-iša₁ še-hu xolem aleya₁].
 Dani will.find ACC the-woman that-he dreams of.**her**
 ‘Dani will find the woman he is dreaming of.’

b. lo hekarnu et [ha-iša₁ še-ha-itona'im mexapsim et ha-bayit šela₁].
 NEG we.know ACC the-woman that-the-reporters searching ACC the-house **her**
 'We didn't know the woman who the reporters are looking for her house.'

(9) [ha-šmu'a al acmo₂]₁ [še-dani₂ xašaš mimena₁] hufca al yedey rani.
 the-rumor about himself that-Dani feared from.**it** was.spread by Rani
 'The rumor about himself that Dani feared was spread by Rani.'

- (10) a. ha-ec₁ še-hu tipes alav₁
 the-tree that-he climbed on.**it**
 'the high position he took'
 b. ha-ec₁ še-hu yarad mimen₀₁
 the-tree that-he came.down from.**it**
 'the high position he came down from'

The pattern is the same when we turn to variable binding. Variable binding into the RC head by an RC-internal quantifier is possible when the resumptive pronoun is part of a PP. Recall that variable binding was blocked in the presence of a direct object pronoun (7).

- (11) [ha-šmu'a al acmo]₁ [še-kol more xašaš mimena₁] hufca al yedey
 the-rumor about himself that-every teacher feared of.**it** was.spread by
 ha-axot.
 the-nurse
 'The rumor about himself that every teacher feared was spread by the nurse.'

The difference between the direct object pronoun and the pronoun within PP/NP shows that the interpretation of a resumptive pronoun is not uniform and that the absence of reconstruction in (3)–(5) (and possibly (7)) cannot be a general property of resumptive pronouns. Given the heterogeneous behavior of resumptive pronouns crosslinguistically, this makes perfect sense. Resumptive pronouns that allow reconstruction are also found in Lebanese Arabic, Jordanian Arabic, Scots Gaelic, Welsh, and Spanish, among other languages (Aoun, Choueiri, and Hornstein 2001, Guilliot and Malkawi 2006, Adger and Ramchand 2005, Rouveret 2002, 2008, Suñer 1998, respectively). Other languages, such as Irish and Brazilian Portuguese, exhibit a mixed pattern, like Hebrew, and the distribution of interpretations is the same: direct object pronouns are optional, and pronouns in PP/NP are obligatory. Here too, obligatory pronouns in PP/NP allow reconstruction, and optional direct object pronouns block it (Bianchi 2004). This is demonstrated in (13)–(14) for amount relatives. In the amount relative in (12), the RC refers to the amount of wine that was spilled. Following Carlson (1977), Heim (1987), Grosu and Landman (1998), Bhatt (2002), Grosu (2002), and Bianchi (2004), among others, I assume that amount relatives involve obligatory reconstruction.

- (12) It would take us all year to drink the wine that you spilled at the party.

Bianchi (2004) shows that crosslinguistically (in colloquial Italian, Spanish, Hebrew, Brazilian Portuguese (BP), Irish, and Swiss German), amount relatives cannot be resumed by an optional direct object resumptive (13); they can only be resumed by an obligatory resumptive in PP (14).

This is expected if amount readings require the low copy and if reconstruction is blocked by the former and allowed by the latter.²

- (13) a. hu rac axšav et ha-merxak še-ani racti (*oto) lifney šana. (Hebrew)
 he runs now ACC the-distance that-I ran it before year
 'He now runs the distance that I ran a year ago.'
- b. Eu acho maus todo tempo que eu desperdico (?*ele). (BP)
 I regret all the time that I waste it
 'I regret the time that I wasted.'
- c. Tá óth liom an méid ama a chuir mé amú (*é). (Irish)
 is regret with.me the quantity time.GEN that put I out it
 'I regret the time that I wasted.'
- (14) a. hu rac axšav et ha-merxak še-higati *(elav) lifney šana. (Hebrew)
 he runs now ACC the-distance that-reached.I to.it before year
 'He now runs the distance that I ran a year ago.'
- b. ?Você não imagina las meninas que ele namorou com elas! (BP)
 you not imagine the girls that he flirted with them
 'You cannot imagine the number of girls he flirted with!'
- c. an buaireamh uilig aN ndeachaigh sé fríd (Irish)
 the trouble all that went he through.it
 'the amount of trouble that he went through'

Finally, free relatives have been argued to require the raising structure or a related structure that forces interpretation of the low copy (Grosu and Landman 1998, Bianchi 2004). We expect direct object resumptives to be degraded and obligatory pronouns in PP to be fine, and that expectation is borne out (Borer 1984).

- (15) a. mi še-at pogešet (??oto) be-hodu nišar xaver le-kol ha-xayim.
 who that-you meet him in-India remains friend to-all the-life
 'People you meet in India remain your friend for the rest of your life.'
- b. mi še-at ozeret *(lo) be-hodu nišar xaver le-kol ha-xayim.
 who that-you help to.him in-India remains friend to-all the-life
 'People you help in India remain your friend for the rest of your life.'

The differences between the two classes of pronouns are summarized in table 1.³

It is possible that the similarity across Hebrew, Brazilian Portuguese, and Irish is accidental and that a pronoun's behavior is determined on the basis of that individual pronoun. The following sections establish that there is a generalization, and that it has to do with competition and with whether the pronoun is optional or obligatory.

² Examples (13b), (13c), (14b), and (14c) are Bianchi's (2004) (12c), (13c), (67a), and (70a), respectively. The Hebrew examples in (13a) and (14a) have been modified to highlight the amount reading, since distances refer to amounts.

³ See Arad 2010 for another contrast between optional and obligatory pronouns, regarding the scope of adjectival modifiers in the RC head.

Table 1

Optional direct object pronouns versus obligatory pronouns in PP/NP

	Optional direct object	Obligatory pronoun in PP/NP
<i>De dicto</i> readings	—	+
Principle A	—	+
Embedded idiomatic readings	—	+
Variable binding	—	+
Amount readings	—	+
Free relatives	—	+

- (16) Optional resumptive pronouns block reconstruction; obligatory pronouns allow reconstruction.

The structural ambiguity of RCs naturally explains why it is this particular property that distinguishes between classes of resumptive pronouns, since this is the property that distinguishes raising and head-external RCs. Therefore, the descriptive generalization in (16) can be understood in terms of a competition among forms to realize the tail of a *wh*-movement chain.

- (17) The tail of the chain in the raising structure is realized as a null copy whenever possible; a pronoun is possible only if a null copy is impossible.

The remainder of this section is devoted to establishing the generalization in (16), and sections 3 through 5 further motivate the implementation in (17). Below, three more sets of data are provided in support of (16). Section 2.2 shows that the behavior of direct object pronouns extends to subject resumptives, which are similarly optional. In a language in which direct object resumptives are obligatory, such as Lebanese Arabic, reconstruction becomes possible with a direct object pronoun, as shown in section 2.3. When the Hebrew direct object resumptive occurs in a context in which it is obligatory, such as the object of a psych predicate, it becomes compatible with readings that require the low copy, as shown in section 2.4. The evidence in section 2.4 is decisive, since it is one and the same pronoun that alternates depending on its distribution.

2.2 Subject Resumptives

The discussion in this section is based on the behavior of embedded subject resumptives in Hebrew, since in the highest subject position subject resumptives are excluded (Doron 1983, Borer 1984, McCloskey 1990).⁴ The prediction based on (16) is clear: subject resumptives should block reconstruction, on a par with object resumptives. This appears to be true, though the picture is not complete. Subject idiom chunks are difficult to find, but the remaining diagnostics are consistent with (16). An embedded subject resumptive blocks *de dicto* readings, in (18). In (18a),

⁴ When the RC has a fronted focal constituent, the subject resumptive is possible alongside a gap (Shlonsky 1992). There are speakers who find embedded subject resumptives similarly degraded. The judgments in this section reflect the intuitions of speakers who generally accept embedded subject resumptives.

with a gap in subject position, the patient may have requested a nurse, any nurse, but in (18b), with a pronoun, the request refers to a particular person.

- (18) a. anaxnu lo yexolim le-šalem avur ha-axot₁ še-ha-pacient doreš še-t₁
 we NEG can.PL to-pay for the-nurse that-the-patient demands that
 tevaker eclo ba-bayit. (de dicto and de re)
 will.visit at.his in.the-house
 ‘We cannot pay for the nurse that/who the patient requests should visit him.’
 b. anaxnu lo yexolim le-šalem avur ha-axot₁ še-ha-pacient doreš še-**hi**₁
 we NEG can.PL to-pay for the-nurse that-the-patient demands that-she
 tevaker eclo ba-bayit. (only de re)
 will.visit at.his in.the-house
 ‘We cannot pay for the nurse who the patient requests that she visit him.’

The presence of the pronoun also appears to block reconstruction for Principle A and amount readings.

- (19) a. [ha-šmu’ot al acmo₁]₂ še-xašavti še-t₂ / ??**hen**₂ yexolot leha’aliv et
 [the-rumors about himself₁]₂ that-thought.I that-t₂ / ??they₂ could to.offend ACC
 dani₁ hufcu al yedey rani.
 Dani were.spread by Rani
 ‘The rumors about himself that I thought could offend Dani were spread by Rani.’
 b. samti ba-arnak et ha-kesef₁ še-xašavti še-t₁ / ***hu**₁ yaxol lehikanes.
 put.I in.the-purse ACC the-money₁ that-thought.I that-t₁ / *it₁ can go.in
 ‘I put in my purse the money that I thought could fit.’

Optional subject resumptives block reconstruction just like optional object resumptives. That is what (16) leads us to expect.

2.3 Lebanese Arabic

The hypothesis that distribution and the availability of a gap alternative determine the interpretation of a pronoun should also be testable in other languages. There are languages in which the direct object pronoun is obligatory, and in these languages reconstruction should be compatible with the direct object pronoun. This is what we find in Lebanese Arabic, which, like other Arabic dialects, has obligatory direct object resumptives (Aoun and Choueiri 1996). Bound variable anaphora is possible with a direct object pronoun in a nonisland context, as in (20) (from Aoun and Choueiri 1996:7, (19b)).⁵ When the dependency spans an island, reconstruction is impossible, since movement is ruled out, as in (21) (from Aoun and Choueiri 1996:8, (21)).

⁵ See Malkawi 2009 for the claim, in the context of Jordanian Arabic, that the availability of a gap alternative has an effect on the interpretation of the pronoun. See also footnote 21 below.

- (20) šeft [ššuura tabaʔ ʔəbn-a₁]₂ yalli [kəll mwazzafe]₁ badda
 saw.1SG the.picture of son-her that every employee.F want.3SG.F
 tʔalləʔ-a₂ bi-maktab-a.
 hang.3SG.F-it in-office-her
 'I saw the picture of her₁ son that every employee₁ wants to hang in her office.'
- (21) *šeft [ššuura tabaʔ ʔəbn-a₁]₂ yalli štriito l-kadr yalli [kəll mwazzafe]₁
 saw.I the.picture of son-her that you.saw the-frame that every employee
 haʔtət-a₂ fi-i.
 put.3-it in-it
 Intended: 'I saw the picture of her₁ son that you saw the frame that every
 employee₁ put the picture of her son in it.'

The relationship between Lebanese Arabic and languages in which the direct object pronoun is optional illustrates that questions about distribution are independent of questions about RC structure and interpretation. Direct object pronouns in RCs may be optional in some languages and obligatory in others, yet the mapping from pronoun to RC structure is the same: the raising structure hosts pronouns only if they do not compete with gaps. It seems justified, therefore, to keep these things apart.

2.4 Direct Objects in Obligatory Contexts

The facts we have considered until now do not decisively point to the conclusion that the factor responsible for the behavior of pronouns is their external distribution, whether it is optional or obligatory. It is possible that there is another property shared by optional pronouns that causes reconstruction to be blocked in their presence, or a property shared by obligatory pronouns that makes movement and reconstruction possible in their presence. For example, Hebrew subject resumptives, along with direct object resumptives in Hebrew, Irish, and Brazilian Portuguese, may be taking up more structural space than pronouns that are obligatory, perhaps because obligatory pronouns happen to be clitics. On this analysis, clitic pronouns will be compatible with a copy of the RC head, in the spirit of the stranding analysis developed in Boeckx 2003. Pronouns that are optional would be "too big" for the containing category to host a full copy in addition to the pronoun. As a result, they would be confined to an RC structure that does not involve a movement chain.⁶

- (22) a. [the man₁ [that [. . . [DP him₁]]]]
 b. [the man₁ [that [. . . [PP about him₁ ~~the man~~]]]]

⁶ See Pesetsky 1998 and Bianchi 2004 for accounts in terms of the inherent properties of pronouns.

On this analysis, the inherent structural properties of the pronoun determine whether the pronoun is compatible with a raising analysis or not. In contrast, on the analysis that I will pursue, the factor that determines the mapping of pronoun to RC structure is related to the presence of a gap alternative, as in (23) (repeated from (17)).

- (23) The tail of the chain in the raising structure is realized as a null copy when possible; a pronoun is possible only if a null copy is impossible.

Direct object pronouns, which in many contexts alternate with gaps, will not be realized in the raising structure and therefore do not give rise to reconstruction effects, in contrast to pronouns in PP/NP, which may appear in raising RCs, like gaps.

The principle in (23) makes a very clear prediction. If we find a syntactic context in which a direct object pronoun becomes obligatory, then in this context it should be able to occur in the raising structure and to allow reconstruction. On the other hand, this behavior would be entirely unexpected on an account that attributes reconstruction effects and occurrence in the raising structure to the inherent properties of the pronoun itself. Since the phenomenon to consider is reconstruction, and since movement and reconstruction are typically blocked by islands (Cinque 1990, and in the context of resumptive pronouns see Aoun and Benmamoun 1998, Aoun, Choueiri, and Hornstein 2001; but see also Shlonsky 2004, Guillot 2006, Guillot and Malkawi 2006, 2011 for reconstruction into islands in the presence of resumptive pronouns), the following discussion is restricted to direct objects in nonisland contexts. I examine three nonisland contexts in which direct object pronouns are obligatory. In each of these, the gap version is ungrammatical: the object in a weak-crossover-violating structure, the experiencer object of a psych verb (Landau 2009), and the complement of a focus particle such as ‘only’.⁷

- (24) a. ze [ha-yeled]₁ še-ima šelo₁ ohevet **oto**₁ / *t₁.
 this the-boy₁ that-mother his₁ loves him₁ / *t₁
 ‘This is the boy who his mother loves him.’
 b. ele ha-anašim₁ še-margiz **otam**₁ / *t₁ še-ha-harca’a be-anglit.
 these the-people₁ that-annoys them₁ / *t₁ that-the-lecture in-English
 ‘These are the people who it annoys that the lecture is in English.’
 c. zot ha-xavera₁ še-zihiti rak **ota**₁ / *t₁ ba-tmuna.
 this the-friend₁ that-identified.I only her₁ / *t₁ in.the-picture
 ‘This is the friend who I identified only her in the picture.’

In these cases, the direct object pronoun does not alternate with a gap, so it should be able to occur in a raising structure and produce reconstruction effects. If it does, the internal makeup of pronouns—or any other inherent property, for that matter—would be irrelevant, since one and

⁷ I thank Philippe Schlenker, Edit Doron, and Luka Črnič (pers. comms.) for suggesting the weak crossover, object experiencer, and complement-of-‘only’ environments, respectively. According to Landau (2009), the experiencer object of a psych verb is a PP; hence, a resumptive in this position is essentially another case of an obligatory pronoun in PP.

the same pronoun occurs sometimes in the raising structure and sometimes in the head-external structure.

I assume, in what follows, that direct object pronouns repair weak crossover violations, and that in this capacity they continue to function as resumptive pronouns. There has been some debate about this in the literature, since it is possible that in structures such as (24a), the first pronoun is the resumptive pronoun and the second pronoun is coreferential, but not a variable itself. It is crucial, in what follows, that the direct object is a resumptive, since if it is not, we will not be comparing an optional resumptive pronoun and an obligatory one. This concern is addressed briefly in the following paragraph.

To control for the possibility that the direct object pronoun is not really a variable, McCloskey (1990) presents cases of strong crossover (SCO) and weak crossover (WCO) in Irish where an epithet replaces the first pronoun. This makes it impossible to interpret the first occurrence as a bound variable, and the bound variable pronoun is necessarily the second occurrence. In Irish this produces a SCO violation, and similarly in Hebrew (Shlonsky 1992). In WCO contexts, however, McCloskey notes that there is no similar degradation in Irish when the first occurrence is an epithet, compared with cases where it is a pronoun (McCloskey 1990:212, (35)). Some of the literature on Hebrew, however, has suggested that the corresponding WCO configuration with an epithet is degraded (see Demirdache 1991, Shlonsky 1992, Fox 1994).

- (25) ze ha-baxur₁ še-yidati et ha-horim šel ha-idiot₁ še-ha-mora taxšil
 this the-guy₁ that-informed.I ACC the-parents of the-fool₁ that-the-teacher will.fail
 *t₁ / *oto₁.
 *t₁ / *him₁
 'This is the guy who I informed the parents of the fool that the teacher would fail him.'

The ungrammaticality of the pronoun version of (25) implies that pronouns do not repair WCO violations and that the improvement in (24a) is due to the use of a coreferential pronoun that is not a variable. Therefore, if the pronoun version of (25) is indeed ungrammatical, we cannot use this configuration to test what happens when an optional resumptive pronoun becomes an obligatory resumptive pronoun, because when it is obligatory it is neither a variable nor a resumptive pronoun. It might be significant, therefore, that the judgment in (25) is not shared by all speakers. More importantly, when the content is enriched and the sentence is slightly modified to control for register (epithets are low-register) and information structure (epithets are very much presupposed or nonfocal), WCO configurations with an epithet and a pronoun become acceptable.

- (26) ze ha-baxur₁ še-basof hayiti crixá le-calcel la-horim šel ha-idiot₁
 this the-guy₁ that-in.the.end was.I need to-phone to.the-parents of the-fool₁
 ve-lesaper lahem še-ha-mora betax taxšil oto₁ / *t₁.
 and-to.tell them that-the-teacher definitely will.fail him₁ / *t₁
 'This is the guy who in the end I had to phone the fool's parents to tell them that the teacher will definitely fail him.'

I will assume, in what follows, that a pronoun does repair the WCO violation encountered by a gap in Hebrew, just as it does in Irish, and that in this capacity it is still a variable and a resumptive pronoun.⁸

I now return to the study of obligatory direct object pronouns in the three contexts introduced above: in WCO, as an object experiencer, and in the complement of a focus particle. In these contexts, the pronoun appears to be available in the raising structure and reconstruction seems to be possible. This is demonstrated by three diagnostics.

- (27) a. *Free relatives*: A direct object pronoun, typically excluded in a free relative, becomes grammatical in a WCO configuration, as an object experiencer, and in the complement of ‘only’.
- b. *Bound variable anaphora*: A direct object pronoun, typically excluded in contexts of bound variable anaphora, is compatible with bound variable anaphora in a WCO configuration, as an object experiencer, and in the complement of ‘only’.⁹
- c. *Embedded idioms*: A direct object pronoun, typically excluded in the presence of an embedded idiom, is compatible with reconstruction in the context of WCO.¹⁰

The examples below examine these three diagnostics across the three obligatory contexts, one diagnostic at a time: direct objects in free relatives, variable binding, and idiomatic interpretation.¹¹

Examples (28)–(31) compare ordinary free relatives and free relatives with obligatory pronouns in the three contexts. They show that the direct object resumptive is much more acceptable

⁸ All pronouns have this effect, as (i) shows.

(i) ze ha-baxur₁ še-ima šelo₁ dibra alav₁ / ito₁ / im ha-xavera šelo₁.
 this the-guy₁ that-mother his₁ talked about.him₁ / with.him₁ / with the-girlfriend his₁
 ‘This is the guy who his mother talked about him / with him / with his girlfriend.’

The obligatory pronouns in (i) are particularly interesting in this respect since syntactically, they inhabit the raising structure just as gaps do, so it does not appear that the repair of WCO is related to structure. Nor can a semantic property such as specificity be the decisive factor in the repair of WCO (see Falco 2007), since obligatory pronouns in NP/PP are no more necessarily specific than gaps (as shown in section 2.1). The WCO repair by a necessarily nonspecific pronoun in the free relative in (29) is particularly revealing in this respect (thanks to Valentina Bianchi (pers. comm.) for pointing this out). This suggests that phonological form is the crucial factor in WCO repair, and it supports an account of WCO along the lines of a parallelism condition, which requires the two variables to be realized in the same way, either as gaps or as pronouns (Safir 1984, 1996).

⁹ Recall that the discussion in section 2.1 left open the possibility that bound variable anaphora with an RC-internal quantifier may ultimately involve QR of the quantifier (with or without reconstruction of the RC head). The details of the analysis, however, are less important than the status of the pronoun, which is identical to its status in standard cases of reconstruction: a pronoun that is degraded in an ordinary context is much more acceptable in an obligatory context. I will argue in section 5 that extraction, in this case QR, is possible in the same raising structure that licenses reconstruction and is subject to (23). Either way, the bound variable test is diagnosing the raising RC, either because it involves reconstruction or because it involves QR.

¹⁰ The object idiom chunk diagnostic could not be applied to object experiencer objects or to objects in the complement of a focus particle. Focus on the RC head tends to restrict interpretation to the literal reading, regardless of the presence of the pronoun. An idiomatic object experiencer construction could not be found. If such an object idiom chunk exists, the idiomatic interpretation should allow direct object resumption.

¹¹ For some speakers, judgments were not always consistent. Perhaps this is to be expected given the unavoidable complexity of some of the examples. The inconsistency in judgments is hopefully controlled for, at least partially, by testing a single phenomenon in seven different ways.

in the free relative when it is obligatory. In (29), there is a WCO violation, repaired by the pronoun even when the first pronoun is replaced by an epithet (as in the discussion surrounding (25)–(26)). The acceptability of the obligatory direct object pronoun in free relatives is shown again in (30)–(31) for an object experiencer and the complement of ‘only’. The acceptability of (29)–(31) should be compared with the marginality of the pronoun in the simple context (28a).

I Free relatives

The simple context

- (28) a. mi še-at pogešet (??**oto**) be-hodu nišar xaver le-kol ha-xayim.
 who that-you meet him in-India remains friend to-all the-life
 ‘People you meet in India remain your friend for the rest of your life.’
 b. mi še-at ozeret ***(lo)** be-hodu nišar xaver le-kol ha-xayim.
 who that-you help to.him in-India remains friend to-all the-life
 ‘People you help in India remain your friend for the rest of your life.’

The WCO context

- (29) ze mi₁ še-basof hayiti crixá lehitkašer la-horim šelo₁ / šel ha-misken₁
 this who₁ that-in.the.end was needed to.phone to.the-parents his₁ / of the-poor₁
 ve-lesaper lahem še-ha-mora taxšil **oto**₁ / *t₁.
 and-to.tell them that-the-teacher would.fail him₁ / *t₁
 ‘This is who in the end I had to phone his / the poor guy’s parents and tell them that
 the teacher would fail him.’

Experiencer object

- (30) mi₂ še-[margiz **oto**₁ / *t₁ [še-[ha-harca’a be-anglit]]] še-yece.
 who₂ that-annoys him₁ / *t₁ that-the-lecture in-English that-should.leave
 ‘Whoever it annoys that the lecture is in English should leave.’

Complement of ‘only’

- (31) zot mi₁ še-zihiti rak **ota**₁ / *t₁ ba-tmuna.
 this who₁ that-identified.I only her₁ / *t₁ in.the-picture
 ‘This is who I identified only her in the picture.’

Given that free relatives necessarily inhabit the raising structure, the acceptability of these examples suggests that when the direct object is made obligatory, it can inhabit the raising structure like any other obligatory pronoun.

The following examples turn to bound variable anaphora in these three contexts, which exhibit obligatory direct object resumptives. Examples (32)–(35) compare variable binding in the ordinary context, where it is blocked by an optional direct object pronoun, with variable binding in the three contexts in which the pronoun is obligatory, and they show that variable binding is possible when the pronoun is obligatory. Examples (36)–(37) then show that reconstruction for idiomatic interpretation is more acceptable in the WCO context, where the pronoun is obligatory.

The obligatory pronouns in the WCO paradigm in (33), with variable binding, and in (37), with reconstruction for idiomatic interpretation, contain a new kind of example that requires some clarification. The (a) examples are provided as background for the WCO violations and their

repair, presented in the (b) and (c) examples, respectively. (33a) and (37a) introduce an RC that contains an additional covarying gap within an RC that is embedded within the subject, and the result is grammatical. These examples are constructed to require what seems to be reconstruction of the RC head into the two gap positions. These structures are, in effect, parasitic gap structures, since there is a parasitic gap within the subject RC. In these examples, the parasitic gap precedes the real gap, in anticipation of the WCO violations in (33b) and (37b), where the first gap is realized as a pronoun. The WCO violation encountered in (33b) and (37b) is repaired by a matrix pronoun in (33c) and (37c); hence, the pronoun here is obligatory. These are therefore the crucial examples, featuring an obligatory direct object pronoun in a WCO context. In these examples, the presence of the second pronoun restores grammaticality and reconstruction becomes available, in contrast to the simple cases (32) and (36), where reconstruction is blocked in the presence of the pronoun.¹² Example (34) shows reconstruction for variable binding with an obligatory object experiencer pronoun, in contrast, again, to the simple case in (32). Example (35) shows this for an obligatory direct object pronoun in the complement of ‘only’.

II Bound variable anaphora

The simple context

- (32) [ha-tmuna šel acmo₂]₁ še-[kol yeled₂ kibel t₁ / *ota₁] hudpesa be-šaxor lavan.
[the-picture of himself₂]₁ that-every child₂ got t₁ / *it₁ printed in-black white
‘The picture of himself that every child got was printed in black and white.’

The WCO context

- (33) a. [[ha-tmuna šel acmo₂]₁ še-[[kol yeled₂] še-t₂ baxar t₁] kibel t₁]
[the-picture of himself₂]₁ that-every child₂ that-t₂ chose t₁ got t₁
hudpesa be-šaxor lavan.
printed in-black white
‘The picture of himself that every child who chose got was printed in black and white.’
b. *[[ha-tmuna šel acmo₂]₁ še-[[kol yeled₂] še-t₂ baxar ota₁] kibel t₁]
[the-picture of himself₂]₁ that-every child₂ that-t₂ chose it₁ got t₁
hudpesa be-šaxor lavan.
printed in-black white
c. [[ha-tmuna šel acmo₂]₁ še-[[kol yeled₂] še-t₂ baxar ota₁] kibel ota₁]
[the-picture of himself₂]₁ that-every child₂ that-t₂ chose it₁ got it₁
hudpesa be-šaxor lavan.
printed in-black white
‘The picture of himself that every child who chose it got it, was printed in black and white.’

¹² A potentially important issue is how to derive reconstruction for the parasitic gap in the complement of ‘chose’ in (33). I will assume, following Chomsky (1986) and many others, that parasitic gaps are derived by movement, but that the moving constituent is a full copy, semantically equivalent to the antecedent of the real gap. This accounts for locality effects (Kayne 1983) and for reconstruction effects with parasitic gaps, and I assume that in (33c) and (37c) the pronoun realizes the tail of this chain.

Experiencer object

- (34) [xaver ha-yaldut šelo₂]₁ še-kol politikai₂ xašad še-ha-seret yargiz
 [friend the-childhood his₂]₁ that-every politician₂ suspected that-the-film will.annoy
oto₁ / ***t**₁ katav mixtav la-orex.
 him₁ / ***t**₁ wrote letter to.the-editor
 ‘The childhood friend of his who every politician suspected that the film would annoy
 wrote a letter to the editor.’

Complement of ‘only’

- (35) [[ha-tmuna šel acma₂]₁ še-kol yalda₂ baxra rak **ota**₁ / ***t**₁] hudpesa be-šaxor
 [the-picture of herself₂]₁ that-every girl₂ chose only it₁ / ***t**₁ printed in-black
 lavan.
 white
 ‘The picture of herself that every girl chose only it was printed in black and white.’

*III Reconstruction for idiomatic interpretation**The simple context*

- (36) ha-tik₁ še-tafru **t**₁ / #**oto**₁ la-sar ha-baxir haya kašur le-nadlan.
 the-case₁ that-sewed **t**₁ / #it₁ for.the-minister the-senior was related to-real.estate
 ‘The case that they pinned on the senior minister was related to real estate.’

The WCO context

- (37) a. [ha-tik₁ še-[ha-xokrim še-tafru **t**₁ la-sar] hexlitu litfor **t**₁
 the-case₁ that-the-investigators that-sewed **t**₁ for.the-minister decided to.sew **t**₁
 gam le-išto] hitbarer ke-kašur le-nadlan.
 also for-his.wife turned.out as-related to-real.estate
 ‘The case that the investigators who pinned on the minister decided to pin also
 on his wife turned out to be related to real estate.’
- b. *[ha-tik₁ še-[ha-xokrim še-tafru **oto**₁ la-sar] hexlitu litfor
 the-case₁ that-the-investigators that-sewed it₁ for.the-minister decided to.sew
t₁ gam le-išto] hitbarer ke-kašur le-nadlan.
t₁ also for-his.wife turned.out as-related to-real.estate
- c. [ha-tik₁ še-[ha-xokrim še-tafru **oto**₁ la-sar] hexlitu litfor
 the-case₁ that-the-investigators that-sewed it₁ for.the-minister decided to.sew
oto₁ gam le-išto] hitbarer ke-kašur le-nadlan.
 it₁ also for-his.wife turned.out as-related to-real.estate
 ‘The case that the investigators who pinned it on the minister decided to pin it
 also on his wife turned out to be related to real estate.’

The examples in (28)–(37) demonstrate the shift that the direct object pronoun undergoes in seven different ways, for three diagnostics, across three obligatory contexts. These results are summarized in table 2, where + indicates an observed shift from blocking interpretation of the lower copy to allowing it.

Table 2

Reconstruction effects observed for obligatory direct object pronouns

	Free relatives	Bound variable anaphora	Idiomatic readings
Weak crossover	+	+	+
Experiencer object	+	+	—
Complement of ‘only’	+	+	—

The consistent shift that the object pronoun undergoes in obligatory contexts suggests that competition with gaps plays a major role in determining the interpretation of the pronoun. In this respect, resumptive pronouns turn out to be surprisingly similar to ordinary pronouns. Whereas an ordinary pronoun may be treated as an anaphor in the absence of the corresponding anaphoric form (Pica 1984, Burzio 1991, Hornstein 2001, Safir 2004, Grolla 2005, Reuland 2011, Rooryck and Vanden Wyngaerd 2011), a resumptive pronoun may be interpreted like a gap when a gap would be ungrammatical. This is close to previous analyses of resumptive pronouns as “elsewhere” elements (Shlonsky 1992, Pesetsky 1998, McDaniel and Cowart 1999). It also has a strong affinity with approaches that acknowledge the shared “elsewhere” status of ordinary and resumptive pronouns and seek a unified treatment, such as those of Hornstein (2001) and Grolla (2005). All these approaches share the intuition that resumptives are used when gaps are impossible, but they focus on distribution and do not pay particular attention to interpretation. The present study shows that the “elsewhere” status of pronouns has systematic consequences for interpretation, and these interpretive effects bring the alternation further into the fold of known pronominal alternations, such as the pronoun/anaphor alternation or the overt subject/null subject alternation (Montalbetti 1984, Larson and Luján 1989). The similarity to ordinary pronouns also suggests that resumptive pronouns are not a grammatical primitive.

There are two things about competition and the principle in (23) that deserve further discussion. Following Chomsky (1993), the reference set—the set of derivations that qualify for competition—should include derivations with identical numerations, so if pronouns were lexical items, a competition between distinct derivations should not be possible. We have seen that the properties of the pronoun are completely determined by external factors: the existence of a gap alternative and the structure in which the pronoun occurs. This implies not only that there is no need for a lexicon to pair meaning and sound, but also, more strongly, that having a lexicon do anything beyond storing the morphophonological form of pronouns would be empirically wrong. If resumptive pronouns spell out pieces of structure, possibly because they are akin to agreement morphemes, the potential problem for transderivational competition and reference set computation becomes irrelevant: the resumptive competition is between distinct realizations of a single derivation and a single numeration.¹³

Once it is accepted that resumptive pronouns are not lexical items merged from a lexicon, another issue resolves itself. The preference for a gap, the less specified form, does not square

¹³ See Hornstein 2001 for similar reasoning and a related conclusion regarding the nonlexical status of pronouns, and Bianchi 2004 for a similar conclusion for different reasons.

with other known blocking effects, where the more specific item typically blocks the less specific one (Embick and Marantz 2008). If the competition in (23) is not among distinct lexical items, however, there is no *a priori* reason to expect it to conform to other blocking effects.¹⁴

3 Principle C and Head-External Relative Clauses

The contexts examined until now focus on the low copy and motivate the raising structure. In other contexts, such as potential Principle C violations, a high head-external copy must be interpreted, and these configurations motivate a head-external structure (Sauerland 1998, 2004, Bhatt 2002, Hulsey and Sauerland 2006). These two RC structures account for the behavior of the two classes of resumptive pronouns introduced in section 2. While obligatory pronouns, by hypothesis, may inhabit the raising structure, optional pronouns are confined to the head-external structure. The structural ambiguity hypothesis explains why it is that resumptive pronouns should differ in precisely this way, and in this respect, the typology of pronouns provides new support for the structural ambiguity of RCs.

As is well-known, RCs differ from questions when it comes to potential Principle C violations. Whereas *wh*-questions with a name in the *wh*-phrase violate Principle C and imply reconstruction, RCs with a name in a similar configuration can escape a Principle C violation.

- (38) a. *[Which picture of John₁]₂ does he₁ like t₂ best?
 b. Which is [[the picture of John₁]₂ that he₁ likes t₂ best]?

Contexts such as these suggest that alongside low copy interpretation, RCs must also have the option of interpreting a high head-external copy. Interpreted in this position, the name in (38b) is not bound and no violation ensues.¹⁵ Sauerland (1998, 2004) argues that all RCs have a low copy. Why doesn't the low copy in the head-external RC induce a Principle C violation? Following Safir (1999), Sauerland argues that when the external head includes a name, another mechanism can come into play to prevent the violation. The vehicle change operation originally proposed by Fiengo and May (1994) refers to a permitted discrepancy between an elided phrase and its antecedent. When the antecedent contains an R-expression, the elided phrase may contain a

¹⁴ See section 4 for the rationale for preferring gaps over pronouns.

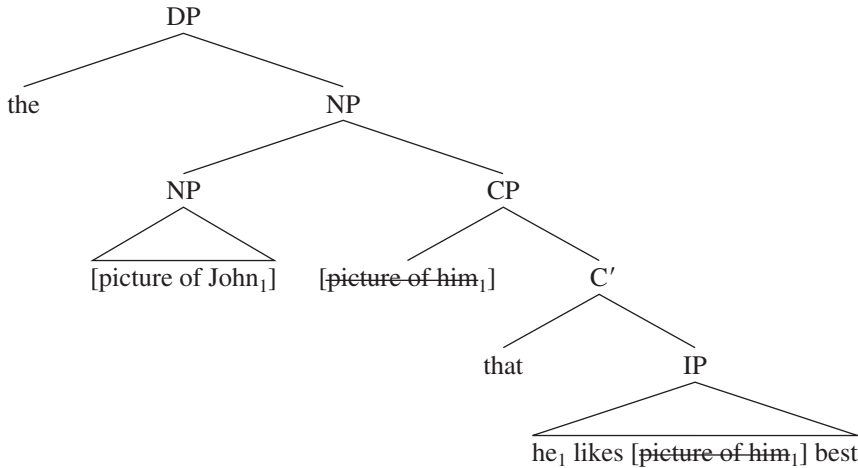
¹⁵ The head-external structure is not the only way to capture the lack of Principle C effects. Here I briefly mention two other possibilities. In Bianchi 2004, all restrictive relatives are derived by movement of the RC head. To block reconstruction for Principle C, Bianchi proposes that only referentially independent R-expressions count for Principle C, where referential independence is associated with R-expressions within the high, nonbound, copy. Given the movement derivation, this implies that the neutralization of a Principle C effect should coexist with reconstruction for anaphor binding, and (ia) should be fine alongside (ib). However, (ia) is degraded. See also the discussion in Sauerland 2003.

(i) a. *That's the picture of herself₁ with John₂ that she₁ reminded him₂ of.
 b. ?That's the picture of herself₁ with him₂ that she₁ reminded him₂ of.

Donati and Cecchetto (2011) propose a Late Merge approach to adjuncts within RC heads where Principle C effects are alleviated, whereby the constituent introducing the R-expression is merged directly into the head position. This leads to the expectation that reconstruction effects for material in the RC head (other than the nominal head itself) should never be observed, such as an anaphor bound by an RC-internal antecedent (example (4) above), since an anaphor would have to be merged in the base position. To the extent that such effects do exist, they must be due to some other mechanism. Section 5 provides an independent argument for the syntactic status of reconstruction in RCs; but see Heycock 2012 for the possibility that not all reconstruction effects in RCs have the same source.

pronominal bearing the same index, and this will circumvent a potential Principle C violation. Sauerland proposes that vehicle change is possible in a head-external RC because the copy within the RC is not a copy of the RC head, and for this reason semantic identity is sufficient. This is the matching structure depicted in (39), with movement within the RC and ellipsis of both RC-internal copies.

(39) *Matching structure*



The evidence that vehicle change, not absence of a low copy, is behind the circumvention of the violation, and that the low copy is present, comes from quantifiers, as in the secondary SCO contexts discovered in Postal 1993. Within adjuncts, quantifiers can escape the violation by being late-merged directly into the RC head (Safir 1999), but for a quantifier within a complement there is no escape: vehicle change is impossible, and late merger is not an option. This shows that in addition to the head-external copy, the low copy must be available for interpretation, as in the matching structure in (39).

- (40) a. *[Pictures of anyone₁] which he₁ displays prominently are likely to be attractive.
 b. [Pictures on anyone₁'s shelf] which he₁ displays prominently are likely to be attractive.

The basic Hebrew facts are no different from the English ones. A violation is observed when a name in the *wh*-phrase of a question is contained in a complement, but not when it is contained in the corresponding RC structure.

- (41) a. *[eyze tmuna šel dani₁]₂ hu₁ cilem t₂?
 which picture of Dani he photographed
 b. zot [ha-tmuna šel dani₁]₂ (še-rina amra) še-hu₁ cilem t₂ be-hodu.
 this the-picture of Dani that-Rina said that-he photographed in-India
 'This is the picture of Dani₁ that Rina said he₁ photographed in India.'

The grammaticality of (41b) implies a head-external RC structure. Optional and obligatory resumptive pronouns are similar to gaps in this respect.

- (42) zot [ha-tmuna šel dani₁]₂ (še-rina amra) še-hu₁ cilem **ota**₂ be-hodu.
 this the-picture of Dani that-Rina said that-he photographed it in-India
 'This is the picture of Dani₁ that he₁ photographed in India.'
- (43) zot [ha-yedida šel dani₁]₂ (še-rina amra) še-hu₁ higi'a ita₂.
 this the-friend of Dani that-Rina said that-he arrived with.**her**
 'This is the friend of Dani₁ that Rina said that he₁ arrived with.'

The similarity of gaps and optional pronouns in this context contrasts with the difference between them in contexts that require reconstruction, where a gap is possible and an optional pronoun is impossible. The pattern can be accounted for if RCs are structurally ambiguous along the lines suggested above: the raising structure may host gaps and obligatory pronouns, and the head-external structure may host gaps, obligatory pronouns, and optional pronouns. This is schematized in table 3. While (41)–(43) provide evidence for a head-external RC in Hebrew, they cannot discriminate among different versions of the head-external structure. Similarly, the behavior of the optional pronoun does not discriminate among the different versions. There are three versions to consider. First, there is the classic head-external structure, in which relativization is derived by operator movement (Chomsky 1977). In this structure, there is no low copy of the RC head, so pronouns in this structure would be incompatible with reconstruction, as desired. Second, there is the matching structure (39), proposed to replace the classic structure. Even though the structure contains a low copy, a pronoun in this structure would be incompatible with reconstruction because the high, head-external copy is necessarily interpreted. This implies that constructions that require interpretation of the low copy (anaphor binding with a low antecedent, embedded idiomatic interpretation, and amount readings) could not be hosted by this structure. Third, there is a simple ‘no frills’ head-external structure to consider. In this structure, schematized in (44), there is no movement and the pronoun is related to the RC head via binding (McCloskey 1990, Aoun, Choueiri, and Hornstein 2001, among others; I will refer to this as the *nonmovement RC*). This structure too would correctly exclude reconstruction, and pronouns

Table 3

The distribution of pronouns and gaps across relative clause structures I

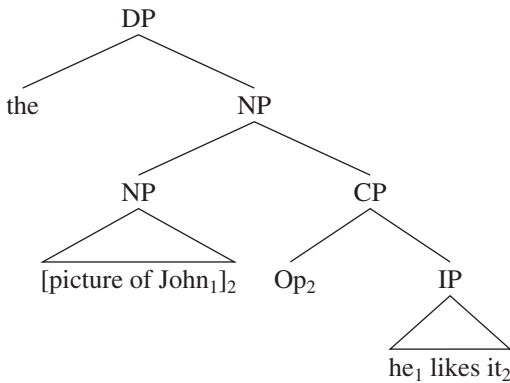
	Raising relative clause	Head-external relative clause
Gaps	+	+
Obligatory pronouns	+	+
Optional pronouns	–	+

Table 4
The typology of head-external structures

	Operator movement relative clause	Matching relative clause	Nonmovement relative clause
Reconstruction for Principle A, idiom interpretation, amount readings	–	–	–
Locality effects	+	+	–

confined to this structure would be incompatible with the constructions just mentioned. Table 4 summarizes the characterization of head-external structures.

(44) *Head-external nonmovement RC*



The behavior of pronouns provides no special reason to adopt the classic operator movement structure, and I assume, following Sauerland (1998, 2004) and Bhatt (2002), that when gaps inhabit a head-external structure, it is the matching structure (39). Since movement is involved, the matching structure is consistent with gap RCs obeying locality effects. Pronouns, on the other hand, may repair island violations (Borer 1984). Assuming the standard (non-PF) approach to island violations, pronouns must be allowed to occur in a nonmovement RC.¹⁶ I will therefore assume that all pronouns, obligatory and optional, may occupy the nonmovement RC. We then have the division in table 5 for gaps and pronouns across RC structures.¹⁷

¹⁶ See section 5 for discussion of resumptive pronouns that do not repair island violations.

¹⁷ In some languages, locality constraints are not observed in gap RCs, and the nonmovement head-external structure may host a gap, realized as *pro*. The conditions on null resumptive pronouns are not fully understood, and languages vary in this respect (see Cinque 1990, Postal 1994, 1998). Some languages have null resumptive pronouns pervasively (Irish, McCloskey 1990; Palauan, Georgopoulos 1985, 1991; Welsh, Tallerman 1983, Willis 2000; and Zurich German, Salzmann 2009; see Salzmann 2009 for discussion), whereas in Hebrew their distribution is covered by the null subject parameter.

Table 5

The distribution of pronouns and gaps across relative clause structures II

	Head-internal	Head-external	
	Raising	Matching	Nonmovement
Gaps	+	+	–
Obligatory pronouns	+	?	+
Optional pronouns	–	?	+

Table 5 leaves open the compatibility of pronouns with the matching structure. As discussed above, having pronouns inhabit the matching structure would be consistent with their reconstruction properties. However, a pronoun in this structure would incorrectly be associated with locality effects. This is not really a problem as long as the nonmovement RC is also available to host pronouns, since any violation incurred in the first structure would be repaired in the second structure. Given the facts considered so far, we simply cannot tell whether pronouns are compatible with this structure or not.¹⁸ For simplicity, I will assume that they are not, and that an optional pronoun is confined to a nonmovement head-external RC. With this in place, I turn to discuss the nature of competition in RCs.

4 Competition in Relative Clauses

We have seen so far that raising structures exclude optional pronouns but head-external RCs do not. This raises an obvious question regarding the scope of competition in RCs: why should the raising structure be subject to competition, while the head-external structure is not? Another question has to do with the property for which gaps and pronouns are competing: what is this property, and why do gaps win?

¹⁸ The secondary SCO paradigm developed in Safir 1999 might give us a handle on this question, at least partially. As discussed above, quantifiers are used in order to force the activation of the low copy, and a quantifier within a complement produces a violation, as in (40). Examples (i) and (ii) adapt Safir's paradigm to Hebrew, with a quantifier in a complement in (i) and in an adjunct in (ii); the English equivalent of (i) violates secondary SCO and is degraded. The prediction for resumptives is the following. If (i) is improved in the presence of a pronoun, the pronoun must be inhabiting the nonmovement structure; if the pronoun version is equivalent to the gap version, the pronoun must not have access to an RC that lacks a low copy, and must be inhabiting the matching structure.

- (i) [[ha-tmuna šel kol xayal]₁ še-hu₁ macig t₂ le-ra'ava] culma ba-krav.
the-picture of every soldier that-he displays prominently photographed in.the-battle
'The picture of every soldier that he displays prominently was photographed on the battlefield.'
- (ii) [[ha-tmuna ba-xeder šel kol xayal]₁ še-hu₁ macig t₂ le-ra'ava] culma ba-krav.
the-picture in.the-room of every soldier that-he displays prominently was.photographed in.the-battle
'The picture in the room of every soldier that he displays prominently was photographed on the battlefield.'

The judgments for the gap versions were not clear enough, and speakers did not agree that the adjunct structure in (ii) was better than the complement structure in (i). It is possible that had more speakers been consulted, a clearer picture would have emerged. I leave this as an open question.

If optional pronouns are only possible in a nonmovement head-external structure, then competition must be limited to RCs created by movement. It is \bar{A} -movement chains, specifically, that are subject to the principle that prefers gaps over pronouns whenever possible.¹⁹ If the other structure is not derived by movement, then there will be no null copy to prefer over a pronoun, since the null counterpart, when it exists, can only be a null pronominal (see footnote 17). This way of restricting the scope of the competition principle delivers a simple and natural account of the absence of reconstruction effects in the presence of optional pronouns.²⁰

I now turn to the second question, regarding the property that gaps and pronouns compete for. Recall the principle in (23), repeated here.

- (45) The tail of the chain in the raising structure is realized as a null copy when possible;
a pronoun is possible only if a null copy is impossible.

The rationale for (45) can be understood in structural terms. I assume that the null copy and the pronoun are part of a richer typology that may also include weak and strong pronominals in languages that have this distinction. These forms are arranged on a scale.²¹

- (46) gap > clitic / weak pronoun > strong pronouns

The preference for the weakest form recalls Cardinaletti and Starke's (1999) Minimize Structure. Cardinaletti and Starke propose this principle to regulate the choice of pronominal form in a given sentence. Clitics, weak pronouns, and strong pronouns are characterized structurally and incrementally, such that the structure of a clitic (an IP-like projection) is included in the structure of a weak pronoun (a ΣP -like projection), which is included in the structure of a strong pronoun (a CP-like projection).²²

- (47) Strong pronoun: [CP ... [ΣP ... [IP ...
Weak pronoun: [ΣP ... [IP ...
Clitic: [IP ...

Cardinaletti and Starke propose Minimize Structure to block strong pronouns in contexts in which weak pronouns are possible, similar to the way in which pronouns are excluded in the raising structure when gaps are possible. If this kind of approach is correct, it implies that gaps are preferred not because of the accompanying silence, but because a null copy of movement would be even smaller than a clitic, possibly just an NP/nP projection. This is consistent with the claim

¹⁹ This does not imply that only \bar{A} -chains are subject to competition. It is conceivable that the *pro* / overt pronoun alternation in null subject languages discussed in Montalbetti 1984 and Larson and Luján 1989 is directly related to the alternation in RCs, and that these all hark back to the Avoid Pronoun Principle in Chomsky 1982. See also Hornstein 2001.

²⁰ If it turned out that optional pronouns could inhabit the matching structure, the restriction would have to be stated differently, not simply in terms of movement, so as to include raising and exclude matching.

²¹ This suggestion is based on a related competition observed in Jordanian Arabic, discussed in Malkawi 2009. Jordanian Arabic has a richer pronominal typology that includes clitics and stronger pronominal forms, and this highlights the preference for the weakest form available, possibly a weak pronoun, rather than an absolute preference for a gap. See Malkawi 2009 for further discussion.

²² CP, ΣP , and IP are arbitrary labels for projections of sequential functional heads in the extended DP, with no implications for the content of these projections.

made in Kayne 1994 and later work about the reduced size of the raising constituent in RCs (less than a full DP) and, more generally, with the idea that reconstruction in \bar{A} -chains is partial reconstruction, excluding the higher projections that bear determiners and quantifiers (Sauerland 1998, Fox 1999).²³ I now turn to a new and independent argument for the structural ambiguity of RCs.

5 Extraction Asymmetries

Under certain conditions, extraction is possible from a raising RC, and this is reflected in the distribution of pronouns. In addition to the interpretive asymmetry discussed in section 2, Doron (1982) reveals an asymmetry between gaps and direct object pronouns with respect to overt extraction from an RC: an RC realized with a gap allows extraction, and an RC resumed by a direct object pronoun blocks extraction. The phenomenon refers to extraction of a constituent, in addition to the relativized constituent, and resumption refers to the chain that forms the RC, not to the chain formed by extracting from the RC. In other words, a resumed RC is an island for extraction, whereas the corresponding nonresumed RC is not, as schematized in (48).

- (48) a. $XP_2 \dots [_{RC} NP_1 \dots t_1 \dots t_2]$
 b. $*XP_2 \dots [_{RC} NP_1 \dots \text{pronoun}_1 \dots t_2]$

I show that in this respect as well, obligatory pronouns pattern with gaps, and I will argue that under certain conditions, raising RCs allow extraction. This is signaled by the distribution of pronouns. The reconstruction pattern and the extraction pattern reveal a striking correlation: pronouns that block reconstruction also block extraction, and pronouns that allow reconstruction also allow extraction. This suggests a common source for reconstruction and extraction. Since extraction is purely syntactic, the correlation supports the syntactic analysis of reconstruction and the structural ambiguity of relative clauses.²⁴ Conversely, if reconstruction is syntactic, it requires

²³ Another possibility would be to block strong pronouns in these contexts by means of Minimize Pronunciation, along the lines of Pesetsky 1998. I will not choose between the two, and will restrict the discussion to showing that *some* account is conceivable. See Salzmann 2009 for criticism of the idea that phonetic content underlies the preference for gaps over resumptive pronouns.

²⁴ Heycock (2012) calls into question the syntactic status of reconstruction in RCs. Heycock argues that low readings of superlatives and ordinals (Bhatt 2002) are limited to Neg-raising contexts, suggesting that the effect is not syntactic. She also shows that Principle C does not always correlate with other reconstruction effects, such as reconstruction for idiomatic interpretation or scope reconstruction. Assuming that reconstruction for Principle C is necessarily syntactic, this suggests that these other effects may not be. Heycock also suggests that where reconstruction effects for Principle C do appear to be present, in (ia) (from Sauerland 2003:214, (24a)) and in (ib) (from Bhatt and Iatridou 2012:8, (29a)), it is only because the R-expression can be construed as coindexed with a null PRO agent, within the RC head. The source of the violation is null PRO, not the embedded pronoun.

- (i) a. *This represents the only headway on Lucy₁'s problem that she₁ made.
 b. *The five stories about Diana₁ that she₁ wants to invent are five too many for any self-respecting journalist.

For the argument to be complete, these examples should be compared with cases in which the embedded predicate does not allow a coindexed construal of a local PRO. For example, (iia) should be acceptable, and so should (iii), under the reading *need > many* (Sauerland 2003).

- (ii) a. ??Smoking is a habit of Lucy₁'s that she₁ can't kick.
 b. Smoking is a habit of hers₁ that Lucy₁ can't kick.
 (iii) *The many books for Gina₁'s vet school that she₁ needs will be expensive.

the raising structure, and this implies that extraction, when possible, is launched from a raising RC.

Under certain conditions, Hebrew RCs allow extraction. In the following examples, the direct object is relativized, and a PP argument of the embedded predicate is topicalized. This is schematized in (49d), abstracting away from the particulars of the RC structure.

- (49) a. me-ha-sifria hazot₂, od lo macati [sefer₁] še-kedai PRO le-haš'il t₁ t₂.
 from-the-library this yet NEG found book that-worth to-borrow
 'From this library, I haven't yet found a book that's worth borrowing.'
 b. ba-mis'ada hazot₂, šamati rak al [kinuax exad]₁ še-kedai le-hazmin t₁ t₂.
 in.the-restaurant this heard.I only on dessert one that-good to-order
 'In this restaurant, I heard only about one dessert that's good to order.'
 c. al lexem šaxor₂, ani makira rak [gvina levana axat]₁ še-efšar limroax t₁ t₂.
 on bread black I know only cheese white one that-possible to.spread
 'On black bread, I know only one white cheese that it is possible to spread.'
 d. PP₂ . . . V [DP . . . NP₁ [. . . V t₁ t₂]]

The extractions in (49) are somewhat surprising since RCs are supposed to be islands for extraction (Ross 1967, Chomsky 1986). Hebrew, however, is not alone in this respect; extraction from RCs in the Scandinavian languages has been discussed extensively (Erteschik-Shir 1973, 1982, 1997, Erteschik and Lappin 1979, Engdahl 1980, 1982, 1998, Taraldsen 1981, 1982) and has recently been observed in Romance languages as well (Cinque 2010).²⁵ In contrast to a gap, a direct object resumptive blocks overt extraction from the RC that it resumes (Doron 1982).²⁶

- (50) a. *me-ha-sifria hazot₂, od lo macati [sefer₁] še-kedai le-haš'il **oto**₁ t₂.
 from-the-library this yet NEG found book that-worth to-borrow it
 b. *ba-mis'ada hazot₂, šamati rak al [kinuax exad]₁ še-kedai le-hazmin
 in.the-restaurant this heard.I only on dessert one that-good to-order
oto₁ t₂.
 it
 c. *al lexem šaxor₂, ani makira rak [gvina axat]₁ še-kedai limroax **ota**₁ t₂.
 on bread black I know only cheese one that-worth to.spread it
 d. *PP₂ . . . V [DP . . . NP₁ [. . . V it₁ t₂]]

²⁵ Extraction from RCs is also observed in English (see Kuno 1976, McCawley 1981, Chomsky 1982, Chung and McCloskey 1983, Kush, Omaki, and Hornstein 2013). See also Hulsey and Sauerland 2006 and Heim 2012 for QR from an RC and for the claim that RCs are not scope islands.

²⁶ It is sometimes suggested that resumptive pronouns reduce the processing complexity associated with movement (Keenan and Comrie 1977, Wanner and Maratsos 1978, Maling and Zaenen 1982, Hawkins 1999). Facts such as (49) and (50), in which the gap version is grammatical and the pronoun version is ungrammatical, suggest that this cannot be generally true.

These examples show that the pronoun that blocks reconstruction also blocks extraction of another constituent from the RC whose head it resumes.²⁷ If reconstruction and extraction are truly related, we expect resumptives in PP/NP to behave like gaps, and not like other pronouns. Extraction should be possible, and it is. In the following examples, the DP within one PP is relativized, producing an obligatory pronoun within PP, boldfaced in (51a–b). The other PP is extracted.²⁸

- (51) a. im ha-balšan haze₂ od lo macati [be'aya₁ [PRO le-daber t₂ aleya₁]].
 with the-linguist this yet NEG found problem to-talk about.**it**
 'With this linguist, I haven't yet found a problem to talk about.'
 b. ?al ha-be'aya hazot₂ od lo macati [taxbiran₁ PRO le-daber ito₁ t₂].
 about the-problem this yet NEG found syntactician to-talk with.**him**
 'About this problem, I haven't yet found a syntactician to talk to.'

The behavior of obligatory pronouns within PPs shows that there is a full correlation between reconstruction and extraction. Optional pronouns block reconstruction and block extraction, and now we see that obligatory pronouns allow reconstruction and allow extraction. This strongly suggests that the possibility of reconstructing the RC head and the possibility of extracting another constituent are related, as suggested originally in Doron 1982 (see Aoun and Benmamoun 1998 for a related correlation). With a few more details in place, it may also imply that reconstruction in RCs is syntactic, as in the raising analysis of RCs. In section 5.1, I argue that the fronted PP in (49) and (51) is the result of actual movement, and in section 5.2, I present independent evidence for the claim that the structural source for extraction is a raising RC.

²⁷ These examples improve when the topicalization chain is itself resumed, as in (i), for (50a). This may be because resumption in topicalization does not involve movement, on a par with resumptive pronouns in head-external RC structures.

- (i) ha-sifria hazot₂ od lo macati [sefer exad₁ [še-kedai [PRO le-haš'il **oto**₁ mimena₂]]].
 the-library this yet NEG found book one that-worth to-borrow it from.**it**
 'This library, I haven't yet found a single book that's worth borrowing it from it.'

However, the presence of the pronoun doesn't seem to block reconstruction. The examples in (ii) and (iii) compare nonresumed and resumed topicalizations for idiomatic readings.

- (ii) me-ha-ec haze kaše lo laredet.
 from-the-tree that difficult to.him to.descend
 'It will be difficult for him to give up his position.'
 (iii) ha-ec haze, kaše lo laredet mimeno.
 the-tree that difficult to.him to.descend from.**it**
 'It will be difficult for him to give up his position.'

I leave open the interaction of movement, pied-piping, resumption, and reconstruction in topicalization.

²⁸ Some speakers report a minor degradation in (51b). This is likely to be due to the relative height of the two PPs within VP and to constraints on the interaction of the two chains (Pesetsky 1982, Richards 2001, Fox and Pesetsky 2004).

5.1 The Nature of the Fronting Operation

There are two alternatives to the movement analysis to consider. First, the PP may be base-generated in initial position, from where it \bar{A} -binds a *pro* in argument position, along lines proposed by Cinque (1990). Cinque argues that a number of constructions commonly considered to be derived by *wh*-movement do not involve a movement chain: parasitic gaps, complement object deletion constructions, and also the gaps in what he calls “apparent extraction from islands,” from an adjunct island (Cinque 1990:98, (1)) and from an RC island (Chomsky 1986). Cinque demonstrates that these constructions are more selective than standard *wh*-movement constructions in a number of respects. Among other restrictions, only a DP is allowed at the head of the chain. PP-extraction from an RC island, for example, is impossible in Italian, but DP-extraction is perfectly acceptable (from Cinque 1990:103, (19)).

- (52) a. I Rossi, che dubito ci sia qualcuno disposto a rivedere
 the Rossis who I doubt there is anybody willing to see again
 dopo quanto è successo . . .
 after what happened
- b. *I Rossi, in cui dubito ci sia qualcuno disposto a confidare,
 the Rossis in whom I doubt there is anyone willing to confide
 dopo quanto è successo . . .
 after what happened

Cinque proposes that the empty category in (52a) is an \bar{A} -bound null pronoun, not a trace, since a null pronominal is necessarily a DP. If a gap in this context can only be a null pronominal, this can explain why PP-relativization in (52b) is ungrammatical. Since the RCs in (49) and (51) all involve fronted PPs, they would not count as “apparent island violations” in this sense.²⁹

Second, the initial PP may be part of the matrix IP, either as a direct dependent of the matrix predicate by virtue of an “aboutness” relation (e.g., Davies 2005, Landau 2009, Gallego 2010) or as an ordinary argument of the matrix predicate. An aboutness relation is exemplified by the *about*-phrase in the English proleptic construction in (53) (see Davies 2005).

- (53) I believe about John that he is my best friend.

An analysis of (49) and (51) along these lines is highly unlikely since the matrix predicate need not denote an activity or event that is “about” anything. While saying, proving, thinking, or regretting can be about an entity, finding *x* or being familiar with *x* are not about anything. The main predicate in (49b) is ‘hear’, which can certainly be about something, but in this example the fronted constituent ‘in this restaurant’ is a locative, so it is not compatible with an ‘aboutness’

²⁹ Extraction of DP in Hebrew is acceptable, as in Italian.

(i) elu ha-anašim še-ani be-safek im yeš mišehu še-muxan lifgoš ____ šuv axrey ma še-kara.
 these the-people that-I in-doubt if is someone that-willing to.meet again after what that-happened
 ‘These are the people who I doubt there is anybody who would be willing to meet again after what
 happened.’

interpretation. Conversely, the fronted constituent in (51b) contains a locative preposition that in this context does denote the meaning of ‘about’, but it cannot be construed as a matrix dependent, since the matrix predicate ‘find’ cannot be about anything. Therefore, it does not look like these initial PPs stand in an ‘‘aboutness’’ relation to the matrix clause. The other option, in which PP is an ordinary argument of the matrix predicate, is not very likely either, given the particular combinations of locative prepositions and matrix predicates. Furthermore, an idiomatic interpretation of the fronted PP seems to be available, where the fronted PP is construed as an idiom chunk associated with the embedded predicate. This too suggests a movement chain.

- (54) me-ec ka-ze gavoha, lo xaserim anašim še-lo yed’u eix la-redet ____.
 from-tree so high NEG lacking people that-NEG know how to-come.down
 ‘There’s no shortage of people who wouldn’t know how to come down from a
 position that high.’

Therefore, the sentence-initial position of the PP in (49) and (51) seems to be derived by movement, and RCs do seem to allow extraction under certain conditions. Some of these conditions are discussed next.

5.2 *Some Conditions on Extraction from Relative Clauses*

If the analysis of the correlation with reconstruction is on the right track, extraction is launched from a raising RC. The hypothesis under consideration is that the factor that distinguishes the grammatical extractions in (49) from the ungrammatical ones in (50) is the choice between a raising structure and a head-external one. This account appeals to structure, and the effect of the pronoun is only indirect, mediated by the mapping of pronouns to RC structure. There is a potential nonstructural alternative that would appeal directly to the semantic contribution of the pronoun, sketched briefly in the next paragraph. The argument developed below is constructed to show that extraction possibilities are independent of the presence of pronouns.

A direct appeal to the presence of the pronoun could capitalize on the fact that in the acceptable extractions in (49), the RC appears in an existential, or narrow scope, environment. This requirement is not well-understood, but it seems to be closely related to a similar constraint on extraction from simple, nonrelative DPs (Erteschik-Shir 1973, 1981, Fiengo and Higginbotham 1981, Dubinsky and Davies 2003, among many others).³⁰ Recall from example (3) that the optional

³⁰ The conditions under which a sentence can denote an existential statement are complex, and they rely heavily on context and information structure (Erteschik-Shir 1973, 1982, 1997, Engdahl 1998, Rubovitz-Mann 2000). The existential nature of the DP can also be seen in English ((ia–b) are from Kuno 1976:423).

- (i) a. Then you look at what happens in languages that you know and languages₁ that you have [a friend who knows t₁].
 b. This is the child₁ that there is [nobody who is willing to accept t₁].

A better understanding of the existential restriction awaits further study. In keeping with the restriction to raising RCs, a syntactic implementation could appeal to the theory of islands. The requirement for an existential might fall into place if raised DPs are islands for extraction, but DPs in situ are not (Uriagereka 1988, 1999, Diesing 1992, Stepanov 2007, Boeckx 2012), combined with the idea that existential DPs remain in situ and nonexistentials are always raised, possibly covertly (Diesing 1992). See Sichel 2014 for further discussion.

direct object pronoun forces the *de re* reading of the RC head. Combining this fact with the existential requirement on extraction, it could be claimed that the pronoun blocks extraction because it induces specificity, and as a result the requirement for an existential context is no longer met. This alternative semantic account would assimilate direct object pronouns to the ingredients of specificity or definiteness that block extraction from a simple DP in English.

- (55) a. Who₁ did you hear [DP jokes about t₁]?
 b. *Who₁ did you hear [DP_[+specific] those silly jokes about t₁]?
 c. *... wh₁ [DP_[+specific] ... NP₂ ... it₂ ... t₁]

The examples below are constructed to tease structural considerations apart from factors related to the semantics of the pronoun, such as specificity, by showing that extraction is impossible from a head-external structure even when there is no resumptive pronoun and the RC could not be said to be specific.

In order to establish that extraction requires the raising structure, we need to show that it is impossible to extract when the RC is clearly head-external and does not contain a pronoun. The head-external structure can be forced by a potential Principle C violation, or by having an anaphor in the RC head that must be bound from a position in the matrix clause. The following examples are constructed to support extraction from an unambiguous head-external structure. First, the RCs are all narrow-scope existential. Second, the examples have PP as the extracted constituent (Cinque 1990). The discourses in (56) provide contexts for existential head-external RCs, with either an R-expression in the RC head (B's response in (56a)) or an anaphor bound from the matrix clause (B's response in (56b)).

- (56) a. A: šamati še-dani₁ sone et kol tmunot ha-bar micva šelo₁.
 heard.I that-Dani hates ACC all pictures the-bar mitzvah his
 'I heard that Dani hates all his bar mitzvah pictures.'
 B: lo, yeš kama tmunot bar micva šel dani₁ še-hu₁ lakax mi-doda šelo₁.
 NEG is few pictures bar mitzvah of Dani that-he took from-aunt his
 'No, there are a few bar mitzvah pictures of Dani that he took from his aunt.'
 b. A: šamati še-dani₁ hexbi et kol ha-tmunot šel miri še-hu₁ cilem.
 heard.I that-Dani hid ACC all the-pictures of Miri that-he photographed
 'I heard that Dani hid all the pictures of Miri that he photographed.'
 B: naxon, ein la₁ af tmuna šel acma₁ še-dani cilem.
 true NEG to.her no picture of herself that-Dani photographed
 'True, she doesn't have any picture of herself that Dani photographed.'

The following examples test extraction. A context with a potential Principle C violation is given in (57a), and a context with matrix binding in (58a). Extraction is impossible in both of them, in contrast to the grammatical extractions where an external head RC is not forced, such as (57b), with a pronoun in the RC head, or (58b), where the antecedent is embedded and reconstruction is forced.

- (57) a. *me-ha-doda hazot₃, yeš [kama tmunot bar micva šel dani₁]₂ še-hu₁
 from-the-aunt this is few pictures bar mitzvah of Dani that-he
 lakax t₂ t₃.
 took
 ‘From this aunt, there are a few bar mitzvah pictures of Dani that he took.’
- b. me-ha-doda hazot₃, yeš [kama tmunot bar micva šelo₁]₂ še-hu₁
 from-the-aunt this be few pictures bar mitzvah his that-he
 lakax t₂ t₃.
 took
 ‘From this aunt, there are a few bar mitzvah pictures of his that he took.’
- (58) a. *al kir ba-maxlaka₃, yeš lo₁ rak [tmuna axat šel acmo₁]₂ še-ani
 on wall in.the-department is to.him only picture one of himself that-I
 muxana litlot t₂ t₃.
 willing to.hang
 ‘On a wall in the department, he has only one picture of himself that I am willing
 to hang.’
- b. al kir ba-maxlaka₃, yeš rak [tmuna axat šel acmo₁]₂ še-hu₁ muxan
 on wall in.the-department is only picture one of himself that-he willing
 litlot t₂ t₃.
 to.hang
 ‘On a wall in the department, there is only one picture of himself that he is
 willing to hang.’

When the RC head is necessarily interpreted in its surface position, extraction from the RC is not possible, and conversely, when the RC head is interpreted within the RC, extraction *is* possible. This is further demonstrated with free relatives, whose head is necessarily interpreted within the RC (see section 2.1). Grosu and Landman (1998) observe that free relatives are similar to embedded questions in allowing extraction (in some languages). Romanian allows extraction from an embedded question and from a free relative (Grosu and Landman 1998). In Hebrew, too, it is possible to extract from an embedded question (Reinhart 1981, Preminger 2010) and from a free relative.

- (59) a. al ma at lo yoda’at [im mi [efšar le-daber]?
 about what you NEG know with who possible to-talk
 ‘What don’t you know with whom it is possible to talk about?’
- b. al ma ein lax [im mi le-daber]?
 about what NEG.be you with who to-talk
 ‘What don’t you have with whom to talk about?’

These examples suggest that it is possible to extract from an RC only if the head is interpreted within the RC. Why should the interpretation of the RC head have this effect on extraction?

While space limitations preclude development of a fuller analysis, these examples provide the foundations for an account in which extraction is facilitated by the same kind of structural conditions that give rise to reconstruction. Given the similarity of raising RCs to embedded questions, and the possibility for selective extraction from embedded questions, in some languages and under certain conditions, it is perhaps not so surprising that extraction from RCs should sometimes be permitted as well, in some languages and under certain conditions. The abstractness of the requirement for a raising RC, and the very specific conditions that must be in place to enforce it, may explain why the systematic possibility for extraction from an RC has not been fully acknowledged until now.³¹

The conclusion is based on contrasts that are completely independent of resumptive pronouns, showing that the effect of the pronoun on extraction is only indirect, mediated by the structure the pronoun inhabits: optional pronouns are confined to an externally headed RC, so the presence of an optional pronoun will necessarily be correlated with blocked extraction.³² The restriction of extraction to the raising structure provides evidence of an entirely new sort for the structural ambiguity of RCs. Since extraction is purely syntactic, and reconstruction is observed under similar conditions, it follows that RC reconstruction is similarly syntactic, derived by movement.

Before I conclude this section, it is important to address one of the strongest objections to a movement analysis of reconstruction with resumptive pronouns. The objection is based on the expectation that pronouns that are compatible with reconstruction should exhibit sensitivity to islands (Salzmann 2009, Rouveret 2011, Asudeh 2012). The objection is certainly justified. It seems, however, to overlook variation in the resumptive typology: there are pronouns that are sensitive to islands, as in Swedish (Engdahl 1980), Vata (Koopman 1984), and Welsh (Tallerman 1983, Rouveret 1994), and there are pronouns that are not sensitive to islands, in Hebrew, Irish, and other languages. It is only pronouns of the latter type that challenge the movement analysis of resumptive pronouns. On the analysis developed above, the latter type are confined to the head-external structure and do not involve movement. The prediction regarding sensitivity to islands is therefore more fine-grained: resumptive pronouns generated by movement should be sensitive to islands, but resumptive pronouns that do not exhibit reconstruction effects are not derived by movement and are not expected to be sensitive to islands and locality.

³¹ This conclusion meshes with the observations in Cinque 2010 about extraction and the choice of complementizer. Crosslinguistically, extraction from RCs is more widespread than previously acknowledged, and Cinque proposes that it is possible only when the relative is introduced by an element that also introduces other clause types (*che/que* in Italian, Spanish, and French, and *som/sem* in Scandinavian), and not by the ordinary element that introduces relatives. It is tempting to recast Cinque's generalization in structural terms: the RC that resembles other *wh*-chains is the raising RC, and "ordinary" RCs are externally headed.

³² The paradigm does not completely exclude a more subtle semantic alternative of the kind proposed by Bianchi (2004), where the two RC structures are raising structures, individuated semantically: nonspecific versus specific RCs. Since in that model Principle C effects are neutralized in a raising RC with a specific head, the extraction contrasts in (57) could be derived directly from the specificity of the RC, without external headedness. This is a subtle difference, but there are still good reasons for preferring a head-external structure: (a) the contrast in (58) would be left unexplained; (b) the [+specific] raising structure predicts reconstruction effects for Principle A to coincide with the absence of Principle C effects, but this is not attested (see footnote 15); (c) a head-external nonmovement structure can provide a natural account of pronoun variation with respect to island sensitivity. See immediately below in the text for discussion.

Testing this prediction is not easy, since the locality sensitivity of movement-derived pronouns can be masked by the availability of a nonmovement structure. This is the situation typically encountered in Hebrew, for example, where obligatory pronouns in PP/NP can be generated either in the raising structure, where locality effects are expected, or in the head-external structure, where locality effects are not expected (recall table 4 and the discussion of head-external structures in section 3). Therefore, when both structures are available, sensitivity to locality is not observed. It is possible, though, that some languages do not have access to the head-external structure. This may well be the situation in Welsh, a language in which Principle C violations are observed in the presence of resumptives (Rouveret 2011), suggesting the absence of a head-external structure, with consequences for locality.³³ The prediction can also be tested in languages of the Irish/Hebrew type, if care is taken to select an unambiguous raising relative, such as a free relative or an amount relative. Borer (1984) shows that resumptive pronouns in free relatives, in contrast to ordinary relatives, are sensitive to islands. The examples in (60) contain a pronoun in a PP within a complex NP island, and they compare a free relative (60a) with a pronoun in an ordinary relative (60b) (example (41) in Borer 1984). The amount relative in (61) shows the same thing. The context is an election campaign, where what matters are numbers, not any particular people. The example in (61b) contains an amount relative with a complex NP island, and again it is degraded.

- (60) a. *ze ma₁ še-pagašti et ha-iš₂ še-t₂ hexlit alav₁.
 this what that-met.I ACC the-man that decided on.it
 b. raiti et ha-yeled₁ še-dalya makira et ha-iša₂ še-t₂ xašva alav₁.
 saw.I ACC the-boy that-Dalya knows ACC the-woman that thought on.him
 'I saw the boy who Dalya knows the woman who thought about him.'
- (61) a. mad'igim otanu ha-alpayim tomxim₁ še-menahel ha-kampein muxan
 worry.PL us the-two.thousand supporters that-head the-campaign willing
 levater aleyhem₁ be-yerušalayim.
 to.give.up on.them in-Jerusalem
 'We are worried about the two thousand supporters who the head of the
 campaign is willing to give up on in Jerusalem.'
 b. ??mad'igim otanu ha-alpayim tomxim₁ še-dibarnu im menahel
 worry.PL us the-two.thousand supporters that-we.talked with head
 ha-kampein še-muxan levater aleyhem₁ be-yerušalayim.
 the-campaign that-willing to.give.up on.them in-Jerusalem
 'We are worried about the two thousand supporters who we spoke with the
 head of the campaign who is willing to give up on in Jerusalem.'

When care is taken to isolate RCs that do not have a head-external analysis, the island sensitivity of resumptive pronouns rears its head. This is exactly what is expected on the analysis

³³ Rouveret (2011) notes that of the two complementizers found in Irish, one corresponding to movement relatives and one to base-generated relatives, Welsh has only the former.

according to which Universal Grammar makes available more than one structure for RCs. Without the structural ambiguity of RCs, it is difficult to see how selective island sensitivity could even be accounted for.

6 Conclusions and Questions

Until now, the basis for the “elsewhere” analysis of resumptive pronouns has been the observation that pronouns can be used where gaps would be impossible. The conclusions from this article add an interpretive dimension: the interpretation of a pronoun is the same as the interpretation of the gap would have been were it not ungrammatical. The existence of resumptive pronouns that are not interpreted like gaps presents particularly strong evidence for the “elsewhere” view: *only* when a gap is impossible can a pronoun be used in this way.

The article also reveals a correlation between reconstruction and extraction from RCs. On the basis of the purely syntactic status of extraction, I have argued that RCs are ambiguous between a raising derivation and a head-external derivation, that reconstruction is syntactic, and that it relies on the copy theory of movement as realized in the raising structure. The syntactic analysis of reconstruction effects is also independently supported by the typology of resumptive pronouns. Since there is no related semantic division for ordinary pronouns, it is difficult to see what other source this division could have.

The view of resumptive pronouns emerging from this article is remarkably close to the current understanding of ordinary pronouns and Principle B effects. Recent attempts to dissolve the binding theory have turned to theories of competition to derive Principle B and complementarity with anaphors (Hornstein 2001, Safir 2004, Reuland 2011, Rooryck and Vanden Wyngaerd 2011). Some of the strongest evidence in that domain comes from the observation that a pronoun may take on anaphoric properties when an anaphor is unavailable (Pica 1984, Burzio 1991, and many others). Here we have seen that when gaps are unavailable, resumptive pronouns may take on the interpretive properties typically associated with gaps. While resumptive pronouns certainly have special properties that distinguish them from ordinary pronouns, these special properties are due to the RC context in which they occur. This is expected if resumptive pronouns are just pronouns.

If its properties derive from external factors, it is unlikely that a resumptive pronoun is a lexical item merged from the (traditional) lexicon. A better understanding of the nonlexical nature of resumptive pronouns and how exactly they emerge in the course of the derivation should ultimately also shed more light on the source of distributional differences—on what makes some pronouns obligatory and others optional.

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