Anatomy of a Counterexample: Extraction from relative clauses

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Abstract

Relative clauses (henceforth RCs) are considered islands for extraction, yet acceptable

cases of overt extraction from RC have been attested over the years in a variety of

languages: Danish, Swedish, Norwegian, Japanese, Hebrew, English, Italian, Spanish,

French (Erteschik-Shir 1973, 1982, Kuno 1976, Engdahl 1980, McCawley 1981, Chomsky

1982, Taraldsen 1981, 1982, Doron 1982, Chung and McCloskey 1983, Cinque 2010,

Kush et. al. 2013,), and also in Lebanese Arabic and Mandarin Chinese, where covert

extraction from an RC is observed (Aoun & Li 2003, Hulsey & Sauerland 2006). The

possibility for extraction has often been presented as evidence against a syntactic theory

of locality, and in favor of constraints defined in terms of information structure

(Erteschik-Shir 1973, 1982, 1997, Engdahl 1982, 1998, Ambridge & Goldberg 2008), or

processing limitations and constraints on working memory (Hofmeister & Sag 2010).

Another possibility, still hardly explored (but see Kush et. al. 2013), is that locality is

determined syntactically (Ross 1967, Chomsky 1973, and subsequent work), combined

with a more fine-grained structure for RCs and a theory of how extraction from this

structure interacts with the theory of locality. I argue in favor of the latter approach. I

assume the structural ambiguity of RCs (Sauerland 1998, Bhatt 2002, among others) and

argue that while externally headed RCs do block extraction, extraction is possible, under

certain conditions, from a Raising RC, and is formally similar to extraction from an embedded interrogative.

Anatomy of a Counterexample: Extraction from relative clauses

1   Introduction

Relative clauses (henceforth RCs) are well known islands for extraction, yet acceptable

cases of extraction from an RC have been attested repeatedly in a wide variety of

languages. Starting with Erteschik's early work on Danish (Erteschik 1973, 1982), overt

extraction from an RC has also been observed in Swedish, Norwegian, Hebrew, English,

Japanese and more recently in Italian, Spanish and French (Kuno 1976, Engdahl 1980,

McCawley 1981, Taraldsen 1981, 1982, Chomsky 1982, Doron 1982, Chung and

McCloskey 1983, Rubowitz-Mann 2000, Hawkins 2004, Kayne 2008, Cinque 2010,

Kush et. al. 2013). Examples of covert movement out of RCs have also been attested, in

languages as diverse as Hebrew, Lebanese Arabic, Mandarin Chinese, and English (Aoun

& Li 2003, Doron 1982, Hulsey & Sauerland 2006). Here I focus on Hebrew, and on the

conditions that conspire to allow overt extraction, as shown in (1).

(1) a.   ba-mis'ada   hazot$_2$, Samati rak [al kinuax exad]$_1$ Se-keday le-hazmin t$_1$ t$_2$

         in.the-restaurant this,   heard.I only on desert one   that-good to-order

         'In this restaurant, I heard about only one desert that's worth ordering.'

   b.   al lexem Saxor$_2$, ani makira rak [gvina levana axat]$_1$ Se-efSar   limroax t$_1$ t$_2$

         on bread black   I   know   only cheese white one   that-possible to-spread

        'On black bread, I know only one white cheese that can be spread.'

   c.   me-ha-sifria   hazot$_2$, od lo   macati [sefer exad$_1$ [Se-kedai PRO le-haS'il t$_1$ t$_2$]

         from-the-library this   yet not found   book one   that-worth   to-borrow

'From this library, I haven't yet found a single book that's worth borrowing.'

d. PP_2 …. V $[_{DP}$ … NP_1 [… V t_1 t_2]]

The possibility for extraction has often been presented as evidence against a syntactic theory of locality, and in favor of constraints defined in terms of information structure (Erteschik-Shir 1973, 1982, 1997, Engdahl 1982, 1998, Rubowitz-Mann 2000, Ambridge & Goldberg 2008), or in terms of processing and constraints on working memory (Hofmeister & Sag 2010). Another possibility, still hardly explored (but see Kush et. al. 2013), is that island sensitivity is determined syntactically, as in Ross 1967, Chomsky 1973 and subsequent work, combined with a more fine-grained structure for RCs and a theory of how extraction from this structure interacts with the theory of locality. I argue in favor of the latter approach. The analysis to be presented includes two independent factors: I. Extraction is launched from a Raising RC (Schachter 1973, Vergnaud 1974, Carlson 1977, Kayne 1994, Sauerland 1998, Bhatt 2002, among others; see also Aoun & Li 2003 and Hulsey & Saeurland 2006 for earlier suggestions, mostly in passing, that covert movement is launched from a Raising RC); II. Extraction is launched from an RC contained within a DP in a non-derived position. The first ingredient assimilates extraction from an RC to extraction from a wh-island, since the raising RC has the RC-head in specCP, on a par with the wh-phrase in a wh-island; to the extent that extraction from a wh-island is selectively tolerated, so is extraction from an RC sometimes possible. The second ingredient is shared with extraction from DP in general (Wexler & Cullicover 1980, Diesing 1992, Takahashi 1994, Ormazábal et. al. 1994, Uriagereka 1999,, Stepanov 2001, Chomsky 2000, 2001, Rizzi 2004, 2006, Gallego & Uriagereka 2006, 2007,

Chomsky 2008, Bianchi & Chesi 2014, among others). The combination of these two ingredients defines grammatical extraction from an RC: a Raising RC in non-derived position allows extraction, selectively, but extraction is impossible from a Raising RC in a derived position, and from a head-external RC in derived or non-derived position. Viewed this way, extraction from RC presents no particular mystery and no particular challenge to the syntactic theory of locality.

In the examples of extraction from an RC in (1) the RC is a non-presupposed indefinite, and in such contexts extraction is optimal. The existential nature of the RC has also been noted in the context of English and other languages ((2a) is from McCawley 1981 and (2b) is from Kuno 1976). Accounting for this restriction has been the focus of most of the literature on extraction from RCs.

(2) a. Then you look at what happens in languages that you know and languages$_1$ that you have [a friend who knows t$_1$].

b. This is the child$_1$ that there is [nobody who is willing to accept t$_1$].

As properties indicating context dependence and non-systematic variation appeared to motivate a departure from syntactic conceptions of island locality, these properties have dominated the discussion of the existential restriction (for example Engdahl 1998 and Rubowitz-Mann 2000). However, the conclusion that extraction from an RC is akin to extraction from a wh-island, and that it does not, after all, violate standard constraints on movement, opens the door to a syntactic treatment of this set of restrictions as well. Following Diesing 1992, I argue that the generalization regarding RCs that allow extraction has an information-structural component which involves presuppositionality:

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extraction is restricted to non-presuppositional RCs (see Bianchi & Chesi 2014 for recent discussion). The presuppositional status of a DP determines its position, and the position of a DP - in this case a relative clause within a DP - determines whether extraction is possible: extraction is limited to DPs in-situ. This generalization has been repeatedly supported over the years, consistent with the syntactic conception of island locality.

The paper is organized as follows. Section 2 argues that examples like (1) involve true movement. Section 3 motivates the Raising RC analysis of extraction from an RC, and section 4 develops an analysis of the restrictions on extraction presented in section 3. Section 5 addresses the restriction to non-presupposed indefinites and argues in favor of a structural approach. Section 6 discusses a challenge presented by RC-extraposition, and section 7 summarizes and concludes.

2   Evidence for a movement analysis

It is conceivable, of course, that the examples in (1) with a fronted constituent do not really involve a movement derivation. There are three possibilities to exclude: (i) the initial constituent is base-generated in its position and is associated with a pronominal empty category in the embedded clause; (ii) the initial constituent is a matrix adjunct standing in an 'aboutness' relation to the matrix predicate; (iii) the initial constituent is a matrix clause dependent. Cinque (1990) discusses the first option and observes that cases of 'apparent extraction' from an island in Italian always involve an extracted DP. This is due to an association with a *pro* at the tail of the chain. In contrast, similar cases of fronted PPs are bad, in (3b).

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(3) a. I   Rossi, che dubito ci   sia qualcuno disposto a rivedere   dopo quanto è

   the Rossis, who I.doubt there is   anybody willing   to see.again after what

   successo

   happened

   'The Rossis, who I doubt there is anyone who is willing to see again after what

   happened…'

   b.*I Rossi,   in cui   dubito ci   sia qualcuno disposto a confidare, dopo quanto è

   the Rossis, in whom I.doubt there is   anyone   willing to confide   after what

   successo

   happened

   To control for this possibility, the examples in (1) and throughout all involve

extraction of a PP. If Hebrew is like Italian in not having a null PP, the initial PP could

not be related to an embedded position via a non-movement pronominal chain. That

Hebrew lacks a null PP can be observed by the ungrammaticality of PP extraction from

the adjunct island in (4a), and from the non-RC complex NP in (4b). Parasitic gaps

corresponding to PP are also impossible (4c), suggesting that Hebrew lacks a pronominal

operator of category PP.

(4) a. *im   dina$_1$ hit'alaft [$_{PP}$ axrey Se-dibart __$_1$]

     with dina   you.fainted after that-you.spoke

   b. *im   dina$_1$ mistovevet [$_{DP}$ Smu'a Se-dani hitxaten __$_1$]

     with dina going.around   rumor that-dani got.married

   c. *me-mi$_1$ lakaxt   et   hasefer t$_1$ [axrey Se-hit'axzavt __$_1$]

from-who you.took ACC the-book   after   that-you.were.disappointed.in

Turning to the second possibility, Davies (2005) considers the initial PP in (5) to be an adjunct, standing in an 'aboutness' relation to the matrix predicate.

(5)   I believe about Kate that she won the daughter-of-the-year award.

An analysis of (1) along these lines is highly unlikely since the predicates *finding* and *being familiar* in (1b-c) cannot be about anything; *hear* in (1a) could, in principle, be about something, but the choice of preposition is incompatible with this meaning. The third 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: *in-hear*; *on-familiar*; *from-find*.

There is also positive evidence in favor of the movement analysis. Note, first, that the contrast between PP extraction from an RC, in (1), and from an adjunct island or a non-RC complex NP, in (4), is surprising if (1) does not involve true movement, since whatever mechanism renders (1) grammatical should have the same effect on (4a-b). If extraction from an RC is extraction from a weak island, as argued below, these contrasts fall into place. Two other kinds of evidence support a movement analysis. First, the addition of a strong island between the RC head and the gap position within the RC causes grammaticality to degrade more than the addition of a complement clause does, in (6a-b).[1] Furthermore, the fronted PP can include a reflexive bound within the RC, suggesting that reconstruction is involved and that the fronted PP is related to the gap position within the RC via a movement chain.

(6) a. ?al lexem Saxor$_2$, yeS rak   gvina axat$_1$ Se-karati Se-kedai   limro'ax t$_1$ t$_2$.

on bread black   BE   only cheese one that-read.I that-worth to.spread

'On black bread, there's only one cheese that I read was worth spreading.'

b. *al lexem Saxor, yeS rak   gvina axat₁ Se-ta'amti t₁ [bli   limro'ax ota₁ t₂].

on bread black   BE only cheese one   that-tasted.I   without to.spread it

Intended: 'On black bread, there is only one cheese that I tasted without

spreading.'

(7) [al acmam₁]₂,   yeS nora me'at talmidim₁ Se-muxanim lixtov t₂.

about themselves BE   very few   students   that-willing   to-write

'About themselves, there are very few students who are willing to write.'

The evidence presented in the next section is also evidence for the broader claim

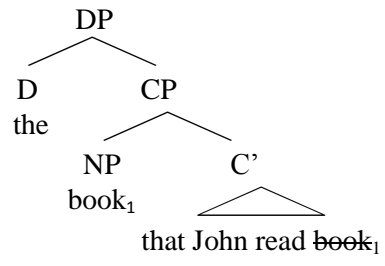that movement is involved.

3   The Raising RC source

I assume the structural ambiguity of RCs (Sauerland 1998, 2003, Grosu & Landman

1998, Bhatt 2002, among others) and demonstrate that while externally headed RCs do

block extraction, extraction is possible, under certain conditions, from a Raising RC

(Schachter 1973, Vergnaud 1974, Carlson 1977, Kayne 1994, for earlier Raising

analyses). A variety of head-raising RC structures have been proposed in the literature

following Kayne 1994 (see for example Sauerland 1998, Bianchi 1999, Bhatt 2002,

Sauerland 2003). For expository purposes I adopt the structure proposed in Kayne 1994

(to be slightly modified in section 4). This CP, with a filled specifier, is sister to a D^0

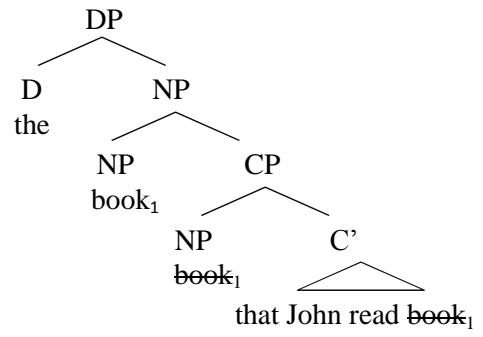which projects a DP. The head-external structure is the Matching structure, where the

identity relation between the two lowest copies is determined by movement, and identity

between the two highest copies is determined by ellipsis: NP moves to specCP and is

deleted under identity with the head NP (Sauerland 1998, Bhatt 2002, Sauerland 2004).

(8) a.   Raising RC: b. Matching RC:

Raising RC tree:

```
          DP
         /  \
        D    CP
       the  /  \
          NP    C'
        book₁  /__\
          that John read book₁
```

Matching RC tree:

```
          DP
         /  \
        D    NP
       the  /  \
          NP    CP
        book₁  /  \
             NP    C'
           book₁  /__\
            that John read book₁
```

The most important property of the Raising structure in (8a) is that the NP head is located in specCP (Kayne 1994). This entails that when a phrase is extracted, movement will cross the DP layer but it will not cross the NP node. In the structure in (8b), however, it will cross both layers.

(9)   a. XP_1 ... $[_{DP}$ D $[_{CP}$ NP […. t_{NP} … t_1]   extraction from (8a)

       b. *XP_1 …$[_{DP}$ D $[_{NP}$ NP $[_{CP}$ … t_{NP} ... $t_1]$ $_{NP}]$ extraction from (8b)

In what follows I argue that extraction from an RC proceeds from a Raising RC, and in this respect it is formally similar to extraction from an embedded interrogative. From this perspective, examples like (1) present no more serious a challenge than tolerated violations of the wh-island constraint. I also argue that extraction from the Matching RC (8b/9b) is always excluded due to the phase status of the NP node, combined with a theory of anti-locality (Bošković, 2014, 2015).

Before turning to the evidence for extraction from a Raising RC, note that like other languages, Hebrew does respect the Complex NP Constraint (CNPC). As seen in (4b) above, a non-RC complex NP does not give rise to grammatical extraction. I now present three arguments for the claim that only Raising RCs allow extraction, and that RCs of the sort in (8b) do not: The binding evidence presented in section 3.1 allows us to distinguish, directly, between (8a) and (8b), and it suggests that when extraction is grammatical, it is always launched from (8a). The two kinds of evidence presented in 3.2 and 3.3 suggest a formal similarity between extraction from an RC and extraction from an embedded interrogative. This is due to the similarity of Raising RCs to wh-islands.

3.1 Binding Considerations

The claim that RCs are in principle ambiguous is based on the observation that there are

contexts in which only one of the structures is possible. This makes it possible to

disambiguate the structures and to test each structure, separately, for extraction. By

hypothesis, extraction is only possible from (8a), because the NP head of the RC is in

specCP and extraction would not cross the NP node. Extraction from (8b), on the other

hand, should behave like the complex NP with a complement clause in (4b). The two

structures can also be discriminated by the number of chains and copies, and by the

location in which the copies are interpreted.

(10) a. Raising RC: [RC-head$_1$ …….. ~~RC-head$_1$~~]

      b. Head-external RC: RC-head$_1$… [~~RC-head$_1$~~ …….. ~~RC-head$_1$~~]

In the Raising structure there is a single chain and two copies, both contained within the

embedded CP. This chain is derived by movement, and the low copy must be interpreted

(Sauerland 2003, Hulsey & Sauerland 2006). The head-external structure adopted is the

Matching structure, and it contains two chains and three copies. The two lower copies are

related via a movement chain and the head-external copy and the copy in specCP are

related via ellipsis. In this structure, the external copy is interpreted, and so are the low

copies within CP (Sauerland 1998, 2003, 2004).

The structures can be discriminated in contexts that require only the low copy to

be interpreted and in structures in which the high copy is necessarily interpreted. In

contexts of the first kind, only the Raising structure is possible because the high copy in

the Matching structure would lead to a violation. Reconstruction for idiomatic

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interpretation is an example of this sort of context (Bhatt 2002). Assuming that idiom

chunks must be interpreted in a local configuration with the idiomatic predicate,

interpretation of the high copy would lead to a violation (examples from Shachter 1973,

via Bhatt 2002).

(11) a.   We made headway.

b. *The headway was satisfying.

c.   The headway that we made was satisfying.

In order to demonstrate the restriction of extraction to the Raising RC, the Matching

structure should be isolated and extraction should be blocked. The Matching structure can

be forced in two ways: (i) when a Principle C violation would be triggered by

interpretation of the low copy, in (12a), and (ii) when an anaphor within the RC head

would have to be bound by an external antecedent (12b).

(12) a. Those are the bar mitzvah photos of John$_1$ that he$_1$ stole from my office.

b. He$_1$ tried to deny the rumors about himself$_1$ that Mary spread at school.

These examples would violate the BT if generated in the Raising structure: *John* within

the low copy would violate Principle C, and *himself*, within the low copy, would violate

Principle A. In the Matching structure, these violations are not incurred since *John* and

himself may be interpreted only in the head-external position, where they are licit. To

exclude a violation induced by the low copies in (12), the Matching analysis relies on

Vehicle Change, whereby the low copy in ellipsis needs to be semantically identical to

the licensing copy, but is not itself a copy of it (Fiengo & May 1994, Sauerland 1998,

2003, 2004). This allows the low copy in (12a), for example, to contain a pronoun, not a

name. This would not be possible in the Raising RC, where the movement derivation imposes strict identity between the copies.[2]

In order to demonstrate that in these two contexts extraction from the RC is blocked, the optimal conditions for extraction must be in place. In particular, the RC should be a narrow scope indefinite, as in the existential construction. The discourses in (13) provide contexts for existential head-external RCs, with either an R-expression in the RC head (B's response in (13a)) or an anaphor bound from the matrix clause (B's response in (13b)).

(13) a. A: Samati Se-dani$_1$ sone   et   kol tmunot ha-bar mitzva Selo$_1$.

          heard.I that-dani hates ACC all pictures the-bar mitzvah his

          'I heard that Dani hates all of his Bar Mitzvah photos.'

     B: lo, yeS kama tmunot bar mitzva Sel dani$_1$ Se-hu$_1$ lakax mi-doda   Selo$_1$.

          no, BE   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: Samati Se-dani$_1$ hexbi et   kol ha-tmunot   Sel miri Se-hu$_1$ cilem.

          heard.I that-dani hid   ACC all the-pictures of miri that-he photographed

          'I heard that Dani hid all the photos of Miri that he photographed.'

     B: naxon, ein la$_1$ af tmuna Sel acma$_1$ Se-dani   cilem.

          true,   NEG to.her no picture of herself that-dani photographed

          'True, she doesn't have any photo of herself that Dani photographed.'

The following examples test extraction in these existential contexts. In (14), the RC-head contains an R-expression, and a violation of Principle C would be at stake in the Raising

structure. (14a) shows that extraction from such a head-external structure is degraded (alternatively, Principle C is violated in the Raising structure). In contrast, (14b) and (14c) do allow extraction. No violation is at stake and the Raising structure may be used.

(14) a. *me-ha-doda   hazot$_3$, yeS [kama tmunot bar micva   Sel dani$_1$]$_2$ Se-hu$_1$ Sa'al t$_2$ t$_3$.

from-the-aunt this   BE   few   photos bar mitzvah of dani   that-he borrowed

   b. me-ha-doda   hazot$_3$, yeS [kama tmunot bar micva   Selo$_1$]$_2$ Se-hu$_1$ Sa'al t$_2$ t$_3$.

from-the-aunt this   BE   few   photos bar mitzvah of.his   that-he borrowed

'From this aunt, there are a few Bar Mitzvah photos of his that he borrowed.'

   c. me-ha-doda   hazot$_3$, yeS [kama tmunot bar micva Sel dani$_1$]$_2$ Se-ima   Selo$_1$

from-the-aunt this   BE   few   photos bar mitzvah of dani   that-mother his

Sa'ala t$_2$ t$_3$.

borrowed

'From this aunt, there are a few Bar Mitzvah pictures of Dani that his mother

borrowed.'

In (15) the RC-head contains an anaphor. In (15a) it is bound by an external antecedent, which entails, by hypothesis, that the Raising structure is blocked. Extraction is degraded, compared with (15b) where the antecedent is within the RC, interpretation of the low copy is obligatory, and the Raising RC is allowed.

(15) a. *[al kir   ba-maxlaka]$_3$,   yeS lo$_1$ rak [tmuna axat Sel acmo$_1$]$_2$ Se-anaxnu

on wall in.the-department BE   to.him only picture one of himself   that-we

muxanim litlot t$_2$ t$_3$.

willing   to.hang

b.   [al kir   ba-maxlaka]$_3$,   yeS lanu rak [tmuna axat Sel acmo$_1$]$_2$ Se-hu$_1$

on wall in.the-department BE   to.us only picture one of himself   that-he

muxan litlot t$_2$ t$_3$.

willing to.hang

'On a wall in the department, we have only one picture of himself which he

is willing to hang.'

Free Relatives, on the other hand, are uncontroversial Raising RCs (Landman &
Grosu 1998, Bianchi 2000). Here too extraction should be possible, and it is, in (16b), on
a par with the embedded interrogative (16a).

(16) a. al   ma   at   yoda'at [im   mi [efSar   ledaber]]?

about what you know   with who possible to.talk

'About what do you know with who it is possible to talk?'

  b. al   ma   yeS lax   [im   mi [ledaber]]?

about what BE   to.you with who   to.talk

'About what do you have with who to talk?'

The contrast between (14a-15a), where extraction is blocked, and (1), (15b), or (16),
suggests a correlation between reconstruction and extraction: Where extraction is
possible, reconstruction is obligatory. This is encoded in terms of the structural ambiguity
of RCs: extraction is possible from a Raising RC, but not from a Matching RC. As shown
in the next section, when extraction is possible, it is possible selectively, suggesting that
Raising RCs are weak islands. The Matching RC, in contrast, is a strong island, excluding

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also complement extraction.[3] The argument for a Raising analysis is based on similarities with extraction from embedded interrogatives.

3.2   Similarity to Wh-island I: RC is a weak island.

Previous literature has suggested that RCs are strong islands for extraction (Chomsky 1986, Cinque 1990, Postal 1998, Szabolcsi 2006), consistent with the adjunct status of the RC and the strong-island status of adjuncts. If, however, the good cases of extraction proceed from a Raising RC, we expect the pattern of extraction to be similar to the selective pattern observed for wh-islands. By hypothesis, the extracting constituent may bypass a phrase in the specifier of a dominating CP, similar to extraction from an embedded interrogative (for now, the order of traces in (17) is irrelevant; see 3.3 below for the interaction of the two chains).[4]

(17) a. Extraction from an embedded interrogative:

$XP_2 \ldots$ $[_{CP}$ Wh-phrase$_1$ $[\ldots t_1 \ldots t_2]]$

b. Extraction from a Raising RC:

$XP_2 \ldots$ $[_{DP}$ D $[_{CP}$ RC-head$_1$ $[\ldots t_1 \ldots t_2]]$

Extraction from an embedded interrogative is possible in Hebrew and shows weak island effects, as shown by the contrast between complement extraction and adjunct extraction in (18).[5]

(18) a.   eyfo   beyeruSalayim amart   li   mi   hiskim lagur?

where in.Jerusalem   you.told me who agreed to.live

'Where in Jerusalem did you tell me who agreed to live?

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b. *eyfo   beyeruSalayim amart   li   mi   hiskim le'exol?

　　where in.Jeruslaem   you.told me who agreed to.eat

A similar pattern is observed for extraction from RC.[6] Extraction of an adjunct is

blocked:

(19) a.　be-yeruSalayim hem hayu hayexidim　　Se-hiskimu lagur.

　　　in-Jerusalem　　they were the.only.ones that-agreed to.live

　　b. *be-yeruSalayim hem hayu hayexidim　　Se-hiskimu le'exol.

　　　in-Jerusalem　　they were the.only.ones that-agreed to.eat

　　　'In Jerusalem, they were the only ones who agreed to live / *to eat.'

(20) a.　be-yeruSalayim, mizman lo　Samati al　　miSehu　Se-roce　　lagur.

　　　in-Jerusalem　　ages　　NEG heard.I about somebody that-wants to.live

　　b. *be-yeruSalayim, mizman lo　Samati al　　miSehu　Se-roce　　le'exol.

　　　in-Jerusalem　　ages　　NEG heard.I about somebody that-wants to.eat

　　　'In Jerusalem, it's been ages since I've heard of anybody who wants to live / *to

　　　eat.'

This is expected if extraction from an RC is formally similar to extraction from an

embedded interrogative. Since the selective pattern is unexpected if no movement is

involved, it also provides further support for a movement analysis.

3.3. Similarity to Wh-island II: Multiple chain interactions.

Extraction from an RC resembles extraction from embedded interrogatives also with

respect to multiple chain interactions (Pesetsky 1982, Richards 1997, 2001, Preminger

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2010, among others). Like extraction from a wh-island or wh-movement in multiple interrogatives, extraction from an RC necessarily involves two chains: the chain forming the RC and the chain formed by extraction from within the RC. Crucially, the interaction of the two chains in extraction from RCs bears the signature of extraction from an embedded interrogative: alongside a strict subject-object asymmetry, the interaction of two internal arguments exhibits flexibility. Either one of the internal arguments may be fronted across the other one.

(21) a. Obj …. [$_{CP}$ Subj … t_{subj}… t_{obj}] / *Subj…. [$_{CP}$ Obj t_{subj}… t_{obj}]

b. Obj$_1$ … [$_{CP}$ Obj$_2$ …. V t_1 … t_2] / Obj$_2$ … [$_{CP}$ Obj$_1$ …. V t_1 … t_2]

The two parts of (21) are first introduced in standard wh-islands. Hebrew allows the object to be extracted over the subject, and not vice versa, in (22). This is part of a more general nesting pattern, discovered in Pesetsky (1982), and shared also by English and other languages, in (23). In both (22) and (23), the lower CP attracts the highest wh-phrase to its specifier, and the lower wh-phrase (the object in (22a) and the embedded object in (23a)), bypasses this intermediate specifier on its way to the higher CP.

(22) a. ani yoda'at ma$_2$ Saxaxt   [$_{CP}$ mi$_1$ t_1 axal t_2]. Saxaxt   mi   axal uga.

       I   know   what you.forgot   who   ate.   you.forgot who ate cake.

     'I know what you forgot who ate. You forgot who ate cake.'

b. *ani yoda'at mi$_1$ Saxaxt   [$_{CP}$ ma$_2$ t_1 axal t_2]. Saxaxt   ma   yosi axal.

     I   know   who you.forgot   what ate.   you.forgot what Yosi ate.

(23) a. Which books$_2$ do you know [who$_1$ to persuade t_1 [PRO to read t_2]?

b. *Who$_1$ do you know [which books$_2$ to persuade t_1 to read t_2]?

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For internal argument interactions we focus on verbs that have two PP internal arguments, such as *talk* (*with* DP *about* DP; see Preminger 2006).[7] Here we find near symmetry: for most speakers it doesn't matter at all whether *with who* is attracted to the lower specCP and *about what* is moved long-distance, or vice versa, as in (24b). The few speakers who have a preference for (24a) report that it is significantly more subtle than the contrast in (23), and that it goes away when descriptive content is added to (24b) in the form of [*which* DP] to either one of the PP arguments, in (25).[8] The addition of descriptive content in the same way to the degraded subject-object pattern in (22b), however, has no effect. This is shown in (26).

(24) a. ani yoda'at al   ma$_2$ Saxaxt [$_{CP}$ im   mi$_1$ dibart t$_1$ t$_2$]. Saxaxt   im   mi

       I   know   about what you.forgot with who you.talked.   you.forgot with who

       dibart   al   ha-bxirot.

       you.talked about the-elections

      'I know about what you forgot with who you talked. You forgot with who you

       talked about the elections.'

    b.? ani yoda'at im   mi$_1$ Saxaxt   [al   ma$_2$ dibart t$_1$ t$_2$]. Saxaxt   al   ma

       I   know   with who you.forgot about what you.talked.   you.forgot about what

       dibart   im   rut.

       you.talked with rut

      'I know with who you forgot about what you talked. You forgot about what you

       talked with Ruth.'

 (25) a. im   eyze   yeled Saxaxt   al   ma   dibart?

with which boy   you.forgot about what you.talked

'With which boy did you forget what you talked about?'

b.   im   mi Saxaxt   al   eyze   nose dibart?

with who you.forgot about which topic you.talked

'With who did you forget which topic you talked about?'

(26) a.   *mi   Saxaxt   eyze   kinuax axal?

who you.forgot which dessert ate

b.   *eyze   yeled Saxaxt   ma   axal

which boy   you.forgot what ate

The contrast between (25-26) suggests that the role of the which-phrases is to introduce descriptive content and this makes it easier to understand which wh-phrase is associated with which position. That this can help (24b) but not (22b) suggests that (24b) is not really ungrammatical, though (22b) is. I will assume this interpretation of the facts, and conclude that the interaction of two PP internal arguments is distinct from the interaction of subjects and objects. This is schematized in (27).

(27) a. Subj-Obj interactions: Obj_2 … $Subj_1$ … t_1 …. t_2 'Nesting'

b. Obj-Obj interactions: Obj_2 … Obj_1 … t_1 …. t_2 'Nesting'

Obj_1 … Obj_2 … t_1 …. t_2 'Crossing'

We return to the difference between (27a) and (27b) below. For the purposes of comparison with the pattern of extraction from RC, the existence of this difference is a blessing, since chance similarity decreases the more complex the pattern is. In other words, given this quirk, the likelihood that the RC pattern is derived from a similar

underlying structure becomes greater. As shown in (28a-b) (Rubowitz-Mann 2000: 135, (4.1) and fn. 2 (ib), respectively), the combination of a subject chain and an object chain yields strict asymmetry and a nested pattern. The combination of two internal argument PPs yields flexibility, where either PP may be relativized and extracted from the RC, in (29).

(28) a.   tikim ka-ele$_2$, ani mekira [miSehu$_1$ [Se-t$_1$ moxer t$_2$]]

      bags like.that I   know   someone that sells

      'Bags like that, I know someone who sells.'

  b.   *anaSim ka-ele$_1$, ra'iti [maSehu$_2$ [Se-t$_1$ moxrim t$_2$]]

      people like.that saw.I something that sell

(29) a.   im   ha-balSan ha-ze$_2$ od lo   macati [be'aya$_1$ [PRO le-daber t$_2$ al<u>eya</u>$_1$]]

      with the-linguist this, yet not found   problem   to-talk   about.it

      'With this linguist, I haven't yet found a problem to talk about.'

  b. ?al   ha-be'aya   ha-zot$_2$ od lo   macati [taxbiran$_1$ PRO le-daber it<u>o</u>$_1$ t$_2$]

      about the-problem this,   yet not found   syntactician   to-talk   with.him

      'About this problem, I haven't yet found a syntactician to talk to.'

Examples such as (29) falsify previous claims that extraction from an RC is acceptable only if the position relativized within the RC is a subject (Erteschik 1973; Taraldsen 1981; Engdahl 1980, 1998; Kluender 1992, Kush et. al. 2013; see also Lindahl 2015 for discussion of the restriction to subject relatives). A restriction to subject relativization would be specific to RCs and would require a special kind of analysis, supporting the view that extraction from RC is truly exceptional. Examples with internal arguments

show that the so-called subject restriction actually falls under a broader generalization that constrains the interaction between the two chains, and this is the restriction familiar from the study of multiple wh-movement (Pesetsky 1982, Richards 1997, 2001, Preminger 2010, among others). As expected if the underlying mechanism is related to Minimality and Shortest Move, the requirement for subject relativization holds only in interactions between subject and objects and an internal argument may be relativized (Rizzi 1990, Chomsky 1995, Richards 1997). Crucially, the pattern of multiple chain interactions in RCs is exactly the same as in embedded interrogatives and multiple questions. This provides further support for a movement analysis of extraction, and more specifically for the Raising analysis of extraction from RCs.[9]

To summarize, this section has provided three arguments in favor of the idea that extraction proceeds from a Raising RC. Since it is difficult to see how else the selective contour of extraction could be derived, these are also arguments for a movement analysis: 1. Binding considerations. When the high RC-external copy is interpreted, extraction is impossible. This suggests that Matching RCs are strong islands, and that extraction is launched from a Raising RC (see further discussion in section 4). 2. Weak island effects, and 3. Nesting multiple chains. The combination of these two patterns suggests that the RC structure which allows extraction is a weak island, formally similar to an embedded interrogative, in other words, a Raising RC. These generalizations form the basis of the analysis developed in the next section.

4   Analysis of Extraction from Raising RC

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This section aims to identify the crucial difference(s) between the Matching RC, which behaves like a strong island in blocking all extraction, and the Raising RC, which patterns with weak islands in selectively allowing complement extraction. As explained below, the weak / strong island distinction provides new evidence for the implementation of the structural ambiguity of RCs in terms of the two distinct containing structures sketched in (8) above. In the discussion to follow, the only property distinguishing weak and strong islands that I will presuppose is their empirical contour: selective extraction from weak islands and no extraction from strong islands. Based on the landscape of extraction from noun phrases which contain clauses I will propose that the strong island status of Matching RCs follows from the phase status of NP, combined with a theory of anti-locality. After fleshing out the relevance of the weak/strong island typology for the structure of RCs in section 4.1, section 4.2 goes on to isolate the property responsible for the strong island status of Matching RCs, and section 4.3 develops an analysis of extraction from Raising RCs.

4.1 Island Typology and the Structural Ambiguity of RCs

This section is devoted to motivating an analysis of extraction along the lines of the ambiguity hypothesis expressed in (8). An important first step is the observation that extraction is limited to configurations in which only the low copy is interpreted (section 3.1). How do extraction and reconstruction interact? On the approach developed here, the two configurations are associated with distinct containing structures. The Raising RC has CP as a direct complement to D^0, and the Matching RC has CP adjoined to NP. The presence of an NP node dominating the extraction site forms the basis of the analysis of

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strong island effects in Matching RCs in section 4.2. Here it is shown how the selective

pattern of extraction further supports the structures in (8).

There is an alternative to (8) which would deny that the extraction pattern requires

separate containing structures for different kinds of RCs. According to this proposal,

there would be only one RC structure, the Raising structure (see for example Bianchi

1999, 2000 and Bhatt 2002 for different versions of the single-containing-structure

hypothesis). Instead of expressing the interaction between extraction and reconstruction

via two distinct RC structures, it would be expressed via two LF structures: in LF_1 the

high copy is interpreted and extraction is blocked, and in LF_2 the low copy is interpreted

and extraction is allowed. Crucially, there is no high copy in LF_2. In this analysis the

circumvention of Subjacency would be related to the absence of a high copy in the RC-

head position. The relevant details are given in (30), abstracting away from whether this

Raising RC is contained within an NP (Bhatt 2002, Thoms & Heycock 2014), or not

(Bianchi 1999, 2000).

(30) a. LF_1: [$_{RC}$ RC-head   …..]

    b. LF_2: [$_{RC}$ …..   RC-head]

The first question raised by (30) is how an LF structure could block overt

extraction. For concreteness, the discussion is based on a combination of Aoun &

Benmamoun (1998) and the division into stem-movement and PF-movement in Elbourne

& Sauerland (2002).[10] On this approach LF_2 is also part of overt syntax. Stem-movement

is movement at S-structure in pre-MP frameworks, and PF-movement occurs after the

split into LF and it does not feed LF. LF_1 corresponds to a structure in which

relativization is derived by stem movement and feeds LF, and LF_2 would correspond to a derivation with PF-movement of the RC head, so that at LF only the low copy would be visible. Since extraction correlates with reconstruction (section 3.1), it follows that extraction would be blocked in LF_1 (now understood as the representation derived by stem-movement), and allowed in LF_2 (now understood as representing the stem portion of the derivation, prior to PF-movement). In other words, extraction would be excluded in the presence of a wh-island and allowed when the copy is low.

This implementation, however, would fail to derive the selective pattern of extraction seen in 3.2 above. First, when the analysis excludes extraction (30a), at least complement extraction should be possible, given the weak island status of the wh-island configuration. We have seen, however, that when the high copy is interpreted, complement extraction is also excluded in this configuration (14a/15a). This suggests that (30a) does not represent a strong island RC structure. Second, when the analysis allows extraction, as in (30b), adjunct extraction should also be allowed, since here there is no wh-island. But adjunct extraction is never allowed (in section 3.2). This suggests that (30b) is not an adequate representation of a weak island RC structure. The theory encoded in (30) fails, therefore, to derive the weak / strong island typology of RCs.[11]

4.2 Matching RC as a Strong Island

We now return to the implementation of the structural ambiguity hypothesis in (8) above, where the crucial difference between the two structures is that only in the Matching structure does the extraction trajectory cross NP. In the Raising RC, on the other hand,

the RC-head is embedded within specCP. It is not the location of a copy in specCP which blocks extraction, as it was in (30a); in both structures specCP is filled in the stem. Given the difference between Raising and Matching RCs, and also the difference between extraction from RCs and extraction from non-RC complex NPs, the ingredient which creates a strong island in complex NPs appears to be the NP layer: present in Matching RC and in other complex NPs, and absent in Raising RCs. This account of strong islandhood, in terms of the phase status of NP, replaces earlier government-based accounts of the complex NP island, which relied on the complement-adjunct asymmetry in extraction domains (Huang 1982, Chomsky 1986), and as a result failed to account for the island status of complex NPs in which CP is a complement. In what follows, I will show how an account in terms of NP-phasehood can be integrated into a general theory of locality.

Bošković (2015) formulates a single generalization to capture a variety of limitations on extraction observed for NPs but not for VPs. Adjunct extraction, deep complement extraction, and the complex NP constraint are all subsumed under the generalization in (31).

(31) NP_x is a phase for any constituent that it dominates and N_x does not theta-mark.

The combination of (31) and other constraints developed in Bošković 2015 can straightforwardly account for the difference between Raising and Matching RCs. These other constraints include: (i) the phasehood of DP in languages which have a DP layer, including Hebrew; (ii) the Phase Impenetrability Condition (PIC), whereby only the edge of a phase is accessible for phrasal movement outside of the phase (Chomsky 2000,

2001)); (iii) an anti-locality constraint, whereby each step of movement must cross at least one full maximal projection (Bošković 1994, 1997, see Abels 2003, Grohman 2003, Ticio 2003, and Erlewine 2016); and (iv) the absence of an A-bar specifier in NP (Bošković 2014). The combination of these ingredients derives intricate cross-linguistic differences, associated with the parameter in (i), whether DP is a phase in a language; in English it is, but not in Serbo-Croatian, where there is no DP. One of the effects of this parameter is that complement extraction is possible in English but not in Serbo-Croatian, since in English, NP is not a phase for complements. The complement is free, therefore, to move directly to specDP without violating Anti-locality. In Serbo-Croatian, where NP is the highest nominal projection and therefore an absolute phase, the complement must adjoin to NP, given the PIC, but this then violates Anti-locality. As a language with determiners and a DP layer, Hebrew falls on the side of English.[12]

The combination of these ingredients conspires to prevent extraction of a phrase not theta-marked by N from an NP, unless NP isn't immediately dominated by DP (as in Serbo-Croatian, where it isn't, and where adjunct extraction is surprisingly possible). When it is dominated by DP, as it always is in English or Hebrew, there will be a step of movement that violates Anti-locality. This is the source of the complex NP constraint, and the analysis extends directly to Matching RCs. Extraction from a RC must involve adjunction to NP, since the extracting constituent is not a complement of the head noun, i.e. the RC head. The next step will involve movement to specDP, since DP is a phase as well, but this step violates Anti-locality since it crosses only a segment of NP. The same considerations explain why extraction from a Raising RC is possible. In the absence of an

NP node the step of movement, which culminates in specDP, will be launched from specCP. Since CP is fully crossed this step does not violate Anti-locality.[13]

4.3 Extraction from Weak Island RC

We now turn to the wh-island contained within Raising RCs, and to how extraction from CP bypasses a filled specCP and circumvents a wh-island violation. Following Preminger 2010, I assume an articulated CP, in which CP immediately dominates other projections associated with the A-bar system (Rizzi 1997; see also Bianchi 1999, 2000 and Cinque 2013 for extensions to relative CP). Preminger derives the nesting pattern observed in embedded interrogatives from this structure, as schematized in (32-33) below. CP immediately dominates FocP.[14] FocP hosts A-bar operators, and given Shortest Move and the PIC (Chomsky 1995, 2000, 2001), the closest wh-phrase is attracted to its specifier. This will be the subject in sentences with multiple wh-phrases in which one is a subject and the other is an object. The object, or the more distant wh-phrase, will be attracted to specCP. The PIC dictates that attraction by the matrix CP will target the wh-phrase in the embedded spec CP, in this case the object, and this produces the nesting pattern. I assume that RC CPs are no different and can similarly include more than one A-bar position. Since the same pattern is observed, and the interactions between multiple chains are essentially the same as in multiple questions, it must be that the differences between RCs and interrogatives are not relevant for the computation of Relativized Minimality / Shortest Move. This is schematized below, for an embedded interrogative in

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(32), and for a Raising RC in (33). DP_2 will adjoin to the RC DP on its way up, as described above.

(32)   a. ma_2 Saxaxt   [$_{CP}$ mi_1 t_1 axal t_2]?

           what you.forgot   who   ate

        b. [$_{CP2}$ DP_2 … forgot … [$_{CP1}$ ~~DP_2~~ [$_{FocP}$ DP_1 … [$_{IP}$ ~~DP_1~~ … ~~DP_2~~ ..]

(33)   a. tikim ka-ele_2, ani mekira [$miSehu_1$ Se-t_1 moxer t_2]

           bags like.that I   know   someone that sells

        b. [$_{CP2}$ DP_2 …know … [$_{DP}$ ~~DP_2~~ [$_{DP}$ D^0 [$_{CP1}$ ~~DP_2~~ [$_{FocP}$ DP_1 … [$_{IP}$ ~~DP_1~~ … ~~DP_2~~ ..]

        We now turn to the syntax of relativization within the Raising RC. In order to derive the wh-island contour of extraction from a Raising RC, I assume the structure proposed in Kayne 1994, in which D^0 directly selects CP. In Kayne's original formulation the relativizing constituent is an NP, and it becomes adjacent to D^0 in its derived position. Borsley 1997 argues against relativizing an NP, and these objections are addressed in Bianchi 1999, 2000 within the general framework of Kayne's Raising RC. Bianchi 2000 presents two Raising RC structures, one for English *that*-relatives and one for wh-relatives, and in both, the trace within the RC is associated with a moved DP, not NP.[15] Only the latter is compatible with the details of the analysis above. In the version with *that*, the moved DP is [$_{DP}$ D^0 picture], the D^0 head is silent, licensed by incorporation into the matrix D^0 that selects CP. This structure would not be compatible with the articulated CP sketched above because incorporation requires the two instances of D^0 to be local, but in (33b) a specCP escape-hatch intervenes. In the derivation of wh-relatives, [$_{DP}$ which NP] first moves to the specifier of some functional head XP within the CP area,

followed by extraction of NP to a higher specifier. This derivation is compatible with the

PIC requirement that the escape hatch be highest since it requires no particular relation

between external D^0 and [$_{DP}$ which NP]. The combination of these positions is illustrated

schematically in (34).

(34)

```
        CP₂
       /    \
   DP₂      \
        ...   \
               DP
              /   \
          D̶P̶₂    CP₁
                 /   \
             D̶P̶₂    \
                  ....  \
                         FP
                        /   \
                    NP₃     \
                        ....  \
                               FocP
                              /     \
                  [which N̶P̶₃]DP1    IP
                                    /\
                          [w̶h̶i̶c̶h̶ N̶P̶₃]DP1  D̶P̶₂
```
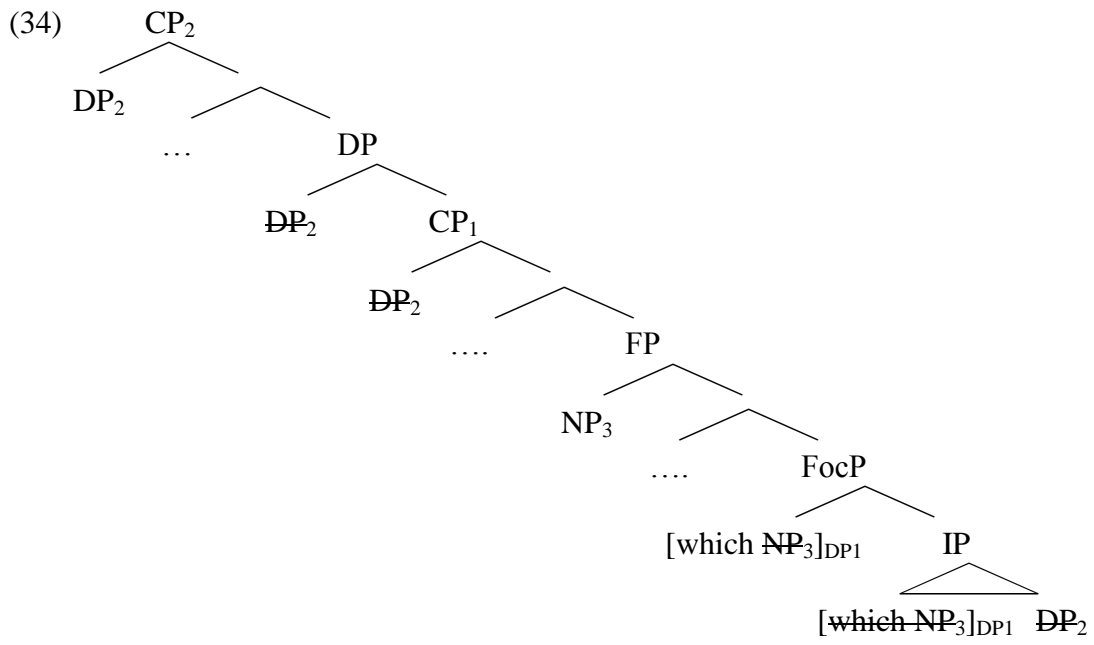
As discussed above, Shortest Move dictates that the constituent [which NP] that relativizes, starts out higher within IP than the constituent undergoing long movement.[16] Following DP-relativization, NP moves to the next specifier up, and the lower DP raises to 'escape hatch' specCP. This is the only order possible. Given the PIC, movement to the escape hatch couldn't precede, or target a position lower than, movement of [which NP]. It also couldn't precede the step of NP movement from [which NP], since here too the PIC would be violated and NP movement would have to skip a filled specifier.[17]

Summing up, this section situated the weak and strong island typology for RCs within a broader theory of locality. It was argued that single-containing-structure implementations of the structural ambiguity hypothesis would fail to derive the typology. The piece of structure responsible for the strong island status of Matching RCs is NP, and extraction from a Raising RC proceeds from an articulated CP structure in which [which NP] first moves to FocP, followed by extraction of NP to a higher projection, and movement of the second wh-phrase to an escape hatch in specCP.

5   The Existential Ingredient

Section 3 has established that the Raising structure is necessary for extraction from an RC. It is not the only condition, however. To recall, extraction from an RC is typically found when the RC-head is indefinite and the utterance is making an existential statement. This is very clear in the canonical existential constructions in (35), but extraction is also possible in a variety of 'non-canonical' existential sentences, one of which is given in (36) (see more below).

(35) a.   al lexem Saxor yeS rak   gvina axat Se-kedai   limro'ax.

on bread black BE   only cheese one that-worth to.spread

'On black bread there is only one cheese that's worth spreading.'

b. me-ha-sifria   hazot$_2$, yeS ulay   [xamiSa sfarim$_1$ [Se-kedai PRO lehaS'il t$_1$ t$_2$]

from-the-library this   BE   maybe five   books   that-worth   to.borrow

'From this library, there are hardly five books worth borrowing.'

(36) al lexem Saxor$_2$, ani makira rak [gvina levana axat]$_1$ Se-efSar   limroax t$_1$ t$_2$.

 on bread black   I   know   only cheese white one   that-possible to.spread

'On black bread, I know only one white cheese that can be spread.'

The puzzle presented by extraction from RCs, and from DPs more generally, has to do with the proper characterization of the environments that allow extraction. While it is clear that (in)definiteness plays a role, it has been harder to state the relevant generalization, to explain why this factor should interact with extraction in the way that it does, and to incorporate this into a general theory of wh-movement. The literature on extraction from RC has been dominated by discussion of contextual factors of various sorts that enter into facilitating extraction (Erteschick-Shir 1973, 1982, Alwood 1976, 1982, Engdahl 1980, 1982, 1998, Rubowitz-Mann 2000 among others). Since extraction from RC seemed to be insensitive to islands and to violate Subjacency, these factors have often been presented as a further challenge to syntactic conceptions of locality. This emphasis has obscured the fact that extraction from an RC is not significantly different in this respect from extraction from a simple DP.

The Raising analysis developed above brings extraction from RC back into the fold of syntactic theory, and the goal of this section is to develop a formal syntactic

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account of the existential ingredient without compromising its contextual contour. I argue that the constraints on extraction from RCs are the same as those imposed on extraction from simple DPs, also limited to non-specific indefinites and subject to a variety of contextual factors (Fiengo & Higginbotham 1981, Diesing 1992, Mahajan 1992, Davies & Dubinsky 2003, Bianchi & Chesi 2014).[18] Extending ideas in Diesing 1992 to extraction from RCs, and updating them to reflect the cyclic phase-based nature of current syntactic theory (Chomsky 2000, 2001, Nissenbaum 2000)), the analysis below has two parts. First, in the spirit of previous accounts in which DP is an island if it is specific or presuppositional, it is argued that only non-presuppositional RCs allow extraction.[19] The contextual sensitivity of extraction from RCs is to be attributed, on this account, to the contextual nature of presuppositions of existence (Borschev & Partee 1998, 2001, Engdahl 1998, Rubowitz-Mann 2000). Second, I will show that syntactic position, and not presuppositionality per se, constrains extraction from an RC: extraction is possible only from RCs contained within DPs in non-derived positions. Following Diesing 1992, presuppositional DPs raise from their base position and non-presuppositional DPs remain in-situ; extraction is only possible from a DP in a non-derived position (see references for the Freezing Condition below). The movement of a presuppositional DP bleeds sub-extraction from within it, and this movement may be overt or covert: in German, for example, the movement of presupposed objects is overt, while in English and Hebrew it is covert.[20] The structure of the analysis is summarized in (37). I will assume some version of the Freezing condition, in (38) (for various rationales and different implementations see Ormazábal et. al. 1994, Uriagereka 1999, Chomsky

2000, 2001, Stepanov 2001, Rizzi 2004, 2006, Chomsky 2008, Gallego & Uriagereka

2006, 2007; see Gallego 2010 for discussion), and specifically, the Activity Condition

(39) (Chomsky 2000, 2001)).

(37) a. Presuppositional DPs, including RCs, raise; non-presuppositional DPs do not.

 b. Sub-extraction is impossible when the containing DP/RC is in a derived position.

 c. It follows that extraction is excluded from a presuppositional DP.

(38) *The Freezing Condition*:

 Constituents in derived A-positions are opaque to sub-extraction.

(39) *Activity Condition* (Chomsky 2000: 123):

 a. DPs with structural Case are *active*.

 b. A-movement (triggered by φ-Probes) renders active DPs *frozen*, unable to move

 or allow movement of their constituents.

 While constraints on movement, from this perspective, have a syntactic or

morpho-syntactic source, context sensitivity derives from the information-structural

nature of presuppositionality. An alternative approach to definiteness effects in extraction

from DP, in (40), relates the possibility for extraction to the amount of functional

structure present in DP, not to its position (Bowers 1988, Corver 1992, Bošković 2005,

2008, among others).

(40) a. Who do you like [jokes about __]?

 b.*Who do you like [the/those jokes about __]?

On these accounts, DP blocks extraction, but when the DP layer is not present, extraction

may be possible. The related contrast between RCs, however, could not be accounted for

in this way, if a Raising RC is D^0 + CP (Kayne 1994) as argued above. If the relevant functional layers are stripped away from the indefinite RCs in (35-36), then all that would be left is an embedded CP, but RCs do not have the distribution of CPs. Furthermore, in section 4 it was claimed that in a sequence of DP and NP projections, it is the NP projection that creates a problem for locality, not the DP projection. In what follows further evidence is presented in favor of an analysis based on the position of DP, rather than the presence of the DP layer.

5.1. Extraction Requires a Non-presuppositional DP

In the context of extraction from simple DPs, Diesing 1992 observes that the correct generalization is to be stated in terms of weak vs. strong quantifiers. DPs headed by strong quantifiers are those excluded in the existential construction (Milsark 1974).

(41) a. Who did you see pictures of?

    b. Who did you see a picture of?

    c. Who did you see many / several / some pictures of?

(42) a. *?Who did you see the / every / each picture of?

    b. *?Who did you see most pictures of?

    c. ??Who did you see the pictures of?

(43) a.   There were (many/several/some) pictures of Mary on the wall.

    b. *There was the/every/each picture of Mary on the wall.

Within the class of DPs headed by weak quantifiers there is a further division, into DPs whose denotation is presupposed to exist and DPs which do not involve an existence

presupposition. Modification by 'certain', for example, brings out the presuppositional reading, and extraction is bad.

(44) *Who did you see a certain picture of?

Matushansky (2005) mentions the fact that comparative superlatives allow extraction despite being definite, and this suggests, independently, that mere presence of a definite article is not enough to block extraction.[21] It also supports the generalization in terms of presuppositionality, since no particular picture is presupposed in the superlative version of (45), only that some picture is the best picture.

(45) (Of those present) Who did you take the *(best) picture of?

These observations form the basis of the generalization that presupposed DPs block extraction (Fiengo & Higginbotham 1981, Erteschik-Shir 1981, Diesing 1992, Mahajan 1992, Davies & Dubinsky 2003, Bianchi & Chesi 2014). Following Diesing 1992 (and many others), the presuppositionality of a DP correlates with its position. Presuppositional readings are associated with a DP in a derived position, possibly at LF, whereas non-presuppositional readings are associated with a low position and narrow scope.[22]

This extends to extraction from RCs, which is possible in a variety of contexts in which the RC is non-presupposed, as in (46-49), where this reading is forced or at least strongly preferred. The non-presuppositional nature of the RC is obvious in canonical existential sentences such as (46), but a preference for non-presuppositional RCs is also observed in I. Non-verbal sentences, when the DP is a predicate nominal (47). The predicate nominal may be definite, but even then it is not presuppositional (see also

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Engdahl 1998 for Swedish). II. Non-canonical existential sentences in which existence is asserted or implied (48), or denied (49). These are considered here existential since the utterance, as a whole, is asserting, implying, or denying existence of the entity denoted by the RC, and the RC is not presupposed.

(46) a. al lexem Saxor yeS rak gvina   axat Se-kedai   limro'ax.

     on bread black BE only cheese one that-worth to.spread

     'On black bread there is only one cheese that's worth spreading.'

  b. me-ha-sifria   hazot$_2$, yeS ulay   [xamiSa sfarim$_1$ [Se-kedai PRO lehaS'il t$_1$ t$_2$]

     from-the-library this   BE   maybe five   books   that-worth   to.borrow

     'From this library, there are hardly five books worth borrowing.'

(47) a. al   ha-haxlata   hazot$_2$ Yair Lapid haya [ha-axaron Se-yada t$_2$]

     about the-decision this   Yair Lapid was   the-last   that-knew

     'About this decision, Yair Lapid was the last to know.'

  b. et   ha-toxnit   hazot$_2$ ata [ha-yaxid Se-ro'e t$_2$]

     ACC the-program this   you the-single that-watches

    'This program, you're the only one who watches.'

(48) a. me-ha-mis'ada   hazot$_2$, Samati rak   al [kinuax exad]$_1$ Se-keday lakaxat t$_1$ t$_2$

     From-the-restaurant this,   heard.I only on dessert one   that-good to.take

     'From this restaurant, I heard about only one dessert that's worth taking.'

  b. al lexem Saxor$_2$, ani makira rak [gvina levana axat]$_1$ Se-efSar limroax t$_1$ t$_2$.

     on bread black   I   know   only cheese white one that-possible to.spread

     'On black bread, I know only one white cheese that can be spread.'

c. miSkafayim yerukot ka-ele, ra'iti kan etmol   miSehu Se-moxer.

   Eye-glasses green   like.that, saw.I here yesterday someone that-sells

  'That kind of green eye-glasses, I saw here yesterday someone who sells.'

(49) a. me-ha-sifria   hazot$_2$, od lo macati [sefer exad$_1$ [Se-kedai PRO lehaS'il t$_1$ t$_2$]

   from-the-library this   yet not found book one   that-worth   to.borrow

  'From this library, I haven't yet found a single book that's worth borrowing.'

  b. me-ha-sifria   hazot$_2$, od lo macati [et ha-sefer$_1$[Se-kedai PRO lehaS'il t$_1$ t$_2$]

   from-the-library this   yet not found ACC the-book that-worth   to.borrow

  'From this library, I haven't yet found the book that's worth borrowing.'

The non-canonical existentials in (48-49) induce a strong tendency, depending on context, to interpret the object DP as not presupposed. This gives them an existential flavor even though the matrix predicate is an ordinary lexical verb. That is, with most verbs and in most contexts, non-presuppositional readings of object DPs will coexist with presuppositional readings, but in (48-49) the non-presuppositional reading will be the preferred reading in many contexts of use. Rubowitz-Mann 2000 characterizes sentences such as (48a-c) as *Evidential Existentials* (EEs). Existence is asserted or implied through the use of a perceptual verb, such as *heard of* or *seen*, and a first person subject: the speaker implies or asserts the existence of the denotation of the RC by using a first-person statement about the way in which evidence was acquired. The numeral *one* also helps to bring out the non-presuppositional reading, where what is important is that some item exists (or is denied existence, as in (49)), a dessert in (48a) and a cheese in (48b). In this kind of context, the actual denotation is beside the point. Situations in which the non-

presuppositional reading is virtually forced are perhaps optimal for identifying acceptable cases of extraction, but they are not the only configurations in which it is observed.[23]

The effect of presuppositionality and scope on extraction can also be observed in other contexts. In the following example, the RC may scope below *want* and produce the non-presuppositional reading, or above it. In the reading in which the RC scopes above *want* (50b), there is a dessert, say the Black Forest cake, which I wanted my friend to find, order, and take. For the non-presupposed reading, in which the RC scopes below *want*, consider the following scenario. My friend has dietary restrictions and I am taking her to a restaurant that I love. I hope that among the fabulous desserts on the menu she will find at least one that she can eat.[24] The example in (51), with extraction, shows a clear preference for this reading.

(50) a. raciti   Se-hi   timca   [kinuax exad$_1$ [Se-tuxal   lakaxat t$_1$

     wanted.I that.she would.find dessert one   that-she.could take

     me-ha-misada   hazot$_2$]

     from-the-restaurant this

     'I wanted her to find one dessert that she could take from this restaurant.'

   b. There is a particular dessert (that she could take) that I wanted her to find.

   c. I wanted her to find some dessert or other (that she could take).

(51) me-ha-misada   hazot$_2$, raciti   Se-hi   timca   [kinuax exad$_1$

     from-the-restaurant this,   wanted.I that-she would.find dessert one

     Se-hi   tuxal lakaxat t$_1$ t$_2$]

     that-she could take

'From this restaurant, I wanted her to find one desert that she could take.'

The example in (49b) features a non-canonical existential with a definite RC, and here too extraction becomes degraded when the presuppositional reading is forced. This reading of (52a) is brought out by the continuation in B's utterance, which contains a pronoun anaphoric to 'the book that's worth borrowing'. In this context extraction becomes degraded.

(52) A: me-ha-sifria   hazot$_2$ od lo   macati [et ha-sefer$_1$ [Se-kedai PRO le-haS'il t$_1$ t$_2$]

         from-the-library this   yet not found   ACC the-book   that-worth   to.borrow

       'From this library, I haven't yet found the book that's worth borrowing.'

     B:#naxon, hexbeti lexa   oto al madaf axer.

         true,   hid.I   to.you it   on shelf   different

       'True, I hid it on a different shelf.'

These examples show that the effect that the presuppositionality of a DP has on extraction is not limited to a particular kind of utterance such as the existentials above, and point in favor of a structural characterization. Subtle lexical choices can also have an effect on extraction (Erteschick-Shir 1973 for Danish, Alwood 1982 for Swedish and Rubowitz-Mann 2000 for Hebrew), and this too has been taken to suggest that the source of the (un)grammaticality of extraction from RCs cannot be syntactic. The example in (53a) is possible as an answer to the question: 'Do you know where I can get some flowers like that?', especially if prefixed by 'Yes,…'. (53b), however, is not felicitious as an answer in that context. Rubowitz-Mann (2000) presents a similar difference between *talk* and *converse* (54).

(53) a. De blommorna känner jag en man som säljer.   Swedish

   Those flowers know   I   a   man who sell

   b.#De blommorna talar jag med en man som säljer.

   Those flowers talk   I   with a   man who sells

(54) a. ba-inyan   ha-ze, dibarti   im miSehu Se-yuxal la'azor lexa.   Hebrew

   in.the-issue this,   talked.I with someone that-could to.help you

   'Regarding this issue, I talked to someone who could help you.'

   b.?ba-inyan ha-ze, soxaxti   im   miSehu   Se-yuxal la'azor lexa.

   in.the-issue this, conversed.I with someone that-could to.help you

   'Regarding this issue, I conversed with someone who could help you.'

Rubowitz-Mann (2000) suggests that there are conventionalized ways to make non-

canonical existential statements ('Evidential Existentials'), and that (53b-54b) are more

difficult to construe as such. Erteschik-Shir (1973, 1982) and Erteschik-Shir & Lappin

(1979) observe that in order to facilitate extraction from Danish RCs, the matrix clauses

should not be too complex and they should be relatively empty semantically, similar to

the existential operator. These observations are fully compatible with the idea that the

source of the restrictions is presuppositionality. It is easier to construe the RC in (53a-

54a) as non-presupposed when the verb is less specified and less informative. The more

specified the event is, the stronger the tendency is to construe the arguments as DPs that

provide denotations based on prior discourse and a presupposition of existence.

   Factors affecting the information-structural status of a DP, such as choice of verb

and subject as discussed above, are clearly important for determining whether a DP is

construed as presuppositional or not in a given context. While these factors may have seemed, in the history of the discussion, to play a more major role when extraction is from an RC than from a simple DP, (51-52) show that they are not a necessary ingredient. The next two sections further motivate a structural analysis and the correlation between position and extraction.[25]

5.2. Surface Position and Sub-extraction

The effect of position on extraction from a simple DP is seen very clearly in German, where direct objects may scramble past an adverb. In (55) the object is in-situ, following the adverb *always*, and extraction is possible, whereas in (56) the object is scrambled past *always* and extraction is impossible.

(55) a. daß Hilda immer Sonaten von Dittersdorf spielt.

     that Hilda always sonatas by Dittersdorf plays

      '… that Hilda is always playing sonatas by Dittersdorf.'

   b. Was$_1$ hat Hilda immer [$_{NP}$ t$_1$ für Sonaten] gespielt?

    What has Hilda always   for sonatas played

    'What kind of sonatas did Hilda always play?'

(56) a. … daß Hilda Sonaten von Dittersdorf immer spielt.

      that Hilda sonatas by   Dittersdorf always plays

      'If it is a sonata by Dittersdorf, Hilda plays it.'

   b. *Was$_1$ hat Hilda [$_{NP}$ t$_1$ für Sonaten] immer gespielt?

     what has Hilda   for sonatas   always played

Similar effects of position on sub-extraction are attested in Dutch (Broekhuis 2007) and Spanish (Uriagereka 1988, 1999, Torrego 1998, Gallego & Uriagereka 2007, Gallego 2010), for subject and object simple DPs. The correlation between position and extraction seems to hold in English as well, for subjects, when a subject in specIP is compared to a lower subject in the existential construction, in (57) (Moro 1997). The effect of position on extraction is also attested in Hebrew, with a non-finite clausal subject (simple DPs and subject finite clauses do not usually allow extraction). Extraction is impossible when the subject precedes the verb, but fine when it is post-verbal, just as it is in German, Dutch, Spanish and English.[26]

(57) a. Which candidate$_1$ C were [$_{TP}$ there T [$_{vP}$ v [posters of t$_1$] all over town]?

   b. *Which candidate$_1$ C were [$_{TP}$ [posters of t$_1$]$_2$ T [$_{vP}$ v t$_2$ all over town]?

(58) a. [PRO ledaber im   rut] ye'acben   et   rani.

         to.talk with rut   will.annoy ACC rani

   'Talking to Ruth will annoy Rani.'

  b.*im   mi$_1$ (ata xoSev Se-) [PRO ledaber t$_1$] ye'acben   et   rani?

    with who you think that   to.talk   will.annoy ACC rani

    Intended: 'With who (do you think that) talking will annoy Rani?'

  c. im   mi$_1$ (ata xoSev Se-) ye'acben   et   rani [PRO ledaber t$_1$]?

    with who you think that will.annoy ACC rani   to.talk

    'With who (do you think that) it will will annoy Rani to talk?'

A similar positional effect is observed when extraction is from an RC, possible when the RC subject is post-verbal, but not when it is preverbal (from Rubowitz-Mann 2000):

(59) a. tikim ka'ele, omed kan kol   Savua [miSehu Se-moxer __].

         bags such   stands here every week   someone that-sells

        'Bags like that, there's someone here every week who sells.'

      b.*tikim ka'ele, [miSehu   Se-moxer __] omed kan   kol   Savua.

         bags such,   someone that-sells   stands here every week

5.3 Scope and Sub-extraction

We now turn to the relationship between covert position and extraction. In a language like German, the presuppositionality of the object is reflected in its surface position, but in languages like Hebrew and English, presuppositional objects remain in their base position. Nevertheless, they block extraction, as in (60) repeated from (42-43) above.

(60) a. Who did you see (many / several / some) pictures of?

    b. Who did you see a picture of?

    c. *?Who did you see the / every / each picture of?

    d. *?Who did you see most pictures of?

    e. ??Who did you see the pictures of?

Diesing argued that position determines extraction universally, possibly at LF, and this should apply to presuppositional object RCs as well. When an object RC occupies a derived position at LF, extraction should be blocked, and when it doesn't, extraction

should be possible. According to this hypothesis, the effect of covert position on extraction should be detectable in other LF-related domains, beyond the presupposition-related contrasts presented above (46-52). In particular, there could be cases in which a preverbal subject allows extraction when it is interpreted lower than its surface derived position, or cases in which an object blocks extraction when it is interpreted higher than its surface in-situ position. The first sort of effect does appear to hold for NPI licensing (Linebarger 1980, Uribe-Etxebarria 1995). When the subject scopes below its surface position, an NPI within it can be licensed by sentential negation, as in (61a), with a stage-level predicate.

(61) a. [Tickets to any of the afternoon concerts] were not available.

b. *[Tickets to any of the afternoon concerts] were not green.

When we turn to Hebrew RCs and compare preverbal subjects of stage-level and individual-level predicates, there is no obvious contrast in the acceptability of extraction. For example, it is hard to say that the preverbal subject of a stage-level predicate (62b) is any better than (62c), with an individual-level predicate.[27]

(62) a.   tikim ka-ele,   lo   nimca   kan [af exad Se-moxer __].

         bags like-that not present here nobody that-sells

         'Bags like that, there isn't anybody here who sells.'

    b.   *tikim ka-ele, [af exad Se-moxer __] lo   nimca   kan.

         bags like-that nobody that-sells   not present here

    c.   *tikim ka-ele, [af exad Se-moxer __] lo   yehudi.

         bags like-that nobody that-sell   not Jewish

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It might be too ambitious, however, to expect a sentence to get better due to a possible low interpretation that co-exists with the interpretation associated with the RC's surface position. In the reverse case a wide scope reading would be expected to block extraction, and here an effect is clearly observed. Diesing uses ACD to force wide scope readings of objects (May 1985) and to argue that presuppositionality can be associated with syntactic position at LF. The example in (63) is ambiguous. In the presuppositional reading, the adverb binds into the DP, and in the existential reading it binds a spatio-temporal argument. This ambiguity disappears in the context of ACD (64), suggesting that presuppositionality is represented structurally, in a derived position at LF. ((64) is from Diesing 1992: Ch 4 ex. 28).

(63) a. I usually read books about wombats.

b. Presuppositional reading: Whenever there is a book about wombats, I usually read it.

c. Existential reading: Usually (in the morning) I read a book about wombats.

(64) a. I usually read books that you do.

b. Presuppositional reading: Whenever you read (some) books, I usually read them too.

c. *Existential reading: Usually (in the morning) I read books that you read too.

ACD can also be used to test extraction from a higher position at LF.[28] Extraction should be impossible in ACD structures, and it is, in (65c).

(65) a. Who do you like two jokes about?

b. I like two jokes about Bill that Fred does.

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c. *Who do you like two jokes about that Fred does?

This further supports the claim that extraction is mediated by syntactic position, possibly

at LF. We can now apply this diagnostic to object RCs in Hebrew, since extraction from a

definite RC is sometimes possible, in (52) above and repeated in (66) below. Here the RC

object appears in its base position, and the interaction between position and extraction

refers to LF-position. On the analysis developed above, the preferred reading for the

object DP in this context is non-presupposed, so it remains in-situ at LF and extraction is

permitted. To test the claim that extraction correlates with LF position, we use ACD to

force QR. Extraction should be impossible, and it is, in (67a). Without extraction the

ACD construction is grammatical, in (67b), and without ACD the extraction is

grammatical, in (66).[29]

(66)   me-ha-sifria   hazot$_2$, od lo   macati [et   ha-sefer$_1$ [Se-kedai PRO lehaS'il t$_1$ t$_2$]]

         from-the-library this   yet not found ACC the-book that-worth   to.borrow

         'From this library, I haven't yet found the book that's worth borrowing.'

(67) a.*me-ha-sifria   hazot$_2$, od lo   macati [et   ha-sefer$_1$[Se-kedai PRO lehaS'il t$_1$ t$_2$]]

         from-the-library this   yet not found   ACC the-book that-worth   to.borrow

         Se-dina mac'a.

         that-dina found

         Intended: 'From this library, I haven't yet found the book that's worth borrowing

         that Dina found.'

   b. od lo   macati [et   ha-sefer$_1$ [Se-kedai PRO lehaS'il t$_1$ me-ha-sifria   hazot]

         yet not found   ACC the-book that-worth   to-borrow from-the-library this

Se-dina mac'a.

that-dina found.

'I haven't yet found the book that's worth borrowing from this library that Dina
found.'

The previous section showed the effect of overt position on extraction, possible
only when a subject RC is postverbal, in (59). This section has shown the effect of covert
position on extraction, blocked when object QR and wide scope are obligatory. Taken
together, these effects place the possibility for extraction from an RC squarely within a
syntactic theory of locality. Combining this with the conclusion reached in section 3, we
arrive at the following generalization: extraction is selectively allowed from a Raising RC
contained within a DP in non-derived position.

At the time, the analysis in Diesing 1992 faced a number of theoretical
challenges, but they have since been resolved. First, the characterization of extraction
domain in terms of Freezing and movement of the containing DP (Wexler and Cullicover
1980) represented a substantial departure from the theory of locality (Huang 1982,
Chomsky 1986), but by now, the central role of Freezing and movement of the containing
DP are widely acknowledged (Uriagereka 1988, 1999; Gallego & Uriagereka 2006, 2007;
Stepanov 2007; Gallego 2010; Müller 2010, 2011; Chomsky 2000, 2008 among others).

The account also faced a difficulty with respect to cyclicity, for the analysis of
configurations in which presuppositional DPs occupy a derived position only at LF.
Within a GB type of model, where all covert movement follows all overt movement, the
statement that covert movement can bleed overt movement creates a paradox. To address

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the problem, Diesing suggested that Subjacency was a representational constraint

(Chomsky 1986) so that the ordering of operations wouldn't matter. It is no longer

necessary, however, to adopt this solution since theoretical developments have led to a

view of the cycle within which the ordering paradox doesn't arise. In late minimalist

models (Chomsky 2001, 2004) cycles correspond to pieces of structure such as the vP

and CP 'phases'. Syntactic operations have a single output, LF, and overt and covert

movements may be interspersed. Since covert movement of a presuppositional DP may

precede – i.e. occur in a lower cycle than - overt wh-movement from within this DP

(Brody 1995, Bobalijk 1995, 2002, Fox & Nissenbaum 1998, Nissenbaum 2000, Fox &

Pesetsky 2009), it is also possible for covert movement to bleed overt movement.[30] At the

point in the derivation in which overt movement to specCP is considered, the object DP

may have moved covertly to specvP. Given the Activity Condition (in (39)), this bleeds

sub-extraction. The reverse order, in which sub-extraction precedes covert movement of

DP to specvP is also excluded, since the first step of movement would target a higher

position than the second step, and this would lead to a counter-cyclic derivation.

6   Extraction and Extraposition

Two challenges for the proposal above are presented by RC-extraposition and these are

now addressed. Following up on Chomsky 1977, where extraction from an NP proceeds

via extraposition, Taraldsen (1981) argues that extraction from an RC in Norwegian may

evade a Subjacency violation because the RC was first extraposed. Since the extraction

path does not cross NP or DP, Subjacency is not violated. The current account shares the

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idea that there is a principled syntactic reason for the circumvention of Subjacency, but Taraldsen's analysis in terms of prior extraposition is problematic in at least two ways. First, if extraction from an RC is facilitated by extraposition, then the role attributed above to the Raising structure becomes irrelevant. Below it is argued that extraposition cannot be a necessary ingredient for extraction from an RC, since extraction is also possible when extraposition is not an option. Second, if Hulsey & Sauerland (2006) are correct in claiming that extraposition is only possible from the Matching structure, extraction from RC should not be compatible with extraposition, since this would entail extraction from a Matching RC, argued above to be impossible. Below it is shown that extraction from an extraposed RC is indeed sometimes possible. New evidence is presented in favor of extraposition being launched from a Raising RC (Bianchi 1999, De Vries 2002, and Sheehan 2010 (among others)), and it is argued that when extraction proceeds from an extraposed RC, the extraposed RC has a Raising RC as its source.

The following examples show that extraction from an extraposed RC is possible.[31] In the canonical existential sentence in (68), where extraction is generally possible (68a), it may also proceed from an extraposed RC.

(68) a. sefer ka-ze, lo   kayam ba-ir   hazot karega [af mol   Se-yaskim

book such   not exist   in.the-town this   now   no publisher that-would.agree

lefarsem __].

to.publish

b. sefer ka-ze, lo   kayam ba-ir   hazot [af mol]   karega [Se-yaskim

book such   not exist   in.the-town this   no publisher now   that-would.agree

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lefarsem __].

to.publish

'A book like that, there is no publisher in this town now who would agree to

publish.'

Following Taraldsen 1981, (68a) would obligatorily involve string-vacuous RC-

extraposition (henceforth, RC-Ex). In some languages the distributions of extraction and

extraposition are similar, and this may seem to suggest that extraction from an RC is

mediated by extraposition, especially if the conditions on extraction could be derived

from the conditions on extraposition. In Italian, for example, extraposition is limited to

narrow scope indefinite DPs (Bianchi 2013), similar to the distribution of extraction in

Hebrew. This distributional correlation does not, however, guarantee a direct relationship

between extraposition and extraction: Extraction from an RC in Italian *cannot* proceed

from an extraposed RC (Cinque 2010, and see Bianchi 2013 for Italian extraposed RCs as

VP adjuncts), and extraposition in Hebrew is not limited to narrow scope indefinites.[32] It

is still possible, of course, that extraposition is necessary for extraction, but other factors

conspire to restrict extraction to narrow scope indefinites. This is falsified in contexts in

which the RC is followed by additional material and string-vacuous extraposition could

not have occurred.[33] In these contexts, the possibility for extraction is not diminished, in

(69) and (70c).

(69) sefer kaze, ein [af mol   Se-yefarsem __]   ba-ir   hazot karega, ve-gam

     book such   neg no publisher that-would.publish in.the-town this   now   and-also

     lo   be-kol ha-medina.

not in-all the-country

'That kind of book, there's [no publisher who would publish] in this town now, nor is

there one in the entire country.'

(70) a. sefer ka-ze, ani lo mekira ba-ir   ha-zot karega [af mol

book such I   not know in.the-town this   now   no publisher

Se-yaskim   lefarsem __].

that-would.agree to.publish

b. sefer ka-ze, ani lo mekira ba-ir   hazot [af mol]   karega

book such I   not know in.the-town this   no publisher now

[Se-yaskim   le-farsem __].

that-would.agree to.publish

c. sefer ka-ze, ani lo mekira [af mol   Se-yefarsem __]   ba-ir   hazot

book such I   not know   no publisher that-would.publish in.the-town this

karega, ve-gam lo   be-kol ha-medina.

now   and-also not in-all   the-country

'That kind of book, I don't know [any publisher that would agree to publish] in this

town now, nor in the entire country.

All of this implies that RC-Ex is not what makes extraction from an RC possible.

This is important, but it doesn't fully address the challenge posed by RC-Ex. If Hulsey &

Sauerland are correct, RC-Ex requires the Matching structure. They assume that RC-Ex

requires QR and Late Merge (Fox &Nissenbaum 1998), in (71), available only for

Matching RCs. In a Raising RC the NP head is within the RC, so RC-extraposition would require Late Merge of C-bar, but that is impossible.

(71)

```
            IP
          /    \
       We        \
              /       \
           VP           ◁
         /     \      a̶ ̶b̶o̶o̶k̶ [CP that Mary₁ had asked us for]
        ◁      yesterday
   lent her₁ a book
```
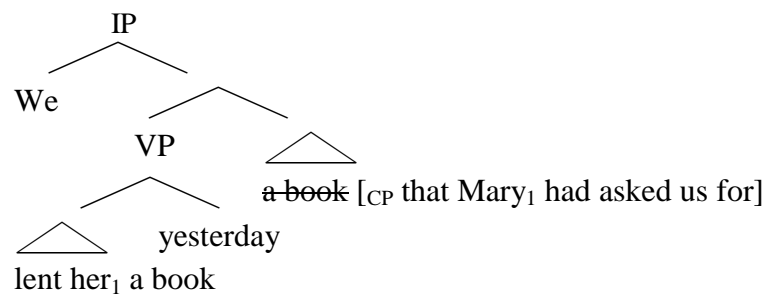
If this is correct, then extraction from a Matching RC must be possible, contrary to the claim made above that extraction is always from a Raising RC. Below I argue that extraposed RC may be of the Raising variety and that extraction from RC-Ex proceeds from a Raising RC-Ex.

If it is possible to extract from RC-Ex, as in (68b) and (70b), and if extraction from an RC is restricted to Raising RCs, it must be possible to extrapose a Raising RC, as argued in Bianchi 1999, De Vries 2002 and Sheehan 2010. In fact, the derivation of RC-Exs which involve extraction could not involve QR and Late Merge, extraction is restricted to non-presuppositional indefinite RC-Exs, where QR is not an option. It is necessary, then, that RC-Ex can apply to a Raising RC, possibly implemented in a way which would not involve C-bar movement, such as leftward movement of the NP head (Kayne 1994) in (72a), or the Scattered Deletion approach to complement extraposition (Sheehan 2010) in (72b).[34]

(72)   a. $[_{NP1}$ a man] walked in $[_{DP}$ D^0 $[_{CP}$ t_1 who I told you about t_1 yesterday]]

b. [a chance ~~to meet the president~~] has come up [~~a chance~~ to meet the president]

As it turns out, a number of reconstruction effects are observed with extraposition, further supporting the existence of Raising RC-Ex. Hulsey & Sauerland 2006 present three types of reconstruction which are incompatible with extraposition: low readings of superlatives, anaphor binding, and idiom chunk interpretation, but Heycock 2012 claims that DE DICTO readings for modifiers, as well as anaphor binding and idiom chunk interpretation are available with extraposition. Another reconstruction effect which appears to be compatible with extraposition, not yet discussed in this context, is NPI

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licensing in Sub-trigging contexts (Dayal 1995, 1998). The phenomenon refers to the possibility for NPI *any* to be licensed in non-downward entailing environments, just in case it is associated with a phrasal modifier, including a relative clause:

(73)　a. *Pictures of anyone were on sale.

　　　b.　Pictures of anyone [that were displayed on the wall] were on sale.

The requirement for a modifier suggests that *any* is interpreted within the modifying phrase, and Dayal 1995, 1998 argues that the crucial ingredient is a spatio-temporal event operator. This suggests that the head of the RC, *pictures of anyone*, reconstructs. This is supported in (74a), where reconstruction of the RC head would trigger a Principle C violation (from Safir 1999: ex. (66a)). The universal quantifier in (74b) does not require the relative clause or reconstruction (Safir 1999: ex. (67a)).

(74)　a.*[Pictures of anyone$_1$]$_2$ which he$_1$ displays t$_2$ prominently are likely to be

　　　　　attractive.

　　　b.　[The picture of every boy$_1$]$_2$ which he$_1$ displays t$_2$ prominently is likely to be

　　　　　attractive.

Further evidence for a reconstruction analysis of sub-trigging is provided by a Principle C violation triggered for a name contained in the reconstructing RC head. In (75b) the NPI is replaced with a universal quantifier and the example is perfectly grammatical.[35]

(75)　a. *[Pictures of [any friend of John's$_1$]$_2$]$_3$ that he$_1$ likes t$_3$ were on sale.

　　　b.　[Pictures of [every friend of John's$_1$]$_2$]$_3$ that he$_1$ likes t$_3$ were on sale.

Reconstruction in the context of sub-trigging is compatible with extraposition:

(76) a. When I was at NYU I talked to anyone who came up to me.

   b. I talked to anyone when I was at NYU who came up to me.

This suggests that extraposition may very well be compatible with reconstruction and with the Raising structure (Raising-Ex), in addition to the Matching structure (Matching-Ex). By hypothesis, sub-extraction in (70c) proceeds from Raising-Ex. The existence of these two varieties of RC-Ex may follow from the existence of complement-Ex and adjunct-Ex, each with its own properties (Fox & Nissenbaum 1998 and especially Sheehan 2010, who proposes this division internal to RC-Ex). Matching-Ex would fall under adjunct extraposition, whereas Raising-Ex, where the RC is a complement to D^0, would fall under complement extraposition. Based on this typology, RaisingEx should exhibit properties associated with complement-Ex. The brief discussion below will focus on the potential for extraction, Principle C, and the interaction between them.

The property of complement extraposition relevant to this discussion is that it allows sub-extraction (Kuno 1973, Huck & Na 1990, Sheehan 2009, 2010).[36] In the following paradigm, extraction from an extraposed complement is even better than extraction from the non-extraposed version ((77) is from Sheehan 2010:78 and (78) is from Huck & Na 1990:66.).

(77)   a. ?Which topic has a new book just appeared about?

       b. *Which topic has a new book about just appeared?

(78) Okay, you saw a picture yesterday, but just whom did you see a picture yesterday OF?

If Raising-Ex is complement-Ex, it makes sense that it would allow sub-extraction. This is supported by Principle C effects, since Principle C is bled in adjunct-Ex, but not in complement-Ex (Fox & Nissenbaum 1998):

(79) a.   I gave him_1 an argument yesterday that supports $John_1$'s theory.

    b. */?? I gave him_1 an argument yesterday that this sentence supports $John_1$'s theory.

We can now formulate a prediction: If extraction from RC-Ex is extraction from a Raising-Ex, and if Raising-Ex is complement-Ex, extraction from an extraposed RC should not bleed Principle C. Though judgments here are delicate, and some speaker variation is observed, the prediction appears to be confirmed. First, note that Hebrew too exhibits a difference between complement-Ex (80) and adjunct-Ex (81), where only the latter bleeds Principle C.

(80) a. *yeS la_1 [tmuna Sel $miri_1$] al ha-kir   ba-salon.

    BE   to.her picture of Miri   on the-wall in.the-living room

    b. *yeS la_1 tmuna [al ha-kir   ba-salon]   Sel $miri_1$.

      BE   to.her picture on the-wall in.the-living room of Miri

(81) a. *yeS la_1 [tmuna Sel yosi Se-$miri_1$ nora ohevet] al ha-kir   ba-salon.

    BE   to.her picture of Yossi that-Miri much loves   on the-wall in.the-living room

    b. ?yeS la_1 tmuna Sel yosi [al ha-kir   ba-salon]   Se-$miri_1$ nora ohevet.

      BE   to.her picture of Yossi on the-wall in.the-living room that-Miri much loves

      'She has a picture of Yossi on the wall in the living room that Miri truly loves.'

Turning to Principle C effects in extraposed RCs featuring movement, it appears that extraposition does not bleed Principle C when extraction is involved, in contrast to adjunct-Ex (81b). This is shown in (82b) and (83b), which are also significantly worse than the baselines in (82c) and (83c).

(82)a. *al ha-dvarim ha-be'emet kaSim, ein la$_1$ [af xaver Se-medaber im rina$_1$]

    on the-things the-truly   difficult not to.her no friend that-talks   with rina

    ka-rega.

    now

  b.*al ha-dvarim ha-be'emet kaSim, ein la$_1$ [af xaver] karega [Se-medaber im

    on the-things the-truly   difficult not to.her no friend now   that-talks   with

    rina$_1$].

    rina

  c. al ha-dvarim ha-be'emet kaSim, ein la$_1$ [af xaver] karega [Se-medaber __ ita$_1$].

    on the-things the-truly   difficult not to.her no friend now   that-talks with.her

    'About the truly difficult things, she has no friend right now who talks to her/*Rina.'

(83)a.*tmixa   rigSit   amitit, lo nimca ita$_1$ [af exad Se-yaxol latet   le-rina$_1$]

    support emotional real   not present with.her nobody that-can to.give to-rina

    be-ezor ha-ason.

    in-area the-disaster

  b.*tmixa rigSit   amitit, lo nimca ita$_1$ [af exad] karega [Se-yaxol latet

    support emotional real   not present with.her nobody now   that-can to.give

    le-rina$_1$].

to-rina

c. tmixa   rigSit   amitit, lo nimca   ita$_1$ [af exad] karega [Se-yaxol latet la$_1$].

support emotional real   not present with.her nobody now   that-can to.give her

'True emotional support, there's nobody now with her that could give her/*Rina.'

Two things can be concluded from these data: (a) the RC-Ex from which extraction

occurs does not behave as expected from a Matching RC-Ex; (b) with respect to Principle

C, the extraposed RC behaves like complement-Ex. While more work is certainly needed

on the interaction of RC-Ex and extraction, I tentatively conclude that when extraction

proceeds from RC-Ex it is a Raising RC, consistent with the claims made above.

7   Summary and Conclusions

Extraction from RC has presented a puzzle for linguistic theory because it appears to

violate syntactic constraints on extraction, and to be affected by subtle contextual factors

subject to speaker variability. I have argued that it can be brought into the fold of

syntactic theory once it is acknowledged that I. RCs are ambiguous, II. One of the

structures, the Raising RC, resembles a wh-island, and III. Selective violations of wh-

islands are tolerated. On this proposal, extraction from an RC is always extraction from a

Raising RC, and it exhibits the selective pattern of extraction associated with embedded

interrogatives and weak islands more generally. Matching RCs, along with complex NPs

with complement CPs, are absolute 'strong' islands due to the phase-status of the NP

layer. An analysis in terms of NP-as-phase represents a departure from earlier

approaches, which identified the islandhood of a DP containing an RC with the adjunct

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status of the RC. The present approach offers a superior account of the selective pattern of extraction from an RC, extending to other kinds of complex NPs.

The analysis of extraction from a Raising RC involves a cartographic structure in which the specifier position which hosts the escape hatch is above the position which hosts the relative head, consistent with the PIC. This suggests that languages that tolerate extraction from an embedded interrogative should also allow extraction from an RC under comparable conditions.

Having a Raising RC as the source structure is a necessary condition, but it is not the only one. Contextual factors and sensitivity to information-structure follow from the non-presuppositional nature of the containing RC. Ultimately, however, the factor that determines extraction is syntactic position, not presuppositionality per se, and in this respect extraction from an RC is just like extraction from a simple DP: movement of the containing DP to a derived position bleeds sub-extraction from within. Both of these generalizations, in terms of NP-phasehood among types of complex NPs, and in terms of DP position across simple and RC-containing DP, represent departures from the Barriers conception of extraction domains in terms of complements vs. adjuncts / subjects. With a clearer understanding of these factors in place, extraction from RCs falls squarely within syntactic theories of locality.

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[1]I thank an anonymous reviewer for suggesting this diagnostic.

[2]There are other ways to derive the effects of (12) without having different containing structures, such as Late Merge of the complements within the RC head (Thoms & Heycock 2014, Checchetto & Donati 2015). See section 4 for further discussion.

[3]There is evidence for the sensitivity of extraction to the structure of the RC in languages other than Hebrew. Cinque 2010 observes that in languages in which extraction is possible, the RC must be introduced by the complementizer which also introduces other clause types, and not by the complementizer or operator dedicated to introducing RCs; with the latter, extraction is blocked. In Italian, Spanish and French, for example, the RC has to be introduced by *che* / *que*, and in the Scandinavian languages, by *som* / *sem*. Cinque claims that the sensitivity to choice of complementizer can also explain why some languages allow no extraction from RC at all. German and Bulgarian,

for example, do not allow extraction from an RC, and also do not have RCs introduced by the element that introduces other clause types. It is tempting to recast Cinque's generalization in structural terms: the RC which resembles other clause types is the Raising RC, and 'ordinary' RCs are of the Matching variety. For example, Norwegian relatives introduced by *som*, the element found in other clause types, are associated with reconstruction (see Åfarli 1994 for examples and discussion). This empirical picture is merely suggestive, as we cannot do justice here to the many questions raised by a fuller consideration of Cinque's generalization.

[4]In some languages, like English (and French and Dutch, among others), selective extraction and weak island effects are observed only in non-finite wh-complements. Other languages, like Hebrew, also allow selective extraction from finite wh-complements.

[5]Different kinds of generalizations have been proposed to account for the difference between those wh-phrases that can extract from embedded interrogatives and those that cannot. The characterization above in terms of an argument-adjunct asymmetry (Rizzi 1990) was later modified (Kroch 1989; Cinque 1990; Abrusan 2011, 2014, among others). The discussion here will not address details pertaining to the correct generalization or its ultimate source. The present argument only aims to show that, when care is taken to isolate those RCs which do allow extraction, the selective pattern that characterizes embedded interrogatives – whatever it may be, for particular languages or speakers - is also observed with RCs.

[6]See also Chung & McCloskey 1983, Cinque 2010, and Lindahl 2015 for argument/adjunct asymmetries in English, Italian, and Swedish, respectively, and Lindahl 2015 for the claim that Swedish RCs constitute weak islands for extraction.

[7]We set aside verbs taking DP and PP as internal arguments, to control for the effects of resumption on extraction from RC. Movement of a DP complement of P^0 in relativization involves obligatory resumption (there is no preposition stranding). Having 2 PPs implies local resumption in each case and this ensures that whatever contrast emerges is not due to resumption in the local chain.

[8]An anonymous reviewer considers (24b) ungrammatical, with no help from (25a). These are subtle distinctions, and additional speaker variation is not unexpected. What is important is not so much the absolute status of each construction, but the correlation between embedded interrogatives and RCs. That is what the reviewer reports when comparing the two.

[9]The flexibility observed in PP-PP interactions falls under a consistent nesting pattern, once we take into account the asymmetry between the two PP arguments. While both $PP_{with} > PP_{about}$ and $PP_{about} > PP_{with}$ are possible orders, Preminger (2005) argues that the underlying hierarchical arrangement has PP_{with} higher than PP_{about}, with the second order derived by a step of A-movement, i.e. $PP_{about} > PP_{with} \ldots \bcancel{PP_{about}}$. With this in place, the flexibility observed between internal arguments in (24) and (29) is no longer surprising, since A-bar movement may proceed from either one of these structures, and for each initial configuration there is only one possible outcome.

[10]Single output models (Brody 1995, Bobalijk 1995, 2002) could also represent the correlation in this way and would encounter similar difficulties.

[11]Within the class of approaches that attribute a single containing structure to reconstructing and non-reconstructing relatives, there is an alternative to (30) which derives, via Late Merge of complements into the RC head, configurations in which only the high copy is interpreted (Cecchetto & Donati 2015, Thoms & Heycock 2014). It is unclear how Late Merge would interact with extraction to derive the patterns in section 3.

[12]It is predicted, therefore, to allow complement extraction. This is confirmed in (i), although on the whole, complement extraction appears to be more restricted in Hebrew than in English.

(i)   me-eyze   erec   ro'im axSav be-tel aviv haxi harbe tayarim?

      from-which country see.pl now   in-tel aviv most many tourists?

      'From which country do you now see in Tel Aviv the most tourists?'

[13]In addition to the 'escape hatch' specCP, the CP area also hosts the relative head, which produces the wh-island configuration. See section 4.3 for further discussion of how these positions interact.

[14]The precise labels of these CP-related projections are not intended to suggest any particular semantic interpretation (of focus, as opposed to topic, for example). Labels such as CP_1 and CP_2 would be just as informative.

[15]See also Bhatt 2002 for a related proposal, where DP raises and NP further moves and re-projects an NP head. That analysis, however, is not compatible with the view of extraction developed here. See discussion surrounding (30).

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[16]Since the two wh-phrases are not associated with the same semantics of interrogativity, the operation of Shortest Move in RC-syntax raises an interesting question: in what sense are the two constituents, the DP to be relativized and the DP to be extracted, similar enough to be competing for Shortest Move?

[17]It may seem that the articulated CP structure for RCs is problematic for the compositional derivation of the RC denotation, since the extracting phrase intervenes between D^0 and the NP that it is associated with. This does not create a problem for compositionality, however, since λ-abstraction at the level of CP_1 creates a predicate of type $<e<e,t>>$ with which DP_2 of type $<e>$ will compose. Another issue concerns the type of FocP, determined by predicate modification (Heim and Kratzer 1998). I assume, following Heim & Kratzer 1998, that relative *which* denotes $<<e,t>,<e,t>>$ and that [which NP_3] is therefore $<e,t>$, which when composed with $IP_{<e,t>}$ produces $FocP_{<e,t>}$. Combined with D^0 of type $<<e,t>e>$, the denotation of the containing DP is of type $<e>$.

[18]The factors that enter into allowing extraction from a simple DP in a language like English are notoriously complex, at least at first glance. In addition to restrictions on the presuppositionality of the containing DP (see below), extraction from simple DP is also sensitive to whether the extracted constituent is a complement or an adjunct (Huang 1982, Chomsky 1986, Cullicover & Rochmont 1992, Davies & Dubinsky 2003, Ticio 2003, Bošković 2014, among others). Erteschik-Shir (1973, 1981) discusses choice of matrix verb (Bach & Horn 1967) and choice of possessor, arguing that the complicated ways in which lexical choices affect extractability call for a non-structural account of the

phenomenon. These complexities, however, probably fall under the argument/adjunct status of the extracteé (see Davies & Dubinsky 2003 for discussion).

[19]Closely related generalizations can be found in Erteschik-Shir 1973, 1981, 1982 and in Borschev & Partee 1998, 2001.

[20]The kind of covert movement assumed here is not triggered by the need to escape from existential closure (Diesing 1992), nor QR in the narrow sense of movement in the service of resolving type-mismatch (Heim 1987, Heim & Kratzer 1998), since it can apply also to names and pronouns. It is closer to movement in the domain of Differential Object Marking (DOM), where pronouns and names can be part of the set of DOM material even though they are not quantificational. For approaches to DOM which treat it as movement to a higher position, possibly covert, see Woolford 1995, 2001 and López 2012.

[21]See Szabolcsi 1986, Heim 1999, and Hackl 2009 (among others) for the claim that the definite article in superlatives is actually the spell-out of an indefinite/existential operator at LF. Thanks to an anonymous reviewer for pointing this out.

[22]Diesing (1992) captures the difference in interpretation between DPs in-situ and in derived position via her Tree Splitting algorithm, but other methods of interpretation for the indefinite in-situ are conceivable, such as semantic incorporation (Van Geenhoven 1998; though this will not readily work for a subject in-situ) and Restrict (Chung & Ladusaw 2004). These other methods are set aside since they are not based on syntactic position and would not derive the pattern of extraction. See however López 2012 for a

structural implementation of Chung & Ladusaw's Restrict/Choice function division, and more recently Bianchi & Chesi 2014.

[23]The restriction to this set of matrix verbs (listed as *know*, *know of*, *believe*) is discussed in the literature on extraction from RCs in the Scandinavian languages but given very different explanations (Alwood 1976, 1982, Engdahl 1982, 1998, Erteschik-Shir 1982). Engdahl 1982, 1998, for example, follows Allwood's idea that these are verbs which select for either an individual or a state of affairs, and extraction from an RC disambiguates in favor of the latter.

[24]The RC has *take* as its matrix predicate, rather than *eat*, to ensure that the extracted PP *from this restaurant* is a true argument (recall that RCs are weak islands).

[25]The mapping of interpretations to positions is actually not cross-linguistically uniform. Alongside the kind of languages predicted by the Mapping Hypothesis, there are languages, such as English and Dutch, in which specIP also allows non-presuppositional readings (Adger 1997; Neeleman 1994; Neeleman and van de Koot 2008; Runner 1995; Bobalijk 1995), and there are also presuppositional DPs which remain in-situ, such as Dutch objects (Stepanov 2007, Neeleman 1994, Neeleman & Reinhart 1998). Just as movement may not be the only mechanism which interprets presuppositional DPs, it is also possible that cross-linguistically, the requirement for movement is not determined only by presuppositionality (Woolford 1995, 2001). These questions are orthogonal to the main point- what matters for the present proposal is only that extraction is determined by position. For example, Dutch presuppositional objects in-situ should allow extraction, and they do (Stepanov 2007).

[26]In the grammatical (58c) and (59a) the subject is actually VP-final, following complements and adverbs. This may reflect the true base position of the subject in specvP/VP, with a specifier to the right, or the result of 'Heavy NP Shift', since these subjects are clausal. The preference for this position holds also without extraction. See section 6 for the interaction of extraction and extraposition.

(i) a. ani xoSevet Se-ye'acben   (*le-daber im ruti) et   rani (le-daber im ruti).

   I   think   that-will.annoy to-speak with ruti acc rani to-speak with ruti

   'I think that it will annoy Rani to talk to Ruti.'

  b. omed (*[miSehu   Se-moxer tikim]) kan kol   Savua [miSehu   Se-moxer tikim].

   stands   someone that-sells bags   here every week   someone that-sells   bags

   'There is standing here every week someone who sells bags.'

[27]See Chomsky 2008 for the significance of the derivational history of the containing DP for sub-extraction from within it. See Bianchi & Chesi 2014 for extensive discussion of the significance of stage and individual level predicates for extraction from a subject, and an account compatible with the pattern in (62).

[28]Thanks to Danny Fox for suggesting ACD to test this.

[29]Hebrew ACD constructions include the verb because V^0 raises to I^0 prior to VP-ellipsis (verb-stranding VP-ellipsis, Doron 1999).

[30]There are a number of ways to understand the division between overt and covert movements that could produce this situation, all compatible with the idea that covert movement of an object to specvP could bleed overt wh-movement from within the object. See Brody 1995, Bobalijk 1995, 2002 for the idea that 'covert' movement is

interpretation of a low copy at PF; Nissenbaum 2000 for covert movement preceding overt movement if it occurs within a lower phase; Fox & Pesetsky 2009 for the overt / covert distinction in terms of the directionality of movement and specifiers.

[31]The literature on extraction from extraposed constituents is extremely mixed, and starting with Ross 1967, many studies have claimed that it is impossible (Baltin 1984, Lasnik & Saito 1992, De Vries 2002, Koster 2000, Engdahl 1980, Huck & Na 1990, Cinque 2013). See however Kuno 1973, Chomsky 1977, Cullicover & Rochemont 1990, Huck & Na 1990, Büring & Hartmann 1997, and Sheehan 2010 for selective extraction from at least some kinds of extraposed constituents.

[32]The following, for example:

i.   karati et   ha-sefer etmol   Se-bekoSi hiskamt   lehaSi'l le-ima   Seli.
      read.I ACC the-book yesterday that-hardly you.agreed to.lend   to-mother my
      'I read the book yesterday that you hardly agreed to lend to my mother.'

[33]See Büring & Hartmann 1997 for the claim that an extraposed RC must be final in its clause.

[34]The grammaticality of sub-extraction further limits the range of possible implementations for Raising RC-Ex. Extraposition as Predicate Modification (Bianchi 2013, Overfelt 2015) will not work because the extraposed RC is a VP adjunct, and an implementation in terms of Specifying Coordination (Koster 2000, De Vries 2002) must also be set aside since extraction here would proceed from a conjunct (Sheehan 2010). Regarding the Stranding analysis in (72a), many of the challenges that it faces, as noted in the literature (see Sheehan 2010 for recent discussion), do not come up in the

existential context which is the focus of this analysis: the non-constituency of left-moved definite RC-heads; the PP source ('John is going to talk to someone tomorrow who he has a lot of faith in.'); the high landing position of RC-Ex (Cullicover & Rochemont 1997, Fox & Nissenbaum 1998). For the applicability of Scattered Deletion to complement-EX, see below for the claim that Raising RC-Ex is a kind of complement-Ex. Here I merely sketch the availability of at least two analyses for Raising RC-Ex; the choice between (72a) and (72b), along with the distribution of (72a) beyond the realm of existentials, are beyond the scope of this discussion.

[35]The example in (74a) is constructed in Safir 1999 to show that head-external RCs include low full copies, and Principle C violations are triggered when Late Merge to the RC head and Vehicle Change are not an option (the former because 'of anyone' is a complement, and the latter, because Vehicle Change is assumed to not apply to quantifiers). The ungrammaticality of (75a) suggests, however, that Vehicle Change for names is not an option. Thanks to Luka Crnič and Danny Fox for discussion of Sub-trigging and reconstruction.

[36]Though it is not available cross-linguistically (for example, not in Dutch (Koster 2000, De Vries 2002)) and is further restricted by conditions which are poorly understood.