Accounting for the comprehension of Hebrew object relatives

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1. Introduction

It has been reported in the literature that the production of relative clauses (RCs) starts quite early, around 2;2 (cf. McKee, McDaniel & Snedeker (1998)), but their comprehension is achieved much later, around 5;0 (Sheldon (1974), Tavakolian (1981), Roth (1984), among others), which is surprising in the process of language acquisition. This surprising discrepancy was somewhat resolved following Hamburger & Crain (1982) who substantially improved the experimental methodology eliciting production and comprehension of RCs. As a result, children's comprehension of subject relatives (SR) was shown to be, in fact, quite good – much better than it has been reported in the previous studies. Furthermore, Diessel & Tomasello (2000, 2005) noted that early productions of RCs are quite different from sentences commonly used in comprehension tasks; right-branching subject relatives (SRs) expressing one statement and involving at most 2 DPs in production (1), as opposed to self-embedded/right-branching SRs and object relatives (ORs) involving 3 DPs (2).

(1) Here is the tiger that will frighten him.   (right-branching SR)

(2) a. The pig jumps over the cow that knocks down the horse. (right-branching SR)
    b. The pig that jumps over the cow knocks down the horse. (self-embedded SR)
    c. The pig jumps over the cow that the horse knocks down. (right-branching OR)
    d. The pig that the cow jumps over knocks down the horse. (self-embedded OR)

Given this, in order to assess production vs. comprehension of RCs, the sentences in a comprehension task should be of the same complexity as those produced by children at the relevant age. This was adhered to in Günzberg, Shvimer, & Friedmann's (in press) study of production and comprehension of Hebrew RCs. Nevertheless, the study reports that around the age of 4 SRs and ORs are produced quite well, but while comprehension of SRs is good too, the comprehension of ORs is at chance level (see also Friedmann & Novogrodsky (2004, 2007)).

The goal of this paper is to account for poor comprehension of ORs, as opposed to good comprehension of SRs, as well as for the production/comprehension discrepancy attested in the acquisition of Hebrew ORs.
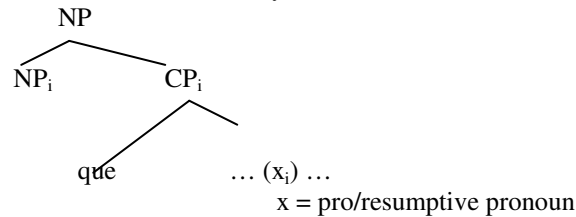
The paper is structured as follows: In section 2 I discuss the production of RCs, clarifying the syntactic status of gaps and resumptive pronouns. Section 3 presents the results reported in Günzberg, Shvimer, & Friedmann (in press). In section 4, given the syntactic processing model of Pritchett (1992), I show how these results are accounted for, and the production/comprehension discrepancy attested in the acquisition of ORs is resolved. Section 5 summarizes the paper.

2. Production of RCs: gaps and resumptive pronouns

Production of children's RCs across languages involves in addition to gaps, resumptive elements, pronouns and full DPs (the latter will be ignored throughout the paper due to lack of space).[1] Various analyses have been proposed to account for the occurrence of resumptives, especially in the so-called non-true resumptive languages like French or English, where adult RCs are derived via operator movement and therefore, in principle, do not include resumptives.

In the well-known analysis of Labelle (1990), the formation of a relative CP does not involve movement. Rather, it is proposed that a semantic lambda operator binds null or overt base-generated element within the RC, rendering the relative CP predicative, a property denoting constituent (3). The analysis accounts for the lack of relative operators in children's production of RCs (as well as for the instances of RCs which seem to lack any relativization site). But, as pointed out by various authors (e.g. Guasti & Shlonsky (1995), Pérez-Leroux (1995)), it is discontinuous, assuming the derivation of RCs to be semantic at one stage, and syntactic at another.[2]
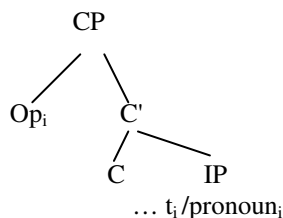
(3) The non-movement analysis of Labelle (1990)

NP
NP$_i$ CP$_i$
que   … (x$_i$) …
             x = pro/resumptive pronoun

I follow Labelle's intuition that children's RCs are derived without movement, but depart from her view that a predicative CP is formed in semantics, and propose the following.
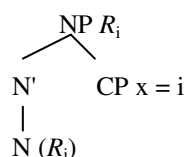
Inspired by Hamburger and Crain's (1982) observation that due to their semantic and syntactic complexity, the acquisition of RCs may involve several steps, I suggest that the adult mechanisms of bound variable formation involved in the derivation of RCs, namely the (null) operator movement or operator-binding (4) might be preceded by a pre-operator stage where children treat a relative CP as a simple modifier (e.g. AP), i.e. a constituent with a slot (x), which generates modification.[3]

(4)   Adult RC   CP

.   Op$_i$ C'
                                  C   IP
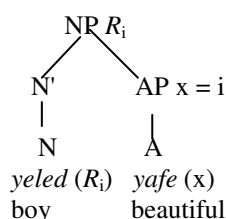   … t$_i$ /pronoun$_i$

The saturation of the CP's slot is achieved via identification with the external semantic argument of the modified NP (R), like in simple modification of a nominal by an AP (Higginbotham (1985)), as schematized in (5).

(5)   a. Modification by a relative CP at the pre-operator stage

    NP R_i
    /   \
 N'   CP x = i
 |
 N (R_i)

    b. Modification by an AP

       NP R_i
      /   \
   N'   AP x = i
   | |
   N   A
 yeled (R_i) *yafe* (x)
  boy   beautiful

I suggest further that the slot of the relative CP results from externalization of one of the verb's θ-roles (canonically, the external one, see Williams (1994)).[4] Specifically, a θ-role can assume the status of a slot, if its assignment is retained (as proposed, for instance, in Reinhart and Siloni (2005) for the derivation of syntactic reflexives in languages like French). A θ-role which is not assigned within the IP is externalized, becoming a slot (x) of the relative CP.

According to Reinhart and Siloni (2005), non-assignment of a θ-role has to be morphologically marked. Since externalization affects the verb's theta-grid, the marking should be closely related to the verb, namely be an element of I (e.g. *se* in French reflexives), or part of the verbal inflection in the lexicon (e.g. the *hitpa'el* template in Hebrew). In this respect, note that the verb in (adult) RCs does not have such marking and hence RCs in adult grammar are not derived via externalization.

I propose that children at the discussed developmental stage are not fully familiar with the precise nature of the marking, considering the complementizer and/or the resumptive pronoun as markers of externalization. As a result, externalization would be allowed in children's RCs. This is plausible given that the complementizer is what distinguishes AP modifiers from CP modifiers. Furthermore, in SRs the complementizer is adjacent to the verb, and therefore it is reasonable to view it as closely related to the verb.[5] Consequently, both children's RCs with a gap and those

with a resumptive pronoun are outputs of the derivation involving externalization at a certain developmental stage. In the former externalization is marked by the complementizer, while in the latter externalization is marked by the resumptive pronoun.[6] Note that in ORs the pronoun is adjacent to the verb, and therefore could be considered as the appropriate marker of externalization.

The proposed analysis makes no claim regarding the existence of null operators in children's grammar at the relevant stage. Rather, it is suggested that operators (null or overt) might not be used in the derivation of RCs from the start. Why would this be the case? Two possible answers come to mind:

(i) Following Wexler (1991), (null) operators of the sort employed in RCs are not available to children under 6 years (but see Vainikka & Roeper (1993)).

(ii) Children opt for the canonical: Overt operators are canonically associated with *wh*-questions, but RCs are not questions. Moreover, *wh*-operators in interrogatives do not turn the CP into a predicate. RCs are modifiers (i.e. they are predicative). Canonical modifiers have a slot. Hence RCs are assumed to have a slot.[7]

To summarize, in the proposed analysis RCs at the discussed stage are derived without movement (similarly to Labelle's (1990) claim), but the formation of the open constituent, namely externalization, is part of the syntactic derivation (contra Labelle (1990)). With this in mind, let us turn now to the facts to be accounted for.

3. Production and comprehension of Hebrew (O)RCs

The results I aim at accounting for are those reported in the study of Günzberg, Shvimer, & Friedmann (in press), where the same children were tested for production and comprehension of various Hebrew RCs. As mentioned, this study used the simplest kind of RCs, including at most 2 DPs, expressing a single statement and right branch embedding, namely the kind of relatives children produce at the relevant age (as observed in Diessel & Tomasello (2000, 2005)) (6):

(6) a. tar'e li   et   ha-para she-menasheket et   ha-tarnegolet   (SR)
    show me acc the-cow that-kisses   acc the-chicken
    'Show me the cow that kisses the chicken.'
  b. tar'e   li et   ha-para she-ha-tarnegolet menasheket   (OR)
    show me acc the-cow that-the-chicken   kisses
    'Show me the cow that the chicken kisses.'

The additional goal of the study was to examine whether various linguistic hints are useful for the comprehension of ORs. These included: (i) distinct agreement on the embedded verb (i.e. the gender of the NPs is not identical); (ii) the addition of a resumptive pronoun; (iii) Free ORs, including a *wh*-phrase; and (iv) ORs with an arbitrary subject (pro_{arb}) (the relevant examples are illustrated in section 4.3).[8]

Comprehension of RCs was tested by two sentence-picture matching tasks, using acted out scenes, similarly to McKee, McDaniel & Snedeker (1998), following the methodology suggested in Hamburger & Crain (1982). 22 native Hebrew speaking children, aged 3;7-5;0, were divided in two age-matched groups, each tested by one of the tasks (for details, see Günzberg et al. (in press)).

As shown in Table 1, comprehension of SRs (as well as free RCs and RCs including a pro_{arb}) was very good, its success rate was significantly above chance level, whereas ORs were comprehended at chance level. Interestingly, unlike all other linguistic hints all of which improved the comprehension of ORs, the addition of a resumptive pronoun did not, i.e. it remained at chance level.

Table 1. Comprehension of RCs with/without linguistic hints

Kinds of RCs / Linguistic hints	SR	OR	Free OR	pro_{arb} OR
	good	**chance**	good	good
Distinct agreement	even better	good		
Addition of resumptive pronoun		**chance**		

Before we turn to the account of the results, it is worth noting a surprising correlation reported in the study: Children whose comprehension was poor (i.e. they were guessing) tended to produce ORs in an adult-like fashion, without a

resumptive, while those showing good comprehension tended to use resumptive pronouns, which are grammatical, but less favored in adult Hebrew (the "understanding" children produced significantly more ORs with a pronoun).

4. The account

Based on the proposal advanced here, a relative CP at the relevant stage of the development is viewed by children as a simple modifier, formed via externalization. Following Pritchett (1992), Chomsky (1995), Reinhart (1999), Siloni (2004) (among others), I assume that production and comprehension are done by the Computational System, CS. Informally speaking, production and comprehension differ in that in production the speaker controls the numeration, which, in turn, guides the derivation, while in comprehension the speaker has no control of the whole numeration. Rather, the incoming words are assigned some structure according to the principles guiding the syntactic processor.[9] It is possible, then, depending on the nature of the processing guideline(s), that there will be structures causing some parsing difficulties (e.g. the Garden Path phenomenon: 'The boy hit fell.'). The processing model developed in Pritchett (1992), is presented below in very rough lines.

4.1 The processing model (Pritchett 1992)

The incoming words entering the processor are put in the store. The structure of the sentence is built upon the arrival of the predicate (i.e. the verb). The processing is fully automatic, with no look-ahead, and it is guided by the following, informally stated, principle: The processor attempts to satisfy the predicate-argument relations as soon as possible. Put differently, at any given moment of the processing the processor attempts to link the θ-roles (or x-slots) to the arguments, and to incorporate all the arguments in the store into the structure. Since the processor is part of the CS, it is sensitive to syntactic entities such as Case, agreement, etc., i.e. these entities can influence the processing, serving as the hints.

In most cases, there is only one way to satisfy the processing guideline at any processing step, leading sometimes to a wrong analysis, which is referred to as the GP effect.[10] However, in some sentences at some point of processing, there actually exist two processing options which are equal in terms of predicate-argument relations. For instance, in one option the predicate can get rid of all its θ-roles, but there is an argument in the store which cannot be linked with a θ-role, whereas in the other processing option, all the arguments that were in the store get linked to θ-roles, but the verb has still one θ-role unlinked. Since both options satisfy the processing guideline to the same extent, some processors take one and some take the other. As we will see in the next section, this kind of a situation, namely the existence of two

processing options, is involved in the parsing (i.e. in the comprehension) of ORs, assuming the derivational mechanism of externalization proposed here.

4.2 Comprehension of SRs vs. ORs

Let us look at the SR example ((6a) repeated as (7)), and illustrate how its parsing leads naturally to the correct comprehension (I focus mainly on the embedded CP):

(7) tar'e li   et   ha-para she-menasheket et   ha-tarnegolet
    show me acc the-cow that-kisses   acc the-chicken
    'Show me the cow that kisses the chicken.'

(8) Processing of (7)

Store	Structure
tar'e li et ha-para (show me the cow)	the main clause is built
she- (that)	
menasheket <θ1, θ2> (kisses)	The structure of the relative CP is being built from the VP upwards. If children assume the externalization derivation, one of the verb's θ-roles has to be externalized. Since there is no unlinked argument in the store, namely no argument can be linked to θ1, this θ-role is externalized, becoming the slot (x) which enables the merge of *ha-para* ('the cow') and its modifier, the relative CP.
(et) ha-tarnegolet (the chicken)	is merged as the complement of the verb, linked to θ2.

The processing is over, resulting in an adult-like comprehension. Now, let us examine the parsing of an OR.

The OR presented in (6b) is repeated in (9), and its processing steps are elaborated in (10).

(9) tar'e   li   et   ha-para she-ha-tarnegolet menasheket
    show me acc the-cow that-the-chicken   kisses
    'Show me the cow that the chicken kisses.'

(10)   Processing of (9)

Store	Structure
tar'e li et ha-para (show me the cow)	the main clause is built
she- (that)	
ha-tarnegolet (the chicken)	
menasheket <θ1, θ2> (kisses)	**two equal analyses in terms of predicate-argument relations arise**:

<u>Analysis I</u> (leading to **incorrect parsing**): θ1 is externalized (x) to generate modification, θ2 is assigned to *the chicken* (as a result, the assignment of the θ-roles is reversed: θ1, the Agent of 'kisses', is interpreted as 'the cow').

<u>Analysis II</u> (leading to **correct parsing**): θ1 is assigned to *the chicken*, θ2 is externalized (x).

Since these two parsing analyses satisfy the processing guideline to the same extent, each can be chosen by the automatic processor randomly, resulting in the attested chance level rate of OR comprehension. [11]

Importantly, the existence of two equal analyses as depicted in (10) is crucially related to the claim advanced here regarding the existence of the pre-operator stage in children's derivation of RCs. Specifically, the two equal analyses arise because the formation of the modifier (CP) via externalization involves direct and immediate manipulation of one of the θ-roles of the verb, affecting the linking of the other one. ORs do not present a processing difficulty for adult speakers because of the mediating effect induced by the operator involved in their formation; in adult processing of ORs the operator marks the CP as a modifier, and therefore upon the arrival of the verb, θ1 is standardly linked to the argument already in the store ('the chicken', in our example) with the subsequent linking of θ2 to the argument bound by the operator (trace or resumptive pronoun).

In light of the above, the apparently surprising finding that children whose comprehension rate is at the chance level, produce ORs in (what looks like) an adult-like fashion, namely with a gap, is not that surprising. By hypothesis, at the discussed developmental stage, production with a gap reflects externalization namely, non-realization of the relevant θ-role in its syntactic position (rather than production with a trace). As just explained, this mechanism of RC formation can have the undesirable effect on ORs comprehension, i.e. the reversed linking of the verb's θ-roles. In contrast, children showing good comprehension of ORs are probably at a more advanced developmental stage, using operator-binding. Consequently, their production is expected to contain considerably more resumptives, according to the results.

4.3 Comprehension of ORs: useful and useless hints

As mentioned, among the four hints (illustrated in (11)), only the addition of the pronoun (11b) was shown in Günzberg et al. (in press) to be useless for comprehension of ORs. Let us see how this is accounted for.

(11) a. tar'e li et ha-yeled she-ha-yalda menasheket   (distinctive agreement)
        show me acc the-boy that-**the-girl** kisses-**3p.Fem.**
        'Show me the boy that the girl kisses.'
    b. tar'e   li et ha-para she-ha-tarnegolet menasheket **ota**   (resumptive)
        show me acc the-cow that-the-chicken   kisses   her/it

c. tar'e li et **mi** she-ha-yeled menashek   (Free OR)
   show me acc who that-the-boy kisses
d. tar'e li et ha-yeled she-menashkim oto   (*pro*arb OR)
   show me acc the-boy that-kiss-**3p.Pl**. him

4.3.1 The addition of the resumptive pronoun (not helpful)
The processing of the OR, including the two equally possible analyses is repeated in (12):

(12)   Processing of an OR (e.g. (11b))

Store	Structure
tar'e li et ha-para (show me the cow)	the main clause is built
she- (that)	
ha-tarnegolet (the chicken)	
menasheket <θ1, θ2> (kisses)	**two equal analyses in terms of predicate-argument relations arise**:

Analysis I (**incorrect parsing**): θ1 is externalized (x) to generate modification, θ2 is assigned to *the chicken* (the assignment of the theta-roles is reversed).
Analysis II (**correct parsing**): θ1 is assigned to *the chicken*, θ2 is externalized (x).

The resumptive pronoun (*ota* 'her' in (11b)) enters the processor after one of the above options has been (randomly) taken, namely the θ-roles of the verb has been linked, resulting in grammatical sentences. Therefore in order to incorporate the pronoun, some reanalysis is needed. The question is what kind of reanalysis is necessary in each case and whether this reanalysis can be done automatically or not (see note 10). I assume that only an automatic reanalysis, which is done by the syntactic processor would have a meliorating effect on the comprehension of an OR.

   Analysis I + pronoun: Under present assumptions, the pronoun marks the externalized θ-role. Since the pronoun is accusative, it should be associated with externalization of the internal θ-role, namely θ2. But this θ-role is linked with 'the chicken', rather than being externalized. In order to incorporate the pronoun the whole sentence should be completely, and non-trivially (namely, consciously) reanalyzed; the previously externalized θ-role (θ1) should be linked to 'the chicken', while θ2 be unlinked from 'the chicken' and externalized, subsequently marked by the pronoun. As far as I know, there is no evidence that children engage in conscious reanalysis, to begin with, and if so, whether they are successful. Given that even for adults a conscious reanalysis is not always trivial, it seems reasonable to assume that children would not opt for the required global reanalysis. Rather, they can simply ignore the pronoun. After all, the sentence is fully grammatical without it. As a result, the incorrect parsing is unaffected by the addition of the pronoun.

   Analysis II + pronoun: In light of the above, the pronoun can be simply ignored, not affecting the (correct) comprehension at all. (If it is not ignored, it can be easily incorporated as the marker of the externalized θ2.)[12]

4.3.2 Helpful hints: agreement and Free ORs

In Günzberg et al. (in press) distinctive agreement on the verb (repeated once more in (13a)), and ORs including a pro_{arb} (13b) are treated as separate hints. Given that the φ-features of pro_{arb} in Hebrew are 3p.Pl., thus clearly distinct from the φ-features of the head of the relative, which is singular ('the boy' in (13b)), I treat both as instances of distinctive agreement.[13] The agreement features on the verb dictate the identity of the subject, namely the argument associated with θ1 ('the girl', in (13a), pro_{arb} in (13b)), eliminating Analysis I, whereby this θ-role is externalized. As a result, only Analysis II is pursued by the processor, leading to correct comprehension.

(13) a. tar'e li et ha-yeled she-ha-yalda menasheket   (distinctive agreement)
        show me acc the-boy that-**the-girl**   kisses-**3p.Fem.**
        'Show me the boy that the girl kisses.'
     b. tar'e   li   et   ha-yeled she-menashkim oto   (*pro*$_{arb}$ OR)
        show me acc the-boy   that-kiss-**3p.Pl**. him

Finally, free (O)Rs (14) differ from all other RCs, including only one explicit argument ('the boy'), and an overt *wh*-phrase (*mi* 'who'). The *wh*-phrase is an explicit operator-morpheme, marking the CP as the modifier. Externalization, thus, is not required, i.e. it is irrelevant, and therefore the processing step with two equal analyses never arises. The association of the verb's θ-roles within the relative clause is done like in a regular clause, according to the arguments in the store, without the need to "sacrifice" one of the θ-roles to generate modification. Since there is no distinct object marking on the argument already in the store ('the boy'), this argument is linked with the external θ-role of the verb, θ1.

(14)   tar'e   li   et **mi**   she-ha-yeled menashek   (Free OR)
        show me acc who that-the-boy kisses

5. Summary

The goal of this study was to account for the observed surprising discrepancy between the relatively early production of Hebrew (O)RCs as opposed to their late comprehension. The main hypothesis I advanced is that at a certain developmental stage children treat relative CPs as simple modifiers, namely as constituents with a slot, resulting from externalization of one of the verb's θ-roles. Based on this, and assuming the processing model of Pritchett (1992), the guessing pattern in OR comprehension was argued to derive from the externalization mechanism assumed in the parsing of RCs and its interaction with the processing guideline, leading to two equal parsing analyses randomly chosen by the automatic processor at a certain

processing stage. The variety of the well-comprehended RCs was shown to lack such stage, providing sufficient and unambiguous linguistic information for the automatic processor.

Notes

[1] The gaps in children's RCs are not limited to subject and direct object arguments, realized as DPs, but may also include indirect and oblique objects, namely PPs.

[2] In other analyses the massive occurrence of resumptives is attributed to the nature of the moving element and/or its trace (most notably, Pérez-Leroux (1995), but see also Guasti (2002), Guasti & Shlonsky (1995)).

[3] I assume the standard analysis of RCs (Sells (1984)).

[4] In this work, I take the term theta-role in its wide sense, referring to obligatory or optional participants in the event denoted by the verb, regardless of their syntactic realization.

[5] See also Armon-Lotem (2005), where the emergence of the RCs before the other types of subordinate clauses is attributed to the specification of the complementizer in RCs merely as [±Finite].

[6] The derivation with the gap, namely externalization marked by the complementizer, arguably, underlies the attested deletion of obligatory or optional PPs (see note 4).

[7] An important question that arises is how the pre-operator stage evolves into the adult mechanism(s) involved in the derivation of RCs (i.e. (null) operator movement, and/or binding)? I believe that as the mastery of embedded clauses develops, the role of the complementizer in the grammar becomes precise; it is fully recognized as the marker of the force of the clause, rather than of externalization. Further, the acquisition of the various verbal forms, whose derivation involves theta-grid manipulations, such as reflexives, unaccusatives and passives, clarifies the nature of the relevant morphological marking; it should be associated with the verb, namely be an element of I (e.g. French *se*), or part of the verbal inflection in the lexicon (e.g. the *hitpa'el* template in Hebrew), rather than a C-morpheme or a resumptive pronoun.

[8] The addition of a resumptive pronoun has been shown to be very effective for children with hearing impairment (Friedmann & Szterman (2006)), whose production includes a lot of resumptives. Children with S-SLI, who have difficulties in comprehending ORs, were shown to produce ORs with one explicit DP, namely using a free RC or an RC with pro_{arb} instead of the target OR (Friedmann & Novogrodsky (2004), (2007)).

[9] I abstract away from the non-syntactic factors, which may well influence the speaker's on-line processing.

[10] The wrong analysis, in itself, is not what creates the GP effect. Rather, the nature of the required reanalysis is the crucial factor. Some reanalyses are possible for the automatic processor (e.g. 'Bart knows the clown is crazy.'), having no GP effect, while others are not (e.g. 'Lisa warned her friends wouldn't help.'), resulting in the GP effect. See Pritchett (1992) and Siloni (2004) for the definitions of a 'costly' reanalysis, i.e. a reanalysis which cannot be done by the automatic processor.

[11] A reasonable question arising with respect to Analysis 1 is why the absence of the Hebrew accusative marker *et* does not force the processor to link θ1 to 'the chicken', namely choose exclusively Analysis II, or at least, strongly prefer this analysis. I believe that the absence of *et* does not serve as the hint for the processor, because direct objects in Hebrew can occur

without the accusative marker; DPs not marked for definiteness disallow *et,* and in abbreviated style (e.g. newspaper headlines) even definite DPs occur without *et.* Being a functional morpheme, it is not even clear whether the presence of *et* would have served as a hint to the processor, let alone its absence (see Pritchett (1992) where the functional morphemes such as *would, have, or be* are argued not to serve as hints for the processor). As a result, nothing forces the processor to link θ1 to 'the chicken'. This, combined with the assumption that externalization primarily targets the external θ-role, unless this role has been saturated otherwise, maintain the plausibility of Analysis I alongside Analysis II. Put differently, normally, θ1 would be associated with the NP in the store, analyzed as the subject of the clause, which is predominantly preverbal in Hebrew. At the same time, however, externalizing θ1 is canonical as well. Since it is impossible to adhere to both, any choice is equally imperfect as far as canonicity is concerned. Since, by hypothesis, externalization, namely modifier formation, and structure building, namely linking of a θ-role to the argument in the store are equally necessary, the choice between them is random.

[12] Note that the effectiveness of the resumptive pronoun for the hearing-impaired kids is not surprising, since these are bigger kids, clearly beyond the pre-operator stage, whose grammar, arguably, suffers from lack of syntactic movement (cf. Friedmann & Szterman (2006)). Their production of RCs involves an extensive use of resumptive pronouns, suggesting that their derivation involves Op-binding of an overt resumptive pronoun. Abstracting away from the details, it is reasonable to expected then, that the lack of such an element in the comprehension of OR tasks (e.g. Friedmann & Szterman (2006)) is confusing, lowering the success rate, whereas its addition makes everything right again.

[13] In Günzberg et al. (in press) free ORs, and those including an arbitrary subject (*pro*arb) are viewed as similar, instances of ORs with one explicit DP (the subject of the embedded CP in the former, the head of the relative in the latter). In lack of evidence, showing that the facilitating factor in ORs including a *pro*arb is indeed the null subject, I believe the good comprehension of these ORs should be attributed to the distinct number agreement on the verb, awaiting further experimental research.

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