Notes on Passive Object Relatives*.
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Introduction

Across languages, children are known to encounter difficulty, up to different ages depending on different languages, in the production of object relative clauses (OR), in contrast with their smooth production of Subject relatives (SR) (for discussion, Guasti & Cardinaletti (2003), Novogrodsky & Friedmann (2006), and references cited therein). In this paper I will develop a hypothesis as to what the source of the difficulty with the production of object relatives could be. I will address the issue from a particular angle, looking at the strategies that children put to work in their productions, when faced with the necessity to produce an object relative. Among them, a relatively widespread one is the production of what I will refer to as passive object relatives, namely a passive sentence + a subject relative. Here, I will focus my attention on this strategy more closely.

Basing the discussion on recent experimental results on the elicitation of SR and OR in Italian, I will submit the hypothesis that passive object relatives constitute a (relatively preferred) way to overcome an otherwise problematic intervention effect arising in the production of an object relative, induced by the presence of the intervening preverbal lexical subject. In this sense, although pre-theoretically more complex, the passive computation involved in the production of passive object relatives renders the overall derivation more local. The derivation of passive object relatives is split into different steps, crucially involving *smuggling* in Collins' (2005) sense. Arguably, this may be a favored option at some developmental stages.[1]

The account in terms of locality extends to production the account in terms of Relativized Minimality, recently formulated by Friedmann, Belletti, Rizzi (2009) on the comprehension of relative clauses, based on experimental results on Hebrew development. The difficulty with OR in contrast with SR is also a frequently observed fact in comprehension (Arosio, Adani, Guasti (2006) on Italian and references cited therein for recent general discussion) both in development and in adult parsing. This general issue is addressed in detail in Friedmann, Belletti, Rizzi (2009); it will be touched upon here in order to substantiate the proposal on production.

Essentially, in what follows I will try to formulate an answer to the following related questions:

i.	Where does the difficulty with object relatives with respect to subject relatives stem from?
ii.	How is the difficulty overcome and why by means of some (preferred) avoidance strategy?

[1] And, possibly, in adults as well, given the first experimental results obtained with a control group of 30 adults in the elicitation experiments to be discussed momentarily.

1. Some data on Italian

The (preliminary) data on the production of SR and OR in Italian I will refer to here, have been collected by Utzeri (2007), adapting the elicitation method developed in Novogrodsky & Friedmann (2006). I will only mention here the main relevant aspects of the results. [2]

The production of SR and OR has been tested in a group of 41 Italian school aged children aged 6 - 11. The production of object relatives has indicated a clear difficulty, in line with previous studies in other languages, and a sharp contrast with the smooth production of subject relatives, also in line with previous studies in other languages (Guasti & Cardinaletti (2003), Novogrodsky & Friedmann (2006), and the discussion in Belletti (2008)). The elicited relatives were all headed relative clauses.

A salient feature of the results is the following: Transforming an object relative into a passive object relative is one of the preferred strategies used by children in order to avoid the direct production of an OR. [3]. An example is given in (1):

(1) Target elicited OR:
  (Vorrei essere il bambino…./I would rather be the child…)
  il bambino che la mamma copre
  the child that the mother covers

Produced Passive Object Relative (>SR):
  (Vorrei essere il bambino…./I would rather be the child…)
  il bambino che è coperto dalla mamma
  the child that is covered by the mother

36% of the elicited OR were SR with passive, i.e. passive object relatives.

2. An aside comparison with Hebrew

As discussed in Novogrodsky & Friedmann (2006), Hebrew children of matching age - after 6 - do not show a comparable difficulty with the production of OR. [4] This fact is surprising, at least at first sight, and a natural question to ask is why it should be so. Since it is known that Hebrew has a productive (non substandard) resumptive pronoun strategy for OR, it could be tempting to propose that the confidence manifested by Hebrew children in the production of OR be related to their use of the resumptive strategy. The hypothesis could look even more plausible if one aspect of the productions of the Italian children under consideration is also

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[2] Children were asked to choose to be one of two kids, presented with small pictures accompanying a short story (this is part of the adaptation, as Novogrodsky & Friedmann (2006) did not use pictures in their original version of the experiment). Children were asked to answer in such a way that they would use a relative clause; e.g. "I would rather be the child that…". See Novogrodsky & Friedmann (2006), Utzeri (2007) for detailed description of the experimental designs. More recent results on related designs are collected in Belletti & Contemori (2009), confirming the preliminary data presented here for children of the relevant age. On the age issue see also the following footnotes 3 and 4.

[3] Passive was typically adopted by the children older than 6-7, i.e. after the first grade of elementary school. Adults as well have manifested a clear preference for passive object relatives over OR. An issue to which I will briefly come back in section 4.

[4] The authors actually propose that the inability to produce OR at the relevant age in Hebrew can in fact be used as a detector of SLI in that language. Younger children (3;7 – 5;5, some data reported in Friedmann, Belletti, Rizzi (2009)) experience difficulty with the production of OR in Hebrew as well.

taken into account. Among the actually produced object relatives (144 out of 649 elicited in total), 60% were object relatives with a resumptive pronoun, as in the example in (2):

(2) la bambina che la mamma *la* copre
    The child that the mother her(clitic) covers

The data is particularly significant since the resumptive strategy is considered rather substandard in Italian.[5] Taken at face value, this data might suggest that the resumptive strategy is somehow easier or anyway somewhat favored in development and that Italian children preferably adopt it, despite its substandard status in their language. In so doing, they would converge to a strategy productively available in a language like Hebrew. And Hebrew children do not experience difficulty with object relatives since the resumptive relativization strategy of their language is not problematic anyway[6].

However, that this cannot be the whole story is indicated by the fact that Hebrew children do not experience problems also in the production of OR with gap, a further relativization strategy available in the language. In other words, object relatives are not that hard for Hebrew children after 6-7 on (the same age of the Italian children considered here), independently of whether the relative has a gap or whether a resumptive pronoun is present in the relative clause.[7] The question is still open, then: Where does the difference with the production of object relatives in the behavior of Hebrew children and Italian children stem from?

As pointed out in Novogrodsky & Friedmann (2006), Hebrew is known not to have a productive (verbal) passive. It is natural to suggest that unavailability of productive passive in Hebrew may indirectly provide a reason why object relatives are more readily accessed by Hebrew children: they cannot resort to a privileged way to avoid an OR, consisting in transforming it into a subject relative, through passive. On the other hand, (verbal) passive is productive and relatively widespread in standard Italian, and, most importantly, it is available at the developmental ages considered here, after 6[8]. This may suggest a reason why Italian children resort to passive, thus avoiding the production of an OR (with gap, in particular).

Before leaving this topic, it should be noted that these acquisition data allow us to make a non trivial form of comparison, a point which I develop somewhat in Belletti (2008). Grammatical properties differentiating two grammatical systems such as Italian and Hebrew appear to be ultimately responsible for the different reaction to the same experimental task by children in the two languages. Thus, acquisition data indirectly reveal properties of the two different

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[5] Although there is certain amount of normative pressure here, since the resumptive strategy may be relatively common in informal speech, possibly at different levels in different varieties of Italian, related in part to dialectal influence (in many dialects the resumptive strategy is the standard relativization strategy) . However, the generally accepted object relatives in Italian are relatives with a gap, not with a resumptive pronoun.

[6] I do not elaborate here on the reason why the resumptive strategy may be favored in production. An issue for which further investigation is required.

[7] Again, younger children seem to show some preference in production for resumptive OR in Hebrew as well. Günzberg-Kerbel, Shvimer, & Friedmann, (2008).

[8] Although the exact age of the children using passive object relatives is unfortunately not deducible from Utzeri (2007), where only the total of productions is provided, it seems that older children in the group adopted this strategy more frequently than younger ones (this conclusion is based on a first survey of the files of the younger children, 6 y.o., which have been recently become accessible to me). And adult controls adopted it overwhelmingly. It is known from comprehension data (presented in Manetti's (2008), MA dissertation in Linguistics, University of Siena) that passive is productively understood by Italian children after the age of 5 and it also starts being produced around the age of 6. This contrasts with unaccusatives which are comprehended well much earlier, already around the age of 3; see also Friedmann (2007) on Hebrew.

grammatical systems involved and in this way they may be said to become comparative data on their own.

3.   Why passive? Where does the difficulty with object relatives lay?

If the production of passive object relatives is correctly characterized as a way to avoid the production of an OR *tout court*, the natural question to ask is: why passive? In other words, why should passive help? In order to look for an answer to this question, a preliminary question needs to be asked: where does the difficulty with object relatives lay? Once some explicit hypothesis is made on the reason(s) for the difficulty with the production of OR, which property of passive may be responsible for its substitutive use, thus leading to the production of passive object relatives, may become apparent.

I would like to explore the hypothesis that the difficulty in the production of OR is essentially a locality problem. More specifically, it is a consequence of the disturbing presence of the intervening lexical subject, crossed over by the object in its movement to the relative position in the CP.

In recent work with N.Friedmann and L.Rizzi (Friedmann, Belletti, Rizzi (2009), see Grillo (2005, 2008) for related proposals on aphasics), we have proposed an intervention type explanation, formulated in terms of the locality principle known as Relativized Minimality (RM), for the parallel difficulty that children are known to experience in the comprehension of object relatives.[9] The hypothesis that I would like to entertain here is that the same intervention type explanation may account for production, thus partly extending the account in terms of RM formulated for comprehension. It should be noted first that in all the (elicited) object relatives considered here, the subject was a lexically restricted noun phrase, i.e. a DP containing a fully lexically realized NP, as illustrated by the example in (1). This can be represented as in the schematic structure in (3) in which the intervening fully lexically restricted preverbal subject is a noun phrase indicated as [$_{DP}$ D **NP**], where NP (in boldface) is the lexical restriction. Throughout, I will refer to such a DP as a lexically restricted DP.

(3)   [$_{CP}$ ..   [$_{TP}$ [$_{DP}$ D **NP**] (S) [$_{vP}$ …V   DP(O)]]

In the following section I summarize the essential lines of the account developed in Friedmann, Belletti, Rizzi (2009) for the comprehension data, directly relevant for the proposal to be developed in section 4 on production.

3.1. A detour on comprehension: a Relativized Minimality account on intervention effects in A' dependencies

Assume the standard characterization of a RM configuration along the following lines:

(4)   *RM*:   X … Z … Y

According to the RM principle, the relation between X and Y cannot hold if Z is a potential candidate for the local relation (Rizzi (1990), (2004)). As in Friedmann, Belletti, Rizzi (2009), let us refer to X as the *target/attractor*; to Z as the *intervener*; to Y as the *origin*.

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[9] A known difficult domain also in adult parsing (De Vincenzi (1991)). We discuss the relation between the parallel difficulty in children (problems with comprehension of object relatives) and adults (good comprehension but harder parsing of object relatives) in terms of a stricter adherence, by children than by adults, to the grammatical RM principle of locality. See Friedmann, Belletti, Rizzi (2009) for detailed discussion.

A number of experimental results on Hebrew discussed in Friedmann, Belletti, Rizzi (2009) show that young children - aged 3;7-5;5 - experience difficulty in the comprehension of object relatives in contrast with subject relatives; other A' dependencies are also hard, such as *which* object questions in contrast with the good comprehension of *who* questions. A direct way to characterize the difficulty is that it arises whenever both the *target/attractor* (head) position in the relative CP and the *intervener* preverbal subject are lexically restricted DPs, i.e DPs with a lexical NP restriction in the sense described in (3) (a range in Starke's (2001) sense). Specifically, the proposal formulated in the quoted article is that, under a raising analysis of relative clauses, a relative CP is assumed to contain a head attractor such that in headed object relatives it carries the (complex) feature [+R, +NP], where R is the relative feature and NP expresses the lexical restriction, always present in headed object relatives; this is schematized in (5), with the lexical restriction feature on the *target/attractor* (X of (4)) and the lexical restriction on the *intervener* (Z of (4)) in boldface:

(5) $[_{CP}$ .. [+R, +**NP**] … $[_{TP}$ $[_{DP}$ D **NP**] (S) $[_{vP}$ …V   DP(O)]]

. The results on Hebrew clearly show that the manipulation of properties of either the *target* or of the *intervener* may significantly change the children's performance: whenever both the *target* and the *intervener* involve a lexical NP restriction, the structure is problematic for children; however, if either the *target* or the *intervener* do not contain a lexical restriction, the structures are correctly comprehended by children. The first situation arises in Hebrew free object relatives – no lexical restriction on the *target/attractor* – the second situation arises in Hebrew object relatives with a null arbitrary non lexical subject – no lexical restriction on the *intervener*. Hence, there is no intrinsic difficulty with the parsing of the OR *per se*.   The difficulty is a consequence of the relevant locality principle. Crucial in this respect are the good performances of children in non headed free object relatives and in (headed) object relatives whose subject is a null impersonal arbitrary subject (which is possible in Hebrew)[10]. Arguably, there is no [+NP] feature within the attracting head in the former case of free object relatives, and within the intervener in the latter case.[11] Similarly, it is proposed that a [+Q, +NP] feature is present within the attracting head in the CP in *which* questions, whereas a simple [+Q] feature is present in *who* questions. Thus, a lexically restricted subject creates an intervention effect in the former case with *which* object questions but not in the latter with *who* object questions. The proposal is that this is the reason why object *which* questions are harder to comprehend for children than object *who* questions, as the significantly different

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[10] One example of free object relative from the relevant comprehension experiment discussed in the article is given in (i):
(i) Tare li   et mi she-ha-yeled menadned.
    Show to-me ACC who that-the-boy swings
One example of headed object relative with a null impersonal arbitrary subject from the relevant comprehension experiment discussed in the article is given in (ii):
(ii) Tare li   et ha-sus   she-mesarkim oto.
    Show to-me ACC the-horse that-brush-pl him
    'Show me the horse that someone is brushing.'
(Presence of a resumptive pronoun in the object relative in (ii) does not induce a better comprehension, for reasons discussed in the Friedmann, Belletti, Rizzi (2009)).
The question whether the relevant factor in cases like (ii) is the pronominal nature of the subject or the fact that it is null is left open in the article and it is currently investigated.
[11] Note that the free object relative case clearly indicates that presence of a lexical NP restriction within the intervener may be uninfluential. What creates problems is presence of the lexical NP restriction in both the target and the intervener. Any approach which solely takes into account the shape of the intervener cannot capture the distinctions summarized in the text. See Friedmann, Belletti, Rizzi (2009) for detailed discussion.

performances of the Hebrew children in the two cases indicates.[12] The reader is referred to Friedmann, Belletti, Rizzi (2009) for a detailed development of the proposal.

4. Back to production and passive

Various avoidance strategies are put in use by children, which allow them to avoid the production of an object relative. For instance, a different verb can be chosen, or else the same elicited verb is used in a reflexive causative form yielding a *fare da* structure[13]. In both cases a subject relative is produced in place of the elicited object relative; in both cases the meaning of the elicited sentence is preserved as far as the interpretation of the arguments is concerned. Two examples from the elicited corpus of the Italian children (aged 6 -11), are given in (6):

(6)   a.   Target
                (Vorrei essere il bambino…./I would rather be the child…)
                Il bambino che la mamma bacia
                the child that the mother kisses

        b.   Actual production
                (Vorrei essere il bambino…./I would rather be the child…)
                Il bambino che riceve un bacio dalla mamma
                the child that receives a kiss by the mother

        c.   Target
                (Vorrei essere il bambino…./I would rather be the child…)
                Il bambino che il re pettina
                the child that the king combs

        d.   Actual production
                (Vorrei essere il bambino…./I would rather be the child…)
                Il bambino che si fa pettinare dal re
                the child that himself makes comb by the king

It is interesting to point out that similar strategies appear to be put in use by younger Hebrew children (aged 3;7-5;5), when object relatives are still hard for them to get (some production data from the Hebrew results are also presented in Friedmann, Belletti, Rizzi (2009)).

The strategies illustrated in (6) and the copular verbal passive strategy have in common the property that the production of an OR is avoided by revolving the structure in such a way that the produced relative is in fact a SR. To the extent that the intervention explanation formulated in section 3 in terms of RM is the source of the difficulty with the production of object relatives, much as it is for their comprehension, the attempt to resort to a subject relative seems to be a straightforward way to avoid the disturbing (subject) intervention. Although obtained in different ways, this seems to be the common feature that the various avoidance strategies share, on which any account should capitalize. With this in mind, let us go back to the copular verbal passive strategy and concentrate on the question as to how passive could help in resolving the
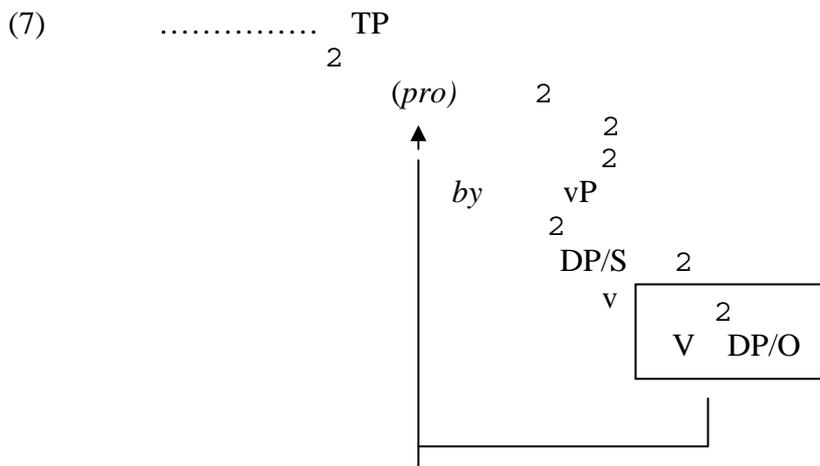
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[12] Also confirmed by previous results on Italian presented in De Vincenzi et al. (1999).
[13] The relation of this causative structure with passive is primarily suggested by use of a by-phrase (*da* in Italian, *par* in French) introducing the external argument within the complement of the causative verb (Burzio (1986); Guasti (1993); classical reference on the related *faire par* structure in French is Kayne (1975)). As an example, see the sentence in (6)d from the corpus.

assumed problematic intervention configuration. Let us first of all make explicit the main aspects of the *smuggling* analysis of passive which I will assume here.

Under the *smuggling* approach to (copular) passive proposed by Collins (2005), it is assumed that a standard passive computation according to which the VP-internally merged direct object of a transitive verb directly moves into the preverbal subject position in Spec/TP[14], cannot be maintained as such, since the vP-internally merged DP which would be merged in the same position in the active counterpart - the external argument, in Williams'classical terminology - would intervene and would be crossed over by the moving object, thus giving rise to a locality, RM violation[15]. *Smuggling* is precisely the operation which avoids intervention. For the sake of clarity let us refer to the external argument in Spec/vP as DP/S and to the VP-internally merged direct object as DP/O. Rather then directly moving DP/O over DP/S, *smuggling* of the [V + DP/O] chunk of the vP excluding DP/S, takes place first, thus avoiding the locality/RM violation induced by the intervention of DP/S. Taking *by* to be the passive voice, let us assume for concreteness that the VP chunk is smuggled into the specifier of the projection of *by*. Thus *smuggling* can be seen as a privileged route which avoids a locality/RM violation. The relevant (parts of the) structure and the *smuggling* derivation is schematically given in (7) (omitting details):

(7) …………… TP
              2
        (*pro)*   2
                       2
                       2
          by   vP
                 2
              DP/S   2
                 v   2
                       V   DP/O

From the position where [V + DP/O] is smuggled, DP(O) can either move to the preverbal high subject position in Spec/TP or, I assume, it can move to some low vP-peripheral position depending on its discourse interpretation (e.g. as new info focus, movement will be into the low portion of the vP-periphery, Belletti (2004)). In the latter case it would remain as a post-

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[14] The cartographic analysis of preverbal subject positions developed in Cardinaletti (2004), has shown that there is more than just one position for a preverbal subject in the high portion of the TP depending on the nature of the subject in question (lexical, pronominal, strong, weak…). For the sake of simplicity I will refer to the preverbal subject position as Spec/TP, keeping the more articulated structure in mind.

[15] The idea that the external argument is present within the vP in passive structures much as it is in active ones, is the most direct way to express why it counts as an understood argument even when it is left implicit: it is understood, since it is present. Moreover the external argument can become the argument of preposition *by* with no ad hoc mechanism, but just taking *by* to be the passive voice (see the coming discussion in the text), merged within the clause functional structure (as is assumed in Kayne (2004) for prepositions in general). I will not present here Collins' analysis in detail but its numerous advantages with respect to previous analyses of passive should be clear even from this brief sketch. Beside the one to be discussed in the text related to the locality problem, Collins' *smuggling* analysis avoids a number of ad hoc mechanisms which were characteristic of GB accounts, such as the notion of Th-role absorption, just to mention one significant case (Chomsky (1981), Baker, Johnson, Roberts (1989)

verbal subject and a silent *pro* should fill the high subject position, satisfying EPP.[16]The fundamental insight is that, once the relevant vP chunk is moved higher than DP/S, movement of DP/O can take place without producing any violation of RM.

Given this background on the effect of *smuggling* on the relevant local dependencies, to the extent that intervention of a lexically restricted DP/S can be held responsible for the problematic production of (headed) object relatives by children - as it is in comprehension, according to the proposal summarized in 3.1 - passive through *smuggling* naturally becomes a most suitable way to realize the structure in a different way, eliminating the intervention problem: an object relative is realized as a subject relative with passive, i.e. what we have referred to as a passive object relative.

So far, no comprehension results on passive object relatives are available, in Italian, both for children and adults. This is an important open question which needs a thorough further investigation[17]. As for the adult group of control, the production data so far obtained has shown a clear preference for passive object relatives as well, briefly mentioned in footnote 3. This seems to suggest that, for adults as well, the intervention structure, although grammatically available, is preferably avoided. Once again, this reflects in production the often observed fact that parsing of object relatives is relatively hard in adult comprehension, as opposed to the parsing of subject relatives (footnote 9). It is well known that, crosslinguistically, there are languages which do not have object relatives altogether (Keenan and Comrie (1977)). It is tempting to speculate that, all things being equal, the harder structure where intervention is involved, is just systematically avoided in these languages. I leave this crosslinguistic observation and its possible wide comparative implications and relevance for general complexity issues open at this speculative stage here, keeping it in mind in the future evaluation of further developmental and descriptive findings.[18]

It may be worth pointing out that, from the point of view of their informational content, given the experimental situation where both characters are introduced in the preceding story and in the picture (e.g. in "il bambino"/the child; "la mamma"/the mother), an object relative with a preverbal subject and a passive object relative with a post-verbal *by* phrase seem to be both equivalently felicitous; (1) is reproduced below to be considered from this particular angle:

(1)   Target elicited OR:
                         (Vorrei essere il bambino..../I would rather be the child…)
                         il bambino che la mamma copre
                         the child that the mother covers

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[16] On the possibly referential nature of *pro* in these instances of (subject) inversion see Belletti (2005); the issue is not directly relevant here.

[17] Currently in preparation.

[18] In the case of Austronesian ergative languages (Keenan (2005), Richards (2000), Guilfoyle, Hung, Travis (1992) for relevant references), a process often assimilated to passive in some of its crucial aspects is productively implemented for the realization of structures which would be object relatives in languages displaying the construction. The Italian acquisition data under discussion in this article interestingly indicate that, in this case as in many other cases discussed in the literature (Rizzi (2005) for discussion), in their productions children adopt options and mimic computations productively available in other languages, different from the target one. This adheres to Chomsky's (2002) statement that acquisition never is a dead end (Belletti (2008) for some discussion). Thanks to Hilda Koopman for pointing out to me the possible connection with the Austronesian languages.

Produced Passive Object Relative (>SR):

> (Vorrei essere il bambino…./I would rather be the child…)
> il bambino che è coperto dalla mamma[19]
> the child that is wrapped up by the mother

4.1. Where does movement start out in subject relatives?

Under the assumption that movement never occurs from the EPP preverbal subject position since this is a criterial position in the sense of Rizzi (2006), Rizzi & Shlonsky (2007), the question that one should ask is from which position movement takes place in the derivation of a subject relative. I assume, as in the references quoted and in standard accounts since Rizzi (1982), that a way to perform subject extraction is by moving the subject from a different position than the preverbal EPP position; specifically, by moving it from a post-verbal position; typically, the vP internal position where it is merged; a silent *pro* fills the high EPP position. If this is the case, the further general question then arises as to what the relevant extraction site is in the particular instance of subject extraction illustrated by a passive object relative. I assume that the relevant post-verbal position in these cases is the object position within the smuggled vP chunk of (7). The preverbal EPP position is then filled with (an expletive) *pro*, as is illustrated in structure (7). Note that the expletive *pro* sitting in the *intervener* position does not give rise to intervention since it lacks, by definition, any relevant lexical restriction.

5. Decomposing (long) derivations: economy and complexity.

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[19] Some of the object relatives produced by children had the subject in the post-verbal position (typically in the subject change condition , although no exact calculation was done in the original Utzeri's experiment. In Belletti & Contemori (2009) the significance of the subject change condition in this respect is calculated and discussed). Object relatives with a post-verbal subject which contain a resumptive clitic are unambiguous object relatives, as in the example in (i) from the corpus:

> (i)   (Vorrei essere) il bambino che *lo* copre il suo babbo
>   (I would rather be) the child that him(cl) covers his dad

Object relatives with a gap (no resumptive clitic) and a postverbal subject are potentially ambiguous between a SR and an OR interpretation. One example from the corpus:

> (ii) (Vorrei essere) il bambino che bacia il nonno
>   (I would rather be) the child that (pro) kisses - the granddad

In principle a sentence like (ii) is ambiguous between the interpretation as an object relative with a post-verbal subject, or a subject relative (with "il nonno" interpreted as the object). However, these cases have been interpreted (and counted) as object relatives with gap and a post-verbal subject, given the contextual situation. (See Crain, Mc Kee, Emiliani (1990) for relevant discussion of this interpretive issue and its consequence on how to evaluate children productions in this domain; see also Belletti & Contemori (2009) for relevant proposal on how to evaluate the ambiguity of this kind of relative clauses). The post-verbal location of the subject in examples like (ii) can be attributed to the fact that, in the experimental situation in the subject change condition, the child may be choosing at the same time the child that she would like to be and the person who should perform the relevant action on the child. In this case the subject can be analyzed as a new information subject in a dedicated position in the vP-periphery, hence post-verbal (Belletti (2004)). Note that the *by* phrase is necessarily post-verbal in a passive object relative, due to the low location of the *by* voice within the clausal structure. In the same way as a post-verbal subject it is also compatible with a new focus interpretation. In this case, it should fill the same dedicated position in the vP-periphery as a post-verbal subject. However, as noted in the text in connection with example (1), the *by* phrase can also provide given/topic information. In this case it would fill the vP-peripheral topic position also present in the low area of the clause according to the proposals in Belletti (2004), Cecchetto (2000).

As we have seen in 1, for the Italian children considered, the passive computation appears to be a frequently adopted and relatively favored strategy utilized in place of the computation necessary for the derivation of an object relative. Let us now look at the essential steps of the two relevant derivations. In (9)a the schematic derivation of an object relative is given, which, by assumption, is blocked/disfavored, for the intervention reason discussed in 3, 4. In (9)b the derivation of a passive object relative is given. As discussed, this derivation includes *smuggling* and subsequent extraction to perform relativization[20]:

(9)

a $[_{CP} \ .. \quad [_{TP} \ DP \ [_{vP} \ ...V \quad DP]]$

b $[_{CP} \ .. \quad [_{TP} \ pro \ ... \ [\ [V \ DP] \ by... \ [_{vP} \ ...<[V \ DP]>]]]]$

Intuitively, pre-theoretically, the derivation in (9)b looks far more complex than the derivation in (9)a: it involves more steps and the *smuggling* operation, which seems to be arguably a relatively costly operation in development; indeed, the detected delay in the acquisition of passive vs the acquisition of unaccusatives (footnote 8) may be plausibly attributed to presence vs absence of *smuggling* in the two cases (see current work by Hyams & Snyder (2007) and, for results on Italian, Manetti (2008)). Nevertheless, (9)b represents a clearly favored option. It seems reasonable to propose that, despite appearance, (9)b represents in fact a more economical ultimately less complex option and that this should explain why it is preferably adopted to avoid object relativization. In principle, the derivation in (9)b can be considered more economical/less complex since it is more local in the following two related senses:

- each movement step is shorter than the long direct movement in (9)a;
- intervention is avoided in (9)b

Thus, decomposing a single computation into smaller pieces appears to be favored (in development and, possibly, also for adults; see footnotes 3, 8, and section 4 above). A computation involving more local (and shorter) steps is preferred. The locality of the various steps, however, is not simply a function of their length. The crucial role is played in (9)b by the *smuggling* operation which, in contrast with the direct computation of an object relative over an intervening (lexically restricted) subject, allows for the more local movement to take place, which avoids intervention.[21]

6. Further open questions on the agenda and concluding remarks

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[20] Recall that in all the cases under consideration, both DPs involved are lexically restricted DPs, the hard case also in comprehension (see 3.1).

[21] That the length of the derivation is likely not to play a crucial role *per se* is also strongly indicated by the comprehension results mentioned in 3.1, where structurally equally long object relatives (e.g. headed vs free; headed with and without presence of a lexically restricted subject) are differently parsed by children as a function of the nature of the target and the intervener.

There are several questions that the proposed analysis raise, both on the theoretical side bearing on aspects of language description and comparison, and on the experimental side indicating new experimental data to be looked for.   In this concluding section I will just indicate two possible new areas of development bearing mainly on the first aspect, from which comparative data of a new kind should emerge. For new experimental results in Italian see Belletti & Contemori (2009).

In a language like French the subject or object nature of a relative clause is overtly signaled by the different shape of the complementizer/relative pronoun[22] *qui* vs *que*:

(10)	a	L'enfant qui soulève la maman	(SR)
	b	L'enfant que la maman soulève	(OR)
	c	L'enfant que soulève la maman	(OR + Stylistic Inversion)
	d	L'enfant qui dessine la maman	
	e	L'enfant que la maman dessine	
	f	L'enfant que dessine la maman	(OR + Stylistic Inversion)

The natural question arises as to whether children experience the same type of difficulty with the production of object relatives in French as well, and more generally in languages which make a *que/qui* type distinction, as they do in languages like Italian.[23] Furthermore, the question whether both comprehension and production of object relatives give similar results is also potentially quite revealing. It is not unconceivable that the two modalities work differently in this type of language. Since the interpretation as either a subject relative or an object relative is determined at the point of the *que/qui* complementizer/relative pronoun, the comprehension could work better than the production where the intervention problem occurs anyway within the object relative clause.[24] The same kind of question is worth asking also in the domain of adult parsing.

In a language like Norwegian where the (expletive) complementizer *som* is obligatory in subject relatives (and free subject relatives) and optional in object relatives (and excluded in free object relatives) as discussed in Taraldsen (1986), from which the following examples in (11) are taken, it would be interesting to check whether absence of *som* in (headed) object relatives may favor both the production and the comprehension of the relevant object relative structures. As usual, both adult parsing and children development are relevant to test on this

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[22] See Koopman and Sportiche (2008) for an analysis of *qui* and *que* as a weak (Cardinaletti and Starke (1999)) relative pronouns, which crucially revise the standard analysis dating back to Kayne (1974), and, more recently, Taraldsen (2001), Rizzi and Shlonsky (2007) according to which *qui* is a special agreeing form of the (declarative) complementizer *que*. For the point under discussion in the text the particular analysis of the *que-qui* alternation may not be directly relevant, although this aspect needs further investigation.

[23] See Labelle (1996) for some production data on French, not directly testing the *que/qui* alternation from this perspective. New experimental results on production testing this aspect are presented in Coyer (2009) (MA dissertation in Linguistics, University of Siena). A preliminary answer to the above question is formulated, with the *que*/*qui* alternation being uninfluential: OR are equally harder than SR in the production of French children of the relevant age. Similar avoidance strategies to Italian are also put forth by French children. Similar results hold for comprehension, also tested in Coyer (2009).

[24] In recent work Arosio, Adani Guasti (2006) show that ambiguous relatives are disambiguated more rapidly according to the position of the disambiguating element/feature. Since the complementizer/relative pronoun is the first element of the relative clause, comprehension should work relatively well in the examples in the text. The testing of this hypothesis and of the possible difference with production in this case is currently on the way, also taking into account the possible difference between object relatives with and without Stylistic inversion. However, the results presented in Coyer (2009) on comprehension do not show any significant amelioration.

point. Again, possibly different results may be expected in comprehension and production in the Norwegian case as well:

(11)   a   Ve kjenner den mannen *(som) snakker med Marit
             We know the man that is talking to Mary
        b   Ve kjenner den mannen (som) Marit snakker med
             We know the man that Mary is talking to
        c   Ve vet hvem *(som) snakker med Marit
             We know who [that] talks with Mary
        d   Ve vet hvem (*som) Marit snakker med
             We know who Mary is talking to

Let me conclude these notes with a brief summary of the basic idea proposed and a general comment. The main proposal of this article has been that that the difficulty that (Italian) children experience in the production of object relatives can be interpreted as a locality problem: in a direct derivation of an object relative, RM would be violated in the children's grammar, due to the intervention of the (lexically restricted) preverbal subject[25]. Thus, children split the derivation in various steps in such a way that, through *smuggling* in the passive case, the subject intervention is overcome. Although apparently more complex, the passive computation can in fact be considered more economical in the relevant sense since it allows children not to violate locality; so they adopt it, at the age when passive is available to them. Throughout this article, I have often expressed the fact that children produce passive object relatives in place of object relatives as an avoidance strategy: passive is a way for them to avoid the direct production of an object relative. The term avoidance strategy should not be misleading. There is no comparison of derivations assumed here on the part of the children in order for them to get to the optimal structure. The interpretation of the children's performance is that they simply do not compute the direct relativization of the object, because of the strict operation of the RM principle in their grammar, also indicated by their behavior in comprehension (see the discussion in sections 3, 3.1). If their grammar supports other ways to express the meaning of the elicited object relative structures, they use it. This is what they do in the production of passive object relatives.

References

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[25] See the comment in footnote 9 on the comparison between children and adults in this domain.

Arosio, F., F. Adani , M. T. Guasti (2006) "Processing grammatical features by Italian children". *Supplement 30th Proceeding of Boston University Conference on Language Development.* http://www.bu.edu/linguistics/APPLIED/BUCLD.

Baker, M. , Johnson, K. and Roberts, I. (1989) 'Passive arguments raised', *Linguistic Inquiry*, 20**:** 219-251.

Belletti, A. (2004) "Aspects of the low IP area", in *The Structure of CP and IP*, L.Rizzi ed., 16-51, Oxford University Press.

Belletti, A. (2005) "Extended doubling and the VP periphery", in *Probus,* 2005, 17, 1: 1-35

Belletti, A. (2008) "Acquisition meets comparison. Some notes", forthcoming in A.Gavarrò et al. eds. *Language Acquisition and development- Proceedings of Gala 2007*, CSP, Cambridge UK

Belletti, A. & C.Contemori (2009) "Intervention and attraction. On the production of Subject and Object relatives by Italian (young) children and adults", ms. in prep. University of Siena.

Burzio, L. (1986) *Italian Syntax. A Government-Binding Approach*, Dordrecht: Reidel.

Cardinaletti, A. (2004) 'Towards a Cartography of Subject Positions', in L.Rizzi (ed.) *The structure of IP and CP. The Cartography of Syntactic Structures,* vol. 2, New York: Oxford University Press, 115-165.

Cardinaletti, A. and M. Starke (1999) "The typology of structural deficiency. A case study of the three classes of pronouns," in H. van Riemsdijk, ed., *Clitics in the Languages of Europe*, de Gruyter, Berlin, 145-233.

Cecchetto, C. (2000) 'Doubling Structures and Reconstruction', *Probus*, 12, 1: 93-126.

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

Chomsky, N. (2002) *On Nature and Language,* CUP

Collins, C**. (**2005) "A Smuggling Approach to the Passive in English", *Syntax*, 8.2, 81-120

Coyer, C. (2009) "The acquisition of relative clauses in French", MA thesis, University of Siena

Crain, S., C. Mc Kee and M.Emiliani (1990) "Visiting relatives in Italy", in L. Frazier and J.de Villiers eds. *Language Processing and Language Acquisition*, Kluwer, Dordrecht, 335-356

De Vincenzi, M. (1991) *Syntactic Parsing Strategies in Italian*, Kluwer, Dordrecht, The Netherlands.

De Vincenzi, M., L.Arduino, L.Ciccarelli, R.Job (1999) "Parsing Strategies in Children Comprehension of Interrogative sentences", *Proceedings of the European Conference on Cognitive Sciences*, Siena, 301-308

Friedmann, N. (2007). Young children and A-chains: The acquisition of Hebrew unaccusatives. Langauge Acquisition, 14, 377-422

Friedmann, N., A. Belletti, L. Rizzi (2009) "Relativized relatives. Types of intervention in the acquisition of A-bar dependencies", *Lingua*, 119, 67-88

Grillo, N. (2005) "Minimality effects in agrammatic comprehension", in *Proceedings of ConSOLE* XIII, Blaho, S., Schoorlemmer, E., and Vicente, L. (eds.), 106-120. Available at http://www.sole.leidenuniv.nl/.

Grillo, N. (2008) *Generalized Minimality – syntactic underspecification in Broca's aphasia.* Doctoral Thesis, University of Utrecht.

Guasti, M.T. (1993) *Causative and Perception Verbs. A Comparative Study*, Torino: Rosenberg and Sellier

Guasti, M.T. & A., Cardinaletti (2003) "Relative clause formation in Romance child production", *Probus* 15, 47-88

Guilfoyle, E., H. Hung, L. Travis (1992) ""Spec of IP and Spec of VP: Two Subjects in Austronesian Languages", in *Natural Language and Linguistic Theory*, 10, 375-414

Günzberg-Kerbel, N., Shvimer, L., & Friedmann, N. (2008). "Take the hen that the cow kissed the hen": The acquisition of comprehension and production of various relative clauses in Hebrew. Language and Brain, 7, 23-43.

Kayne, R. (1974) 'French Relative *que*', in F.Hensey and M.Lujan (eds.) *Current Studies in Romance Linguistics*, Washington DC: Georgetown University Press, 255-299.

Kayne, R.(1975) *French Syntax*, Cambridge Mass.: MIT Press.

Kayne, R. (2004) 'Prepositions as probes', in A. Belletti (ed.) *Structures and Beyond. The Cartography of Syntactic Structures,* vol. 3, New York: Oxford University Press, 192-212.

Keenan, E.L. and B. Comrie (1977). ' Noun Phrase Accessibility and Universal Grammar', in *Linguistic Inquiry* 8, pp. 63-99.

Keenan, E. (2005) "Extraction without movement: is Malagasy a Perfect Language?", ms. UCLA

Koopman, H. and D.Sportiche (2008) "Que/qui. Structural Deficiency in Relatives and Pseudorelatives", ms UCLA

Labelle, M. (1996) "The Acquisition of Relative Clauses: Movement or No Movement?", *Language Acquisition* 65-82

Manetti, C. (2008) "I passivi e gli inaccusativi nell'acquisizione dell'italiano: un approfondimento teorico e sperimentale", MA thesis, University of Siena

Novogrodsky, R. & N. Friedmann (2006) "The production of relative clauses in syntactic SLI: A window to the nature of the impairment", *Advances in Speech-Language pathology*, 8, 364-375

Richards, N. (2000) "Another look at Tagalog subjects", in I. Paul, V. Phillips and L. Travis eds. *Formal Issues in Austonesian Linguistics*, Kluwer, Dordrecht, 105-116

Rizzi, L. (1990) *Relativized Minimality*. MIT Press: Cambridge. Mass.

Rizzi, L. (2004) "Locality and left periphery", in A. Belletti (ed.), *Structures and Beyond. The Cartography of Syntactic Structures*, Vol 3, Oxford University Press, Oxford-New York, 223-251

Rizzi, L. (2005) "Grammatically-Based Target-Inconsistencies in Child Language," in K. UdDeen, J. Nomura, B. Schulz and B.D. Schwartz, eds., *The Proceedings of the Inaugural Conference on Generative Approaches to Language Acquisition* - North America (GALANA). UCONN / MIT Working Papers in Linguistics. MIT Press, Cambridge (MA).

Rizzi, L. (2006) "On the Form of Chains: Criterial Positions and ECP Effects" in *WH-Movement Moving on*, S.Cheng & N.Corver eds., 97-134, MIT Press

Rizzi, L. & U. Shlonsky (2007) "Strategies of Subject Extraction", in U. Sauerland and H.M. Gärtner eds., *Interfaces + Recursion = Language?*, Mouton De Gruyter, 115-160

Starke, M.(2001) *Move dissolves into Merge* , PhD dissertation, University of Geneva

Taraldsen, K.T. (2001) 'Subject extraction, the distribution of expletives and Stylistic Inversion', in A.Hulk and Pollock J.Y. (eds) *Subject Inversion in Romance and the theory of Universal Grammar*, New York: Oxford University Press, 163-182.

Taraldsen, K.T. (1986) "Som and the Binding Theory", in L.Hellan, K.Koch Christensen eds., *Topics in Scandinavian Syntax*, Reidel Publishing Company, 149-184

Utzeri, I.(2007) "The production and acquisition of subject and object relative clauses in Italian", *Nanzan Linguistics Special Issue 3*, 283-314