A Unified Account for Two Problems in the Acquisition of Pronouns

Elaine Grolla
University of Connecticut

1. Introduction

In this study, I investigate the acquisition of pronominal elements by children acquiring English and Brazilian Portuguese (BP) as their native languages. The constructions under scrutiny contain pronouns appearing in two distinct environments, namely, pronouns locally A-bound, as shown in (1a-b), and pronouns A'-bound appearing in extractable positions inside relative clauses (the so-called resumptive pronouns (RPs)), as in (2a-b):

(1) a.   * *The elephant* is washing *him*.   (English)
     b.   * *O   elefante* está lavando *ele*.   (BP)
            The elephant is   washing him

(2) a.   * The frog that *he* is skating is happy.   (English)
     b.   * O   sapo que *ele* está esquiando está contente.   (BP)
            The frog that he is   skating   is   happy

These constructions are ungrammatical both in English and in BP. Studies on the acquisition of locally A-bound pronouns in various languages indicate that children behave differently from adults when sentences like (1) are tested (cf., Avrutin (1999); Avrutin and Thornton (1994); Avrutin and Wexler (1992); Chien and Wexler (1990); Grimshaw and Rosen (1990); Jakubowicz (1984); McDaniel, Cairns and Hsu (1990); McDaniel and Maxfield (1992); Philip and Coopmans (1996); Sigurjónsdóttir and Hyams (1992); Thornton and Wexler (1999); Wexler and Chien (1985); among others). In Chien and Wexler's (1990) study in English, for example, children allowed the pronoun to corefer with a local DP antecedent around 50% of the time. Adults did not allow such coreference. In the case of A'- bound pronouns inside relative clauses, McKee and McDaniel (2001) found out that children acquiring English judged sentences like (2a) grammatical around 50% of the time, contrary to adults, who almost never accepted it (cf., Bar-Shalom and Vinnitskaya (2001); Goodluck and Stojanovic (1996); Grolla (2005); Kang (2003); Labelle (1990); McKee and McDaniel (2001); Pérez-Leroux (1995); and Varlokosta and Armon-Lotem (1998), among others).

In (1), the pronoun is bound by an antecedent sitting in A-position, while in (2) the pronoun is bound by the relative operator, which is sitting in an A'-position. It is typically assumed that the distribution of locally A-bound pronouns is regulated by Binding Principle B, while the distribution of RPs is regulated by language-specific rules. This is possibly the reason why the constructions in (1) and (2) have always been treated separately in acquisition studies.

The present study will make different assumptions concerning the distribution of bound pronouns and this shift in perspective will allow us to develop the hypothesis that children's poor performance in contexts like (1) and (2) is due to one underlying cause. That is, I will claim that children's behavior in both domains is correlated. There are several reasons to pursue such a unifying approach for children's

behavior on tests of A- and A'-bound pronouns. First, both constructions involve pronominal elements. Second, results of studies in various languages indicate that children perform similarly on both tests, that is, they incorrectly accept sentences like the ones in (1) and (2) around 50% of the time, behaving at chance. And third, the age-range when this chance performance is detected is the same in both cases, that is, around 4 and 5 years of age.

In this paper, I discuss how such a connection is plausible from the point of view of syntactic theory, and how this unification is worth pursuing from the point of view of language acquisition research. I provide acquisition data that corroborate this claim. Using the grammaticality judgment task, I interviewed two groups of children, one acquiring English as their native language and the other acquiring BP as their native language. These children were interviewed on two tests, one involving A-bound pronouns, like in (1) and another involving A'-bound pronouns, as in (2). The data revealed that children behaved at chance level in the two tests. This correlation constitutes strong evidence in support of the hypothesis that children's chance performance on both domains has the same cause. Interestingly, however, children did not behave at chance when the pronouns were not locally bound. This result is relevant as it shows that children's chance level performance is not obtained for all cases of bound pronouns, but only in the cases of locally bound ones.

The paper is organized as follows. Section 2 outlines an analysis of bound pronouns as elsewhere elements, as proposed in Hornstein (2001). Following the ideas first put forth by Grodzinsky and Reinhart (1993), section 3 discusses how the computations required for derivations with bound pronouns are too demanding for young children, due to their limited working memory capacity. Section 4 lays out the predictions that such analysis makes for language acquisition. Section 5 discusses the experimental results of the studies carried out with English- and BP-speaking children. Section 6 discusses the case of pronouns bound by quantified antecedents and compares the results of my study with the results obtained in Chien and Wexler (1990) and Thornton and Wexler (1999). Section 7 is the conclusion.

2. Bound Pronouns as 'Elsewhere' Elements

In this study, I assume the proposal developed in Hornstein (2001), which analyzes (A- and A'-) bound pronouns as 'elsewhere' elements. In this proposal, bound pronouns are never part of the numeration and their insertion in a derivation is highly costly. They are inserted only when the derivation without them does not converge. In this system, movement is considered 'cheaper' than the insertion of pronouns (see also Hornstein (2004)).

In order to see how this analysis works for the case of A'-bound pronouns (RPs), consider the examples below:[1]

(3) a.   the frog [$_{CP}$ Op$_i$ that t$_i$ is skating]   (movement of Op)
    b. * the frog [$_{CP}$ Op$_i$ that he$_i$ is skating]   (insertion of pronoun)

(4) a. * the frog [$_{CP}$ Op$_i$ that the swan laughed [when t$_i$ fell]]   (movement of Op)
    b.   the frog [$_{CP}$ Op$_i$ that the swan laughed [when he$_i$ fell]] (insertion of pronoun)

RPs in extractable positions (as in (3b)) are excluded because they involve the insertion of a pronoun when a more economical derivation (involving movement) is available, as in (3a). In the case of RPs in unextractable positions, as in (4b), the insertion of the pronoun is licit because the derivation involving movement, (4a), does not converge, as it involves movement out of an island. These examples show that RPs are possible only when movement isn't (see also Shlonsky (1992)).

In the case of A-bound pronouns, these elements are possible only when local anaphors aren't (for a proposal in similar lines, see also Burzio (1996) and Safir (2004)):

---

[1] In what follows, although I present examples only in English, the facts under consideration are the same for BP as well. Therefore, the analysis holds for both languages. For a more complete analysis of the BP data, see my (2005) UConn Ph.D. dissertation.

(5) a. Anaphor: *The elephant* is washing *himself*.
    b. Pronoun: * *The elephant* is washing *him*.

(6) a. Anaphor: * *The witch* is washing *herself's* crystal ball.
    b. Pronoun: *The witch* is washing *her* crystal ball.

In this system, Principle B is not part of the theory of the grammar and its effects are analyzed as economy violations. That is, a sentence with a locally A-bound pronoun, as in (5b), is excluded because it involves the insertion of the pronoun when a more economical derivation (with the anaphor, (5a)) exists.[2] If the derivation with the anaphor is not possible, as in (6a), the insertion of the pronoun is licit, as in (6b).

The examples in (3)-(6) show that, in order to check if the derivations with A- and A'-bound pronouns are licit or not, these derivations have to be compared to their counterparts involving movement or the anaphor.[3] This means that in order to evaluate if pronouns are licit or not, we need *reference-set computation*. Reference-set computation is triggered by the application of uneconomical procedures, such as the insertion of pronouns.

A reference-set can only contain convergent derivations. In (3), the reference-set has two convergent derivations, (3a) and (3b). Note that the derivation with the pronoun is convergent. Although it does not win the comparison, it is convergent, as it does not violate any other constraint besides economy, which is precisely the issue being evaluated. Therefore, the derivations in (3) are compared and the derivation involving movement wins because it is more economical: movement of the operator (Op) is preferred over insertion of a RP, which is more costly. The same occurs in the case of A-bound pronouns. In (5), the reference-set also has two convergent derivations, which are compared in order to see which one is more economical. The derivation with the pronoun loses because it involves the insertion of the pronoun when the derivation with the anaphor (considered more economical) is available.

On the other hand, in the case of (4), the reference-set has just one convergent derivation, (4b). The derivation involving movement, (4a), does not converge, as it crosses an island. Therefore, the reference-set contain just one derivation in it, and it wins without any comparison having to be performed. The same holds for the case in (6).

3. Reference-Set Computation and Children's Working Memory

As discussed above, reference-set computation is required in order to check if derivations involving bound pronouns are licit or not. From the point of view of language acquisition research, the question that we should ask then is, are children good at executing reference-set computations?

According to Grodzinsky and Reinhart (1993) and Reinhart (1999, to appear), no, they aren't. Reinhart (1999) argues that reference-set computation requires greater load on working memory than local computation. She proposes that whenever reference-set computation is involved, there should be some evidence of processing complexity. As numerous studies in psychology have shown (cf. Gathercole and Baddeley (1993) for a review), children's working memory capacity is more limited than adults'. Reinhart hypothesizes that children's working memory cannot perform reference-set computations, as these computations exceed children's processing ability. Not being able to perform them, when pressured to give an answer in experimental settings, children guess. So, Reinhart suggests that a guess pattern should emerge in every area where we assume reference-set computation is involved.

So, if we assume Reinhart's hypothesis, we expect a guess pattern when bound pronouns are tested. When children hear a sentence with a bound pronoun, they have to hold the sentence they heard

---

[2] In Hornstein's system, derivations with anaphors are more economical than their counterparts with pronouns. For space limitations, I cannot explore this issue in further detail here. See Hornstein (2001) for an analysis.
[3] Note that deictic pronouns are not considered elsewhere elements in this system. They are present in numerations and their distribution is not dependent on the availability of movement.

in memory, and at the same time construct a second derivation, with movement or the anaphor. Then, they must compare the two derivations and decide which one is more economical. The hypothesis is that, although children know what they have to do, their working memory cannot perform all these computations, which leads to guessing.

The proposal presented here, though clearly inspired by Grodzinsky and Reinhart's (1993) analysis for children's problems with coreferential pronouns, differs from that theory. Grodzinsky and Reinhart claim that children's problem is in comparing the bound and coreferential *interpretations* of a pronoun. I claim the problem is in comparing syntactic derivations with and without bound pronouns. The two analyses make different predictions for RPs, where the interpretations for a derivation with a gap and a pronoun are the same. Grodzinsky and Reinhart do not predict chance level performance in this case, but the hypothesis presented here does, as we will see in the next section.

4. Predictions

Based on the assumptions presented above, we predict that children should perform around chance level (that is, around 50% correct responses) when RPs are placed in extractable positions (as in (3b)) and when pronouns are locally A-bound (as in (5b)). In these cases, both the derivation with the pronoun and the one without it converge, requiring reference-set computation.

Conversely, children should have close to 100% correct responses when RPs are in non-extractable positions (as in (4b)) and when pronouns are not locally A-bound (as in (6b)). In these cases, the derivation without the pronoun does not converge. If so, the reference-set has just one derivation in it and no comparison is needed. If no comparison is needed, children should not have processing problems.

5. Experiments in BP and English

Subjects. I tested forty children acquiring BP as their native language. They ranged in age from 3;4 to 6;6. Twenty-three children acquiring English as their first language were also interviewed. They ranged in age from 3;7 to 5;11.

Procedure. The experiment was a grammaticality judgment task (Hiramatsu and Lillo-Martin (1998) and McDaniel et al. (1990)). Children were introduced to a puppet which came from the moon and spoke moon-talk. The puppet was presented as a creature that was willing to learn the child's language, but got confused sometimes. The child was then invited to help the puppet to learn the language. In this task, only one experimenter was present. The experimenter showed to the child and the puppet pictures of cartoon characters. After a brief presentation of the character(s) in the picture, the experimenter manipulated the puppet, uttering the target sentence. Children had to say whether the sentence uttered by the puppet was right or wrong.

A clarification is in order here regarding the choice of this methodology. Usually, studies investigating Principle B have made use of the truth-value judgment task to elicit children's responses.[4] In studies on RPs, the grammaticality judgment task is more frequently used. In the present study, it was desirable to gather data from the same children using the same type of methodology. This is one of the reasons why a grammaticality judgment task was used in both cases. Another reason will be discussed in section 6.

Materials. There were seven types of sentences investigated. Sentences with anaphors had only two trials each. The other types of sentences had four items each, giving a total of 24 sentences tested. The types of sentences were: (a) relative clauses with RPs in the highest subject position and inside

---

[4] McDaniel et al. (1990) have made use of the grammaticality judgment task to test children's knowledge of locally A-bound pronouns. They tested sentences with the pronoun locally bound by DP and QP antecedents and their results are comparable to what has been reported in studies using the truth-value judgment task.

islands and (b) simple sentences with DP and QP antecedents binding pronouns and anaphors. Examples of target sentences (both in BP and in English) are presented below:

(7) **A-bound pronouns**:
    a.   *O dragão* está *se* coçando.   (DP – self: control)
        The dragon is scratching *himself*.

    b.   *Toda aranha* está *se* lavando.   (QP – self: control)
        Every spider is washing *herself*.

    c.   * *O cachorro* está coçando *ele*.   (DP – him)
        * *The dog* is scratching *him*.

    d.   * *Todo elefante* está lavando *ele*.   (QP – him)
        * *Every elephant* is washing *him*.

    e.   *Every duck* is carrying *his* guitar.   (Poss – English only)

(8) **A'-bound pronouns**:
    a.   * O sapo que *ele* está esquiando está contente.   (RP – extr)
        * The frog that *he* is skating is happy.

    b.   Este é o sapo que o cisne riu quando *ele* caiu.   (RP – non-extr)
        This is the frog that the swan laughed when *he* fell.

Results. The results of the experiment are provided in the table below. It shows the acceptance rates for each sentence type in English and Brazilian Portuguese (BP):

Sentences	*English*	*BP*
DP – self	93.4%	95%
QP – self	82.6%	95%
DP – him	52.1%	44.4%
QP – him	44.5%	49.3%
Possessives	97.8%	N/A
RP – extr	48.9%	58.1%
RP – unextr	88%	95%

Table 1: Acceptance rates for BP and English

The table shows that children had a high rate of acceptance of anaphors bound by DP and QP antecedents. The acceptance rates for pronouns locally A- and A'-bound (DP – him; QP – him; RP – extr), both in BP and English, are around chance level, as predicted. The percentages of acceptance of possessive pronouns and RPs in unextractable positions are well above chance, also as predicted.

The chance behavior observed for the group of children is also observed for individual children. In other words, the 50% correct responses emerged for children individually. This means that this pattern of correct responses is not due to some children always rejecting the trials and other children always accepting them.

Discussion. The results above show that children behaved at chance only in the cases where the reference-set has two derivations to be compared. Children did not behave at chance in sentences with RPs in unextractable positions and in sentences with possessive pronouns. These are the cases that do not require reference-set computation, as the derivation with the pronoun is the only member in the reference-set. This brings evidence to the hypothesis stated in section 3 that it is only in the cases requiring reference-set computation that children have processing problems.

6. Quantified Antecedents

Given the theory of bound pronouns adopted above, sentences with pronouns locally A-bound by quantified antecedents require reference-set computation to be excluded. Therefore, we predicted that children should display chance-level performance when sentences of this type are tested. As table 1 shows, this is confirmed in my results. However, these results contrast with those obtained in Chien and Wexler's (1990) (C&W) and Thornton and Wexler's (1999) (T&W) studies, where children rejected pronouns locally A-bound by QPs at a higher rate. In C&W's study, children rejected these sentences 84% of the time (for 5 year-olds) and in T&W's study, the rate of rejection is 92%.

I believe that the difference between my results and the results obtained in C&W's and T&W's studies for QP antecedents has a principled explanation, which is related to the methodology employed in the studies. I will start commenting first on C&W's methods. In their experiment, children saw a picture with three identical characters performing a reflexive action and a fourth distinct character, which was only watching the scene. Children then were asked a question containing a pronoun in object position, and a QP in subject position, as shown below:

(10) These are the bears, this is Goldilocks. Is every bear touching her?

Children answered 'no' to this question most of the time, probably picking 'Goldilocks,' rather than the QP, as the pronoun antecedent. C&W claim that this is so because children were constrained by Principle B. Were children to pick 'every bear' as the antecedent for the pronoun, this would violate Principle B. Therefore, children chose 'Goldilocks.' Since the bears were not touching Goldilocks in the picture, they answered 'no.'[5]

However, C&W did not consider another possibility in analyzing children's answers. There is the possibility that children picked Goldilocks as the antecedent for the pronoun not because of Principle B, but because Goldilocks was highly salient in the context. This possibility is highly likely, as the following factors indicate. First, in their picture, Goldilocks was much bigger than each of the three bears, which obviously made her stand out. Second, all three bears were identical, and Goldilocks was physically different from them. This is relevant, as studies on the acquisition of universal quantifiers like 'every' have shown that children tend to concentrate their attention on the different character present in the pictures in those experiments (see Crain, Thornton, Boster, Conway, Lillo-Martin and Woodams (1996); Drozd and van Loosbroek (1998); Philip (1995); Sugisaki and Isobe (2001); among others). C&W's pictures were similar to the pictures used in this kind of experiment, in that they also had three identical characters and a fourth, different and more salient individual. Third, Boster (1994) claims that children in C&W's study might have had difficulty in recognizing the bears as female, as the experimenter did not identify them as such or name them. The pictures of the bears did not make their gender clear also; the only hint about it was small bows in the bears' heads. Thus, although the bears might or might not be female, Goldilocks is clearly a girl and undoubtedly an appropriate antecedent for the pronoun.

These observations make me consider the possibility that children might have answered 'no' to question (10) above, not because of their knowledge of Principle B, but because the pictures presented to them were flawed, as they had one salient character that somehow drew children's attention. If this was the case, then C&W's experiments had a confound factor, and the authors' conclusion about children's knowledge of Principle B does not necessarily go through.

This confounding factor is absent from the grammaticality judgment task I used in my study. In trials testing A-bound pronouns, the pictures shown to children displayed only the elements performing the reflexive actions; there were no other potential antecedents for the pronoun. This is so due to the nature of the experiment, in which children were asked to judge the grammaticality of the sentence. For example, in the picture accompanying sentence (7d) above, there were only the three elephants washing themselves, with no fourth character. Children had to say if (7d) was the 'right way'

---

[5] Although I assume that Principle B is not part of the grammar (as discussed in section 2), I will use this term here in order to make the discussion coherent with C&W's and T&W's assumptions.

to describe that picture. So, this difference in the pictures could be the reason for the different results obtained in the two studies.

Turning now to T&W's study, problems similar to the ones identified in C&W's methods can be detected in their methods as well. They used a truth-value judgment task with stories acted out in front of children using toys and props. Below, I provide one of their stories leading up to a sentence with a potential QP antecedent for the pronoun (story taken from T&W's book, page 142):

(11) "Bert and three reindeer friends have a snowball fight, and they all get covered in snow. When they go inside, Bert is shivering, so he asks the reindeer to brush the snow off him. Two of the reindeer (separately) refuse, saying they have too much snow to deal with, and they brush themselves. The third reindeer helps Bert a little bit, but then brushes the snow off himself. Bert thanks the helpful reindeer for starting to brush him. He says he's sorry he can't reciprocate by helping brush the reindeer; he needs to finish brushing all the snow off himself because he's still very cold.
Puppet: *Every reindeer brushed him*."

In this story, Bert is more salient than the other characters. T&W acknowledge this when they claim that the background behind this story is that *Bert* has a problem: he wants the reindeer to brush the snow off him. The other three animals involved are not as prominent as Bert is. For example, they do not have names (they are referred to as 'the reindeer', 'the third reindeer', 'the helpful reindeer') and they do not have the urgency that Bert has, as they do not ask each other to brush the snow off them. Also, I suspect that the three reindeer are identical looking. Bert, on the other hand, is physically different, which makes him stand out.

Similarly to what happened in C&W's study, the saliency of this character might be the reason why children took him as the antecedent for the pronoun. One piece of evidence supporting this claim comes from a study with adult speakers of English. Morrow (1985) investigated the influence of protagonist status on referent assignment. In his experiment, subjects read a story with a protagonist and a non-protagonist. At the end of the story, a sentence containing an ambiguous pronoun was presented. Subjects were asked what the 'he' referred to in the last sentence. The results are that subjects are more likely to choose the protagonist when the protagonist was thematically prominent *or* most recently mentioned. Subjects preferred the non-protagonist only when the non-protagonist was thematically prominent *and* most recently mentioned. Oppy and Long (1996) also found that adults are more likely to pick the protagonist of a story as the referent of an ambiguous pronoun. Therefore, if children are like adults in this matter, they will pick Bert in the story above as the antecedent for the pronoun, given that Bert is more thematically prominent and was most recently mentioned.

Both in C&W's and T&W's experiments, these problems do not arise in cases where the potential extra sentential antecedent for the pronoun is a DP. In C&W's case, the pictures showing only Mama Bear and Goldilocks, for sentences of the type "*Is Mama Bear is touching her?*", do not have one character more salient that the other: the pictures displayed two equal sized characters, which were clearly identified as female. In T&W's experiment, the same holds. In order to see why, observe the story below, taken from T&W's book, page 96:

(12) "Goldilocks trips and falls in a puddle, so she stops at Mama Bear's house and asks Mama Bear to help her get clean. Mama Bear says that she would love to help, but her baby has just eaten his dinner, and he spilled it all over her. So, unfortunately, Mama Bear is unable to help Goldilocks because she needs to clean herself up. She is able to give Goldilocks a facecloth, though, so Goldilocks can attend to herself. Following the action of Mama Bear and Goldilocks washing, the puppet says:
Puppet: That was a story about Goldilocks and Mama Bear. I know one thing that happened in the story. *Mama Bear washed her*."

Here, both Goldilocks and Mama Bear are salient. Although it can be said that the story is about Goldilocks (the story starts with her falling in a puddle), both her and Mama Bear have problems and have to clean themselves. The two characters are salient, have names and are depicted as having

'problems.' The context does not provide an obvious antecedent for the pronoun, as it did in the case of QPs. Thus, in sentences involving a possible DP antecedent for the pronoun in both studies, the confounding factors mentioned above did not arise and children's answers could not have been guided by the saliency of one of the characters.

This discussion leads me to conclude that these studies investigating children's knowledge of Principle B ended up having a confound factor when the possible local antecedent for the pronoun was a QP. In these cases, the character not mentioned in the target sentence (e.g., Goldilocks or Bert) is necessarily made more salient than the characters that make up the QP (e.g., three bears or three reindeer). This might be the reason why children took that DP as the antecedent for the pronoun, and if that is the case, the results of these experiments do not bear on children's knowledge of Principle B.

When the confound factor pointed out above does not exist, as in my grammaticality judgment task, children behaved differently from the children in C&W's and T&W's experiments, accepting pronouns locally bound by QPs and DPs at chance level. Therefore, the difference in the results of my experiments on the one hand and in C&W's and T&W's studies on the other, can be explained in terms of the experimental differences of these studies, indicating that the methodology employed here has advantages over the methods they used for investigating locally A-bound pronouns.

7.   Final Remarks

C&W's and T&W's theories claim that children's chance performance in sentences like (7c) above is related to the coreferential reading of the pronoun. The core hypothesis in both proposals is that children lack some pragmatic knowledge, which is responsible for excluding cases of coreference. They argue that children do not have problems with bound pronouns, as they rejected pronouns bound by QPs at a high rate.

However, as we saw above, their results with QPs can be an artifact. The results reported in section 5 show that children display chance level performance in tests involving pronouns with referential and quantified antecedents. If we take these results as being more reliable (as they do not exhibit the confounding factors detected in C&W's and T&W's studies), we have that children do in fact have problems with bound pronouns. Pronouns with QP antecedents and RPs cannot have a coreferential interpretation; they only have a bound reading. Therefore, children's chance performance in these cases cannot be explained by theories which resort to the coreferential reading of pronouns to account for children's problems. In these theories, it has to be considered a coincidence that the same children behaved at chance in cases involving RPs in extractable positions and in cases of locally A-bound pronouns.

The theory proposed here does not treat these results as a coincidence. Children's behavior with respect to bound pronouns is explained by analyzing bound pronouns elsewhere elements, requiring reference-set computation. This proposal does not raise learnability problems, since we do not assume that children's grammar is different from adults'. As children grow older, their processing abilities get better and they are able to deal with these structures more efficiently.

References

Avrutin, S. 1999. *Development of the Syntax-Discourse Interface*. Dordrecht: Kluwer Academic Publishers.

Avrutin, S., and Thornton, R. 1994. Distributivity and Binding in Child Grammar. *Linguistic Inquiry* 25:265-271.

Avrutin, S., and Wexler, K. 1992. Development of Principle B in Russian: Coindexation at LF and Coreference. *Language Acquisition* 2:259-306.

Bar-Shalom, E., and Vinnitskaya, I. 2001. Relative Clauses in Child Russian: a Comparison with Serbo-Croatian. Ms. Storrs, University of Connecticut.

Boster, C. 1994. Children's Failure to Obey Principle B: Syntactic Problem or Lexical Error? In *UConn Working Papers in Linguistics 4*, eds. J. Abe, L. Ferro, L. Laporte-Grimes, D. Takahashi and M. Yamashina. Storrs, University of Connecticut.

Burzio, L. 1996. The Role of the Antecedent in Anaphoric Relations. In *Current Issues in Comparative Grammar*, ed. R. Freidin, 1-45. Dordrecht: Kluwer.

Chien, Y.-C., and Wexler, K. 1990. Children's Knowledge of Locality Conditions in Binding as Evidence for the Modularity of Syntax and Pragmatics. *Language Acquisition* 1:225-295.

Crain, S., Thornton, R., Boster, C., Conway, L., Lillo-Martin, D., and Woodams, E. 1996. Quantification without Qualification. *Language Acquisition* 3:83-153.

Drozd, K., and van Loosbroek, E. 1998. The Effect of Context on Children's Interpretation of Universally Quantified Sentences. Ms., *Max Planck Institute for Psycholinguistics and Nijmegen University*. Nijmegen.

Gathercole, S., and Baddeley, A. 1993. *Working Memory and Language*. Hove: Lawrence Erlbaum Associates.

Goodluck, H., and Stojanovic, D. 1996. The Structure and Acquisition of Relative Clauses in Serbo-Croatian. *Language Acquisition* 5:285-315.

Grimshaw, J., and Rosen, S. 1990. Knowledge and Obedience: the Developmental Status of the Binding Theory. *Linguistic Inquiry* 21:187-222.

Grodzinsky, Y., and Reinhart, T. 1993. The Innateness of Binding and Coreference. *Linguistic Inquiry* 24:69-101.

Grolla, E. 2005. Resumptive Pronouns as Last Resort: Implications for Language Acquisition. In *Proceedings of the 28th Annual Penn Linguistics Colloquium*, eds. S. Arunachalam, T. Scheffler, S. Sundaresan and J. Tauberer. Philadelphia - PA.

Hiramatsu, K., and Lillo-Martin, D. 1998. Children Who Judge What They Produce Ungrammatical. *Proceedings of the 22nd Boston University Conference on Language Development*:337-347.

Hornstein, N. 2001. *Move! A Minimalist Theory of Construal*. Oxford: Blackwell Publishers.

Hornstein, N. 2004. Pronouns in a Minimalist Setting. Ms. University of Maryland, College Park.

Jakubowicz, C. 1984. On Markedness and Binding Principles. In *Proceedings of NELS 14*, ed. C. J. a. P. Sells: Univesity of Massachusetts, GLSA: Amherst, MA.

Kang, B. 2003. The Nature of Children's Resumptives. Ms. General Examination Paper, University of Connecticut.

Labelle, M. 1990. Predication, Wh-Movement and the Development of Relative Clauses. *Language Acquisition* 1:95-119.

McDaniel, D., Cairns, H. S., and Hsu, J. R. 1990. Binding Principles in the Grammars of Young Children. *Language Acquisition* 1:121-138.

McDaniel, D., and Maxfield, T. 1992. Principle B and Contrastive Stress. *Language Acquisition* 2:337-358.

McKee, C., and McDaniel, D. 2001. Resumptive Pronouns in English Relative Clauses. *Language Acquisition* 9:113-156.

Morrow, D. 1985. Prominent Characters and Events Organize Narrative Understanding. *Journal of Memory and Language* 24:304-319.

Oppy, B., and Long, D. 1996. The Influence of Working Memory Constraints on Pronominal Reference. In *Empirical Approaches to Literature and Aesthetics*, eds. R. J. Kreuz and M. S. MacNealy, 69-82. Norwood, NJ: Ablex.

Pérez-Leroux, A. T. 1995. Resumptives in the Acquisition of Relative Clauses. *Language Acquisition* 4:105-138.

Philip, W. 1995. Event Quantification in the Acquisition of Universal Quantification, Ph.D. Dissertation, University of Massachusetts.

Philip, W., and Coopmans, P. 1996. The Double Dutch Delay of Principle B Effect. In *Proceedings of the 20th Annual Boston University Conference on Language Development*, eds. A. Stringfellow, D. Cahana-Amitay, E. Highes and A. Zukowski: Cascadilla Press: Somerville, MA.

Reinhart, T. 1999. The Processing Cost of Reference-Set Computation: Guess Patterns in Acquisition: Lectures given in Rutgers Cognitive Colloquium.

Reinhart, T. to appear. Processing or Pragmatics? - Explaining the Coreference Delay. In *The Processing and Acquisition of Reference*, eds. T. Gibson and N. Pearlmutter. Cambridge, MA: MIT Press.

Safir, K. 2004. *The Syntax of Anaphora*. Oxford: Oxford University Press.

Shlonsky, U. 1992. Resumptive Pronouns as a Last Resort. *Linguistic Inquiry* 23:443-468.

Sigurjónsdóttir, S., and Hyams, N. 1992. Reflexivization and Logophoricity: Evidence from the Acquisition of Icelandic. *Language Acquisition* 2:359-413.

Sugisaki, K., and Isobe, M. 2001. Quantification without Qualification without Plausible Dissent. Paper presented at *Semantics of Under-Represented Languages in the Americas*, University of Massachusetts, Amherst.

Thornton, R., and Wexler, K. 1999. *Principle B, VP Ellipsis, and Interpretation in Child Grammar*. Cambridge, MA: MIT Press.

Varlokosta, S., and Armon-Lotem, S. 1998. Resumptives and Wh-Movement in the Acquisition of Relative Clauses in Modern Greek and Hebrew. In *Proceedings of the 22th Annual Boston University Conference on Language Development*, ed. A. e. a. Greenhill, 737-746: Cascadilla Press: Sommerville, MA.

Wexler, K., and Chien, Y.-C. 1985. The Development of Lexical Anaphors and Pronouns. *Papers and Reports on Child Language Development* 24:138-149.

Proceedings of the 24th West Coast Conference on Formal Linguistics

edited by John Alderete, Chung-hye Han, and Alexei Kochetov

Cascadilla Proceedings Project   Somerville, MA   2005