

UNIVERSALITY OR ACQUISITION OF BINDING PRINCIPLES?

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ABSTRACT

This paper is an attempt to give new light to the controversial issue of universality in the Binding Theory, mainly in Principles A and B. We will present evidence not only from synchronic and diachronic linguistics but also from results obtained in experiments in the field of Language Acquisition that will lead us to conclude that even if these syntactic Principles exist, are by no means univesal.

1. Introduction

In this article we will discuss the apparent universality of the Binding Theory (henceforth BT). We will provide evidence showing that the standard binding Principles, originally formulated in Chomsky (1981), are not universal. Our main purpose is not as much to make up three new principles that accomodate this universal value -which are, probably, not necessary- as to give reasons for a rejection of these standard principles within the minimalist framework.

2. Parameterization or universality in binding?

One of the main points on which generative grammar focuses is universality. Chomsky (1981, 1986), among others, has claimed that the study of grammar should be concerned with competence and not with performance. In other words, he thinks that linguists should aim to describe the language faculty of an ideal speaker-hearer, rather than his / her speech acts. In this respect, we could assume that if this language faculty is universal, we will not need cross-linguistic data to reach conclusions holding for all languages. However, we are aware a closer look at other languages will prove very revealing, since it will shed light on controversial issues that have never been successfully accounted for. One of the main problems that arise concerning universality in language is the use of pronominals and reflexives, which will be extensively discussed throughout this article.

The crucial question we need to answer is, then, the following: What is universal and what parametric in the BT?. At first sight, we may assume that the three Principles of the BT, given in (1) below, are universal while notions like Governing Category, SUBJECT, Accessibility are parameters that vary from language to language. In fact, I will leave these notions aside, since I take for granted that parameters escape universality in the wide sense of the word.

- (1) a. Principle A: an anaphor must be bound in its GC.

B. Principle B: a pronominal must be free in its GC.

It is Chomsky himself who draws the distinction between a genetic or innate component versus an experiential component in language acquisition. In his words ‘The (fundamental) problem ... is to determine the innate endowment that serves to bridge the gap between experience and knowledge (of language) attained’ (Chomsky: 1986). That is, any speaker of any language is said to have an unconscious, tacit or implicit knowledge of his / her language. It is true that any speaker of a language has almost since birth the capacity to acquire a language. This capacity is shared by all living beings, that is, not only humans but also animals can speak a certain type of language. Obviously, any speaker makes use of a set of internalized rules, rules that have never been clearly defined.

The approach that will be taken here is, then, very different to that proposed in standard versions of the BT. In Chomsky’s terms, there are reasons to argue for the universality of the binding principles. At first sight, the way they are standardly defined, they could seem to be innate, the parametric (or other) variation coming in elsewhere (e.g. with the definition of the governing category, or with the X0 / XP level of the anaphor and therefore how far it can move...). Needless to say that if the principles were re-defined, we could imagine that the language variation could be due to these principles and not to something more peripheral. However, there are reasons to argue that even the standard binding principles, accepted since Chomsky (1981), are not universal. These arguments against the innateness of binding will come from two different sources. First, I will briefly discuss synchronic and diachronic linguistics, and then we will concern ourselves with Language Acquisition. It is worth mentioning that I take “universal” at this point as meaning both (i) “holding for all languages” and (ii) “surfacing at the same age period in every language in the world”.

Even though we may I think there are no structural binding conditions, we must still think that there are cognitive structures that probably are innate. Of course, we do not yet know nearly enough to say what is and what is not innate, nor can we see what is really and truly specific to language (especially since mainstream research deflects all attention away from any similarities between linguistic structures/processes/skills and other cognitive ones). I think the whole innateness question is a big red herring that impedes progress on all fronts. It seems to me that a serious heuristic problem is at least potentially involved here. The idea that BT is universal, i.e hard-wired, presumably only means that every normal, healthy human child “knows intuitively” that anaphors are by definition subject to Principle A, requiring an antecedent within their governing category, while pronominals are by definition subject to Principle B, lacking an antecedent within their local domain. This leaves wide open the question of what constitutes a pronominal versus what constitutes an anaphor, which I regard as language-specific. Presumably, the hypothetical normal healthy child has to figure that out on the basis of empirical evidence. In theory, reflexives and reciprocals are regarded as anaphors while personal pronouns are pronominals. But does Language Acquisition data really bear out that children take this as given? Or do they go on the assumption that the distinction between anaphors and pronominals is unmotivated, assuming “X seems to obey Principle A, therefore must be an anaphor, while Y seems to obey Principle B, therefore it must be a pronominal”, even though X happens to be (from the point of view of an adult’s grammar) a garden variety personal pronoun while Y is a reflexive?. This line of reasoning derives from the fact that at the age of five English-speaking

children still have not gotten it straight that the “-self” forms in English are anaphors. I am aware that one complication when trying to give an explanation to this is that “-self” forms in English are used also as emphatics.

Our first hypotheses are stated as follows: If the binding principles were innate, then all humans should show evidence of having them, regardless of the first language learned. That means either (a) all humans should have them from the beginning, and never produce utterances violating them even as a child; or (b) all humans should developmentally acquire them. If (b), there are still two different possibilities: (i) all children should acquire the principles in the exact same time frame, as I suggest, or (ii) the input data may affect the process of acquisition, so that certain parameters triggered by a given language may affect the process or sequence or timing of acquisition. I will reject (ii) on the basis of LA results. If the binding facts are acquired only from linguistic experience, we could not explain the differences in the acquisition between pronouns and anaphors that are shown in the tables below.

2. Arguments against universality of Principles A and B.

2.1. Arguments from synchronic and diachronic linguistics.

The first reason to reject the universality of the binding principles comes not only from cross-linguistic data but also from data taken from different stages of the same language. I will only sketch out some ideas, which will be further developed in Vázquez Iglesias (Ph.D dissertation in progress). First of all, we must mention the fact that reflexives and pronominals in many languages do not fulfill Principles A or B of the BT, e.g. Chinese, Korean, Thai, Italian, and Spanish, among others. Even in English, for which these conditions were thought, it is possible to find examples of free reflexives and bound pronouns under certain stylistic circumstances. Furthermore, the terminology used to define these Principles confuses us. It is hard to explain how Principle A could apply in Old and Middle English, stages of English in which (i) a personal pronoun could have either a reflexive or a pronominal value and (ii) a “-self” form could be used with a pronominal value as well. Anyhow, this violation of Principles A and B across languages and even within the same language leads us to suggest that they cannot be universal.

2.2. Arguments from Language Acquisition

As I have outlined above, my counterarguments to the consideration of universality, i.e. innateness, of binding in such a wide way as it has been proposed are further supported by language acquisition experiments. Since we lack genetic and neurological approaches to the universality of language, the field of language acquisition has been considered the only proof that BT is innate. Let us summarize, then, the main approaches to the innateness of binding within this field, and analyze the proposals given in these articles.

2.2.1. Grimshaw and Rosen

The first complete and rather innovating analysis was made by Grimshaw and Rosen (1990; henceforth GR). They argue that the three principles are part of the UG that any child has inside. Their experiment consisted of presenting children with two different types of questions that are often asked when testing children’s knowledge. They are given in (3-4) below:

(4) a. This is A. This is B. Is A washing him?

b. A washes A.

c. A washes B.

(4) a. B says that A should touch him.

b. A touches A.

c. A touches B.

On the basis of these sentences, children are requested to find out the content of the target question in what is called the “act-out” type of question. At the same time, they must say whether a sentence such as (3a) or (4a) describes a picture (3b), (3c) or (4b) and (4c) respectively. In other words, they are asked about their grammaticality intuitions. This type of question is called “grammaticality judgement”, and it is the most important in GR’s opinion.

Their experiment shows that children perform perfectly well on questions concerning Principle A of the BT and that they do not allow pronouns where reflexives are syntactically possible. However, when they deal with Principle B, they come across some unexpected reactions on the part of the children. They find that children perform worse in this kind of examples, and this should not be the case if we claim that Principle B is also innate. They do not succeed in explaining this peculiar result in the experiment. They just give some hints to solve this problem, that I summarize in (5) below:

(5) a. Young children cannot give grammaticality judgements.

b. Comprehension tasks indicate preferred interpretations rather than grammaticality judgements.

c. Therefore, children’s responses reveal their knowledge only indirectly.

d. The data do not indicate what is or what is not innate.

e. Children know the coreference restrictions on pronouns.

As early as 1983, it has been proposed by Reinhart that Principle B does not apply to coreference in the absence of syntactic binding. This led him to formulate a Pragmatic Rule I, that constrains the use of accidental coreference. This new rule was called Intrasentential coreference, and reads as follows:

(6) Rule I: Intrasentential coreference

NP A cannot corefer with NP B if replacing A with C, C a variable A-bound by B, yields an indistinguishable interpretation. (Grodzinsky & Reinhart, p.79).

According to Reinhart (1983), this rule only applies to sentences with coreference but without binding. It could be the case, therefore, that children did not have an innate knowledge of Rule I (and, therefore, they would have to learn it) but that they did of Principle B.

This would explain why their answers to pragmatic questions are not very successful. While still arguing for the innateness of both Principle B and Rule I, GR give an extralinguistic explanation to this poor performance. They claim that children are incapable to pay attention for a long time, so they get tired and respond what first comes to their mind. This is, obviously, a crucial limitation to any research made with children. As Marcus et al. (1992) note, children usually produce more speech errors than adults. Performance factors can, therefore, prevent us from finding out what their real knowledge is. Besides, everytime a child behaves as a linguistically-competent adult, s/he is surely imitating an adult's speech. It may be the case, though, that this competence is due, even, to chance. If we take into account children's poor performances on pronominals in English along with all the impediments mentioned above, it seems very difficult to distinguish a universal Principle B and a pragmatic Rule I. In fact, I will try to prove later that both are pragmatic constraints (perhaps undistinguishable in terms of LA experiments) that need to be learned, just as stylistics,.... This can be observed with cross-linguistic data. If a child aged 4 does not use Rule I (or Principle B) correctly, this implies that it is not a faculty that he has inside since birth, but rather some linguistic rule he has not learned yet. This assumption is supported by the fact that as the child grows older and reaches the age of six or seven, s/he will be able to use this pragmatic rule just the way adults do. As regards children's perfect responses concerning Principle A, I also disagree with GR in claiming that this is enough reason to explain the innateness of this Principle. It is likely that children have a clear notion of the semantic difference between reflexives and pronouns. Moreover, it is this semantic distinction that makes them choose a pronoun to express disjoint reference, and a reflexive to express anaphoric reference. The so-called logophors, or even the bound pronouns, are a result of stylistic and pragmatic usage, and their syntactic behavior has nothing to do with innate knowledge.

2.2.2. Bloom, Barss, Nicol and Conway

Let us consider now Bloom, Barss, Nicol and Conway's (1994) approach to the innateness of binding. These four linguists explore the acquisition of anaphora from a very different point of view. They work with sequences produced by children aged from two to five in spontaneous speech, since they claim that this kind of speech causes less pressure on the informants. As regards Principle A, the results they reach are consistent with the idea that this principle is innate. Furthermore, they argue that Principle B is also innate and, contra similar experiments made by GR (1990) and Grozinsky and Reinhart (1993), they give plausible reasons. In their opinion, if a child did not have an innate knowledge of Principles A and B, we would expect a free choice of reflexive / pronoun in the same contexts. On the contrary, their statistical reports show that there is no such free variation in children's utterances. Furthermore, children have an almost adult-like performance for both pronouns and reflexives, and the very few mistakes they make are due to pragmatic factors. In principle, this approach faces less problems than that of GR (1990), probably because of the method used in the experiment. It is observed, contra GR, that in spontaneous speech the difference between knowing a rule and obeying it is not very significant. The fact that the children are not conscious of their linguistic knowledge being analyzed makes them perform better. What is important in this analysis is that children do not allow pronouns and reflexives in the same contexts. We should, then, conclude that they have an innate knowledge of binding

constraints. In this sense, pragmatics would play a important role when ungrammatical sentences are uttered. This would be a great solution as long as it would work for any language in the world. We need to see some cross-linguistic data, for example in Spanish (and Italian). Recall that these languages use clitics to express both reflexivity (i.e. Spanish *me, te, se*) and pronominality (i.e. Spanish *lo, la, le, los, las, les*). From what we have said before, it would not be expected to find a child using pronouns and reflexives in the same contexts in spontaneous speech. At the same time, and connected with this, it would be very rare to find children using pronouns and reflexives at random. Surprisingly, this is exactly what happens in the case of several Romance language, as we will see below.

2.2.3. *Experiments on Spanish: Otsu, Jakubowicz, Solana and Ortiz*

At this point we should go back to an old study which argues that BT is innate. I refer to Otsu (1981). Her experiment goes as follows: Given a sentence like (7)

(7) The hippo remembered that the monkey patted him / himself

six and seven-year old children have no problems with its interpretation. However, younger children only perform well half of the time. These results seem to indicate, in Otsu's opinion, that children apply these Principles correctly. The problem with these two approaches is, in my opinion, that they are not consistent with their results. In fact, what Otsu and Jakubowicz are suggesting is that age factors play an important role in performance errors. How can they still argue that BT is innate?. Are they, perhaps, suggesting that we all have the same Universal Grammar, but this treats elements such as clitics in Romance and pronouns in Germanic languages in a different way? But, how do they differ?. That is still an open question. Along these lines, we also find a similar experiment made by Jakubowicz (1984). He also comes to the conclusion that at early stages children do not distinguish between anaphors and pronominals and tend to interpret both as bound expressions. In other words, in a sentence like (8)

(8) John said that Peter washed him / himself.

the pronoun *him* can be interpreted by three and four year-olds as coreferential with Peter, in violation of Principle B. The problem with these two approaches is, in my opinion, that they are not consistent with their results. In fact, what these experiments are suggesting is that age factors are so important in the experiment results that learning of the syntactic behavior of pronominals and anaphors is undeniable. In other words, how can Otsu and Jakubowicz still maintain the idea that BT is innate if performance errors are influenced by age?. It is true that some things in life are innate but they do not show up till a certain age. For example, every child is born with the capacity to walk or to speak, but he will not be able to walk till he is one year old, and he will not be able to speak till he is two years old. Along these lines, we could argue that our knowledge of the binding principles is on our mind since birth, but does not surface till later in our lives. This would be a fair argument as long as we would find the same age requirements for all languages. Unfortunately, this is not the case so our assumption seems to fail on empirical grounds.

Before proceeding to analyze our experiment, we should revise some of the studies on Spanish anaphora and try to reach some conclusions. Solana and Ortiz (1982) also carried

out an experiment to test children's knowledge of binding. They worked with 28 children, ages four to six in a comprehension act-out task. They posed sentences like

(9) a. Juan dijo que Pedro se pateó.

'Juan said that Pedro kicked himself.'

b. Juan dijo que Pedro lo pateó.

'Juan said that Pedro kicked him.'

c. Juan ordenó a Pedro patearse.

'Juan ordered Pedro to kick himself.'

d. Juan ordenó a Pedro patearlo.

'Juan ordered Pedro to kick him.'

Children's interpretation of these data was not as perfect as it should be if they had an innate knowledge of the two Principles. In fact, only 49% of the sentences were interpreted correctly by these children. The reason may lie in the complexity of the data given, that makes young children misunderstand the meaning of the sentences. Anyhow, it is clear that age is playing once more an important role here.

2.2.3.1. *Vázquez Iglesias*

Our experiment was made with a group of Spanish-speaking children whose age ranged from five to eight years old. First of all, I gave 25 six-year olds a set of sentences containing pronouns and reflexives that can be used in the same contexts, and I asked them some questions to analyze the interpretation they give to each of these grammatical words. It was, therefore, a comprehension task, which is as useful as an act-out task, and less complicated when doing research with young children.

My aim was to prove the logical assumption that seven and eight-year olds respond much better to these questions than five and six-year olds. However, they still lack the linguistic knowledge required to interpret all the sentences correctly. As the child gets older, his/her intuitions will greatly improve. In other words, the Strong Maturation Hypothesis does apply in the acquisition of the syntax of reflexives by children. If this assumption is correct, then we will expect an almost perfect interpretation of the sentences in question at the age of eight.

As regards Principle A, we notice that up to the age of seven or eight the children make several mistakes, confusing true reflexives such as *se* with pronominals such as *lo*, *la*, *los*, *las*. Thus, we posed sentences like

(10) Ana se lava todos los días.

'Ana washes herself everyday.'

(11) Ana la lava todos los días.

'Ana washes her everyday.'

Surprisingly, (10), and not (11) was often misunderstood by seven and eight year olds. The results are shown in Table I below:

Table I. Children's understanding of Principles A and B in Spanish.

| | 7 year olds | 8 year olds |
|--|-------------|-------------|
| NPsubject = NP object | | |
| SE interreted as reflexive | 79.1% (19) | 91.3% (21) |
| SE interpreted as pronominal | 20.9% (5) | 8.7% (2) |
| NPsubject \neq NP object | | |
| LO/LA interpreted as pronominal | 100% | 100% |
| LO/LA interpreted as reflexive | 0% | 0% |

From this table we come to several conclusions. First, Spanish-speaking children do not reject the pronominal reading of a reflexive *se*, as early as English-speaking children do with “-self” forms. In fact, they do not show good knowledge of Principle A till they are more than eight, even in the simplest sentences consisting of a subject + a (reflexive) clitic +verb, as in (10). If this is correct, then we might reject our previous hypothesis that adult-like interpretations of reflexives on the part of children may depend on the difficulty of the structure under examination. Recall that pronominals in simple sentences do not present any problems for our informants. Moreover, if this experience were crucial, how could we explain the fact that a Dutch child interprets an object pronoun as coreferent with the subject, while he allows the local reading of anaphors till he is five. This cannot be due to linguistic experience, since adults are always aware that anaphors are local whereas pronouns are non-local. Besides, it does not account for the delay in the acquisition of Principle B in ECM constructions in Spanish, and a stronger one in Dutch. We must take into account that, at least in Dutch, constructions of this type are already present in three-year old children, i.e. they are part of the children's linguistic experience.

Taking this issue a little further, we could suggest that, in fact, there is no delay in the acquisition of Principle A. On the contrary, what is happening is that children from six on begin to play with *se* and use it as a long-distance anaphor. Needless to say that SE (Simple Expression) anaphors in many languages, for instance in Italian or Icelandic, have the possibility of being bound outside their governing category.

It is likely that Spanish children think, at one stage, that Spanish is like Italian in that sense. It is worth mentioning that experiments made by Philip & Coopmans (1996) also show that Dutch children seem to use “*zich*” as a long distance anaphor or logophor when they are more than five, and after having demonstrated an adult-like performance on anaphors. In my opinion, the tests run here do not give us proof that these apparent violations of Principle A are consequences of a linguistic evolution on the part of the child that has already dominated local anaphora and plays now with language.

To recap what has been said so far, it seems that biological explanations to the innateness of binding cannot be successful. Otherwise, we would expect these reflexives and pronouns to be used correctly by children of the same age. Second, were these principles universal, then we should find both English and Spanish children performing exactly alike in questions regarding Principle A and Principle B. However, it is worth mentioning that we carried out an experiment which shows that Spanish children performed better on questions in which Principle B is involved. This is a surprising fact that has not been previously observed in experiments of this kind -neither for English nor for Spanish- and that is a valuable piece of evidence that supports our rejection of the universality in binding. Thus, Spanish children distinguish, at the age of five, the clitic simple pronouns and give them a virtually adult-like interpretation (i.e disjoint reference) that English children are unable to give till the age of seven or eight. The so-called Delayed Principle B Effect is more obvious in English than in languages such as Spanish and Italian. For instance, while in English it is already present in simple sentences, in Spanish and Italian it only shows up in complex sentences such as ECM and quantifying constructions.

Compare the results obtained in these types of sentences with five year olds.

(12) Cada niña la seca. 72% adult-like

‘The girl is drying her off.’

(13) La niña la ve bailar. 64% adult-like

‘The girl sees her dance.’

It is true that the more difficult a sentence is the later the child will perform adult-like on it, but the tests run out in this chapter only show expected differences in the acquisition of pronominals in simple and complex structures in a language like Spanish. I will not concern myself with ECM and quantifying constructions since they are not relevant for the purpose of this paper.

One could take the view that these differences in the acquisition of pronouns are due to the fact that languages with clitics such as the Romance languages are harder to learn than those that do not have clitics. This view is valid on the basis of the results obtained in this experiment, but can be rejected on logical grounds. Every normal child is born with the ability of learning to speak, read and understand any language, regardless of its nature. This should mean that a child in England or The Netherlands will acquire the skill of understanding at the same age as a child in Spain or Italy.

Once again, we note that experiments made with children of other languages cannot give us a clear explanation of what is innate (and, therefore, universal and applicable for all speakers of all languages) in the BT. It seems easier and more reasonable, perhaps, to assume that universality in BT refers just to the semantic knowledge we have since birth to express that “someone is doing something to you” versus “you are doing something to yourself”.

2.2.4 Cook & Newson

The most recent argument in favor of the innateness of binding is given in Cook & Newson (96). I quote

“Step A is to claim that the native speaker knows that in

. Helen said that Jane voted for herself.

Jane binds herself. [...(”

“Step B is to see whether children could have worked this out from the speech they are likely to have encountered. Suppose children wrongly understand that “herself” is bound by Helen [...(Nothing would tell the children that they are wrong; no context could let them unerringly distinguish the binding of anaphors and of pronominals.” (p.84f.)”.

Let us begin by discussing Cook’s arguments supporting the innateness of binding principles. First, I can well imagine -as I have mentioned above- that children learn by induction and generalizations from a number of simple sentences in proper contexts, like, for example, “Jane hurts her” versus “Jane hurts herself” that “her” cannot refer to the Actor of the action of which her is the Patient, while “herself” must refer to this Actor. Note that I have used a typical reflexive verb in English, probably the first one a child hears in this language. Verbs indicating personal grooming, such as “wash” or “comb”, which are in the middle voice, do not use reflexive markers much. Therefore, they are not good examples since they designate inherently reflexive actions, which many languages, including English, keep formally separate from true reflexives, which are those actions that one normally performs on another, and exceptionally on the self.

Anyhow, if we apply this generalization to the example sentence given by Cook and Newson (1996) allowing also Benefactors alongside Patients, we still get the correct result: “herself” must refer to the Actor of the action of which it is the Benefactor. The fact that the anaphor is part of an embedded clause and that the matrix clause also has a feminine subject NP does not interfere if the ‘rule’ is derived by induction and stated this way. In other words, it is far from clear why English-speaking children should overgeneralize and allow long-distance binding when there is no evidence in the input. The same question could be raised as to why children might allow local binding of pronominals when, presumably, there is no evidence in input for a reflexive interpretation of things like “The horse kicked him” either.

On the other hand, I would be totally convinced by Cook and Newson’s (1996) arguments if children never made the mistake of using pronouns instead of anaphors or anaphors instead of pronouns during language acquisition. This would indicate that they do not proceed by induction and generalization. However, the experiments given above, both for English and Spanish, show that very young children do make these kinds of mistakes with anaphoric expressions both in production and comprehension. It is true that children use pronominals instead of reflexives -as in “I hurt me”- and vice versa, -as in “Sue’s mother brushed herself” (when the agent and the beneficiary of the action are not the same person). These misconstructions take place before children have learned the correct adult patterns. However, I do not see the latter example as problematic for the Chomskyan Binding Theory. I can imagine two possible interpretations of this phenomenon:

(18) The child is not using the anaphorical herself but the emphatic herself.

(19) The child understands the Binding Theory distinction between the theoretical entities “pronominal” and “anaphor”, but does not know that “herself” is an anaphor.

In other words, early child grammars might allow reflexives and (ungrammatical) locally bound pronominals in parallel distribution, at least in lexically governed contexts.

3. Conclusion

To sum up, we may say that none of the experiments and data provided above support the claim that Principles A and B of the Binding Theory are universal. Rather, they are consistent with our preliminary suggestion that the innateness of binding should be restricted to the semantic distinction we all make between pronominality and reflexivity. From all these arguments, it seems more reasonable to claim that it is the possibility of expressing anaphoric or disjoint reference that is available to any speaker of any language, and nothing else. As regards binding, then, the Innateness Hypothesis should not go further than this. We have seen that the syntactic use of coreference, on the one hand, and disjoint reference, on the other, depend heavily on age factors as well as on the type of language in question. For instance, the fact that Principle B is learned before Principle A in Spanish but not in English matches our claim that particular lexical items that indicate reflexive / pronominal meanings need to be learned for each particular language.

NOTES

1. Our first intention was to work also with spontaneous speech in order to analyze children’s performance without their being under any pressure. In this way, we could compare the written responses with the unconscious use of pronouns versus reflexives in colloquial speech. Thus, we devoted some time to secretly recording children’s every day utterances. After having recorded approximately 40 minutes for a small group of children, we transcribed all their utterances and selected those contexts in which reflexives and simple pronouns occurred. Unfortunately, we realized that colloquial speech would require much more time of recording so that we could reach some relevant conclusions regarding the distinction of Principle A and B by young children, so we decided to quit.

2. Cf. Michael Barlow (1996), who shows how corpora reveal patterns that data from pure intuition can never reach, including frequency information that affects the generalizations speakers draw (again, both as children and as adults). He has a case study on reflexive marking in English, which shows what the real patterns of reflexive marking are that people are exposed to. This is quite different from the kinds of examples UG linguists think up. He presents a schema theory to describe the actual usage data found with reflexives. We must remember that UG is not about usage; language is somehow completely divorced from what happens when speakers use and understand language).

3. Obviously, I do not regard the so-called long-distance reflexives as true reflexives, but rather as discourse-oriented anaphors.

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