

Grammatical features and the acquisition of reference: A comparative study of Dutch and Spanish

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Reviewed by Jeannette Schaeffer

Summary by the author

1. Introduction

This study investigates the acquisition of definite articles and pronouns in two languages, Spanish and Dutch, and particularly the interpretation four-to-seven-year-olds assign to these elements. On the basis of experimental evidence I show that children's interpretation of definite articles and pronouns is affected by their incomplete acquisition of morpho-syntactic features of the D-position. The present study also provides evidence for the claim that children are sensitive to inflectional morphology, showing that rich agreement paradigms, in particular rich determiner-noun and object-verb agreement, give children a head-start with respect to the acquisition of the adult interpretation of pronouns and definite articles.

2. Children's interpretation of definite articles

Children between four and seven have difficulties with the proper use and interpretation of definite articles. In particular, they appear to have difficulties with restricting definite DPs to "familiar" or presupposed objects or individuals (Karmiloff-Smith, 1980; Bamberg, 1987), which locates children's non-adult-like performance at the syntax-pragmatics interface.

I provide experimental evidence showing that some aspects of children's non-adultlike performance with definite articles are not pragmatic but morphosyntactic in nature. More specifically, I argue that children can interpret definite articles as *expletive determiners*, i.e. non-denoting determiners, as in Constructions of Inalienable Possession (CIPS) in Spanish (Zubizarreta & Vergnaud, 1992; Longobardi, 1994).

- (1) a. Las dos niñas volvieron la cabeza.
the two girls turned the head
b. ??De twee meisjes draaiden het hoofd om.
the two girls turned the head PRT.
'The two girls turned their heads.'

In (1a) the definite article is not denoting, since *la cabeza* 'the head' does not refer to one specific head, but is interpreted distributively with respect to the subject of the sentence. Some languages, for instance Dutch do not allow definite articles to be interpreted as expletives. In standard Dutch (1b) *het hoofd* 'the head' can only be interpreted as referring to one specific head.

An experiment carried out with 47 four-to-seven-year-old Dutch speaking children and 22 Dutch adults, using a Truth Value Judgment Task, showed that whereas both Dutch adults and Dutch six- and seven-year-olds rejected the distributive reading of the body-part noun in constructions like (1b) 70% of the time, Dutch four- and five-year-olds accepted this reading 70% of the time. A similar experiment carried out with 32 four-to-seven-year-old Spanish speaking children and 13 Spanish adults showed that both groups accepted the distributive reading of the body-part noun in (1a).

These results raise the question how expletive determiners are licensed in adult and child language. Zubizarreta & Vergnaud (1992) argue that in the Romance languages expletive determiners are licensed by their rich D-N agreement morphology. In Spanish, for instance, the definite article distinguishes four different forms (*el, la, los, las*), reflecting the two morphosyntactic dimensions [number] and [gender]. The Dutch definite article, on the other hand, only distinguishes two different forms (*het* for singular neuter, *de* for the rest), which arguably qualifies Dutch D-N agreement as morphologically poor, i.e. as unable to license expletive determiners. How does this fit the experimental results? For child Spanish no additional assumptions need to be made. Snyder,

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Senghas & Inman (1999) have shown that Spanish children have acquired the D-N agreement morphology before the age of three. We may therefore assume that, like in adult Spanish, in child Spanish expletive determiners are licensed by rich D-N agreement morphology. Obviously, this account does not work for child Dutch. I therefore propose that in child Dutch expletive determiners are licensed in a different way: by radically underspecified D-N agreement. Hoekstra & Hyams (1995) argue that Dutch children may keep the D-position underspecified for ϕ -features. I claim that this underspecification is reflected in their D-N agreement paradigm, in the sense that it leads children to use a default definite article for all nouns. As Don *et al.* (1994) show, before the age of three Dutch children hardly use the definite article *het*, and even after the age of three Dutch children often use *de* for nouns independently of their gender or number.

Note, finally, that Spanish children's ability to license expletive determiners does not guarantee adult-like performance. An experiment testing the interpretation of complex nominals in light-verb constructions (e.g., *make the decision*), where the determiner is argued to be an expletive, and non-light-verb constructions (e.g., *find out about the decision*), where the determiner is denoting, revealed that Spanish children often use expletive determiners in contexts that require a denoting determiner in the adult language. This finding is in line with what Roeper & DeVilliers (1995) have reported for English speaking children.

3. Children's interpretation of pronouns

Four-to-six-year-old children often allow pronouns (*him*) to be identified with local c-commanding antecedents (*the boy*).

(2) The boy touched him.

This so-called Delay of Principle B Effect (DPBE), does not show up when the antecedent is quantified (Chien & Wexler, 1990): children reject a reflexive reading of (3) 85% of the time.

(3) Every boy touched him.

This shows that children who exhibit a DPBE do not violate Principle B, but instead allow *intrasentential coreference* to be established between pronouns and local c-commanding antecedents. Apparently, children have difficulties with the application of a syntax-pragmatics interface principle that constrains intrasentential coreference to contexts such as (4) (Grodzinsky & Reinhart, 1993).

(4) Everybody hates Oscar. John hates him, Mary hates him, even Oscar hates him. (him = Oscar)

In this study I provide experimental evidence from Spanish and other languages, showing that the DPBE is not a unitary phenomenon but that, in addition to a "pragmatic" DPBE as discussed above, there is a

"syntactic" DPBE that is related to children's incomplete acquisition of morphosyntactic features of pronouns.

The main argument for considering the relevance of morphosyntactic feature acquisition comes from an experiment that tested Spanish speaking children on constructions like (5a,b) using a Truth Value Judgment Task.

- (5) a. La niña la señala.
the girl her points-at
'The girl is pointing at her.'
b. La niña la ve bailar.
the girl her sees dance
'The girl sees her dancing.'

The results showed firstly that five-year-old Spanish children do not exhibit a DPBE in constructions like (5a) (see McKee, 1992, for similar findings in Italian acquisition), and secondly that Spanish children do show a DPBE in (5b), accepting the reflexive interpretation roughly 50% of the time.

I claim that the absence of a DPBE in (5a) is the result of these elements being "syntactic clitics", i.e. VP-external functional heads, probably the reflection of object-verb agreement. I argue that in clitic constructions a null-object is moved to the Spec of the Clitic Projection, creating a variable chain whose tail must be interpreted as a predicative trace, i.e. a variable bound by a λ -operator. This entails that clitics always involve *binding*, and that *coreference* between the pronominal clitic and a local c-commanding antecedent is not an option.

Since intrasentential coreference is not an option in constructions containing syntactic clitics, it follows that the DPBE that shows up in (5b) must involve binding. This conclusion is confirmed by the persistence of the DPBE when the main clause subject in Exceptional Case Marking (ECM) constructions is quantified (i.e. *cada niña* 'every girl' instead of *la niña* 'the girl'). I propose that the reason why Spanish children allow the embedded ECM subject to be bound by the matrix subject is that they often interpret pronouns as "referentially deficient", i.e. they misanalyze them as SE-anaphors (cf. Reinhart & Reuland, 1993). I argue that Spanish children can interpret third person pronouns as SE-anaphors in ECM constructions because they can keep personal pronouns underspecified for ϕ -features, in particular for [number] (cf. Reuland, 1998). Interestingly, this account is supported by earlier findings by Philip & Coopmans (1996), who showed that Dutch children exhibit an extra-strong DPBE in exactly those constructions where Dutch licenses SE-anaphors (*zich*), namely in so-called "inherently reflexive verbs" (such as *wassen* 'wash'), and, crucially, in ECM constructions.

I also address Dutch children's interpretation of weak pronouns. Dutch weak pronouns have been argued to be syntactic clitics by some authors (see, among others, Zwart, 1992). If this is correct, it is predicted that they should not give rise to a DPBE.

However, I present experimental evidence showing that Dutch four- and five-year-olds do exhibit a DPBE in constructions with weak pronouns like 'm 'him' (6), which indicates that Dutch children do not interpret these elements as syntactic clitics.

- (6) Het jongetje heeft 'm (denk) getekend.
 the boy has him think I drawn
 'The boy has (probably) drawn him.'

Spanish strong pronouns, like *él* 'him', on the other hand, are predicted to give rise to a DPBE, since they remain VP-internal. However, the experimental evidence shows that Spanish children do not exhibit a DPBE in (7).

- (7) El niño le dibuja a él.
 the boy CL. draws acc. him_{strong}
 'The boy is drawing him.'

I propose that the absence of a DPBE in (7) is the result of Spanish strong DO pronouns having to be doubled by a clitic pronoun. I argue that clitic-doubling constructions are interpreted in a similar way as non-doubled clitic constructions, i.e. in terms of λ -abstraction, blocking the possibility of intrasentential coreference (cf. Aoun, 1999).

Finally, I tested Spanish children's interpretation of strong pronouns as complements of (non-)locative prepositions. Although the results indicated that children accepted the anaphoric reading of strong pronouns more often than adults did in this context, I argue on the basis of evidence from constructions with quantified antecedents that this does not point at the existence of a "real" DPBE in Spanish.

4. Conclusions

Four-to-seven-year-old children's interpretation of definite articles and pronouns is affected by two factors: (i) a pragmatic factor, and (ii) a morphosyntactic factor. The first factor relates to children's inability to apply pragmatic principles correctly. The second relates to their incomplete acquisition of the ϕ -feature make-up of the D-position. This latter factor leads children to interpret definite articles as expletive determiners and personal pronouns as SE-anaphors.

The experimental results also provide evidence for the claim that children are sensitive to "rich" inflectional morphology. Spanish children know from the beginning that the rich D-N agreement morphology of their language licenses expletive determiners. The poor D-N agreement morphology of Dutch, on the other hand, gives rise to Dutch children's non-adultlike acceptance of expletive determiners. Likewise, the presence of syntactic clitics (which I consider to be a piece of inflectional morphology) in Spanish prevents Spanish children from showing a DPBE in (5a), while their absence in Dutch leads Dutch children to exhibit a DPBE in (6).

Review by Jeannette Schaeffer

On children's acquisition of reference: A review of Sergio Baauw's dissertation

In his large study of the acquisition of reference in two languages, Sergio Baauw sets a good example for the right approach to the investigation of child language. Linguistic theoretical studies of first language acquisition face the challenging task of addressing the problem of real-time development towards the target grammar, as well as formulating coherent theories describing and explaining the child's linguistic system during certain developmental stages. Furthermore, assuming that the study of adult language requires this, such studies should differentiate between the different modules of language, such as the lexicon, the computational system and the pragmatic system. Baauw focuses on the two latter points, namely: (a) How can we adequately describe and explain children's deviant interpretation of definite articles and pronouns, and (b) How does this bear on the distinction between syntax and pragmatics? He provides a lucid description of the relevant parts of reference in adult language and shows how the results of his carefully designed experiments with Dutch and Spanish children have an impact on both theories of language acquisition and generative linguistics in general. A nice illustration of the theoretical child language researcher at work.

In particular, Baauw tackles the long-standing tension found in explanations in response to the questions posed above. Since the 1970s child language researchers have observed that children have difficulties with the proper use of determiners and pronouns. Up until the age of 6 (or even 7) they violate the constraint on the use of definite expressions, i.e. that these must refer to "familiar" or presupposed objects or individuals (see Maratsos, 1974; Karmiloff-Smith, 1979, 1980; Schaeffer, 1997, 2000; Schaeffer & Matthewson, 1999; Matthewson & Schaeffer, 2000). Since many other studies on child language acquisition show that children master most syntactic constructions of their target language by age 3/3;6, it is attractive to invoke a pragmatic explanation for the delay of the correct use of determiners. Loosely formulated, these accounts boil down to saying that the child does not take the discourse representation of the hearer into account, and therefore assumes that if a nominal expression is referential for him/her, it is automatically so for the hearer as well. This might be related to the acquisition of "Theory of Mind", which, according to some researchers takes place around age 3 and according to others around age 4. Similarly, the so-called "Delay of Principle B Effect" (DPBE), showing up until at least the age of 4, has also received several pragmatic explanations (Chien & Wexler, 1990; Avrutin, 1994). However, other studies have put forward pragmatic explanations for children's anomalies that last only until age 3. For example, in Schaeffer (1997, 2000) I point out that initially (Dutch and Italian) children

have problems with direct object scrambling and direct object clitic placement, but perform pretty much adultlike on these constructions from age 3;6 on. The explanation I propose lies in the syntax-pragmatics interface. The “deviance” in child language is obviously a syntactic one: Dutch children often place the object in the wrong position while Italian children omit object clitics. Nevertheless, I argue that these syntactic differences are due to an immature pragmatic system, which in turn affects the realization of the syntactic referentiality feature on the nominal expression. Furthermore, in Schaeffer and Matthewson (1999) and Matthewson & Schaeffer (2000) we show that children acquiring English “overgenerate” definite determiners only until the age of 3. Thus, the studies on the acquisition of reference to date yield a tension as to when exactly the pragmatic prerequisites for the correct use of reference are acquired.

In order to resolve this tension, two hypotheses are feasible. It might be the case that there are distinct pragmatic principles, which are acquired at different points in time. Alternatively, it could be that the acquisition of reference is not driven by pragmatics only. It is the latter approach that Baauw defends. Without dismissing the possible pragmatic forces behind the acquisition of reference, he convincingly shows that there are also purely syntactic deficiencies in this area, i.e. instances of children’s article/pronoun interpretation that cannot be explained by pragmatic factors. These deficiencies include the ones illustrated in I. – V.:

- I. Rejection of bound-variable reading of pronoun *la* (‘her’) by Spanish-speaking children in constructions with complex NPs such as in (1) (ungrammatical for Spanish adults):
 - (1) **La niña_i tomó la decisión de dibujarla_i*
the girl took the decision to draw-her
‘The girl made the decision to draw her.’
- II. Acceptance of long-distance wh-extraction out of complex NPs by Spanish-speaking children in constructions such as in (2):
 - (2) **Cuándo_i se enteró María de [la decisión de tejer calcetines t_i]*
when SE found-out Mary of the decision to knit socks
‘When_i did Mary find out about the decision to knit socks t_i?’
(when/knit socks → Which moment is such that Mary found out about the decision to knit socks at that moment?)
- III. Acceptance of distributive reading of definite article *het* (‘the’) by Dutch-speaking children in constructions of inalienable possession (CIP) as in (3):
 - (3) ??*De twee meisjes draaiden het hoofd om*
The two girls turned the head around
‘The two girls turned their heads.’
- IV. Acceptance of distributive reading of definite article *la* (‘the’) by Spanish-speaking children in CIPs as in (4):

- (4) ??*Los niños tocaron la oreja*
the boys touched the ear
‘The boys touched their ears.’

- V. Acceptance of reflexive interpretation by Spanish-speaking children in ECM constructions as in (4) (DPBE):

- (5) **La/cada niña_i la_i ve bailar*
the/every girl her sees dance
‘The/Every girl sees herself dance.’

The constructions illustrated in (1)–(4) all contain definite nominal expressions, referential for the adult, but interpreted non-referentially by the child. Baauw proposes that children interpret the definite articles in these constructions as expletive determiners. Following Longobardi (1994) and Zubizarreta & Vergnaud (1992) he argues that expletive determiners are definite articles, generated in D, lacking an operator, and therefore devoid of any denotational content; they are just bundles of Φ -features. In languages with so-called “rich” or “strong” D-N agreement morphology such as Spanish, these operatorless Φ -feature bundles are licensed because they unambiguously express at least one of the features ([number]/[gender]) expressed by the noun (cf. Baauw, p. 73). For example, the Spanish definite article *el* (‘the’) always expresses the features [masculine] and [singular]. On the other hand, the Dutch definite article *de* (‘the’) sometimes expresses [common gender]/[singular], sometimes [common gender]/[plural], and sometimes [neuter]/[plural], implying that the D-N agreement morphology is poor. According to this definition, adult Spanish allows both denoting and expletive definite determiners, whereas adult Dutch merely allows denoting definite determiners. Since Spanish children acquire the rich D-N agreement morphology of their target grammar at a very early stage, expletive determiners are allowed. However, they have not yet acquired all the lexical restrictions for the use of expletive determiners, hence the incorrect expletive (non-referential) interpretations of the definite determiners in (1), (2) and (4). For Dutch child language, Baauw makes an additional claim, namely that its determiners’ Φ -features are underspecified. Inspired by Jaeggli & Safir’s (1989) Morphological Uniformity Parameter he argues that this makes the D-N agreement morphology uniformly “poor”, giving rise to the licensing of expletive determiners as well.

Thus, children’s definite determiners can be expletive in that they lack an operator and/or are underspecified for Φ -features. This suggests that in addition to a pragmatic factor, there is a morphosyntactic factor underlying children’s misinterpretations of sentences such as in (1)–(4). However, the question is whether there really is a pragmatic factor at play here. The determiner issue discussed by Baauw seems different from the phenomenon found in the studies mentioned above (Maratsos, Karmiloff-Smith, etc.), since the focus here is on the definite/referential use of nominal expressions in contexts in which adults would have used an indefinite. In a sense this is opposite to the non-referential interpretation of definite nominal

expressions that adults would interpret as referential, observed in (1)–(4). It is not clear how the pragmatic explanation that children do not take the hearer’s discourse representation into account would be at play in the analysis of children’s interpretations of (1)–(4). Therefore, it is feasible that the two phenomena have different sources: the overgeneration of definite determiners a pragmatic one, and the non-referential (expletive) interpretation of denoting definite determiners (as in (1)–(4)) a morphosyntactic one. This could explain the discrepancy in age of acquisition between the two phenomena. Whether this turns out to be true or not, Baauw’s contribution to the debate about children’s acquisition of reference is an important one: his Dutch experimental data show that the development of morphosyntactic feature specification plays a major role, and it illustrates that this process can take a long time (up until age 7). Perhaps less importantly, his experimental data from Spanish indicate that the acquisition of lexical restrictions also takes a considerable amount of time.

With respect to Baauw’s account of the licensing of expletives, which I will refer to as the “Expletive Licensing Hypothesis” (cf. Baauw, p. 76), I would like to make a few points. First of all, it is a hypothesis, that yields a number of strong predictions, thus increasing its falsifiability – a desirable property. Secondly, it makes predictions for both adult and child languages. For convenience, I copy the two clauses of Baauw’s formulation (cf. Baauw, p. 76) under (7):

(7) *Expletive Licensing Hypothesis*

- (i) The Determiner-Noun agreement is uniformly rich: the different forms of the determiner express feature oppositions reflected in the agreement paradigm as a whole;
- (ii) The Determiner-Noun agreement is uniformly poor: the determiner is underspecified for Φ -features, i.e., it is invariant.

The Expletive Licensing Hypothesis predicts that both languages with uniformly rich and poor D-N agreement allow expletive determiners. From this point of view, Hebrew is an interesting language because its morphology is generally rich, yet D-N agreement does not seem to be rich at all. Let us therefore examine the predictions following from the Expletive Licensing Hypothesis for adult and child Hebrew.

Adult Hebrew has only one definite article, namely *ha*, used for masculine, feminine, singular and plural. Thus, it neither expresses gender, nor number. In other words, it does not express Φ -features whatsoever. According to Baauw’s definition of rich *vs.* poor D-N agreement, it follows that adult Hebrew has poor D-N agreement and hence should license expletive determiners. As Baauw points out, one way to find out whether a language allows expletive determiners is to see whether it has constructions of inalienable possession (CIP). Hebrew adult language is indeed such a language: it allows both indirect object and subject CIPs, as is illustrated in (8):

- (8) a) *ha-rofe badak la’hem/la-yeladim et ha-beten*
the-doctor examined their/the children’s
stomachs
‘The doctor examined them/the children the
stomach’
- b) *Ha-yeladim sovevu et ha-rosh*
the-children turned acc. the-head
‘The children turned their heads’
- c) *Ha-yeladim shatfu et ha-panim*
the-children washed acc. the-face
‘The children washed their faces’
- d) *Ha-yeladim gerdu et ha-af.*
the-children scratched acc. the-nose
‘The children scratched their noses’

Note that Hebrew allows subject CIPs even more freely than adult Spanish: (8c) and (8d) are out for many Spanish speakers. Thus, Hebrew appears to provide additional evidence in support of Baauw’s hypothesis.

However, as Baauw points out, this would mean that adult English should also license expletive determiners, whereas in fact it does not. Like Hebrew, English has only one definite determiner, namely *the*. Baauw solves this problem by including the English demonstratives in determining whether English D-N agreement is uniformly rich or poor. Examining the English demonstrative system, it turns out that English D-N agreement is not uniform: the feature opposition expressed by *this/these* and *that/those* ([singular/plural]), is not reflected by the definite article, which is invariant. As Baauw notes, “this correctly predicts that expletive determiners are not licensed in English”.

Nonetheless, this analysis poses a problem for our Hebrew data. If we take the Hebrew demonstratives into account as well, the picture in (9) emerges:

(9) *The Hebrew Determiner System*

	Masculine	Feminine
Singular	ha/haze	ha/hazot
Plural	ha/ha’ele	ha/ha’ele

The paradigm in (9) shows that there is at least one gender opposition, namely between *haze* and *hazot*. This suggests that, like English, adult Hebrew is not uniformly poor (and not uniformly rich either), and should therefore not allow expletive determiners. As it stands now, it is unclear how Baauw’s theory would account for the existence of CIPs in adult Hebrew. It could be that the Hebrew and English determiner systems are less alike than was suggested above. Unlike the Hebrew definite determiner *ha*, the English definite determiner *the* could be argued to express at least gender, namely, “common gender”. Since English has only one gender, this makes the English definite determiner look as though it is invariant; yet, this could be viewed as just an artifact of the system that does not distinguish between different genders. This argument is not valid for Hebrew: Hebrew nouns distinguish between feminine and masculine, so it cannot be

argued that *ha* always expresses feminine, or masculine for that matter. How exactly this difference between adult English and Hebrew would tie into the formulation of both Baauw's definition of strong D-N agreement and his Expletive Licensing Hypothesis is not entirely clear to me, but it might be relevant.

As for child Hebrew, it is well known that children acquiring Hebrew make very few agreement errors in general; however, if such errors are made they mostly concern gender errors. Thus, if they do not consistently distinguish between demonstrative determiners such as *haze* and *hazot* (implying that their determiner system is uniformly poor) it is predicted that they allow expletive determiners. To the best of my knowledge, there are no studies on Hebrew acquiring children's knowledge of CIPs. It would be very interesting to check this, as it could contribute to both our understanding of the Hebrew determiner system and to Baauw's analysis of strong/weak D-N agreement. If Hebrew speaking children allow subject CIPs, and if they do not distinguish between *haze* and *hazot*, this would suggest that their D-N agreement system is uniformly poor, similar to the Dutch child's D-N agreement system. If on the other hand they would allow subject CIPs and do distinguish between *haze* and *hazot*, they allow subject CIPs for the same reasons as Hebrew adults do; this dilemma requires further investigation.

Corroborating evidence for Baauw's main claim that the child's Φ -feature make-up of the D-position is incomplete comes from his experiments on binding in child Spanish. Despite the fact that child Romance does not show a DPBE (in the sense of Chien & Wexler, 1990) in simple sentences, Baauw does find such an effect in ECM constructions (see (vi) above). Since these types of constructions involve real binding (i.e. they do not allow pragmatic coreference), this suggests that either there is a true Principle B violation, or the pronominal element has been misanalyzed. Baauw dismisses the former possibility and proposes that the Spanish child underspecifies the feature content of the 3rd person singular pronominal element, in the case of (5) *la*. This Φ -feature underspecification turns the clitic into a so-called "SE-anaphor", a reflexive pronominal element void of the features [number] and [gender]. A question largely left open is exactly which Φ -features are underspecified, and what it means to be underspecified. In the case of pronouns Baauw notes that it is probably the feature [number], but apart from referring to Hyams & Hoekstra (1995) where the same claim is made, he does not back up this idea. If [number] is underspecified, does this mean that only part of the feature is there, or that it is *unspecified*? Even if the feature [number] is lacking completely, why would this imply that a singular clitic such as Spanish *la* is interpreted as a SE-anaphor ([[-gender], [-number]]) and not as {[+feminine] [default number]}? Cross-linguistically, it looks like all children initially use singular as their default number. Nonetheless this is in all fairness not specifically Baauw's problem, but rather a problem for everyone using the term "underspecifi-

cation". Although it is difficult to come up with precise definitions of un(der)specification, it is important we try.

Baauw's hypothesis that children growing up with "rich agreement" languages acquire agreement earlier than learners of language lacking such richness is a hunch that has been shared by many child language investigators, but it has not been shown so clearly as in Baauw's examination of data from child Dutch and Spanish. The general idea is that a language with rich agreement morphology shows more evidence (i.e. provides more triggers) for the acquisition of agreement, whether this is subject-verb agreement, or agreement within nominal expressions. In Schaeffer and Ben Shalom (2001) we argue that this is the reason why children acquiring Spanish, Italian, Hebrew (among other languages) produce hardly any non-finite matrix clauses (Root/Optional Infinitives), whereas, for example, children acquiring Dutch, German, French use them up to age 3;3/6. In our attempt to make the above claim precise we propose that initially, children acquire verbal or nominal syntactic features by discovering that these are mapped onto a pragmatic concept, i.e. the feature [person] is mapped onto the pragmatic concept [discourse participants]. It is thus predicted that languages that show overt morphological evidence of this type of mapping (such as the verbal ending *-o* in Spanish, expressing the discourse participant "speaker") provide clear triggers, and therefore facilitate and accelerate the acquisition of the relevant syntactic features.

This brings me to the problem of transition to the target grammar (see the opening paragraph of this review). Although Baauw presents us with a thorough and coherent analysis of the data from children acquiring Spanish and Dutch during a certain, relatively steady stage in development, he does not devote much attention to the question of how the children actually arrive at the target grammar. Again, this is not just Baauw's problem: any linguist working on child language development should entertain a possible solution to it. What exactly do the children in Baauw's study need to learn? They need to discover for which determiners/pronouns Φ -features can be left underspecified, and for which ones they must be specified. Do children do this through lexical learning, i.e. through the acquisition of new lexical items, including their properties, or through the mapping with pragmatic, or even semantic concepts? Or, alternatively, is the maturation of the brain purely responsible for this type of development? These are long-standing questions, none of which have been answered satisfactorily to date.

My final comments concern the status of weak pronominal elements such as *'t*, *'m*, *(d)'r* in Dutch. Baauw shows convincingly that the arguments in favor of calling these elements syntactic clitics are much less numerous than those that can be advanced for their Romance counterparts. Furthermore, he points to several studies that indicate an absence of the DPBE in (child) languages that have real syntactic clitics, such as

Spanish and Italian. Therefore, so Baauw argues, Dutch child language provides an excellent testing ground for determining the clitic status of reduced pronominal elements such as the ones mentioned above. If Dutch children show a DPBE in constructions with such elements, this provides evidence against the hypothesis that they are syntactic clitics. If a DPBE is not found this could mean that the weak pronominal elements are indeed syntactic clitics, just like in Italian or Spanish. Baauw tested this hypothesis with sentences such as the one in (8) in his summary and shows that Dutch children do show a DPBE in these types of constructions. Thus, he concludes that at least weak pronominal elements such as 'm do not have the status of syntactic clitic, neither in adult nor in child Dutch.

However, as Baauw admits, there is some evidence that weak pronominal elements do sometimes behave as syntactic clitics in adult Dutch, such as in double object constructions and ECM constructions. I believe that there is some evidence for their syntactic clitic status in child Dutch as well. In my study on the acquisition of scrambling and clitic placement (Schaeffer, 1997, 2000) I find that when children (even 2-year olds) face the choice between using a reduced weak pronominal element such as 'm, a full personal pronoun such as *hem*, and a demonstrative pronoun such as *die*, they sometimes opt for 'm, they sometimes use *hem*, and they sometimes use *die*. In itself this is no proof of the clitic status of 'm, as children could have two forms of a pronoun, without one of them being a clitic. What is interesting though, is that whenever these children use reduced pronominal elements such as 'm, they place them correctly in front of the negation, whereas the full pronoun *hem* and the (unstressed) demonstrative *die* are often (incorrectly) left in a position following the negation. Assuming that syntactic object clitics are base-generated in a position higher than the VP and negation (as is also assumed by Baauw) but that object pronouns are base generated in the sister-of-V position, this suggests that even 2-year old children have some knowledge of the fact that weak pronominal elements in Dutch can be syntactic clitics.

Concluding, Baauw's dissertation is a valuable contribution to our understanding of child language acquisition. A particular strong aspect of his study is its interaction between linguistic theory and child language. Linguistic theoretical principles guide his research questions and the design of his experiments, while his experimental results shed light on the syntactic composition of determiners and pronominal elements in both adult and child language.

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