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Introduction

Reference and referentiality in native and learner grammars

1. Background to the SI

The Special Issue (SI) ''Reference and referentiality in native and learner grammars'' was initially inspired by a workshop at the Netherlands Institute for Advanced Study for the Humanities and Social Sciences in April 2012. The main aim of the workshop and subsequently of this SI was to provide a research forum in which theoretical as well as empirical questions on reference and referentiality could be addressed from the point of view of theoretical linguistics, language development in typical and atypical child grammars as well as language processing. The notions of reference and referentiality have attracted a large number of studies in various fields of linguistic research such as philosophy, semantics, pragmatics and syntax (Frege, 1980; Lyons, 1977; Chierchia, 1997). The notion of referentiality is gradient in that it concerns the degree to which a particular noun phrase points to an individual member of a class or denotes general class membership. Notions such as familiarity and specificity are also relevant to referentiality. Specificity characterizes definite and indefinite noun phrases and anaphoric expressions more generally, and refers to the possibility of identifying the referent of the anaphoric expression (Fodor and Sag, 1982; Maratsos, 1976).

More recently, the interest in syntax–discourse interface phenomena which, by definition, combine formal syntactic/semantic with discourse properties have become central in developmental and psycholinguistic research (see Sorace, 2011 for an overview). This is partly due to the intriguing question in language development of whether it is the contribution of language as such or of extralinguistic properties (e.g. cognitive resources and discourse sensitivity) which are responsible for protracted development of this phenomenon or its vulnerability in atypical or learner grammars. Understanding and producing referential forms in appropriate contexts is thus an interface phenomenon *par excellence*: the speaker and the listener are required to have good language knowledge of candidate forms (e.g. different types of determiners and pronouns), sensitivity to discourse constraints (e.g. shared knowledge, new information, topicality) and sufficient cognitive resources (e.g. working memory, updating, inhibition). Although the extralinguistic resources could be argued to develop along similar paths in typical populations, crosslinguistic differences in the repertoire of referential forms and the arbitrariness of form-function mappings within and across languages add considerably to the complexity of the phenomenon. At the same time, disentangling the effects of linguistic complexity from cognitive abilities becomes an increasingly difficult task since 'knowing' a referential form, e.g. a pronoun, implies having the relevant morphosyntactic knowledge within a paradigm of pronominal forms available in the language but also having the ability to choose this pronoun over other referential forms in online sentence production. In addition, 'knowing' a referential form implies being able to interpret it appropriately in discourse especially when competing antecedents are available. In this case, other linguistic considerations such as structural prominence of the antecedent, word-order, features of animacy and gender need to be considered as well.

The topic of reference and referentiality in native and learner grammars is vast and diverse. The present SI addresses these notions from a theoretical linguistic, a developmental and a psycholinguistic perspective. In particular, the contributions in the SI address (a) the development and use of various referential forms including pronouns or determiner phrases in monolingual typically-developing children from preschool age to early adolescence, children with SLI and monolingual adults (Aksu-Koç and Nicolopoulou; Blom, Vasić and Baker; Chondrogianni and Marinis; Hughes and Allen; Papadopoulou, Peristeri, Plemenou, Marinis and Tsimpli), (b) the interpretation of discourse-marked syntactic structures differing in the presence vs. absence of an already established topic in the discourse, in the native/heritage language of monolingual and bilingual adults (Mendez, Rothman, and Slabakova), and (c) the interpretation of pronouns and

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reflexives in view of the Delay of Principle B effects (Rooryck and Vanden Wyngaerd; Van Koert, Koeneman, Weerman and Hulk).

The methodologies used target either comprehension or production and within each of these modalities various methodologies are adopted. In particular, the production studies of Chondrogianni and Marinis as well as Blom, Vasić and Baker elicit definite and indefinite articles in different semantic contexts. Elicitation is prompted through a lead-in sentence which differs according to the semantic context induced. As such the experimental conditions are maximally constrained. A 'what' question or a 'Guess which' request is used to elicit the child's response with a determiner phrase targeting definite or indefinite articles. In contrast, Hughes and Allen's methodology involves the analysis of spontaneous production data from very young children whereas Aksu-Koç and Nicolopoulou's study presents narrative production data elicited through picture-based story sequences from preschoolers.

The comprehension studies also differ in the methodology adopted. Mendez, Rothman and Slabakova's study targeted the evaluation of felicity in the use of Clitic-Left Dislocation and Fronted Focus in Spanish. Their methodology involves the presentation of a brief background scenario setting the context for a question and answer sequence. The answer includes one of the discourse-marked conditions which the participant had to judge as being felicitous or not. Papapopoulou, Peristeri, Plemenou, Marinis and Tsimpli's study uses an online self-paced listening task targeting pronominal resolution of overt and null subject pronouns in Greek. Two competing antecedents are included in the first part of the sentence before the subject pronoun is encountered. One picture depicting the event described by the sentence is presented and participants have to respond as to whether the sentence matches the picture on the screen or not. Preferences for matched or mismatched sentences with pictures as well as listening times on the critical segments of the sentence and at the final judgment are evaluated. Van Koert, Koeneman, Weerman and Hulk's study is also a match/mismatch study of sentence comprehension with reflexives and pronouns occurring in sentences with nouns or quantifiers in the local subject position. The methodology used is identical with Marinis and Chondrogianni (2011) as the aim was to compare Dutch and English age-matched children.

In what follows, we briefly present the production and comprehension studies outlining their main conclusions. We also briefly attempt to address some discrepancies in the findings.

1.1. Production studies

Chondrogianni and Marinis examine the various contexts of use of the definite and the indefinite article in English-speaking children with SLI and their typical controls. The contexts for the definite article include anaphoric and bridging uses, the former being roughly equivalent to the notion of 'second-mention' of a referent, i.e. a referent that has already been introduced in the discourse. The bridging context on the other hand relies on world knowledge and does not presuppose first mention of the referent. Thus, in the context where 'a jar' is mentioned, reference to the lid of the jar with a definite article is felicitous: *There's a jar. The lid is hard to open*. The indefinite article contexts include non-referential predicational, referential specific and non-referential instrumental uses, exemplified in (1):

(1a)	A referee has a whistle.	Non-referential predicational
(1b)	What can you eat jelly and soup with? A spoon.	Non-referential instrumental
(1c)	I saw a dog and a cat in that house.	Referential specific
(1d)	I need a book to read on the plane.	Non-referential

Chondrogianni and Marinis' findings reveal two interesting facts. First, the type of semantic context is important for evaluating article use in utterances. Both groups of children perform better on the bridging than the anaphoric use of definite articles while for indefinite article uses, both groups perform better on the non-referential predicational than the referential specific and the non-referential instrumental uses. Children have more problems with the use of the definite than the indefinite article. Chondrogianni and Marinis argue that the problem is in the integration of discourse properties regulating the choice of the definite *versus* the indefinite article which, in the case of children with SLI, is aggravated by their grammatical impairment. The authors propose that definite articles are not a clinical marker of SLI in English because typically-developing children show similar types of problems. Thus, they attribute their findings to problems that children have with the integration of discourse features, following de Cat (2011). It would be interesting to know, however, what causes the problem of integration: Why should children at this age find it problematic to use a definite article in second mention contexts? The authors reject working memory and Theory of Mind (ToM) accounts as being inappropriate for the children's age range.

Blom, Vasiç and Baker use a similar experimental task as that in Chondrogianni and Marinis' study. Blom, Vasiç and Baker examine specific *versus* non-specific contexts of use of the definite and the indefinite articles in Dutch children with SLI. What they refer to as the specific, discourse-new context is what Chondrogianni and Marinis call bridging reference.

Moreover, the non-specific condition in Blom et al. is the condition that Chondrogianni and Marinis refer to as the non-referential instrumental condition. The results from the Dutch children with SLI show lower performance than that of age-matched typically-developing but similar with the language-matched children with respect to omission errors. However, children with SLI differed from both age-matched and language-matched groups in producing more substitution errors than the two unimpaired groups. In addition, more variability and optionality are found in the SLI group's performance compared to the control groups.

Unlike the English children with SLI examined in Chondrogianni and Marinis' study where the definite article is more problematic than the indefinite, Dutch children with SLI are challenged by both the definite and the indefinite article. challenging. Blom et al. suggest various reasons for the attested performance of children with SLI including the possibility of impaired lexical representations which would lead to problems with mapping each determiner form onto a (pragmatic) function and/or processing limitations leading to failed integration of the properties which regulate article use in particular contexts. According to Blom et al., limited processing resources could also be considered in relation to ToM and the ways in which ToM is used to constrain the distribution of definite and indefinite articles. In other words, a processing limitations account could include problems with accessing and using lexical representations but also other types of knowledge such as ToM for regulating article use. The authors also speculate about the role of individual differences in age and severity of the impairment which may differentially contribute to performance on article use.

Interestingly, **Hughes and Allen** dispute the idea that children have limited knowledge of syntax-discourse mappings for appropriate encoding of reference. Their study shows that young children (even at age 2;6) have the ability to integrate various types of discourse information and produce appropriate forms regulated by various features. Hughes and Allen's study analyzes different contexts of use of referential expressions in child-adult spontaneous interactions. Their results indicate that sensitivity to discourse-pragmatic contexts is evident in 2–3 year old English-speaking children's data, although they also identify two stages of development: the earlier one (2–2;7) where children omit subjects instead of producing pronouns and a second one (around age 3) where children's use of pronouns increases. Their analysis involves the notion of a hierarchy of conceptual accessibility which characterizes the use of referential forms according to three notions: prior mention, physical presence and joint attention. Referential choice, as Hughes and Allen suggest, requires sophisticated linguistic knowledge, discourse knowledge (accessibility of the referent) and social knowledge (listener's attention). In their study they code accessibility in terms of six binary features: animacy, linguistic disambiguation, prior mention, joint attention, physical presence and contextual disambiguation in order to establish whether children are sensitive to these discourse-related features (discourse knowledge). In terms of linguistic knowledge Hughes and Allen analyze the frequency of forms the children use in subject position and only for third person referents. The four different forms used are null pronouns, lexical NPs, pronouns and demonstratives. The choice of linguistic form, coded for accessibility too – a reduced form indicates high accessibility whereas a lexical NP low accessibility of the referent – was evaluated against the degree of accessibility coded for discourse contexts in terms of the six discourse-features mentioned above. Results from caregivers' speech suggest that inaccessible referents are expressed through full lexical NPs over 95% of the time whereas accessible referents are expressed through the use of pronouns 67% of the time. Referents between these two extreme points (i.e. either totally inaccessible or accessible respectively) are referred to by adults with demonstratives or pronouns. Children's use of referential forms follows the same hierarchy of discourse features: reduced forms are used for accessible referents whereas more informative forms are used if accessibility decreases. One developmental difference observed between younger and (slightly) older children is the use of null subjects in highly accessible contexts which are replaced by older children with overt pronouns. The authors attribute this development to immature grammar or processing difficulties. Finally, of all variables examined, joint attention, prior mention and physical presence seem to be the ones that predict the use of null subjects vs. lexical NPs. Crucially, Hughes and Allen suggest that joint attention seems to be guiding young children's use of referential forms, arguing that the rudiments of ToM are already in place. Accordingly, children's use of referential forms is guided by a 'well-grounded though still developing pragmatic system' which is able to take into account logical, psychological and social knowledge. They argue that their results constitute strong counterevidence against various accounts of deviance in the children's use of referential forms which attribute the deviance to deficits in the pragmatic system (de Cat, 2011; Schaeffer, 2000 a.o.).

How can we reconcile these diverse results? One possibility is that in spontaneous interactions pragmatics is a helpful hand for children's and adults' use of referential expressions. A real context in which interaction takes place is perhaps the best testing ground for referential forms in very young children as this establishes the urge to produce something that coheres with the discourse and achieve one's goals. Early sensitivity to referential forms used appropriately in discourse is also observed in the findings from narratives where children are shown to perform better than in the experimental contexts presented in Blom et al. and Chondrogianni and Marinis' studies. In experimental conditions, as in the ones used in these studies there is no child-initiated context-building. The advantages of the experimental method is that researchers can target the particular semantic contexts they are interested in to test the use of referential expressions. It may be that the methodological differences however indicate additional, extralinguistic constraints which are independently known to affect felicitous use of anaphoric expressions such as cognitive resources and integration of the cues offered by the

linguistic context. Additional questions about the role of language-specific properties and crosslinguistic variation arise from the diverse findings in Chondrogianni and Marinis' study of English as compared to Blom et al.'s results from Dutch.

Aksu-Koç and Nicolopoulou's contribution addresses the developmental and crosslinguistic question of how young Greek, Turkish and English children track characters in picture-based narrative discourse. The two stories used differ in the number of main characters involved. One story has a single main character and the other two main characters. The importance of controlling for number of characters is revealed in the use of referential forms by children according to story type. The data is drawn from three age groups of 3-, 4- and 5-year old children who had to narrate the same stories using identical methodology of narrative elicitation. The focus of the article is on the crosslinguistic properties which distinguish Turkish from English and Greek in terms of the type of linguistic marking used for encoding the three main functions of introducing a character, maintaining reference to that character and reintroducing a character if other characters or events disrupt reference to him/her. A central difference between Turkish *versus* Greek or English is the use of global cues for marking reference: while Turkish uses global cues such as word-order, case-marking or dislocations, English and Greek use definite and indefinite articles and quantifiers within the determiner phrase. Evidence that the difference between global and local marking for character reference has implications for first language development is already available from crosslinguistic research that Hickmann and colleagues have conducted (e.g. Hickmann and Hendricks, 1999). For example, Chinese speaking children appear to show some delay in mastering the global cues used by the language to express referential properties of characters compared to children speaking languages which use local cues. This is largely supported by the results of Aksu-Koç and Nicolopoulou's study showing earlier acquisition patterns of Greek and English children's referential markings than the pattern observed in Turkish children. However, further differences are found between the two languages using local cues, namely Greek and English. In particular, Greek children's introduction of characters involves the use of indefinite articles even at age 3 becoming the dominant form by age 5 while English children use the indefinite less frequently but without showing a clear developmental pattern in this respect. The authors suggest that a possible reason for this discrepancy between Greek and English is that while Greek links the article with the noun in morphologically rich and transparent ways (number, case and gender agreement) in English there is almost no morphological exponent of whatever underlying agreement processes might be involved. As a result the cues offered to the Greek child learner are consistent and abundant in contrast to the English learner. Interestingly, the dominant form used for character introduction in the three languages is different and only in the case of Greek does the dominant form for the 5-year-old children coincide with the adult form, namely the indefinite nominal. For Turkish speaking children the dominant form is the definite nominal. Indefinites are hardly used at all by children while for adults it is the predominant (but not exclusive) choice. Finally, the English children do not show dominant use of indefinites for character introduction while adults prefer indefinites for this function. Maintaining a character involves the use of pronouns and definite nominals for all three languages in the child data with differences between Turkish on one hand and Greek and English on the other in the preference for definite nominals over pronouns. Specifically, pronouns are predominant in Greek and English children's character maintenance while Turkish children use definite nominals for this function, too. Reintroducing a character in all three languages shows an effect of story type, i.e. whether there are one or two main characters in the story. All children use more definite nominals than pronouns in the two main characters story than in the single main character story thus showing sensitivity to ambiguities which may arise as a result of the competition. In this respect, reintroduction and maintenance are more adult-like than introduction of a character, a finding consistent with previous research in the field.

1.2. Comprehension studies

Mendez, Rothman and Slabakova address the question of whether bilingual grammars show reduced sensitivity to interface properties, as has been argued by the Interface Hypothesis (Sorace, 2011). In particular, they test Spanish learners of English who moved to the US as adults and might exhibit attrition effects in their L1 Spanish, and two groups of bilingual Spanish–English speakers who are heritage speakers of Spanish and differ in their degree of proficiency in Spanish. The authors examine the participants' judgments of felicity for Clitic-left dislocation and fronted focus structures in Spanish. Both of these structures are 'marked' in terms of their sensitivity to discourse constraints. In particular, while CLLD presupposes the presence of an antecedent in the discourse, a fronted focused element does not. The relation between the antecedent and the dislocated element however does not need to be that of identity alone. It could be a subset relationship (as in 2b) or a part/whole relationship (which is very similar to the bridging context for definites presented in Chondrogianni and Marinis as well as in Blom, Vasić and Baker's studies. (English) Examples of the contexts are found in (2):

(2a) What did you do with *the tables*? Identity
Las mesas las traje en la mañana. . .
the tables Cl.acc bring.PAST.1sg in the morning
''The tables I brought in the morning''

(2b) What did you do with *the furniture*? Subset
Las mesas las traje en la mañana. . .
the tables Cl.acc bring.PAST.1sg in the morning
''The tables I brought in the morning''

(2c) What shall we do with the table? It is too big! Part/whole
Mira, las patas, las doblas así. . .
Look the legs Cl.acc fold.PRES.2sg this way.
''Look, you can fold the legs like this. . .''

Fronted focus is exemplified in (3):

(3) I am glad that Arturo cleaned the bathroom.
LA COCINA limpió Arturo. El resto de la casa sigue sucia.
the kitchen he-cleaned A the rest of the house continues dirty
''It was the kitchen that Arturo cleaned. The rest of the house is still dirty.''

Mendez, Rothman and Slabakova assume López (2009) according to which the difference between the two structures is based on a single feature, namely [+/− discourse anaphor]. Although there is an additional, syntactic, difference concerning the presence or ban of a clitic in CLLD and fronted focus, respectively, the study included only grammatical sentences. The intonation differences associated with CLLD and fronted focus structures are also taken care of: all stimuli are presented in written and (recorded) oral form in order to preserve the appropriate intonation contour. Thus, participants only have to judge the felicity of the sentence in the context provided. The findings of the study are robust in showing that monolingual native speakers of Spanish and *all* bilingual groups (late bilinguals as well as heritage speakers of Spanish) are similar in judging the felicity of the two structures in all the different pragmatic contexts they were presented with. Accordingly, the authors suggest that the claims about the vulnerability of the syntax-discourse interface are too strong and need to be refined. One possibility would be that anaphora and pronominal use in bilinguals, which have been repeatedly shown to evoke different responses from monolinguals, have a different status from CLLD and fronted focus: the latter induce syntactic effects in word-order and clitic use while the former do not (Tsimpli and Sorace, 2006).

Papadopoulou, Peristeri, Plemenou, Marinis and Tsimpli's study is a processing study with a sentence-picture matching component too. The aim is to examine how speakers of a null subject language, Greek, develop their preferences for resolving pronouns in a sentence context where two potential antecedents are available. Three groups of children (6-, 7- and 10–11 year olds) and a group of adults participated in the study. A single sentence is presented each time which includes two clauses, a main and a subordinate clause (Tsimpli et al., 2004):

(4a) O papus miluse dinata ston egono tu otan diavaze ena vivlio.
The old-man / spoke / loudly / to his grandchild / when / read/ a book.

(4b) O papus miluse dinata ston egono tu otan aftos diavaze ena vivlio.
The old-man / spoke / loudly / to his grandchild / when / he/read/ a book.
''The grandfather was speaking loudly to his grandson when ø/he was reading a book.''

Comprehension is assessed through an offline sentence-picture matching task while the presentation of each sentence is online (self-paced listening) thus allowing authors to assess the effects of 'unexpected' use of overt or null pronouns in view of the event depicted on the screen while the sentence was unfolding. The adult results reveal a preference for the overt subject pronoun being coreferential with an antecedent in the object position whereas a subject antecedent is preferred when the subject pronoun is null. Nevertheless, the preference for interpreting a null subject pronoun as coreferential with the subject of the preceding clause is not as strong as the preference for overt pronouns, indicating that null subjects are unmarked in terms of morphosyntax but also in terms of their interpretation. All child groups distinguish between null and overt pronouns but not with the same pattern as the adult data. Instead, they show a developmental process which is still not at the final state even at the age of 10–11. In essence, within each child group one of the two pronouns (the null or the overt) shows a strong preference for a subject or object antecedent. As a result, within each developmental stage there is a binary distinction between pronominal form and choice of antecedent thus showing that children are not at chance on pronominal resolution at any stage. More specifically, overt pronouns trigger object antecedent preference in the older group of children (10-11yrs) only while null subject pronouns show a subject preference in the younger group but not in the 10–11 year olds.

How can this data be reconciled with production data reported in previous studies as well as in Hughes and Allen (this volume), and Aksu-Koç and Nicolopoulou (this volume)? Various possibilities spring to mind. It is likely that this is just a modality difference, i.e. the contrast found in comprehension *versus* production studies of other phenomena too, such as relative clauses (Friedmann and Novogrodsky, 2004). It is also possible that processing demands increase when evaluating a depicted event in contexts of ambiguity or competition; even more so in the test sentences in Papadopoulou et al., given that the ambiguity is never resolved intrasententially and the participant is asked to balance out a number of different cues in order to arrive at an interpretation. Disentangling the development of processing capacity from language growth in interpreting but also in producing referential expressions remain open for future research.

1.3. Pronouns, reflexives and delay of principle b effect

Rooryck and Vanden Wyngaerd's as well as **van Koert, Koeneman, Weerman and Hulk's** contributions concern the well-known Delay of Principle B effect attested in some languages in child data up to the age of 8 (Chien and Wexler, 1990 for English; Koster, 1993 for Dutch; Sigurjónsdóttir and Hyams, 1992 for Icelandic; Avrutin and Wexler, 1992 for Russian). Briefly, the claim is that following an early stage (up to age 4) during which the interpretation of reflexives and pronouns is at chance, reflexives become adult-like around that age while pronouns are not for another four years (age 8). During that period, children allow object pronouns to be interpreted as reflexives, i.e. they are read as coreferential with a subject NP in the same clause. However, the DPBE is not found in all languages. Children speaking Italian (McKee, 1992), French (Jakubowicz, 1984), Spanish (Padilla, 1990) and Catalan (Escobar and Gavarró, 2001) do not show DPBE. **Rooryck and Vanden Wyngaerd's** contribution addresses the crosslinguistic differences found refuting accounts arguing for the clitic *versus* pronoun distinction that seems to be relevant to the two sets of languages mentioned above. Rooryck and Vanden Wyngaerd argue that the absence of DPBE is also found in languages without clitics, such as German (Ruigendijk, 2007). Their analysis of the crosslinguistic differences is based on a detailed morphological and by extension syntactic account of morphological differences among reflexives. Their idea is that languages with reflexives in which person and number features are fused in their morphological exponents will exhibit DPBE while those with unfused morphology will not. The authors examine the paradigm of pronouns and reflexives in various languages in each set (i.e. with or without DPBE) demonstrating the fused *versus* bimorphemic status of the reflexives, respectively. These findings are placed within a learnability framework of morphology-syntax mappings which are evaluated against a transparency principle. The idea is that the more transparent the link between (abstract) syntactic features and their morphological exponents the more learnable the distribution and interpretation of the reflexive will be within the pronominal paradigm. Rooryck and Vanden Wyngaerd argue that the person feature on the reflexive plays a central role in the degree of transparency and the subsequent learnability of reflexives as part of the pronominal system of a language. They further argue that in languages where a dedicated reflexive form is missing pronouns can behave like reflexives. They refer to this as the Absence of Principle B Effects. In order for a reflexive to be properly identified as such it should be viewed in competition with pronominal forms, i.e. as part of the pronominal system. The authors argue that in English, for example, the child needs to recognize the reflexive 'himself' as a competitor of 'him' in order to restrict the contexts in which it is used in an adult manner.

Crosslinguistically, then, morphological transparency of features on forms would allow the child to identify reflexives in the pronominal paradigm and resolve the competition in the appropriate contexts.

Van Koert, Koeneman, Weerman and Hulk's article is also concerned with the DPBE in Dutch and English. Methodologically, it is a comprehension and sentence-picture matching study investigating Dutch (6–9 year-old) children's interpretation of pronouns and reflexives in object position of a subordinate clause with a noun phrase or a quantifier phrase in subject position. A picture depicting the licit or illicit interpretation of the event is presented. The matrix subject introduces an additional referent also depicted in the picture. Nevertheless, the choice of antecedent for the pronoun or the reflexive is expected to be syntactically resolved according to principles of binding theory (Chomsky, 1981). Thus, a reflexive is expected to be bound clause-internally while a pronoun should be free in the same domain. The difference between quantifier and noun phrases is based on the assumption that although young (English) children have been shown to exhibit a delay in the development of Principle B allowing for a reflexive-type interpretation of a pronoun, quantifiers in subject position seem to induce an adult-like interpretation of the object pronoun in simple SVO sentences (e.g. 'the boy scratched him' *versus* 'every boy scratched him').

Examples of the types of sentences tested in van Koert et al.'s study are presented in (5):

(5a) Het paard zegt dat het konijn zichzelf krabt [picture: rabbit scratching horse]
'The horse says the rabbit is scratching himself'
(Reflexive Mismatch Referential NP condition)

(5b) Het paard zegt dat elk konijn zichzelf krabt [picture: 3 rabbits scratching horse]
'The horse says every rabbit is scratching himself'
(Reflexive Mismatch Quantificational NP condition)

(5c) De kangoeroe zegt dat het schaap hem krabt [picture: sheep scratching self]
'The kangaroo says the sheep is scratching him'
(Pronoun Mismatch Referential NP condition)

(5d) De kangoeroe zegt dat elk schaap hem krabt [picture: 3 sheep scratching self]
'The kangaroo says every sheep is scratching him'
(Pronoun Mismatch Quantificational NP condition)

The Dutch child data is compared with age-matched English child data from Marinis and Chondrogianni (2011) in order to examine whether problems with Principle B or the contrast between quantifiers and noun phrases obtains across languages or not. The results show that Dutch data conform with English in showing a Delay in Principle B in that Dutch children too occasionally interpret a pronoun as a reflexive when the antecedent is a noun phrase. In the quantifier sentences however, English and Dutch data differ. In particular, Dutch children perform equally non-adult-like with quantifier and noun phrase antecedents for pronouns while English children show an asymmetry in favor of the quantifier condition. Van Koert et al. suggest that Spenader et al.'s (2009) account of the distribution of pronouns and reflexives is more promising than binding theoretic constraints. This account argues for a combination of syntactic and pragmatic blocking constraints for the interpretation of coreference or disjoint reference with pronouns. Thus, their analysis of the English and Dutch child data is based on problems that children may have with applying the relevant pragmatic constraints on the interpretation of pronouns, which, in turn, may stem from the immature perspective-taking that children of this age may have. With respect to the differences attested between Dutch and English quantifier-sentence data the authors argue for a preference for the distributive reading for the Dutch quantifier 'elk(e)' in contrast to English 'every' which favors a collective reading.

2. Final points

The reader of this SI will hopefully appreciate the complexity and the diversity of data and approaches arising from methodological, theoretical and developmental aspects of the various contributions. The comprehension/production comparisons, the different methods and the crosslinguistic facts presented can contribute to the evaluation of formal linguistic and learnability accounts of native and learner grammars. Admittedly, many questions remain open and call for further research in other (typical and atypical) populations and languages. Research in the topic of reference and referentiality will be hard to saturate.

References

Avrutin, S., Wexler, K., 1992. Development of principle B in Russian: coindexation at LF and coreference. Lang. Acquis. 2, 259–306.
Chien, Y.-C., Wexler, K., 1990. Children's knowledge of locality conditions in binding as evidence for the modularity of syntax and pragmatics. Lang. Acquis. J. Dev. Linguist. 1 (3), 225–295.
Chierchia, G., 1997. Reference to kinds across languages. Nat. Lang. Semant. 6, 339–405.
Chomsky, N., 1981. Lectures on Government and Binding. Foris, Dordrecht.
de Cat, C., 2011. Information tracking and encoding in early L1: linguistic competence vs. cognitive limitations. J. Child Lang. 38, 828–860.
Escobar, L., Gavarró, A., 2001. The acquisition of clitics and strong pronouns in Catalan. In: Gerlach, B., Grijzenhout, J. (Eds.), Clitics in Phonology, Morphology and Syntax, John Benjamins, Amsterdam, pp. 161–180.
Fodor, J., Sag, I., 1982. Referential and quantificational indefinites. Linguist. Philos. 5, 355–398.
Frege, G., 1980. In: Geach, P., Black, M. (Eds.), Translations from the Philosophical Writings of Gottlob Frege. Blackwell.
Friedmann, N., Novogrodsky, R., 2004. The acquisition of relative clause comprehension in Hebrew: a study of SLI and normal development. J. Child Lang. 31, 661–681.
Hickmann, M., Hendricks, P., 1999. Cohesion and anaphora in children's narratives: a comparison of English, French, German, and Mandarin Chinese. J. Child Lang. 26, 419–452.
Jakubowicz, C., 1984. On markedness and binding principles. In: Jones, C., Sells, P. (Eds.), Proceedings of NELS 14. GLSA, University of Massachusetts, Amherst, pp. 154–182.
Koster, C., 1993. Errors in Anaphora Acquisition (Ph.D. dissertation), Utrecht.
López, L., 2009. A Derivational Syntax for Information Structure. Oxford University Press, Oxford.
Lyons, J., 1977. Semantics. Cambridge University Press.
Maratsos, M.P., 1976. The Use of Definite and Indefinite Reference in Young Children. Cambridge University Press.
Marinis, T., Chondrogianni, V., 2011. Comprehension of reflexives and pronouns in sequential bilingual children: do they pattern similarly to L1 children, L2 adults, or children with specific language impairment? J. Neurolinguist. 24 (2), 202–212.
McKee, C., 1992. A comparison of pronouns and anaphors in Italian and English acquisition. Lang. Acquis. 2, 21–54.

Padilla, J., 1990. On the Definition of Binding Domains in Spanish. Kluwer, Dordrecht.
Ruigendijk, E., 2007. Reference assignment in German preschool children. In: Gavarró Algueró, A., João Freitas, M. (Eds.), Proceedings of GALA 2007. Cambridge Scholars Publishing, Cambridge, pp. 368–379.
Schaeffer, J., 2000. The Acquisition of Direct Object Scrambling and Clitic Placement: Syntax and Pragmatics. Language Acquisition and Language Disorders, vol. 22. Benjamins Publishers.
Sigurjónsdóttir, S., Hyams, N., 1992. Reflexivization and logophoricity: evidence from the acquisition of Icelandic. Lang. Acquis. 2, 359–413.
Sorace, A., 2011. Pinning down the concept of interface in bilingualism. Linguist. Approach. Biling. 1 (1), 1–33.
Spenader, J., Smits, E.-J., Hendriks, P., 2009. Coherent discourse solves the pronoun interpretation problem. J. Child Lang. 36, 23–52.
Tsimpli, I., Sorace, A., 2006. Differentiating interfaces: L2 performance in syntax–semantics and syntax–discourse phenomena. Proc. Annu. Boston Univ. Conf. Lang. Dev. 30 (2), 653–664.
Tsimpli, I.-M., Sorace, A., Heicock, C., Filiaci, F., 2004. First language attrition and syntactic subjects: a study of Greek and Italian near-native speakers of English. Int. J. Biling. 8, 257–277.

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