



HAL
open science

Chapter 7. The influence of dialogue in young children's uses of referring expressions

Haydée Marcos, Anne Salazar Orvig, Christine da Silva-Genest, Julien
Heurdier

► To cite this version:

Haydée Marcos, Anne Salazar Orvig, Christine da Silva-Genest, Julien Heurdier. Chapter 7. The influence of dialogue in young children's uses of referring expressions. Anne Salazar Orvig; Geneviève de Weck; Rouba Hassan; Annie Rialland. *The Acquisition of Referring Expressions: a dialogical approach*, 28, John Benjamins Publishing Company, pp.204-232, 2021, Trends in Language Acquisition Research, 9789027208354. 10.1075/tilar.28.07mar . hal-03440799

HAL Id: hal-03440799

<https://hal.univ-lorraine.fr/hal-03440799>

Submitted on 17 Jan 2023

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Marcos, H., Salazar Orvig, A., da Silva-Genest, C., & Heurdier, J. (2021). The influence of dialogue in young children's uses of referring expressions. In A. Salazar Orvig, G. de Weck, R. Hassan, & A. Rialland (Eds.), *The acquisition of referring expressions: a dialogical approach*. (pp. 203 - 232). John Benjamins Publishing Company.
doi:10.1075/tilar.28.07mar

© 2021 John Benjamins Publishing Company

CHAPTER 7

The influence of dialogue in young children's uses of referring expressions

Haydée Marcos¹, Anne Salazar Orvig¹, Christine da Silva-Genest² and Julien Heurdier¹

¹ CLESTHIA, Université Sorbonne Nouvelle – Paris3

² Laboratoires DevAH & ATILF, Université de Lorraine

Twenty-four dialogues between French-speaking children aged 1;10 to 2;6 and their more competent interlocutors were analyzed from the point of view of 1) the uses of referring expressions by both children and their interlocutors, according to the attentional and discursive status of the referent, 2) the immediate effect of the interlocutor's discourse on the choice of a referring expression; and 3) the dialogical relations of referring expressions. The main results confirmed the similarity of adults' and children's uses of third-person pronouns and showed that maintaining continuity in dialogue overrode the influence of forms in the interlocutor's discourse. Finally, a qualitative analysis highlighted the role of formats and more generally, patterns of dialogue in the language developmental process.

Keywords: Dialogical relations, discursive status, attentional status, third-person clitic pronouns, nouns, demonstrative pronouns, formats, question, repetition, interlocutor's discourse

1. Introduction

This chapter is about the role of dialogue in young children's acquisition of pragmatic skills for using referring expressions, with a special focus on third-person pronouns¹. After comparing the children's uses of referring expressions according to the referent's attentional and discursive status to their interlocutor's uses, the role of dialogue is considered from three perspectives: (a) Does the interlocutor's discourse have an immediate impact on the children's choice of referring expressions? (b) Do these referring expressions appear preferentially in certain dialogical relations? (c) Can we identify specific dialogical patterns that account for the acquisition of early pragmatic skills.

According to cognitive approaches to reference, the choice of a referring expression strongly depends on the accessibility of the referent (Ariel, 1990) or, in another theoretical perspective, of its givenness (Gundel, Hedberg, and Zacharski, 1993). Accessibility is related to the referent's cognitive status in the addressee's assumed mental model of the situation. The referring expression the speaker uses orients the addressee's interpretation and referent retrieval. Studies in experimental settings have shown that young children have trouble adopting the addressee's viewpoint (Campbell, Brooks, and

¹ This chapter deals only with reference to entities. For a discussion on the influence of child-directed speech on the way children refer to participants, see Caët, 2012.

Tomasello, 2000; Matthews, Lieven, Theakston, and Tomasello, 2006; Wittek and Tomasello, 2005). Yet children as young as age 2 are able to adjust their choice of referring expressions to the referents' status in the conversation. According to studies of various typologically different languages (Allen, 2000; Gundel & Johnson, 2013; Hughes & Allen, 2013; Salazar Orvig et al., 2010a; Skarabela, 2007; da Silva-Genest, Salazar Orvig, Marcos, Caët, and Heurdier, Chapter 3, this volume, and Rezzonico, Vinel, de Weck, Hassan, and Salagnac, Chapter 4, this volume), this ability pertains to the contrast between overt and covert forms, and weak and strong forms (e.g. clitic pronouns and verbal inflections vs. strong personal and demonstrative pronouns). Moreover, children's uses of referring expressions appear to be similar to their caregivers' and to reflect the conventions of their particular language (Guerriero, Oshima-Takane, and Kuriyama, 2006; Huang, 2011; Hughes & Allen, 2013; Paradis & Navarro, 2003).

In spite of this convergence of results, there are divergences as to the explanations given of the developmental process through which children grasp the values and uses of referring expressions. Formal and nativist approaches refer almost exclusively to cognitive development to account for this acquisition (see De Cat, 2015). In contrast, constructivist and interactionist approaches are challenged by this early competence. In this chapter we aim to show that children's participation in dialogue contributes

to their acquisition of the ability to use referring expressions in terms of the accessibility or givenness of the referent.

According to some authors, the use of referring expressions partly depends on the interlocutors' immediately preceding utterances, via the questions they ask or via priming or repetition (see section 3). We will begin by examining our data from this perspective (see § 3.1). However, we contend that even though the models and structures provided by the adults' utterances are undoubtedly at the core of acquisition, their "effectiveness" is explained by the fact they form part of "language games" (Wittgenstein, 1953), whereby the child has the opportunity to grasp not only the forms but also, and essentially, their contexts of use in dialogue. Our hypothesis is based on the premise that adult-child dialogues are partly organized into "formats" (Bruner, 1975, 1983a) characterized by recurrent patterns in which the reciprocation of participant's roles takes place. Furthermore, in these contexts, adults scaffold children's contributions by adjusting their speech to the children's cognitive and linguistic level. In section 3.2, this dialogical perspective is compared to the hypothesis of a direct impact of the interlocutor's utterance, via repetitions or answers. We propose a developmental model where children first depend on adult scaffolding and then gradually become increasingly independent from this support in their use of referring expressions.

Before analyzing the relations between the adult's discourse and child's choice of a referring expression, we begin by showing that, as noted for other languages, young French-speaking children and their adult interlocutors use referring expressions in similar ways. As discussed in da Silva-Genest et al. (Chapter 3, this volume), the crucial issue in French is the acquisition of clitic pronouns, in contrast to nouns and strong demonstrative pronouns like *ça* ('that', 'this'), which appear earlier. From a developmental point of view, the first uses of clitic pronouns are in continuity with the uses of omissions and fillers (Veneziano & E. Clark, 2016; Veneziano & Sinclair, 2000). From a cross-linguistic perspective, the use of clitic pronouns is similar to the use of other weak expressions in other languages, including verbal inflection in Spanish or Inuktitut, omission in Japanese, or full pronouns in English (Allen, 2000; Guerriero et al., 2006; Hughes & Allen, 2013; Paradis & Navarro, 2003)². From the onset, French-speaking children use third-person clitic pronouns, almost exclusively, to encode a previously mentioned referent, in contrast to nouns and demonstrative pronouns, which can appear in various contexts. In order to analyze this early specialization, we will first compare child and adult uses of third-person clitic pronouns to their uses of nouns and demonstrative pronouns.

² There is considerable debate among Romanists about the status of subject clitic pronouns (Culbertson & Legendre, 2008; for a discussion see De Cat, 2005). Whether subject clitic pronouns are seen as full pronouns or as morphological inflections is not relevant to our purpose here.

2. Distribution and uses of referring expressions

The corpus³ consisted of dialogues between 24 children aged 1;10 to 2;6 (MLU between 1.3 and 3) and their more skillful interlocutors, usually the mothers or sometimes the fathers. In addition, the study occasionally included siblings, the observer, and other adults present in the verbal interactions, in order to respect the natural conditions of interaction. The dialogues included daily routines, and standardized or non-standardized free play at home and snack time.

2.1 *The distribution of third-person pronouns, nouns, and demonstrative pronouns*

Table 1 presents the frequencies of third-person clitic pronouns, nouns, and strong demonstrative pronouns among all the referring expressions produced by the children and their interlocutors. The clitic demonstrative pronoun *c'* ('*it*') in the construction *c'est* ('*it is*'), dislocations, fillers and amalgams, null

³ The corpus of 24 dyads was drawn from the Paris Corpus, the Standardized Play Corpus, the Childcare corpus, the Nashawati corpus and the Salazar Orvig corpus. See Appendix I for further details.

forms and all other pronouns (interrogative, indefinite, relative, and possessive) were grouped together under ‘other forms’⁴. A Wilcoxon test was run to compare children and their interlocutors.

	Chi* %	Int %	Total %	W	P
C3PP	9.4	21.5	18.1	104	<.0001 ***
Nouns	38.1	37.3	37.5	393.5	.3141
SDems	8.7	4.9	5.9	377.5	.4753
Other Forms	43.9	36.4	38.5		
N=	1998	5105	7103		

* Chi: children, Int: the children’s interlocutors, C3PP: third-person clitic pronouns, SDems: strong demonstrative pronouns

Table 1. Distribution (in percentage) of the referring expressions for the children and their interlocutors

As expected, the children produced a significantly lower proportion of third-person clitic pronouns than their interlocutors did, but similar proportions of nouns and strong demonstrative pronouns. Possible adjustment of child-directed speech to the children’s level of linguistic development was assessed by focusing on pronouns as a particularly sensitive category. A Spearman rank correlation between the proportion of third-person clitic pronouns in the interlocutors’ speech and the children’s MLU was not significant ($r_s = 0.139$, $p = .498$). These results suggest that more competent speakers’ (adults and

⁴ An inter-coder agreement test was conducted on the total DIAREF Paris corpus. Excerpts of 10% of referring expressions for each session were coded by a different member of the team. For categories of referring expressions the inter-coder agreement score was 95.81 and Cohen’s kappa was 0.95

siblings) uses of pronouns or other referring expressions was not affected by children's linguistic development but by pragmatic or discursive factors.

2.2 *Uses of referring expressions*

Our previous research (Salazar Orvig et al., 2010a, 2010b) and da Silva-Genest et al. (Chapter 3, this volume) has shown that young French-speaking children, like children acquiring other languages, prefer weak expressions for the referents under focus and strong expressions for new discourse referents. This suggests that they use these expressions according to the accessibility of the referent for the interlocutor. The aim of the present section is to compare the children's and their interlocutors' uses of referring expressions. Like da Silva-Genest et al., we classified the attentional and discursive status of referents into four mutually exclusive categories⁵:

- **New:** the referent was totally new in the interaction.
- **Activated:** the referent was part of the ongoing activity or was inferable from the previous discourse but had not yet been mentioned.
- **Discourse-given:** the referent had already been mentioned by either the speaker or the interlocutor.

⁵ The inter-coder agreement rate was of 86.97%, and Cohen Kappa was 0.796.

- **Reintroduced:** a thematic change took place between the targeted mention of the referent and the previous one.

The results are presented in Table 2. For the sake of clarity, we only show the detailed results for third-person clitic pronouns compared to nouns and strong demonstrative pronouns⁶.

	New %	Activated %	Discourse- Given %	Reintroduced %	Total %
Chi*					
C3PP	0.9	3.4	13.6	3.4	9.4
Nouns	60.1	31.2	34.4	47.2	38.1
SDem	6.1	21.4	5.6	9.0	8.7
Other RE	32.9	44.0	46.5	40.3	43.9
Total N =	213	327	1225	233	1998
Int					
C3PP	2.7	6.2	30.3	8.0	21.5
Nouns	61.3	46.7	27.7	59.9	37.3
SDem	2.8	9.4	4.5	2.9	4.9
Other RE	33.2	37.7	37.5	29.2	36.3
Total N=	705	743	3318	339	5105

* Chi: children, Int: the children's interlocutors, C3PP: third-person clitic pronouns, SDem: strong demonstrative pronouns, Other RE: Other referring expressions (Fillers, Null forms, Clitic demonstrative pronouns, dislocations and other pronouns, such as relative, indefinite, possessive pronouns)

Table 2. Distribution (in percentage) of referring expressions for each attentional and discursive status of the referents, for the children and their interlocutors.

We carried out binomial mixed-effect regressions fitted using the glmer function of lme4 R-package (Bates, Mächler, Bolker & Walker, 2015), in

⁶ Table 2 also shows the percentage of other referring expressions for each category. However, this grouping lumps together a set of expressions (dislocations, clitic demonstrative pronouns, and relative, indefinite, numeral, adverbial, possessive, and interrogative pronouns) that are heterogenous both in their formal and functional aspects. In all of the tables, their total percentage is noted only to show the relative importance of the three types of referring expressions under focus in this chapter.

order to assess the effect of the attentional and discursive status in the two groups (children and adult interlocutors). For each referring expression (as compared to all others), we assessed the effect of each type of context (as compared to all others). The regressions included two random-effect variables to control for the participant (the childrens' and their interlocutor's identity) and the session. The best fitting models are presented in Table 3.

Fixed Effects	Est.	S.E.	z	p	Random Effects	Var.	S.D.	C-value**
Third-person clitic pronouns								0.78
Intercept	3.58	0.26	13.89	<.001	Participants	0.32	0.57	
Attentional and discursive Status (Discourse-Given)***	1.68	0.23	7.06	<.001	Sessions	0.04	0.21	
Speaker (Int*)	0.62	0.29	-2.08	.037				
Discourse-Given: Int	0.44	0.26	-1.67	.095				
Nouns								0.66
Intercept	-0.67	0.09	-7.28	<.001	Participants	0.03	0.13	
Attentional and discursive Status (New)	1.06	0.15	6.93	<.001	Sessions	0.12	0.35	
Attentional and discursive Status (Reintroduced)	0.60	0.15	4.11	<.001				
Speaker (Int)	-0.20	0.08	-2.27	.023				
New: Int	0.22	0.18	1.23	.22				
Reintroduced: Int	0.60	0.18	3.23	.001				

Strong demonstrative pronouns							0.77
*Intercept	-3.31	0.22	-15.0	<.001	Participants	0.36	0.60
Attentional and discursive Status (Activated)	1.55	0.18	8.52	<.001	Sessions	0.42	0.64
Speaker (Int)	-0.03	0.23	-0.14	.887			
Activated: Int	-0.72	0.24	-3.05	.002			

*Int: the children's interlocutors

Number of observations: 7103, Grouping factors: Participants (including children and their interlocutors): 61; Sessions: 38

** The models were assessed using C statistics, which indicate whether the predicted binomial outcome is better than chance. Hosmer, Lemeshow and Sturdivant (2013) considered that C-values below .5 indicated a model that is not better than chance whereas C-values above .7 are reasonable and above .8 are strong.

*** The category in parentheses on fixed-effects rows indicates the category value compared with the intercept (reference level). For binomial factors, the reference level is the other factor.

Table 3. Regression tables for third-person clitic pronouns, nouns, and strong demonstrative pronouns for all referring expressions used by the children and their interlocutors

Discourse given was the most frequent context of occurrence for all types of referring expressions. Even though adults produced significantly more third-person clitic pronouns than children did, the children and their interlocutors exhibited similar trends: third-person clitic pronouns were more likely to encode discourse-given referents than other referents. Nouns were positively associated with new and reintroduced referents⁷ and strong demonstrative pronouns were associated with activated ones. These findings indicate that these French-speaking children were able to link the available referring

⁷ Table 3 indicates a rather low C-value (0.66) for nouns. For Hosmer, Lemeshow and Sturdivant (2013) only C-values above .7 are reasonable. This suggests that other factors should be taken into account to accurately explain the choice of nouns.

devices to the dialogical context, and/or to the attentional status of the referent.

3. Towards a dialogical account

How are these early pragmatic skills acquired? Currently there is no unified account of this process. Some studies have put forward the effects and interplay of factors such as linguistic structure, the child's cognitive development, or his/her linguistic experience (see Allen, Hughes & Skarabela, 2015; De Cat, 2013; Gundel & Johnson, 2013; Hickmann, Schimke & Colonna, 2015). Setting aside the impact of linguistic structure, which can only be assessed via cross-linguistic studies, one recurrent issue is whether such early pragmatic skills reflect a specific level of socio-cognitive development or are the outcome of linguistic experience.

According to Gundel and her co-workers (Gundel & Johnson, 2013; Gundel, Ntelitheos & Kowalsky, 2007), children are capable of making "reasonable assumptions about the addressee's memory and attention state [which] involves the attribution of mental states to others" (Gundel & Johnson, 2013: 53). This capacity is based on an implicit and relatively mechanical theory of

mind, also qualified as “procedural”. However, “procedural” knowledge implies communicative experiences with more competent partners.

As mentioned at the beginning of this chapter, the role of linguistic experience can be conceptualized in terms of the direct impact of adult utterances on the child’s subsequent utterances, or in terms of referring patterns that children incorporate throughout early childhood. In this section, we address these two standpoints.

3.1 The immediate impact of the interlocutor’s discourse

The immediate effects of the interlocutor’s discourse can be observed both when children answer questions and when they immediately take up adult forms. The influence of questions on the choice of referring expressions has occasionally been analyzed for naturally occurring dialogues. This issue was first studied from the perspective of informativeness (Allen, 2000; Clancy, 1993). Referents that were replies to questions (i.e. *John* as an answer to *who came?*) were considered informative because the identity of the referent was only partially established by the question. Therefore, children were likely to produce overt or strong expressions when answering questions. In later studies, Allen and her colleagues discarded this feature because it overrides the other accessibility factors (see Hughes & Allen, 2006). In our work, we

have shown that subject pronouns are seldom elicited by questions in French (Salazar Orvig et al., 2010b).

However, these earlier studies focused only on referring expressions elicited by questions, without taking into account the fact that questions shape the wording of the answers. The focus of a question frames the form of a referring expression in several ways. A referent can be the topic of the question in predicate-focused questions (e.g. *what is the boy doing?*). It can be elicited by argument-focused questions (e.g. *who is coming? what do you want?*). Or it can be indirectly brought up by general questions (e.g. *what happened?*). Several studies have shown that these features may interact with the prior mention and/or perceptual availability of the referent (Campbell et al., 2000; Wittek & Tomasello, 2005; Matthews et al., 2006; Salomo, Lieven & Tomasello, 2013). Children as young as 2;6 appear to prefer null or weak forms when the question mentions the referent as the topic as compared to when it solicits utterances or arguments. Salomo et al. (2013) showed that when the target referent was a patient (and not the topic), young children often fail to provide enough information when responding to predicate and general questions. They suggest that children may lack experience as to what is expected for answering these kinds of questions.

Children might also take up the referring expressions used by their adult interlocutor in immediately preceding utterances. Repetition is known to play an important role in the construction of common ground (E. Clark & Bernicot,

2008), and more specifically, as a first form of cohesion (Halliday, 1979; Salazar Orvig, 2000). A quite different view of repetition has been put forward in the account of mechanical alignment through priming (Pickering & Garrod, 2004). For Matthews et al. (2006), this mechanism could account for the fact that 2-year-old children are sensitive to prior mentions of a referent but not, as 3-year-olds are, to perceptual availability. Clancy (2008) ascribes to priming the acquisition of argument marking in Korean. However, although her results support her hypothesis, she insisted on the fact that other factors limit the action of priming, the most important of which “must be whether the reuse fits with the child’s communicative goals” (Clancy, 2008: 115).

We explored the hypothesis that the adult’s utterances have a direct impact on the child’s subsequent use of referring expressions. We considered (a) the similarities in form and category between the expression used by the child and its immediate antecedent in the interlocutor’s speech, and (b) the dialogical relations between utterances, in terms of contingency.

3.1.1 Data analysis

In this section, we present coding categories and statistical methods.

Form and category of antecedents

A child's use of a referring expression may be influenced by lexical choices and syntactic forms in the interlocutor's utterances. At a formal level, third-person clitic pronouns could be prompted more easily by the interlocutor's uses because alignment with the syntactic structure of the interlocutor's utterance for the child, would involve the same expression in the same syntactic function. For example, *il* ('he') as subject in the interlocutor's utterance would entail the use of *il* as the subject in the child's utterance. In order to assess this effect, we coded each referring expression used by the child according to the form and grammatical category of its antecedent in the interlocutor's discourse⁸. Two possibilities were considered for the correspondence with the antecedent's forms: **same form** and **different form**.

- **Same form** included both total correspondence between the child's and the interlocutor's forms (i.e. *il* for *il*, *l(e)* for *l(e)*, etc.), and partial correspondence whenever the child took up part of a dislocation used by the interlocutor or *vice versa*, as in Example 1 below.

(1) Alice, 2;3, MLU 2.44⁹

⁸ Data on the form and category of the interlocutor's antecedents were automatically retrieved in the coding file, so the inter-coder agreement rate was the same as for the list of referring expressions.

⁹ Example captions indicate the name of the child, his/her age (years; months) and the Mean Length of Utterance (MLU) for the cited session. The first three letters of the child's first name are given in lowercase (e.g. Ali for Alice), Mot stands for mother and Fat for father. When the children's utterances are transcribed phonetically (between square brackets []), the interpretation in French is given below in inverted commas. An approximate English translation is also given between inverted commas.

Mot70	il est où papa. (i)l est là-bas?	‘where is daddy? is he there?’
Ali26	[la] ‘là’	‘there’
Mot71	(i)l est dehors?	‘ is he outside?’
Ali27	[le dəʁ papa] ‘ (i)l est dehors papa’	‘ he is outside dad’

If the expression had no antecedent in the interlocutor’s discourse, we searched for a non-coreferential occurrence of the same form in the interlocutor’s immediately preceding turns (up to 4 turns back). These cases were rare (3%).

- **Different form** included all expressions where the antecedent appeared in a different form from the expression used by the child (e.g. *le* after *il*, a third-person clitic pronoun after a noun, etc.).

We also looked for two options for grammatical categories, whatever the form: **same category** and **different category**.

- **Same category** included cases where the antecedent belonged to the same grammatical category as the child’s expression (i.e. *i* for *le*, or *elle* for *il*, all of which are third-person clitic pronouns).
- **Different category** included cases where the antecedent belonged to a different grammatical category than the child’s expression (e.g. a noun for a third-person clitic pronoun). Dislocations after single expressions or vice versa were considered different categories.

Braces indicate uncertain transcriptions or alternative interpretations. {X} stands for uninterpretable or inaudible segments. For more details on transcription conventions, see Appendix II.

Dialogical relations: coding

We also explored a second kind of relation to the interlocutor's discourse: the contingency context in dialogue. Five types of contexts were identified¹⁰: **Repetition**, **Elicitation**, **Answer Continuity**, **Plain Continuity**, and **Contrast**. In the first three types the children's contributions were induced by their interlocutors' discourse.

- **Repetition** occurred in cases where the referent was mentioned in an utterance that partially or fully repeated the interlocutor's utterance (see Example (1) above.
- **Elicitation** occurred in cases where the referent was the focus of the adult's question, as in Example (2) below.

(2) Margaux, 2;3, MLU 2.62

Mot37	qu'est-ce que tu veux?	'what do you want?'
Mar30	<i>[gato]</i> 'gâteau'	'cookie'

- **In Answer continuity**, the referent was the topic of a question, as in Example (3) below:

(3) Maxime, 2;3, MLU 1;4

Mot8	qu'est-ce qu'il fait ça	'what is he doing, that'
Max6	<i>[idɔʁ]</i> 'i(l) dort'	'he is sleeping'

¹⁰ The inter-coder agreement rate for dialogical relations was 87.24%, and Cohen's kappa was 0.843.

The last two categories correspond to non-induced mentions of referents, i.e. not constrained by the interlocutor's utterance.

- **Plain continuity:** the utterance added a new predicate to the given referent, without perspective or genre shifting, as in Arn35 Example (4) below:

(4) Arnaud, 2;3, MLU 2.96

Arn34	[welekleɱari?] 'où <i>elle</i> est Clai(re)-Marie?'	'where is Claire-Marie?' ((the observer))
Mot52	<i>elle</i> va revenir dans un petit moment. tu finis ta tarte aux pommes	' <i>she</i> is coming back soon. finish your apple pie'
Arn35	[lɛpati] '(<i>e</i>) <i>lle</i> est pa(r)tie'	' <i>she</i> is gone'

- **Contrast:** the utterances introduced a contrast in the dialogue, including a change in topical status, a perspective shift, an opposition, or a contradiction as in Léa158 in Example (5):

(5) Léa, 2;2, MLU 2.4

Mot179	et <i>le prince il</i> est beau <i>le prince</i> ?	'and <i>the prince</i> is <i>he</i> handsome <i>the prince</i> ?' <i>prince</i> ?
Léa157	[wi] 'oui'	'yes'
Mot180	c'est vrai?	'really?'
Léa158	[əpɛ̃ ijɛpaʒãti ləpɛ̃s dəpuselina] ' <i>F</i> ¹¹ <i>p(r)in(ce) il</i> est pas gentil <i>le p(r)ince</i> de Poucelina'	' <i>F prince he</i> is not nice Thumbelina's <i>prince</i> '

¹¹ In the interpretations and translations of children's utterances, 'F' stands for a filler syllable.

Statistics

We used mixed-effect binomial logistic regression fitted using the `glmer` function of `lme4` R-package (Bates et al., 2015) in order to assess the effect of the following factors: the interlocutor's forms, the interlocutor's category, child's repetition, elicitation¹², and continuity (both answer continuity + plain continuity). In order to further assess these effects, binary partitioning trees were drawn with the `ctree` function included in the "party" R package (Hothorn & Zeileis, 2015).

3.1.2 Results

In this section, we present the results for the impact of the interlocutor's antecedent on referring expressions use (Tables 4 and 5) and dialogical relations (Table 7), and the interaction between the two (Figures 1 to 3). The best fitted models for these factors are presented in Table 6).

Form and category of the interlocutor's antecedents: results

Tables 4 and 5 show that formal links, although very frequent, were not the most prevalent in the children's discourse.

¹² Elicitation was not assessed for third-person clitic pronouns because no pronoun was elicited by a question.

	Same Form		Different Form		N=
	Total Correspondence %	Partial Correspondence %	Total %	%	
C3PP*	26.5	18.1	44.6	55.4	166
Nouns	42.6	6.5	49.2	50.8	413
SDem	18.5	12.3	30.8	69.2	65
All RE	28.2	12.5	40.8	59.1	1211

*C3PP: third-person pronouns, SDem: strong demonstrative pronouns, RE: referring expressions

Table 4. Distribution (in percentage) of children's referring expressions for discourse-given referents, according to their correspondence with the form used by their interlocutors

	Same category	Different category	N=
	%	%	
C3PP*	45.8	54.2	166
Nouns	49.9	50.1	413
SDem	20.0	80.0	65
All RE	34.0	66.0	1211

* C3PP: third-person clitic pronouns, SDem: strong demonstrative pronouns, RE: referring expressions

Table 5. Distribution (in percentage) of children's referring expressions for discourse-given referents, according to their correspondence category of interlocutor's antecedents

These results can be seen as a glass that is either half full or half empty. As a whole, 40.8 % of the children's referring expressions corresponded partially or totally to the interlocutor's forms (Table 4), but neither the third-person clitic pronoun, nor the nouns or the strong demonstrative pronouns were significantly affected by the form of the antecedent (see Table 6). In contrast, children's third-person clitic pronouns and nouns were likely to be preceded by an antecedent of the same category in the interlocutor's discourse while strong demonstrative pronouns tended not to be preceded by a similar expression (Tables 5 and 6).

Fixed Effects	Est.	S.E.	z	p	Random Effects	Var.	S.D.	C. value*
Third-person Clitic Pronouns								0.84
Intercept	-2.71	0.28	-9.77	<.001	Children	0.37	0.60	
Interlocutors' form (Same)	-0.13	0.24	-0.56	.056	Sessions	0.84	0.91	
Interlocutor's category (Same)	0.69	0.24	2.90	.004				
Repetition	-0.23	0.29	-0.77	.441				
Continuity	1.23	0.22	5.54	<.001				
Nouns								0.76
Intercept	-1.15	0.15	-7.52	<.001	Children	<.001	<.001	
Interlocutors' form (Same)	0.003	0.19	0.02	.999	Sessions	<.001	<.001	
Interlocutor's category (Same)	1.45	0.18	7.3	<.001				
Repetition	-0.12	0.18	-0.65	.515				
Continuity	-0.78	0.17	-4.42	<.001				
Elicitation	2.03	0.27	7.51	<.001				
Strong demonstrative pronouns								0.80
Intercept	-2.77	0.32	-8.67	<.001	Children	0.35	0.59	
Interlocutors' form (Same)	0.178	0.38	0.473	.636	Sessions	0.26	0.51	
Interlocutor's category (Same)	-0.85	0.41	-2.10	.036				
Repetition	0.05	0.34	0.15	.879				
Continuity	-1.58	0.46	-3.431	<.001				
Elicitation	-0.33	0.51	60.66	.513				

Number of observations: 1211; Grouping factors: children: 24, sessions: 38

* The models were assessed using C statistics, which indicate whether the predicted binomial outcome is better than chance. Hosmer, Lemeshow and Sturdivant (2013) considered that C-values below .5 indicated a model that is not better than chance whereas C-values above .7 are reasonable and above .8 are strong.

**The category in parentheses on fixed-effects rows indicates the category value compared with the intercept (reference level). For binomial factors, the reference level is the other factor.

Table 6. Regression tables for third-person clitic pronouns, nouns, and strong demonstrative pronouns for discourse-given referring expressions in the children's discourse

Let us now turn to the use of these referring expressions in dialogue.

Dialogical relations: results

Table 7 presents the distribution of the children’s referring expressions for given referents, according to the type of dialogical relations. We refer also to the models presented in Table 6, which include the assessment of the impact of dialogical relations on the use of these three types of referring expressions.

	Induced contribution			Non-induced contribution		N=
	Repetition %	Elicitation %	Answer-Topic Continuity %	Plain Continuity %	Contrasted dialogical relations %	
C3PP*	13.9	0	18.7	39.8	27.7	166
Nouns	27.6	17.2	2.4	17.4	35.3	413
SDem	26.1	9.2	4.6	4.6	55.4	65
All RE	23.4	8.2	8.7	23.9	35.9	1211

*C3PP: third-person clitic pronouns, SDem: strong demonstrative pronouns, RE: referring expressions

Table 7. Distribution (in percentages) of the children’s referring expressions for given referents, according to the type of dialogical relations.

Tables 6 and 7 paint a complex picture. Referring expressions were not evenly distributed across the dialogical contexts. Non-induced contributions (plain continuity and contrasted dialogical relations) were the most frequent (60%), whereas answers (17%) were the least frequent¹³. Nearly 25% of the referring expressions appeared in a context of repetition. However, as shown in Table

¹³ In our corpus, most questions were yes/no questions.

6, this factor does not appear to affect the choice of any of these referring expressions.

Third-person clitic pronouns were never elicited by a question, whereas nouns were likely to appear as an answer. The picture was almost the opposite when the referent was the topic of a question. In this case, third-person clitic pronouns were frequent and nouns were clearly less frequent. Similarly, plain continuity in non-induced contributions promoted the use of third-person clitic pronouns but not of nouns or strong demonstrative pronouns. Moreover, the highest percentage of third-person clitic pronouns occurred for continuity, when considering together both plain continuity and answer-topic continuity.

To summarize, the use of third-person clitic pronouns, in contrast to that of nouns and strong demonstrative pronouns, was generally associated with continuity, and rarely occurred in constrained contexts such as questions or repetitions.

3.1.3 Interaction between interlocutor's antecedents, and dialogical relations

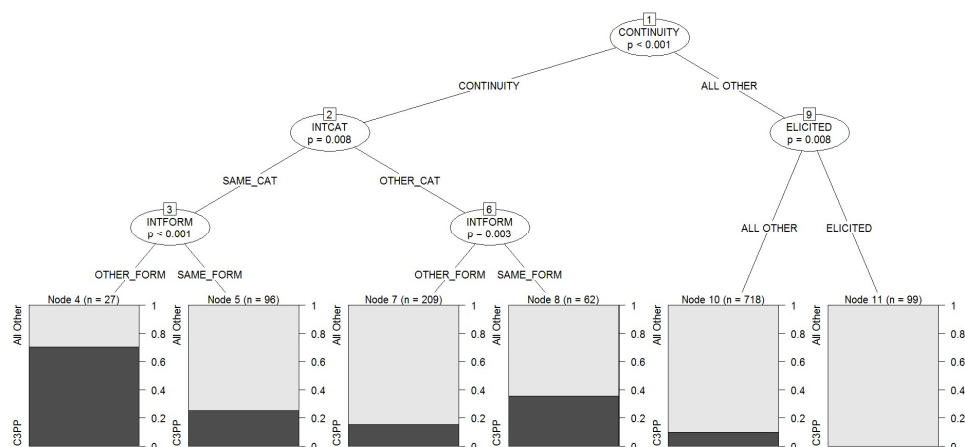


Figure 1. Binary partition tree for third-person pronouns for discourse-given referents

Figure 1 corresponds to the binary partitioning tree drawn to assess the weight of significant factors in the choice of third-person clitic pronouns. Each final node indicates the contrast between the presence of a third-person clitic pronoun and the presence of any other referring expressions (All Other). As we can see in Figure 1, the proportion of third-person clitic pronouns was always higher in the left nodes (nodes 4, 5, 7 and 8), which correspond to referents in continuity, than in the right nodes (10 and 11). This means that continuity was the factor accounting for most of the uses of third-person clitic pronouns by children. When the referent was in continuity, the category of the antecedent was the second most influential factor (node 2) but it did not necessarily entail the repetition of the form (e.g. *le* after '*il*').

Figure 2 presents the binary partitioning tree for nouns. Nouns, for discourse-given referents, involved a different hierarchy among the relevant factors for which the antecedent category and elicitation prevailed over continuity.

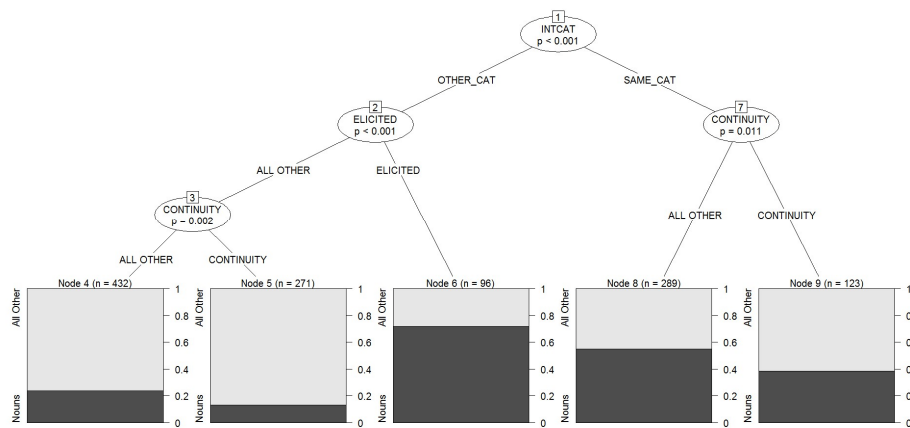


Figure 2. Binary partition tree for nouns for discourse-given referents

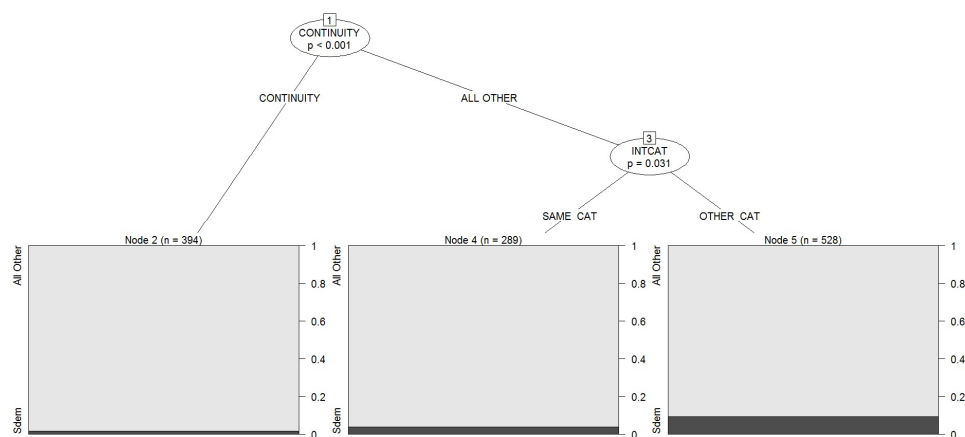


Figure 3. Binary partition tree for strong demonstrative pronouns for discourse-given referents

In Figure 3 we can see that continuity was the main factor, but in contrast to third-person clitic pronouns, it was a negative factor in the use of demonstrative pronouns.

The position of continuity as a secondary factor for nouns (Figure 2) or as an excluding factor for demonstrative pronouns (Figure 3), compared to its primary position for third-person clitic pronouns suggests that, for the latter, continuity is a crucial factor. Even though the children often used an expression of the same grammatical category, the frequent difference in form shows that the children's own wording prevailed over their interlocutor's. Let us remind that this predominance of continuity (as defined here) over more constraining contexts concerns specifically the choice of devices for referring to ad discourse-given referent. Therefore there is no contradiction with studies showing that questions (e.g. Salomo et al., 2013) or repetitions (e.g. E. Clark & Bernicot, 2008) support children's participation in dialogue, either by prompting or by ratifying their contributions.

These nuanced results argue against the priming hypothesis or other mechanistic analyses based on a synchronic approach to dialogue, which do not completely explain the children's uses of referring expressions. We therefore take up a second hypothesis.

3.2 *Patterns in dialogue*

Formats help children learn how to participate in dialogue, including how to answer questions. The interlocutor's linguistic forms also provide children with material for building their own utterances. Given that from the very beginnings of linguistic communication, "scaffolded" dialogues are present in adult-child interactions, two-year-olds have already been exposed to many uses of third-person clitic pronouns. They gradually become able to use these forms without adult support.

Levy (1989) showed that in the well-known monologues of Emily (Nelson, 1989), apparently anaphoric uses of pronouns reproduced the referential chains previously produced by the adult. In this context, the child probably learned "ways of doing" (procedural behaviors) before grasping the anaphoric value of pronouns. In the same vein, Levy and Nelson (1994) proposed a theory of word acquisition (more specifically, for causal and temporal words) wherein their use in activities and dialogues provides the basis for the acquisition of meaning.

Beyond the particular context analyzed by Nelson (monologues), the interactionist approach (Bruner, 1983a; Vygotsky, 1933/1962) and the dialogical approach (Bakhtin, 1979/1986) seem particularly helpful in explaining the acquisition of pragmatic skills, because both embed the child's behavior in contextualized models of language use. An example of this

perspective appears in Clancy (1996). She proposes that children can abstract acceptable realizations of a predicate across argument structure alternations, “thanks to the juxtaposition of utterances with the same predicate in conversation” (Clancy, 1996, p. 35). The acquisition of argument structure is therefore a jointly achieved co-construction, interpretable, according to this author, in terms of Vygotsky’s theory of cognitive development. Clancy started from naturally occurring mother-child dialogues and extracted several series of utterances in which the mother included alternations between nominal or pronominal forms, and null forms, depending on discursive factors. The child is thus exposed both to a range of argument structure realizations and to the contextual factors responsible for their selection. This promotes the acquisition of appropriate uses of referring expressions.

We looked in our corpus for sequences that, even if they did not exhibit the strong regularities found in Clancy’s data, might contain equivalent phenomena. If this is a possible route for acquisition, we should observe similar traces of the way children might lean on their experiences of alternations between nominal and pronominal forms. We used a qualitative method to examine the data in order to identify the various possible steps from simple repetition to more autonomous uses of referring expressions. The sequences we discuss are presented in three sets. The first set illustrates immediate or distant uptake of the structure produced by the interlocutor (Examples 6-7). The second illustrates the role of questions (Examples 8-10).

The third shows how non-induced, apparently autonomous contributions may in fact depend on utterances the interlocutor had produced in earlier sequences (Examples 11-13).

Immediate or distant uptake

(6) Julien, 2;3, MLU 1.92

Mot422	oh il se roule par terre et il se roule là par terre et il chante	‘oh he rolls over on the floor and he rolls over on the floor there and he sings ’
Mot423	i(l) chante? tu chantes toi aussi? qu'est-ce que tu chantes?	‘is he singing? do you sing too? what do you sing?’
Jul144	[iĩfã] ‘ i(l) i(l) chan(te) ’	‘ he he sings ’

In Example 6, the immediate uptake of his mother’s utterance helps the child to associate, like her, the subject pronoun and the predicate (even if he fails to answer his mother’s question). This phenomenon can also be observed when children reuse an utterance in a different context as in Example 7.

(7) Thibault, 1;11, MLU 1.56

Thibault and his father are playing at a table with several toys, including a toy car.

Thi36	[vwaty] ‘voiture’	‘car’
Fat22	tiens	‘take (it)’
((The father hands him the car and the child rolls it. The car falls off the table))		
Fat23	là elle est tombé	‘there it fell ’
Thi37	[enetõbe ¹⁴ la vwaty] ‘ elle est tombé la voiture ’	‘ it fell the car ’
Fat24	oui elle est tombée.	‘yes it fell’
<i>They focus on another referent. Several turns after, the father picks up the car</i>		
Thi42	[enetõbe] ‘ elle est tombée ’	‘ it fell ’ ((the car fell off the table))

¹⁴ The form [en] in this utterance was considered as a pronoun and not as a filler because it is a phonological approximation of the adult target [ɛl]

In Thi36, the child refers to the car with a one-word utterance. In Fat23, the father uses a third-person clitic pronoun to comment on the car's falling. The child (Thi37) relies on his father's wording and adds, in a dislocated position, the noun he had previously used. The father confirms with a single pronoun. Several turns later and after focusing on other topics, the child again comments on his father's action by repeating an earlier utterance. In this context, we can observe both a first, scaffolded, use of a third-person clitic pronoun but in a dislocated structure, and then a not fully induced production, in a different context, still associated with the same referent.

Answering questions

When third-person clitic pronouns appear in the context of answering a question, they encode the topic common to the question and answer. One of the ways children might learn how to answer is by taking up the components of the question:

(8) Clément, 2;3, MLU 2.28

Mot10	un animal. <i>i(l) s'appelle</i> comment?	'an animal. what <i>is it called</i> ?' 2
Cle98	[<i>isapel</i> lə / ima] ' <i>i(l) s'appelle</i> le / (an)ima(l)'	' <i>it's called</i> the / animal'

In his answer to this argument-focused question, the child takes up both the topic and the predicate, and simultaneously changes the role of the noun *animal* to fill the elicited slot, even though this does not fit his mother's expectations. This tight link between question and answer probably has its

roots in early formats where children learn to answer specific questions (Ninio & Snow, 1996). Example 9 presents two distant sequences of question-answer sequences.

(9) Elodie, 2;3, MLU 2.04.

At snack time, Elodie and her mother play at hiding and showing their hands

Mot71	ben où elles sont les mains à Elodie?	‘so where are Elodie’s hands?’
Elo56	[<i>pati mamã</i> / papati mamã] ‘ <i>partie ma main</i> / pas partie ma main’	‘ <i>gone my hand</i> / not gone my hand’
Elo57	[<i>pati</i>] ‘partie’	‘gone’
Mot72	elles sont parties? voilà elles sont parties	‘they are gone? there they are gone’

In the playing session, the mother and child are playing with a toy truck

Mot122	ben il est où le camion?	‘so where is the truck?’
Elo85	[<i>i pati</i>] ‘ <i>il (est) pa(r)ti</i> ’	‘ <i>it (is) gone</i> ’
Mot123	il est parti le camion?	‘it’s gone the truck?’

In the first situation, the mother and child are playing at hiding their hands. Gestures are associated with the question *où elles sont?* (‘where are they ’), Mot71) and the answer [*pati*] ‘*parties*’ (‘gone’, Elo56). During this game, the mother uses dislocations or third-person clitic pronouns and the child uses null forms. During the following play session, the mother again asks the same type of question, *il est où?* (‘where is it?’) about a new referent. The child relies on the same kind of answer [*i pati*] with the same predicate used in the previous game and the pronoun her mother just used in her question. This type of routine is probably the basis of more general question-answer relations, as in Example 3. Predicate-focused questions provide a frame where

children can specify a new predicate while maintaining continuity of topic. This is the case in Example 3 where Maxime takes up the third-person clitic pronoun and substitutes the pro-verb ‘*fait*’ (‘*doing*’) of his mother’s question by a specific verb ‘*dort*’ (‘*sleeping*’). This is why answers appear to be good candidates for first uses of pronouns: children are scaffolded both by the illocutionary force and the form of questions. This gives children the opportunity to participate in the dialogue by reusing the interlocutor’s wording to build a new utterance. This double process is clearly visible in Example 10.

(10) Loli, 2;3, MLU 2.94

Lol18	[mamã leu papa] ‘maman (i)l est où papa?’	‘mommy. where is daddy?’
Mot21	t(u) as d(é)jà demandé. il est à son <i>tra(vail)</i> /...?	‘you already asked. he is at work’
Lol19	[sõ byko] ‘son bureau’	‘his office’
Mot22	il est à son bureau oui. c’est quoi le bureau? qu’est-ce qu’i(l) fait au bureau?	‘he is at his office, yes. what is the office? what does he do at the office?’
Lol20	[il kɔva] <i>‘il trava(ille) !’</i>	<i>‘he works!’</i>

Lol20 answers a predicate-focused question by using a previous contribution of her mother (Mot21, the noun *travail*, (‘*work*’) in the corresponding verb. At the same time, she takes up the third-person clitic pronoun used by her mother in Mot21 and 22. The interlocutor’s utterances appear to offer a resource for building the child’s own utterances while being scaffolded by questions.

Autonomous uses are anchored in previous sequences

In the least induced form of continuity, we observed children's production of third-person clitic pronouns with no influence from the interlocutors' earlier utterances.

(11) Cécile, 1;11, MLU 2.83

Mot2	de quelle couleur est cette vache?	'what color is this cow?'
Cec 2	[blā] 'blanc'	'white'
Mot3	oui	'yes'
Cec 3	<i>[ilamal]</i> 'il ¹⁵ a mal'	'it is hurt'

In this example, the child initiates a new predication about the referent and uses a third-person clitic pronoun after her mother uses a noun. Because this sequence occurred at the beginning of a session, the child's use of a third-person clitic pronoun may be considered as not induced. At the same time, this use is probably connected to previous conversational experiences and could be the result of the accumulation of a series of past co-constructed experiences. Examples 12 and 13 illustrate, in one particular dialogue, how these processes may evolve on a larger scale.

(12) Julien, 2;3, MLU 1.92

Jul51	[madamipat] ¹⁶ 'madame i(l) part'	'(the) lady she leaves'
-------	---	-------------------------

¹⁵ This gender error (*il* for *elle*) does not show up in the English translation

¹⁶ In the Childcare corpus (see also Example 3) we purposely had the observer leave the room after starting up the camera. This protocol elicited numerous questions from the children about the "lady" and her disappearance.

((Mother nods))

Jul52 [lepatiemene]
'elle est partie promener' 'she left for a walk'

Jul52 also seems a good example of an autonomous, monological contribution in which the child first mentions a referent and then adds a further, new predication. However, Jul52 is in fact the outcome of several earlier sequences, reproduced in Example 13:

(13) Julien, 2;3, MLU 1.92

Jul4:	[ladam] 'la dame'	'the lady'
Mot6:	la dame elle est partie	'the lady is gone'
Jul5:	[uladam?] 'où la dame?'	'where (is) the lady?'
Mot7:	elle est partie sur le balcon se promener un peu	'she went out onto the balcony to take a little walk'
(...)		
Jul6:	[ilotomadam? ileulœmadam] ((il regarde le balcon)) 'il est où madame? 'il est où le madame?'	'where is lady? where is the [masculine form] lady?' ((looking towards the balcony))
Mot12:	elle est sur le balcon je t'ai dit	'she is on the balcony I told you'
(...)		
Jul10:	[leumadameur] 'l'est où madame est {où}?'	'where is the lady {where} is?'
Mot18:	hein?	'what?'
Jul11:	[madamelur] 'madame est {XX}'	'lady is {XX}'
Mot19:	elle est partie dans le sur le balcon. elle est en train de regarder ce qu'y a dehors et puis elle va revenir te voir, pour te faire coucou d'accord?	'she is gone out onto the balcony. she is looking around outside and then she will be coming back to see you to say hello to you. ok?'
Jul12:	[itasokuku] '{xxxcoucou}'	'{xxx hello}'
(...)		
Jul14:	((pointe le balcon)) [ekakõ] 'F balcon' ¹⁷	((he points to the balcony)) 'F balcony'
Mot28:	voilà sur le balcon	'right, on the balcony'

¹⁷ In this example, [e] before [kakõ] (for 'balcon', 'balcony') is interpreted as a filler (F), for which we cannot determine whether it corresponds to the verb 'est' ('is'), an amalgam of the verb and its subject or even a pre-nominal filler.

Jul15	[kekuku] '{faire} coucou'	'{say} hello'
<i>After several topic changes</i>		
Jul41:	[madameikako] 'madame est F balcon'	'lady is F balcony'
Mot65	oui elle est sur le balcon la dame. elle regarde dehors les arbres. les enfants qui jouent	'yes she is on the balcony the lady. she is looking around outside, the trees, children playing'
(...)		
Jul42:	[dam ie pati] 'dame i(l) est pa(r)tie'	'lady he is gone'
Mot70:	oui oui elle est partie oui	'yes yes she is gone yes'
Jul43:	[iekakō̃] 'i(l) est balcon'	'he is balcony'
Mot71:	sur le balcon	'on the balcony'

Let us first consider Julien's predicates. In Jul4 he mentions the referent for the first time without any predicate. Several predicates are introduced by his mother in her successive utterances (*est partie* / 'is gone', *est sur le balcon* / 'is on the balcony', *se promener* / 'to take a walk', *faire coucou* / 'to say hello'). These predicates are either elicited by the child, through several forms of *elle est où* ('where is she') or taken up immediately or at distance ([*ekakō̃*], [*kekuku*] and in Example 12 [*lepatiemene*]). Therefore, the apparently monological construction in Example 12 appears to be the result of the internalization of the predicates the child has just heard during the conversation. A similar pattern can be observed for referring expressions. The child introduced the referent only with a noun *dame* ('lady') and the mother replied with a dislocation, *la dame elle* ('the lady she'), thus offering the child a pronoun associated with the noun. The following contributions from the child consist of several attempts at producing a dislocation, first with only the noun postposed to the verb (Jul5) and then with approximating masculine

pronouns (*i(l)* / 'he '). In the meantime, the mother replied with a third-person clitic pronoun, thus providing the following pattern: “after a noun or dislocation follows a third-person clitic pronoun”. Jul42 and 43, in Example 13, and Jul51 and 52 in Example 12 replicate this pattern, the first time scaffolded by the mother’s confirmation and the second in a more independent way. These sequences clearly show how the association of different predicates and referring expressions, ordered according to a givenness hierarchy, can be gradually built upon throughout a dialogue. Autonomous contributions are the outcome of long-term dialogical contributions where children take up the form, the content, and the sequentiality of adult contributions. Certainly, fuller support of our hypothesis will require more longitudinal follow-ups.

4. Conclusion

The present chapter explored some ways in which verbal interactions contribute to the emergence of an association between third-person clitic pronouns and the givenness of the corresponding referents, in contrast to referential uses of nouns and demonstrative pronouns.

The first step of our research was aimed at determining whether the uses of referential expressions in French-speaking children, as in other languages, are similar to those of adults. The results confirmed this similarity, and more specifically (also in line with the literature) that discourse-given referents are the most prevalent context for using third-person clitic pronouns. This step also provided groundwork for addressing our main question: How are the pragmatic skills for reference acquired? We hypothesized that they are the outcome of children's linguistic experiences with dialogue, which allow them to gradually achieve a non-induced and then wholly child-initiated use of referring expressions. To test this hypothesis, we analyzed the relations between the children's utterances and their antecedents in the interlocutor's discourse, from three viewpoints: (1) the impact of the form of immediate antecedents, specifically through repetitions, or through the answer's structure, as framed by questions, (2) the various ways in which the child's utterances blend into the continuity of the dialogue, and (3) how children build upon their experiences with dialogical formats, either immediate or distant, and thereby gradually arrive at autonomous uses. We addressed the first and second issues quantitatively and the third, qualitatively.

Our previous research (Salazar Orvig et al., 2010b) already brought forth arguments for the hypothesis that third-person clitic pronoun use is rooted in dialogue, since the results showed that third-person clitic pronouns appeared immediately after mentions of the referent by the interlocutor. The form of

the interlocutor's referring expression proved not to have a significant influence, while its category did. Repetitions less frequently included pronouns than the other dialogical links. In other words, the child rarely "chose" a referring expression that reproduced the adult's. As for answers to questions, we noted that third-person clitic pronouns were never directly elicited by questions. At the second level, the analyses revealed that the use of third-person clitic pronouns mainly reflected dialogue continuity.

Does the absence of any significant effects of repetitions, questions, or form uptake occur uniformly throughout linguistic development? In order to answer to this question, it would be necessary to analyze a corpus with a larger MLU span than the one we had here.

Our analysis of examples at the third level, that is, the ways in which the children's utterances leaned on dialogue, suggest that during a first stage, children's referring rely on immediate and then distant models; at the next stage, independent uses appear, albeit anchored in previous sequences; lastly, the production of third-person clitic pronouns becomes more often child-initiated. This kind of sequences can be explained by Bruner's concept of formats. One characteristic that Bruner assigned to formats is particularly relevant here: formats are modular, in the sense that they are amenable as subroutines for incorporation into larger-scale routines (Bruner, 1983b). In other words, they are not simple repetitions of sequences but may involve increased generalization and abstraction. The shift observed in our examples,

from more scaffolded to more autonomous uses of third-person clitic pronouns, appears to reflect this evolution of formats. As proposed by Nelson (2007), dialogues provide children with a structure for building their own understanding of a task or concept.

This leads us to rethink the role of child-directed speech and input, at least in regard to referring expressions. As H. Clark (2014) put it, the central matter is not “talking-to” children (which would correspond to the traditional conception of input) but “talking-with” children, i.e., engaging them in interactive conversation. “They [adult and child] try to establish, as they go along, that they and their partner have understood what each other meant well enough for current purposes” (H. Clark, 2014: 334). It remains, however, that in adult-child conversation one of the participants is still a beginner conversationalist. Some form of “scaffolding” is still necessary.

Any analyses of the role of dialogue in language acquisition, and particularly, in the present case, in the use of referring expressions, would be incomplete if it does not take into account the fact that individualized, sustained, adult-child dialogue is not present in all cultures. As cross-cultural research has shown, children may be immersed from birth in the daily life of an extended social group rather than in a nuclear family. Moreover, in some cultures very little talk is addressed to children before they produce one- or two-word utterances. Despite these characteristics, children are not devoid of support for language acquisition (Brown, 1998; Ochs & Schieffelin, 1995; Rabain-

Jamin, Maynard & Greenfield, 2003). Whatever the culture, language is acquired in the framework of joint activities and conversations with more competent partners. Note also that in many Western countries children attend daycare centers or similar structures, which provide them with opportunities for polyadic verbal exchanges, and thereby contribute to their pragmatic development (Marcos et al., 2004).

Wittgenstein's concept of "language games" encompasses a diversity of existing conditions. For Wittgenstein (1953) "the meaning of a word is its use in the language" (§43), in the framework of language games, that is, "language and the actions into which it is woven" (§7). This concept intends "to bring into prominence the fact that speaking a language is part of an activity" (§ 23). In her chapter on lexical acquisition, Nelson invokes this notion to explain how shared meaning can be attained and points out that "in the child's case, the problem [of meaning] is that of learning the criteria of parents' (and others') use of words in joint activity" (Nelson, 2007: 14).

This seems particularly relevant to findings on the way children begin to use referring expressions. They most certainly grasp forms and constructions from the recurrent uses of their interlocutors. Children may even grasp word functions before managing to produce adult-like forms, as suggested by the fact that uses of fillers and null forms resemble those of third-person clitic pronouns uses (see da Silva-Genest et al., Chapter 3, this volume). The first uses of pronouns may therefore be inserted in preexisting functions or already

known language games. In sum, children acquire pragmatically meaningful ways of speaking rather than just syntactic or grammatical devices. The dialogical aspect of language games accounts for the fact that, before being able to build a model of his or her interlocutor's knowledge and needs, child's speech is scaffolded both by formats and by the meaning of the whole contextual activity.

Funding

This research was made *possible* thanks to the grant from the *ANR Agence Nationale de la Recherche* (French National Agency for Research: Grant n° ANR-09-ENFT-055).

Acknowledgements

We thank the internal and external anonymous reviewers, as well as Evan Kidd, for their helpful comments, the team of the DIAREF project (*Acquisition des Expressions Référentielles en dialogue: approche multidimensionnelle*) for their contribution to the scientific and methodological discussions. The data analyses reported here were conducted by the authors with the collaboration of Janina Klein, Marine Le Mené and Salma Nashawati. We thank Stefano Rezzonico for his invaluable advices for the statistical analysis. A special thank goes to Vivian Waltz for her thorough and rigorous English proof-reading.

References

- Allen, S. E. M. (2000). A discourse-pragmatic explanation for argument representation in child Inuktitut. *Linguistics*, 38(3), 483-521.
- Allen, S. E.M., Hughes, M. E., & Skarabela, B. (2015). The role of cognitive accessibility in children's referential choice. In L. Serratrice & S. E. M. Allen (Eds.), *The acquisition of reference* (pp. 123-153). Amsterdam: John Benjamins.
- Ariel, M. (1990). *Accessing noun-phrase antecedents*. London: Routledge.
- Bakhtin, M. (1979/1986). *Speech genres and other late essays*. Austin: University of Texas Press.
- Bates, D., Mächler, M., Bolker, B., & Walker, S. (2015). Fitting Linear Mixed-Effects Models Using lme4. *Journal of Statistical Software*, 67(1), 1-48. doi: 10.18637/jss.v067.i01.
- Brown, P. (1998). Conversational structure and language acquisition: The role of repetition in Tzeltal. *Journal of Linguistic Anthropology*, 8(2), 197-221.
- Bruner, J. S. (1975). From communication to language: a psychological perspective. *Cognition*, 3(3), 255-287.
- Bruner, J. S. (1983a). *Child's talk: learning to use language*. New York: W.W. Norton & Company.

- Bruner, J. S. (1983b). The acquisition of pragmatic commitments. In R. Michnick Golinkoff (Ed.), *The transition from prelinguistic to linguistic communication* (pp. 27-43). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Caët, S. (2012). Développement de la référence à soi chez une enfant de 1;05 à 3;00: de l'influence de l'input à la reconstruction du système. *Journal of French Language Studies*, 22(01), 77-93.
- Campbell, A. L., Brooks, P., & Tomasello, M. (2000). Factors affecting young children's use of pronouns as referring expressions. *Journal of Speech, Language and Hearing Research*, 43, 1337-1349.
- Clancy, P. M. (1993). Preferred argument structure in Korean acquisition. In E.V. Clark (Ed.), *Proceedings of the 25th annual child language research forum* (pp. 307-314). Stanford, CA: CSLI Publications.
- Clancy, P. M. (1996). Referential strategies and the co-construction of argument structure in Korean acquisition. *Typological Studies in Language*, 33, 33-68.
- Clancy, P. M. (2008). Dialogic priming and the acquisition of argument marking in Korean. In J. Guo, E. Lieven, N. Budwig, S. Ervin-Tripp, K. Nakamura & S. Ozcaliskan (Eds.), *Crosslinguistic approaches to the psychology of language: Research in the tradition of Dan Isaac Slobin* (pp. 105-117). New York: Psychology Press.

- Clark, E. V., & Bernicot, J. (2008). Repetition as ratification: How parents and children place information in common ground. *Journal of Child Language*, 35(02), 349-371.
- Clark, H. H. (2014). How to talk with children. In I. Arnon, M. Casillas, C. Kurumada & B. Estigarribia (Eds.), *Language in interaction. Studies in honor of Eve V. Clark* (pp. 333-352). Amsterdam: John Benjamins.
- Culbertson, J., & Legendre, G. (2008). Qu'en est-il des clitiques sujet en français oral contemporain? *Congrès Mondial de Linguistique Française - CMLF'08*.
<http://www.linguistiquefrancaise.org/articles/cmlf/abs/2008/01/cmlf08308/cmlf08308.html> doi:DOI 10.1051/cmlf08308.
- da Silva-Genest, C., Salazar Orvig, A., Marcos, H., Caët, S., & Heurdier, J. (2021). Young children's uses of referring expressions.. In A. Salazar Orvig, G. de Weck, R. Hassan & A. Rialland (Eds.), *The acquisition of referring expressions: a dialogical approach* (pp XXX-XXX). Amsterdam: John Benjamins.
- De Cat, C. (2005). French subject clitics are not agreement markers. *Lingua*, 115, 1195-1219.
- De Cat, C. (2013). Egocentric definiteness errors and perspective evaluation in preschool children. *Journal of Pragmatics*, 56, 58-69.

- De Cat, C. (2015). The cognitive underpinnings of referential abilities. In: L. Serratrice & S. E. M. Allen (Eds.), *The acquisition of reference* (pp.263-283). Amsterdam: John Benjamins.
- Guerriero, A.M. S., Oshima-Takane, Y., & Kuriyama, Y. (2006). The development of referential choice in English and Japanese: a discourse-pragmatic perspective. *Journal of Child Language*, 33(04), 823-857.
- Gundel, J. K., Hedberg, N., & Zacharski, R. (1993). Cognitive status and the form of referring expressions in discourse. *Language*, 69, 274-307.
- Gundel, J. K., & Johnson, K. (2013). Children's use of referring expressions in spontaneous discourse: Implications for theory of mind development. *Journal of Pragmatics*, 56, 43-57.
- Gundel, J. K., Ntelitheos, D., & Kowalsky, M. (2007). Children's use of referring expressions: some implications for theory of mind. *ZAS Papers in Linguistics*, 48, 1-22.
- Halliday, M. A. K. (1979). Development of texture in child language. In T. Myers (Ed.), *The development of conversation and discourse* (pp. 72-87). Edinburg: Edinburg University Press.
- Hickmann, M., Schimke, S., & Colonna, S. (2015). From early to late mastery of reference. Multifunctionality and linguistic diversity. In L.

- Serratrice & S. E. M Allen (Eds.), *The acquisition of reference* (pp.181-211). Amsterdam: John Benjamins.
- Hosmer, D. W., Lemeshow, S. & Sturdivant, R.X. (2013). Assessing the fit of the model. In D. W. Hosmer, S. Lemeshow & R.X. Sturdivant, (Eds.), *Applied logistic regression* (pp. 153-226). New York, NY: Wiley 10.1002/9781118548387.ch5
- Hothorn, T., & Zeileis, A. (2015). partykit: A modular toolkit for recursive partitioning in. *Journal of Machine Learning Research*, 16, 3905-3909.
- Huang, C. (2011). Referential choice and informativeness in mother-child conversation: A focus on the mother. *Language Sciences*. doi:10.1016/j.langsci.2011.10.003.
- Hugues, M. E., & Allen, S. E. M. (2006). A discourse-pragmatic analysis of subject omission in child English. In D. Bamman, D. T. Magnitskaia & C. Zaller (Eds.), *Proceedings of the 30th annual Boston University conference on language development* (pp. 293-304). Somerville, MA: Cascadilla Press.
- Hughes, M. E., & Allen, S. E.M. (2013). The effect of individual discourse-pragmatic features on referential choice in child English. *Journal of Pragmatics*, 56, 15-30.

- Levy, E. T. (1989). Monologue as development of the text-forming function of language. In: K. Nelson (Ed.), *Narratives from the crib* (pp. 123-161). Cambridge, MA: Harvard University Press.
- Levy, E. T., & Nelson, K. (1994). Words in discourse: a dialectical approach to the acquisition of meaning and use. *Journal of Child Language*, *21*, 367-389.
- Marcos, H., Salazar Orvig, A., Bernicot, J., Guidetti, M., Hudelot, C., & Préneron, C. (2004). *Apprendre à parler: influence du mode de garde*. Paris: L'Harmattan.
- Matthews, D., Lieven, E., Theakston, A. L., & Tomasello, M. (2006). The effect of perceptual availability and prior discourse on young children's use of referring expressions. *Applied Psycholinguistics*, *27*, 403-422.
- Nelson, K. (Ed.) (1989). *Narratives from the crib*. Cambridge, MA: Harvard University Press.
- Nelson, K. (2007). *Young minds in social worlds: Experience, meaning, and memory*. Cambridge, MA: Harvard University Press.
- Ninio, A., & Snow, C. (1996). *Pragmatic development*. Boulder: Westview Press.

- Ochs, E., & Schieffelin, B. (1995). The impact of language socialization on grammatical development. In P. Fletcher & B McWhinney (Eds.), *The handbook of child language* (pp. 73-94). Oxford: Blackwell.
- Paradis, J., & Navarro, S. (2003). Subject realization and crosslinguistic interference in the bilingual acquisition of Spanish and English: What is the role of the input? *Journal of Child Language*, *30*(2), 371-393.
- Pickering, M., & Garrod, S. (2004). Toward a mechanistic psychology of dialogue. *Behavioural and Brain Sciences*, *27*, 169-190.
- Rabain-Jamin, J., Maynard, A. E., & Greenfield, P. (2003). Implications of sibling caregiving for sibling relations and teaching interactions in two cultures. *Ethos*, *31*(2), 204-231.
- Rezzonico, S., Vinel, E., de Weck, G., Hassan, R., & Salagnac, N. (202X). Referring in dialogical narratives: a study on children's use of nouns and pronouns. In A. Salazar Orvig, G. de Weck, R. Hassan & A. Rialland (Eds.), *The acquisition of referring expressions: a dialogical approach* (pp. xxx-xxx). Amsterdam: John Benjamins
- Salazar Orvig, A. (2000). La reprise aux sources de la construction discursive. *Langages*, *140*, 68-91.
- Salazar Orvig, A., Marcos, H., Morgenstern, A., Hassan, R., Leber-Marin, J., & Parès, J. (2010a). Dialogical beginnings of anaphora: the use of

third-person pronouns before the age of 3. *Journal of Pragmatics*, 42(7), 1842-1865.

Salazar Orvig, A., Marcos, H., Morgenstern, A., Hassan, R., Leber-Marín, J., & Parès, J. (2010b). Dialogical factors in toddlers's use of clitic pronouns. *First Language*, 30(3-4), 374-402.

Salomo, D., Lieven, E., & Tomasello, M. (2013). Children's ability to answer different types of questions. *Journal of Child Language*, 40(2), 469-491.

Skarabela, B. (2007). Signs of early social cognition in children's syntax: The case of joint attention in argument realization in child Inuktitut, *Lingua*, 117(11), 1837-1857.

Veneziano, E., & Clark, E. V. (2016). Early verb constructions in French: adjacency on the left edge. *Journal of Child Language*, 43(6), 1193-1230.

Veneziano, E., & Sinclair, H. (2000). The changing status of 'filler syllables' on the way to grammatical morphemes. *Journal of Child Language*, 27, 461-500.

Vygotsky, L. S. (1933/1962). *Thought and language*. Cambridge, MA: M.I.T. Press.

- Wittek, A., & Tomasello, M. (2005). Young children's sensitivity to listener knowledge and perceptual context in choosing referring expressions. *Applied Psycholinguistics*, 26(4), 541 - 558.
- Wittgenstein, L. (1953). *Philosophical investigations*. Oxford: Basil Blackwell.