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CHAPTER 11

Referential features, speech genres and activity types

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Abstract

Based on a dialogic theoretical framework, this chapter explores the influence of speech genres and activities on the use of referring expressions. The study examines a corpus of 25 dialogues of French speaking children aged between 1;10 and 2;04 in various activities. Results show that referring expressions are not homogeneously used throughout activities and genres. Everyday activities increase the use of nouns and strong demonstrative pronouns, games with toys positively affect the use of strong demonstrative pronouns and iconic material entails a more frequent use of clitic demonstratives and to a lesser extent of 3rd person pronouns. However, discourse in activities is made of various speech genres which strongly affect the use of clitic pronouns. Clitic demonstratives are preferred for labeling and evaluation but 3rd person pronouns are used for description and narratives. The discussion deals with the

way these associations could be factors accounting for children's early choice of referring expressions.

Keywords: referring expressions, pronouns, activities, speech genres, dialogic perspective, language acquisition

1. Introduction

The aim of this chapter is to bring to light the influence of speech genres and activities on the use of referring expressions, in particular 3rd person clitic pronouns. This study mobilizes a dialogic perspective to explain young children's early abilities in the choice of referring expressions.

It is now well established that very young children contrast emerging referring expressions according to the salient accessibility features of the referent, such as joint attention and previous mention (Allen 2000; Gundel & Johnson 2013; Hughes & Allen 2013; Salazar Orvig, Marcos, Morgenstern, Hassan, Leber-Marín & Parès 2010; Skarabela, Allen & Scott-Phillips 2013, *inter alia*). For instance, in various languages, children as young as two years of age tend to use null forms or 3rd person pronouns (3rdPP) when the referent is under attentional or discursive focus, whereas they prefer strong forms (lexical NP, strong demonstratives) when the referent has not been previously mentioned. Moreover children grow to more adult-like uses throughout linguistic development: in languages where the subject is obligatory, such as French or English, 3rdPP progressively replace null forms. In addition, greater availability of 3rdPP does not result in a greater number of non-relevant, deictic uses.

While studies on naturally occurring dialogues show convergent results for various languages, experimental settings reveal that children experience difficulties in

dealing with perceptual cues when they are not scaffolded by discourse (Matthews, Lieven, Theakston & Tomasello 2006; Serratrice 2008; Wittek & Tomasello 2005). Studies on narratives also show young children misuse pronouns when introducing new referents or dealing with competing referents (de Weck 1991; Hickmann 2003; Karmiloff-Smith 1985; Peterson & Dodsworth 1991).

These controversial results have been interpreted from various perspectives related to the construction of reference: the textual/discursive competence, cognitive abilities and interactional mechanisms. Some of these approaches are based on the premise that children master, from the onset, the semantic values of referring expressions, and that they only need to develop pragmatic and cognitive skills. These perspectives disregard the gradual nature of the acquisition of semantic values and paradigms whereas, according to other approaches, such as usage-based ones, children start from non-analyzed expressions captured in specific contexts before using them in a productive way. Levy and Nelson (1994), for example, showed that children's uses of causal and temporal terms first reproduce their function in the parents' discourse (i.e. their pragmatic dimension), before grasping their meanings.

Usage-based approaches (Tomasello 2003) have also emphasized the role of children's experience of linguistic units through input and interaction. However, whereas the statistical dimension of the children's linguistic experience has been thoroughly explored for the acquisition of syntax and lexicon (see Lieven 2010, *inter alia*), there have been fewer studies on the impact of its socio-pragmatic dimension. Yet children's linguistic experience occurs in culturally defined contexts (formats, Bruner 1985; scripts, Nelson 2007), characterized by their social goals, such as meals, bath, games and play. As Bruner (1985) puts it, these routinized activities expose children to conventional ways of interacting, negotiating, and discussing the world,

and give them the opportunity to experience both language resources and social relations on a reduced and simplified scale. Our contention is that in these contexts, children experience the uses of referring expressions, which allows them to progressively discover their referential features. Consider the sequence in (1).

(1) Léa – 2;2 – MLU= 2.4, Activity free game with toys¹

In a discussion about the child's toys, her mother shows a baby boy

MOT	et ça c'est? [bebe]	'and that's?'
LEA	'bébé'	'baby'
MOT	bon (...)	'well'

(...) the mother shows again the doll to the child

MOT	est-ce que tu trouves qu'il est propre? [wi]	'do you think he is clean?'
LEA	'oui'	'yes'
MOT	non, mais regarde comme il est sale, tu lui as pas donné son bain? hein. [u?]	'no, but look how dirty he is. you haven't bathed him, have you?'
LEA	'où?'	'where?'
MOT	il est sale là + regarde là [wi ilesal]	'he is dirty there + look there'
LEA	'oui, il est sale'	'yes, he is dirty'

In (1) the child takes part in a discussion about a baby doll. She takes up her mother's expression (*il est sale* 'he is dirty') after having experienced it in her mother's previous descriptions of the doll. The use of the 3rdPP is not only consistent with the fact that the doll is under their joint attention but also with its inclusion in the ongoing activity. As various authors have suggested (François 1984; Nelson 2007; Tomasello

¹ Example captions indicate the name of the child, his/her age (years; months) and the Mean Length of Utterance (MLU) for the cited session. When the children's utterances are transcribed phonetically (between square brackets []), the interpretation in French is given in inverted commas. An approximate English translation is also given between inverted commas. Braces indicate uncertain transcriptions or alternative interpretations. {X} stands for uninterpretable or inaudible segments. In the interpretations and translations, 'F' stands for a filler syllable. '+' stands for a pause. '\$' marks overlapping segments.

2002), both early comprehension and emerging values of linguistic devices can be understood through their use within what Wittgenstein called language games “consisting of language and the actions into which it is interwoven” (Wittgenstein 1953: §7).

The entanglement between language and action has also been addressed by two other concepts, akin to language games, *speech genres* on the one hand, and *activities* on the other, which highlight different aspects of language uses. For *speech genre* we refer to Bakhtin’s definition (see also François 1993; Wertsch 1991), for whom “utterances reflect the specific conditions and goals of each [area of human activity] not only through their content (thematic) and linguistic style, that is, the selection for the lexical, phraseological and grammatical resources of the language, but above all through their compositional structure” (Bakhtin 1986: 60). Bakhtin puts forward not only the inseparability of the three components (content, style and compositional structure) but also the close bond of speech genres and activities. On the other hand, activities are “structures of cooperation/collaboration that organize the interaction of individuals with their environment” (Bronckart 2004: 100²); they involve language to varying degrees, as a mediating tool for human action and development (Vygotsky 1978; Wertsch 1991).³ Though activities and speech genres are intimately intertwined, they are not merged⁴. Activities are structured by their social purpose (i.e. business interactions, conversations between friends, meals, games), whereas speech genres are regular types of discursive organization (i.e.

² Our translation.

³ See also the fundamental contribution of Levinson (1979) addressing the relation between speech acts and speech events: “I take the notion of activity type to refer to a fuzzy category whose focal members are goal-defined, socially constituted, bounded events with constraints on participants, setting, and so on, but above all on the kinds of allowable contributions” Levinson 1979: 368).

⁴ In linguistics, this intricate relationship has also been addressed through different notions that share the view that language use is socially determined and that there are recurrent forms identified and mobilized by the members of a culture (see Halliday’s (1978) or Biber’s (1995) notion of *register*).

narratives, descriptions, argumentation) that can be mobilized in different activities, even though they are, at the same time, shaped by them.

Speech genres entail different ways to structure information and, therefore, contrasted uses of referring expressions (e.g. a narrative involves the maintenance of the referential chains of main characters, while recipes involve frequent introduction of new referents). As such, they predetermine the use and function of referring expressions (Fox 1987; Givón 1995; for a discussion see also Ariel 2008).

The influence of speech genres and activities on children's discourse has been mostly investigated in the field of speech acts and of the lexicon (Gleason, Phillips, Ely & Zaretsky 2009; Leaper & Gleason 1996, *inter alia.*) and syntax (Berman & Nir-Sagiv 2004; Chenu, Jisa & Mazur-Palandre 2012). Studies on the impact of speech genres and activities on children's use of referring expressions concern older children (see for example Jisa & Stomqvist 2002; Mazur-Palandre & Jisa 2012). In this chapter, we address the issue of toddlers' acquisition of referential features of 3rdPP through the perspective of the appropriation of these language games. This influence was investigated in a two-step process: for the first step, the more macroscopic one, dialogic sequences were characterized according to the activity in which participants were involved. The distribution of referring expressions was examined according to their occurrence in these various activity types. For the second step, speech genres were identified and referring expressions were characterized according to the genre in which they occur. Before presenting these results, we provide an overview of the corpus and methods of investigation (§2).

2. Referring expressions in a French corpus

Uses of referring expressions were studied in 25 dialogues⁵ of 23 French speaking children aged between 1;10 and 2;04 (see Table 1) in various situations, such as snack-time, picture reading, games, and play.

@@ insert table 1

Two kinds of statistical analysis were conducted: a Kruskal-Wallis rank sum test was run to compare the percentage of each referring expression across the three MLU groups; General Linear Mixed Effects Regressions (GLMER) were performed in order to assess the effect of contextual factors on the use of referring expressions. Successive binomial calculations were performed for each referring expression (as contrasted with all others) to assess the effect of each type of context (as contrasted to all others of the same category). Statistical models are presented in Appendix 1.

2.1 *The distribution of referring expressions*

The age range under study corresponds to a noticeable development of grammatical units, and more specifically of pronouns. In order to capture the influence of speech genres and activities on the uses of 3rdPP (*il(s)*, *elle(s)*, *le(s)*, *la*, i.e. ‘he’, ‘she’, ‘it’, ‘they’ ‘him’, ‘her’, ‘them’),⁶ we compared their use with the uses of three other referential devices, nouns, the clitic demonstrative pronoun *c-* (in *c’est*, a typical construction of spoken French, henceforth Clitic DP), and strong demonstrative

⁵ These data are part of a larger corpus analyzed for the research project, *DIAREF Acquisition des Expressions Référentielles en dialogue: approche multidimensionnelle*, funded by the French National Agency for Research, ANR-09- ENFT- 055). The data come from previous research projects (Marcos, Ryckebusch & Rabain-Jamin 2003; Marcos, Salazar Orvig, Bernicot, Guidetti, Hudelot & Préneron 2004; Morgenstern & Parisse 2010; Nashawati 2010; Salazar Orvig 2003).

⁶ As in other studies (Salazar Orvig et al. 2010; Hughes & Allen 2013), 1st and 2nd person pronouns were excluded because their use is influenced by other interactional factors (see Caët 2013, and Salazar Orvig & Morgenstern 2015).

pronouns (*ça*, *celui-ci*, *celui-là*, i.e. ‘this’ or ‘that’, henceforth Strong DP). Table 2 presents the frequencies of each type of referring expressions for each MLU group and the range between minimum and maximum values observed in individual children.

@@ insert table 2

As shown in Table 2, nouns are always the prevailing referring expressions (around 50%). Even though MLU group 3 presents a lower proportion of strong DPs (7.5%, compared to 14.7% in MLU1) and higher proportions of 3rdPPs (from 4.5 to 8.2%) and of clitic DPs (from 3.8 to 11.6%). differences between groups are not significant. Only clitic DPs grow significantly with MLU (see Appendix table II). This lack of significance is related to a wide individual variability. For each type of referring expression, large differences between minimum and maximum values remain similar throughout the three MLU groups. This striking variability suggests that grammatical development alone cannot account for the use or choice of referring expressions.

2.2 *Uses of referring expressions*

Let us now consider how children use these referring expressions. Expressions were categorized according to their referential uses and the discursive and attentional status of their referent, specifically whether the referent had been previously mentioned (DISCOURSE GIVEN), was under the attention of the dyad or part of the activity but had not been previously mentioned (ACTIVATED), was reintroduced after a topic change (REINTRODUCED), or was completely new in the interaction (NEW). A fifth category

grouped all non-referential uses (NON-REF), such as labeling, predicative uses, expletives and vocatives.

@@ insert figure 1

Figure 1 presents the distribution of referential uses for nouns and the three types of pronouns as well as their global distribution for all referring expressions. Let's remind that for statistical purposes each category was contrasted to all the other categories and one variable with all other variables. For example, 3rdPP was contrasted to all other referring expressions and assessed with respect to DISCOURSE GIVEN opposed to all other referential categories and so on for all referring expressions and the three activities. Figure 1 (see also Tables I to IV in Appendix) shows clear differences in the use of referring expressions. Compared to the three types of pronouns, nouns have more non-referential uses and encode significantly less often discourse-given referents 3rdPPs are mainly used to refer to a discourse given referent. They are more often associated to this status than other referring expressions. They are relatively infrequent for activated referents. Demonstrative pronouns (strong and clitic) are significantly more often associated to the latter.. In addition, Clitic DPs share with 3rdPP the prevalence in discourse-given contexts.

These data reveal a complex picture with great individual variability for the frequency of referring expressions and yet a very consistent functional adequacy, already shown in most studies on reference in young children dialogues. This divergence between high variability and functional consistency suggests that pragmatic competence comes before actual grammatical competence. The question remains how to explain this pragmatic competence when two year old children lack the cognitive abilities underpinning reference. Let us now turn to the contexts in which children experience these expressions.

3. Referring expressions, activities and speech genres in family dialogues

The contexts of use of referring expressions were studied through a twofold analysis. The first aspect concerned the interactive contexts in which participants act and dialogue, *i.e.* activities, and the second aspect, the recurrent discursive patterns that compose activities, *i.e.* speech genres.

3.1 *Activities and referring expressions*

As our data were not collected on the basis of a homogenous protocol, our corpus contains a wide range of activities. In order to simplify the presentation, the various activities were gathered into three groups, in terms of their aims, main objects and actions.

- a) **Everyday activities (EVERYDAY)** such as meals, bathing or dressing; these may unfold along two (or more) simultaneous tracks (see Goffman 1974): the primary interaction (such as dressing the child, feeding and eating) involves speech focused on the main actions and manipulated objects, while, simultaneously, participants can carry out detached conversations on various topics, even on absent referents or past and future events. Examples (4, 5, 9 and 10) give a glimpse of the heterogeneity of these communicative situations.
- b) **Activities focused on iconic material (ICONIC)** in which participants are focused on pictures or other representations, be it a book, a photograph, an

illustration, or a drawing. This includes joint picture-book reading (see 3) and board games like lotto or lotto-like puzzles (see 2).

(2) Clément, 2;3. MLU=2.3

The mother shows an animal on the puzzle board

MOT:	c'est quoi ça?	'what's that?'
CLE:	[de pɛ̃]	
	<he shows the animal>	
	'des (la)pins'	'rabbits'
MOT:	le lapin?	'the rabbit?'
CLE	[m]	'hm'
MOT:	non. regarde <she whispers> un lapin c'est pas grand comme ça <she points to the same animal>	'no, look, <she whispers> a rabbit isn't that big'.
CLE	[se pɛ̃]	
	'c'est (la)pin'	'it's rabbit'
MOT:	c'est un +..?	'it's a+'
CLE	[se ɛ̃ pɛ̃]	
	'c'est un (la)pin!'	'it's a rabbit'
MOT:	un cheval.	'a horse'
CLE	[ɛ̃ piva]	
	'un cheval'	'a horse'
MOT:	ouais.	yeah

c) **Activities with toys (TOYS)**, which include all games involving toy manipulation: building games, such as Lego® or toy bricks, symbolic play with figures, dolls, houses, farms, or other typical scripts (see 7), as well as playing with various object (see 8).

Figure 2 presents the distribution of referring expressions according to activity types.

@@ insert figure 2

Figure 2 shows that referring expressions are not homogeneously used throughout activities. The generalized mixed effect models (see tables I to IV in the Appendix) assess the weight of activities as factors explaining the choice of each of the four types of referring expressions. Once again, each category was contrasted with all

other categories and one variable with all other variables. For example 3rdPP was contrasted to all other referring expressions (nouns+demonstrative pronouns+ other referring expressions) and assessed with respect to one activity, for example, Iconic material contrasted to the other two activities, and so on for all referring expressions and the three activities. Whereas everyday activities significantly increase the use of nouns, they have the opposite effect on 3rdPP pronouns and clitic and strong DPs, which are significantly less frequent in these contexts. Games with toys positively affect the use of strong DPs, do not significantly affect 3rdPP and have a significant negative impact on nouns. Iconic material entails more frequent use of Clitic DPs, and, to a lesser extent, of 3rdPPs. These various associations between activities and referring expressions could be one of the factors explaining the great variability in the distribution of referring expressions across children.

3.2 Speech genres and referring expressions

Activities are themselves multiform with regard to speech. They mobilize various speech genres which present both specific structures and styles. Even though speech genres such as narratives, argumentation, description, and explanation are usually identified as discourse sequences, they are intrinsically heterogeneous. For instance, narratives include secondary genres such as description, explanation, and evaluation (see for example Labov's (1972) analysis of narrative syntax); argumentation sequences include narratives or descriptions typically used as arguments. In their varied communicative experience, children often face these complex patterns, as illustrated in (3), where the mother displays various speech genres while looking at a picture-book:

(3) Théo, 02;03, MLU=2,23, Activity: joint reading

Théo and his mother are looking at a catalogue with Disney characters

MOT	c'est un petit garçon qu'est- ce qu'i(l) avait de particulier <le> [/] le Pinocchio	'it's a little boy. what did Pinocchio have in particular?'
THE	{xxx}	
MOT	il a un grand?	'he has a big?'
THE	{xxx}	
MOT	tu connais l'histoire?	'do you know the story?'
THE	[wi] 'oui'	'yes'
MOT	qu'est-ce qu'il a euh Pinocchio? il a un grand +++? regarde-moi, regarde <she shows her own nose to Théo>	'what does hum Pinocchio have? he has a big ... look at me, look'
THE	[ne] 'nez'	'nose'
MOT	oh il a un grand nez. et quand il raconte des mensonges? quand il dit pas la vérité	'oh he has a big nose. and when he tells lies? when he doesn't tell the truth'
THE	oh	'oh'
MOT	son nez i(l) grandit, i(l) grandit, i(l) grandit	'his nose it grows, it grows, it grows'
THE	[a grãdi] 'F grandit'	'F grows'
THE	[ẽgãne] 'un g(r)rand nez'	'a big nose'
MOT	il a un grand nez. exactement, il a un grand nez Pinocchio parce qu'il a raconté des mensonges.	'he has a big nose. exactly, Pinocchio, he has a big nose because he told lies'

The dialogical sequence above includes a description of Pinocchio's nose, the recall of a narrative (what happens when he lies) and an explanation (his nose grows because he lies). Therefore, an analysis at the sequence level would entail a unique characterization of the context (according to what would be considered the primary communicative intent) either as a narrative, an explanation, or a description, wiping out the diversity of speech genres displayed by the participants. In order to capture the conditions of the use of referring expressions, we opted for a more fine-grained

analysis on the utterance level. Utterances were coded according to eight speech genres:

- a) **NEGOTIATION:** when utterances aim to change or regulate immediate or future activities, actions and events (see Ninio & Snow 1996). These include directives, commitments, threats, instructions, rules, or proposed of new actions, and their respective responses (see 4)

(4) Serena, 02;03, MLU=2.45, Activity: Snack

MOT	qu'est-ce que tu veux faire?	'what do you want to do?'
SER	[omanɛ]	
	'au manège!'	'to (go on) the merry-go-round!'
MOT	tu veux aller au manège?	'you want to go on the merry-go-round?'
SER	[nãdabɔ̃lso]	
	'nan d'abord F seau'	'no, first to F bucket ⁷ '
MOT	d'abord au seau? Ah!	'first to the bucket? oh!'

- b) **DESCRIPTION:** when utterances encode the features of an object, a person, actions or events. This includes existential utterances, identifications, and comparisons. Descriptions of current actions or events (5) were also included in this category.

(5) Margaux, 02;03, MLU=2.62, Activity: Snack

MAR	[ʃakul]	
	'ça coule'	'it is running'
MOT	il coule ton nez?	'you have a runny nose?'

- c) **NARRATIVE:** utterances involve actions and events that are not located in the here and now of the interaction. They can correspond to fictional or personal experience narratives (6).

(6) Daniel, 2;4, MLU=2.39, Activity: Conversation.

⁷ The child probably meant that she wanted to go play in the sandbox.

Daniel is talking with his sister (SIS) and the observer (OBS). The sister tells about their uncle, Gérard, who recently visited them

SIS	Gérard une fois il m'a fait toucher le plafond	'once, Gérard made me touch the ceiling'
OBS	c'est vrai?	'really?'
SIS	oui	'yes'
OBS	quand ça? hier?	'when? yesterday?'
DAN	[ijɛ tufɛ mɔ tafɔ tɔtɔ] 'hier toucher mon plafond tonton'	'yesterday, touch my ceiling uncle'
OBS	il t'a fait toucher le plafond à toi aussi, Daniel?	'he made you touch the ceiling too, Daniel?'
SIS	non pas lui, pas lui hein?	'no, not him, not him, right?'
OBS	non?	'no?'
DAN	[si amwa tufɛ {mɔ} amwa fãfɔ] 'si à moi toucher {mon} à moi plafond'	'yes to me touch {my} to me ceiling''

d) EVALUATION: corresponds to the expression of the speaker's positioning about a state of affairs. See in example (7) the child's assessment (*est trop grand*, 'is too big') and her father's reply (*mais non c'est pas trop grand*, 'no, it's not too big').

(7) Iris, 01;11, MLU=1.30, activity: playing with Mr. Potato Head

FAT	mets-lui ses lunettes. mets-lui. regarde	'put his glasses on. put.(them) on look'
IRI	[nɔ̃ɛkʁɔgʁã] 'non est trop grand'	'no is too big'
FAT	mais non c'est pas trop grand	'no, it's not too big'
IRI	[nɔ̃ɛkʁɔgʁã. sɛpuʁkʁis] 'est trop grand. c'est pour (I)ris'	'is too big. it's for (I)ris'

e) LABELING corresponds to the act of naming objects or events (8).

(8) Anaé2, 2;00 MLU=2.67, activity: playing with various toys

ANA	[apul] 'F poule'	'F hen'
MOT	et tu / tu es sure que c'est une poule ça?	'and you you're sure that that's a hen?'
ANA	[we] 'ouais'	'yeah'
MOT	regarde bien	'look better'
ANA	[a::]	

	‘ah’	‘ah’
MOT	‘c’est pas plutôt un pin(gouin)’	‘isn’t it rather a pen(guin)?’
ANA	++ [gwɛ̃]	
	‘(pin)gouin’	‘(pen)guin’
MOT	bah oui! c’est pas tout à fait une poule.	‘well yes! it isn’t really a hen’

f) EXPLANATION: corresponds to utterances that give (or ask for) the cause or reason of an event or a behavior (Veneziano & Sinclair 1995), as well as argumentative moves that aim to bring the interlocutor to a shared conclusion. In example (9) the mother and child discuss the reason the child does not toast with her mother.

(9) Léa, 2;02, MLU=2.40, Activity: Snack

Léa is drinking milk from her bottle. Her mother has a glass of water.

MOT	{on fait} tchin? +++ tchin tchin?	‘do we say cheers? cheers +++ cheers?’
LEA	[e! {fotjɛ} dɛlotʃintʃin] ‘hé! {faut qu’y ait} de l’eau tchin tchin’	‘hey there has to be water cheers ‘
MOT	eh ben! tchin tchin. pour toi c’est de l’eau pour faire tchin tchin avec maman? on boit de l’eau? pas forcément hein:	‘well! cheers. for you there must be water to say cheers with mum? we have to drink water? well, not necessarily’

g) METALINGUISTIC USES: include all questions, directives or comments on participants’ speech behavior or linguistic forms, including clarification sequences as in (10).

(10) Ilona, 2;03, MLU=2.58, Activity: snack

MOT	(...) tu veux d(e) la brioche?	‘do you want a bun?’
ILO	[øwi] ‘euh oui’	‘hum yes’
MOT	hein?	‘what?’
ILO	[wimwawøbʁijʃɔʃokola] ‘oui moi veux bri(o)che au chocolat’	‘yes I want chocolate bun’

- h) **OTHER:** all other kinds of utterances, including greetings, thanking, counting, utterances, performing acts in games, marking, back channel, exclamations, onomatopoeic sounds.
- i) **UNCERTAIN:** refers to cases when the context does not allow characterization of the utterance.

Do speech genres influence the frequency of referring expressions? Figure 3 shows the distribution of 3rdPP, clitic demonstratives, strong demonstratives and nouns according to the speech genres in which they appear.

@@ insert figure 3

Speech genres was the fourth variable considered in the generalized mixed models (see tables I to IV in the Appendix) in order to account for the choice of referring expressions. In this case, each type of referring expression was contrasted to all other referring expressions and assessed for the influence of one speech genre as contrasted with all the others. Figure 3 shows that the distribution of nouns reflects the overall distribution of referring expressions, except that they are significantly less often used for description and for evaluation. Strong DPs follow a similar pattern but they are dispreferred for narratives. In contrast, clitic forms, 3rdPPs and clitic DPs are more positively influenced by speech genres. Clitic DPs are more likely to be used for labeling and evaluative discourse and less for description and for negotiation. On the other hand, 3rdPP are significantly more likely to be used for description than for any other speech genre. Moreover, for 21 of the 25 Sessions studied, description ranges from 42% to 100% of the uses of 3rdPP. Similarly, even though narratives are not very frequent in our observations, children use significantly more 3rdPPs in this context than in the six other genres. 3rdPPs are significantly less frequent in labeling.

These results show that the use of emerging pronouns is strongly linked to speech genres. Considering 3rdPPs, the focus of this study, description appears as their prototypical genre. As can be seen in (11), this preferred genre does not necessarily reflect the adult's immediate uses where description is subordinated to negotiation. The child's negotiation utterances are solely acceptance and refusals without involving the use of referring expressions. However, she also replies to her mother with descriptive utterances which give her the opportunity to actually produce referring expressions.

(11) Léa 2;02 – MLU= 2,40 Activity: free game with toys

Léa and her mother are talking about a doll

MOT il est sale là. + regarde là. 'he is dirty there. look there'

LEA [wi ilesal]

'oui il est sale' 'yes he is dirty'

MOT qu'est-ce qu'on fait alors? 'what do we do then?'

A pile of stuffed animals falls down

LEA [bẽ. §onõ! etu tõbe§]

'ben. oh non! est tout tombé' 'well. oh no! it all fell!'

MOT § hein § on lui donne le bain? 'so. do we give him a bath?'

LEA [nõ]

'non' 'no'

MOT on le laisse sale? 'do we leave him dirty?'

LEA [wi]

'oui' 'yes'

MOT à tes souhaits:: 'bless you'

LEA [i:simba kãmsezoli]

'{i} Simba comme c'est joli' '{ee}! Simba how pretty it is'

MOT tu veux qu'on fasse une maison avec les legos. 'do you want to build a Lego house?'

LEA [wi]

'oui' 'yes'

MOT- oui 'yes'

LEA [wi. {isõdõdã}]

'oui. ils sont dedans' 'yes. they are inside'

LEA [wi]

'oui' 'yes'

MOT	ils sont dedans. tu les prends pour voir. tu me donnes les: donne-moi tous les legos: bleus.	‘they are inside. you take them out and (we’ll) see. you give me the: give me all the blue Legos’
LEA	[isɔ̃u?] ‘ils sont où?’	‘where are they?’
MOT	ben, cherche les.	‘well, look for them’
LEA	[isɔ̃la] ‘ils sont là’	‘they are there’

4. How can speech genres affect the acquisition and use of referring expressions?

This study aims to contribute to the understanding of early appropriate uses of 3rdPPs by French speaking children, from a dialogic perspective. As noted above, previous studies have clearly shown that young children tend to use 3rdPPs when the referent is in focus, whereas they prefer strong forms (lexical NP, strong DPs) when it has not been previously mentioned. Undoubtedly, this early ability cannot be explained by a single factor. Without overlooking the possible influence of cognitive development on the one hand (De Cat 2015; Gundel & Johnson 2013), and of dialogue dynamics on the other (Matthews et al. 2006), not to mention factors pertaining to linguistic development itself, our contention is that communicative experiences both in their cultural and interactive dimensions (Vygotsky 1978; Bruner 1983; Clancy 1996; Nelson 2007 *inter alia*) form the basis on which this ability develops. We studied the contexts of use of 3rdPPs (compared to nouns and demonstratives) in a two-step process: through the general social context of activities and through their discursive components, i.e. speech genres. Both activity types and speech genres proved to be factors that clearly account for preferential uses of referring expressions. Games with toys entail the use of strong DPs whereas activities involving iconic material involve a

more frequent use of Clitic DPs and 3rdPPs. Everyday activities increase the use of nouns and strong DPs. However, clitic forms are more strongly affected by speech genres than by activities. More specifically, description accounts for 61% of the uses of 3rdPPs whereas clitic DPs are more frequently used in labeling. On the other hand, strong forms (nouns and strong DPs) seem to be noticeably less influenced by speech genre, or only influenced in a negative manner: nouns are dispreferred for description while strong demonstratives are dispreferred for narratives.

Given these results, it is relevant to wonder why description is a particularly suited genre for the use of 3rdPP and how this prevalence could explain their early referential features in children's discourse. As Ariel (2008) puts it, when discussing Biber's data, the statistical distribution could be affected by discourse function, such as topicality. However, whilst, for Ariel, discourse functions explain the use of pronouns in various contexts, the question remains how these pervasive associations are developed in children.

Paradoxically, the close association of 3rdPPs and description cannot be explained by the precocity of the speech genre, given that description has not been identified as a use of language as early as labeling or negotiation (Ninio & Snow 1996). Rather, we propose that the explanation may lie in the discursive (or dialogic) position of descriptive utterances. As observed in examples (1, 3, 5 and 11), descriptive utterances often appear as a second move after the identification or the labeling of the referent. Therefore, these discursive moves necessarily concern previously-mentioned referents.

We can thus contemplate the possibility of an acquisition process that goes, as Nelson (2007) would say, from pragmatics to meaning. Children experience various aspects of reference on a reduced and simplified scale through routine activities. They

first identify recurrent non-analyzed sequences like ‘introduction of a referent followed by a description’ which would contain 3rdPPs. These sequences can be seen as “formats” (Bruner 1985), which are typically recurrent and yet not completely repetitive. Children learn to contribute with the second part of the sequence through various dialogical moves, such as answers, uptakes or autonomous contributions. This first step of learning is not a simple memorization; it requires an active cognitive participation of the child, to retrieve the common contextual framework of sequences. Referential features of 3rdPPs would be first closely linked to the fact that, in the case of description, the discursive move is subsequent to the first mention of the referent, and thus that the referent is already present in the dialogue. Around age 2, the strong association between description and 3rdPPs could explain both individual variability for the occurrences of pronouns and their consistent use for previously-mentioned referents. Further accumulation and diversification of communicative experiences would allow children to generalize the use of 3rdPPs to all second position moves in other genres, as we can see in the first uses in narratives in our corpus. Our results thus suggest that children do not learn linguistic units with their semantic or referential value from the onset but that they first grasp how to use them in communicative situations. The constitution of the semantic and referential representation of the linguistic device would come in a third and last stage, when diversified experiences reach a critical mass. The fact that strong forms (nouns and strong demonstratives) seem less influenced by speech genres could be an argument to support this hypothesis. Indeed, as nouns and strong DPs are the earliest forms in language development, they might now be less dependent on original sequences and used in a more generalized manner than emergent clitic forms. This hypothesis is

consistent with usage-based approaches and interactional analysis, but needs to be further investigated with longitudinal studies.

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References

- Allen, S. E. M. 2000. A discourse-pragmatic explanation for argument representation in child Inuktitut. *Linguistics* 38(3): 483–521.
- Ariel, M. 2008. *Pragmatics and grammar*. Cambridge: Cambridge University Press.
- Bakhtin, M. 1986. *Speech Genres and other late essays*. Austin: University of Texas Press.
- Berman, R. A. & Nir-Sagiv, B. 2004. Linguistic indicators of inter-genre differentiation in later language development. *Journal of Child Language* 31(02): 339–380.
- Biber, D. 1995. *Dimensions of register variation: A cross-linguistic comparison*. Cambridge: Cambridge University Press.
- Bronckart, J.-P. 2004. Les genres de textes et leur contribution au développement psychologique. *Langages* (153): 98–108.
- Bruner, J. S. 1983. *Child's talk; learning to use language*. New York: W.W. Norton & Company.
- Bruner, J. S. 1985. The role of interaction formats in language acquisition. In *Language and social situations*, J. Forgas (ed.), 31-46. New York: Springer.
- Caët, S. 2013. *Référence à soi et à l'interlocuteur chez des enfants francophones et anglophones et leurs parents*. PhD dissertation, Université Sorbonne Nouvelle – Paris 3.
- Chenu, F., Jisa, H. & Mazur-Palandre, A. 2012. Développement de la connectivité syntaxique à travers deux types de textes à l'oral et à l'écrit. Paper presented at the Congrès Mondial de Linguistique Française - CMLF 2012. *SHS Web of Conferences* 1 (2012) DOI 10.1051/shsconf/20120100253.

- Clancy, P. M. 1996. Referential strategies and the co-construction of argument structure in Korean acquisition. *Typological Studies in Language* 33: 33–68.
- De Cat, C. 2015. The cognitive underpinnings of referential abilities. In *The acquisition of reference*, L. Serratrice & S. E. M. Allen (eds), 263–283. Amsterdam: John Benjamins.
- de Weck, G. 1991. *La cohésion dans les textes d'enfants. Etude du développement des processus anaphoriques*. Neuchâtel: Delachaux et Niestlé.
- Fox, B. A. 1987. *Discourse structure and anaphora*. Cambridge: Cambridge University Press.
- François, F. 1984. Problèmes et esquisse méthodologique. In *Conduites linguistiques chez le jeune enfant*, F. François, C. Hudelot & E. Sabeau-Jouannet, 13-116. Paris: PUF.
- François, F. 1993. *Pratiques de l'oral. Dialogue, jeu et variations des figures du sens*. Paris: Nathan Pédagogie.
- Givón, T. 1995. Coherence in text vs. coherence in mind. In *Coherence in spontaneous text*, M. A. Gernsbacher & T. Givón (eds.), 59-115. Amsterdam: John Benjamins.
- Gleason, J. B., Phillips, B. C., Ely, R. & Zaretsky, E. 2009. Alligators all around: The acquisition of animal terms in English and Russian. In *Crosslinguistic approaches to the psychology of language: research in the tradition of Dan Isaac Slobin*, J. Guo, E. Lieven, N. Budwig, S. Ervin-Tripp, K. Nakamura & S. Ozcaliskan (eds.), 17-26. New York: Psychology Press.
- Goffman, E. 1974. *Frame Analysis*. New York: Harper and Row.

- 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.
- Halliday, M. A. K. 1978. *Language as Social Semiotic: The Social Interpretation of Language and Meaning*. London: Arnold.
- Hickmann, M. 2003. *Children's discourse: person, time and space across languages*. Cambridge: Cambridge University Press.
- Hughes, M. E. & Allen, S. E. 2013. The effect of individual discourse-pragmatic features on referential choice in child English. *Journal of Pragmatics* 56: 15–30.
- Jisa, H. & Stomqvist, S. 2002. Pragmatique et acquisitions tardives chez l'enfant: langage oral et langage écrit. In *Pragmatique et Psychologie*, J. Bernicot, A. Trognon, M. Guidetti & M. Musiol (eds), 257–265. Nancy: Presses Universitaires de Nancy.
- Karmiloff-Smith, A. 1985. Language and cognitive processes from a developmental perspective. *Language and Cognitive Processes* 1(1): 61–85.
- Labov, W. 1972. The transformation of experience in narrative syntax. In *Language in the inner city*, W. Labov, 354–396. Philadelphia: University of Pennsylvania Press
- Leaper, C. & Gleason, J. B. 1996. The relationship of play activity and gender to parent and child sex-typed communication. *International Journal of Behavioral Development* 19(4): 689–703.
- Levinson, S. C. 1979. Activity types and language. *Linguistics* 17(5–6): 365–400.
- 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.

- Lieven, E. 2010. Input and first language acquisition: Evaluating the role of frequency. *Lingua* 120(11): 2546–2556.
- Marcos, H., Ryckebusch, C. & Rabain-Jamin, J. 2003. Adult's responses to young children's communicative gestures: joint achievement of speech acts. *First Language* 23(2): 213–237.
- 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. V. M., 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.
- Mazur-Palandre, A. & Jisa, H. 2012. Introduire et développer l'information: une acquisition tardive? *CogniTextes* 7. URL : <http://cognitextes.revues.org/597>
- Morgenstern, A. & Parisse, C. 2010. The Paris Corpus. *French Language Studies* 22(1): 7–12.
- Nashawati, S. 2010. *Le développement des expressions référentielles chez le jeune enfant: noms et pronoms dans des dialogues mère-enfant*. Ph. D. dissertation, Université Sorbonne Nouvelle - Paris 3..
- 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.
- Peterson, C. & Dodsworth, P. 1991. A longitudinal analysis of young children's cohesion and noun specification in narratives. *Journal of Child Language* 18: 397–415.
- Salazar Orvig, A. 2003. L'inscription dialogique du jeune enfant: évolution, diversité et hétérogénéité. *TRANEL* (38–39): 7–24.

- Salazar Orvig, A. & Morgenstern, A. 2015. Acquisition and uses of pronouns in a dialogic perspective. In *The acquisition of reference*, L. Serratrice & S. E. M. Allen (eds), 155–180. Amsterdam: John Benjamins.
- Salazar Orvig, A., Marcos, H., Morgenstern, A., Hassan, R., Leber-Marin, J. & Parès, J. 2010. Dialogical beginnings of anaphora: the use of third person pronouns before the age of 3. *Journal of Pragmatics* 42(7): 1842–1865.
- Serratrice, L. 2008. The Role of Discourse and Perceptual Cues in the Choice of Referential Expressions in English Preschoolers, School-Age Children, and Adults. *Language Learning and Development* 4(4): 309–332.
- Skarabela, B., Allen, S. E. & Scott-Phillips, T. C. 2013. Joint attention helps explain why children omit new referents. *Journal of Pragmatics* 56: 5–14.
- Tomasello, M. 2002. Things Are What They Do: Katherine Nelson's Functional Approach to Language and Cognition, *Journal of Cognition & Development* 3: 5-19.
- Tomasello, M. 2003. *Constructing a language. A usage-based theory of language acquisition*. Cambridge, Ma. and London: Harvard University Press.
- Veneziano, E. & Sinclair, H. 1995. Functional changes in early child language: the appearance of references to the past and of explanations. *Journal of Child Language* 22: 557–581.
- Vygotsky, L. S. 1978. *Mind in society* (M. Cole, V. John-Steiner, S. Scribner & E. Souberman (eds). Cambridge, MA: Harvard University Press.
- Wertsch, J. 1991. *Voices of the mind*. Hemel Hemstead: Harvester Wheatsheaf.
- 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* (G. E. M. Anscombe, Trans.):

Oxford: Basil Blackwell.

Appendix

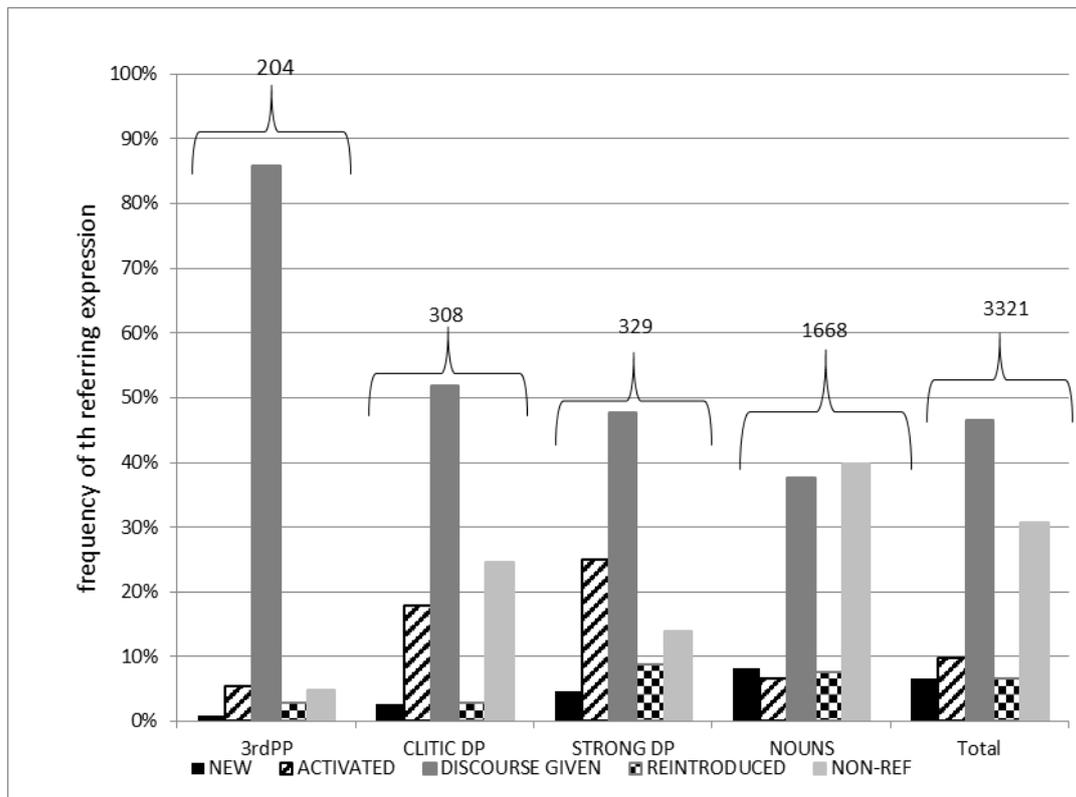
@@ insert tables Ia-IVc

MLU group	MLU range	Age range	No. of children ⁸	No. of observations
MLU group 1	1.3 – 1.92	1;10 – 2;03	7	7
MLU group 2	2.04 – 2.50	1;10 – 2;04	8	9
MLU group 3	2.52 – 2.96	1;10 – 2;03	9	9

Table 1 – Corpus of French speaking children in naturally occurring dialogues

	3 rd PPs		Clitic DP		Strong DPs		Nouns		Other RE ⁹		Total					
	Total	Range	Total	Range	Total	Range	Total	Range	Total	Range	raw					
	%		%		%		%		%		No.100%					
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max						
MLU1	4.5	0	16.7	3.8	0	7.9	14.7	2.6	45.7	50.2	24.0	80.7	26.9	8.8	35.1	763
MLU2	4.9	0	14.9	10.1	0	18.2	9.7	2.0	18.4	50.8	39.6	80.7	24.6	9.1	35.4	1171
MLU3	8.2	1.4	33.9	11.6	6.0	18.6	7.5	0.0	13.3	49.8	11.9	64.2	23.0	6.1	50.9	1387

Table 2 – Distribution of referring expressions in children’s discourse according to MLU (Total % for each group and range of individual values)



NB: Raw numbers indicate the total number of tokens for each category of referring expressions

⁸ One child was observed at 1;10; (MLU group 1) 2;3 and 2;4 (MLU group 2).

⁹ Table 2 includes also the values of all other expressions (other pronouns, such as possessives or interrogatives, and fillers and null forms) even if henceforth they will not be mentioned.

Figure 1 Referential uses of 3rd person pronouns, clitic and strong demonstrative pronouns and nouns

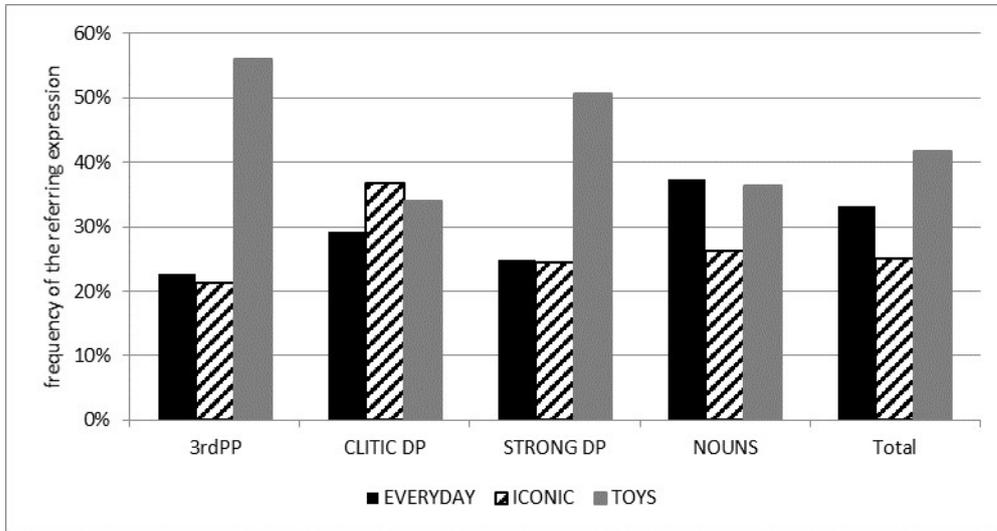


Figure 2 - Distribution of referring expressions according to activities

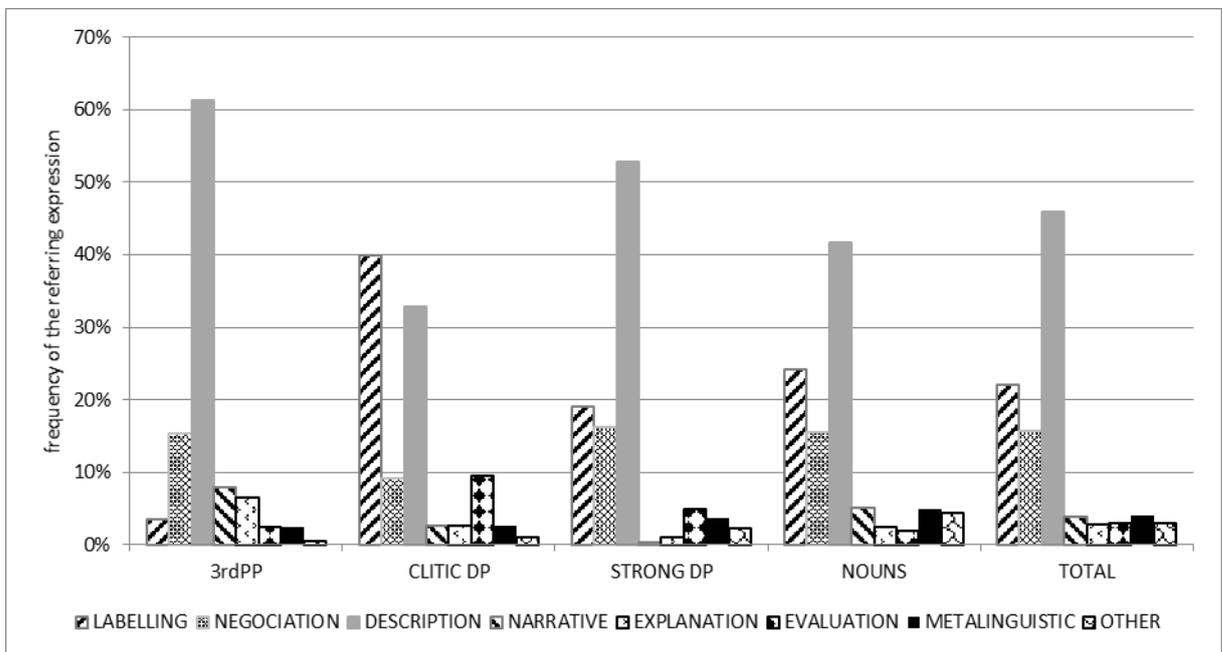


Figure 3 - Distribution of referring expressions according to speech genres

Appendix

Table Ia. Strongest GLMER model for 3rd person pronouns

Random Effect		<i>Variance</i>	<i>SD</i>		
	Sessions	1.047	1.023		
Fixed effects		<i>Estimate</i>	<i>SE</i>	<i>z</i>	<i>p</i>
	(Intercept)	-6.2808	1.1084	-5.666	1.46 ^{e-08} ***
	MLU	0.7787	0.4666	1.669	0.095104
	ATTENTIONAL AND DISCURSIVE STATUS: DISCOURSE GIVEN	2.1584	0.2094	10.309	< 2 ^{e-16} ***
	ACTIVITY TYPE: EVERYDAY	-0.6387	0.2364	-2.702	0.006889*
	GENRE: DESCRIPTION	0.5596	0.1652	3.387	0.000707***

Note: SD = Standard Deviation; SE= Standard Error; Number of observations: 3321; groups (Sessions): 26; C-statistics: 0.8505452

Table Ib Comparative GLMER model for 3rd Person Pronoun with the same factors than table IIa (model for Clitic Demonstrative Pronoun)

Random Effect		<i>Variance</i>	<i>SD</i>		
	Sessions	1.046	1.023		
Fixed effects		<i>Estimate</i>	<i>SE</i>	<i>z</i>	<i>p</i>
	(Intercept)	64.2973	1.0908	-3.940	<.00001***
	MLU	0.6422	0.4629	1.387	0.16530
	ATTENTIONAL AND DISCURSIVE STATUS: ACTIVATED	-0.6485	0.3225	-2.011	0.04431 *
	ACTIVITY TYPE: ICONIC	0.7079	0.2715	2.607	0.00914 **
	GENRE: LABELLING	-2.2196	0.3890	-5.706	<.00001 ***

Note: SD = Standard Deviation; SE= Standard Error; Number of observations: 3321; groups (Sessions): 26; C-statistics: 0.8135431

Table Ic : Additional GLMER model : genre narrative

Random Effect		<i>Variance</i>	<i>SD</i>		
	Sessions	0.9847	0.9923		
Fixed effects		<i>Estimate</i>	<i>SE</i>	<i>z</i>	<i>p</i>

(Intercept)	-3.0289	0.2253	--13.443	<.00001 ***
GENRE: NARRATIVE	0.9095	0.3053	2.979	0.00289 **

Note: SD = Standard Deviation; SE= Standard Error; Number of observations: 3321; groups (Sessions): 26; C-statistics: 0.7804639

Table IIa Strongest GLMER model for Clitic demonstrative pronoun

Random Effect	<i>Variance</i>	<i>SD</i>		
Sessions	0.2794	0.5286		
Fixed effects	<i>Estimate</i>	<i>SE</i>	<i>z</i>	<i>p</i>
(Intercept)	-5.0309	0.6785	-7.415	<.00001 ***
MLU	0.8848	0.2814	3.145	0.001664 **
ATTENTIONAL AND DISCURSIVE STATUS: ACTIVATED	0.7498	0.1693	4.430	<.00001 ***
ACTIVITY TYPE: ICONIC	0.6228	0.1750	3.558	0.000374 ***
GENRE: LABELLING	0.8692	0.1357	6.404	<.00001 ***

Note: SD = Standard Deviation; SE= Standard Error; Number of observations: 3321; groups (Sessions): 26; C-statistics: 0.7156903

Table IIb: Comparative GLMER model for Clitic Demonstrative Pronoun (same factors that model Ia for 3rd person pronoun)

Random Effect	<i>Variance</i>	<i>SD</i>		
Sessions	0.3037	0.5511		
Fixed effects	<i>Estimate</i>	<i>SE</i>	<i>z</i>	<i>P</i>
(Intercept)	-4.4419	0.2908	-6.412	<.00001 ***
MLU	0.9500	0.2908	3.267	0.00109 **
ATTENTIONAL AND DISCURSIVE STATUS: DISCOURSE GIVEN	0.3492	0.1246	2.802	0.00508 **
ACTIVITY TYPE: EVERYDAY ACTIVITIES	0.5088	0.1573	-3.234	0.00122 **
GENRE: DESCRIPTION	-0.6693	0.1313	-5.098	<.00001 ***

Note: SD = Standard Deviation; SE= Standard Error; Number of observations: 3321; groups (Sessions): 26; C-statistics: 0.6993154

Table IIc: Additional GLMER models for Clitic Demonstrative Pronoun**Genre Evaluation**

Random Effect		<i>Variance</i>	<i>SD</i>		
	Sessions	0.3996	0.6321		
Fixed effects		<i>Estimate</i>	<i>SE</i>	<i>z</i>	<i>P</i>
	(Intercept)	-4.4419	0.2908	-6.412	<.00001***
	GENRE: EVALUATION	0.9500	0.2908	3.267	0.00109 **

Note: SD = Standard Deviation; SE= Standard Error; Number of observations: 3321; groups (Sessions): 26; C-statistics: 0.699315

Genre Negotiation

Random Effect		<i>Variance</i>	<i>SD</i>		
	Sessions	0.3996	0.6321		
Fixed effects		<i>Estimate</i>	<i>SE</i>	<i>z</i>	<i>P</i>
	(Intercept)	-2.4529	0.1544	-15.891	<.00001***
	GENRE: NEGOCIATION	0.6291	0.2085	3.017	0.00256 ***

Note: SD = Standard Deviation; SE= Standard Error; Number of observations: 3321; groups (Sessions): 26; C-statistics: 0.6787568

Table IIIa Strongest GLMER model for Strong Demonstrative Pronouns

Random Effect		<i>Variance</i>	<i>SD</i>		
	Sessions	1.342	1.159		
Fixed effects		<i>Estimate</i>	<i>SE</i>	<i>z</i>	<i>p</i>
	(Intercept)	-2.1120	1.1803	-1.789	0.0735.
	MLU	-0.5926	0.5070	-1.169	0.2425
	ATTENTIONAL AND DISCURSIVE STATUS ACTIVATED	1.4695	0.1579	9.308	<.00001***
	ACTIVITY TYPE:TOYS	1.2617	0.2468	5.112	<.00001***
	GENRE: NARRATIVE	-2.4113	0.9978	-2.417	0.0157 *

Note: SD = Standard Deviation; SE= Standard Error; Number of observations: 3321; groups (Sessions): 26; **C-statistics:** 0.7768492

Table IIIb: Comparative GLMER model for Strong Demonstrative Pronoun. (same factors that model Ia for 3rd person pronoun).

Random Effect		<i>Variance</i>	<i>SD</i>		
	Sessions	0.9224	0.9604		
Fixed effects		<i>Estimate</i>	<i>SE</i>	<i>z</i>	<i>p</i>
	(Intercept)	-0.75407	0.97824	-0.771	0.4408
	MLU	-0.74083	0.42780	-1.732	0.0833
	ATTENTIONAL AND DISCURSIVE STATUS: DISCOURSE GIVEN	-0.7566	0.12434	-0.609	0.5428
	ACTIVITY TYPE:EVERYDAY ACTIVITIES	0.7955	0.16020	-4.947	<.00001***
	GENRE:DESCRIPTION	0.16929	0.12631	1.340	0.1801

Note: SD = Standard Deviation; SE= Standard Error; Number of observations: 3321; groups (Sessions): 26; **C-statistics:** 0.7389183

Table IVa: Strongest GLMER model for Nouns.

Random Effect		<i>Variance</i>	<i>SD</i>		
	Sessions	0.3496	0.5913		
Fixed effects		<i>Estimate</i>	<i>SE</i>	<i>z</i>	<i>p</i>
	(Intercept)	0.15430	0.59576	0.259	0.796
	MLU	-0.03112	0.25311	-0.123	0.902
	NON REFERENTIAL	0.95985	0.08839	10.860	<.00001***
	ACTIVITY TYPE: TOYS	0.54630	0.12244	-4.462	<.00001***
	GENRE: LABELLING	-0.15763	0.09945	-1.585	0.113

Note: SD = Standard Deviation; SE= Standard Error; Number of observations: 3321; groups (Sessions): 26; **C-statistics:** 0.6786509

Table IVb: Comparative GLMER model for Nouns. (same factors that model Ia for 3rd person pronoun)

Random Effect		<i>Variance</i>	<i>SD</i>		
	Sessions	0.4219	0.6495		
Fixed effects		<i>Estimate</i>	<i>SE</i>	<i>z</i>	<i>p</i>
	(Intercept)	0.328779	0.634334	0.518	0.6042
	MLU	0.007119	0.273785	-0.026	0.9793
	ATTENTIONAL AND DISCURSIVE STATUS: DISCOURSE GIVEN	0.748390	0.075478	-9.915	<.00001***
	ACTIVITY TYPE:EVERYDAY ACTIVITIES	0.656427	0.095211	6.894	<.00001***
	GENRE:DESCRIPTION	-0.203392	0.075548	-2.692	0.0071 **

Note: SD = Standard Deviation; SE= Standard Error; Number of observations: 3321; groups (Sessions): 26; C-statistics: 0.6837097

Table IVc: Additional GLMER model for Nouns : genre Evaluation

Random Effect		<i>Variance</i>	<i>SD</i>		
	Sessions	0.3918	0.626		
Fixed effects		<i>Estimate</i>	<i>SE</i>	<i>z</i>	<i>p</i>
	(Intercept)	0.1262	0.1319	0.957	0.338802
	GENRE : EVALUATION	0.8660	0.2281	-3.758	0.000171 ***

Note: SD = Standard Deviation; SE= Standard Error; Number of observations: 3321; groups (Sessions): 26; C-statistics: 0.6347298