Dialogical beginnings of anaphora: The use of third person pronouns before the age of 3

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Abstract
This paper deals with the referential value of third person pronouns used by French-speaking children (aged 1;10 to 3) in a corpus of natural dialogues, in different communicative situations (dyadic and polyadic; at home and in nursery school). The referential value of pronouns is assessed on a discursive and dialogical basis by studying the givenness and newness of referents in the children’s utterances and the links with the interlocutor’s discourse. The results show that, from the onset, pronouns mostly refer to objects that are already in the interlocutors’ focus of attention and that have been previously mentioned in the dialogue. Moreover, pronouns most often refer to a discourse object previously mentioned by the child’s interlocutor. This suggests that the anaphoric value of pronouns is first acquired through dialogue before it is extended to monological uses.

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1. Introduction

It is usually assumed that there is an ontogenetic relation between deixis and anaphora (Lyons, 1977) and many studies tend to confirm this (section 1.2). On the other hand, an increasing number of studies (section 1.2) have shown that early uses of referential expressions by young children, in particular third person pronouns, are similar to adult use. The present study deals with this apparent contradiction through the analysis of young children’s use of third person pronouns in French. Our aim is to determine to what extent these uses indicate that young children are in the process of acquiring anaphora. For this purpose, we will examine the attentional and discursive status of the contexts in which young children produce pronouns.

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Anaphora has often been studied in monological contexts, such as narratives. However, early forms of discursive organisation are not monological (Ochs et al., 1979; Halliday, 1979). Children’s first verbal productions are tightly linked to those of their interlocutors. In line with a dialogical perspective (Bakhtin, 1986; François et al., 1984), our study aims also at showing that the use and acquisition of personal pronouns are anchored in the children’s experience of verbal interactions.

1.1. Deixis, anaphora and third person pronouns

Different theoretical frameworks lie behind the studies on referential expressions and on anaphora and deixis in young children’s discourse. This heterogeneity might partly explain the apparent controversial findings. Before addressing the issue of first uses of pronouns by young children, we will quickly present the framework of our study and some factors that can explain this discrepancy.

Anaphora and deixis are considered differently depending on whether one assumes a textualist/localist perspective on reference or a cognitive/memory perspective. According to the former (Halliday and Hassan, 1976), anaphora is defined as an intra-discursive relation: the interpretation of the referential expression depends on the retrieval of an antecedent present in the discursive environment. In this framework, anaphora contrasts with exophora, which refers to an extra-linguistic referent, outside the text. According to the cognitive conception of reference (Ariel, 1988; Gundel et al., 1993; Kleiber, 1994; Givón, 1995; Cornish, 1999) anaphora is grounded in mental representations (discourse model for Cornish, 1999 or episodic memory for Givón, 1995). In this perspective, the location status (whether intra-discursive or extra-discursive) of the referent is less relevant than its cognitive status (i.e. to be in focus or not) and “anaphora becomes the process that indicates reference to a referent already known by the interlocutor, in the sense that it is already ‘present’ or already apparent in his immediate memory” (Kleiber, 1994:25, our translation).

On the other hand, deixis is frequently defined as a mode of reference which is anchored in the enunciation act (Bühler 1934/1990; Benveniste, 1966). It encompasses a pointing function (actual or symbolic): deictic expressions orientate the interlocutor’s attention. Thus, deixis is considered (Ehlich, 1982) as a way to focus the attention of the interlocutors on an element that they may know but that is not activated, whereas anaphora is a way to maintain the interlocutors’ attention on a referent within the frame of a shared representation which is not necessarily verbalised.

In cognitive frameworks, the choice of referential expressions is constrained by factors such as the cognitive status of the referents in the speaker’s and the interlocutor’s representations of the discourse state of knowledge. In the accessibility scales proposed by Prince (1981) or Ariel (1988), descriptive nominal phrases are used for the least accessible referents and pronouns are employed for the designation of the most accessible ones. According to Gundel et al. (1993), the conventional meanings of referential expressions correspond to six different cognitive statuses (in focus, activated, familiar, uniquely identifiable, referential, type referential) which are hierarchically related: a referent that meets the condition associated with a given cognitive status automatically satisfies the conditions pertaining to any status lower in the hierarchy, so that being in focus entails being activated, familiar, uniquely identifiable, referential and type identifiable, and being uniquely identifiable entails being referential and type identifiable, and so on. Therefore, in cognitive frameworks, the main function of third person pronouns is “to signal referential and attentional continuity, thereby marking the stability of a given referent’s existence within a given discourse model” (Cornish, 1999:63).

1.2. Third person pronouns in young children’s discourse

Some researchers support the idea of a precocious use of anaphora, others on the contrary insist on a late acquisition of intra-discursive relations. Contradictory findings in the study of the development of referential expressions in young children, and more specifically of pronouns, might be explained by underlying different conceptions of anaphora and deixis as well as divergence in methodological choices.

In a study on spontaneous narratives by children aged 2–5, Bennett-Kastor (1983) shows that even the youngest ones use the third person pronoun much more frequently to reiterate a referent than to introduce a new one. Using Halliday and Hasan’s (1976) methodology, Peterson and Dodsworth (1991) examined cohesive links in narratives of personal experiences of children followed up from 2 to 3;6 years old. They found that pronominal reference is one of the earliest cohesive links. They consider that “most of their nouns and noun substitutes are anaphoric” (Peterson and Dodsworth, 1991:412). However, both studies mention inadquate or ambiguous productions.
A second range of studies (Karmiloff-Smith, 1979, 1985; see also de Weck, 1991, 1998; Hickmann, 1995, 2002) distinguish the formal and the functional aspects of the acquisition of pronouns and determiners. Children are said to move from grammatical functions (e.g. indicating syntactic role and information on number and gender) to discursive functions. For these authors, first uses of pronouns (or definite noun phrases) are not considered anaphoric but either deictic or exophoric: in early co-referential chains, occurrences of the third person pronoun refer directly to the extra-linguistic entity (most often present in the situation) without depending on a specifically discursive construction. Karmiloff-Smith (1985) establishes three stages in children’s narratives of a picture story. Between the ages of 3 and 6, children narrate the story with a “deictic” “referent-driven strategy”, as if they were describing unlinked pictures. During the second stage (between the ages of 6 and 8/9), children adopt a “thematic subject strategy” and choose one character as the privileged discourse object. Only in the third stage (after the age of 8/9) will the children manage the relation to the referent as well as to the discursive organisation and introduce linguistic contrasts according to the narrative role of the characters (see also Hickmann, 2002).

However, factors linked to the cognitive processing of the story can influence the use of anaphoric devices. Bamberg (1986) shows that when children are already familiar with the content of the story, the thematic subject strategy appears earlier (at 3;6). According to him, anaphoric relations are acquired from a pragmatic perspective: young children use “the self-constructed principle that pronominal forms are the prototypical candidates for thematic progression, while nominal forms are adding on information that does not directly contribute to thematic progression” (Bamberg, 1986:275).

Levy (1989, 1999) examines the acquisition of cohesion devices in the now classical “monologues in the crib” of Emily between the ages of 2 and 3. According to her, cohesive devices emerge from the child’s reproduction of patterns taken from adult speech in a token-by-token acquisition process. Only around the age of 3, do pronouns begin to appear in co-referential chains, always scaffolded1 by adults in the interaction. In other words, according to this author adult speech not only induces the child’s “deferred imitations” but also gives a context to linguistic devices. Experimental studies on children between 2;6 and 3;6 (Campbell et al., 2000; Wittek and Tomasello, 2005) and on older children and adults (Serratrice, 2008) show that the type of questions asked by the interlocutor determines what kind of referring expression is used by the child. In the same vein, Matthews et al. (2006) have shown that 2-year-old children seem to be sensitive to discursive features. But at the same time, these studies suggest that young children do not seem to take their interlocutor’s state of knowledge or perceptual experience into account.

Studies on corpora have led to somewhat different results. de Cat (2004), who works on French, considers that when linguistically signalled information structure is taken into account, young children have a higher rate of adequate uses of referential expressions. Using the Givenness Hierarchy framework (Gundel et al., 1993) in their study of a longitudinal corpus of English speaking young children, Gundel et al. (2007) point out that young children use different referential expressions appropriately by age 3 or earlier and show that personal and demonstrative pronouns are acquired before determiners, revealing an evolution that parallels the order of forms on the Givenness Hierarchy.

Studies conducted on non-Indo-European languages – Inuktitut by Allen (2000, 2003) and Korean by Clancy (2003, 2004) – confirm that the acquisition of grammar is intertwined with pragmatic and discursive aspects of language. In these languages, arguments can either be linguistically coded (by nouns or deictic or personal pronouns) or omitted. The authors note that discursive-pragmatic parameters such as argument informativity or accessibility influence the choice of referential expressions quite early in development. These results have been confirmed for Indo-European languages such as Italian (Serratrice, 2005) and English (Hugues and Allen, 2006).

1.3. Are early uses of third person pronouns anaphoric or deictic?

The review of the literature on the acquisition of pronouns and other referential expressions reveals quite a complex picture. On the one hand, it seems difficult to speak of anaphora before a later age. The absence of evidence of a discursive construction and/or of sensitivity to the interlocutor’s knowledge or perceptions could lend support to a deictic or exophoric interpretation of these items. On the other hand, many studies show that young children use referential expressions in an adult-like manner and are sensitive to discursive context.

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1 By “scaffolding” (Wood et al., 1976) we refer to the support adults bring to a child in the accomplishment of activities (linguistic or not) that are within his or her Proximal Zone of Development (Vygotski, 1978).
In order to solve this apparent contradiction, it is necessary to focus on the functions of referential expressions and the conditions pertaining to their first uses. There is a certain consensus among researchers to consider that proto and early reference is fundamentally deictic (Lyons, 1977), first, by pointing gestures (Bruner, 1978) secondly, by the early use of units such as là (‘there’) or ça (‘that’). At the same time, young children are already skilled in participation in joint attention episodes (Moore and Dunham, 1995; Carpenter et al., 1998). Moreover, the management of joint attention is one of the bases for the setting up of linguistic reference and topic-comment structure (Bruner, 1978).

Thematic continuity is also a significant feature of verbal exchange sequences very early on. As shown by research on ‘successive single word utterances’ (Bloom, 1973; Scollon, 1979; Ochs Keenan and Schieffelin, 1976; Veneziano, 2000) children under 2 produce semantically linked one-word utterances for one single communicative intention, the conditions pertaining to their first uses. There is a certain consensus among researchers to consider that proto and early reference is fundamentally deictic (Lyons, 1977), first, by pointing gestures (Bruner, 1978) secondly, by the early use of units such as là (‘there’) or ça (‘that’). At the same time, young children are already skilled in participation in joint attention episodes (Moore and Dunham, 1995; Carpenter et al., 1998). Moreover, the management of joint attention is one of the bases for the setting up of linguistic reference and topic-comment structure (Bruner, 1978).

In the 1970s Greenfield and Smith (1976) had drawn attention to the fact that young children verbalise what is informative for them. In line with this observation, Salazar Orvig et al. (2004, 2005) show, for French, that young children are sensitive to the status of discourse objects in the dialogue and tend to omit mention of the referent when it is under the attention of the interlocutors, or when it has been previously mentioned. Following Allen (2000), Skarabela (2006) showed for Inuktitut that children’s participation to episodes of joint attention has an influence on the type of linguistic units employed. According to her, the choice of arguments is an indication of children’s early social and discursive competences – in particular their capacity to evaluate the accessibility of the referent on the basis of the attentional status of their interlocutor.

Thus it can be argued that at the early stages of multi-word utterances, children already master two functions: the ability to draw the interlocutor’s attention to some object and the capacity to follow the interlocutor’s discourse and attention and thus to share an intersubjective space of meanings. For the first function, French-speaking children use linguistic tools such as the demonstrative ça and the adverb là very early, whereas omission seems to be the ‘device’ for the second function. In line with Slobin’s principle according to which “new forms first express old functions, and new functions are first expressed by old forms” (1973:184), we consider that pronouns emerge as the new forms for the marking of the second function, continuity, anchored in the first intersubjective sharing of experience.

However, another epistemological question arises: is it possible to assume that the ‘appropriate’ or ‘expected’ handling of linguistic units means that the children’s cognitive skills are similar to those of an adult (always considered as an ideal target)? There could be a relative dissociation between the conventional meaning of these units and their conditions of use, which become more and more complex and sophisticated with age. For example, according to Gundel et al. (2007), when children first use referential expressions they have the ability to assess “what cognitive status the intended interpretation has for the addressee at a given point in the discourse, e.g. whether it is in focus, activated, or familiar” but their ability to deal with implicatures (Grice, 1975) is still immature.

Considering that properties such as accessibility are, above all, a construction of verbal interaction, we adopt an intermediate position and search for the signs of the children’s functioning in their discursive and dialogical productions. Referential expressions will thus be analysed within the dialogical context in which they occur. Clear contrasts in contexts should give support to either one or the other interpretation of their reference mode. Consequently, we will consider the third person pronoun to have a (proto)-anaphoric value if it occurs most frequently in contexts that meet at least one of the two following conditions: (a) maintenance of the attentional focus and (b) discursive continuity. If, on the contrary, pronouns are essentially used to draw the interlocutor’s attention to a referent (i.e. a referent that is familiar but not necessarily activated), then we will conclude that they have a deictic value.

The second question addresses the issue of the need for evidence of a discursive construction, which could be the basis of an anaphoric relation. As seen previously, for some authors the existence of a co-reference relation does not constitute a strong argument because it may correspond to the mere reiteration of a previous act of reference, rather than to a link between the different nominal or pronominal occurrences. This reasoning is valid if reference is seen as the construction of a monologic subject. However, in a dialogical framework (Bakhtin, 1986) reference is also constructed in relation to the interlocutor’s discourse. In this case, children’s utterances should provide some sort of evidence that reference is built on a dialogical basis and not only on their direct perceptive relation to extra-linguistic entities.

Our main hypotheses, which we have tested by comparing the use of pronouns with the use of other referential expressions, are as follows: (1) third person pronouns are used more frequently in the context of maintenance of the attentional focus on a given referent than for directing the interlocutors’ attention to a new referent; (2) third person
pronouns are used more frequently for referents which have already been mentioned (by the interlocutor or by the child) than for first mentions; (3) third person pronouns are used preferentially for referents that have already been mentioned by the interlocutor in his or her previous utterances. The first and second hypotheses concern the (proto)-anaphoric nature of third person pronouns, the third analysis highlights the dialogical foundations of this (proto)-anaphoric value.

2. Method

2.1. Population

Four corpora of 20 French-speaking children (see Table 1) observed in natural dialogical situations were analysed.

1. A longitudinal corpus at home: two children (Daniel and Léonard) were observed about once a month in different situations at home (play, snack, picture book reading, bath, ...).

2. A cross-sectional study at 1;11: 5 children (Alice 1, Cécile, Lisa, Pauline 1 and Thibault) were observed at home with their father or mother during free play with various toys brought by the observer.

3. A cross-sectional study at 2;3: 10 children (Alice 2, Arnaud, Chloé, Elodie, Léa, Margaux, Maxime, Pauline 2, Rémi, Théo) were observed with their mother and, for five of them (Chloé, Elodie, Margaux, Rémi and Théo), also in a day care centre in various activities (play, snack, ...).

4. A longitudinal follow up at the nursery school. Every day, the teacher asked the children in the classroom to talk about a puppet that they took back home in turns every evening. The study is centred on three children (François, Lucille and Matteo).

The first three corpora were videotaped. The utterances of all participants were transcribed (in phonetics and/or in spelling). Contextual information necessary to the interpretation of the verbal production was noted.

In order to test our hypotheses at successive developmental levels, we grouped the children according to their Mean Length of Utterances (MLU). This criterion was chosen, rather than age, because of the great variability of young children’s language level at each age. Four MLU levels were considered, roughly corresponding to Brown’s stages (Brown, 1973): Level 1 – MLU between 1.3 and 1.92 words; Level 2 – MLU between 2.00 and 2.47 words; Level 3 – MLU between 2.50 and 2.92 words and Level 4 – MLU over 3 words.

2 These data are part of a larger study, which includes other children. We have only used the data of the children who are already producing identifiable pronouns. In the longitudinal studies, sessions previous to first uses of third person pronouns were excluded.

2.2. Coding

The use of pronouns and other referential expressions by the children was analysed from two perspectives: (1) givenness/newness of the referent and (2) the link to the interlocutor’s discourse. The condition to consider that early third person pronouns are (proto)anaphoric is their preferential use (as opposed to the use of other referential expressions) in (a) contexts of joint attention and (b) contexts of discursive continuity. Therefore, the functioning of referential expressions is characterised through the analysis of the dialogical context in which they are used, without assuming any pre-established property of the linguistic units, neither at the level of mind-reading abilities, nor with regard to their adequacy judged on the basis of criteria determined by the target adult language. This position differentiates our coding system from other proposals in the literature.

2.2.1. Referential expressions

All the children’s utterances containing a referential expression were analysed. For the present study only referential uses of linguistic units were considered. Calls and vocatives (such as “maman” in example 1), interjections, labeling and meta-linguistic utterances were excluded. Given the focus of our research (3rd person pronouns) we also excluded the reference to the speaker and the interlocutor. Thus in example (1), [ō✈ėgato mama], only GÂTEAU (CAKE) was considered as a referent.

On the other hand, a single utterance comprises several referents: for example in (2) il (‘he’) and joli collier (‘pretty necklace’) were coded and analysed separately.

The referential expressions, whatever their syntactic function in the sentence (subject, object, etc.), were classified according to four categories: nouns, third person pronouns, dislocated constructions and other pronouns (demonstratives, possessives, etc.) even though for some children the grammatical status of these forms was not stabilized yet.

We coded as ‘third person pronoun’ every unit presenting the morphological characteristics of the adult pronoun (il or elle – ‘s/he’, it – for the subject pronouns, le, la or lui for the object pronouns). Unless the context induced other interpretations such as y or est,4 [i] and [e], forms that are frequent before consonants in colloquial adult language were also coded as pronouns (ex. 3).

Instances when the child produces only the lateral consonant [l] (ex. 4) were also included:

3 When the children’s utterances are transcribed phonetically, we give our interpretation in French between inverted commas and the English translation between inverted commas in the right column. In all other cases, we only indicate the English translation. { } indicate uncertain transcription or alternative interpretations. In the transcription + stands for a brief pause. F stands for “filler syllables” (Peters, 2000) which cannot be interpreted in morphological terms.

4 For example when the child says [ekase] about a completed process, we considered the form [e] as a precursor of an auxiliary rather than a pronoun.

Pre-verbal syllables (also called fillers: cf. Peters, 2000; Veneziano and Sinclair, 2000) were not taken into account because of their uncertain morphological and referential status.

In oral French, pronouns are often used in dislocated constructions, in co-occurrence with a noun (e.g.: [ana elle est parti]e, ‘Anna, she’s gone’) or [il fait dodo le chat’, ‘it is sleeping, the cat’]. In these constructions the noun, rather than the pronoun, conveys the reference of the expression. Moreover, in adult language, dislocations are often used to promote an accessible referent to the rank of being activated (Lambrecht, 1994). Therefore, dislocations (noun + pronoun) were considered as a single specific category. Dislocations can also involve demonstratives, e.g. [se n’est pas bon ça’, ‘it’s not good, that’].

2.2.2. Givenness and newness

Our first line of analysis concerns the attentional and discursive status of the referent coded by a referential expression. Givenness (or newness) depends on the joint attention of interlocutors in the ongoing activities and the progress of the conversation. Four cases were distinguished:

- **Focus on a new referent (NEW):** The referential expression introduces a particular referent in the interlocutors’ focus of attention. We have considered as NEW all referents introduced under (attentional or discursive) focus by the referential expression analysed, even if they are familiar to the interlocutors. If an entity is present in the situation (and is known to be present) but has not been the target of joint attention or has not been involved in some joint activity, it is considered as NEW when it is referred to for the first time. In the next excerpt (5), even though the children and the teacher know that THIBAULT is in the classroom, as far as the transcript shows it, it is the first time their attention is focused on him in that session.

(5) Lucille 2;8 – MLU: 4.67

*Dialogue at nursery school, between the teacher (Tea), a pupil (Pup) and Lucille (Luc).*

**TEA** - je comprends pas ce que François me demande! ‘I don’t understand what François is asking me!’

**PUP** - il a dit une voitu(re) ‘he said a car’

**TEA** - mm! *<different noises>* on ne bouge pas! c’est déjà difficile, Naomi! si tu fais + bouger les tables, on comprend rien! ‘mm! don’t you move! it is really difficult, Naomi! if you move the tables we won’t understand anything!’

**LUC** - *< looking at Thibault’s medal >* eh! il a un joli collier! il a un joli collier! ‘hey! he’s got a pretty necklace! he’s got a pretty necklace!’

- **First mention in discourse of a focused referent (FMF).** In contrast to the preceding category, for which the attention is drawn to the referent by means of the referential expression, we coded as FMF the referents already in the focus of attention of the interlocutors but mentioned for the first time by means of the referential expression under analysis. This occurs when the attention of the interlocutors has been focused on an object (through gaze, pointing, handling, ...) without it having been explicitly mentioned in discourse, usually in the context of a shared activity (play, snack, for example):

(6) Rémi; 2;03 – MLU: 1.32

*During the snack time Rémi rides around on his tricycle. His mother stops him*

**MOT** - allez viens là, viens vite, viens finir, viens finir ++ allez +++ viens là ‘come on, come quickly, come and finish, come and finish ++ come here’

**RÉM** [**ebelo**] *<complaining>* ‘F vélo’ ‘F bike’

The tricycle is present in the situation and, furthermore, before the mother tries to stop the ride by calling Rémi, her attention was focused on the child’s activity (riding). However, she had not mentioned the tricycle before Rémi did.

5 Dislocated constructions include 3 cases of tonic third person pronouns.

6 The opposition between ‘givenness’ and ‘newness’ is not similar to the one made by Gundel for whom shared knowledge and presupposition are also criteria for givenness (see for example Gundel and Fretheim, 2004).
- **Given in discourse (GVN).** We considered as ‘given’ any referent that has already been mentioned in the dialogue within the topical sequence, either by the child or by his/her interlocutor (see example 7).

(7) Léonard 2;4 - MLU: 2.45

*Mother and child are looking at a book.*

MOT - Et oui, et Adèle?
LÉO - <with a whining voice> [cétobela yegad] ‘yes, and Adèle?’

‘elle est tombée là regarde’ ‘she fell over there look’

- **Reintroduction of a referent in the attentional focus (REI).** The last case corresponds to the reintroduction of a referent under the attention of the interlocutors after they both have been focused on other objects.

(8) Cécile 1;11 – MLU: 2.86

*Mother and child are playing with a toy farm. The child tries to put a cow in a trailer. The cow falls down several times.*

CÉC - <talking about the cow that has fallen> je la câline ‘I cuddle it’
MOT - tu la câlines ‘you cuddle it’

*After talking about other topics the child picks up the cow again*

CÉC - on la met là <putting it on the tractor> ‘we put it here’

In this case, Cécile reintroduces a referent that has previously been handled and talked about. The distinction between ‘given’ and ‘reintroduced’ is not based on distance (in terms of number of turns) between two occurrences of a referent but on their co-existence or not in the same thematic or topical sequence. If the discourse topic (Dik, 1997) is maintained, then we consider the referent as ‘given’. If however there are changes of discourse topic between two mentions of the same referent, then the second one is analysed as a reintroduction. The cases of reintroduction frequently correspond to refocusing on a referent which has remained in the background of the interaction for a certain time. Since the verbal interactions are always anchored in a limited set of situations (the types of objects discussed are quite limited, there are specific activities taking place), it is rare that the referent loses completely its ‘activated’ status (see examples in section 3.1) Coding “reintroductions” separately is thus a conservative measure.

Table 2 summarizes the main features of the four categories of our coding scheme.

### Table 2

<table>
<thead>
<tr>
<th>Referent</th>
<th>NEW</th>
<th>FMF</th>
<th>GVN</th>
<th>REI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absent in the situation</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Present in the situation</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Part of the activity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part of the ongoing sub-activity</td>
<td></td>
<td></td>
<td></td>
<td>+/-</td>
</tr>
<tr>
<td>Mentioned in the same topical sequence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mentioned in a previous topical sequence</td>
<td></td>
<td></td>
<td>+/-</td>
<td></td>
</tr>
<tr>
<td>Immediately previously handled, gestures or joint gaze</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.2.3. The mention of the referent in the interlocutor’s discourse

In order to assess the importance of the dialogical foundations of the use of referential expressions, we examined the continuity between the children’s referential expressions and the preceding utterances of their interlocutors. Only expressions coded as ‘given in discourse’ were considered for this analysis. Among the various possibilities, we consider immediate dialogical continuity (IMM) as opposed to three kinds of partial or total monological continuity (DIST, INF and ABS):

- **Immediately mentioned in the interlocutor’s discourse (IMM).** The referent has been mentioned by the interlocutor in the same topical sequence (as in example 7).
Distant mention in the interlocutor’s discourse (DIST). The referent has been mentioned in the interlocutor’s discourse but in another topical sequence.

(9) Lucille 2;09 - MLU: 5.4

*In the classroom. The teacher and the pupils are talking about the puppet (Ploum) that Lucille took home the previous evening. The teacher takes Ploum out of the bag*

TEA - alors on va le sortir du sac! ‘so we are going to pull him out of the bag’

TEA - mm! vas-y ma chérie, raconte! ‘mhm! go on dear! tell us!’

LUC - pasque, il avait+ il avait joué, sorti du sac ‘because, he had + he had played, out of the bag’

TEA - oui! ‘yes’

LUC - je, il avait peu(r) de la maîtresse ! ‘I, he was afraid of the teacher!’

TEA - <surprised> il avait peur de la maîtresse ? ‘<surprised> he was afraid of the teacher?’

LUC - ben ouais! <riant>i voulait se cacher dans le SAC ! ‘well yeah! <laughing> he wanted to hide into the bag!’

Lucille reintroduces the referent THE BAG (sorti du sac) that was mentioned by the teacher in a previous sequence. In her reply, the teacher focuses on another aspect of Lucille’s narrative, while the child refers back to THE BAG (i voulait se cacher dans le SAC!). Thus, even though this last nominal phrase is, by some means, linked to the teacher’s distant turn, it is mainly in continuity with the child’s previous turn.

Inferable (INF): the referent has not been explicitly mentioned but is inferable from the interlocutor’s discourse or participation in dialogue.

(10) Pauline2 2;3 - MLU: 2.52

*Pauline is having a snack. She asks about the observer who has set the camera and left the room*

PAU - [éleuladam?] ‘elle est où la dame?’ ‘where is the lady?’

MOT - je sais pas ‘I don’t know’

PAU - [éledǎkwizin †]? ‘elle est dans cuisine?’ ‘is she in (the) kitchen?’

By saying [éledǎkwizin †] she refers for the second time to the observer that has not been mentioned but was only alluded to in her mother’s reply (je ne sais pas). Even if she answers her daughter’s question, Pauline’s mother does not contribute to the construction of the discourse object. The co-referential chain is thus only based on the child’s verbal production.

Not mentioned by the interlocutor (NOT). The referent has neither been mentioned nor alluded to by the interlocutor. It has only been previously mentioned by the child.

(11) Lucille 2;09 – MLU: 5.4

*TEA (…) tu l’as sorti du sac chez Mamie? (…) did you take it out of the bag at grandma’s?*

LUC - ouais ‘yeah!’

TEA - oui! ‘yes!’

LUC - y avait tonton! Et je l’ai vu pasque j(e) n’avais pas d’chaussons! ‘there was uncle. I saw him ‘cause I had no slippers’
Lucille introduces a new referent (TONTON, ‘UNCLE’) and goes on talking about him. In the second occurrence (the pronoun “l’”) the referent is given in discourse but still absent from the interlocutor’s discourse. This category thus corresponds to total monological continuity in the child’s speech.

2.2.4. Complementary descriptions

For descriptive purposes, we present in Table A (appendix) the distribution of the referential expressions occurring with non-verbal behaviours such as handling the referent (activity with the object, offering and taking, carrying, etc.), gaze, pointing or body and head orientation towards the referent. This description only concerns the children who were videotaped.

Reference was also characterised from the point of view of the presence of the entities in the communicative situation. Three cases were examined: the entity that is referred to is present and visible in the situation (coded as Present); it is absent (Absent); it is not visible in the situation but the interlocutors are aware of its presence (noise, previous knowledge, etc.) (coded as Semi-Present). Table B (in appendix) presents the distribution of the referential expressions according to the degrees of presence of the entities they refer to.

2.3. Statistical analyses and reliability

In order to work with enough data to conduct statistical analyses without losing the longitudinal dimension, the longitudinal data from Corpora 1 and 4 were collapsed into 1 month intervals. Thus the same child appears in several MLU groups (see Table 1).

Statistical analysis: Logistic regression was used to test the statistical value of the data. For the dependent variable, pronouns were contrasted with all other referential expressions. For the independent variables, the effect of each category was first studied separately and then categories were grouped according to relevant features. For each independent variable the most frequent category was taken as the reference category. Statistical computations were conducted with the software SAS. We first started with a model that includes only a single explanatory variable, and then added the subsequent factors so as to check for interactions (possible variations inside each group level).

Reliability: Inter-coder agreement for each of the categories under study was tested for 10% of the data from randomly selected children. The rates of agreement were: 95% for linguistic categories (fixed-marginal kappa: 0.89; free-marginal kappa: 0.93), 83% for givenness/newness categories (fixed-marginal kappa: 0.67; free-marginal kappa: 0.79) and 87% for the presence of the discourse object in the interlocutor’s discourse (fixed-marginal kappa: 0.57; free-marginal kappa: 0.84).

3. Results and discussion

For descriptive purposes, we first present (Table 3) the distribution of the referential expressions according to the MLU level. For third person pronouns we also present the mean number and mean percentage of referential expressions.

The first occurrences of third person pronouns appear in children with at least an MLU of 1.32. The proportion of pronouns rises relatively slowly until MLU 3. We note an important contrast in group 4 (MLU equal or above 3) which

<table>
<thead>
<tr>
<th>MLU</th>
<th>Total number</th>
<th>Nouns</th>
<th>Dislocated constructions</th>
<th>Other pronouns</th>
<th>3rd person pronouns</th>
<th>Total per group</th>
<th>Range per child</th>
<th>Mean number per child</th>
<th>Mean % of referential expressions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1 (&lt;1; &lt;2)</td>
<td>517</td>
<td>324 (62.7%)</td>
<td>19 (3.7%)</td>
<td>148 (28.6%)</td>
<td>26 (5%)</td>
<td>1</td>
<td>8</td>
<td>2.6</td>
<td>11%</td>
</tr>
<tr>
<td>Level 2 (&lt;2; &lt;2.5)</td>
<td>1011</td>
<td>609 (60.2%)</td>
<td>83 (8.2%)</td>
<td>237 (23.4%)</td>
<td>82 (8.1%)</td>
<td>1</td>
<td>23</td>
<td>5.9</td>
<td>10%</td>
</tr>
<tr>
<td>Level 3 (&lt;2.5; &lt;3)</td>
<td>790</td>
<td>387 (49%)</td>
<td>91 (11.5%)</td>
<td>231 (29.2%)</td>
<td>81 (10.3%)</td>
<td>1</td>
<td>29</td>
<td>9</td>
<td>17%</td>
</tr>
<tr>
<td>Level 4 (&gt;3)</td>
<td>727</td>
<td>372 (51.1%)</td>
<td>53 (7.3%)</td>
<td>88 (12.1%)</td>
<td>214 (29.4%)</td>
<td>1</td>
<td>34</td>
<td>21.4</td>
<td>31%</td>
</tr>
<tr>
<td>Total</td>
<td>3045</td>
<td>1692 (55.6%)</td>
<td>246 (8.1%)</td>
<td>704 (23.1%)</td>
<td>403 (13.2%)</td>
<td>1</td>
<td>34</td>
<td>9.4</td>
<td>17%</td>
</tr>
</tbody>
</table>

presents a particularly high frequency of third person pronouns. This can be explained both by the children’s linguistic level and by the fact that, for the nursery school children, there was a privileged topic (the puppet) even if this is also the context in which absent entities are the most often referred to (43.6% of absent entities, see Table B in the appendix).

3.1. Givenness or newness of the referent

Table 4 presents the distribution of the referential expressions types for each of the four contexts of givenness/newness for each MLU group.

The ‘total number’ column in Table 4 shows that for all groups, most referential expressions code a referent that has already been mentioned either by the child or by his or her interlocutor. This first result should not be surprising. It reflects the fact that children actively participate in the dialogical activity and contribute to the development of topics (Marcos et al., 2004; Salazar Orvig, 2003). Table 4 also shows that, despite the difference in their respective frequency in the children’s productions, there are preferential tendencies for each linguistic category. Pronouns are more often activated to code referents given in the discourse and the other referential expressions have more diversified uses.

The logistic regression was computed opposing pronouns to all other referential expressions. A global effect was calculated ((n = 3042, ddl = 3) = 118.8460, p < 0.0001), GVN favours the presence of pronouns. Odds of a third person pronoun are 8.5 lower in the context of FMF, 17 lower in the context of NEW and 14 lower in the context of REI.

<table>
<thead>
<tr>
<th>MLU</th>
<th>3rd person pronouns</th>
<th>Nouns</th>
<th>Dislocated constructions</th>
<th>Other pronouns</th>
<th>Total number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEW</td>
<td>2 (2.5%)</td>
<td>46 (58.2%)</td>
<td>6 (7.6%)</td>
<td>25 (31.6%)</td>
<td>79 (15.3%)</td>
</tr>
<tr>
<td>FMF</td>
<td>1 (2.6%)</td>
<td>17 (44.7%)</td>
<td>0 (0.0%)</td>
<td>20 (52.6%)</td>
<td>38 (7.3%)</td>
</tr>
<tr>
<td>GVN</td>
<td>23 (7.3%)</td>
<td>202 (64.5%)</td>
<td>9 (2.9%)</td>
<td>79 (25.2%)</td>
<td>313 (60.5%)</td>
</tr>
<tr>
<td>REI</td>
<td>(0.0%)</td>
<td>59 (67.8%)</td>
<td>4 (4.6%)</td>
<td>24 (27.6%)</td>
<td>87 (16.8%)</td>
</tr>
<tr>
<td>Total Level 1</td>
<td>26 (5.0%)</td>
<td>324 (62.7%)</td>
<td>19 (3.7%)</td>
<td>148 (28.6%)</td>
<td>517</td>
</tr>
<tr>
<td>Level 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEW</td>
<td>(0.0%)</td>
<td>110 (60.8%)</td>
<td>23 (12.7%)</td>
<td>48 (26.5%)</td>
<td>181 (17.9%)</td>
</tr>
<tr>
<td>FMF</td>
<td>2 (3.3%)</td>
<td>19 (31.1%)</td>
<td>9 (14.8%)</td>
<td>31 (50.8%)</td>
<td>61 (6%)</td>
</tr>
<tr>
<td>GVN</td>
<td>76 (11.8%)</td>
<td>378 (58.7%)</td>
<td>43 (6.7%)</td>
<td>147 (22.8%)</td>
<td>644 (63.8%)</td>
</tr>
<tr>
<td>REI</td>
<td>4 (3.2%)</td>
<td>101 (81.5%)</td>
<td>8 (6.5%)</td>
<td>11 (8.9%)</td>
<td>124 (12.3%)</td>
</tr>
<tr>
<td>Total Level 2</td>
<td>82 (8.1%)</td>
<td>608 (60.2%)</td>
<td>83 (8.2%)</td>
<td>237 (23.5%)</td>
<td>1010</td>
</tr>
<tr>
<td>Level 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEW</td>
<td>2 (1.7%)</td>
<td>71 (59.7%)</td>
<td>11 (9.2%)</td>
<td>35 (29.4%)</td>
<td>119 (15.1%)</td>
</tr>
<tr>
<td>FMF</td>
<td>2 (3.8%)</td>
<td>22 (41.5%)</td>
<td>11 (20.8%)</td>
<td>18 (34.0%)</td>
<td>53 (6.7%)</td>
</tr>
<tr>
<td>GVN</td>
<td>75 (14.0%)</td>
<td>237 (44.4%)</td>
<td>59 (11.0%)</td>
<td>163 (30.5%)</td>
<td>534 (67.7%)</td>
</tr>
<tr>
<td>REI</td>
<td>2 (2.4%)</td>
<td>57 (68.7%)</td>
<td>9 (10.8%)</td>
<td>15 (18.1%)</td>
<td>83 (10.5%)</td>
</tr>
<tr>
<td>Total Level 3</td>
<td>81 (10.3%)</td>
<td>387 (49.0%)</td>
<td>90 (11.4%)</td>
<td>231 (29.3%)</td>
<td>789</td>
</tr>
<tr>
<td>Level 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEW</td>
<td>4 (2.1%)</td>
<td>161 (83.0%)</td>
<td>13 (6.7%)</td>
<td>16 (8.2%)</td>
<td>194 (26.7%)</td>
</tr>
<tr>
<td>FMF</td>
<td>(0.0%)</td>
<td>7 (26.9%)</td>
<td>1 (3.8%)</td>
<td>18 (69.2%)</td>
<td>26 (3.6%)</td>
</tr>
<tr>
<td>GVN</td>
<td>209 (45.2%)</td>
<td>169 (36.6%)</td>
<td>35 (7.6%)</td>
<td>49 (10.6%)</td>
<td>462 (63.6%)</td>
</tr>
<tr>
<td>REI</td>
<td>0 (0.0%)</td>
<td>34 (77.3%)</td>
<td>5 (11.4%)</td>
<td>5 (11.4%)</td>
<td>44 (6.1%)</td>
</tr>
<tr>
<td>Total Level 4</td>
<td>213 (29.3%)</td>
<td>371 (51.1%)</td>
<td>54 (7.4%)</td>
<td>88 (12.2%)</td>
<td>726</td>
</tr>
<tr>
<td>Total</td>
<td>402 (13.2%)</td>
<td>1690 (55.6%)</td>
<td>246 (8.1%)</td>
<td>704 (23.1%)</td>
<td>3042</td>
</tr>
</tbody>
</table>

* For three cases the transcription and the video do not enable us to assess the attentional or discursive status of the referents.
3.1.1. Hypothesis 1

Our first hypothesis is that third person pronouns are used more frequently to maintain the interlocutor’s attention to a given referent than to direct his or her attention to a new referent. In this analysis, for each MLU group, we have collapsed the two categories corresponding to shared attention (FMF and GVN) and contrasted them to the other two for which there is no shared attention (NEW and REI). As we mentioned earlier, we include REI in this second category in order not to speculate on the mental state of the interlocutors.

A global effect is measured \((n = 3042, \text{ddl} = 1) = 98.3103, p < 0.0001\). Shared attention favours the presence of pronouns. Odds of a third person pronoun are 14 times lower in the context of no shared attention than in the context of shared attention. This effect is measured also for each group individually. For Level 1 \((n = 517, \text{ddl} = 1) = 5.8481, p < 0.0156\), odds of a third person pronoun are 6 times lower in the context of no shared attention than in the context of shared attention. For Level 2 \((n = 1010, \text{ddl} = 1) = 18.6835, p < 0.0001\), odds of a third person pronoun are 9 times lower in the context of no shared attention than in the context of shared attention. For Level 3 \((n = 789, \text{ddl} = 1) = 14.9833, p < 0.0001\), odds of a third person pronoun are 7 times lower in the context of no shared attention than in the context of shared attention. For Level 4 \((n = 726, \text{ddl} = 1) = 54.4257, p < 0.0001\), odds of a third person pronoun are 43 times lower in the context of no shared attention than in the context of shared attention.

However, the force with which our first hypothesis is confirmed could be reduced by the fact that some children (6) at levels 1, 3 and 4 sometimes (8 tokens) use a pronoun when they introduce a new referent under the attention of the interlocutor. Therefore it is important to examine these divergent uses on a qualitative level.

The analysis of the eight pronominal introductions of new referents shows that in four cases, the introduction of a new referent is simultaneously associated to an ostensive gesture:

\[(12)\] Lisa 1;11 – MLU: 1.56

*Lisa is playing with a farm set. She takes a horse and shows it to her father.*

Lis - *est quoi?*  what is it?

Mot - *c’est un cheval*  It’s a horse.

The simultaneous use of a gesture (showing the horse) and the pronoun has been considered by Karmiloff-Smith (1985) as evidence of the deictic nature of the pronoun. However, discussing adult language examples, Kleiber (1994) considers that when an utterance is associated with an ostensive gesture, it is the gesture that directs the attention of the interlocutor and not the pronoun. And this context of shared attention set up by the gesture favours the simultaneous use of pronouns. Example (5) in which Lucille gets the attention of her interlocutors by using an interjection before using the pronoun could be considered as a similar case.

For two other cases the coding as NEW is in fact a conservative measure: the lack of video makes it impossible to know whether there was an ostensive gesture; the transcription of the preceding context does not enable us to determine whether the referent had previously been the focus of attention.

In the last two cases, the divergent use can be explained by the child’s representation of his interlocutor’s attention. Let us consider the first one.

\[(13)\] Daniel 2;03 – MLU: 2.5

*Daniel is playing with his father. Many car toys are at hand.*

DAN  ynvwatya? del(a) watya  a car? of the car.

Fat  oui mais j(e) sais pas où il est moi  yes but I don’t know where it is.

Obs  c’est un camion qui transporte des voitures?  is it a truck that carries cars?

Fat  oui, qu’il a eu comme cadeau euh  yes it was a gift.

*D. is handling a white car.*

DAN  sase paluvieä  that’s to open it.

Fat  c’est Jacqueline qui lui a offert ça  Jacqueline gave it to him. <*talking about the truck*>
In excerpt 13 the child is handling the white car he is referring to but does not seem to acknowledge that his father has begun to speak to the observer and therefore pays less attention to his activity. This temporary shift of attention changes their respective representations of the situation. The use of the pronoun could be considered inappropriate with respect to the father’s interlocutive orientation, but, at the same time, it could be considered appropriate if we assume that for the child the previous participation framework (Goffman, 1981) is still valid. This complex crisscrossing of simultaneous participation frameworks is typical of family dialogues and young children learn also to cope with it in their pragmatic development (Salazar Orvig, 2002). Let us consider the second case:

(14) Matteo 2;11 – MLU 4.08

In the classroom, the teacher and the pupils are talking about Matteo’s ice-creams

TEA - elles sont toutes remuées tes glaces
MAT - oui
TEA - ah bon! où sont-elles?
MAT - dans [::: bato] i va les manger les glaces euh
TEA - qui?
MAT - le le chien!

The mention of the dog (by means of a third person pronoun) bursts out of the blue, in the context of the current conversation. At the same time, we can see that the child is involved in the dialogue and takes its progress into account. The introduction of the dog happens as he is speaking of ice cream, a shared topic. But this referent is not retrievable for his interlocutors. As a matter of fact, this is the only case in the whole corpus for which we can think that the child does not take his interlocutors’ perspective into account at all.

Let us now consider the six uses of the pronoun in reintroductions. Most of the time, (4 cases out of 6), when the child uses a pronoun for reintroduction, the referent has remained in the background of the interlocutive situation, is part of the ongoing activity, and has not been totally evacuated from the interlocutors’ attention. These cases are in fact probably intermediary cases between the category ‘Discourse Given’ and actual reintroductions. Besides, in three of these cases, as in excerpt (8), the reintroduction is complemented by a non-verbal behaviour. The result is a simultaneous refocusing of the interlocutor’s attention to the target object.

There are only two cases in which the pronoun seems to reactivate a referent:

(15) Pauline 2 2;3 – MLU 2.52

Pauline and her mother are talking about the observer, who is waiting somewhere in the apartment.

PAU - [elvaprädsaduf]
‘elle va prendre sa douche’
‘she is going to take a shower’
MOT - et après elle va faire quoi? + après la douche
‘and after that, what is she going to do? +
qu’est ce qu’on fait?
what do we usually do after the shower? ’.

50 turns later, Pauline is having her snack. She suddenly tries to leave the table

PAU - [velavuar + savjê]
‘vais là voir + reviens’
“(I am) going to see her + (I will) come back”

Pauline is finishing her snack. She tries to come down from her chair and announces she is going to see the lady who put the camera on the stand and is waiting someplace in the apartment. She thus reintroduces the referent LA DAME (THE LADY) which had been a topic about 50 turns before. Even if dialogue during these 50 turns does not manifest any degree of activation of the referent, the presence of the camera probably constitutes a factor of subjacent activation. This type of reintroduction has been frequently analysed in adult conversations (Fox, 1987; Pekarek Doehler, 2001) and can be considered as a sign of the pervasiveness of the topic for the speakers.
The qualitative analysis of the 14 divergent uses suggests that actual inappropriate uses are really exceptional. Either children simultaneously use gestures that draw the attention of the interlocutor or they use pronouns in what seems to be a context of shared attention from their own perspective. Therefore it is the management of the dynamics between background and foreground in the dialogue and/or the transformation of the participation framework which prove to be difficult for the children. The pronouns’ anaphoric discourse value does not seem to be at stake: children do not use pronouns in order to focus the attention of the interlocutors on an entity that is not activated.

3.1.2. Hypothesis 2

Our second hypothesis predicts that pronouns will be preferentially used for referents which have been previously mentioned in the discourse. For this analysis, we contrast the cases for which the referent has been previously mentioned in the discourse (GVN + REI) and the cases for which there has been no previous mention (NEW + FMF).

A global effect is measured ($n = 3042$, ddl = 1) = 73.8791, $p < 0.0001$). Previous mention 3643 mention of the referent, and the use of other referential expressions, by an absence of previous mentions, except for the first level, where the difference is not significant (Level 1 ($n = 517$, ddl = 1) = 1.8208, $p = 0.1772$). For Level 2 ($n = 1010$, ddl = 1) = 13.4084, $p = 0.0006$), Odds of a third person pronoun are 14 times lower in the context of absence of previous mention than in the context of previous mention. Level 3 ($n = 789$, ddl = 1) = 11.8308, $p = 0.0006$, Odds of a third person pronoun are 6 times lower in the context of absence of previous mention than in the context of previous mention. Level 4 ($n = 726$, ddl = 1) = 50.3643, $p < 0.0001$, Odds of a third person pronoun are 38 times lower in the context of absence of previous mention than in the context of previous mention.

In this case as well, the confirmation strength of the hypothesis could be reduced by the fact that there are some few uses of pronouns without a previous mention of the referent. We examine here the pronouns occurring in the context of NEW or FMF referents from the point of view of discursive relations. Even if no antecedent can be identified either in the children’s discourse or in the discourse of their interlocutor, third person pronouns can, nevertheless, appear in relevant discursive contexts. We can note three different contexts.

a) In some cases (4, coded as FMF) the ongoing activity context favours continuity and the use of a pronoun:

(16) Lisa 1;11 – MLU: 1.56
Lisa is playing with a puzzle, her father is looking at her. She places the pieces on the support but does not put them in the right place. Having done so, she looks at the puzzle.
Lisa: Ah! j’est fini
Father: <smiling> tu crois que c’est fini? tu crois que c’est comme ça que ça va Lisa?
Lisa: ‘ah it’s finished’ ‘you think it’s finished? you think that’s the way it’s supposed to be, Lisa?’

The context in which Lisa mentions the puzzle (by means of a pronoun) is that of an activity observed by the father and the child alike. When she says “ah j’est fini”, her father doesn’t need a descriptive nominal expression from her in order to answer. The adult’s reaction confirms the fact that joint attention results in the representation of shared meanings as Kleiber (1994) and Cornish (1999) suggest. It is therefore fair to say that the child uses a pronoun just as an adult would have done in a similar situation.

b) In two cases, the reference of the pronoun is anchored in a specific discursive context which prepares its interpretation:

(17) Lucille 2;9 – MLU: 5.4
Teacher: et qu’est-ce que tu as fait avec Ploum alors ma chérie?
Lucille: il a mangé des pommes!
Teacher: ‘so what did you do with Ploum, dear?’ ‘he ate apples’

The teacher asks Lucille what she did with Ploum. The student answers by saying that she ate apples. The teacher’s reaction is compatible with this information. Lucille answers with a declarative sentence, which is a common way of answering a question, and does not need to provide a descriptive nominal expression.

In this excerpt, the pronoun ils refers to children whose drawings are on the wall. By saying ‘y a des cha-y avait des chameaux’ Lucille draws the attention of her interlocutors to the drawings. Besides, as the answer of the teacher shows, ils is used here as an indefinite, ‘collective’ pronoun (Kleiber, 1994) whose reference need not be made explicit, not even by adults. The reference of ils can be retrieved thanks to the triple contribution of the utterances mentioning the drawings, the gestures and the context of the classroom.

c) In two other cases, which present some common features with the previous ones, the pronoun designates a referent which is implicit and can be inferred from the interlocutor’s discourse. The referent is, in this case, part of the discursive representation built through dialogue.

(18) Chloé 2;3 – MLU: 2.71
Chloé is having a snack. She is handling a package of figs.

**CHL** - [sepa kokomâ lauvirî] ‘sais pas co-comment la ouvrir’

‘hey what are you doing there?’

When Chloé says [lauvirî] she refers to the package she is handling. This package has been alluded to by her mother when she asks ‘qu’est-ce que tu fais là?’ referring to the activity of the child.

Indeed, in contrast to these three kinds of discursive contexts, there are few exceptional cases when nothing in the linguistic context nor in the progress of the activity, can help retrieve the reference except for the presence of the entity in the situation, whether it is associated to a gesture or not. This concerns excerpts 5 and 14, which have been discussed above.

This qualitative analysis of the use of pronouns without any previous mention of an antecedent in the discourse enables us to reassert that the cases where there is a total absence of a discursive link are extremely rare. The cases that diverge from the global statistical tendencies are generally anchored in a discursive space in which the referent is not totally new. In the great majority of cases, pronouns refer back to entities that are part of the shared representation of the ongoing activity. These referents have, thus, at that point an activated status at the point when the children use pronouns in order to refer to them.

### 3.1.3. Present versus absent entities

As the various examples show, the mentioned entities are more often than not physically present in the situation, visible and at hand. Some authors consider that the appropriateness of the use of pronouns depends mostly on the presence of the entities they refer to in the situational context. If this was the case we should observe a greater proportion of inappropriate uses for brand-new absent referents. Table 5 presents the distribution of pronouns for present, absent or semi-present entities in raw numbers.

When the entity is absent from the situation (9.4% of all tokens), the pronouns are almost exclusively used after a previous mention in the discourse (GVN) (37 cases out of 38). The only exception corresponds to the case previously analysed (excerpt 14). The same remark can be made for the semi-present entities: 12 cases, out of 13, appear in the context of a previous mention of the referent, the 13th case corresponds to a reintroduction, whose intermediary status was discussed above (excerpt 17). Therefore, the use of pronouns for absent or semi-present entities does not increase the rate of divergent uses of pronouns.

<table>
<thead>
<tr>
<th>MLU level</th>
<th>Absent</th>
<th>Present</th>
<th>Semi-present</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NEW</td>
<td>FMF</td>
<td>GVN</td>
<td>REI</td>
</tr>
<tr>
<td>Level 1</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Level 2</td>
<td>0</td>
<td>0</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>Level 3</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Level 4</td>
<td>1</td>
<td>0</td>
<td>14</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>0</td>
<td>37</td>
<td>0</td>
</tr>
</tbody>
</table>

* In one case, the recording does not enable us to assess the presence of the referent.
3.2. Presence of the discourse object in the interlocutor’s discourse

The aim of this second analysis is to try to understand how anaphoric values of third person pronouns originate in dialogue. Table 6 presents the distribution of the referential expressions according to the mention of the referent in the interlocutor’s discourse for each MLU level. This analysis only concerns the subset of the ‘discourse given’ referents.

The ‘total’ column shows that most referential expressions concern discourse objects that have been previously mentioned by the interlocutor in the topical sequence (IMM: globally between 70 and 83%). In contrast, the percentage of referential expressions that have no link with the interlocutor’s discourse (NOT) and which correspond to the beginning of monologic sequences in child language amount approximately to 10% of the occurrences.

The percentages in Table 6 show the distribution of referential expressions in each context. A closer look at the use of pronouns shows that despite the small number of pronouns, they appear proportionally more often in the context of a previous mention of the referent by the interlocutor than the other types of referential expressions. Through logistic regression, a global effect is measured ($n = 1953$, ddl = 1) = 33.6051, $p < 0.0001$). The production of pronouns is thus significantly linked to immediate presence in the interlocutors’ discourse (IMM), whereas other categories appear more frequently in the context of different kinds of monological continuity. Odds of a third person pronoun are 3 times lower in the context of absence of link with the interlocutor’s discourse (NOT) than in the context of previously mentioned by the interlocutor in the topical sequence (IMM). For Level 1 ($n = 313$, ddl = 1) = 4.9509, $p = 0.0261$), odds of a third person pronoun are 10 times lower in the context of absence of link with the interlocutor’s discourse (NOT) than in the context of previously mentioned by the interlocutor in the topical sequence (IMM). For Level 2 ($n = 644$, ddl = 1) = 4.2709, $p = 0.0388$), odds of a third person pronoun are 2 times lower in the context of absence of link with the interlocutor’s discourse (NOT) than in the context of previously mentioned by the interlocutor in the topical sequence (IMM).

<table>
<thead>
<tr>
<th>MLU level</th>
<th>Third person pronouns</th>
<th>Nouns</th>
<th>Dislocation constructions</th>
<th>Other pronouns</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>IMM</td>
<td>22 (9.9%)</td>
<td>141 (63.5%)</td>
<td>8 (3.6%)</td>
<td>51 (23.0%)</td>
</tr>
<tr>
<td></td>
<td>DIST</td>
<td>0 (0.0%)</td>
<td>20 (71.1%)</td>
<td>1 (3.7%)</td>
<td>6 (22.2%)</td>
</tr>
<tr>
<td></td>
<td>INF</td>
<td>0 (0.0%)</td>
<td>19 (59.4%)</td>
<td>0 (0.0%)</td>
<td>13 (40.3%)</td>
</tr>
<tr>
<td></td>
<td>NOT</td>
<td>1 (3.1%)</td>
<td>22 (68.8%)</td>
<td>0 (0.0%)</td>
<td>9 (28.3%)</td>
</tr>
<tr>
<td>Total Level 1</td>
<td>23 (7.3%)</td>
<td>202 (64.5%)</td>
<td>9 (2.9%)</td>
<td>79 (25.2%)</td>
<td>313</td>
</tr>
<tr>
<td>Level 2</td>
<td>IMM</td>
<td>68 (13.1%)</td>
<td>302 (58.3%)</td>
<td>32 (6.2%)</td>
<td>116 (22.4%)</td>
</tr>
<tr>
<td></td>
<td>DIST</td>
<td>1 (2.4%)</td>
<td>27 (64.3%)</td>
<td>6 (14.3%)</td>
<td>8 (19.0%)</td>
</tr>
<tr>
<td></td>
<td>INF</td>
<td>4 (15.4%)</td>
<td>11 (42.3%)</td>
<td>1 (3.8%)</td>
<td>10 (38.5%)</td>
</tr>
<tr>
<td></td>
<td>NOT</td>
<td>3 (5.2%)</td>
<td>38 (65.5%)</td>
<td>5 (6.9%)</td>
<td>13 (22.4%)</td>
</tr>
<tr>
<td>Total Level 2</td>
<td>76 (11.8%)</td>
<td>378 (58.7%)</td>
<td>43 (6.7%)</td>
<td>147 (22.8%)</td>
<td>644</td>
</tr>
<tr>
<td>Level 3</td>
<td>IMM</td>
<td>66 (14.9%)</td>
<td>182 (41.2%)</td>
<td>51 (11.5%)</td>
<td>143 (32.4%)</td>
</tr>
<tr>
<td></td>
<td>DIST</td>
<td>3 (9.7%)</td>
<td>22 (71.0%)</td>
<td>2 (6.5%)</td>
<td>4 (12.9%)</td>
</tr>
<tr>
<td></td>
<td>INF</td>
<td>1 (5.9%)</td>
<td>8 (47.1%)</td>
<td>2 (11.8%)</td>
<td>6 (35.3%)</td>
</tr>
<tr>
<td></td>
<td>NOT</td>
<td>5 (11.4%)</td>
<td>25 (56.8%)</td>
<td>4 (9.1%)</td>
<td>10 (22.7%)</td>
</tr>
<tr>
<td>Total Level 3</td>
<td>75 (14.0%)</td>
<td>237 (44.4%)</td>
<td>59 (11.0%)</td>
<td>163 (30.5%)</td>
<td>534</td>
</tr>
<tr>
<td>Level 4</td>
<td>IMM</td>
<td>194 (50.0%)</td>
<td>131 (33.8%)</td>
<td>26 (6.7%)</td>
<td>37 (9.5%)</td>
</tr>
<tr>
<td></td>
<td>DIST</td>
<td>4 (21.1%)</td>
<td>10 (52.6%)</td>
<td>1 (5.3%)</td>
<td>4 (21.1%)</td>
</tr>
<tr>
<td></td>
<td>INF</td>
<td>0 (0.0%)</td>
<td>4 (100%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td></td>
<td>NOT</td>
<td>11 (21.6%)</td>
<td>24 (47.1%)</td>
<td>8 (15.7%)</td>
<td>8 (15.7%)</td>
</tr>
<tr>
<td>Total Level 4</td>
<td>209 (45.2%)</td>
<td>169 (36.6%)</td>
<td>35 (7.6%)</td>
<td>49 (10.6%)</td>
<td>462</td>
</tr>
<tr>
<td>Total</td>
<td>383 (19.6%)</td>
<td>987 (50.5%)</td>
<td>146 (7.5%)</td>
<td>438 (22.4%)</td>
<td>1953</td>
</tr>
</tbody>
</table>
discourse (NOT) than in the context of previously mentioned by the interlocutor in the topical sequence (IMM). For Level 4 \((n = 462, \text{ddl} = 1) = 19.9677, p < 0.0001\), odds of a third person pronoun are 4 times lower in the context of absence of link with the interlocutor’s discourse (NOT) than in the context of previously mentioned by the interlocutor in the topical sequence (IMM). For Level 3 the difference is not significant \((n = 534, \text{ddl} = 1) = 1.654, p = 0.1995\). For this group, the proportion of pronouns in the IMM context does not differ from the proportion of pronouns in the whole corpus. There is no inversion of the general tendency either. Indeed, the detailed analysis of the data in group 3 shows that 5 out of 9 occurrences of pronouns that do not appear in the IMM context are produced by the same child (Cécile 1;11), whereas pronouns in IMM context are produced by almost all the children of the group.

This global tendency can give us some hints on the way the proto-anaphoric value we have underlined above is set up. Discourse givenness is anchored in a common ground, which has been established in dialogue more than in monological continuity for each child. This framework seems to scaffold the children’s productions. The qualitative analysis of dialogical sequences in which pronouns are involved show how the links between the participants’ utterances underlie children’s verbal productions.

Excerpt (18) illustrates the impact of dialogue on children’s elaboration of discourse. The pronoun is produced in the context of a dialogically shared co-referential chain. The child introduces the topic MUM; the adult takes up this discourse object and expresses it in a pronominal form. When Daniel says, [elepati äavwaty] (‘she left in F car’), his utterance sets up a double continuity: the focus is on the same referent and he takes up the form used by the adult even though he uses the pronoun with a different predicate. The construction of the child’s utterance is therefore grounded in the adult’s discourse.

Lisa and her mother are talking about the doll. When Lisa says [i dort], the adult has already mentioned the referent by means of a right dislocated construction ([l’... la poupee]). The child takes up the discourse object from her mother’s utterance and shifts its syntactical function from object to subject.\(^7\) At the same time she takes up the verb used by her mother and modifies it ([endors/dort]).

In both excerpts we can see how the development of discourse is based on this fundamentally dialogical double move of uptaking and modifying (François, 1984). Thus, when children produce an utterance, their construction of the discourse object is not only based on their own and sole perception of the world. The topic of discourse has also been developed and commented upon by the adult. Children may draw upon these two sources: their own perception of the world and the adult’s discourse.

\(^7\) Lisa uses a masculine form [i] for a feminine referent. This gender neutralisation is also frequent in adult’s oral discourse and has been observed in French since the beginning of the 20th century (Frei, 1929). It has frequently been regarded as an argument to treat the clitic pronoun as a flexional prefix of the verb rather than a free morpheme (Apothéloz, 2004; Jakubowicz and Rigaut, 1997). Nevertheless this debate can be considered independently from the reflexion on the pragmatic value of the construction. We do not have enough space to develop this discussion here.
In contrast, we can note that the proportion of pronouns which appear in the context of a total absence of an antecedent in the interlocutor’s discourse but which have their antecedent in the child’s own production slowly rises with the MLU level. There might be a correspondence between this tendency and the onset of a monologic intra-discursive construction.

The proto-anaphoric value of pronouns seems therefore tightly linked to the primacy of dialogue in the elaboration of discourse. In contrast to what Levy’s analysis suggests (1989, 1999), this primacy does not correspond to the mere reproduction of preferential associations produced by the adult nor to an imitative behaviour (Salazar Orvig et al., in press). To a certain extent, the construction of reference is tied to dialogue as a joint activity (Bakhtin, 1986; Bamberg, 1999; Pekarek, 1999), the discourse of the adult being the foundation for the construction of the discourse of the child, and vice versa.

3.3. General discussion

Our data has enabled us to observe the functioning of pronouns from the onset when they emerge along with the child’s first syntax (MLU Level 1) to more ‘adult-like’ uses (MLU Level 4). Our results confirm that children begin to use third person pronouns to maintain a reference rather than to introduce new discourse objects. In our study, the analysis of the referential use of pronouns is based on the assessment of the givenness or newness of the referent from an attentional and a discursive point of view. The results for these parameters suggest that children do not use third person pronouns either randomly or in a deictic way. If this were the case (as for demonstratives, cf. Salazar Orvig et al., 2006), a much higher rate of third person pronouns used for focusing the attention of interlocutors on new referents and/or for a first discursive mention of the referent would have been observed. On the contrary, in an overwhelming majority of cases, children prefer other referential expressions for new referents. Pronouns are preferred in the context of referential continuity, for referents that have been previously mentioned in the dialogue or that have been under the joint attention of the participants. In other terms, when using referential expressions, children seem to be sensitive to the attentional and discursive status of the objects they refer to. This suggests that third person pronouns are not acquired with a deictic function.

The contrast between these results and some of the other studies on anaphora in language acquisition might seem puzzling. On the one hand, differences in the treatment of the anaphora/deixis opposition mentioned above (section 1.1) can explain that superficially similar configurations can be analysed in opposite ways: some exophoric expressions could be analysed as deictic in textualist approaches because of the extra-linguistic location of the referent whereas in the cognitive framework the activated status of their referent in the context of joint attention brings them closer to anaphoric functioning. On the other hand, differences in the contexts that were examined and in the interpretation of the data can account for these discrepancies.

Studies on children’s referential expressions have been conducted in three types of contexts: narratives, experimental settings and dialogues. In the context of narratives, the referential continuity is managed in the framework of an extensive monologue, which includes several characters (de Weck, 1991; Hickmann, 2002). The child must therefore manage a whole set of competing referents whose topical centrality can be modified in the course of the narrative. In fact, the great majority of these studies concern monological narratives mostly based on picture stories and the phenomena described could be partly specific to these types of context. Pictures can favour deictic referential behaviours, even when the interlocutor does not see them (cf. Hickmann et al., 1995). Reference to iconic fiction may be very different from reference to objects that are not mediated by iconic representations. These reference modes do not necessarily develop in similar ways. Moreover, in the dialogues that we have analysed for this study there are very few cases of picture interpretation; this may also explain contrasts in results in the two kinds of studies.

We have studied conversations in a familiar environment such as home or school, providing the children with a ‘friendly’ context in which reference is scaffolded by adults. Our results reflect these natural interlocutive conditions. When young children are placed in experimental conditions (e.g. Campbell et al., 2000; Matthews et al., 2006; Serratrice, 2008) they often fail to assess their interlocutor’s knowledge or the perceptual availability of the referent. The more ecological context of our study shows that ‘inappropriate’ uses are far less frequent than in experimental conditions (cf. section 3.1). Experimental situations probably have a magnifying effect on some difficulties the children experience. Although we do not deny their validity, it is necessary to recall that experimental situations are also dialogues (for a reflexion on these topics see Schubaeur-Leoni and Grossen, 1992; Aronsson and Hundeide, 2002). In these particular dialogues only some factors governing reference are considered by experimenters as...
independent and controlled variables and the complex network of meanings involved in dialogue is not addressed. In ordinary conversations, the reference of pronouns is grounded in the ongoing co-constructed discourse and in its topical and interlocutive continuity. By contrast, it is difficult to know what it means for a young child who is not yet used to school type interlocutive conditions, for example, to answer a repetitive series of questions in which there is no topical continuum. Our own experience in various experimental testing situations with children has caused us to believe that the youngest ones do not necessarily have the same representation of the experimental situation as the experimenter. A complementary study would certainly be useful to evaluate the effect of these differences on verbal productions.

Another question that might be raised concerns the fact that, in our data, the entities the children refer to are in most cases physically present in the situation. As we have seen above (section 1.2), for several authors this physical presence can prevail over the discursive organisation: this could be considered as an argument against assigning an anaphoric value to the correspondent referential expressions. But if so, we should expect proportionally more inappropriate uses when the entities they refer to are absent. In contrast, our results show that the children’s reference acts do not differ according to whether the entity is present or absent. The cognitive status of the referents depends on more discoursal features. Indeed, an interpretation which would only consider the presence/absence of the entities that children refer to would disregard a very important fact: children, like any speaker (Bakhtin, 1986), are involved in dialogue and consequently the interlocutor’s discourse is an important source for their verbal elaboration. Our results suggest that children move forward in their appropriation of anaphora thanks to their participation in dialogue. As we have seen, pronouns (more than other referential expressions) are mostly used in immediate link to the interlocutor’s previous discourse. Where the presence of the entity and mutual focus on it constitute a basis for thematic continuity, the discursive relation woven in dialogue provides the source for verbalisation. When the entity is present, the perceptual relation to the referent in sight works in conjunction with the linguistic relation to the interlocutor’s discourse. Thus, co-reference relations do not correspond to a ‘re-enactment’ of exophoric reference but have a discursive and dialogical basis.

It is also important to tackle the issue of the type of mental representation which underlies children’s productions. Research in language acquisition and the development of referential expressions encounters important drawbacks. Indeed, it is quite difficult to determine whether the conformity of the children’s productions with adult uses are based on the same type of processing of mental representations, especially as far as the ability to assess the status of a referent (its familiarity for example) is concerned. Matthews et al. (2006) for instance hold that the origin of the common ground constructed in dialogue could be the interlocutors’ aligned models of the situation (Pickering and Garrod, 2004), which are constructed by priming rather than by explicit or conscious assessment of the interlocutors’ knowledge. Nevertheless, as the qualitative analysis of our excerpts shows, children do not rely on priming alone. Their replies display a referential continuity that draws on the shared understanding of the ongoing activity.

On the other hand, Gundel et al. (2007) argue that relevant production and comprehension of referential expressions implies both linguistic competence (knowing the forms and their functions, their conventional meanings) and non-linguistic, cognitive capacities which entail a certain level of theory of mind (Baron-Cohen et al., 1993). They conclude that the acquisition of referential expressions progresses in two distinct stages of mind-reading ability. At the first, implicit and non-propositional level, the child is able to assess cognitive statuses such as familiar or in focus. At the second, propositional and conscious level, the child is capable of evaluating epistemic statuses (such as knowledge and belief). The verbal behaviour of the children we have studied probably corresponds to the first level considered by Gundel et al., which can be assessed through the progression of the dialogue. Besides, from an ontogenetic point of view, the development of capacities concerning the mental states, the shared knowledge, or the beliefs of the interlocutors is grounded in the development of first interactions and in particular in the development of joint attention conceived of as an intersubjective process. First references are constructed in this mutual sharing of forms and meanings. Even though this development has not yet been sufficiently explored (Plumet, in press) in the framework of dialogical development, a number of observations (Veneziano, 1992; Veneziano and Hudelot, 2002; Salazar Orvig, 2005) show some forms of perspective taking which are not measured in traditional TOM tests.

Above all, the assessment of appropriateness cannot be similar at the dialogical level as at the sentence level. Whereas, at the sentence level, linguistic units are grammatically constrained, at the discursive level, their range of values are resources that can be mobilized under relevant conditions for the interaction in progress. For example, in a conversational analysis perspective, Fox proposes the following basic pattern for adult conversations: “the first mention of a referent in a sequence is done with a full NP. After that, by using a pronoun the speaker displays an
understanding that the preceding sequence has not been closed down” (Fox, 1987:18). She thus considers (see also Pekarek Doehler, 2001) that a distant use of 3rd person pronouns can express a particular orientation of the interlocutors concerning the topic and the referents in question. In our study, the qualitative analysis of ‘exceptional’ cases suggests that a context which is perceived by the child as a joint attentional one, may not necessarily be perceived as such by the adult. As we have seen, some of the divergent uses show that the management of background and foreground information can be difficult for children. The issue might not be the semantic and pragmatic value of pronouns, but the child’s difficulty to master the complex interactional context in which he is embedded.

4. Concluding remarks

Our observations suggest that children acquire pronouns with a proto-anaphoric value and not with a deictic value. This value is not yet equivalent to anaphoric devices used by adults, since young children do not deal with monologues and various competing referents. This proto-anaphoric value corresponds to two basic features: attentional and discursive continuity.

The data we have studied provide some leads as to how this basic or proto-anaphoric value emerges through dialogue and joint activities. Children are sensitive to the course of dialogue (Salazar Orvig et al., 2004) and to whether joint attention is focused on a referent or whether a referent has been previously mentioned or not. This idea is reinforced by the fact that children mostly rely on their interlocutors’ discourse to construct reference and co-reference. Pronouns used by children draw their proto-anaphoric value from the dialogical contexts in which they are used and, at the same time, this basic dialogical continuity might enable the child to adopt the adult’s uses of pronouns. In order to understand this process, we can think of an enlarged context-based use (Tomasello, 2003) explanation which would rely on ‘the integration of interactional episodes’ (Veneziano, 2000). Children would thus grasp the contrasts marked by adults in their choice of referential expressions – and in particular the fact that adults use pronouns in the context of strong thematic continuity. They would then be capable of using these units thanks to what Tomasello (1999) calls “role reversal imitation”. Therefore, as Tomasello puts it, this internalisation would not be the result of some mysterious process. Children adopt linguistic forms that they have experienced in dialogue and whose communicative value they have grasped.

On the other hand, the analysis of children’s first uses of pronouns, contribute to our understanding of pronominal anaphora in adult language. The importance of the dialogical dimension in referential and discursive processes cannot be disregarded. Even if children under 3 are less proficient than adults at assessing their interlocutors’ mental states, knowledge or perceptions, they first experience referent accessibility through given information in dialogue. Our analysis of young children’s productions suggests both the anteriority and the importance of the dialogical dimension. Anaphora could therefore originate in the relation to the other’s discourse – in the reference to shared representation in a co-constructed discursive space.

Uncited references


Appendix A

See Tables A and B.

Table A
Percentage of referential expressions associated with a non-verbal behaviour (handling, body and head orientation, pointing, showing, offering and taking).

<table>
<thead>
<tr>
<th>MLU</th>
<th>3rd person pronouns</th>
<th>Nouns</th>
<th>Dislocation constructions</th>
<th>Other pronouns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1 (≥1; &lt;2)</td>
<td>43%</td>
<td>38%</td>
<td>35%</td>
<td>54%</td>
</tr>
<tr>
<td>Level 2 (≥2; &lt;2.5)</td>
<td>40%</td>
<td>30%</td>
<td>46%</td>
<td>55%</td>
</tr>
<tr>
<td>Level 3 (≥2.5; &lt;3)</td>
<td>42%</td>
<td>38%</td>
<td>61%</td>
<td>57%</td>
</tr>
<tr>
<td>Level 4 (≥3)</td>
<td>75%</td>
<td>44%</td>
<td>33%</td>
<td>73%</td>
</tr>
</tbody>
</table>

*Percentage for Level 4 concern only children who were videotaped, from cross-sectional corpus at 2;3.*
Table B

Distribution in percentages of the degree of referent presence for each category of referential expressions and for all referential expressions.

<table>
<thead>
<tr>
<th>MLU</th>
<th>3rd person pronouns</th>
<th>Nouns</th>
<th>Dislocation constructions</th>
<th>Other pronouns</th>
<th>All referential expressions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Abs</td>
<td>Prs</td>
<td>Spr</td>
<td>Abs</td>
<td>Prs</td>
</tr>
<tr>
<td>Level 1 (≥1; &lt;2)</td>
<td>11.5</td>
<td>80.8</td>
<td>7.7</td>
<td>21.6</td>
<td>69.8</td>
</tr>
<tr>
<td>Level 2 (≥2; &lt;2.5)</td>
<td>18.3</td>
<td>75.6</td>
<td>6.1</td>
<td>37.1</td>
<td>52.9</td>
</tr>
<tr>
<td>Level 3 (≥2.5; &lt;3)</td>
<td>6.2</td>
<td>88.9</td>
<td>4.9</td>
<td>34.4</td>
<td>62.3</td>
</tr>
<tr>
<td>Level 4 (≥3)</td>
<td>7.0</td>
<td>92.1</td>
<td>0.9</td>
<td>71.8</td>
<td>23.7</td>
</tr>
<tr>
<td>Total</td>
<td>9.4</td>
<td>87.3</td>
<td>3.2</td>
<td>41.1</td>
<td>51.8</td>
</tr>
</tbody>
</table>

References


859 Haydée Marcos After some years as a child psychologist, she dedicated her career to research (Centre National de la Recherche Scientifique) first on motherhood and its meaning (La signification de la naissance du premier enfant, 1984, Privat, Paris) then on child communication between 1 and 3 from a pragmatic perspective (De la communication prélinguistique au langage: formes et fonctions (L’Harmattan, Paris, 1998 and Apprendre à parler: les effets du mode de garde, L’Harmattan, Paris 2004). She published papers (Journal of Child Language, First Language, Journal of Pragmatics) concerning different aspects of early pragmatic development and conversational abilities.

860 Aliyah Morgenstern is Professor in English Linguistics at Université Sorbonne Nouvelle Paris 3, France. Her work is centered on the emergence of grammaticality in child language through the use of pronouns, prepositions, conjunctions, determiners in the framework of spontaneous interactions between children and their interlocutors (Un JE en construction, 2006, Ophrys). She is the scientific director of the Leonard Project (http://am-leonard.ens-lsh.fr/) in which her team takes on a multimodal and pluridisciplinary (linguistics, psychology, neurology, psychoanalysis, anthropology) approach to child language and compares the acquisition of French Sign Language, English, French and Italian.

861 Rouba Hassan is associate professor at the Université Charles de Gaulles-Lille3, France, in the department of ‘Sciences de l’éducation’. She is a member of Theodile (Théories didactiques de la lecture-écriture: Theories in writing and reading learning). Teaching and learning French L1 is her current major field of research. Her interest goes to language development, literacy in young children in various educational contexts.

862 Jocelyne Leber-Marin is a retired school teacher. She has a PhD in linguistics on the diversity of kindergarten children’s discursive styles (Université René Descartes, paris V –Sorbonne). She continued her research in the framework of research teams at the universities of Paris V and Paris III. She has taught language acquisition and literacy courses in several universities and institutions. She published ‘Analyser et favoriser la parole des petits, un atelier de langage à l’école maternelle’, in collaboration with Mireille Froment, E.S.F. (2003).

Jacques Pare` was born in 1928. After his studies, he served as Administrator of the French Overseas territories in Lebanon where he learned several native languages and in Chad where he learned Modern Arab. Back in France in 1960, he was then an advisor for the French Foreign Affairs Ministry, General Secretary in several national public institutions and became director at “Télédiffusion de France”. After his retirement in 1995, he studied linguistics at Paris V University. He participated in various research projects in language acquisition and in several publications.