

# *Rising grammatical awareness in a French-speaking child from 18 to 36 months: uses and misuses of possession markers*

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(Received January 2011; revised August 2011)

## ABSTRACT

Children's awareness of grammar can be traced in the way they use and particularly misuse morphology and constructions in what Clark (2001) calls 'emergent categories'. We focus our longitudinal study on a French speaking child's use of possession markers (*Anaé, Paris Corpus*), and her creative nonstandard productions (*la poupée de moi* for *ma poupée/my doll*). We provide a detailed analysis of the ways in which she moves between a global strategy thanks to which she locates, identifies and uses whole blocks or constructions without analyzing them, and a more analytic strategy that parallels her progressive mastery of the semantic and syntactic complexity of grammatical morphemes.

## I. ISSUES AT STAKE AND STATE OF THE ART

### 1.1 *Theoretical framework – Construction grammar*

Young children learn the set of linguistic conventions used around them through interactions with members of their community. These conventions consist of hundreds of thousands of words and constructions, including the abstract constructional patterns that speakers of each language have grammaticalized.

Scientists have differed in their accounts of this acquisition process (see introduction to this Special Issue). In more recent years, a number of studies in developmental psychology, linguistics and cognitive science have suggested that children have at their disposal very powerful learning mechanisms integrated with social-cognitive skills that enable them to learn from the input. Theories representing this viewpoint come mainly from cognitive or functional linguistics and take a usage-based approach to language development. Such approaches take language structure to emerge from language use (Langacker 1987; Croft 1991; Goldberg 1995; Givón 1995; Bybee 1985; Tomasello 2003). Adult linguistic competence is thus viewed as based on concrete pieces of language that undergo generalizations. Children are seen as using meaning and function to acquire linguistic constructions in context. Crucially, linguistic competence does not

correspond to the mastery of a formal grammar based on semantically empty rules, but rather to the mastery of an inventory of meaningful linguistic constructions that each pair meaning with form. For Tomasello (2003), toward the beginning of the acquisition process these constructions are dominated by isolated, lexically specific, 'item-based' constructions. Acquiring grammar is viewed as the gradual generalization of such item-based constructions into more abstract patterns based on communicative function. More concretely, children first extract tangible elements (words, morphemes, unanalyzed strings, constructions) by identifying their communicative function; then, based on recurring items with similar functions across various situations in the input, they create more or less abstract categories and constructions.

In this study of the acquisition of constructions marking possession, we will illustrate how at the beginning of acquisition, some of the children's productions do not resemble adult language. Rather, the actual structures and representations involved in children's productions seem to change across different stages of the acquisition process. The main factors affecting language development in our view are 1) communicative intention, 2) frequency and saliency in the input, but also 3) children's very own affective, social and practical concerns. Those three main factors come into play to various degrees according to the specific linguistic item that is being acquired.

The development of the marking of possession serves as an especially interesting locus for a study of the way these factors intermingle. As shown by Marcel Cohen (1924), children seem to construct their own transitory systems in the course of language acquisition. Since the beginning of the 20<sup>th</sup> century, a number of scientists have tried to explain the mismatches between the input and some of the children's peculiar productions. Karmiloff-Smith (1986) makes a theoretical proposal in terms of continual revision of form-function mappings illustrated by examples of how the child's system does not directly reflect the characteristics of the input. Children produce a number of nonstandard forms at the beginning of the learning process (Rondal *et al.* 2000); these are typical of what Clark (2001) has named 'emergent categories'. Some of those forms illustrate how children are able to move beyond frozen expressions thanks to productive analyses of the input, and might create non-adult constructions in the process of learning form-function pairings.

In the course of this study of a French-speaking child's forms used to mark possession, we will analyze her 'errors' or nonstandard forms, which have been referred to as 'barbarisms' by Egger (1879) or 'incorrect forms' by Bühler (1926). We view these forms as revealing signs of her cognitive processing of the grammatical categories and the semantic features at play in the marking of possession.

### 1.2 *Expressing possession in French*

Even though possession is quite a stable notion cross-culturally, and all languages seem to have means to encode that notion linguistically, there is no universal linguistic structure common to all possessive constructions. These constructions

often express other concepts, and various forms used to express other concepts might be borrowed to express possession (Heine, 1995). It is therefore quite difficult to analyze the use of possessive constructions in a large corpus (especially spontaneous adult-child conversations), since automated searches are not easy when the forms are diverse, unless the notion of possession is specifically tagged.

Possession in French may be marked in many ways, either locally in nominal expressions (attributive possession) or more globally in the utterance using a predicate, and particularly the verb *avoir* / *to have* (predicative possession). In this paper, we will focus on attributive possession. Expressions involving mere juxtaposition are much less frequent in French than in English (as in *New York buildings*). Just as in English, however, French has not grammaticalized the distinction between inalienable (inherent) possession (*son nez* – her nose) and alienable (non-inherent) possession (*sa voiture* – her car).

For third-person possessors, there are two competing structures in French: [Noun<sub>1</sub> + preposition *de* + Noun<sub>2</sub>] (*le sac de maman* – mummy's bag) and [Possessive Determiner + Noun] (*son sac* – her bag). The selection of the construction depends on the discourse status of the possessor. If the possessor has been mentioned (given), the speaker will use [Possessive Determiner + N] (*sa voiture* – her car). If the information is not known (new), the speaker will use [N<sub>1</sub> de N<sub>2</sub>] (*la voiture de Martial* – Martial's car). A third grammatical marking of possession is possible, with the use of an anaphoric possessive pronoun (*la sienne* – hers), when not only the possessor, but also the possessed object, are given information in the discourse context, though this pattern is less frequent in adult data.

For first and second-person possessors, the construction used is [Possessive Determiner + Noun] as in *ma maison* (my house), *ton sac* (your bag), since the reference to the possessor is constructed deictically. An emphasis can be expressed with the addition of [*à* + tonic pronoun] to the [Possessive Determiner + noun] structure, as in *ton papa à toi* (your own dad). This phrase can also stand by itself: the answer to questions such as *c'est à qui?* (whose is it?) can be *à moi* (it's mine).

In French, as opposed to English, agreement of possessive determiners marks both the possessed object and the possessor. These determiners must agree in number and gender with the noun they determine (referring to the possessed object/s) and in person with the possessor(s). According to Rondal *et al.* (2000), their use is guided by an economy principle that reduces expressions such as 'X belongs to Y' or 'X is part of Y' to [Poss Det + X]. The choice of a possessive determiner is the result of four combined operations: 1) the selection of personal reference according to the interpersonal context of the verbal exchange (first person when the speaker is the possessor, second person when the interlocutor is the possessor, third person when the possessor is neither the speaker nor the interlocutor); 2) the selection of the agreement in gender and number according to the gender and number of the possessed object; 3) the selection of the agreement in number according to the number of the possessor (singular or plural); 4) the initial phoneme of the possessed element (in *son amie*, the possessive determiner is masculine because the noun begins with a vowel).

Possessive determiners can therefore be analyzed as an amalgam of several grammatical and phonological features. They seem to be simple markers on the surface but are quite complex at different levels.

### 1.3 How children acquire the marking of possession

Children start talking about possession from an early age (Brown, 1973), for it plays a central role in their daily lives (Eisenbeiss *et al.*, 2009). Slobin (1985) suggests that they start out with a higher-level category of location that includes possession. But Bowerman (1985) argues that nothing proves which of location or possession is more basic. Children might focus on either of these semantic relations at different times.

Since French subdivides the semantic notion of possession into several constructions according to the various factors identified above (discourse status, person, gender, number), children learning French often produce 'errors' while in the process of sorting out these factors (Clark, 2001). More precisely, children have a preference for seeking consistent ways to mark certain distinctions as they create their own form-function pairings (Slobin, 1985; Budwig, 1995). They may thus pick a single construction to express all instances of a category they mean to target. This may lead them to overgeneralization errors before they acquire all the conventional forms for that category and learn how to express finer distinctions. Besides, constructions might be acquired in stages with omission of certain grammatical markers. This leads to paratactic uses such as *chemise papa* (shirt daddy) instead of *la chemise de papa* (daddy's shirt).

According to Rondal *et al.* (2000), French-speaking children don't use possessive determiners at first; they express possession in three different ways:

- (preposition *à*) + possessor: *à moi* (mine)
- (article) + possessed object + (preposition *à/de*) + possessor: *la balle de Dédé* (Dédé's ball)
- possessor + possessed object: *papa bic* (daddy pen)

The construction [N + *à moi*] is quite frequent in some registers of French used in families from the working class (Grégoire, 1937), but the child in the data we have collected is not surrounded by that kind of input. Those uses are not standard in her environment and could be considered to express possession as an emergent category (a single construction generalized to nonstandard uses). However, since children are so sensitive to the input, these non-standard [N + *à moi*] constructions are transitory and are soon replaced by the adult forms [N<sub>1</sub> *de* N<sub>2</sub>] and [Poss Det + N].

In this paper, we examine the developmental pattern in our longitudinal data and compare it to the relatively rare mentions of the acquisition of possessive markers in the literature, as well as to the marking of possession in the child's maternal input. We mostly focus on the nonstandard forms used by the child<sup>1</sup> and on her acquisition of the conventional standard alternatives.

<sup>1</sup> A short version of a study on nonstandard forms (gender and possessive marking) is presented in Leroy-Collombel (2010).

Table 1: Example of Coding

Data	Sp	Utterance	Poss	Noun	Structure	Form	Pers. Ref.
Anaé 2;5	CHI	Y'a pas d'escalier dans la maison de Dora	Yes	maison	N de N	la maison de Dora	3
Anaé 2;5	CHI	Je parle dans ma tête	Yes	tête	Det + N	ma tête	1

## 2. DATA, METHOD AND RESULTS

### 2.1 Data and Method

This paper focuses on *Anaé's* longitudinal data (see the description of the *Paris corpus*, this issue). We used the three types of data at our disposal to study *Anaé's* linguistic development: 1) transcriptions in CHAT format from 1;06 to 4;0 linked to video; 2) the mother's diary from birth to 4;00; 3) detailed coding of eleven one-hour sessions from 1;07 to 2;11.

We coded all utterances that contained a construction marking possession. In the child's language, we found the following standard constructions embedded in her utterances:

- [Poss Det + N]: possessive determiner + Noun (*sa maison* – her house)
- [N1 de N2]: Noun 1 + *preposition* de + Noun 2 (*la maison de Dora* – Dora's house)

We also found the following constructions in isolation:

- *C'est à* + tonic pronoun (*c'est à moi* – it's mine)
- *A* + tonic pronoun (*à moi* – mine).

Very few of these constructions are used in the second and third person. Nonstandard constructions were also coded:

- Le N de moi / Le N à moi

This construction was only produced in the first person.

The coding was done using Excel, based on the following features:

- 1) Dataset, 2) Speaker, 3) The whole utterance, 4) Presence of a possessive structure (Yes/No), 5) Noun determined, 6) Possessive structure, 7) Concrete possessive phrase, 8) Personal reference of the possessor.

Examples such as *la poche de ma maman* (my mummy's pocket) were coded twice, once for the [N1 de N2] structure, once for the [Poss Det + N structure] (*ma maman* – my mummy).

### 2.2 Distribution of the various structures in the data

#### 2.2.1 Possessive structures in the input

Our coding enabled us to count the number of occurrences of each construction in the input, in order to compare mother and child's uses. Overall, we found 271

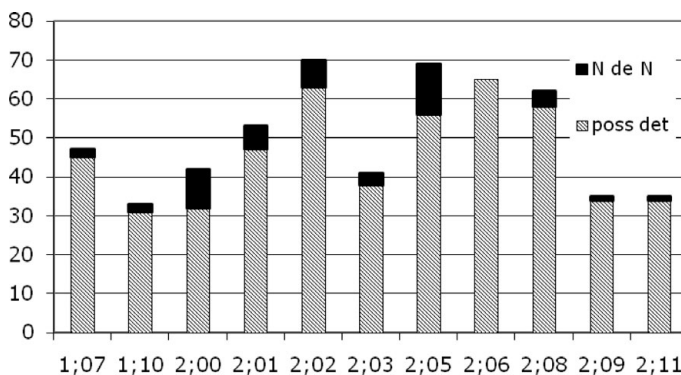


Figure 1. *Distribution of possessive constructions in the input*

occurrences of possessive constructions in the child's verbal productions and 552 in the mother's input in the recordings between 1:07 and 2:11.

We can observe in Figure 1 that there are two types of constructions in the mother's input, where the structure [Poss Det + Noun] is predominant. The total rate of [Poss Det + N] in the mother's productions in the eleven one-hour sessions is 91.5%. The construction [N<sub>1</sub> de N<sub>2</sub>] is only used to refer to third-person discourse objects that are introduced for the first time in the discourse (new information), are not the focus of attention, and are not particularly emphasized for contrastive reasons, as illustrated in the examples below.

(1) - Anaé 2:05

MOT: C'est Martial et Magali qui te l'avaient offert, le papa et la maman de Sacha. [Martial and Magali gave it to you, Sacha's Mummy and Daddy.<sup>2</sup>]

In (1), the mother introduces the family relationship between Sacha and the two discourse objects mentioned in the first part of the utterance. The relation constructed with [N<sub>1</sub> de N<sub>2</sub>] enables the mother to clarify who the discourse-objects are, and to locate them according to a discourse-object whose identification seems to be easier for Anaé. Sacha is a friend she knows very well, but she probably does not remember the names of his parents.

(2) - Anaé 2:05

MOT: le bébé kangourou, il est dans la poche de sa maman. [the baby kangaroo is in his mummy's pocket.]

In (2), there are two possessive constructions in the same utterance 1) *la poche de sa maman* (his mummy's Pocket) (N<sub>1</sub> de N<sub>2</sub>) and 2) *sa maman* (his mummy) (Poss Det + N). In the first construction, the relationship between *poche* (pocket) and *maman* (mummy) is presented for the first time in discourse. It is new information and gives the location of 'bébé kangourou'. The second construction is made

<sup>2</sup> The translation is literal in order to maintain the syntax of the French utterance.

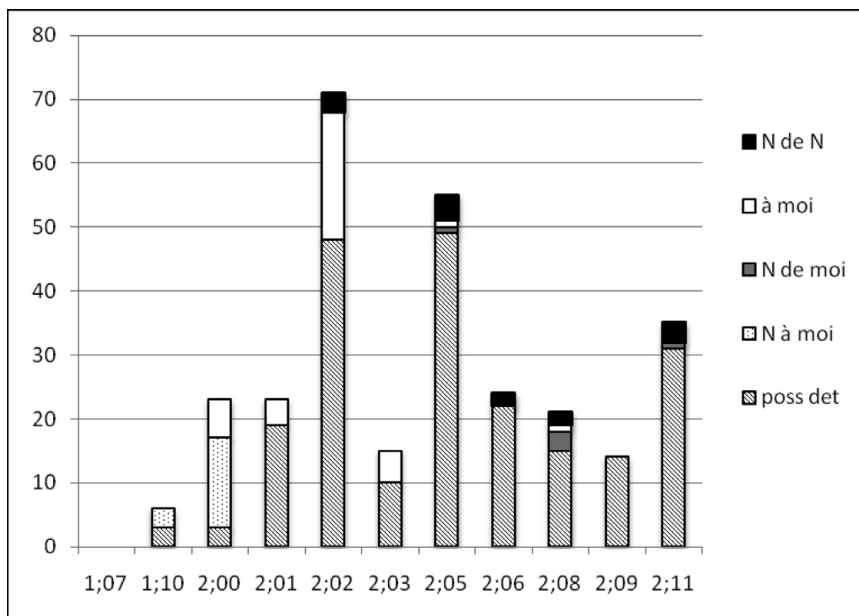


Figure 2. Distribution of possessive constructions in the child's productions

possible because the discourse-object has been mentioned in the first part of the utterance and is pointed back to in the second part with the third-person possessive determiner *sa* (his), which also plays an anaphoric function.

In six occurrences of the mother's 367 uses of the construction with a possessive determiner (0.01%), she adds the structure [*à* + tonic pronoun], which expresses a contrastive value.

(3) - Anaé 2;03

*The mother is moving Anaé's toy horse. The other horses belong to her brothers.*

MOT: Voilà ton cheval à toi qui arrive. [look, your own horse is coming.]

The marking of possession in the mother's input is therefore quite straightforward and follows the rules of the French grammatical system, with some rare occurrences of a construction specific to spoken French to mark contrastive possession.

### 2.2.2 Possessive structures in the child's data

As shown in Figure 2, possession is marked quite early in Anaé's data and with a variety of forms. There is only one case of a paratactic juxtaposition of two nouns, which are linked semantically by possession in the data. At 1;09, Anaé holds out a plate to her mother (who is setting the table) and says *c'est l'assiette* (pause) *Ael* (It's Ael's plate, Ael is one of her elder brothers). Juxtaposition therefore is not a privileged means to express possession, even though the child does juxtapose

nouns for other types of relations (*carte Dora* meaning a card displaying a picture of the character Dora; *sirap pêche* instead of ‘sirap de pêche’, meaning peach-flavored syrup).

The child therefore mainly expresses possession with overt forms and in the first person (there is only one instance of *à toi* – yours, and one instance of *à elle* – hers – throughout the corpus, with a possessive sense). She uses the construction *à moi* and [N + *à moi*] a lot until 2;03. This construction is probably derived from the massive use of *à moi* in the input (by her mother, but also by her two elder brothers) in turn-taking situations (where ‘*à moi*’ means ‘my turn’). We did not consider those uses to be marking possession, even though these recurrent situations are strongly related to the marking of identity (and otherness) expressed in possessive relations. Example (4) illustrates the nonstandard possessive use of [N + *à moi*].

(4) – Anaé 2;00: *c’est la puzzle à moi* [it’s my puzzle].

The recording at 2;00 is particularly interesting to study the blossoming of several constructions through Anaé’s production of various nonstandard forms. In (4), on top of the nonstandard use of [N + *à moi*], the gender error (*la puzzle* instead of ‘*le puzzle*’) may be a sign that Anaé is constructing her utterances without always rigidly replicating the input and makes the wrong choice in a paradigm of determiners. Anaé proves to be particularly prone to gender errors (Leroy-Collombel, 2010) such as *un fleur* (a flower), *le poupée* (the doll), *le poule* (the chicken), *la ballon* (the ball), *une oiseau* (a bird) but with non-systematic gender assignment.

Once possessive determiners are acquired (at 2;02, when the child’s MLU is 3.0), they become dominant, as is the case in the input. Anaé’s uses of possessive constructions are therefore quite similar to Brown’s description of the use of possessive constructions in English. Genitive constructions and possessive determiners are stabilized in the course of what Brown refers to as ‘stage 3’, (between MLU 2.5 and 3) (Brown, 1973). However a few occurrences of nonstandard forms such as [N + *de moi*] are also produced such as example (5) and (6).

(5) – Anaé 2;08: *le caddie de moi* il était bougé aussi. [my shopping cart was also moved.]

(6) – Anaé 2;08: *ça c’est mon truc de moi* [that’s my own thing.]

In example (6), Anaé superimposes the [Poss Det + N] structure (*mon truc* – my thing) and the nonstandard [N + *de moi*] structure used to emphasize possession. This might also demonstrate that she has not entirely analyzed the role of *mon* (my) as being both a masculine determiner and a marker of first-person possession, so that she resorts to a second grammatical marker to express her intended meaning. There are two occurrences of such a phenomenon: one at 2;08 and one at 2;11.

The [N<sub>1</sub> *de* N<sub>2</sub>] construction emerges at 2;02 and is used for all first mentions with a third-person possessor. The possessor can eventually (but rarely) be the child herself, in constructions such as *la tête de Anaé* (Anaé’s head). As shown by Caët (this issue), the child sometimes uses her own name to designate herself in specific pragmatic conditions, which creates a certain distance between herself as a speaker and herself as a discourse-object. This particular case is interesting, because when



she produces this utterance, she is playing a game where she is alternatively hiding and showing her head. This use of her own name in a possessive construction enables her to take on the other's perspective and might also, as Deutsch and Budwig (1983) note for English, mark less 'pragmatic control' as opposed to the use of *my*.

At 2;02, [N1 *de* N2] alternates with [Poss Det + N] with a very clear advantage for the latter – 92.3% in the whole longitudinal data. There are 5.8% [N1 *de* N2] constructions and 1.9% *à moi* and *c'est à moi* productions in isolation. The nonstandard productions are quite frequent up to 2;00 and then become sporadic in the rest of the data.

It is interesting to note that when Anaé starts making a productive use of possessive determiners at 2;02, out of the 17 different nouns she produces with those determiners, 10 are also used in other contexts either bare (with no determiner), or with filler syllables, or with other determiners. The possessive determiner may therefore very well be chosen in a paradigm of alternative determiners, and not learned with the noun as a frozen expression or a 'noun island'.

(7) – 2;02

*mon bébé / le bébé / ce bébé / [e]<sup>3</sup> bébé* (my baby / the baby / this baby / [e] baby)

*mon chien / le chien / ce chien* (my dog / the dog / this dog)

In the same recording, the mother uses five different determiners (*ton, le, un, les* and *ces*) with *bébé* and seven different determiners (*le, mon, ce, son, un, des* and *les*) with *chien*. It is therefore interesting to note that at 2;02, similarly to her mother, the child already has a paradigm of determiners at her disposal for a number of nouns. She has moved beyond frozen expressions (a noun always used with the same determiner) and shows productivity and a sense of grammatical categories in her use of determiners in nominal expressions.

### *2.3 Possessive determiners among nominal determination markers*

In the mother's data (Figure 3), definite articles are used predominantly (with an average of 53%), then come indefinite articles (29%), possessive determiners (14.6%) and very few demonstrative determiners (3%). Although the distribution and number of determiners depend on context (for example, there are more indefinite articles when looking at picture books and labeling objects), the number of possessive determiners (solid grey line in Figure 4) remains relatively constant throughout the data.

Even at the end of the data, as shown in Figure 4, the child uses fewer tokens than her mother (73 tokens at 1;10 when the mother uses 482, and, at 3;01, 146 tokens

<sup>3</sup> In [e *bébé*], the phoneme [e] is what we call a « filler syllable » (Peters 2001). Filler syllables are un glossable syllables that children incorporate in front of verbs or nouns, which will progressively be replaced by determiners, auxiliaries and pronouns.

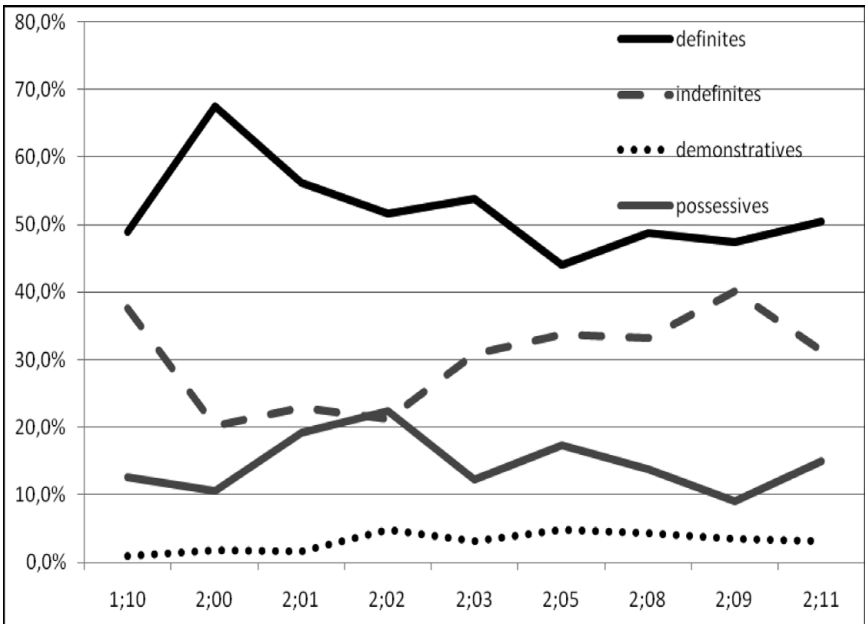


Figure 3. Percentage of occurrences and types of determiners in the mother's utterances

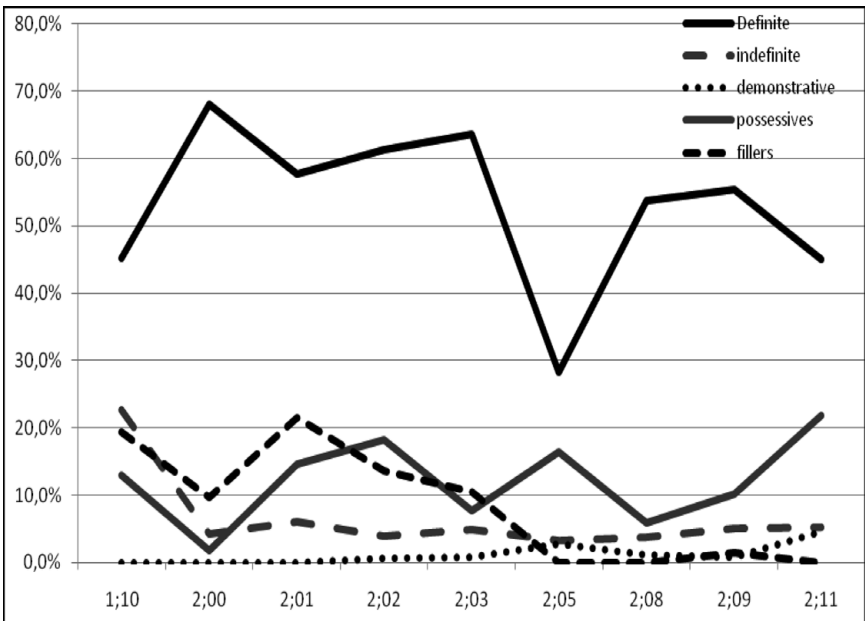


Figure 4. Percentage of occurrences and types of determiners in the child's utterances

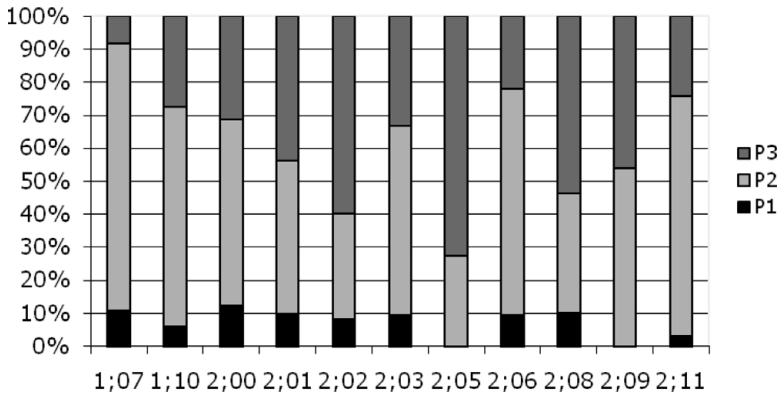


Figure 5. Personal reference of possessors in the input

for the child and 229 for the mother). The child uses filler syllables up to the age of 2;03. As soon as they emerge at the age of 2;00, she predominantly and constantly uses definite articles, just like her mother (53.4% of all her determiners throughout the data are definite articles). The number of indefinite articles increases at 2;05, a session in which they are more numerous than definite articles (possibly due to the prevalence of a labeling activity). Possessive determiners start being used a little bit later and stabilize at 2;02 with an average of 12%, which is quite similar to adult use. Demonstrative determiners are very infrequent and only start being used as of 2;05 (1% of the overall use of determiners). The child's profile is therefore very similar to her mother's. However, she has a tendency to use infrequent forms even less often than her mother, which is quite typical of that age range (Morgenstern *et. al.* 2009).

#### 2.4 Personal reference of possessors in the data

In the mother's data, as shown in Figure 5, there are very few mentions of first-person possessors (7.2%). Second-person references are used most (54.4% overall). She therefore speaks mostly of her child as possessor. Many of the third-person references (which total 38.4%) are made during games with various dolls and figurines, or during book reading, but family members and friends are also mentioned. Very few references in first, second and third person are plural possessive determiners (16 occurrences out of 680 nouns, which represent 0.02%).

The distribution is very different in the child's data (Figure 6). There is a majority of reference to self as possessor (45.3%), but mostly in the first half of the data. Reference to the addressee as possessor is quite low (5.8%) and a parallel could be made with reference to the addressee as grammatical subject (see Caët, this issue). The rate of reference to third-person possessors is quite similar to the rate found in the input: both mother and daughter refer a lot to toys and characters

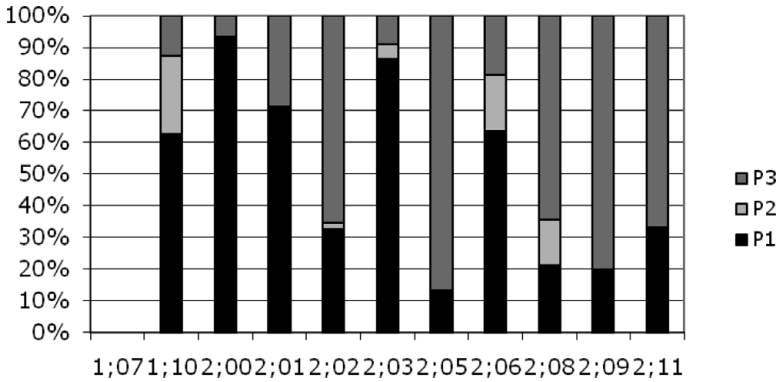


Figure 6. Personal reference of possessors in the child's productions

in books, friends and family. There were no uses of plural possessive determiners before three.<sup>4</sup>

As far as personal reference of possessives is concerned, the child thus does not directly replicate the frequency of the actual forms observed in the input. However, it should be clear that both the mother and the child refer predominantly to the child as possessor. A pragmatic feature – focus on the child in adult–child interaction – therefore influences the person of expressed possessors. Personal reference can thus be considered ‘usage-based’ in the sense that it reflects the typical pragmatic experience in which possession is expressed in interaction.

### 3. FORMS WITH NONSTANDARD USES

During the first half of the data, possession in the child's data is mainly expressed by nonstandard constructions. As shown in Figure 2, the use of *à moi* in [Noun + *à moi*] is quite significant between 1;07 and 2;03. This construction enables the child to mark the possessive function even before she has the whole range of possessive constructions of the target adult language at her disposal. She has co-opted this particular form for marking the possessive function before producing all the conventional forms. As characterized by Slobin (1973: 184): ‘New forms first express old functions, and new functions are first expressed by old forms’. The early use of this construction may demonstrate how important the semantic notion of possession is for children. The nonstandard use of the form *à moi* represents 50% of Anaé's productions of possessive marking from 1;10 to 2;00, as shown in Figure 2.

We hypothesize that this particular usage might be connected to the general tendency French children have around two years old, to overuse the word *moi*. At 2;00, 39% of Anaé's productions of possessive constructions are either *à moi* or *c'est*

<sup>4</sup> Later in the data, Anaé starts using idiosyncratic plural forms such as *noutre* instead of ‘notre’, which is based on the subject pronoun form ‘nous’.

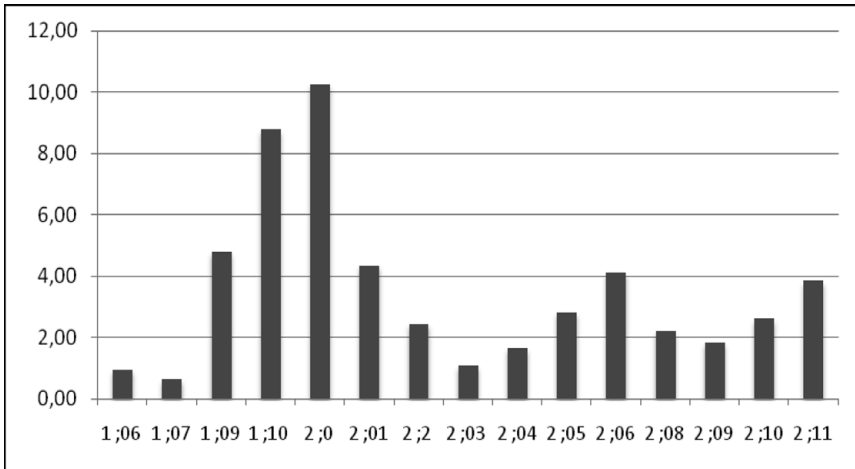


Figure 7. Percentage of utterances containing *moi* over the total number of utterances in Anaé's productions

à *moi*. When added to the 50% uses of nonstandard [N + à *moi*], we find 89% uses of *moi* in possessive constructions.

We counted the uses of *moi* in the whole data and found an increase at 2;00 as shown in Figure 7 (60% more uses than at 1;09 and 2;01).

The term *moi* is found quite frequently in the data. At two years old, it is used in over 10% of Anaé's productions, and is the third most frequent word at 1;9, 1;10 and 2;00. In the subsequent recordings, *moi* is no longer one of the 10 most frequent words.

Since the overuse of *moi* is so important at the age of 2;00, we focused our analyses on this recording. We note that Anaé expresses a great amount of contrastive agency, to explain either that she is capable of doing things by herself, or that she wants to do them as opposed to others. Our hypothesis is that the overuse of the term *moi* has 'contaminated' the marking of possession. Our coding (Figure 2) shows that out of 24 constructions marking possession at 2;00, 22 contain à *moi* and two are instances of the [Poss Det + Noun] structure (*mon jeu; mon papa* – my game; my daddy).

Moreover, out of 60 occurrences of *moi*, 26 are used in à *moi* constructions, of which 22 mark possession. We took a closer look at these uses of à *moi* and noticed that 14 nonstandard forms combined a noun with à *moi* and would have been replaced by a possessive determiner in adult language.

(8) – Anaé 2;00

CHI: oh y'a puzzle à *moi* (*when she sees the puzzle on the table*) [oh there's puzzle of me.<sup>5</sup>]

<sup>5</sup> We used 'of me' to translate à *moi* here even though English speaking children would not use this expression.

- CHI: c'est le loup à moi (*as she picks up a piece of the puzzle*) [it's wolf of me.]  
CHI: le chapeau à moi [the hat of me]  
CHI: c'est le tapis à moi [it's the rug of me]  
CHI: c'est la vache à moi [it's the cow of me]  
CHI: c'est le cadeau à moi [it's the present of me]  
CHI: ah les cadeaux à moi [oh, the presents of me]  
CHI: c'est l'anniversaire à moi [it's the birthday of me]

À *moi* is not only used to mark the possessor of the discourse-object with great pragmatic force (Deutsch and Budwig, 1983), but it is also extended to other functions, as shown in the following examples.

(9) - Anaé 2;00

CHI: le loup a pas mangé à moi (she puts her hands on her chest). [the wolf has not eaten 'of me'.]

The patient should be expressed by an object pronoun, *me* or *m'* in front of a vowel (*le loup ne m'a pas mangé* – the wolf has not eaten me).

(10) Anaé 2;00.

CHI: [se] [a]<sup>6</sup> donné à moi [it has given to me.]

The *à moi* construction is used here instead of the object pronoun (*m'a donné* – given to me), marking the beneficiary. Anaé's production brings the underlying grammatical structure to the surface as in clusters such as *de le chien* (of the dog) instead of the amalgam 'du' *du chien*.

(11) - Anaé 2;00

CHI: c'est [a] cadeau à moi [it's a gift of me]

In this example, Anaé uses *à moi* instead of *pour moi* (for me): her comment is produced just when the observer is about to give her a gift, so she is the beneficiary in this example as well.

In their study of acquisition of French as a second language, Chaudenson, Véronique and Vally (1986) also noticed this overuse of *à moi* to mark possession. According to Chaudenson (2004), the use of the post-posed personal pronoun demonstrates that the child creates her own rule, based on two types of utterances in the input: 1) possessive constructions with a proper name (*le X de Y*); 2) isolated utterances such as *c'est à moi*. By blending these two structures, the child produces *X de/à moi*.

Grégoire (1937) linked his son's production of [Noun + *à moi*] to a more popular use that the child could have overheard around him (such as *la voiture à son frère* – the car of his brother – instead of 'de son frère'). In the case of Anaé, we don't find [definite article + noun + *à* + tonic pronoun] in the input, but there are a few constructions such as *ma maman à moi* (my mummy of me) composed of the following elements: [possessive determiner + noun + *à* + tonic pronoun] with

<sup>6</sup> We chose to transcribe [se] and [a] in phonetics in order to avoid interpreting the child's production in terms of grammatical categories.

a contrastive value. There is of course a high frequency of constructions with *à moi* or *à toi*, mostly for turn-taking in her social environment (she has two elder brothers). The child shows a clear preference for the [*à moi*] construction at 2;00 and overgeneralizes the form to other functions. Around two, the child therefore seems to construct her own system in order to mark the possessive relation, based in particular on the production of *à moi* (meaning either 'my turn' or 'mine'). She treats that form as a frozen expression, which serves the purpose of making a reference to herself in a variety of contexts and with a certain flexibility in its pragmatic and syntactic functions.

#### 4. CONSTRUCTING ADULT STANDARD FORMS

##### 4.1 *Determiners*

As noted earlier, possessive determiners in adult French mark possession, gender, number and person in one grammatical form. This amalgam of several features might make it difficult for children to handle those unstressed monosyllabic grammatical words. Anaé's analysis of gender marking is quite visible when she makes repairs of her own productions, as in *le son son sa queue* (the, his, her tail) or *il met son son sa robe* (he's putting on his his, her dress) at 2;02 and *Timothé i veut pas me prêter mon v/, ton v/ le vélo de Timothé* (Timothé doesn't want to lend me my, your, Timothé's bike) at 2;10.

Possessive determiners are first used at 1;08 in frozen expressions (*tatête* – yourhead – to designate the toy's head is not yet analyzed as two separate elements and the wrong person, second instead of third, is used). At 1;10, there is a very interesting use of *donne ma main* (give my hand) when she means 'give me your hand' or 'hold my hand' as if *ma* was used to amalgamate the role of patient (instead of using *moi*) and the possessive relation. During the same session, she also makes the opposite mismatch, saying *toi chaussure* (you shoe) to her father as she tries to take his shoes off, instead of 'ta chaussure' (your shoe). The handling of those grammatical markers thus seems to be quite confusing, since they amalgamate several functions in one term. At 2;00, there are two 'correct' occurrences of first-person possessive determiners (*mon jeu* – my game, and *mon papa* – my dad). At 2;01 Anaé starts using a third-person possessive determiner (*sa maman* – his mummy) but it is only at 2;02 that possessive determiners are used very productively, and *ma*, *mon*, *mes* take on the function that was marked by her nonstandard use of [Noun + *à moi*], which totally disappears from the data. At 2;02, there are 27 occurrences of possessive determiners with 17 different nouns. Some nouns appear with third- and first-person possessive determiners, both singular and plural (*mes doudous*, *son doudou*). Anaé makes sporadic uses of [Noun + *de moi*] up to 2;11. At 2;08, an interesting occurrence of *mon truc de moi* (my thing of me) shows that she might not consider possessive determiners to be semantically strong enough to mark nominal determination, reference to a first-person possessor, masculine gender and possession all at once, and therefore needs to resort to the nonstandard

*de moi* to emphasize the identity of the possessor. This type of production, which is not found in adult language (though it may be derived from the [N<sub>1</sub> *de* N<sub>2</sub>] construction), demonstrates how the little girl ascribes functions to forms that she has picked up in her analysis of the input. These types of unusual uses can be seen as ‘emergent categories’ (Clark 2001) and are transitional forms children use while in the process of acquiring the target linguistic forms. In acquiring their language, children must attend to all grammatical distinctions relevant in their own language, and might not employ them multifunctionally as shown for instance in Karmiloff-Smith (1979)’s work on the acquisition of determiners. When several grammatical features are marked by the same term, this could lead to some confusion about which features are marked by what grammatical element, as shown by Anaé when she says *mon truc de moi* (my thing of me).

As illustrated in Figures 5 and 6, the distribution of first-, second- and third-person reference differs dramatically between Anaé and her mother, with very high percentages of first-person possessive determiners in Anaé’s data.

It is also interesting to note that Anaé starts using possessive pronouns (*le mien, le tien, le sien* – mine, yours, his) later on, after the end of the data coded for this paper, in the mother’s diary. A pronoun such as *le mien* (mine), for example when referring to one’s dog, amalgamates reference to the noun (with its gender and number) and to the possessive determiner (with its person). We found examples in the diary such as *j’ai trouvé ton mien* (I found your mine) at 3;00 as she speaks about her brother’s toy or *votre mien* (your mine) referring to her parents’ bed. In these examples, she seems to use the first-person pronoun with only one function (possession), instead of amalgamating person and possession. She therefore adds another grammatical marker to indicate person.

#### 4.2 The [N<sub>1</sub> *de* N<sub>2</sub>] construction

The ‘correct’ use of the [N<sub>1</sub> *de* N<sub>2</sub>] construction appears only at 2;02, at the same time as the productive use of possessive determiners. At 2;01, there is one nonstandard production in the data with the preposition ‘à’ instead of the preposition ‘de’ (*les épaules à papa* – the shoulders of daddy). At 2;02, the session in which the possessive determiner becomes predominant, there are two occurrences (*la tête de monsieur* – the head of mister and *la tête de Anaé* – the head of Anaé). The child designates herself with her name instead of the deictic determiner *ma*, and treats the reference to herself in the same way as the reference to ‘monsieur’.

Her uses are more numerous and diversified as of 2;05. Her utterances are like building blocks made of several different pieces (at 2;05 *dans le lit de moi* – in the bed of me; at 2;06 *le bébé de ours brun* – the baby of brown bear; *les poils de le bébé* – the hair of the baby; at 2;11 *des petites poils de Omer* – the little hairs of Omer). The construction [N<sub>1</sub> *de* N<sub>2</sub>] is therefore an excellent locus to observe the various nonstandard forms a child can create in the process of acquiring language. Since it is made of several blocks (nouns, determiners, a preposition), there is ample opportunity for creativity on the part of the child.



CONCLUSION

Our analysis of the emergence and development of possession markers in Anaé's longitudinal data illustrates a dynamic constructive process, which evolves as the child acquires the means to express all the semantic features they amalgamate. Her increasing capacity to analyze the input seems to guide her usage. She assembles pieces of various structures without having full control over the complexity of each grammatical marker or each construction. Anaé uses two complementary strategies. On some occasions, she behaves as a 'lumper' and produces target forms learned as whole frozen expressions, which she either uses correctly or in inadequate ways (for example, she overgeneralizes the expression *à moi* by assigning it various functions). But sometimes she behaves as a 'splitter' who analyzes each little form in trying to put them together but somehow misses the target (as in *de le bébé* instead of *du bébé* or the overmarked *mon truc de moi* – my thing of me – when *mon truc* would have been sufficient). As linguists, we are especially thankful for those variations and deviations, which give us some insights into her cognitive and linguistic processing.

As she is learning how to mark possession, in many cases, what the child says matches the adult's constructions. The high frequency of target forms produced, as opposed to nonstandard ones, can be explained by the role of the input. Children are highly skilled imitators who easily adopt the forms addressed to them. However, when the child produces nonstandard forms or forms with nonstandard uses, her data illustrates the fact that children do not merely replicate what they hear. Rather, they have a tendency to 'grammaticalize' their productions as they analyze, reinvent and recreate their native language. This detailed study of possessive markers shows both how children's productions evolve and vary throughout development according to social, pragmatic, syntactic or semantic factors and how they differ from adult input. The creative learning processes rooted in context, usage and meaning are at play in the nonstandard forms produced by Anaé as she constructs her language and normalizes her productions in accordance with her stimulating and rich input.<sup>7</sup>

Further research on French language acquisition is needed to complement our findings with detailed scrutiny of different morphological markers, creative uses of prepositions, conjunctions, pronominal forms and verbal morphology in the *Paris corpus* and to illustrate how children analyze the input in terms of their own developing system. Such studies will help illuminate the various paths children take to reconstruct their own language through dialogue.

ACKNOWLEDGEMENTS

We would like to thank Nancy Chang for insightful comments, suggestions and thorough editing of this paper, Martine Sekali and the CoLaJE team for all their feed-back during the research process and our anonymous reviewers for their

<sup>7</sup> In contradiction to the poverty of stimulus argument (Chomsky 1959).

rich comments. Any errors and other shortcomings are, of course, our own responsibility.

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