Author preprint (final version appeared in The Acquisition of Derivational Morphology, John Benjamins Publishing Company, pp. 54-83)

Derivational patterns in spontaneous data of French-speaking parent-child interactions before age three

Marianne Kilani-Schoch & Aris Xanthos

University of Lausanne

This chapter is a first step towards the characterisation of the morphological structure of the French lexicon in early first language acquisition, i.e. before children coin novel word formations. Focusing on nouns and verbs, it analyses the variety of derivational means used by toddlers and caregivers in two corpora of French-speaking children (1;4/1;6–2;11). A comparison is done with a sample of adult-directed speech (ADS). Findings on derivation are compared with previous observations on compounds in the same data. The results display the development of tight-knit morphological relationships within the lexicon and a clear prevalence of suffixation over other derivational means and compounding. Along with errors in affixed words, these relationships provide cues of early detection of derivational morphology in child speech.

Author preprint (final version appeared in The Acquisition of Derivational Morphology, John Benjamins Publishing Company, pp. 54-83)

Keywords: affixed words, converted words, morphological errors, compounds

1. Introduction

In her analysis of classic diary studies and other acquisition studies on French, Clark (1993: 161, 209) found that, in contrast to e.g. Germanic language-speaking children, French-speaking children do not coin new nouns or verbs before age 4. As conversion (zero-derivation or "identity operation", Bauer, Lieber & Plag 2013: 546), has some productivity in the language but produces activity nouns rather than object nouns, she hypothesises that children "might wait until they acquire some affixes".

This chapter is interested in characterising what is happening regarding derivation, and more specifically affixation, during this waiting period. It strives to show the role of affixed words in the early lexicon and to see whether there are traces of an emerging knowledge of derivation before neologisms are coined. For that purpose it analyses the proportion of affixed words, the distribution of various affixation patterns in child speech (CS) and child-directed speech (CDS), the degree of diversity displayed by affixes, as well as the developmental trajectories that can be found in the data, including semantic development.

Conversion, which involves the same word classes, will also be examined. However, a thorough characterisation of this device in children's speech deserves a dedicated study in particular because of the theoretical problems it raises (Lippeveld & Oshima-Takane 2015a, b).

The analysis is based on the corpora of two French-speaking children recorded between 1;6 and 2;11. As data from the acquisition literature are scarce (see e.g. Clark 1985, 1993, 1998; Lippeveld & Oshima-Takane 2015a, b) and mainly consist in elicited data, the chapter is meant to be a first step towards the characterisation of the morphological structure of the French lexicon in spontaneous data of first language acquisition before age three. It also aims at finding first signs of emerging knowledge of derivational morphology in the course of development.

A final question is how specific the findings on derivational means in CS and CDS data are with regard to derivational means in ADS. A sample of ADS from the parents of the children recorded will be used as a basis of comparison with the CS and CDS data. In particular, the differences in affix types and diversity will be examined.

The structure of the chapter is the following: after a short description of the main derivational means in the target language in section 2, data and method are presented in section 3. Section 4 develops the results of the analysis on affixation and conversion, respectively suffixed nouns, suffixed adjectives, prefixed verbs and noun-verb pairs (conversion). Section 5 on the one hand compares the results on suffixation in CS and CDS with previous

findings on compounding, and with observations made in a sample of ADS, on the other hand. In section 6 we conclude on morphological relations found within the CS's lexicon, pace of development of simplicia and derived words as well as errors in complex words as constituting cues of detection of derivational morphology.

2. French derivational morphology in the target system

French derivational patterns are typically represented by affixation. There is a large inventory of suffixes deriving nouns, verbs, adjectives from bases consisting of nouns, verbs or adjectives. Adverbs can be built on adjectives by suffixation as well (*joli-ment* 'nicely').

Compared with Germanic or Finnic languages, French is generally said to be a poor-compounding language, and the productivity of NN formations by juxtaposition which are very much used in in written French, e.g. in advertising as already noticed by Clark (1993: 160), does not change the picture since their status as morphological compounds is not widely accepted (see Fradin 2009, Villoing 2012, pace Bauer 2011, Gaeta 2015).

As is typical for Romance languages, nominal derivation is more widespread and productive in French than verbal derivation (Bauer 2011: 533). Suffixation prevails over prefixation in terms of diversity of affixes and lemmas. Nonetheless prefixation comprises a number of productive

morphemes combining with verbs and nouns, with a possible dominance of verb formations (Bauer 2011: 532). Neologisms are thus mainly formed with affixes and particularly suffixes, e.g. *ubér-is-ation* 'uberisation'*, développ-eur* 'developer'*, bruit-iste* 'noise maker' from *bruit* 'noise', *viral-ité* 'virality' (de-adjectival), also in combination with prefixes: *dé-référence-ment* 'dereferencing'*, dé-faç-age* 'defacement' (based on the English word).

Another productive type of operation is conversion (zero-derivation or identity operation, see above) commonly used to coin new denominal verbs (belonging almost exclusively to the first conjugation class), e.g. *mécenn-er* 'patronise' from *mécène* 'patron'*,* or deverbal adjectives (derived from past or present participle), e.g. *crypt-é* 'encrypted'*, cliv-ant* 'cliving'. Conversions from adjectives to verbs (of the 2nd conjugation class) are also common: *sal-ir* 'dirty'*, roug-ir* 'blush', etc. Whether deverbal adjectives based on past participles (*fatigué* 'tired'*, ralenti* 'slowed down'*, disparu* 'disappeared') have to be categorised as conversions or rather as suffixations is a matter of debate (see Tribout 2010: 22). This is even more true for adjectives derived from present participles.

Several nominal diminutive suffixes (e.g. *-et/-ette* in *chemis-ette* 'short sleeved shirt,' *-on* in *ours-on* 'bear cub'*, -elle* in *coup-elle* 'cup') occur in French. Feminine *-ette* is the most frequent and, to a certain extent, the most productive of those (Fradin et al. 2003: 73, 76). The productivity of the diminutive suffix *-ette* is limited to a few transparent patterns (e.g. *maisonn-ette* 'small house'*, camionn-ette* 'small truck'). Indeed, a great number of

suffixed words in *-et/-ette* words are morphosemantically more or less opaque, i.e. lexicalised (Fradin et al. 2003: 56). Hence, in contrast to other Romance languages, the French diminutives are basically morphosemantic, and pragmatic effects typical of diminutive-rich languages are taken over by the adjective *petit* 'small, little' (Kilani-Schoch & Xanthos 2013).

Although diminutive suffixes most generally do not change the category of the word and show a preference for nominal bases (Dressler & Merlini Barbaresi 1994: 94), some diminutive suffixes in *-ette* with instrument meaning (*sonn-ette* 'bell' from *sonn-er* 'ring'), *servi-ette* 'napkin' from *serv-ir* 'serve') or object meaning (*suc-ette* 'lolly pop' from *suc-er* 'suck') raise the issue of possible verbal bases. Corbin (1987) and Dal (1997), among others, strongly argue in favour of (truncated) nominal bases or conversions.[1] We will not enter into this discussion here.

As diminutives constitute an important part of the basic French lexicon, in contrast to the languages that are presented in the other chapters of the volume, and since the acquisition of French diminutives has not been dealt with in Savickienė and Dressler (2007), the present chapter includes diminutive suffixes.

[1] Specifically, the agent noun *sonn-eur* (from *sonn-er* 'ring') and the potential (°) instrumental noun °*sonn-oir(e)* (Dal 1997: 179) on the one hand, the object noun *suç-on* from *suc-er* 'suck' (Corbin 1987: 691), on the other.

2.1. Noun formation

Within the set of affixes available in the grammatical sources on French derivation (Arrivé, Gadet & Galmiche 1986; Béchade 1992; Huot 2001; Apothéloz 2002, *TLFi* 2021), nominal suffixes (more than 40) clearly outnumber adjectival and verbal suffixes.

Although accurate data on suffix productivity are still scarce (see, e.g. Fradin et al. 2003, Grabar et al. 2006), it is commonly considered that frequent and productive nominal suffixes, i.e. suffixes used to coin new words, are deverbal *-eur, -ateur* /fem. *-euse, -atrice* deriving agent and instrument nouns as well as denominal *-iste* (*dent-iste* 'dentist' from *dent* 'tooth') for agent nouns, the pattern of deverbal action nouns in *-age* (*rempliss-age* 'filling'), to a lesser extent that in *-ment* (*blanchi-ment* 'blanching' from *blanc,* fem. *blanche* 'white'), and of instrument nouns in *-oir(e)* (*arros-oir* 'watering can'). N in *-erie* for location and activity (*épic-erie* 'grocery' from *épice* 'spice') are frequent (and have a clear productivity nowadays, e.g. *sandwich-erie* 'sandwich store', *animal-erie* 'pet shop').

Deadjectival property nominal suffixes in *-(i)té* (*beau-té* 'beauty'), denominal agent nouns in *-(i)er/-(i)ère* (*pomp-ier* 'fireman' from *pompe* 'pump') and deverbal action, result and object nouns in *-ure* (*bless-ure* 'wound') also belong to frequent suffixes (see Guilbert 1975; Clark 1993;

Lehmann & Martin-Berthet 1998; Huot 2001; Grabar et al. 2006; *TLFi* 2021).[2]

Some prefixes have recently gained a high productivity in casual French, i.e. *sur-* (*sur-booké* 'overbooked'), *super- (super-héros* 'superhero'*), hyper-* (*hypermarché* 'hypermarket') but they are not specific to nouns and much used with verb and adjective bases. Other prefixes combining with nouns include prepositions like *sous-* (*sous-verre* 'clip-frame'), *contre-* (*contre-sens* 'misinterpretation') (see Fradin 2003: 196) and *anti-* (*anti-héros* 'antihero'). Most of them also apply to verb bases. The question of the theoretical status of these prefixes which are also autonomous morphemes (compound constituent, hybrid element?) is a matter of debate (Amiot 2004). However, they are irrelevant for child language and so are the prefixes *re-* and *in-* which are used with abstract nouns and adjectives (*re-naissance* 'rebirth'*, in-existence* 'non-existence') (but see below for deverbal *re-* and de-adjectival *in-*).

2.2. Verb formation

[2] *-tion/-ation* and allomorphs (*-ification, -isation*): *absorp-tion, distanci-ation* 'detachment'*, diversific-ation, féminis-ation* 'feminisation' deriving action/result nouns, or nouns in *-itude* (*trist-itude* 'sad attitude'*,* Koehl 2012: 300) which are highly productive are not mentioned here as they are not likely to occur in early child language. The same is true of nouns in *-isme* denoting a property, a result (*alcool-isme* 'alcoholism') or a doctrine (*jeun-isme* 'ageism') or of nouns in *-iste* for adherents to a doctrine.

As said above, verb suffixation patterns are limited to a few suffixes such as denominal and de-adjectival *-is-* (*panthéon-iser* 'pantheonise'*, précar-iser* 'make precarious'*)* and *-ifi-* (*personn-ifier* 'personify'*, divers-ifier* 'diversify') with a factitive meaning, which are very productive (Huot 2001: 80–81).

The most common and productive verb prefixes are iterative and reversative *re-* (*re*-dessiner 'redraw', *re-venir* 'come back') (Apothéloz 2007) and privative *dé(s)-* (*dé-faire* 'undo', *dé-loyal* 'dishonest')[3] which combine with verbal and adjectival bases. Other prefixes are denominal *en-* (*en-dormir* 'get to sleep') and denominal and de-adjectival *a-* (*a-tterrir* 'land'*, a-grandir* 'extend') and *é-/ex-* (*é-courter* 'shorten'*, ex-matriculer* 'exmatriculate').

Conversion between nouns and verbs is a widespread means of word formation in French and plays a significant role in the conventional lexicon. According to Tribout (2010: 143, 148, 170, 172, 176), noun to verb conversions (e.g. N *peigne* [pɛɳ] – inf. *peign-er*, sg. pres. ind. *peigne* [pɛɳ] 'comb') outnumber verb to noun conversions (e.g. inf. *réveiller*, sg. pres. ind. *réveille* [revɛj] 'wake up' – N *réveil* [revɛj] 'alarm clock'). However, there are cases where the directionality of conversion is undecidable (Tribout 2010: 196). Conversion is even more pervasive in French as one includes cases such

[3] The allomorph *dis-* occurs with verbal and nominal bases (*dis-créditer* 'discredit'*, dis-harmonie* 'disharmony').

as, e.g. inf. *saut-er* [sote], sg. pres. ind. *saute* [sot] 'jump' – N *saut* [so], inf. *refus-er* 'refuse', sg. pres. ind. *refuse* [rəfyz] – N *refus* [rəfy] 'refusal', inf. *dessin-er* 'draw', sg. pres. ind. *dessine* [dɛsin] – N *dessin* [dɛsɛ̃], *sel* [sɛl] – *sal-er* sg. pres. ind. *sale* [sal] 'salt') (Mel'čuk 1996: 130–131; Tribout 2010: 102, 114, 135). In these cases, there is a word-class and paradigmatic change of a base with a semantically regular relationship (Manova 2011: 60 ff.) but no strict morphotactic identity between the forms. The first three examples display an alternation between the realisation of a final consonant in the verb and its non-realisation in the noun. In various theoretical models the consonant, which may occur in liaison, inflection or derivation before a vowel (e.g. *dessin-atrice* [dɛsi**n**atris] 'designer', is considered as latent (see Tribout 2010 for an overview). The last two pairs show vocalic allomorphy of the base, combined, in *dessine* – *dessin*, with consonant alternation. As alternations between a short and a long form of a lexeme is ubiquitous in French morphology (see the model of thematic spaces in, e.g. Bonami & Boyé 2005; Plénat 2008; Bonami, Boyé & Kerleroux 2009), Tribout (2010) includes them in conversions based on the argument that the change cannot be equated with derivational affixation. In the present chapter we will nevertheless treat them in the separate category of modification, for the relation between identical forms obviously should be handled more easily by toddlers than the relation between forms blurred by allomorphy.

Tribout (2010: 2) counted 3241 noun – verb pairs in a relation of conversion, the majority of which are noun to verb conversions as just

mentioned. It follows from the above that conversion also raises important theoretical questions relating notably to the delimitation of what can be subsumed under the operation.[4]

2.3. Adjective formation

The most productive adjectival suffix is arguably the deverbal possibilitive *-able*/*-ible* (e.g. with Latin bases) (*mange-able* 'edible', *destruct-ible* 'destructible'). Denominal productive suffixes are e.g. *-eux* (*joy-eux* 'joyful'), relational *-ier* (*piétonn-ier* 'pedestrian'), or ethnic *-ain (améric-ain* 'American'*)*.

3. Data and method

3.1. Data

This study is based on the corpora of two children from Lausanne (Switzerland): Sophie and Emma, born in upper-middle class families (see

[4] Here we will neither handle the question of the relevance of verbal stem space in conversion (Bonami, Boyé & Kerleroux 2009) nor discuss the distinction between syntactic and morphological conversion (Kerleroux 1996; Tribout 2010). But see section 3.2.

Table 1). The children were audio recorded by the parents about twice a month, for about half an hour. Recording situations vary between free and everyday activities such as eating, washing, book reading, and having a bath.

Emma's data are more limited than Sophie's. Some of the recordings of Emma are very short (especially those at 1;6, 1;7, and 2;0; at 1;7 diary notes complement the recordings). Probably, this limitation partly accounts for the greater heterogeneity of some of the findings concerning her language development.

Transcription and coding have been done according to the CHAT conventions of CHILDES (MacWhinney 2000).

Table 1. CS and CDS data

Corpus	**Period**	**No. of utterances**		**No. of recordings**	**No. of hours**
		CS	CDS		
Sophie (SOP)	1;6–2;11	15,564	12,279	45	28
Emma (EMM)	1;4–2;11	7,335	6,639	40	18

3.2. Method

The main and crucial methodological issue is the identification of morphologically complex words. The question of what is a morphologically complex word is even more difficult when dealing with CS data.

The differentiation between actual suffixes and lexicalised or pseudo suffixes (formally similar to existing suffixes but semantically generally

empty and without a simplex base) e.g. *tableau* 'board' (CS Sophie)*, gâteau* 'cake'*, château* 'castle' (Sophie's CDS), or between affix polysemy and affix homophony, between double suffixation and allomorphy, etc. (see below) was done following the morphological literature when available. The morphological dictionary *Le Robert Brio* as well as the main electronic dictionaries (*TLFi, Grand Robert*) were also consulted in order to assess derivational patterns. For instance, following Fradin et al. (2003: 56), we considered that the (nominal) suffixes masculine *-et* (e.g. *poul-et* 'chicken') and feminine *-ette* (e.g. *chauss-ette* 'sock') are different suffixes. Indeed, the type frequency of *-ette* is higher than the type frequency of *-et*; moreover, opaque lexemes in *-et* are five times more frequent than opaque lexemes in *-ette.* The suffix *-erie* is synchronically a single suffix[5] (Roché 2009: 164, Booij 2012). The lexeme *can-eton* 'duckling' was not analysed as *cane-et-on* but as *can-eton* as all names of young/baby animals are constructed on the species name (see Roché 2009: 145). The suffix *-eron* (Emma-CS) is considered as an allomorph of *-on* (*TLFi* 2021), *-ieux* in *délic-ieux* 'delicious' an allomorph of *-eux* in *courag-eux* 'brave' (Sophie's CDS, Emma's CS) and *-er (roch-er* 'rock') an allomorph of *-ier* (*ros-ier* 'rose bush')*.* On the other hand feminine *-(i)ère* [jɛr] which differs formally from the masculine was counted separately. We included gender suffixes as derivational morphemes

[5] Reanalysis and coalescence of *-ier* with addition of *-ie.*

even in the case of nominalised adjectives such as *coqui-ne* (arguing, e.g. for the possible addition of a diminutive suffix: *coqui-n-ette* 'mischievous').

In the selection step, we adopted a target-like or system-centered perspective to avoid any unsound assumption on children's knowledge. All lemmas with a morphotactically and morphosemantically identifiable base and suffix were extracted from the corpora and manually analysed. This criterion entails that examples such as *buanderie* 'laundry room' (*buandier* is not used anymore)*, brouette* 'wheelbarrow'*, moquette* 'carpet'*, lolette* 'dummy' or *galette* 'shortbread biscuit' in which the base is not synchronically identifiable have not been kept (for morphosemantics, see below). By contrast examples such as *assi-ette* (base *assi-*, past participle from *asse-oir* 'sit') and *serviette* (base *servi-,* past participle from *serv-ir*) have been included among suffixed nouns. As far as nouns in *-ette* are concerned, verbal bases have thus been assumed in some examples.[6] Moreover, in a small number of cases, e.g. *bavette* 'bib' or *dînette* 'playing dinner party', either a nominal or a verbal base can be assumed.

We have also excluded words which are morphologically complex but not constructed (Corbin 1987: 188), i.e. words which have some internal structure but contain one semantically empty constituent formally identical to an existing morpheme, such as *pommade* 'ointment' (the suffix *-ade* 'made of'

[6] However, this surface analysis does not prejudge the final status of these bases, which is the subject of theoretical debate (see section 2.).

is combined with a semantically empty basis, as *pomme* 'apple' denotes a fruit).

Taking all lemmas with a morphotactically and morphosemantically identifiable base and suffix into account leaves open the problem of how to deal with allomorphy, which may alter the identity of base or suffix. The two following criteria have been applied:

1. A lexeme with base or affix allomorphy is treated as a derived word if it is part of a morphological series in the target-language, i.e. if there are several derived words which synchronically attest to its analysability, e.g. *pan-ier* 'basket' derived from *pain* [pɛ̃] 'bread' (*salad-ier* 'salad bowl'*, beurr-ier* 'butter dish'*, cendr-ier* 'ashtray'), *ann-ée* 'year' derived from *an* [ã] 'year' *(journ-ée* 'day'*, soir-ée* 'evening'), *man-ette* 'lever' from *main* [mɛ̃] 'hand' or *mi-ette* [mjɛt] 'crumb' from *mie* 'crumb' (with morphonological gliding of /i/). In this way, a word like *docteur* 'doctor' is considered as a simplex word, although its ending seems identical to agentive *-eur*, as agent nouns are derived from verb or noun bases, not adjectival ones. The criterion of belonging to a series also applies to base and affix allomorphy which does not change the base or affix but adds material, e.g. *suppos-it-oire* 'suppository'*, ri-z-ière* 'rice field'*, chic-l-ette* 'chewing-gum'*, chan-son* 'song' from *chant* [ã] 'song (*boi-sson* 'drink'*, cui-sson* 'cooking') are clearly derived words.

2. A lexeme with base allomorphy is a morphologically complex word if it is part of a morphological family: we have already seen *pan-* in *panier* 'basket'

(*pan-ure* 'breadcrumbs'*, pan-ade*, etc.) which also belongs to a series. It is also the case of *cass-ette* [kasɛt] 'tape' (derived from *caisse* [kɛs] 'crate') which belongs to the series of lexicalised diminutives in *-ette* and to a family of containers: *cass-erole* 'pan'*, cass-ol-ette* 'dish', etc.

Let us add that the actual realisation of the lexemes that have been selected was systematically checked in the corpora and instances in which the modification of the word was substantial, i.e. the affix was not easily identifiable, were discarded, e.g. Emma 1;6 [vai] for *voil-ier* 'sailboat'- Sophie 1;10 *tapam* for *tromp-ette* 'trumpet'.

On the semantic level, identification of derived words is especially complex because there are different degrees of lexicalisation (in the sense of morphosemantic opacification). This is why any constituent which was morphotactically identifiable and had a semantic meaning was considered as relevant for assessing the morphological complexity of a lemma, independently of the semantic relation with the derived word: e.g. *pinc-eau* 'paintbrush', *toil-ettes* 'bathroom' or *cass-ette* 'tape', in which *pince* 'pliers', *toile* 'hessian' and *ca(i)sse* 'crate' have no transparent relation with the final lexeme, i.e. are semantically too opaque, were still considered as morphologically complex. Other examples include *chauss-ette* 'sock'*, chic-lette* 'chewing gum', *mir-oir* 'mirror' or *tract-eur* 'tractor'*,* in which the nominal or verbal bases *chique/chique(r)* 'tobacco/tobacco chew' *chausse/chauss-e(r)* 'hose/to put on (shoes)', *se mi-re(r)* 'gaze at one's reflection', *tract-e(r)* 'tow' have a weak degree of transparency in the target

language. Nevertheless, they are morphosemantically identifiable. They were thus included even though most probably the children never heard these verbs in CDS, because they are very formal/literary or very specific.[7] From the perspective of acquisition, the argument for keeping *chic-lette* is that a child may identify just one salient morpheme of a word, in this case the productive or frequent suffix *-ette*. In other cases a familiar basis (e.g. *peint(e)* 'paints/painted' in *peint-ure* 'painting') may have been identified.

4. Results

Table 2 displays the total number of verbs, nouns and adjectives found in the two corpora.

Table 2. Total number of both derived and underived verbs, nouns and adjectives in Sophie's and Emma's corpora (lemmas and tokens)

	V		**N**		**ADJ**	
	lemmas	tokens	lemmas	tokens	lemmas	tokens

[7] This does not preclude the strong relationship between morphological decompositionability and morphosemantic transparency in processing that has been pointed out by a reviewer. The rather arbitrary criterion of morphosemantic identifiability has been chosen for this corpus study since the available experimental data on degrees of morphosemantic transparency are still patchy.

Sophie-CS 1;6–2;11	188	6,459	494	4,544	71	1,241
Emma-CS 1;4–2;11	205	4,757	572	3,060	70	879
Sophie-CDS 1;6–2;11	278	13,595	631	5,939	97	1,866
Emma-CDS 1;4–2;11	294	8,455	780	4,592	93	1,179

4.1. Suffixation

Suffixed words, especially suffixed nouns, occur from early on in the data and provide the largest morphological series, in comparison with prefixation, in accordance with the role and the distribution of suffixation in the target language (see section 2). Suffixed adjectives are limited while suffixed verbs are non-existent. Generally, suffixed words contain no more than one suffix. But some exceptions do occur, e.g. in words with a gender suffix (Emma's CS *ind-ien-ne* 'Indian' *-ien* ETHNIC, *-ne* FEMININE*, proch-ai-ne* 'next'*, Japon-ai-se* 'Japanese').

4.1.1. Nominal suffixes

In Tables 3a and b the number of different nominal suffixes (suffix types) as well as the proportion of suffixed nouns in relation to the total number of noun lemmas are presented. Suffixes combining with at least two bases

(Table 3a) are distinguished from isolated suffixes, i.e. occurring with one base, thus in a single lexeme (Table 3b).

Table 3a. Suffixed nouns (with at least 2 bases)

	No. suffix types		**No. suffixed N**		**% of N**	**No. N total**	
	with at least 2 bases	isolated	lemmas	tokens		lemmas	tokens
Sophie's CS	8	12	42	296	8.5	494	4,544
Emma's CS	8	13	35	165	6.1	572	3,060
Sophie's CDS	12	12	59	425	9.4	631	5,939
Emma's CDS	16	15	95	383	12.2	780	4,592

Table 3b. Suffixed nouns (1 base)

	No. suffixed N		**% of N**
Sophie's CS	12	76	2.4
Emma's CS	13	74	2.3
Sophie's CDS	12	80	1.9
Emma's CDS	15	86	1.9

At first glance, the results do not yield striking differences between the corpora except for the relations between CS and CDS with Emma's CDS having a higher number of suffixes and proportions of suffixed nouns. Regarding in particular the proportion of suffixed noun lemmas of series (i.e. combined with at least two bases), a chi-square test leads us to reject the hypothesis that they are equal ($\chi^2 = 14.87$, df = 3, $p < 0.01$); post-hoc tests using the Marascuilo procedure (Marascuilo & McSweeney 1967) show that

the only pairwise difference that is significant is the difference between Emma's CS and Emma's CDS (6.1% vs 12.2%). Proportions of suffixed nouns of series are more similar in Sophie's corpus than in Emma's corpus. That there are more differences between Emma's CS and CDS than between Sophie's CS and CDS will be seen in all results.[8]

It is no surprise that the number of isolated suffixes (i.e. showing up with a single lemma) is greater than the number of suffixes combined with at least two bases in the limited lexicon of CS before 3;0. Nevertheless, even though confidence intervals (CI) are broad, a sizeable proportion of the suffixed nouns which form morphological series are related to other words within embryonic morphological families (see Table 4). We call them embryonic for the reason that they have 2 members only (see Introduction to the volume), with the exception of Sophie's CS (and CDS) triplet *manch-on, manch-ette, manch-oir* 'swimming wings', simplex *manche* 'sleeve' and Emma's CS *bain, (se) baigne* 'bath'*, baign-oire* 'bathtub' and *jouer* 'play', *jouet* 'toy', *joueur* 'player' (but see section 4.3.1.2).

Table 4. Embryonic families

	Families	**No. suffixed N** (at least 2 bases)	**%**	**95% CI**

[8] It is probably due to a large extent to the behaviour of Sophie's mother during the recordings consisting in talking little during the recordings in order to leave the floor to the child, as well as to the more limited data of Emma's corpus (see section 3.1).

Sophie's CS	21	42	50	[34.2, 65.8]
Emma's CS	15	35	42.9	[26.3, 60.6]

These family relations suggest that suffixed words start getting some morphological motivation in the linguistic representation of the children. The comparison of age of emergence of simplicia or bases and corresponding derived words supports this hypothesis: in the two corpora the simplex word (e.g. *manche* 'sleeve'*, peigne* 'comb'*,* sg. pres. ind. *lave* 'washes' or *balance* 'swings') tends to emerge earlier than the derived corresponding word (e.g. *manch-ette, manch-on* 'swimming wings'*, peign-oir* 'robe'*, lav-ette* 'washcloth'*, balanç-oire* 'swing') (13/19 in Sophie's corpus, 12/15 in Emma's corpus). Other pieces of evidence for emerging morphology are provided by examples such as (1a, b, c) which shows the child's play with morphologically related words, as well as by errors which display decomposition of base and suffix (see section 4.1.3).

(1) Emma 2;1:

a. *l'* *ai* *lava [: lavé]* *avec* *la* *lavette*;
PRON.OBJ.3SG avoir.AUX.PRS.1SG laver-PP with the washcloth;
'washed it/him with the washcloth'

b. *je* *lave* *la* *lavette*;
PRON.SBJ.1SG laver.PRS.SG the washcloth;
'I am washing the washcloth'

c. *j'* *ai* lavé *avec* *la* *lavette*.

PRON.SBJ.1SG avoir.AUX.PRS.1SG laver-PP with the washcloth.

'I washed with the washcloth'

The following Tables 5a and 5b focus on suffix diversity by presenting the series of suffixed nouns occurring in the data. In the four subcorpora, the largest series is by far the series in *-ette* which goes up to 20 lemmas (Emma's CDS). The other series contain no more than 10 different lemmas.

Table 5a. Suffixed nouns (at least 2 bases): corpus Sophie

SOP CS (8 SUFFIXES)							**SOP CDS (12 SUFFIXES)**				
	Lem.	Tok.	Semant. categ.	Base (lem.)*		Age emerg.**		Lem.	Tok.	Base (lem.)*	
				N	V					N	V
-ette	17	169	OBJ, INSTR	11	9	1;9	*-ette*	19	187	14	8
-oir(e)	7	15	INSTR	1	6	2;2	*-oir(e)*	9	47	1	8
-on	5	41	INSTR	3	2	2;3	*-on*	7	51	5	2
-ure	4	22	OBJ, RESULT	0	4	2;3	*-ure*	4	23	0	4
-age	3	14	ACTION, LOC	1	2	2;9	*-age*	3	6	0	3
-ard	2	20	OBJ, INSTR	1	1	2;9	*-ard*	3	10	2	1
-ade	2	2	ACTION	0	2	2;9	*-(i)er* AGENT, OBJ	3	26	2	1
-ne	2	13	GENDER	2	0	2;10	*-eau* OBJ	3	5	3	0
							-ne	2	31	2	0
							-eur INSTR	2	23	0	2
							-et DIM	2	12	2	0
							-esse GENDER	2	4	2	0
Total	**42**	**296**		**19**	**26**			**59**	**425**	**33**	**29**

* As mentioned in 3.2.1, some bases of suffixed words in *-ette* are undecidable (N or V).

** At least 2 lemmas.

Table 5b. Series of suffixed nouns (at least 2 bases): corpus Emma

EMM CS (8 SUFFIXES)							**EMM CDS (17 SUFFIXES)**				
	Lem.	Tok.	Semant categ.	Base (lem.)		Age emerg.*		Lem.	Tok.	Base (lem.)	
				N	V					N	V
-ette	11	46	INSTR, OBJ	6	9	1;8	*-ette*	20	91	14	11
-on	7	38	DIM, INSTR, AUG	4	3	1;8	*-on*	10	97	7	3
-oir(e)	4	31	INSTR	2	2	2;1	*-ure*	8	29	0	5
-(i)er	4	15	OBJ, AGENT	1	3	2;6	*-(i)er*	8	24	8	0
							-eau	7	11	3	4
-et	3	25	OBJ, DIM	3	0	1;10	*-et*	6	28	4	2
-age	2	6	RESULT ACTION	0	2	2;5	*-age*	6	11	0	6
-(i)ère	2	2	LOC-INSTR	1	1	2;9	*-oir(e)*	5	25	0	5
-eur	2	2	INSTR-AGENT	0	2	2;4	*-eur*	4	10	0	4
							-ne GENDER	4	10	0	4
							-(i)ère	3	5	2	1
							-erie LOC-ACTIV	3	14	2	1
							-ée TIME ACTION	3	4	3	0
							-ère GENDER	2	2	2	0
							-ine DIM	2	14	2	0
							-ment ACTION	2	6	0	2
							-euse GENDER	2	2	1	1
Total	**35**	**165**		**17**	**23**			**95**	**383**	**48**	**49**

** At least 2 lemmas.

First of all, it is interesting to notice that while each corpus displays the specific features mentioned above, i.e. greatest suffix diversity in Emma's CDS and to a certain extent in Emma's CS in spite of more limited data, and more homogeneity in Sophie's corpus, the general picture is one of strong resemblance between the two corpora. In Sophie's corpus the parallel

between CS and CDS is striking: the five suffixes having the greatest diversity, i.e. forming the largest series, *-ette, -oir(e), -on, -ure* and *-age* are the same and are ranked in the same order. The triplet *manch-ette, manch-on, manch-oir* 'swimming-wings' in CS (and CDS) illustrates the relevance of the three suffixes in the production of the child. Differences pertain to suffixes with low diversity (*-(i)er, -eau* and *-eur, -et*, *-esse*, as well as *-ade*). In terms of vocabulary, the relation between CS and CDS is straightforward too: with the exception just mentioned and a few other words, the same suffixed words of series are also found in CDS. This is also true of Emma's corpus.

In Emma's corpus, however, the picture is slightly different. While all series of Emma's CS are found in CDS, the ranking of suffixes is close but not identical in CS and CDS (*-ier* and *-oir(e)*). Notice that out of the 9 suffixes of Emma's CDS that do not find a correspondence in Emma's CS, 6 occur with a single lemma (*-ure, -eau, -erie, -ée, -ine*). In this way, taking the large inventory of suffixes of Emma's CDS into account, CS's suffixes are parallel to CDS. Curiously, no derived word constructed with the productive suffix *-ade* appears in Emma's corpus. Nonetheless, overall the inventory of series/suffixes is very similar in both CDS.

In CS, the three most-highly ranked suffixes *-ette, -on* and *-oir(e)* are identical. Most importantly, these correspondences between the two CS are not simply due to vocabulary correspondences since in each CS several lemmas are different: for instance, *manch-ettes* 'swimming-wings', *sonn-ette* 'bell', *plonge-on* 'dive', *mouch-oir* 'handkerchief' and *tir-oir* 'drawer' occur

in Sophie's CS only, whereas *roul-ettes* 'caster'*, croqu-ette, viol-on* 'violin' and *can-eton* 'duckling' belong to Emma's. They are neither just determined by the child-centered situation nor by the reference to the world of children: almost three quarters of the lemmas with diminutive suffix (e.g. *chauss-ettes* 'socks'*, servi-ette* 'table napkin'*, tromp-ette* 'trumpet'*, fourch-ette* 'fork') belong to the ADS lexicon. Nevertheless, given the strong parallelism between the derived nominal vocabulary of CS and CDS, one cannot exclude that the items have been simply memorised without paying attention to their morphological structure and the morphological series they belong to. The size of the largest series in *-ette* could be seen as due to the great number of lexicalised diminutives which are commonly used in everyday language and are thus expected in CDS. Indeed, all lexemes displaying the diminutive suffixes are lexicalised, with one exception in the corpus of Sophie (the imitation of a diminutivised nominalised adjective used by the mother: *foll-ette* 'scatterbrain'). However, they are the first derived words to emerge and very early form a series (Sophie 1;8*, cass-ette* 'tape'*, chauss-ettes* 'socks', 1;9 *lun-ettes* 'glasses'*,* Emma 1;6 *servi-ette* 'towel'*, bav-ette* 'bib'*,* 1;8 *pouss-ette* 'scroller'*, chauss-ettes* 'socks') and families, as shown above. This suggests that the ending, more specifically the suffix, is relevant (see 4.1.3). Moreover, *-ette* and *-oir(e)* meet the criterion of potential productivity based on the occurrence with three different stems and recurrence of the stem in other words along with a few other suffixes (see Introduction to the volume):

Sophie's CS: *-ette, -oir(e), -on*

Emma's CS: *-ette, -on, -oir(e), -et, -ier*.

In terms of development, one notices a six-month gap in Sophie's CS between the first series in *-ette*, *-oir(e), -on* and *-ure* (1;9–2;3) and the other series in *-age, -ard, -ade* and *-ne* (from 2;9 on). In Emma's CS the emergence of series is more evenly distributed.

4.1.2. Adjectival suffixes

It is well-known that adjectives develop later than nouns and verbs and are thus less frequent in early child language (see e.g. Tribushinina et al. 2013; Tribushinina, Voeikova & Noccetti 2015). Suffixed adjectives represent between 1% and 4% of adjective lemmas (Table 6), which is a significantly lesser proportion than suffixed nouns, except in the case of Sophie's CDS (Sophie's CS: $\chi^2 = 3.49$, df = 1, p = 0.03; Emma's CS: $\chi^2 = 3.42$, df = 1, p = 0.03; Sophie's CDS: $\chi^2 = 2.28$, df = 1, p = 0.07; Emma's CDS: $\chi^2 = 9.36$, df = 1, p = 0.001). They appear later than noun suffixes in development (Sophie's CS from 2;1 on, Emma's CS from 2;3 on).

Table 6. Suffixed adjectives

	No. suffix types		**No. suffixed ADJ** (at least 2 bases)		**% ADJ**	**No. ADJ total**	
	at least 2 bases	Isolated	Lem.	Tok.	Lem.	Lem.	Tok.
Sophie's CS	0	1	1	6	1.4	71	1,241
Emma's CS	0	5	0	0	0	70	879

Sophie's CDS	2	0	4	10	4.1	97	1,866
Emma's CDS	1	9	1	2	1.1	93	1,179

* The lemma *japon-ai-se* 'Japanese' has 2 suffixes

4.1.3. Errors

A small number of errors (10 in Sophie's CS and 6 in Emma's CS) affecting the morphological structure of suffixed words have been found in the data. They can be classified into the following types:

a. six substitutions of the base by nonsense forms within a series producing non-target-like words, e.g. Sophie 2;2 *baqu-ette, paqu-ette* for *casqu-ette* 'cap'; 2;2 *beubav-oir* for *arros-oir* 'watering can'; Emma 1;10 *jav-ette* for *bavette* 'bib'.

b. Three substitutions of the base within a series, e.g. Sophie 2;4 *barr-ette* 'barrette' for *bav-ette* 'bib', Emma 1;6 *bav-ette* 'bib' for *serv-iette* 'table napkin'.

c. Three substitutions of a simplex by a complex word: Emma 2;1 *bûch-eron* 'wood cutter' for *bûche* 'log', 2;5 *ind-ienne* 'Indian' for *Inde* 'India', or by an approximation of a complex word: Sophie 2;1 *bat-ette, a tass-ette* [: casquette] 'cap' for *casque* 'helmet'.

d. One blend of two complex words based on morphotactic similarity: Sophie 2;9 non-target-like *convert-ure* for *confit-ure* 'jam' (*couvert-ure* 'blanket'). The initial syllable of *confit-ure* 'jam' is followed by the penultimate and final syllable of c*ouvert-ure* 'blanket' that occurs at 2;2.

What we see in a. and b. is that the errors alter the stem but preserve the suffix. Therefore, they may presuppose decomposition of the target. The question is the nature of the decomposition and whether it may be phonological rather than morphological, e.g. motivated by the salience of the ending. The argument in favour of morphological decomposition and suffix generalisation rather than uptake of a phonologically salient string is that the latter would imply extraction of a syllable and not only the rhyme, e.g. *-et* [ɛ] and *-oir* [war], as in the example of Sophie 2;1 *vette* for *lavette* 'washcloth'. But in most of the examples, it is only *-ette* which is retained.

In addition, we found two examples of a change of a complex word into a simplex one, in prefixation (see section 4.2): Sophie 1;9 CDS (*il faudra que je le*) *re-colle* '(I will have to) glue it back together' is repeated as *atolle*, with a filler most probably replacing the prefix, or, alternatively, meant for *ça* 'that' as in the frequent sequence/item-based construction *ça colle* 'it sticks' occurring from 2;6 on. At 1;8 Emma uses *coller* 'stick' (*pas coller* 'not stick') instead of *décoller* 'unstick' as corrected by the mother.

This minimally suggests that the children may have identified the suffixes and take the shape of words and their morphological complexity into account.

4.1.4. Development of semantic categories

As expected, in both CS object and instrument nouns (see Namer & Villoing 2008; Ferret & Villoing 2015 for a characterisation of the semantic categories

and a review of the literature) are early whereas action and gendered nouns are late. There is no occurrence of agent noun in Sophie's CS. In Emma's, however, the category of agent noun emerges earlier than that of action noun.

Affixed N, ADJ and V are more often morphosemantically transparent than opaque in CS, even more so in CDS. Transparent suffixed nouns represent more than 60% of the lemmas forming series in CS. However, quite paradoxically, in the largest series of suffix *-ette,* about half of derived nouns (9 out of 17 lemmas, 53%) are rather opaque in Sophie's and Emma's CS. However, the low number of items casts a doubt on this result's representativity: 95% CI [28%, 77%]. These lexicalised words in *-ette* (*cass-ette* 'tape'*, assi-ette* 'plate'*, servi-ette* 'table napkin'*, fourch-ette* 'fork'*, chauss-ettes* 'socks') are the first derived words to appear in Sophie's CS as they denote very familiar or pragmatically important (e.g. *cass-ette* 'tape') objects or instruments in the child's life. It is not before 2;4/2;5 that transparent derived words are produced and are accurate (2;4 *dîn-ette* 'playing dinner party'*, bav-ette* bib', 2;5 *pouss-ette* 'stroller'*, suc-ette* 'lolly pop') along with other transparent derived words *mass-age* 'massage'*, balanç-oire* 'swing'*, sal-eté* 'dirtiness'. In Emma's CS, on the other hand, the development cannot easily be characterised in relation to transparency/opacity: both types of derived words occur from the beginning.

4.2. Prefixation

Prefixation applies almost exclusively to verbs (recall that suffixed verbs are practically not found in the investigated data). A single instance of a prefixed noun occurs in the corpus, i.e. *re-change* 'change' in Emma's CS and CDS. As to prefixed adjectives, a single example from Emma's CDS (*dés-agré-able* 'unpleasant') is attested.

Prefixed verbs have chiefly two prefixes only: iterative or reversative *re-* (e.g. *re-voir* 'see again', *re-mettre* 'put after removing') and privative *dé-* (e.g. *décoller* 'take off', *déshabiller* 'undress') (Tables 7 and 8). They emerge in the third year, at 2;1 in Emma's CS and 2;6 in Sophie's corpus (see also Clark 1993: 234). All prefixed verbs have their corresponding simplex word in the corpora and appear after it. Moreover they are morphosemantically transparent. In other words, we found clear signs of potential productivity in prefixed verbs. Nonetheless, in comparison to suffixed nouns, the proportion of prefixed verbs, especially of tokens, to all verbs is significantly lower (less than 1%) (Sophie's CS: $\chi^2 = 362.94$, df = 1, $p < 0.0001$; Emma's CS: $\chi^2 = 162.34$, df = 1, $p < 0.0001$; Sophie's CDS: $\chi^2 = 852.48$, df = 1, $p < 0.0001$; Emma's CDS: $\chi^2 = 512.26$, df = 1, $p < 0.0001$).

Table 7. Proportions of prefixed verbs: Sophie's and Emma's corpus

	No. prefix types	**No. prefixed V** (at least 2 bases)	**% of V**	**No. V total**

	at least 2 bases	Isolated	Lem.	Tok.	Lem.	Lem.	Tok.
Sophie's CS	2	2	17	21	9.1	187	6,459
Emma's CS	2	1	9	34	4.4	205	4,757
Sophie's CDS	2	2	19	35	6.8	278	13,595
Emma's CDS	2	1	16	65	5.4	294	8,455

Table 8. Series of prefixed verbs

SOP CS (2 PREFIXES)						**SOP CDS (2 PREFIXES)**			
	Lem.	Tok.	Semant. categ.	Base	Age em.*		Lem.	Tok.	Base
re-	15	19	ITER, REVERS	V	2;5	*re-*	14	2	V
dé-	2	2	PRIV	V	2;11	*dé-*	3	3	V
EMM CS (2 PREFIXES)						**EMM CDS (2 PREFIXES)**			
re-	7	27	ITER	V	2;1	*re-*	14	24	V
en-	2	6	DIR	V	2;5	*dé-*	3	8	V

* At least 2 lemmas.

4.3. Conversion

Given the extent of conversion in French (see section 2), the part of potential conversion relations in the vocabulary of toddlers is predicted to be quite widespread (depending also on the theoretical delimitation of the notion, see section 2).

4.3.1. N-V pairs

4.3.1.1. Homophonous N-V pairs. Let us start with semantically related N-V pairs which are homophonous. The analysis of homophonous pairs encounters a very common methodological problem of early acquisition studies, namely the indeterminacy of the category/class of early words (see Bloom 1970; Ambridge & Lieven 2015; Veneziano 2017 among many others). For instance, it is impossible to assess whether Sophie 1;9 [dut] for *douche* 'shower' is a noun or a verb form. N-V pairs can only be identified when contextual cues allow a non-ambiguous reading of the word. Thus, in Sophie's CS, it is not before 2;0 that N-V pairs can be safely documented (see Table 10a).

The number of pairs found in the data is displayed in Table 9.

Table 9. Homophonous N-V pairs

	No. N-V pairs	**No. V lemma total**	**% of V lemmas**	**95% CI**	**No. N lemma total**	**% of N lemmas**	**95% CI**
Sophie's CS	9	188	4.8	[2.2, 8.9]	494	1.8	[0.8, 3.4]
Emma's CS	10	205	4.9	[2.4, 8.8]	572	1.7	[0.8, 3.2]
Sophie's CDS	12	278	4.3	[2.3, 7.4]	631	1.9	[1, 3.3]
Emma's CDS	19	294	6.5	[3.9, 9.9]	780	2.4	[1.5, 3.8]

Neither the proportion of verb lemmas nor the proportion of noun lemmas in N-V pairs varies significantly across corpora (V: $\chi^2 = 1.5$, df = 3, p = 0.68; N: $\chi^2 = 1.04$, df = 3, p = 0.79). The slight difference between Emma's CS and

CDS on the one hand and Sophie's CS and CDS figures on the other hand, is thus probably irrelevant.

The fact that the number of homophonous N-V pairs found in the data is rather small may appear to question their relevance, in particular when considering the relatively large confidence intervals. In addition their proportion is significantly lower than the proportion of suffixed nouns (Sophie's CS: $\chi^2 = 21.17$, df = 1, $p < 0.0001$; Emma's CS: $\chi^2 = 13.32$, df = 1, $p = 0.0001$; Sophie's CDS: $\chi^2 = 31.58$, df = 1, $p < 0.0001$; Emma's CDS: $\chi^2 = 53.23$, df = 1, $p < 0.0001$). However, we can notice that among Ns occurring in CS without the corresponding Vs and of Vs occurring without the corresponding Ns, those which may form plausible pairs at this age represent a lower number than the number of attested pairs. We can enumerate in Sophie's CS on the one hand 4 verbs (*coller* 'stick' 11 tokens, *danser* 'dance' 13 tokens*, griffer* 'scratch' 3 tokens (1 token of sg.pres.ind.), and *taper* 'hit' 6 tokens) for which one could expect the nouns *colle* 'glue'*, danse* 'dance'*, griffe* 'claw'*, tape* 'tap', that do not occur in Sophie's CS.

On the other hand there are 3 nouns (*coche* 'tick'*, lange* 'diaper'*, scotch* 'scotch tape') for which the corresponding verbs are not found in our CS data.

In Emma's CS, 3 nouns (*mousse* 'froth', *pince* 'pliers' and *scotch* 'tape') do not have a plausible verb counterpart (*mousser* 'froth'*, pincer* 'nip'*, scotcher* 'tape') in her data, and 2 verbs (*caresser* 'caress'*, crier* 'scream') occur without the corresponding noun (*caresse* 'caress', *cri* 'scream').

In CDS only isolated examples of some of the members of the pairs lacking in CS have been found (Sophie's CDS: V *scotcher*, Emma's CDS: V *pincer* and N *cri*).

As a counter-example, one would not expect a young child to use the nouns corresponding to common verbs like *regarder* 'look'*, demander* 'ask for'*, marcher* 'walk', *aider* 'help' which are abstract nouns, neither the verbs *cuisin-er* 'cook'*, tartin-er* 'spread' corresponding to Ns such as *cuisine* 'kitchen', *tartine* 'spread', etc. which are much more specific. Moreover, in French everyday speech, these verbs are often replaced by the structure *faire* + N 'do + N' (*faire la cuisine,* etc., lit. 'do kitchen').

The homophonous pairs are presented in Tables 10a and 10b, in which they are arranged in ascending order according to age of emergence of the earliest member and time distance between the two members. We have included some doubtful pairs in which the homophonous member either contains additional material (i.e. is a reduplication or a multilexical unit, e.g. *canne à pêche* 'fishing rod') or is semantically unrelated (e.g. *goûter* used with the meaning of 'taste' and not 'eat after-school snack').

Table 10a. Age of emergence of homophonous N-V pairs in Sophie's CS

Age of first N	Age of first V	Lemmas	Gloss
1;7	2;9	*téléphone – téléphon-er*	'phone'
1;10	2;5	*habit – habill-er*	'item of clothing, dress'
1;11	2;0/2;5	*bagarre – se bagarr-er*	'fight'
2;7	2;6	*caresse – caress-er*	'caress'

2;7	2;6	*travail – travaill-er*	'work'
1;10/2;10	2;6	*brosse – bross-er*	'brush'
2;8	2;8	*foehn – foehn-er*	'hairdryer, hairdry'
Doubtful pairs			
2;3	2;3	*pousse-pousse –pouss-er*	'stroller, push'
2;4	2;4	*goûter – goût-er*	'after-school snack, to taste'
Total: 9 pairs (2 doubtful)			

Table 10b. Age of emergence of homophonous N-V pairs in Emma's CS

Age of first N	**Age of first V**	**Lemmas**	**Gloss**
2;4	1;8	*habit – habill-er*	'item of clothing, dress'
2;9	1;9	*griffe – griff-er*	'claw'
1;9	1;10	*travail – travaill-er*	'work'
2;5	1;10	*plongée – plong-er**	'diving, dive'
1;10	2;1	*déjeuner – déjeun-er*	'breakfast'
2;3	2;3	*danse – dans-er*	'dance'
2;5	2;5	*pêche – pêch-er***	'fishing, catch'
Doubtful pairs			
2;0	1;10	*cache(-cache) – (se) cach-er*	'hide-and-seek, hide'
1;10	2;1	*pousse-pousse – pouss-er*	'stroller, push'
2;0	2;1	*brosse (à dents) – bross-er*	'toothbrush, brush'
2;5	2;5	*canne à pêche – pêch-er* (see above)**	'fishing rod, 'catch'
Total: 10 pairs (4 doubtful)			

* Final vowel lengthening in the noun, that is typical of French spoken in the area of Switzerland where the child lives, has not been taken into consideration.

** *pêche – pêch-er* and *canne à pêche –pêch-er* are counted as a single pair.

As far as the relation to CDS is concerned, results of both corpora show once again a strong correspondence between CS and CDS and more specifically between frequency in CDS and age of emergence in CS. Not only are all the CS's pairs related to the CDS's pairs (although, as expected, CDS has a greater number of pairs than CS), but the first member of a pair to emerge is generally the most frequent member of the pair in CDS.

Furthermore, we have found a clear tendency for members of a homophonous pair to co-occur in a same file or sequence of interaction in CDS, and to a lesser extent in CS.[9]

These findings seem to indicate that for CDS and CS the N and V lemmas of the homophonous pairs are related. The picture is corroborated by the results of the N-V pairs with modification presented in the next section.

4.3.1.2. N-V pairs with modification. A few nearly homophonous N-V pairs display two types of recurrent modification (final consonant or glide addition/subtraction and vowel alternation in the base, see 2.2). Although they represent at most 1% of the total of nouns and a slightly higher percentage of the verbs, they are worth mentioning here insofar as their development seems to be parallel to the development of homophonous pairs (Table 11).

[9] Due to space constraints, we leave the detailed analysis of the two issues we have just mentioned for another publication.

Table 11. N-V pairs with modification

	No. N-V pairs	**No. V lemma total**	**% of V lemmas**	**95% CI**	**No. N lemma total**	**% of N lemmas**	**95% CI**
Sophie's CS	5	188	2.7	[0.9, 6]	494	1.0	[0.3, 2.3]
Emma's CS	4	205	2	[0.5, 4.9]	572	0.7	[0.2, 1.8]
Sophie's CDS	4	278	1.4	[0.4, 3.6]	631	0.6	[0.2, 1.6]
Emma's CDS	4	294	1.4	[0.4, 3.4]	780	0.5	[0.1, 1.3]

These pairs can be chronologically ranked in the same way as strictly homophonous pairs of Tables 10a and 10b (see Tables 12a and 12b).

Table 12a. Age of emergence of N-V pairs with modification in Sophie's CS

Age of first N	**Age of first V**	**Lemmas**	**Phonetic transcription**	**Gloss**
1;6	2;8	*bain – (se) baign-er*	[bɛ̃] – [bɛɲe]	'bath, take a bath'
2;3	1;9	*tour – tourn-er*	[tur] – [turne]	'turn'
2;2	1;11	*dessin – dessin-er*	[dɛsɛ̃] –[dɛsine]	'draw'
2;6	2;11	*pet – pét-er*	[pɛ] – [pɛte]	'fart'
1;10	2;10	*savon – savonn-er*	[savɔ̃] – [savɔne]	'soap, wash'

Table 12b. Age of emergence of N-V pairs with modification in Emma's CS

Age of first N	**Age of first V**	**Lemmas**	**Phonetic transcription**	**Gloss**
1;5	1;10	*bain – (se) baign-er*	[bɛ̃] – [bɛɲe]	'bath, take a bath'
1;10	1;8	*dessin – dessin-er*	[dɛsɛ̃] –[dɛsine]	'draw'
1;10	2;1	*savon – savonn-er*	[savɔ̃] – [savɔne]	'soap, wash'

2;1	2;0	*tour – tourn-er*	[tur] – [turne]	'turn'

With the exception of one (playful) pair in Sophie's CS (*pet – pét-er* 'fart'), the pairs found in both children are the same. These pairs again correspond for the most part to the pairs that occur in CDS (in Sophie's CDS the playful one plus another one differ). It is interesting to notice that they also display co-occurring members in a same recording session.

The data show that a few bases of N-V pairs are also bases of suffixed words (Sophie's CS and CDS 3, Emma's CS 2 and Emma's CDS 4). It follows that the size of morphological families in the corpora reach 4 members once homophonous and nearly homophonous N-V pairs are included (see section 4.1.1), e.g. Sophie's CS *bain* 'bath', *(se) baign-er* 'take a bath', *baign-oire* 'bathtub', *baign-ade* 'bathing'.

In sum, we may assume that the N-V pairs (homophonous and with modification) that are documented in the data highlight the fact that the lexicon of the children and the parents takes advantage of the connections between N and V. These connections, which potentially represent conversions, contribute to the emerging morphological network which seems to characterise the vocabulary of toddlers by the end of the third year.

4.3.2. Verbs derived from adjectives

A very small number of verbs derived from adjectives have been found: in both CS these verbs are *vid-er* 'empty', *sal-ir* 'dirty' and, with modification of the stem *sec* 'dry', *séch-er* 'dry'.

4.3.3. Adjectives converted from verbs (PP, PPres, sg. pres. ind.)/deverbal adjectives

We have seen that there is a low amount of suffixed adjectives in the corpora. Some adjectives derived from verbs complement them (see Table 13).

Table 13. Deverbal adjectives

	No. deverbal ADJ		**% of ADJ**	**No. ADJ total**	
	lemmas	tokens	lemmas	lemmas	tokens
Sophie's CS	7	13	9.9	71	1,241
Emma's CS	6	30	8.6	70	879
Sophie's CDS	11	53	11.3	97	1,866
Emma's CDS	9	48	9.7	93	1,179

Most of the deverbal adjectives are derived from past participles of the first conjugation class (e.g. *fatigué* 'tired', *mouillé* 'wet', *fâché* 'angry') but a couple of them derives from another class (*tordu* 'twisted', *fichu* 'broken') or from a present participle (*brûlant* 'hot', CDS *intéressant* 'interesting'). None of the corresponding verb bases occurs in the corpora. Their development seems to be purely lexical.

4.4. ADS

The sample of ADS data consists in two recordings of approximately 2 hours of conversation between friends, respectively Sophie's mother and the first author, and Emma's father (both present during the recording sessions of the children), the first author and another person (Table 14).

Table 14. Sample of ADS

Speaker	No. of word lemmas	No. of word tokens	No. of utterances
Sophie's mother	2,115	20,537	1,711
Emma's father	1,974	16,918	1,420

As it appears in Tables 16 and 17, results on proportions of suffixed nouns and on the distribution of ADS suffixes display a striking consistency between the two speakers. The difference that was observed between Sophie's CDS and Emma's CDS is not found in the most frequent suffixes of ADS. In both adults' production, the proportion of suffixed noun lemmas is much higher than in their CDS – more than the double in the speech of Sophie's mother, a little less than the double in Emma's father's (Sophie's ADS: $\chi^2 = 30.09$, df = 1, $p < 0.0001$; Emma's ADS: $\chi^2 = 18.26$, df = 1, $p < 0.0001$).

Notice that this result cannot be interpreted as suggesting that the parents do not follow a noun bias: the proportion of nouns in CDS is higher than in ADS and is more than twice as large as the proportion of verbs (Table 15).

Table 15. Proportion of nouns and verbs

	N		**V**		**Words**
	No. lemmas	%	No. lemmas	%	No. lemmas
Sophie's CS	498	45	189	17.1	1,106
Emma's CS	572	49.5	205	17.7	1,155
Sophie's CDS	631	48.8	278	21.5	1,292
Emma's CDS	780	53.5	294	20.2	1,459
Sophie's ADS	651	40.5	345	21.5	1,606
Emma's ADS	624	31.6	317	16.1	1,974

Table 16. Suffixed nouns in ADS

Speaker	**No. suffixes** with at least 2 bases	**No. suffixes ADS only**	**Suffixed nouns** with at least 2 bases	**% of N**	**No. N total**
Sophie's mother	18	13	132	20.5	645
Emma's father	24	13	129	20.7	622

Table 17a. ADS noun suffixes: Sophie's mother

ADS-specific suffixes (with at least 2 bases): 9			**Suffixes in ADS & CDS** (1 lemma incl): 9		
Suffix	No. lemmas	Semantic category	Suffix	No. lemmas in ADS	Semantic category
-ion	26	RESULT – ACTION	*-(i)té*	15	QUALITY*
-ance/-ence	17	ACTION – STATE	*-ment*	13	ACTION
-isme	9	QUALITY – ACTION	*-eur*	6	AGENT
-ain	4	ETHNIC – QUALITY – AGENT	*-age*	6	ACTION
-iste	3	AGENT	*-ure*	6	RESULT – ACTION – COLL
-ais	3	ETHNIC	*-ique*	4	QUALITY

-esse	3	QUALITY –ETHNIC	*-ne*	4	GENDER
-aire	2	RESULT – QUALITY	*-ette*	1	DIM
-ie	2	QUALITY – ACTION	*-ade*	1	RESULT

* Or PROPERTY which is synonymous

Table 17b. ADS noun suffixes: Emma's father

ADS-specific suffixes (with at least 2 bases): 9			**Suffixes in ADS &CDS** (1 lemma incl): 17		
Suffix	No. lemmas	Semantic category	Suffix	No. lemmas in ADS	Semantic category
-ion	32	RESULT – ACTION	*-ance/ -ence*	14	ACTION – STATE
-iste	3	AGENT	*-ment*	12	RESULT – ACTION
-at	3	RESULT – INSTITUTIONAL FUNCTION	*-ateur*	8	AGENT – INSTR
-aire	3	QUALITY	*-(i)té*	8	QUALITY
-ien	3	AGENT	*-age*	7	ACTION – COLL
-ie	3	QUALITY – LOC	*-ique*	3	QUALITY
-isme	2	DOCTRINE – COLLECTIVE	*-erie*	3	COLLECTIVE – EVALUATIVE
-ant	2	AGENT	*-ette*	3	OBJ – INSTR
-aine	2	NUM	*-oire*	2	LOC
			-(t)ure	3	RESULT – INSTR
			-ais	2	ETHNIC
			-ant	2	AGENT
			-ise	2	QUALITY
			-ée	2	TEMP – INSTR
			-(i)er	1	COLL
			-re	1	GENDER
			-ne	1	GENDER

Tables 17a and b show not only that the number of ADS noun suffixes is similar in both adults, but that the suffixes yielding the largest series are the same (with the exception of *-ure* in Sophie's mother):

S *-ion, -ance, -ité, -ment* + *-isme, -eur, -age, -ure*

E *-ion, -ance, -ment* + *-ateur, -ité, -age*

As expected, the suffixes of ADS form abstract nouns. The difference with the suffixes showing the greatest diversity in CDS, i.e. the absence of *-oir(e)*

and *-on* and the scarcity of *-ette*, denoting objects and instruments, can also be accounted for by the speech situation and topics of conversation.

Regarding noun suffixes that are shared with CDS, as expected diminutives are much less represented. Indeed there is a single lemma (*boulette* 'blunder') in the speech of Sophie's mother and three lemmas (c*assette* 'tape'*, lavette* 'washcloth'*, sandalette* 'sandal') in that of Emma's father.

It is noticeable that in this short recording sample of ADS, suffixed verbs are found in both parents while there is none in CS and CDS: 2 lemmas in the speech of Sophie's mother, 4 in that of Emma's father. In all examples it is the productive suffix *-iser* (*util-is-er* 'use'*, sensibil-is-er* 'raise awareness among'*, économ-is-er* 'save'*,* etc.) which is used.

Another difference with CS and CDS comes from nominal prefixes which again occur in both ADS, i.e. iterative *re-,* privative *dés-*/*dis-,* temporal *pré-* and excessive *sur-*.

With regard to verbal prefixes, iterative *re-* and privative *dé(s)-* are found as in CS and CDS, to which directional *in-* (*im-merger* 'immerse') and *é-* (*é-courter* 'shorten') and temporal *pré- (pré-aviser* 'give advance notice') are added.

5. Discussion

Although we found a greater morphological diversity and more heterogeneity between CS and CDS in Emma's corpus, the intra- and inter-similarity of the results in our two corpora of CS and CDS on noun, adjective and verb affixation, as well as ADS on noun and verb affixation, as well as on homophonous pairs, is striking given the differences in caretakers' style, recording context and family situation (single child vs. third child). Nominal suffixation displays the greatest number of derivational series**,** the same nominal suffixes produce the largest series and the ranking is very similar (see Tables 5a and 5b); prefixes appear with verbs and are confined to two productive ones (Table 8), except in ADS, and affixed adjectives are isolated (Table 6). Conversion relations between nouns and verbs, between verbs and adjectives, as well as between a few adjectives and verbs converge in number and types. Moreover, the investigated derivational means have a similar order of emergence in the two corpora. Suffixed words and conversion relations are documented before the less frequent prefixed ones.

Adjectival suffixes appear later than noun suffixes in development: in Sophie's CS the single example of a derived adjective (*délic-ieux* 'delicious' from 2;1 on) emerges later than the first suffixed nouns in *-ette* (1;9) but earlier than the prefixed verbs (2;5) (see section 4.2). In Emma's CS, 9 of the 10 adjectival derived lemmas emerge from 2;3 on, i.e. later than the first three types of nominal suffixes (1;8, 2;1). Suffixed adjective lemmas are significantly less frequent in CDS (Sophie's CDS 4.1%, Emma's CDS 1.1%) than in ADS (Sophie's ADS: 12.6%; Emma's ADS: 23.9%) (Sophie's

parents: $\chi^2 = 4.57$, df = 1, p = 0.02; Emma's parents: $\chi^2 = 22.41$, df = 1, p < 0.0001). Further research should assess whether this speaks for fine-tuning in CDS.

Can we identify an age which would gather converging signs of detection of derivational morphology? At 2;2 we see that Sophie displays the first N – V pairs and she has already produced several errors on morphological complex words (5 out of 10). However, her four richest series are formed at 2;3 so that this seems a safer age. In Emma's data, 2;1 seems to be a turning point: the 3 richest series plus one and N – V pairs are attested, most errors appear, and so do prefixed verbs. In both children this corresponds to late protomorphology, more precisely to one month before morphology proper (see Kilani-Schoch 2017).

Turning to the comparison between noun suffixation and nominal compounding (Kilani-Schoch 2017), we see that the data support the hypothesis of a preference for suffixation over compounding in CS and CDS, as well as in ADS (Table 18).

Table 18. Suffixed N vs. N compounds (lemmas)

	No. suffixed N total (1 lemma included)*	% of N	No. N strict compounds & multilexical units	% of N	No. N total
Sophie's CS	54	10.9	18	3.6	494
Emma's CS	48	8.4	33	5.8	572

Sophie's CDS	71	11.3	27	4.3	631
Emma's CDS	110	14.1	50	6.4	780
Sophie's ADS	132	20.3	26	4.0	651
Emma's ADS	129	20.7	38	6.1	624

* Suffixed N include those in which the suffix occurs with at least two lemmas as well as isolated suffixed lemmas

As expected, on average the proportion of lemmas of suffixed nouns is higher than the proportion of compound lemmas in relation to the total of noun lemmas: between 1.5 times higher, in Emma's CS, and 3 times higher, in Sophie's CS, although the former difference is not statistically significant (Sophie-CS: $\chi^2 = 9.38$, df = 1, p = 0.001; Emma-CS: $\chi^2 = 0.02$, df = 1, p = 0.45; Sophie-CDS: $\chi^2 = 11.99$, df = 1, $p < 0.001$; Emma-CDS: $\chi^2 = 14.72$, df = 1, $p < 0.0001$; Sophie-ADS: $\chi^2 = 12.89$, df = 1, $p < 0.001$; Emma-ADS: $\chi^2 = 26.39$, df = 1, $p < 0.0001$). Sophie's CS has three times more suffixed lemmas, Sophie's CDS a little less but more than twice as much, as Emma's CDS. It is in Emma's CS that the difference between the two types of complex words is the smallest. We see here again in the first case a strong similarity between CS and CDS (Sophie) in favour of suffixed nouns. In the other case (Emma), there is much less similarity between CS and CDS as far as suffixed noun lemmas (and tokens to a lower extent) are concerned while proportions of compounds are close. Emma's CDS shows the highest part of suffixed nouns simultaneously to the highest proportions of compounds, but still her

compounds represent less than half of suffixed nouns. Hence, the preference for nominal suffixation is clear in CS and CDS data.

6. Conclusion

In sum, these data provide an insight into the morphological structure of the French lexicon before age 3;0 and seem to allow some generalization regarding the detection of derivational morphology before its productive use consisting in coining neologisms.

We have found various cues of an emerging morphological network characterising the lexicon at the end of the third year in the tight-knit morphological relations within the lexicon as well as in errors on affixed words, which suggests that the children have developed and used the possible morphological associations between words in the construction of their lexicon. The morphological families of suffixed and prefixed nouns that we were able to establish from the data along with emergence of simplex words before complex words, as well as conversion relations or pairing between nouns and verbs provide additional cues. Whether the same picture can be found in a larger sample including a greater number of children is a question for further research. Another issue is the relationship between the morphological structure of the lexicon in this early period and the later development of derivational productivity, e.g. to what extent the suffixes with

the largest series remain the same and are predictive of the overgeneralisations in coinages.

Acknowledgements

Many thanks to Laura Schött for her help with CDS and ADS. We also thank two anonymous reviewers and the editors of the volume for insightful suggestions.

References

Ambridge, B. & Lieven, E.V.M. 2015. A constructivist account of child language acquisition. In *Handbook of Language Emergence,* B. MacWhinney & W. O'Grady (eds), 478–510. Hoboken NJ: Wiley Blackwell.

Amiot, D. 2004. Préfixes ou prépositions? Le cas de sur(-), sans(-), contre(-) et les autres (Prefixes or prepositions? The case of on(-), without(-), against(-) and the others). *Lexique* 16: 67–83.

Apothéloz, D. 2002. *La construction du lexique français* (The construction of the French lexicon). Paris: Ophrys.

Apothéloz, D. 2007. La préfixation en RE-, l'antonymie directionnelle et les phénomènes de polarité sémantique (RE- prefixation, directional antonymy and semantic polarity phenomena). *French Language Studies* 17: 143–158.

Arrivé, M., Gadet, F. & Galmiche, M. (eds) 1986. *La grammaire d'aujourd'hui* (Today's grammar). Paris: Flammarion.

Bauer, B.L.M. 2011. Word formation in Romance. In *The Cambridge History of the Romance Languages*, Vol. I, M. Maiden, J.Ch. Smith & A. Ledgeway (eds), 532–563. Cambridge: Cambridge University Press.

Bauer, L., Lieber, R. & Plag, I. 2013. The analysis and limits of conversion. In *The Oxford Reference Guide to English Morphology*, L. Bauer, R. Lieber & I. Plag, 545–567. Oxford: Oxford University Press.

Béchade, H.-D. 1992. *Phonétique et morphologie du français contemporain* (Phonetics and morphology of contemporary French). Paris: PUF.

Bloom, L. 1970. *Language Development: Form and Function in Emerging Grammar*. Cambridge MA: MIT Press.

Bonami, O. & Boyé, G. 2005. Construire le paradigme d'un adjectif (Building the paradigm of an adjective). *Recherches Linguistiques de Vincennes* 34: 77–98.

Bonami, O., Boyé, G. & Kerleroux, F. 2009. L'allomorphie radicale et la relation flexion–construction (Radical allomorphy and the inflection–construction relation). In *Aperçus de morphologie du français* (French

morphology overviews), B. Fradin, F. Kerleroux & M. Plénat (eds), 103–126. Paris: Presses Universitaires de Vincennes.

Booij, G. 2012. *The Grammar of Words.* Oxford: Oxford University Press.

Clark, E.V. 1985. The acquisition of Romance, with special reference to French. In *The Crosslinguistic Study of Language Acquisition*, Vol.1, D.I. Slobin (ed.), 687–782. Hillsdale: Erlbaum.

Clark, E.V. 1993. *The Lexicon in Acquisition.* Cambridge: Cambridge University Press.

Clark, E.V. 1998. Lexical creativity in French-speaking children. *Cahiers de Psychologie Cognitive* 17: 513–530.

Corbin, D. 1987 *Morphologie dérivationnelle et structuration du lexique* (Derivational morphology and lexicon structuring). Tübingen: Niemeyer.

Dal, G. 1997. *Grammaire du suffixe -et(te)* (Grammar of the suffix *-et(te)*). Paris: Didier.

Dressler, W.U. & Merlini Barbaresi, L. 1994. *Morphopragmatics.* Berlin, New York: Mouton de Gruyter.

Ferret, K. & Villoing, F. 2015. French N-*age* instrumentals: semantic properties of the base verb. *Morphology* 25(4): 473–496.

Fradin, B. 2003. *Nouvelles approches en morphologie* (New approaches in morphology). Paris: PUF.

Fradin, B. 2009. Compounding in French. In *The Oxford Handbook of Compounding,* R. Lieber & P. Štekauer (eds), 417–435. Oxford: Oxford University Press.

Fradin, B., Hathout, N. & Meunier, F. 2003. La suffixation en -ET et la question de la productivité (-ET suffixation and the issue of productivity). *Langue Française* 140: 56–78.

Gaeta, L. 2015. Lexeme formation in a conscious approach to the lexicon. In *Semantics of Complex Words*, L. Bauer, L. Körtvélyessy & P. Štekauer (eds), 115–141. Dordrecht: Springer.

Grabar, N., Tribout, D., Dal, G., Fradin, B., Hathout, N., Lignon, S., Namer, F., Plancq, C., Yvon, F. & Zweigenbaum, P. 2006. Production quantitative des suffixations par -ité et -Able dans un corpus journalistique moderne (Quantitative production of -ité and -Able suffixations in a modern journalistic corpus). *TALN* 2006: 167–175.

Guilbert, L. 1975. *La créativité lexicale* (Lexical creativity). Paris: Larousse.

Huot, H. 2001. *Morphologie* (Morphology). Paris: Armand Colin.

Kerleroux, F. 1996. *La coupure invisible. Études de syntaxe et de morphologie* (The invisible cut. Syntax and morphology studies). Villeneuve d'Ascq: Presses Universitaires du Septentrion.

Kilani-Schoch, M. 2017. Early development of compounds in two French children's corpora. In *Nominal Compound Acquisition* [Language Acquisition and Language Disorders 61], W.U. Dressler, F.N. Ketrez & M. Kilani-Schoch (eds), 91–118. Amsterdam: John Benjamins.

Kilani-Schoch, M. & Xanthos, A. 2013. The adjective *petit* 'small, little' in French acquisition data: An example of the relationship between pragmatics and morphosyntactic development. *Journal of Pragmatics* 56: 113–132.

Koehl, A. 2012. *La construction morphologique des noms désadjectivaux suffixés en français* (Morphological construction of suffixed deadjectival nouns in French). PhD dissertation. Université de Lorraine.

Le Grand Robert de la langue française 2018. (The Grand Robert of the French Language). <https://gr.bvdep.com/robert.asp>.

Lehmann, A. & Martin-Berthet, F. 1998. *Introduction à la lexicologie* (Introduction to lexicology). Paris: Dunod.

Le Robert brio. 2012. (The Robert Brio). Paris: Dictionnaires Le Robert.

Lippeveld, M. & Oshima-Takane, Y. 2015a. Nouns to Verbs to and verbs to nouns: When do children acquire class extension rules for deverbal nouns and denominal verbs? *Applied Psycholinguistics* 36(3): 559–588.

Lippeveld, M. & Oshima-Takane, Y. 2015b. The effect of input on children's cross-categorical use of polysemous noun-verb pairs. *Language Acquisition* 22: 209–239.

MacWhinney, B. 2000. *The CHILDES Project: Tools for Analyzing Talk.* Mahwah NJ: Erlbaum.

Manova, S. 2011. *Understanding Morphological Rules.* Dordrecht: Springer.

Marascuilo, L.A. & McSweeney, M. 1967. Nonparametric post hoc comparisons for trend. *Psychological Bulletin* 67(6): 401–412.

Mel'čuk, I. 1996. *Cours de morphologie générale* (General morphology course). Vol. III. Montréal: CNRS.

Namer, F. & Villoing, F. 2008. Interpréter les noms déverbaux: quelle relation avec la structure argumentale du verbe de base ? Le cas des noms en -oir(e) du français (Interpreting deverbal nouns : which relation with the argumental structure of the base verb? The case of French nouns in -oir(e)). In *Actes du 1er Congrès Mondial de Linguistique Française* (Proceedings of the 1st Worldwide Congress of French Linguistics), J. Durand, B. Habert & B. Laks (eds), 1551–1569. Paris: EDP Sciences.

Plénat, M. 2008. Le thème L de l'adjectif et du nom (The L stem of adjective and noun). In *Actes du Congrès Mondial de Linguistique Française 2008* (Proceedings of the 2008 Worldwide Congress of French Linguistics), J. Durand, B. Habert & B. Laks (eds), 1613–1626. Paris: Institut de Linguistique Française.

Roché, M. 2009. Un ou deux suffixes? Une ou deux suffixations? (One or two suffixes? One or two suffixations?). In *Aperçus de morphologie du français* (French morphology overviews), B. Fradin, F. Kerleroux & M. Plénat (eds), 143–174. Paris: Presses Universitaires de Vincennes.

Savickienė, I. & Dressler, W.U. (eds) 2007. *The Acquisition of Diminutives: A Cross-Linguistic Perspective.* Amsterdam: John Benjamins.

Trésor de la langue française informatisé (Computerized French Language Treasury) (TLFi). <http://atilf.atilf.fr/tlf.htm>.

Tribout, D. 2010. *Les conversions de nom à verbe et de verbe à nom en français* (Noun to verb and verb to noun conversions in French). PhD dissertation. Université Paris Diderot.

Tribushinina, E., van den Bergh, H., Kilani-Schoch, M., Aksu-Koç, A., Dabašinskienė, I., Hrzica, G., Korecky-Kröll, K., Noccetti, S. & Dressler, W.U. 2013. The role of explicit contrast in adjective acquisition: A cross-linguistic longitudinal study of adjective production in spontaneous child speech and parental input. *First Language* 33(6): 594–616.

Tribushinina, E., Voeikova M. & Noccetti, S. (eds) 2015. *Semantics and Morphology of Early Adjectives in First Language Acquisition*. Cambridge: Cambridge Scholar Publishers.

Veneziano, E. 2017. Noun and Verb categories in acquisition: Evidence from fillers and inflectional morphology in French-acquiring children. In *Polycategoriality and Lexical Categories: Cross-linguistic, cross-theoretical and language acquisition approaches* [Studies in Language Companion Series 182], V. Vapnarsky & E. Veneziano (eds), 381–411. Amsterdam: John Benjamins.

Villoing, F. 2012. French compounds. *Probus* 2: 29–60.