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**There are fillers and fillers  
on the way to grammatical morphemes:  
A three-period account in the acquisition of French**

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In the early period of language acquisition many children start using *fillers* -- monosyllabic elements at the onset of *their renditions of target words* -- renditions that children used earlier, and continue to use also without such elements. For example, the sound /ð/, in ðdog for English, and in /ðʃjɛ~/ 'chien' (dog) for French.

Children's production of fillers has been attested in different languages and is often taken into consideration in accounts of early acquisition.

In some accounts fillers are considered early manifestations of grammatical morphemes produced --from the start -- in syntactically relevant slots;

in others, they are seen as phonoprosodic phenomena that will become only later grammatical morphemes.

1. I will provide further support for the second approach

2. I will argue that there are different kinds of

**fillers or filler periods** on the way to grammatical morphemes

1. *pre-morphological*, where fillers are likely to mainly fulfill phonoprosodic functions:

2. *proto-morphological*, where fillers present incipient properties of grammatical morphemes

3. *quasi-morphological fillers*

Depending on the rhythm with which children develop, we may or not observe all the three periods



## REMINDER : what are FILLERS

underdetermined, not clearly identifiable elements

- i. mostly vocalic or nasalized
- ii. occurring at the onset of the child's word-like productions
- iii. that do not belong to the target word

For example

/ə/ in /əsʊ/ for 'sou' 'cent'

/a/ in /adam/ for 'dame' 'lady'

/ə/ in /əʃõ/ for /buʃõ/ 'cap'

## 1. *Pre-morphological fillers*

What characterizes fillers of this period?

a) their phonoprosodic preferences:

in French - preferential production with monosyllabic targets

in a dominant iambic VCV pattern ;

plurisyllabic targets may follow the same vowel-onset profile

but their vocalic onset may not be additional but may belong

to the target word

**aʃin** for /maʃin/ (machine)

**aty** for /vwatyr/ (voiture - car)



b) no differential production according to the type of word that follows -- we will look at nouns and verbs -- since CDS shows differential production in the presence and in the kind of the first left-edge vocalic sound adjacent to the target word

based on 2 sessions of CDS for one child

Profile reproduced in CDS of 1 session for each of the three other children

PreN and PreV characteristics in CDS			
Characteristics	prenominal position	preverbal position	stat significance Chi square
Absence of grammatical morpheme	1,4%	12,7%	significantly different p<.01
kind of most adjacent vocalic element	1 major peak /e,ə/ 44,4%  1 minor peak /a/ 19,2%  less variety	5 peaks /e,ə/ 24,7% /a/ 22,5% /i,wi/ 16,2% /y/ 15,7% /ɛ/ 10,4%  plus de variété	significantly different p<.01
stability of the adjacent vocalic element	greater stability same type : 47,5%  3 (+) : 13%	less stability même type : 27%  3 (+) : 34%	significantly different p<.01
Lexical forms	practically invariable	2(+) forms : 38% of types	

## 2. *proto-morphological fillers*

What characterizes fillers of this period?





- a) phonoprosodic preferences decrease to disappearance
  - decrease in vowel onset of plurisyllabic targets
  - plurisyllabic targets have fillers as monosyllabic targets do
- that is, if vocalic onset, this is external to the target word
- differential production according to the type of word that follows (at least for nouns and verbs);

### 3. *quasi-morphological fillers*,

- fillers of period 2) alternate with well-formed grammatical morphemes, sometimes for the same lexical item
  
- neither fillers nor wfgm reach criterion in obligatory contexts (we'll hear about possible pragmatic explanations for production vs omission)

## Data

longitudinal data of four children acquiring French, studied between the ages of 1;3/1;10 and 2;0/2;3.

CHILD		Age range	Nb hours analyzed
CAMILLE		1;3 - 2;2	16
GAEL		1;4 - 2;3	18
ANAE		1;6 - 2 ;0	6
ARNO		1;10 - 2;5	12

Children were recorded audio-visually every two weeks (to the exception of Anae - once a month), while they interacted

naturally -- mostly with their mother--in their home environment. The data were transcribed in *CHAT* format, phonologically (in *SAMPA*) for the children and in French orthography for the adults, and were linked to the videos.

## **RESULTS**

**ALL FOUR CHILDREN produce fillers**

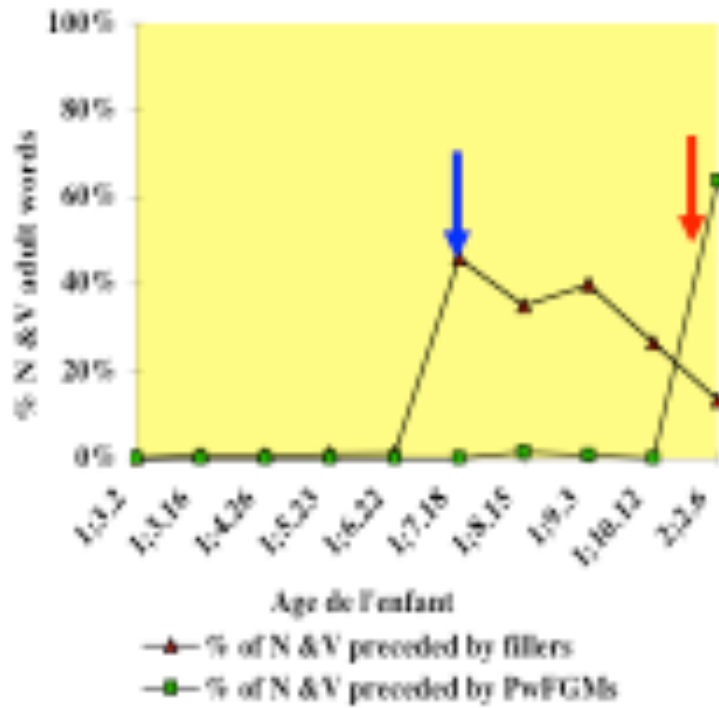
**1.Pre-Filler period**

**2. Increase and systematic production of fillers**

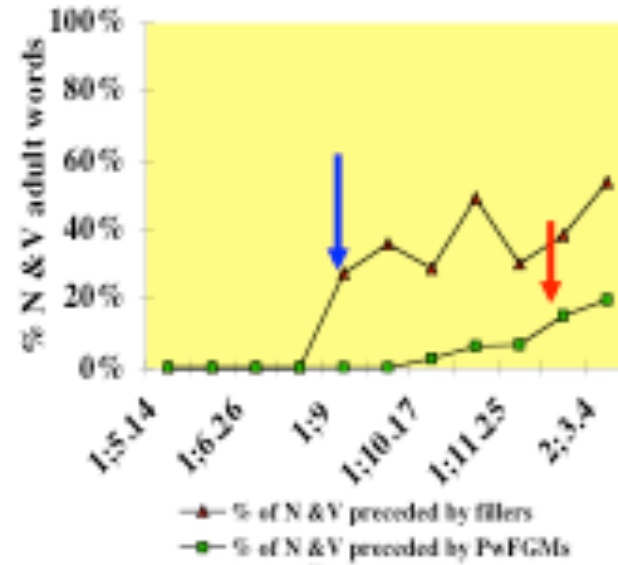
**3. Increase in production of Well-formed grammatical morphemes**



CAM

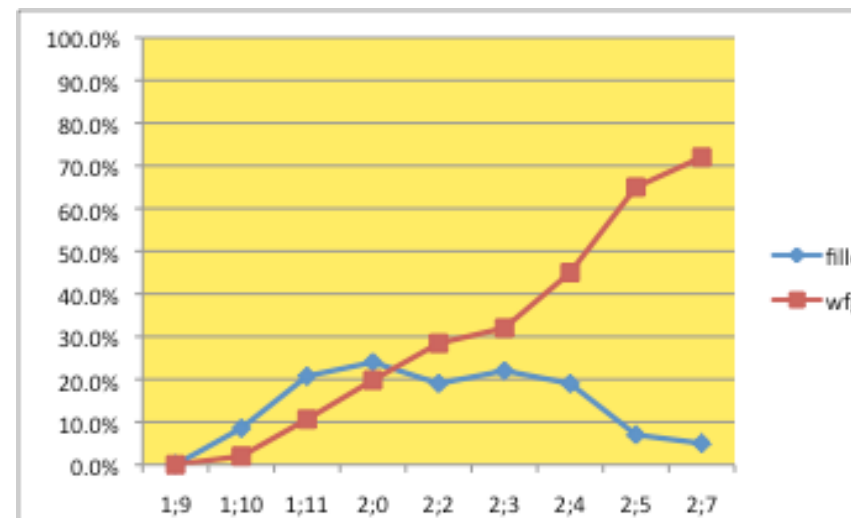
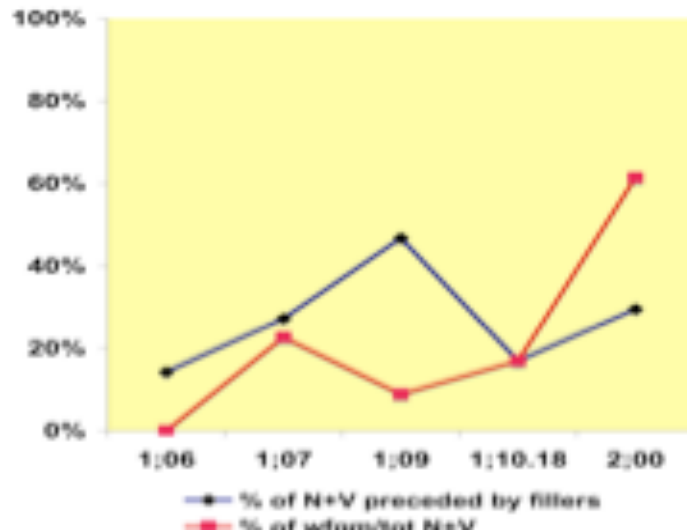


GAEL



Arno

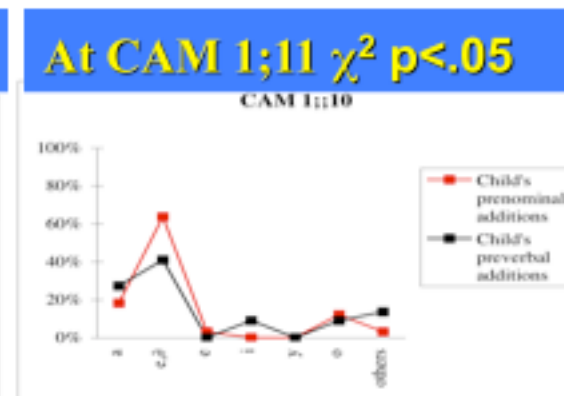
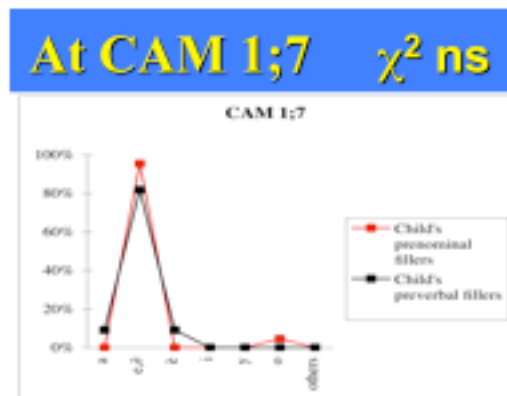
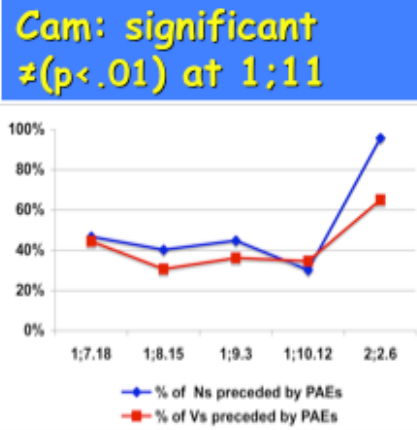
ANA





# Camille

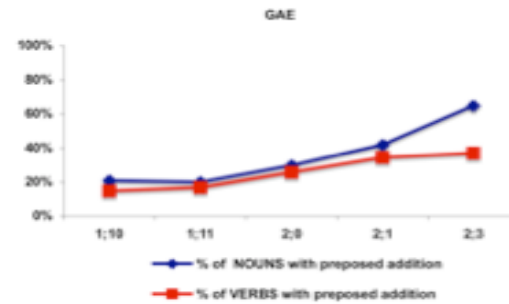
1. Premorphological 1 ;6 - 1 ;11
2. protomorphological 1 ;11 - 2 ;2 +



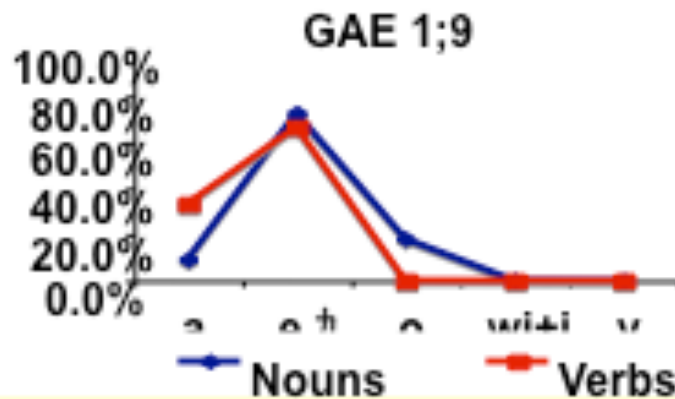
## Gael

1. Premorphological 1 ;10 - 2 ;1
2. protomorphological 2 ;1 - 2 ;3+

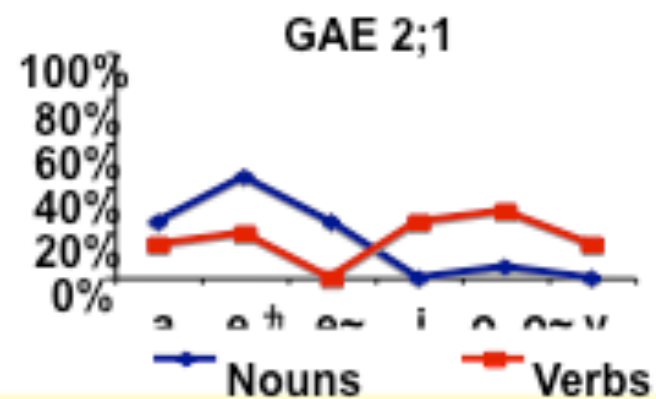
**Gae: significant  
≠(p<.01) at 2;3**



**at GAE 1;9  $\chi^2$  ns**



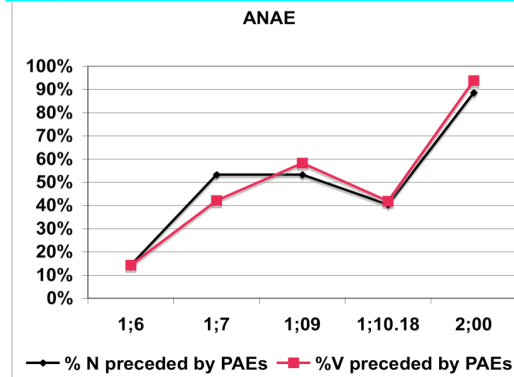
**At GAE 2;1  $\chi^2$  p<.05**



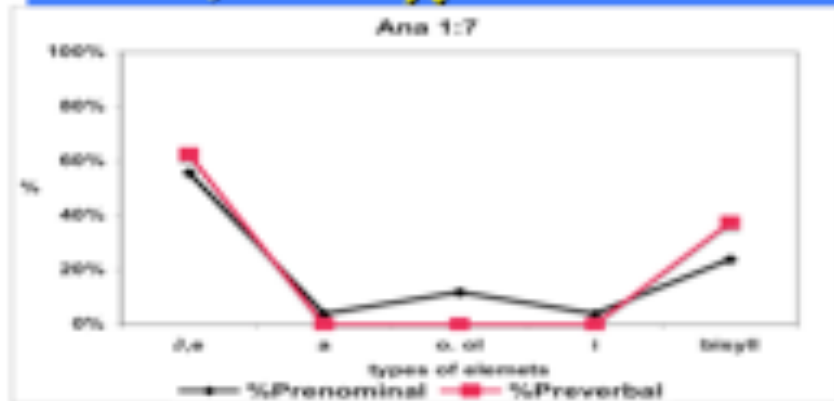
# Anae

1. Premorphological 1 ;6 - 1 :10
2. protomorphological 1 :10 - >2 ;0

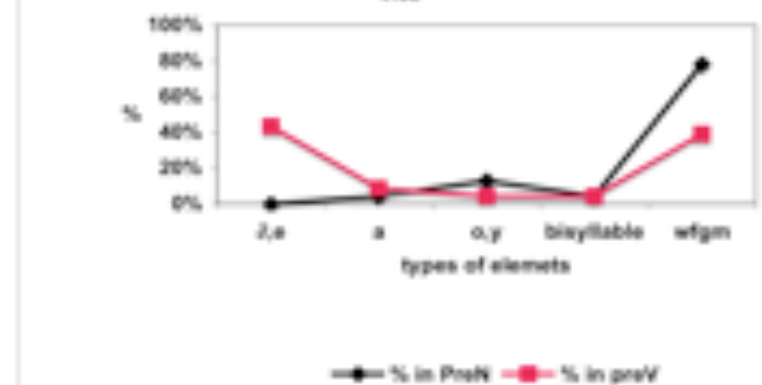
Anae no significant  $\neq$  up to 2;0



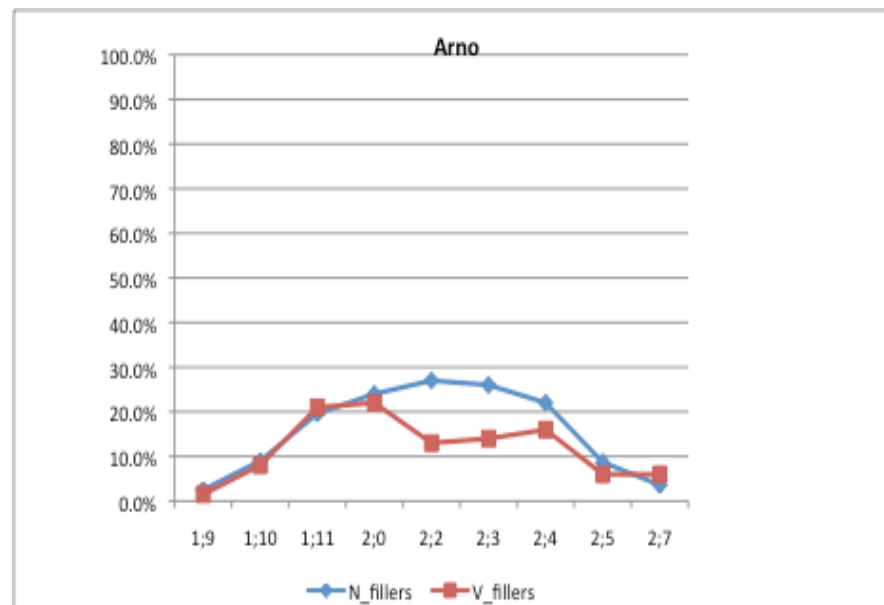
at 1;7  $\chi^2 = ns$



At 1;10  $\chi^2 = p < 0.05$



**Arno : 1 :9 - 2 ;2**



## 1. premorphological period

For the first 3-4 months mainly a, e, ð in both positions

Cam

pre-N

/ə'ʃɔ̃/ /əbouchon/ (əbottlecap)

pre-V

/e'pik/ (epique) (esting)

Gael

pre-N

/ə'vaʃ/ (əvache) (əcow)

pre-V

/ə'plə/ (əpleure) (əcry)

## Anae

pre-N /ə'ʃjɛ~/ (əchien) (ədog)

pre-V

/ə'mɑ~ʒ/ (əmange) (əeat)

## Arno

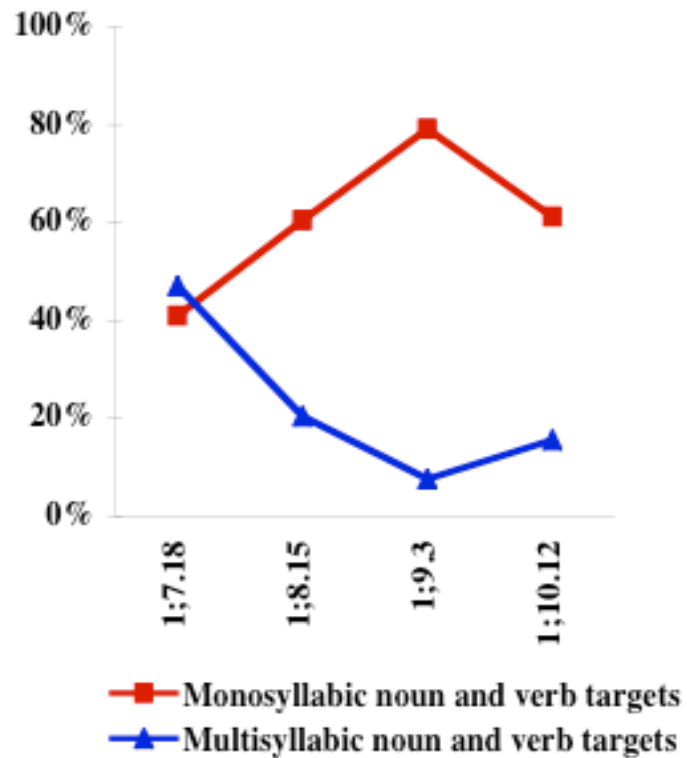
pre-N /ə'ʃɑ/ (əchat) (əcat)

pre-V

/ə'tʌn/ (ətourne) (əturn)

This lack of differentiation is associated with a preference for fillers with monosyllabic targets

Camille



## Examples from *Camille* and *Gael*

/a'po/ for /'ʃa'po/ chapeau (hat)

/a'vet/ for /'ba'vet/ bavette (bib)

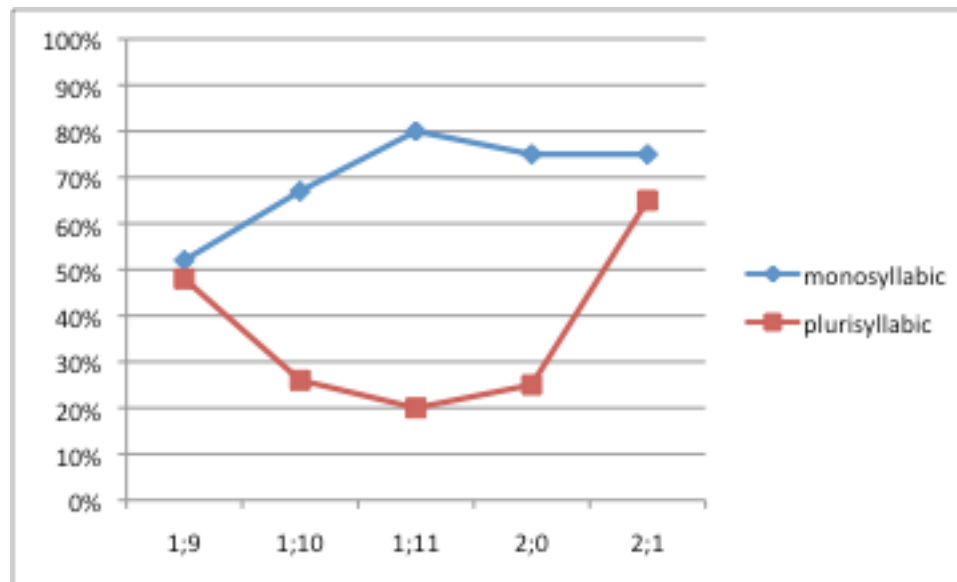
/a'ʃin/ for /''ma'ʃin/ machine

/õ'te/ for /'mõ'te/ mont/e/ to go up/gone up - raise/raised

/a'se/ for /'ka'se/ cass/e/ to break/broken



# Gael



at 1;11 for Camille and at 2;1 for Gael  
syllable-length of the target is no longer a relevant  
differentiating variable for the production of fillers.

## 2. protomorphological period

In pre-N : continue a, e, ð but also o, n'

in pre-V: more i, o, u

without being necessarily appropriate

Cam 1;10->2;2

pre-N

/a'dam/ (alady) ; /eza'zo/ (ez\_oiseaux) (ebirds)

pre-V

/o'don/ (o'give) ; /i'gat/ (i'regarde) (ilook) ; /o'tir/ (opull)

Gael 2;1->2;3

pre-N

/n'dam/ (nlady); /əme'zõ/ (əhome) ; /e'pom/ (eapple)

pre-V

/ita'se/ (ikassé) (ibroken) ; /oku've/ (otrouvé) (ofound) ;

/i'par/ (ipart) (ileave)

### 3. Quasi Morphological fillers

**\*\*Increase in well formed grammatical morphemes**

**/lə'bɑ̃ / (le bain) (the bath); /la'paʒ/ (la page) (the page):**

**/fo'tɜrne/ (faut tourner) (need [to] turn) ; /õtir/ (on tire) (we [imp] pull}**

**Cam: increase from 27% at 1;11 to 86% at 2;2**

**Anae: increase from 16% at 1;10 to 69% à 2;0**

**Gael: increase from 11% at 1;11 to 27% à 2;3**

**Arno: increase from 20% at 2;0 to 65% à 2;5 (72% at 2;7)**

**Fillers co-exist and alternate**

**sometimes we can see them for the same lexical item  
within the same conversational exchange**

**looking at a picture**

\*CHI: dam

%int: dame (lady)

\*CHI: ladam

%int: la dame (the lady)

\*MOT: où est la dame?

%act: MOT tourne les pages

\*CHI: adam

\*MOT: voilà! c'est ça la dame?

%act: MOT pointe sur l'image d'une dame qui tombe par terre

\*CHI: hen

%act: mouvement affirmatif de la tête

**sometimes difficult to draw a clear boundary  
particularly true for auxiliaries in French and for the  
preposition à (abwa- > à boire?)**

**\*\* Decrease of "omission" errors**

**For Cam**

**in PreN : from 69% at 1;11 to 3% at 2;2**

**In PREV : from 33% at 1;11 to 18% at 2;2**

**Similar trends**

**for Gae - decrease in pre-N at 2;1, in pre-V at 2;3**

**for Ana - decrease in pre-N at 1;10, in pre-V at 2;00**

## CONCLUSION

Yes - fillers seem to be -- at least for some children --  
a developmental transition towards grammatical morphemes

What I aimed here and aim in painstakingly long research, to  
show that we should think of fillers not a single bag of  
underdifferentiated sounds

but as elements that undergo themselves development  
children seem to start sorting out the regularities and variation  
in the input independently of the exact phonological  
correspondence and appropriateness they may have with the  
morphological elements of the language



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**This development goes on while children progress also in other aspects of the language in particular progress in word combination, in verbal constructions, in some differentiation in words, as nouns-words and verb-words.**

**Have collaborated**

**Alice Delacour**

**Frédérique Girard**

**Marie Leroy**

**Caroline Masson**

**Emmanuelle Mathiot**

**Aliyah Morgenstern**

**Chritophe Parisse**

**Caroline Poitou**

**Marina Robert**

**...**



Thank you for your attention

preverbal particularly difficult to code borderline between fillers and pronouns - preceding ind present tense or auxiliaries and certain prepositions for past participle and infinitive forms, that in 1st group verby are homophonous (Veneziano & Clark, submitted)

ipus .> il pousse

a mange -> a mange; à manger

often interpreted according to the interpretation that the observer makes of the situation ascribing to the child the right form and thus the form-meaning relationship

All the lexical items whose targets were nouns and verbs in French were coded for the presence and type of elements

occurring at the onset of the lexeme, and specific phonoprosodic and morphosyntactic hypotheses were tested.

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The discussion highlights the importance of the developments in fillers' production for understanding the nature of early language acquisition.

Before using grammatical words, children use fillers whose status may evolve from prosodic entities to precursors.