The acquisition of Negative Concord

The case of *pas…non plus*[*]

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1. Introduction

The first language acquisition of negation is a well-studied phenomenon. Studies on this issue mainly concentrate on the acquisition of negation in relation to V-to-I-movement (Déprez and Pierce 1993) and the acquisition of functional projections in general. Most linguistic theories (cf. among many others Zanuttini 1991, Rowlett 1998, Acquaviva 1993, Ladusaw 1992) assume that the sentential negation marker is located in a functional projection, NegP. Sentential negation is generally said to be acquired between the ages of two and three (cf. Bellugi 1967, Bloom 1970). Does this mean that, having acquired NegP, children from this age onwards have acquired all aspects of sentential negation? A quick glance at Philippe's data from the Childes database (Suppes et al. 1973) suggests that the answer to this question should be no.

(1) Il faut pas le perdre non plus, ce livre
'You should not lose this book either'

(2) Mais il faut pas le perdre aussi ce livre (Philippe 2;8.29)
'But you should not lose that book either'

From (2) it seems as if Philippe has not yet acquired *pas…non plus*, the adult way of saying *not…either* in French, which we see in (1). This corresponds to findings in second language acquisition (SLA), where *pas…non plus* is a well-known difficult construction. For the second language learners the problem does not reside in the sentential negation marker *pas*, but rather in *non…plus*. It thus seems interesting to take a closer look at the first language acquisition of *pas…non plus*, especially since there are hardly any studies on the first language acquisition of multiple negations.

Pas…non plus is an example of a Negative Concord construction, of which an analysis will be proposed in Section 2. In Section 3 data from Philippe are discussed, which show that he does not produce *pas…non plus* straight away. The results of

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the explorative experiment designed to test the hypothesis suggested by the findings in Philippe's data will be described in Section 4.

2. Negative Concord and Double Negation

French, like all other Romance and Slavic languages, is a so-called Negative Concord (NC) language, whereas Germanic languages are Double Negation (DN) languages. NC is the general term for cases where multiple occurrences of negative constituents express a single negation. DN, on the other hand, is the term for cases where multiple occurrences of negative constituents also express multiple negations.

(3) Personne ne fait rien[1,2] NC
NEG *ne* NEG
'Nobody does anything'

(4) Niemand doet niets DN
NEG NEG
'Nobody does not do anything'

(5) Jean ne veut pas lire le journal non plus NC[3]
ne NEG NEG NEG
'Jean does not want to read the newspaper either'

(6) Jan wil de krant ook niet lezen SN
NEG
'Jan does not want to read the newspaper either'

2.1 Analysis of NC: Zanuttini (1991)

There are many analyses trying to account for NC (for an overview of existing analyses cf. Corblin & De Swart t.a.). For my purposes, I will only consider Zanuttini (1991).

In Zanuttini's view all negative components are quantifiers that have to raise at LF to [Spec, NegP] to be interpreted. In a sentence with a single negative component, only one semantic operation is needed: interpretation of the Boolean operator. In the case of NC, in addition to the interpretation of the negative element, two separate operations have to be combined in order to arrive at the correct interpretation: negative absorption and negation factorization.

(7) $[\forall x\neg][\forall y\neg] \rightarrow [\forall x,y\neg]$

These two processes combined make that all negative operators are taken together at LF and are only interpreted once, thereby binding all quantifiers.

2.2 Implications for a theory on the acquisition of NC

I hypothesise that a child will first acquire sentential negation with only one operator. After the acquisition of single negation, the child will acquire double negations. Whereas Zanuttini's theory does not give precise requirements that have to be met before the child is able to produce double negations and NC, I hypothesise that the child at least needs to have acquired the notion of operator, as well as the two mechanisms described, negative absorption and negation factorization in addition to the fact that he needs to have acquired NegP.

When we consider some data and the acquisition literature (Bellugi 1967, Bloom 1970), we see that they provide support for the acquisition order as mentioned above.

In a first stage, children have not yet acquired sentential negation; they negate sentences by putting a negative element in front of the sentence. For French this is normally the element *non*.

(8) Non à moi (Philippe 2;2.3)
'Not for me'

This sentence means "elle n'est pas à moi", 'she does not belong to me'. The element *non* thus has scope over the entire clause.[4]

In a second stage, the child has acquired NegP, which gives rise to finite clauses with the sentential negation marker *pas* in its correct postverbal position, showing that verb movement has taken place.

(9) Elle est pas là la machine? (Philippe 2;2.3)
'It is not there, the machine?'

From the literature we conclude that NegP in French is acquired between the ages of two and three years (cf. Déprez and Pierce 1991).

In the following stage the child will be able to produce sentences with multiple negative constituents. Besides the NegP projection, the child then needs to have acquired the notion of operators as well as the absorption/factorization mechanism.

3. The acquisition of *pas…non plus*

I studied Philippe's data (Suppes et. al 1973) from the Childes database. For these corpus data, recordings have been made of Philippe's spontaneous utterances on a weekly basis, from the age of 2;1.19 until the age of 3;3.12.

In his data I studied the occurrences of *pas…non plus* and of the attempts to

convey the meaning this construction expresses, 'not either'. I distinguished five different stages.

I. NegP acquired (at least from 2;1.19 onwards)
From the first recordings onward, Philippe produces finite negative sentences, with V-to-I-movement, showing that he has acquired NegP.

(10) Ça marche pas ça (Philippe 2;1.19)
'That does not work'

II. Repetition (2;2.3–2;6.27)

(11) *Non plus* (Philippe 2;2.3)
'Neither'

The first occurrence of *pas…non plus* comes when Philippe is 2;2.3. In this instance, he repeats his father's words. I suggest that Philippe has not yet analyzed this construction, because during the next stages he will not produce any such sentences with *pas…non plus* at all.

III. *Pas…aussi* (2;6.27–2;8.29)

(12) Celle là, elle est pas grande aussi (Philippe 2;6.27)
'That one is not big either'

(13) Il faut pas trop se brûler aussi (Philippe 2;7.11)
'You should not burn yourself too much either'

In this period, Philippe does not produce any sentences containing *pas…non plus*. Instead, he uses the construction *pas…aussi*, which literally means 'not either. This shows that Philippe has acquired the notion of 'not…either' but that he simply has not yet acquired the way this is expressed in adult French.

IV. *Pas…aussi* and *pas…non plus* (2;8.29–2;10.17)

(14) A pas d'école non plus (Philippe 2;8.29)
'There is no school either'

(15) Mais il faut pas le perdre aussi ce livre (Philippe 2;8.29)
'But you should not lose this book either'

In this period Philippe uses both constructions: the non-adult like *pas…aussi* and the adult like *pas…non plus*.

V. *Pas…non plus* (from 2;10.17 onwards)

(16) Pour pas vomir non plus (Philippe 2;10.17)
'So that you will not puke either'

(17) Oh, c'est pas de ce côté là non plus (Philippe 2;11.21)
'Oh, not from that side either'

(18) Moi non plus, je sais pas (Philippe 3:0.20)
'Me neither, I do not know'

From the age of 2;10.17 onwards Philippe only uses *pas…non plus* to express the notion of 'not…either'. He seems to have acquired this aspect of the French grammar.

What becomes clear from these data is that the acquisition of *pas…non plus* seems to go through several stages, which was expected on the basis of the analysis of NC. First, no NegP is available. However, this stage is not found in Philippe's data. When the child has acquired this functional projection, he starts producing finite negative sentences and it is only after the acquisition of sentential negation as such and presumably, following Zanuttini's analysis, the acquisition of operators, that children start producing sentences with multiple negative constituents. To test this idea, I designed an explorative experiment to collect more data from other French children on the acquisition of this construction.

4. Experiment

By means of this explorative, cross-sectional, experiment I wanted to collect more data on the acquisition of *pas…non plus* in French monolinguals. An elicited imitation task was used to achieve this goal.

4.1 Predictions

On the basis of the data I studied from Philippe, the following predictions were derived: before children acquire *pas…non plus* they will first go through a stage in which they do not produce this construction, but in which they do master sentential negation, followed by a stage in which they probably use other ways to express the meaning of *pas…non plus*.

4.2 Method (Lust et. al 1996)

The idea behind the elicited imitation task is that children's linguistic imitations are not passive copies of the input; they reflect cognitive and grammatical competence. In order for the child to be able to imitate a structure, this structure has to be part of the child's grammatical system. This method does include the possibility that a child has knowledge of the meaning of a specific structure, but simply is not able to produce it; i.e. the meaning is there, but the syntax is not (yet). Lust et. al (1996) state that this method can already be used with children as young as 1 to 2 years of age. The task has been criticised because of the fact that length and complexity of sentences have to be taken into account to analyze the data; the design of the task is rather complicated. However, since I only wanted to analyse the data qualitatively and I did not aim at quantitative analyses, this was less problematic.

4.3 Materials and subjects

I composed 3 stories, consisting of 15–20 sentences each, which were recorded by a native speaker of French and which were presented to the child on a laptop. I brought a puppet that could not hear very well and the children were asked to help him out in the cases where he did not hear what was said. The puppet then asked the child to repeat the preceding sentence. The children had to repeat 17 sentences. Out of the 17 sentences to be repeated, 4 were *pas…non plus* constructions.[5] Besides these, I also inserted 2 simple *ne…pas* (sentential negation, 'not') sentences.[6] The stories were preceded by a trial story as well as by a memory test. 14 French monolinguals,[7] six girls and eight boys, were tested. Their ages varied from 3;1.25 to 6;8.14. Since it is generally recognised that Philippe has a precocious language development, I assumed it to be no problem that the tested children are older than he is.

4.4 Results

All children repeated the *ne…pas* items in an adult like manner, showing that they have acquired NegP, the first condition to be met in order to be able to produce multiple negations. 54% (30/56) of the *pas…non plus* sentences were repeated correctly. In the remaining 46% (26/56) I distinguished five non-adult like categories, as shown in Table 1.

The most common way children expressed *pas…non plus* was by omitting *non plus*. In 7% of the repeated structures *plus* was replaced by a phonologically ressembling element, *pu* or *tu*. At first sight it might seem that these were performance errors, but the same children were able to correctly imitate the *ne…plus* sentences. It thus seems to me that the problem resides in the *pas…non plus*

Table 1. Qualitative analysis of results

	omission of *non plus*	***pu/tu* instead of *plus***	***plus* instead of *pas***	***plus* instead of *pas… non plus***	***pas… aussi***	**Totals**
1[8]	3 (21%)	1 (7%)	1 (7%)	1 (7%)	1 (7%)	7 (50%)
2	3 (21%)	0	1 (7%)	1 (7%)	0	5 (36%)
3	2 (14%)	3 (21%)	0	0	0	5 (36%)
4	6 (43%)	0	1 (7%)	1 (7%)	1 (7%)	9 (64%)
	14 (25%)	4 (7%)	3 (5%)	3 (5%)	2 (4%)	26(46%)

construction and not in the mere pronunciation of *plus*. In 5% of the cases (3/56) the *pas* was replaced with *plus*, changing sentences to *plus…non plus*. In the same number of cases, *pas…non plus* was changed to *plus*. In two instances, 4%, *pas… aussi* was used instead of *pas…non plus*.

There are differences between the children, but within children there is a large variety too, to the extent that there are no error patterns. I did not find an age effect; the youngest children of 3 years old already performed quite well, which shows that the acquisition of *pas…non plus* starts from that age onwards. The oldest children on the other hand still used non-adult like constructions, which proves that they have not acquired the construction completely. Whether this is due to semantic, pragmatic or cognitive factors remains an unanswered question. For the percentages of adult like constructions see Table 2.

I cited Lust et al. (1996) in Section 4.2 in saying that elicited imitation is not simply imitation. My results indicate that this is indeed the case. One of the *ne…plus* items was *Ils ne peuvent plus voir ce qu'il y a dans le jardin* ('they cannot see what is going on in the garden anymore').[9] Some children repeated this as *Ils ne peuvent plus voir qu'est-ce qu'il y a dans le jardin*. This shows that they change the structures in ways that fit their system.

4.5 Conclusion

The results of this experiment did not completely support the predictions: the older children did not perform better than the younger children. However, I only tested a small number of children, on the basis of which no quantitative claims can be made. The results do show the different stages I predicted, within as well as between subjects. In some constructions, some children left out the tested construction completely, in some cases they replaced it with an alternative. This supports the idea that the acquisition of *pas…non plus* takes place through different stages. The elicited imitation method is effective for the explorative goal of this experiment. If

Table 2. Percentages adult like *pas…non plus* constructions

Child	% adult like
Anaëlle (3;1.25)	75%
Dylan (3;5.8)	25%
Emilie (3;6.22)	0%
Clémentine (3;7.27)	25%
Sébastien (4;3.8)	0%
Lise (4;7.18)	75%
Romain (4;8.2)	75%
Valentine (4;9.6)	75%
Marion (4;10.16)	50%
Pierre-Nicolas (6;1.1)	50%
Vivian (6;2.28)	50%
Rémi (6;3.13)	100%
Fabian (6;6.28)	50%
Axel (6;8.14)	100%

we want to find out at which age the acquisition (both production and comprehension) of *pas…non plus* is in place, we should analyse longitudinal instead of cross-sectional data and more experiments should be carried out.

5. Conclusion

In this paper, I have analysed both spontaneous speech and experimental data on the acquisition of *pas…non plus*. Both the database research and the experimental data point in the same direction: the acquisition of *pas…non plus* takes place through several stages. Children first have to acquire sentential negation and the functional projection NegP. The acquisition of NegP is a necessary but not sufficient condition, because the children only start to produce NC constructions some time after they start producing negated sentences with raised verbs. Further longitudinal data need to be collected to be able to draw conclusions about the exact age at which NC is acquired. An analysis of the acquisition of NC in terms of the acquisition of operators and mechanisms might be on the right track. Hulk (1996) has analysed Philippe's *wh*-questions and found that he was able to produce clefts and *est-ce que*, two constructions for which the full CP has to be acquired, from the age of 2;10.17 onward. Interestingly, this is precisely the age at which Philippe starts producing correct *pas…non plus* constructions. More research on the acquisition of operators and *wh*-absorption is needed to find out whether the apparent analogy between these two can be carried further. What makes that

children are able to take the step towards producing NC constructions thus might have to do with the acquisition of operators and the acquisition of CP, but what remains unclear so far is what causes the non-adult like constructions children still make at the age of 6;6. Are these non-adult like constructions due to other factors, such as pragmatics or cognition? Finally, Weiß (2002) states that all languages are in fact NC languages. The experimental findings presented in this paper do not support this claim, as French children do not start out with NC constructions. The fact that Dutch children produce structures as in (18), which resembles a NC structure, shows that both learners of a NC language as well as learners of a non-NC language have difficulties with the system of multiple negation in their language.

(19) Niet tegen niemand zeggen he (Sarah 4;1.11, Van Kampen 1994)
not to nobody say
'Don't you tell anybody!'

This might indicate that the problem resides indeed in the acquisition of a more universal element than the acquisition of the specific status of n-words in a given language, like the acquisition of CP or the acquisition of quantifier absorption/ negative factorization.

Notes

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1. I gloss *personne* and *rien* as NEG, inherently negative elements. However, this is not uncontroversial: these elements are often considered as negative polarity items instead (cf. Rowlett 1998, Giannakidou 2000)

2. French *ne* only functions as a scope marker and does not count as a negative constituent. *Pas* is the marker for sentential negation in French and it is typically excluded from NC constructions: when combined with other negative constituents, *pas* leads to a double negation reading. Cf. *Personne ne fait pas rien* means 'Nobody does not do anything', the French equivalent of the Dutch example in (4).

3. French *pas* is outside of the concord system: the combination of *pas* and a concord item typically leads to a double negation (cf. Corblin and De Swart t.a.). From this perspective *pas…non plus* is not a Negative Concord construction. However, I think that *non plus* canbe seen as a Negative Concord cnstruction and the combination with *pas* does not lead to a double negation in this case. Whether we should consider *pas…non plus* as a whole as NC remains an open question, but in any case the combination of *non* and *plus* could be considered as such.

4. In this stage, negative elements are also used anaphorically, cf. the following Dutch example.

(i) Nee deur open (Sarah 1;9.10)
'No door open'

This means 'No, the door has to be open', whereby the preceding situation ("the door should be closed") is negated.

5. 1.Dipsy n'a pas d'argent non plus ('Dipsy does not have any money either')
2. Il n'y a pas de gâteau non plus ('There was no cake either')
3. Papa n'est pas là non plus ('Dad is not there either')
4. Lala ne veut pas jouer au foot non plus ('Lala does not want to play football either')

In Table 1 in Section 4.5, the numbers refer to these sentences.

6. There were also six sentences containing *ne…plus* ('not anymore') and five containing *ne…rien* ('nothing'). In the present paper I am only concerned with the *pas…non plus* and *ne…pas* sentences.

7. Initially, I tested 15 children. For the youngest child (3;1.1), the task was too difficult: he only repeated the last words of a sentence. I therefore excluded him from my analysis.

8. These numbers refer to the numbers of the *pas…non plus* items, cf. note 3.

9. *Qu'est-ce que* is used as a direct object in matrix clauses; in embedded clauses, this construction should be replaced with *ce que* (cf. Hanse and Blampain 2000).

(i) Qu'est-ce que tu me racontes?
'What are you telling me?'

(ii) Je ne comprends pas ce que tu me racontes
'I do not get what you are telling me'

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