

CONCORD PHENOMENA IN FIRST LANGUAGE ACQUISITION

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Abstract

Scope-bearing items for sentential negations and sentential questions appear in Dutch child language as ‘doubling’ constructions. A <+neg> or <+Q> element appears in sentence-initial position and is doubled in sentence-final position. The ‘doubling’ is not part of the adult system nor is it part of the child’s acquisition input. The temporary doublings suggest that the grammatical property of sentential scope is learned in a stepwise fashion by means of intermediate grammars that are temporarily simplified. The present view opposes to the idea that temporary constructions in child language betray an innate UG option (v.Kampen 1997, Crain et al. 2006).

1 Learnability background

Children do not design a grammar reflexively, but they certainly develop over time the feel for grammatical consequences. A recent suggestion by Chomsky (2005) seems relevant in this respect. Chomsky suggests three separate factors that play a part in the set-up of grammar. With language acquisition in mind, we read these three factors as follows.

(1)

1. General grammatical principles. These are revealed by comparative grammar. They enter the child’s acquisition procedure as a frame of grammar that is somehow genetically inherent in the human species (a faculty of language).
2. Primary input data. These enter the acquisition procedure as child directed speech. In the beginning, they will be not or only marginally interpretable.
3. General cognitive principles of the human mind. These are not necessarily specific to grammar.

As for the third factor, we imagine things like getting the feel for musical structures, technical designs, card-, board- and field-games, various kinds of craftsmanship, all kind of physical abilities such as biking through city traffic, and so. You do not acquire this seemingly endless range of competences by much reasoning about them. Their internal logic somehow and mysteriously takes shape by practice. The same holds of course for mastering a language as well. This suggests to us something not directly advanced by Chomsky’s three points, but not excluded by them either. The first point, - the presumed biological frame for grammar -, could as well be something like an outcome, an optimal compromise when factor 2 and factor 3 interact, rather than being an independent source. Certain grammatical principles need not be innate. They may be invented and acquired. Their appearance in various further unrelated grammars is nevertheless reasonable, because they solve something. Not unlike techniques for swimming, fishing or building canoes, they are easily invented or reinvented when the circumstances are favorable. Possible solutions for grammatical problems may come up in child language but are given up later on, when the data from the specific grammar do not sufficiently support them.

2 Dutch acquisition data

We will analyze two ‘concord’ phenomena, a double <+neg> feature (2) and a double <+Q>-wh feature (3), along the line sketched above. The data come from Van Kampen (diary notes 1989-1994; CHILDES Van Kampen corpus), Coopmans (1995), Van der Wal (1996).

- (2)
- | | |
|------------------------------------|--------------------------------|
| a. <i>kwil nie(t) badje niet</i> | ((I) wanna not bath not) |
| b. <i>kan nie(t) vinden niet</i> | ((I) cannot find not) |
| c. <i>die is nie(t) ei niet</i> | (that is not egg not) |
| d. <i>hoort niet in kamer niet</i> | ((it) belongs not in room not) |
- (3)
- | | |
|-------------------------------------|-----------------------------------|
| a. <i>wa(t) (i)s dat nou ?</i> | (what are you going to do ‘now’?) |
| b. <i>(wa)t ga jij doen nou?</i> | (what wil you do ‘now’?) |
| c. <i>waar (i)s die meneer nou?</i> | (where is that man ‘now’?) |
| d. <i>wa(t) (i)sse buiten nou?</i> | (what is there outside ‘now’?) |

The first neg-element in (2) and the sentence-initial <+wh>-element in (3) are most of the time cliticized to something that will later reveal itself to the child as ‘the finite verb’. The second neg-element *niet* in (2) and the second question marker *nou* in (3) take the sentence-final position, may be as a ‘tag’. Both doubling phenomena are clearly manifest in some period of Dutch child language between 2-3 years, but they disappear later on. When the concord phenomena are not present in the primary data (and in adult Dutch they are not), it is not clear why the language acquisition device should mobilize such a device from options given by factor 1 in (1). By contrast, when grammatical innovations by the child can be motivated as rational reactions to perceived distributional problems, we get something like an explanation. Be it that we are now more in the free creative domain of factor 3 than in the pre-programmed options of factor 1.

2.1 Double <+neg>

Dutch children start their first negated utterances with a simple neg-element *niet*. In the two-word stage, *niet* appears in initial or final position. These forms are easily derived as reductions from maternal input sentences as indicated.

- (4)
- | | | |
|---|--------------|--------------------------------|
| Data from Sarah (Van Kampen corpus) | | age in years;months.days/weeks |
| a. <i>niet juie (= luier)</i> | (not diaper) | (Sarah 1;10.13 / w.98) |
| <i>wil je [niet (je) luier] aan?</i> (want you not your diaper on ? = don’t you want) | | |
| b. <i>boekje niet</i> | (book not) | (Sarah 2;0.17 / w.107) |
| <i>ik wil dat [boek niet]</i> (I want that book not = I do not want that book) | | |

The early reduction leaves out articles and most grammatical morphology.

When the sentences become longer and quasi-finite modals/auxiliaries appear as standard pragmatic markers of the utterance (De Haan 1987, v.Kampen 2005), the patterns in (5) arise.

- (5)
- | | | |
|----------------------------------|-------------------------|-------------------------|
| a. <i>doet Laura niet</i> | (does Laura not) | (Sarah 2;0.17 / w.107) |
| b. <i>kan liedje niet</i> | (can song not) | (Sarah 2;0.17 / w.107) |
| c. <i>vogeltje is niet</i> | (birdie is not) | (Sarah 2;2.18 / w. 116) |
| d. <i>deze hoefniet oppe dak</i> | (this need not on roof) | (Sarah 2;2.18 / w. 116) |

The neg-element continues to show up in sentence-final position (‘tag’-like) with a denotational (content) phrase or word as in (5)a,b but it may also appear sentence-initially (‘operator’-like), fused with a modal marker {*kannie(t)*, *moe(t)niet*, *hoe(f)niet*, *wilniet*}

(‘cannot’, ‘must not’, ‘need not’, ‘want not’) or with an auxiliary-like marker *isnie(t)*, *zijnnie(t)*, *hebnie(t)*, as in (5)c,d (cf. Hoekstra & Jordens 1994).

The doublings in (2), repeated in (6) for Sarah (Van Kampen corpus), come in when the operator phrase and the denotational phrase appear combined.

- (6) a. [*kwilnie(t)*] badje *niet* ((I) wanna not bath not) (Sarah 2;4.1 / w.122)
 b. [*kannie(t)*] zien helemaal *niet* ((I) cannot see at all not) (Sarah 2;2.10 / w. 114)
 c. die [*isnie(t)*] ei *niet* (that is not egg not) (Sarah 2;4.1 / w.122)

A denotational phrase or word [badje] (‘bath’), [zien helemaal] (‘see at all’), [ei] (‘egg’), [s(er)vetjes] (‘napkins’) is preceded by a negated operator-like modal/auxiliary.

The negative tag is not a property of the adult input, but a neg-element in final position may appear easily in the adult V-2nd input, see (7).

- (7) a. wil Laura ‘t popje niet t_v? (wants Laura doll not? = doesn’t Laura want the doll?)
 b. Laura pakt ‘t popje niet t_v (Laura takes the doll not = Laura doesn’t take the doll)

A system that starts with binary expressions may develop into a double negation system when the initial modal phrase with fused negation is combined with a negated denotational phrase, see (8).

- (8) a. Laura *wilniet* pap *niet* eten { Laura wil niet
 pap niet (eten)
 b. Laura *hoe(f)niet* pop *niet* pakken { hoef niet
 niet - pakken

2.2 Double <+Q>

Dutch children start with wh-questions marked with a simple <+Q>-element *nou*. In the two-word stage, the <+Q>-element appears in initial or final position, see (9). These forms are easily derived as reductions from maternal input sentences as indicated.

- (9) Data from Sarah (Van Kampen corpus) age in years;months.days/weeks
 a. dat *nou*? (that ‘now’?) (Sarah 1;10.13 / w.98)
 wat is [dat *nou*] ? (what is the sweater ‘now’?)
 b. *nou* eend? (‘now’ duck?) (Sarah 2;0.17 / w.107)
 waar is [nou (een) eend] ? (where is ‘now’ a duck?)

The early reduction leaves out articles and most grammatical morphology.

When the sentences become longer and quasi-finite modals/auxiliaries appear as standard pragmatic markers of the utterance, the patterns in (10) arise. For some period *nou* appears as <+Q> content-question marker on its own.

- (10) a. is dat *nou*? ((what) is that ‘now’?) (Sarah 2;1.10 / w.110)
 b. ga doen *nou*? ((what goes do ‘now’?) (Sarah 2;2.10 / w.115)
 c. is mij(n) stoel *nou*? ((where) my chair ‘now’?) (Sarah 2;3.27 / w.120)

The adverb *nou* may also be added in adult questions. It has an emphatic function in questions and stresses that the speaker had already expected something like that, see (11)c. The Dutch

child does not perceive the emphatic function. For the child *nou* simply marks the question and she feels free to drop the question word in sentence-initial position, see (11)a.

- (11) a. early child Dutch: doe jij nou ? ((what) are you doing 'now' ?)
 b. adult Dutch/late child Dutch: wat doe jij ? (what are you doing ?)
 c. adult Dutch (emphatic): wat doe jij nou ? (what are you doing 'now' ?)

When the wh-question words are added, the sentence-final *nou* <+Q> is maintained for some time, but now a sentence-initial wh-element appears simultaneously and is fused with a modal marker {*was* (wat is), *wasse* (wat is er), *waars* (waar is), *tga* (wat ga)} ('what is', 'where is', 'what goes'). The doublings in (3), repeated in (12), come in when the operator phrase and the denotational phrase appear combined.

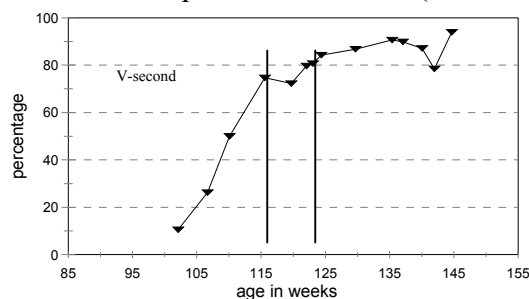
- (12) a. *was* [=wat is] dat *nou* ? (what is that 'now'?) (Sarah 2;2.10 / w.115)
 b. *wasse* [=wat is er] buiten *nou*? (what is there outside *nou*?) (Sarah 2;2.26 / w.117)
 c. *waars* [=waar is] koning *nou*? (where is the king 'now'?) (Sarah 2;3.17 / w.119)
 d. *tga* [=wat ga] jij doen *nou*? (what will you do 'now'?) (Sarah 2;3.27 / w.120)

It seems arbitrary and not yet necessary to analyze the initial words in (12) as wh-pronouns combined with a copula. They rather are fused into a single question operator, just like the element *nou* in sentence-final position.

2.3 V-2nd and the disappearing of the early doublings in child language

As we have seen above, both the wh-element and the neg-element *niet* appear in the same period (before week 122) as part of the sentence-initial group [*wh*+modal/auxiliary] and [modal/auxiliary+*niet*]. And both are repeated in the denotational part of the sentence, be it for a short period. Roughly, between week 110-123 Sarah is acquiring the V-2nd rule. A finite verb in second/first position becomes a standard grammatical property. See the graph in (13).

(13) Dutch Sarah: The acquisition of V-2nd (<+fin>marking) (from: Van Kampen 2004)



The rising percentage of finite verb placement in (13) is initially due to the operator-like verbs (auxiliaries, modals and copulas). Only later in the second half end of the graph in (13) (weeks 115-122) the finite form of denotational verbs comes in as well (see De Haan 1987, Van Kampen 1997, Evers & Van Kampen 2001).

When the <+fin>-variants of denotational verbs appear in the sentence-initial group, the operator elements (fixed forms of modals and auxiliaries) are reanalyzed as <+fin>-elements of a verbal paradigm. The now empty place in the sentence-final group leads to a reanalysis of all sentence-final tags (*nou?* *niet!*). All these tags can now be reinterpreted as preverbal adverbs {*niet* + V and *niet* + *t_V*} {*nou* + V and *nou* + *t_V*}. The sentences continue to be intended as CP<+neg> and CP<+Q>. Scope implies that marking the foot of the verbal chain suffices for sentential scope. Sentential scope is thereby acquired.

2.4 Acquisition steps

So far, we argued that initial child language derives two types of negation from reducing the parental input as binary constructions. There is a type of negation fused with the modal elements $\{kannie(t), moe(t)nie(t), hoe(f)nie(t), wilnie(t)\}$ $issenie(t)$ (cf. Hoekstra & Jordens 1994). These neg-elements characterize the illocutive/pragmatic type of the utterance, see (5). There is also a neg-element added to a denotational word $\{niet\}$ $bad/bad\ niet$, see (4). These constructions may be seen as reductions from more elaborate input, such that they fit into a binary construction.

The combination of the negative modal elements and the negative denotational utterances lead to temporary doublings, not available in the input, see (6). The acquisition of the finite verb rule V-2nd changed the situation. The finite verb elements (denotational verbs as well as modals, auxiliaries and copulas) appear in the sentence-initial group, but are related to an ‘empty’ position in the final group. Initial and final group are from now on transformationally related. The fusions in the initial group are reanalyzed as the neg-elements already known as an adverb of the final group. The neg-doublings disappear. The neg-element related to the finite verb position in the final group obviously enjoys scope over the verbal chain and is thereby acquired as having scope over the CP as a whole. The neg-element *niet*, as well as the question element *nou*, do no longer appear in ‘tag’ positions. They precede the predicate denotational elements. The analysis of V-2nd acquisition is a notorious issue in Germanic syntax, but it is a matter of acquisition steps. The V-2nd construction does not follow from a sentence-reduction. See de Haan (1987), and in his wake Van Kampen (1997) and Blom (2003). See the graph in (12) where the two verticals show the period of <+neg> and <+Q> doublings around the acquisition point of the V-2nd rule.

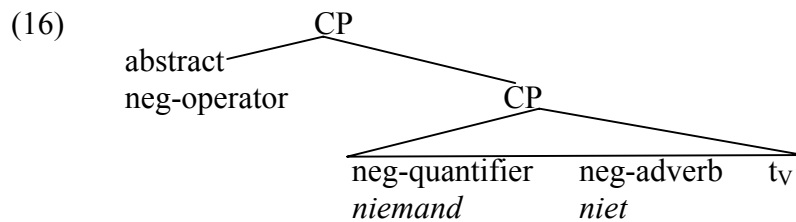
3 Negation and quantifier scope

The end of the doublings in (6) and (12) is not yet the end of doublings as a temporary way out for the acquisition procedure. A year or so after the acquisition of V-2nd and the extended scope of *niet* and *nou*, quantifier elements appear in child Dutch. Thereby, a problem arises for their scope in negative sentences. See the following attempts by the Dutch child.

- (14) a. child Dutch: *niemand* speelt *niet* met mama t_V (nobody plays not with m.)
b. adult Dutch: *niemand* speelt – met mama t_V (nobody plays with mummy)
- (15) a. child Dutch: *iedereen* speelt *niet* met mama t_V (everybody plays not with m.)
b. adult Dutch: *niet iedereen* speelt – met mama t_V (not everybody plays with m.)

Obviously, the child understands the negative status of the CP in (14) and (15) and she maintains her hard won neg-element at the beginning of the final group. Although the position in front of the final group should give the neg-element CP scope, it does not establish in the adult grammar scope over the quantifiers *niemand* (‘nobody’) and *iedereen* (‘everybody’). Quantifiers define (in the adult grammar) a scope hierarchy over all elements c-commanded to the right. Hence, they would define (in the adult grammar) scope over negation contrary to the intention. For that reason, the adult input places the neg-elements more to the left. This step deviates from the earlier rule for negative placement. It turns out to be a very difficult property to acquire, often to the amazement of adult speakers, like the mother of Sarah. Yet, no matter how faultless the mother addresses her children, we believe they will all pass through an intermediate stage of a tentative neg-element in the final group that has scope over the universal quantifier on the left. One may even expect in the distant future a variant of Dutch that maintains the original solution by the children that final negation has automatically scope over the quantifiers on the left. Within that system, negative quantifiers are in for an

interpretation by negative concord, maybe emanating from an abstract operator left at the CP-top, as proposed for Czech by Zeijlstra (2004: 251), see (16).



4 Perspective: The learnability of island constraints

Negation-related markers and question-related markers are both scope-bearing items. For that reason, their acquisition story shows a few parallels in spite of their considerable differences. Both demonstrate a local referential point D^0 (argument) or I^0 (event) that is connected with a scope property $CP<+negation>$ or $CP<+question>$. Scope-bearing items suggest a ‘bi-local’ presence that shows up in doubling phenomena in child languages and often in the adult systems as well. They do so in Dutch child language in the short period that the V-2nd rule gets acquired and sentences are established as scope-bearing constructions.

There are of course differences between the scope properties of $<+neg>$ and $<+wh>$. The wh -marked phrases are subject to movement and sensitive to strong syntactic islands. The neg -marked phrases remain in situ and are sensitive to weak islands when they interact with a quantifier. Can strong and weak islands be acquired or are they mysteriously imposed by an idiosyncrasy of the human nervous system? In Evers and Van Kampen (to appear) we show that the learnability of islands is less forbidding than it seems.

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