

# Finiteness in early child Dutch\*

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## *Abstract*

*Finiteness is a property of the functional-category system in Dutch. In this article, it will be claimed that in early child Dutch finiteness is not yet part of the children's productive grammatical system. In utterances in which adults would use a finite verb, children regularly produce infinitives. Examples from a corpus of diary data collected from the present author's two children are oppe nek zitte 'on the neck sit' (Jasmijn 1;10), poes bal hebbe 'kitty ball have' (Jasmijn 1;11), papa uitdoen 'daddy outdo' (Andrea 2;0) apie dá zitte 'monkey there sit' (Andrea 2;1). Finiteness, so it is claimed, is a grammatical property of the target language that has to be achieved through processes of acquisition.*

*The acquisition of finiteness is a developmental process. At the initial stage of acquisition, it seems that properties of finiteness are expressed through the use of a few modal operators. These modal operators occur "holistically," that is, they have scope over the topic-predicate structure as a whole. The holistic use of clausal operators is most prominently present with nee 'no' meaning 'I don't want'. As positive alternatives to nee Dutch children make use of elements such as ulle or unne, which are based on the target verb form wil(len) 'want', or mag-ikke 'may I', which serves as an unanalyzed phrase. The holistic use of modal operators expressing "volition" is characteristic of the initial stage of acquisition. Examples are utterances such as nee Cynthia afpakke 'no C snatch away' (Jasmijn 1;9), ulle ik sijfe 'want I write' (Jasmijn 1;9), pop pot nee 'doll broken no' (Andrea 1;10), mag-ikke fomme, ja? 'may-I swing, yes?' (Andrea 2;0).*

*After the "holistic stage," a major development occurs with the acquisition of a closed class of modal phrases, which consists not only of the previously used expressions nee 'no', ulle 'want', mag-ikke 'may-I', but also of the elements kanniet 'cannot', kanwel 'can-indeed', magniet 'may-not', mag(wel) 'may-indeed', hoe(f)niet 'has-to-not', moettie 'has-to', niet 'not', doemaar 'do-please', kommes 'come-just' and doetie 'does-he'. These modal*

*phrases appear to constitute a category of protofunctional elements. It is claimed that they are used to express illocutionary force, that is, "volition": nee, ulle, mag-ikke; "ability": kanniet, kanwel; "possibility": magniet, magwel; "obligation": hoefnie, moettie, niet, doemaar, kommes, and "assertion": niet, doetie. At the relevant stage, utterances basically consist of three structural positions each for entities with particular discourse-functional properties. Topic information occurs in first position, modal phrases expressing illocutionary force occur in second position, and information referring to a particular state of affairs occurs in final position. Examples are dit nee afdoen 'this no off-do' (Jasmijn 1;10), poes il mij vinger happe 'kitty want my finger bite' (Jasmijn 1;11), Jaja mag dop opdoen 'J may lid on-do' (Andrea 2;0), da kanniet zitte 'there cannot sit' (Andrea 2;1). The three constituents whose positioning is motivated by their pragmatic function are syntactically related by adjunction. Since ordering seems to be determined by principles of information structuring, this stage of acquisition is termed the "conceptual-ordering stage."*

*Reinterpretation of the protofunctional category of illocutionary phrases occurs as a result of the acquisition of the auxiliary verbs heb/heeft 'have/has' and ben/is 'am/is'. In the context of lexical past-participle forms, these auxiliaries constitute a category AUX, which has the grammatical function of a head constituent. It is argued that the presence of AUX initiates major developments in the acquisition of the target use of finiteness. Evidence shows that, at the relevant stage, the closed class of modal phrases used to express illocutionary force is reanalyzed in terms of the target-functional category AUX, expressing both aspect and illocutionary force simultaneously. Furthermore, auxiliary verbs cooccur with pronominal elements referring to the external argument. Analysis of these elements as constituents establishes a relation of morphological agreement between the auxiliary verbs heb/heeft 'have, has' or ben/is 'am, is' and the external argument. Since grammaticalization of the illocutionary phrase establishes a relation between elements occurring in topic position and elements referring to a particular state of affairs, this developmental stage is termed the "finite-linking stage."*

## 1. Introduction

Among theories on L1 acquisition the *full competence hypothesis* has attracted a great deal of attention. In their investigation of German L1 acquisition, Poeppel and Wexler (1993) argue that "young children's grammars have functional categories and the principles which govern them" (1993: 2). Evidence for functional categories in early child German

are “finiteness,” “agreement,” “head movement,” and “nonsubjects in first position.”

One of the claims put forward in Poeppel and Wexler is that there is “a contingency between the position of the verb and its inflectional status” (1993: 5). That is, “[+finite] verbs systematically appear in second clausal position, whereas [–finite] verbs systematically remain in final position” (1993: 5). Hence, they claim, “the finiteness distinction is made correctly at the very earliest stages of grammatical development” (1993: 6f.). Furthermore, Poeppel and Wexler argue that in early child German the agreement system is basically used correctly. Evidence from L1 German shows that given *-t* inflection the subject is a third person singular. Since “the child almost never uses *-t* in an incorrect syntactic context” (1993: 9), they state that “[t]he singular agreement system is thus in place quite early, ...” (1993: 10). Evidence for the presence of head movement comes from the distribution of finite and nonfinite lexical verbs. Contrary to the results of studies by De Haan (1987) and Jordens (1990) on the acquisition of L1 Dutch, Poeppel and Wexler argue that in early child German finite verbs in V2 position and nonfinite verbs in final position belong to overlapping sets. Hence, they claim that “head-movement as a morphosyntactic process is in place in the early grammar” (1993: 11). Finally, Poeppel and Wexler observe that nonsubjects frequently occur in first position followed by a finite verb. From the fact that in 28% of the sentences overt subjects occur in noncanonical word order, they conclude that “the V2-phenomenon, which is attributed to the existence of a CP system, is in place” (1993: 15).

These observations on the early use of finiteness, agreement, head movement, and nonsubjects in first position are all tied to properties of the functional-category system of the target language. The data are interpreted as evidence in favor of the *full competence hypothesis* (FCH). Since the FCH is a theory on the initial state of the language faculty, it provides a solution to the learnability problem. Given Poeppel and Wexler’s (1993) claim that for early child German “the best model of the data is the standard analysis of adult German” (1993: 2), one may wonder what is left for children to learn.

Contrary to the claims put forward by Poeppel and Wexler, it has been argued by Jordens (1990) that finite and nonfinite verbs are used in complementary distribution in early child Dutch. Given “[t]he small amount of overlap between verbs used in first/second position and final position” (1990: 1431) it seems highly unlikely that children have discovered verb movement. Hence, in early child Dutch, head movement appears to be absent. On the basis of L1 German data, Ingram and Thompson (1996) come to a similar conclusion. They state

that “[i]nflected verbs are initially single morphemes unrelated to their nonfinite counterparts” (1996: 101).

Furthermore, a comparison of the type/token ratios (number of different verbs/total number of verbs) of finite and nonfinite verbs shows that in the initial stages of the acquisition of Dutch, children use only nonfinite verbs productively. While Dutch children thus appear to use many different types of nonfinite verb, finite verbs constitute a comparatively small class of different verb types occurring relatively frequently. This observation can be interpreted as evidence that finite verbs are stored unanalyzed. Ingram and Thompson (1996) have also argued that “[t]he use of inflections, in and of itself, is not sufficient evidence to claim that they are acquired” (1996: 101). With respect to the use of agreement in early child German, they conclude that “the large majority of verbs occur in only one inflected variant form” (1996: 111). This is seen as evidence for their position that, initially, inflected verbs are learned holistically. In sum, acquisition data from Dutch and German indicate that in early child grammar there is no evidence of a productively used system of inflectional morphology.

Also, nonsubjects occurring in first position probably do not constitute evidence for a functional category in early child German. Assuming that there is a functional position that allows nonsubjects to occur in first position, one would expect auxiliaries to appear as well. However, as will be shown below, auxiliaries are typically absent in early child Dutch and German. Furthermore, as pointed out by Poeppel and Wexler (1993), the presence of a functional position ought to provide the possibility for *wh* movement. However, for early child Dutch and German, it is a solid observation that there are no utterances with *wh*-question words in initial position.

Finally, Poeppel and Wexler (1993) themselves note that “children do not use overt complementizers” in the initial stage (1993: 19). It seems this is not because “young children rarely use subordinate clauses” (1993: 20) presumably for reasons of a limited processing capacity. It has been observed that Dutch and German children are able to produce simple forms of embedded clauses quite early. However, these embeddings are systematically used with no complementizer, thereby providing evidence for the absence of a functional category at the relevant stage.

To sum up, in early child Dutch and German evidence for the presence of a functional-category system is lacking. Morphological endings in early child language that look like properties of a functional projection appear to belong to elements that are used morphologically unanalyzed.

One of the major properties of the functional-category system in adult Dutch is the grammatical function of finiteness. In the following, I will

argue that at the initial state of acquisition, properties of finiteness are absent. The acquisition of finiteness is a developmental process occurring over time. The data originate from a corpus of diary data collected from the present author's two children: Jasmijn (11 December 1984) and Andrea (27 May 1993). In both children the acquisition of finiteness will be observed by comparing consecutive stages of development that appear to be critical for the acquisition of finiteness. I will choose the perspective of information structuring for the analysis of utterance structure.

The analysis of developmental progress provides evidence that it seems possible to discriminate language-learning varieties at three levels of developmental progress. These learner varieties differ in terms of information structuring and complexity of the linguistic system involved. Developmental progress occurs when a learner variety representing a lower level of acquisition is given up in favor of a learner variety at a higher level.

In the following I will first give an overview of the properties of the children's language used at consecutive stages of linguistic development. These developmental stages are termed the "holistic stage," the "conceptual-ordering stage," and the "finite-linking stage." A common property at each of the stages of acquisition is the expression of a topic (explicitly or implicitly) and a state of affairs, such that the state of affairs is claimed to hold for the topic. This relation is established through what is called a validation or linking device. It is this relation of linking that is expressed variously at consecutive stages of acquisition. At the holistic stage, validation is achieved by pragmatic means, at the conceptual-ordering stage by lexical means, and at the finite-linking stage by means of morphosyntactic devices.

## **2. The use of modal and auxiliary verbs with nonfinite verb forms**

In early child Dutch, Jasmijn (1;10–1;11) and Andrea (2;0–2;1) use lexical verbs with both finite and nonfinite morphology. Examples of utterances with the finite verb forms they used most frequently are given in (1), while examples of utterances with their most frequent nonfinite verb forms are given in (2).

- (1) Finite verb forms used most frequently in Jasmijn (1;10–1;11) and Andrea (2;0–2;1)
- |                   |                   |
|-------------------|-------------------|
| a. Jasmijn (1;10) | b. Jasmijn (1;11) |
| heettie?          | dit is dop        |
| 'calls-he?'       | 'this is lid'     |

poes saapt  
 'kitty sleeps'  
 ah, Mijnie valt  
 'ah, M falls'  
 Peter lus wel  
 'P likes indeed'  
 sittie da in  
 'sits-he there in'  
 uil zo komt  
 'owl in-a minute comes'

doet koekie dat  
 'does Cookiemonster that'  
 poes lus niet  
 'kitty likes not'  
 Frank zo komt  
 'F in-a-minute comes'  
 Pino slaapt  
 'P sleeps'  
 valt Mijnie  
 'falls M'  
 daar zittie  
 'there sits-he'

- c. Andrea (2;0)  
 hier issie  
 'here is-he'  
 moet hier  
 'has-to-be here'  
 mag ikke paard?  
 'may-have I horse?'  
 kannie nie ope  
 'can-it not open'  
 gaatie niet?  
 'works-it not?'  
 Jaja valt niet  
 'J falls not'  
 zijn die nou?  
 'are these now?'

- d. Andrea (2;1)  
 is hanne nou?  
 'is hands now?'  
 hier kan wel  
 'here can indeed'  
 disse zijn eene  
 'these are ducks'  
 papa pikt niet  
 'daddy pricks not'  
 gaat niet  
 'it-works not'  
 gaap kom niet Jaja toe  
 'sheep comes not J to'

(2) Nonfinite verb forms used most frequently in Jasmijn (1;10–1;11) and Andrea (2;0–2;1)

- a. Jasmijn (1;10)  
 oppe nek zitte  
 'on-the neck sit'  
 Mijnie pakke  
 'M get'  
 Mijnie zelf doen  
 'M self do'  
 appel pakt  
 'apple got'  
 uithale, zak  
 'out-get, bag'  
 mama dit geve  
 'mommy this give'

- b. Jasmijn (1;11)  
 ik doen  
 'I do'  
 water indoen  
 'water in-do'  
 stoel pakke  
 'chair get'  
 oma bed sape  
 'grandmother bed sleep'  
 poes bal hebbe  
 'kitty ball have'  
 bove kast Mickey kijke  
 'upon closet M look'

- |                     |                    |
|---------------------|--------------------|
| c. Andrea (2;0)     | d. Andrea (2;1)    |
| boekje hebbe        | papa soep hebbe?   |
| 'booklet have'      | 'daddy soup have?' |
| papa deze doen      | papa, jij doen     |
| 'daddy this-one do' | 'daddy, you do'    |
| hier zitte, papa    | Cynthia eve kijke  |
| 'here sit, daddy'   | 'C just look'      |
| eve kijke           | apie dá zitte      |
| 'just look'         | 'monkey there sit' |
| papa uitdoen        | goene aandoen      |
| 'daddy out-do'      | 'shoes on-do'      |
| niet au. aaie       | poppie pakke       |
| 'not ow. caress'    | 'doll get'         |

As illustrated in (1), most of the finite verbs are used in their singular form. In adult Dutch, singular forms occur with morphological agreement of person. The children, however, seem to be using either only one singular form such as *valt* 'falls' or *slaapt* 'sleeps', or they use two forms in free variation, for example *kom/komt* 'come/comes' or *lus/lust* 'like/likes'. From this it seems fair to conclude that agreement has not yet been acquired and, hence, finite morphology is not used productively. Furthermore, if we compare the use of finite and nonfinite verb forms in (1) and (2), hardly any overlap can be observed. Hence, it seems that at the relevant stage of acquisition there is no verb movement either. Given these properties of early child Dutch, the question is how finite and nonfinite morphology are used at the initial state of acquisition. What kind of system — if any — is it that determines the use of finite v. nonfinite lexical verb forms?

### *Distributional properties*

In early child Dutch, lexical verbs are used both in utterances used as assertions and in utterances used as imperatives. As noted in Klein (1998, 2001), by using an assertion the speaker claims that a particular state of affairs holds for a topic element, while by using an imperative the speaker indicates that the addressee should (or should not) carry out a particular action. Due to these differences in pragmatic use, the types of lexical verb that can be used in either assertions or imperatives also differ. In accordance with their pragmatic function, imperatives typically occur with action verbs. Verb forms that are commonly used in imperatives are

*doe* 'do', *geef* 'give', and *kom* 'come'. Verb forms that are typically used in assertions refer to a state, as in *weet* 'know', *slaapt* 'sleeps', or *zit* 'sits', to a change of state, as in *komt* 'comes', *valt* 'falls', or *lukt* 'succeeds', and to actions, as in *klimmen* 'climb', *spelen* 'play', *indoen* 'in-do', or *openmaken* 'open-make'. Given the difference in pragmatic use, it seems appropriate to analyze the distribution of lexical verbs in assertions separately from the distribution of lexical verbs in imperatives. By doing so, confounding properties of illocutionary force with properties of lexical meaning can be avoided.

In child imperatives, lexical verbs occur with their stem form if they are used affirmatively, while they occur as infinitives preceded by *niet* if they are used negatively. Examples of the types of imperative verb used in Jasmijn (1;10–2;2) and in Andrea (2;0–2;4) are given in (3) and (4).

(3) Imperatives in Jasmijn (1;10–2;2)

- |                            |                            |
|----------------------------|----------------------------|
| a. affirmative             | b. negative                |
| blijf af                   | niet aankome               |
| 'keep off'                 | 'not on-get'               |
| doe-maar                   | niet plantjes aankome      |
| 'do-please'                | 'not plants on-get'        |
| drink-maar                 | die niet afpakke           |
| 'drink-please'             | 'that-one not away-snatch' |
| drink op                   | niet poes geve             |
| 'drink up'                 | 'not kitty give'           |
| geef-es, geef-maar         | niet kijke                 |
| 'give-please'              | 'not look'                 |
| hou vas                    | niet omgooie               |
| 'hold tight'               | 'not over-throw'           |
| hou los                    | niet oplikke               |
| 'hold loose'               | 'not up-lick'              |
| kom-es                     | niet Cynthia bed slape     |
| 'come please'              | 'not C bed sleep'          |
| kijk, kijk-es              | niet valle                 |
| 'look-please'              | 'not fall'                 |
| pak, pak(ke)-maar, pak-dan | niet zegge                 |
| 'get-please'               | 'not say'                  |
| proef-maar                 | mama niet zien             |
| 'taste-please'             | 'mommy not see'            |
| trek-maar                  | allemaal niet zitte        |
| 'draw-please'              | 'everybody not sit'        |
| trekke(t) af               |                            |
| 'pull-it-off'              |                            |



- (4) Imperatives in Andrea (2;0–2;4)
- |                          |                |
|--------------------------|----------------|
| a. affirmative           | b. negative    |
| doe-maar, doe-es         | niet au doen   |
| ‘do-please’              | ‘not ow do’    |
| geef-maar                | niet doen      |
| ‘give-please’            | ‘not do’       |
| kom-es, kom-maar         | niet hange     |
| ‘come-please’            | ‘not hang’     |
| kijk, kijk-es, kijk-maar | niet huile     |
| ‘look please’            | ‘not cry’      |
| voel-maar                | niet Jaja help |
| ‘feel please’            | ‘not J help’   |
| zie                      | niet opete     |
| ‘look’                   | ‘not up-eat’   |
|                          | niet ape       |
|                          | ‘not sleep’    |

The examples in (3) and (4) show that in affirmative imperatives the lexical verb often occurs together with the modal particle *es* (literally: ‘some time’) or *maar* (literally ‘just’). In the adult language these particles are used to make imperatives sound somewhat less direct. Their frequent occurrence in child utterances seems to indicate that these elements are used as formal means for the expression of imperatives. As illustrated in (3) and (4), negative imperatives occur as infinitives preceded by *niet* ‘not’. Utterances with *niet* and an infinitive are never used for the expression of an assertion.

Imperatives also differ from assertions with respect to the distribution of particle verbs. Particle verbs in imperatives seem to occur both with and without verb movement. On the one hand, children produce affirmative imperatives such as *blijf af* ‘keep off’, *drink op* ‘drink up’, *hou vas* ‘hold tight’, *hou los* ‘hold loose’, and *trekke(t) af* ‘pull it off’ while, on the other hand, they produce negative imperatives such as *niet afpakke* ‘not away-snatch’, *niet aankome* ‘not on-get’, *niet oplikke* ‘not up-lick’, *niet omgooie* ‘not over-throw’. Thus, it seems as though particle verbs in affirmative imperatives are used with verb movement, whereas in negative imperatives verb movement is prohibited.

From these observations it is evident that the distribution of finite and nonfinite lexical verb forms in imperatives is based on the absence or presence of *niet*, while a semantic distinction seems irrelevant. Therefore, utterances with imperatives will not be considered for further analysis.

In assertions, lexical verbs seem to be distributed semantically variably, that is, lexical verbs occurring in sentence-initial position and nonfinite

lexical verbs (i.e. infinitives and past participles) occurring in final position belong to two different sets of verbs. Examples of lexical verbs that are typically used with finite morphology are given in (5) and (6).

- (5) Finite lexical verb forms used most frequently in Jasmijn (1;10–2;2)
- a. *doet* ‘do-3sg’, *heb* ‘have-1sg’, *heet* ‘be called-1/3sg’, *hoort* ‘hear-3sg’, *kom(t)* ‘come-1/3sg’, *lukt* ‘succeed-3sg’, *lus(t)* ‘like-1/3sg’, *slaapt* ‘sleep-3sg’, *valt* ‘fall-3sg’, *vin leuk* ‘like-1sg’, *vin lekker* ‘like-1sg’, *weet* ‘know-1/3sg’, *zoek* ‘look for-1sg’;
  - b. with clitic *-ie* ‘he’: *doetie* ‘does-he’, *hoortie* ‘hears-he’, *hootie* (= *woontie*) ‘lives-he’, *heettie* ‘is-called-he’, *komtie* ‘comes-he’, *valtie/valtik* ‘falls-he/fall-I’, *zittie* ‘sits-he’
- (6) Finite lexical verb forms used most frequently in Andrea (2;0–2;4)
- a. *doe/doet* ‘do-1/3sg’, *ga/gaat/gaan* ‘go-1/3sg,1pl’, *hem/heef(t)* ‘have-1/3sg’, *ben/is/zijn* ‘be-1/3sg,1pl’, *kan* ‘can-1/3sg’, *kom(t)* ‘come-1/3g’, *lijk(t)* ‘look like-1/3sg’, *moet* ‘have to-1/3sg’, *mag* ‘may-1/3sg’, *past* ‘fit-3sg’, *pikt* ‘prick-3sg’, *valt* ‘fall-3sg’, *vin lekker* ‘like-1sg’, *vin leuk* ‘like-1sg’, *wil(t)* ‘want-1/3sg’, *zie(t)* ‘see-1/3sg’;
  - b. with clitic *-ie* ‘he’: *doetie* ‘does-he’, *gaatie* ‘goes-he’, *issie/zijnie* ‘is/be-he’, *kantie* ‘can-he’, *kommie/komtie* ‘comes-he’, *moettie* ‘has-to-he’, *passie* ‘fits-he’

Examples of lexical verbs that are typically used with nonfinite morphology are given in (7) and (8).

- (7) Nonfinite lexical verb forms used most frequently in Jasmijn (1;10–2;2)
- a. simple verbs:  
*doen* ‘do’, *geven* ‘give’, *hebben* ‘have’, *klimmen* ‘climb’, *kijken* ‘look’, *lezen* ‘read’, *maken* ‘make’, *pakken* ‘get’, *slapen* ‘sleep’, *spelen* ‘play’, *zitten* ‘sit’, *zwemmen* ‘swim’
  - b. particle verbs:  
*aandoen* ‘on-do’, *afdoen* ‘off-do’, *indoen* ‘in-do’, *opdrinken* ‘up-drink’, *uithalen* ‘out-get’, *ope(n)maken* ‘open-make’, *losmaken* ‘loose-make’
- (8) Nonfinite lexical verb forms used most frequently in Andrea (2;0–2;4)
- a. simple verbs:  
*aaien* ‘caress’, *doen* ‘do’, *geven* ‘give’, *hebben* ‘have’, *kijken* ‘look’, *lezen* ‘read’, *liggen* ‘lie’, *maken* ‘make’, *pakken* ‘get’, *aapt* (= *geslapen*) ‘slept’, *(s)nijen* ‘cut’, *zitten* ‘sit’, *zoeken/koeken* ‘look for’, *hees* (= *geweest*) ‘have-been’

## b. particle verbs:

*aandoen* 'on-do', *uitdoen* 'off-do', *opeten* 'up-eat', *aanhou*  
'on-hold', *ope(n)maken* 'open-make'

There are only a few instances such as *gaat* v. *gaan* 'goes/go', *doet* v. *doen* 'does/do', *heb* v. *hebben* 'have/have', *slaapt* v. *slapen*, *slaapt* 'sleeps/sleep, slept', *zit* v. *zitten* 'sits/sit' in which lexical verbs are used with both finite and nonfinite morphology.

Distributional differences in the use of lexical verbs are evidence that the use of either finite or nonfinite morphology is determined by properties that are semantic in nature. Thus, although in adult Dutch finite and nonfinite verb forms can be used as instantiations of the same lexical item, this may not be the case in child Dutch. I would argue that this also holds for cases such as *gaat* v. *gaan*, etc. Comparisons of utterances with either of these verb forms constitute instances of semantic minimal pairs.

Examples of the use of *heb* v. *hebben*, *slaapt* v. *slapen*, *zit* v. *zitten* in Jasmijn and Andrea are given in (9) and (10).

- (9) Examples with *heb/hebben*, *slaapt/slapen* and *zit/zitten* in Jasmijn (1;11)

*heb* jij? '[what] have you?' v. alles *hebbe* '[I] everything have'

Pino *slaapt* 'P sleeps' v. lekker *slape*, poppie 'nicely sleep, little-doll'  
da *zittie* 'there sits-he' v. ikke da *zitte* 'I there sit'

- (10) Examples with *heb/hebben* in Andrea (2;2)

*hemme* al 'have-it already' v. gaage *ijskocie hemme* 'would-like ice-cream have'

In the first example of (9), *heb jij?* means 'What do you have?', whereas *alles hebbe* means 'I want to have everything' or 'I am going to have everything'. In (10), the same difference in meaning holds between *hemme al* 'I have it already' and *gaage ijskocie hemme* 'I would like to have an ice-cream'. Here, this difference is even made explicit in the use of *al* 'already' v. *gaag* 'would like'. In a similar way in (9), the utterance *Pino slaap(t)* means 'P is asleep', whereas *lekker slape* is used in a context where it means 'Go to sleep nicely'. Finally, in (9), the utterance *da zittie* means '[He] is sitting there', whereas *ikke da zitte* is used to mean 'I want to sit there' or 'I am going to sit there'. In adult Dutch these particular semantic differences are not represented lexically. However, in the case of *zit* v. *zitten* it is possible in German, for example, to use two different lexical items, *sitzen* meaning 'to be sitting' and *sich setzen* meaning 'to be going to sit'.

The examples in (9) and (10) show a systematic opposition with respect to the role of the external argument. In the utterances with infinitival *hebben*, *slapen*, and *zitten* the external argument has the intention to carry out a particular action, whereas in case of the finite verb *heb*, *slaapt*, and *zit* the external argument is not intentionally involved. Thus, by comparing cases in which the same lexical verb is used with both infinitival and finite morphology, <intention> seems to be the semantic feature that distinguishes the distribution of infinitives from the use of finite lexical verbs.

In summary, the distributional properties of infinitives as opposed to finite lexical verbs can be represented as in (11).

- |   |                   |
|---|-------------------|
| (11) Distributional properties of infinitival v. finite lexical verbs |                   |
| infinitival morphology  | finite morphology |
| sentence-final  | sentence-initial  |
| <+intention>  | <-intention>      |

The relevance of the semantic feature of <intention> for the use of infinitival v. finite morphology can be tested with verbs that can be used both transitively and intransitively. The verb *doen* 'do', for example, may illustrate the case in point. As a transitive verb, *doen* is used in contexts where it means 'someone carries out a particular action', while as an intransitive verb, it is used in contexts in which it means 'something works'. In adult Dutch, the external argument of the transitive verb *doen* is animate and intentionally involved, while the external argument of the intransitive verb *doen* is inanimate and, hence, not intentionally involved. If children use an infinitive to express <+intention> and a finite verb form to express <-intention>, the adult verb *doen* should be used in its infinitival form *doen* 'do' if its meaning is transitive, while it should appear in its finite form *doet* 'does' if its meaning is intransitive. As can be seen in (12) and (13), this is precisely what is found in Jasmijn's and Andrea's data. The infinitive *doen* is used transitively with the external argument intentionally involved, while the finite verb *doet* is used intransitively with no intentional role for the external argument.

- (12) Examples of transitive *doen* v. intransitive *doet* in Jasmijn (1;11)  
 ik *doen*/I do 'I will make it work' v. hij *doet*/he works 'it works'
- (13) Examples of transitive *doen* v. intransitive *doet* in Andrea (2;2)  
 eve koud *doen*/just cold do 'I just want to make it cold' v. ja *doet*  
 wel/yes, works indeed 'yes it works indeed'

Another example illustrating the semantic opposition between infinitives and finite verb forms can be found in Clahsen's (1986) data on the acquisition of German. In German, the verb *drehen* 'turn' can be used

in a similar way to *doen* 'do' in Dutch. It can be used either as a transitive verb referring to an action that is carried out intentionally by an animate external argument or as a reflexive verb *sich drehen* 'turn oneself' with an inanimate external argument and no intention involved. As shown in (14) (see Clahsen 1986: 102) in its transitive, intentional meaning of 'someone turns something around', children use the infinitive form *drehen* 'turn', while in its nonintentional, intransitive meaning 'something turns around' children use the finite form *dreht* 'turns'.

- (14) Examples of transitive *drehen* v. intransitive *dreht* in German  
*diese drehen* 'M. is turning the lens of a camera' (M 2;5) v. *dreht immer* 'M. points to a carrousel that is turning'

Further evidence of the relevance of the feature <intention> for the use of infinitival v. finite morphology comes from the use of the verb *gaan* 'go'. Depending on the meaning of the verb, Dutch *gaan* can be used with different kinds of external arguments. If *gaan* is used to refer to 'some kind of movement' it requires the external argument to be animate. If it means 'it works' as in *deze gaat wel* 'this works' or *het gaat niet* 'it does not work' it either needs no external argument or has an external argument that is inanimate. Given that <intention> is relevant for the use of either a nonfinite or a finite form, there are the following options: use of the infinitive *gaan* 'go' indicates that the external argument is animate and intentionally involved; use of the finite form *gaat* 'goes' indicates that the external argument, be it animate or inanimate, is not intentionally involved. This is precisely what is found in the data. If *gaan* means 'move' the external argument is animate. Depending on whether this external argument is intentionally involved or not, children use either the infinitive *gaan* or the finite form *gaat*. If *gaan* means '[it] works', the external argument is inanimate and, hence, the finite form *gaat* is the only possibility. Examples from Andrea (2;1) and Jasmijn (2;1–2;2) are given in (15) and (16).

- (15) Examples of nonfinite *gaan* v. finite *gaat/gaan* in Andrea (2;1)  
*óók gaan*, *paarde* '[me] too go, horses' v. *poppie gaat niet mee*  
 'doll goes not with'  
*deze gaat niet*. *deze* 'this-one works not. this-one'  
*gaat niet*. *goed*. *gaat hel (=wel)* '[it] works not. all right. [it] works indeed'
- (16) Examples of nonfinite *gaan* v. finite *gaat/gaan* in Jasmijn (2;1–2;2)  
*mama school toe gaan* 'mommy school to-gone' v. *kijk grote auto*.  
*gaatie* *inne garage* 'look big car. goes-he into garage'

Finally, the semantic feature < +intention > also determines the distribution of particle verbs in child Dutch. Particle verbs are typically used as infinitives and, hence, they occur in final position. Examples such as in (17) and (18) are typical of the use of particle verbs in both Andrea (2;0–2;1) and Jasmijn (1;10–2;0).

- (17) Examples of the use of particle verbs in Andrea (2;0–2;1)

slof aandoen  
 ‘slipper on-do’  
 bene indoen  
 ‘legs in-do’  
 dop opdoen  
 ‘lid on-do’  
 deze meeneme  
 ‘this-one with-take’  
 jas opemake  
 ‘coat open-make’  
 deze uitpakke  
 ‘this-one out-wrap’  
 vingje indoen  
 ‘finger in-do’  
 vinger opete  
 ‘finger up-eat’  
 peenie goonmake  
 ‘pacifier clean-make’

- (18) Examples of the use of particle verbs in Jasmijn (1;10–2;0)

dit afhale  
 ‘this off-take’  
 appel indoen  
 ‘apple in-do’  
 peen afdoen  
 ‘pacifier off-do’  
 mondje afvege  
 ‘mouth off-wipe’  
 dop indoen  
 ‘lid in-do’  
 glijbaan aanmake  
 ‘slide on-make’

The fact that particle verbs typically occur as infinitives is predictable on the basis of their semantics. As observed in Jordens (2000), particle verbs in early child language regularly refer to causative actions. Causative action verbs are used with agents referring to participants carrying out

a particular action intentionally. Given that the semantic property of <intention> determines the use of an infinitive, it seems obvious why particle verbs have to occur as infinitives and, hence, are used in sentence-final position.

In early child Dutch, nonfinite verb forms most frequently occur as infinitives. However, in about 10% of the cases nonfinite verb forms occur in past-participle form. Examples of lexical verbs that are typically used with past-participle morphology are given in (19) and (20).

- (19) Lexical verbs with past-participle morphology used most frequently in Jasmijn (1;10–2;2)  
*afpakt* ‘away-snatched’, *knoeid* ‘made a mess’, *krabd* ‘scratched’, *krege* ‘got’, *kleurd* ‘colored’, *maakt* ‘made’, *omvald* ‘over-turned’, *opdronke* ‘up-drunk’, *opgete* ‘up-eaten’, *opraapt* ‘up-picked’, *pakt* ‘caught’, *potmaakt* ‘kaput-made’, *topt* ‘hidden’, *valle* ‘fallen’, *weest* ‘been’
- (20) Lexical verbs with past-participle morphology used most frequently in Andrea (2;0–2;4)  
*aaid* ‘caressed’, *afberope* ‘finished’, *au daan* ‘ow-done’, *bakt* ‘baked’, *kijkt* ‘looked’, *maakt* ‘made’, *goonmaakt* ‘clean-made’, *aapt* ‘slept’, *teekt* ‘drawn’, *gete* ‘forgotten’, *vonne* ‘found’, *hees* ‘been’

Although past participles are a minor category in terms of their frequency of occurrence, they are used in systematic opposition to infinitives, both morphologically and semantically. Morphologically, past participles regularly occur with *-(e)d* endings. Semantically, they seem to indicate a result state. Evidence of the <result state> meaning of past-participle morphology is found in child Dutch past participles that typically occur with causative verbs and change-of-state verbs such as *afpakken* ‘away-snatch’, *bakken* ‘bake’, *kapotmaken* ‘kaput-make’, *knoeien* ‘make-mess’, *krijgen* ‘get’, *losmaken* ‘loose-make’, *schoonmaken* ‘clean-make’, *nemen* ‘take’, *omvallen* ‘over-turn’, *opdrinken* ‘up-drink’, *opeten* ‘up-eat’, *oprapen* ‘up-pick’, *vallen* ‘fall’, *vergeten* ‘forget’, *verstoppem* ‘hide’, and *vinden* ‘find’. Examples are given in (21) and (22).

- (21) Causative and change-of-state verbs with past-participle morphology in Jasmijn (1;10–2;2)  
 Cynthia Minnie *afpakt* (= *afgepakt*)  
 ‘C M snatched-away’  
 Bal weg. *topt* (= *verstopt*)  
 ‘ball allgone. hidden’  
 poesje bete (= *gebeten*)  
 ‘kitty bitten’

zo dinges opraaft (= opgeraaft)  
 'this-way things up-picked'  
 gieter valle (= gevallen)  
 'watering-can fallen'  
 allemaal opdronke (= opgedronken)  
 'everything up-drunk'  
 poes opgete (= opgegeten)  
 'kitty up-eaten'  
 voor mij ekegre (= gekregen)  
 'for me got'  
 knoeid (= geknoeid)  
 'messed'  
 ikke kregre (= gekregen)  
 'I got'  
 aflope (= afgelopen)  
 'finished'  
 ei omvald (= omgevallen)  
 'egg over-turned'  
 engeltje potmaakt (= kapotgemaakt)  
 'angel kaput-made'  
 kijk, dit losmaakt (= losgemaakt)  
 'look, this loose-made'

(22) Causative and change-of-state verbs with past-participle morphology in Andrea (2;0-2;4)

afberope (= afgelopen)  
 'finished'  
 eitje had (= gehad), papa  
 'egg got, daddy'  
 jou hege (= gekregen) dees  
 '[from] you got this-one'  
 affehope (= afgelopen)  
 'finished'  
 kop sote (= gestoten)  
 'head knocked'  
 poppie nome (= genomen)  
 'doll taken'  
 nog Ruti gete (= vergeten)  
 'also R forgotten'  
 zandbak kege (= gekregen)  
 'sandbox got'  
 rietje vonne (= gevonden)  
 'straw found'



vliegtuig afgehoep (= afgelopen)  
 'airplane finished'  
 appeltaart bakt (= gebakken)  
 'apple-pie baked'  
 mooie appeltaart maakt (= gemaakt)  
 'nice apple-pie made'

From a comparison of the types of lexical past-participle verbs as given in (19) and (20) with the types of lexical infinitives as given in (7) and (8), it can be concluded that there is a systematic opposition between past-participle *-(e)d* morphology carrying the semantic feature <result state> and infinitival *-e(n)* morphology carrying the semantic feature <intention>.

In summary, in child utterances used to express assertions there are initially three sets of lexical verbs: infinitives, past participles, and finite verb forms. They differ not only distributionally, that is, with respect to both their morphology and their position, but also semantically. Lexical verbs occur as infinitives in final position, if they are used to express <intention>. They typically refer to actions carried out by an animate external argument. Thus, children systematically use infinitival morphology with transitive verbs such as *doen* 'do', *geven* 'give', *lezen* 'read', *maken* 'make', *pakken* 'get' and intransitive verbs such as *klimmen* 'climb', *kijken* 'look', *spelen* 'play', *zwemmen* 'swim'. Lexical verbs may also occur as past participles in final position. Unlike infinitives, however, they are used to express <result state>. Thus, children systematically use past-participle morphology to express the result state of causative verbs and change-of-state verbs such as *afpakken* 'away-snatch', *kapotmaken* 'kaput-make', *krijgen* 'get', *opeten* 'up-eat', *schoonmaken* 'clean-make', *vallen* 'fall', *verstoppen* 'hide', *vinden* 'find'. Unlike infinitives and past participles, finite lexical verbs occur in initial position. They are used to express <-intention>. Given this semantic property, there are no restrictions with respect to the use of either an animate or an inanimate external argument. It is even possible for finite verbs to occur with no external argument at all. Thus, children systematically use finite lexical verbs to refer to a state or a change of state, either of a psychological kind as in *weet* 'knows', *vin leuk* 'likes', *vin lekker* 'enjoys', *lust* 'is fond of' or of a physical kind as in *heb* 'has', *hoort* 'belongs', *slaapt* 'sleeps', *komt* 'comes' *lukt* 'succeeds' and *valt* 'falls'.

The semantic properties of nonfinite lexical verbs (infinitives and past participles), as opposed to finite lexical verbs, are represented in (23).

- (23) Semantic properties of nonfinite v. finite lexical verbs
- | infinitives | past participles | finite verbs            |
|-------------|------------------|-------------------------|
| <intention> | <result state>   | <state/change of state> |

*Productivity*

A second observation on the distributional properties of nonfinite and finite lexical verbs relates to differences in productivity. Nonfinite lexical verbs occur with a large number of different verb types used relatively infrequently, while finite lexical verbs occur with a small number of different verb types that are used relatively frequently. Evidence of the type/token ratios of nonfinite and finite lexical verbs is shown in Table 1.

The figures in Table 1 show both the absolute number of types and tokens and their (type/token) ratio. Verb types were counted by lexeme, while the number of verb tokens was established on the basis of the actual occurrence of a particular verb form. In the present study, verb forms are considered nonfinite if they are used with either infinitival or past-participle morphology. In adult Dutch, infinitives regularly occur with *-en* endings, while past participles occur with *-ed* or irregular morphology. A verb form is considered finite if there is morphological agreement in person and number between the verb and its grammatical subject. Finite verb forms occur with *-o* or *-t(ie)* endings in contexts in which there is a 1st or 3rd p.sg subject. Plural *-en* endings are extremely rare.

Type/token ratios are evidence of type frequencies. If a child only uses a small number of different verb types with a particular morphological ending quite frequently, the type/token ratio will be relatively low. If a child uses a large number of different verb types with a particular ending rather infrequently, the type/token ratio will be relatively high. Thus, a smaller type/token ratio is evidence of a relatively low type frequency, and a larger type/token ratio is evidence of a relatively high type fre-

Table 1. *The type/token ratios of nonfinite and finite lexical verbs*

	Age	Vnonfinite			Vfinite		
		type	token	type/token	type	token	type/token
Jasmijn	1;10	54	108	0.50	18	42	0.43
	1;11	79	190	0.41	37	261	0.14
	2;0	30	47	0.64	42	180	0.23
	2;1	29	50	0.58	22	195	0.11
	2;2	9	14	0.64	24	123	0.20
Andrea	2;0	62	190	0.33	13	71	0.20
	2;1	45	104	0.43	22	133	0.17
	2;2	54	109	0.50	26	164	0.16
	2;3	31	53	0.58	34	261	0.13
	2;4	13	25	0.52	23	135	0.17

quency. In Table 1, both Jasmijn's and Andrea's type/token ratios were calculated over a period of five months.

The figures in Table 1 show that in both children type/token ratios are significantly higher with nonfinite lexical verbs than with finite lexical verbs. Furthermore, the data show that for finite lexical verbs an increase over time in the absolute number of tokens corresponds to a lower type/token ratio. This means that the increase in the use of finite lexical verbs is a matter of more tokens of more or less the same types. For nonfinite lexical verbs the situation is different. Type/token ratios are significantly higher and more or less stable or even slowly increase over time. The figures in Table 1 also show a sudden decrease in the absolute use of nonfinite verbs both in Jasmijn (2;0) and in Andrea (2;3). This development is due to the fact that within a relatively short period of time utterances with nonfinite verbs are used less frequently than utterances in which the nonfinite verb is used with either an auxiliary or a modal verb.

High type frequency furthers rule formation. This is because the more heterogeneous a set of forms with a particular marker, the more productive or applicable this marker is. A greater variety of nonfinite types of verb is therefore evidence of the productive use of nonfinite morphology. Low type frequency is evidence of a low degree of heterogeneity. In inflected verb forms with a low degree of heterogeneity, morphological properties are bound to remain opaque. A limited variety of verb types with finite morphology therefore promotes an unanalyzed use.

A categorization of verb forms in terms of nonfinite v. finite is a linguistic construct. Nonfinite morphology refers to both infinitival and past-participle morphology comprising both regular and irregular forms. However, given the fact that at the relevant stage nonfinite verbs occur in about 95% of the cases either with regular infinitival *-e(n)* morphology or with regular *-(e)d* morphology, these morphological markers are representative of nonfinite verbs as a syntactic category. On the other hand, as pointed out above, finite verbs occur with variable morphology, that is, *-0* or *-t(ie)*. Furthermore, finite verb forms are irregular in about 70% of the cases. Examples are modal verbs used as lexical verbs and the lexical verb forms of *hebben* 'have' and *zijn* 'be'. They typically occur in Dutch child utterances such as *da kan ook* 'that can too', *mag ikke dees?* 'may I this-one', *moettie nou?* 'has-to it now', *hoenie* 'have-to-not', *unnie niet* 'want-it not', *zijn niet da* 'are not there', *die hem ik* 'that-one have I'. These irregular finite verb forms are used unanalyzed. Their frequent occurrence works counter to a morphological analysis. Given the fact that finiteness is expressed with a variety of morphological markers and taking into account the fact that the majority of the chil-

dren's finite verb forms are irregular, and, finally, considering the fact that the absolute number of finite verb forms with regular morphology is extremely low, it is most efficient from the perspective of language use to have finite verbs stored unanalyzed.

Direct evidence of the productive use of morphological marking are errors of regularization. In case of the infinitives, the target system has regular *-en* marking. Regularization of exceptions such as *doen* 'do', *gaan* 'go', *slaan* 'hit', *staan* 'stand', *zien* 'see', *zijn* 'be' does not occur. For phonological reasons these irregular infinitives are not candidates for *-e(n)* regularization. Thus, regularization errors as evidence of the productive use of *-e(n)* marking are not to be expected.

Compared to regular infinitival *-e(n)* morphology, regular past participle forms with *-(e)d* morphology occur much less frequently. Nevertheless, past-participle *-(e)d* morphology seems to be used productively, too. Evidence is provided by examples of regularization. In a number of cases children produce regular *-e(d)* morphology with verb forms that are morphologically irregular. Thus, Jasmijn (1;10–2;2) uses *\*doed* 'done', *\*geefd* 'given', *\*klimd* 'climbed', *\*omvald* 'over-turned', *\*wast* 'washed', *\*ist* 'been', while Andrea (2;0–2;4) uses *\*aapt* 'slept', *\*bakt* 'baked', *\*geefd* 'given', *\*opdoend* 'on-put', *\*kijkt* 'looked', *\*vald* 'fallen', *\*ziend* 'seen'. Irregular past-participle forms use *-en* morphology. They occur relatively frequently in both adult and child language. However, it is interesting to note that regular *-(e)d* morphology is used instead of the irregular form, whereas the opposite does not occur.

As pointed out earlier, lexical infinitives can be attributed the semantic property of <intention>, while past-participle forms express <result state>. Given the productive use of both *-e(n)* morphology with lexical infinitives and *-(e)d* morphology with past participles, these morphological markers are representative of the meaning of the category of lexical verbs that they are used with. Thus, children may use *-e(n)* morphology to express <intention> and *-(e)d* morphology to express <result state> with a verbal lexeme. As argued above, regular morphological marking with finite lexical verbs is much harder to achieve, due to the relatively great number of irregular verbs children use. At the relevant stage there is no indication that morphological markers of finiteness are used productively. Hence, children are not yet ready to make use of finite verb morphology to express the particular meaning that finite verbs are used with.

To summarize, the distributional properties of nonfinite lexical verbs (infinitives and past participles) as opposed to finite lexical verbs can be represented as in (24).

(24) Distributional properties of nonfinite v. finite lexical verbs

infinitives	past participles	finite verbs
- <i>e(n)</i> morphology	-( <i>e</i> ) <i>d</i> morphology	no productive morphology
sentence-final	sentence-final	sentence-initial
<intention>	<result state>	<state/change of state>

*The acquisition of modal and auxiliary verbs*

In adult Dutch, finiteness not only occurs with lexical verbs, it is also a property of modal and auxiliary verbs (Mod/Aux) as they are used with lexical infinitives and past-participle forms. Tables 2 and 3 show that there is a (sudden) increase in the use of these Mods and Auxs both in Jasmijn's data at (2;1) and in Andrea's data at (2;3).

In Tables 2 and 3 *Vnf* refers to both the infinitival and the past-participle form of the nonfinite lexical verb. MOD and AUX are used to refer to the category of Mods and Auxs. Figures in Tables 2 and 3 not only show an increase in the use of Mods and Auxs, they also demonstrate that

Table 2. *From Vnf to MOD/AUX + Vnf in Jasmijn (1;10-2;2)*

	Vnf	MOD/AUX + Vnf	Total
1;10	108	47 (= 0.30)	154
1;11	190	61 (= 0.24)	252
2;0	47	35 (= 0.43)	82
2;1	50	52 (= 0.51)	102
2;2	18	65 (= 0.78)	83
Total			673

Table 3. *From Vnf to MOD/AUX + Vnf in Andrea (2;0-2;4)*

	Vnf	MOD/AUX + Vnf	Total
2;0	205	21 (= 0.09)	226
2;1	119	41 (= 0.26)	160
2;2	112	48 (= 0.30)	160
2;3	53	113 (= 0.68)	166
2;4	26	63 (= 0.71)	89
Total			801

the frequency of bare infinitives and past participles decreases at the same rate at which MOD/AUX + Vnf is being acquired. Hence, in the process of acquisition nonfinite lexical verbs are given up in favor of MOD/AUX + Vnf. Evidence of this process can be observed in Jasmijn (2;0) and Andrea (2;2). At the relevant stage, both children vary between using Vnf and MOD/AUX + Vnf. Even with the same lexical verbs, the children have both the Vnf and the MOD/AUX + Vnf option. Examples are given in (25) and (26).

- (25) Variation between Vnf and MOD/AUX + Vnf in Jasmijn (2;0)
- |                             |                                       |
|-----------------------------|---------------------------------------|
| a. Vnf                      | b. MOD/AUX + Vnf                      |
| rommel <i>maakt</i>         | <i>heef</i> Cynthia <i>maakt</i>      |
| 'mess made'                 | 'has C made'                          |
| anne boek <i>pakke</i>      | ik <i>ga</i> boter <i>pakke</i>       |
| 'other book get'            | 'I go butter get'                     |
| glijbaan, <i>aanmake</i>    | <i>doe</i> -maar <i>aanmake</i>       |
| 'slide, on-make'            | 'please-do on-make'                   |
| <i>opemake</i> , danoontje  | <i>doe</i> je Pino <i>make</i>        |
| 'open-make, danoontje'      | 'do you P make'                       |
| glijbaan <i>vastmake</i>    | <i>ulle</i> glijbaan <i>make</i>      |
| 'slide up-tie'              | 'want slide make'                     |
| ik aa Cynthia <i>geve</i>   | <i>mag</i> ik Tompoes <i>geve</i>     |
| 'I to C give'               | 'may I T give'                        |
| Herrie <i>vinde</i>         | ik <i>kanniet</i> Herrie <i>vinde</i> |
| 'H find'                    | 'I cannot H find'                     |
| Daphnie ook <i>uitkijke</i> | poes <i>wil</i> <i>kijke</i> na boter |
| 'D too out-look'            | 'kitty wil look to butter'            |
- (26) Variation between Vnf and MOD/AUX + Vnf in Andrea (2;2)
- |                              |                                     |
|------------------------------|-------------------------------------|
| a. Vnf                       | b. MOD/AUX + Vnf                    |
| ikke <i>teekt</i>            | Jaja <i>heef</i> Pino <i>teekt</i>  |
| 'I drawn'                    | 'J has P drawn'                     |
| gasje <i>hope</i> (= lope)   | <i>doen</i> ze same <i>hope</i>     |
| 'grass walk'                 | 'do they together walk'             |
| hekke naas papa <i>zitte</i> | Jaja <i>gaat</i> daar <i>zitte</i>  |
| 'nice next daddy sit'        | 'J goes there sit'                  |
| Jaja fofje <i>pakke?</i>     | papa, <i>doe</i> -es <i>pakke</i>   |
| 'J slipper get?'             | 'daddy, do get'                     |
| <i>hinke</i>                 | <i>doe</i> -maa <i>koffiedrinke</i> |
| 'drink'                      | 'do coffee-drink'                   |

The infinitives in (25a) and (26a) (for which I prefer to use the term 'clausal infinitives') are the notorious "root infinitives." The stage of acquisition at which they are used has been referred to as the "optional

infinitive stage.” In Poeppel and Wexler (1993), the term “optional” is used to refer to the variable use of the lexical verb with finite morphology clause-initially and with nonfinite morphology clause-finally. Hence, with respect to their German data, Poeppel and Wexler (1993) argue that “the one feature that seems to distinguish Andreas’ knowledge of German from an adult’s knowledge of German is that Andreas’ optionally allows infinitives as matrix verbs” (1993: 29). Although the use of finite lexical verbs is claimed to be optional, it is Poeppel and Wexler’s view that at the initial stage of acquisition, finiteness has been established as a morphological property of lexical verbs. For early child Dutch, however, it has been shown that finiteness as a morphological feature of the lexical verb is not used productively. Furthermore, it has also been pointed out that in early child Dutch there is a distributional difference between finite and nonfinite lexical verbs based on both morphological and semantic properties. Thus, it seems warranted to conclude that optionality does not provide an adequate account of the use of finite and nonfinite lexical verbs at the initial state of acquisition. On the other hand, as shown in (25) and (26), there is free variation between Vnf and MOD/AUX + Vnf in Jasmijn (2;0) and Andrea (2;2). This is because utterances with Vnf are in the process of being replaced by utterances with AUX/MOD + Vnf structures. It is at this particular stage of acquisition that the term “optional” for the use of either Vnf or AUX/MOD + Vnf would make sense.

In the following, I will show that the use of MOD/AUX + Vnf has to be interpreted as evidence of an important developmental process in the acquisition of the functional properties of finiteness. After the initial stage in which children are unable to use finiteness with lexical verbs in a productive way, there is an intermediate stage in which modal phrases are used to express some of the properties of finiteness. At the relevant stage these modal phrases belong to a closed class of lexical elements that carry apparent properties of illocutionary force. This occurs before children reach the target state of knowing that finiteness is systematically realized with auxiliaries or with lexical verbs through verb movement and inflection.

### **3. The holistic stage**

In early learner languages, we often find a topic and predicate in juxtaposition and even predicates occurring alone. Predicates are commonly realized by a full noun or an adjective rather than by a verb. In early

child Dutch, *Mods* and *Auxs* are precursors in the acquisition of the functional properties of finiteness. In the initial stage of acquisition they function as modal operators in clause-initial or clause-final position. Dutch *nee* most prominently functions as a clausal operator with a negative modal meaning. In Jasmijn's data, as shown in (27), the earliest examples of *nee* as a negation device are found in (1;7–1;8). In Andrea's data, shown in (28), the earliest examples occur in (1;8). At (1;7–1;8) Jasmijn also evidences a few examples with *magniet* 'may-not' in clause-final position.

- (27) The first examples of negation in Jasmijn (1;7–1;8)  
*nee* tafel. *nee* tafel kunnene. tafel *nee* (1;7)  
 'no table. no table color. table no'  
*nee* doen uit (1;8)  
 'no do out'  
 mama schoene. papa *nee* (1;7)  
 'mommy shoes. daddy no'  
 mama *magniet* (1;7)  
 'mommy [smarties] allowed-not'  
 Cynthia teenie *magnie* (1;8)  
 'C toe allowed-not'
- (28) The first examples of negation in Andrea (1;8)  
*nee* appel (1;8)  
 'no apple'  
*nee* bal (1;8)  
 'no ball'  
 keruit, keruit *nee* 'it-out, it-out, no' (1;8)  
 da *nee*. (P: "daar niet, hè?") da *nee*. (1;8)  
 'there no. (P: "not there, isn't it?") there no'

In terms of its form and distribution, *nee* in early child Dutch is modelled on anaphoric *nee*, which is used as an answer to a yes/no question. The sentence negator in adult Dutch is *niet* 'not', while *geen* 'no' as a constituent negator is a fusion of *niet* 'not' and the indefinite article *een* 'a'. Judging from its form, it seems obvious that in early child Dutch *nee* as a clause negator is modelled on the anaphoric use of *nee* in the target language. It explains why initially learners may use *nee* with scope over the entire clause structure. The clause in the scope of *nee* in fact serves as the explicit expression of a presumed yes/no question and, hence, the meaning of *nee* can be paraphrased as 'I do not want'. Since the modal operator *nee* has scope over the clause structure as a whole, it is referred to as "holistic *nee*."



A similar use of the anaphoric negator has been observed for early child English and German. Here too, in the initial stage, children use the anaphoric form to negate the utterance as a whole. Examples of early cases of negation with *no* in English and *nein* in German are given in (29) and (30).

- (29) Early cases of sentence negation with English *no* (Clark and Clark 1977: 349)
- no* ... wipe finger  
*no* the sun shining  
*no* mitten  
*no* sit there  
wear mitten *no*  
*no* fall!
- (30) Early cases of sentence negation with German *nein* (Wode 1977: 93f.; Felix 1978)
- nein* sauber  
‘no clean’  
*nein* hauen  
‘no bang’  
*nein* schaffe ich  
‘no do I’  
*nein* Heiko Mütze  
‘no H cap’  
*nein* spielen Katze  
‘no play cat’

*Jasmijn* (1;7–1;9)

*Jasmijn* (1;7–1;9) can be regarded as the initial stage in which *nee* is used productively. Here, *nee* occurs in four different positions. Examples are given in (31).

- (31) The use of *nee* in *Jasmijn* (1;7–1;9). The topic element is capitalized.
- a. poessie bal pele. *nee* CYNTHIA afpakke (1;9)  
‘pussy ball play. no C snatch away’  
*nee* SEPEL emmer gooie dees (1;9)  
‘no spoon bucket throw this-one’

- b. *nee* tafel kunnene (1;7)  
 ‘no table color’  
*nee* potmake (1;9)  
 ‘no kaput-make’  
*nee* doen uit (1;8)  
 ‘no do out’  
*nee* tafel (1;7)  
 ‘no table’  
 poessie tille. *nee* nék. zó (1;9)  
 ‘kitty up-pick. no neck. this-way’
- c. TAFEL *nee* (1;7)  
 ‘no table’  
 Mijnie die. DIE *nee* (1;9)  
 ‘M that-one. that-one no’
- d. MIJNIE *nee* daahee. bove (1;9)  
 ‘M no that-way. upstairs’  
 POESSIE die *nee* ete (1;9)  
 ‘kitty that no eat’

In (31a), *nee* occurs before a full clause structure, that is, a clause structure with both a topic and a predicate, while in (31b) it occurs before a predicate only. In (31c), it occurs after a topic, while in (31d), it occurs between a topic and a predicate. As can be seen in (31a), (31b), and (31d) the term “predicate” refers to constituents such as VP, V, NP, or Adv. In the equivalent target-language structures these constituents are used as predicates. The topic as in (31a), (31c), and (31d) always refers to an NP constituent. (32) shows the frequencies with which these four types of *nee* clauses were distributed in Jasmijn (1;7–1;9).

- (32) The distribution of *nee* in Jasmijn (1;7–1;9)
- |                                   |    |
|-----------------------------------|----|
| a. <i>nee</i> + topic + predicate | 10 |
| b. <i>nee</i> + predicate         | 13 |
| c. topic + <i>nee</i>             | 5  |
| d. topic + <i>nee</i> + predicate | 4  |

Given that topic reference can be established through zero anaphora, structures with *nee* + predicate are ambiguous with respect to an interpretation of either (32a) or (32d). If we compare the developmental order in which structures as in (32a) and (32d) occur, it seems that *nee* before a clause structure with both a topic and a predicate is characteristic of Jasmijn’s initial stage (1;7–1;9). The main reason for assuming this to be true is the fact that at later stages of development there is an increase in the use of structures with topic + *nee* + predicate as in (32d), while

structures with *nee* + topic + predicate as in (32a) gradually disappear. Jasmijn's utterances with a holistic clause structure under the scope of *nee* all occur at (1;9). They are given in (33).

- (33) Examples of holistic *nee* in Jasmijn (1;9). The topic element is capitalized.

*nee* PETER bij zitte. *nee* PETER da zitte (1;9)

'no P with sit. no P there sit'

*nee* SEPEL emmer gooie dees (1;9)

'no spoon bucket throw this-one'

*nee* menneng CYNTHIA hebbe (1;9)

'no milk C have'

*nee* PETER fles ophale (1;9)

'no P bottle get'

poessie bal pele. *nee* CYNTHIA afpakke (1;9)

'pussy ball play. no C snatch away'

pop fles. *nee* MIJNIE drinke (1;9)

'doll bottle. no M drink'

*nee* POP ook valle (1;9)

'no doll too fall'

Peter drinke. *nee* MIJNIE drinke (1;9)

'P drink, no M drink'

Peter *nee* POES tafel krimme (1;9)

'P [says that] no kitty table climb'

In Jasmijn (1;7–1;9) there are a few negative modal expressions such as *kanniet* 'cannot', *magniet* 'may-not', *hoefniet* 'has-to-not', which occur in the same contexts as *nee*. Examples are given in (34).

- (34) Examples of negative modals in Jasmijn (1;7–1;9). The topic element is capitalized.

a. CYNTHIA teenie *magnie* (1;8)

'C toe allowed-not'

b. *kannie* bal pakke (1;9)

'cannot ball get'

c. POESSIE *hoefnie* meer (1;9)

'kitty have-to-not anymore'

MAMA *magniet* (1;7)

'mommy [smarties] allowed-not'

d. MIJNIE *kannie* zitte (1;9)

'M cannot sit'

PAARD *kanniet* nee valle (1;9)

'horse cannot no fall'

DIE *kannie* daarin (1;9)  
 'that-one cannot there-in'

In (34a), *magnie* occurs with a full clause structure, that is, a clause structure with both a topic and a predicate, while in (34b) *kannie* occurs with a predicate only. In (34c), *hoefnie* and *magniet* occur after a topic. Finally, in (34d), *kanniet* occurs between a topic and a predicate. (35) shows the frequencies with which these four types of *MODniet* clauses were distributed in Jasmijn (1;7–1;9).

- (35) The distribution of negative modals in Jasmijn (1;7–1;9)
- |    |                                    |   |
|----|------------------------------------|---|
| a. | topic + predicate + <i>MODniet</i> | 1 |
| b. | <i>MODniet</i> + predicate         | 1 |
| c. | topic + <i>MODniet</i>             | 2 |
| d. | topic + <i>MODniet</i> + predicate | 3 |

Given that *nee* and negative modals such as *kanniet* and *magniet* occur in the same distributional contexts, it seems fair to conclude that in early child Dutch *nee* can be analyzed as a modal operator.

The correct adult alternative to *nee* in the examples in (31) and (33) is *niet*. At the relevant stage, *niet* appears to be nearly absent. In a nonfinite context *niet* occurs only twice, after a topic as in *nee*, *daar nie* (1;9) 'no, there not' and between a topic and a predicate as in *seestraat nie aandoen* (1;9) 'Sesame Street not on-turn'. As pointed out in the above, these examples can be adequately accounted for as instances of negative imperatives.

Simultaneously with holistic *nee*, Jasmijn (1;7–1;9) also uses the expression *unne*, *hunne*, *minne*, *ninne*, *ulle*, etc., as a positive counterpart. It is productively used in precisely the same positions in which *nee* occurs. Examples of *unne*, etc., are given in (36).

- (36) Examples of *unne*, etc., in Jasmijn (1;7–1;9). The topic element is capitalized.
- |    |  |  |
|----|--|--|
| a. | <i>hunne</i> MIJNIE die sijfe (1;7)        |  |
|    | 'want M that-one write'                    |  |
|    | <i>unne</i> TOUT POESJE ballie pakke (1;8) |  |
|    | 'want naughty kitty ball get'              |  |
|    | <i>ulle</i> MIJNIE ook (1;8)               |  |
|    | 'want M too'                               |  |
| b. | <i>minne</i> uit (1;7)                     |  |
|    | 'want out'                                 |  |
|    | <i>ninne</i> pen pakke (1;7)               |  |
|    | 'want pen get'                             |  |
|    | <i>unne</i> die (1;7)                      |  |
|    | 'want that-one'                            |  |

- unne* hebbe kaas (1;8)  
 ‘want have cheese’  
*unne* kijke ope is (1;8)  
 ‘want look open is’  
 d. MIJNIE *minne* titat om (1;7)  
 ‘M want watch attached’

(37) shows the frequencies with which these different types of *unne*, etc., clauses were distributed in Jasmijn (1;7–1;9).

- (37) The distribution of *unne*, etc., in Jasmijn (1;7–1;9)
- |    |                                 |    |
|----|---------------------------------|----|
| a. | <i>unne</i> + topic + predicate | 19 |
| b. | <i>unne</i> + predicate         | 44 |
| c. | topic + <i>unne</i>             | 0  |
| d. | topic + <i>unne</i> + predicate | 1  |

As with *nee*, *unne* before a clause structure with both a topic and a predicate is characteristic of Jasmijn’s initial stage (1;7–1;9). Furthermore, structures with no topic, as in *unne* + predicate, are ambiguous with regard to either (37a) or (37d). Finally, as with *nee*, the holistic use of *unne*, etc., will disappear at later stages of development. Examples of the different types of holistic use of *unne*, etc., are given in (38).

- (38) Examples of the holistic use of *unne*, etc., in Jasmijn (1;7–1;9)
- hunne* MIJNIE die sijfe (1;7)  
 ‘want M that-one write’  
*unne* MIJNIE sijfe (1;7)  
 ‘want M write’  
*unne* MIJNIE dit sijfe dit (1;7)  
 ‘want M this-one write this-one’  
*nunne* MIJNIE hier sijfe (1;8)  
 ‘want M here write’  
*unne* TOUT POESSIE ballie pakke (1;8)  
 ‘want naughty kitty ball get’  
*ulle* MIJNIE ook (1;8)  
 ‘want M too’  
*ulle* IK sijfe (1;9)  
 ‘want I write’  
*ulle* UKKE sijfe (1;9)  
 ‘want I write’

In Jasmijn (1;7–1;9), there are few instances of the nonholistic use of *ul*, *el*, *wil* ‘want’. Examples are given in (39).

- (39) The use of *ul, el, wil* in Jasmijn (1;7–1;9)
- a. *ul* die hemme (1;7)  
‘want that-one have’  
*wil* uit (1;9)  
‘want out’
  - b. ik *wil* poes kijke (1;7)  
‘I want kitty look’

The holistically used *unne*, etc., forms seem to be modelled on the adult verb *willen* ‘want’. With respect to their distribution as well as their meaning, they function as the positive alternative to *nee*. Given that the meaning of *nee* and *unne*, etc., can be described as ‘[I] do not want’ and ‘[I] want’, both devices serve to express volition.

Other data collections provide additional evidence that the verb *willen* ‘want’ is a positive alternative to sentence negation. (40) shows a few examples from Schaerlaekens and Gillis (1987; 99) with both *willen* and its negative counterpart *wil nie*. If we compare these examples with those given in (38), they only differ with respect to the position of *willen/wilnie* in clause-final position.

- (40) Examples of *willen* ‘want’ v. *wilnie* ‘want not’ (Schaerlaekens and Gillis 1987)
- Frans bal spelen, *willen*  
‘F ball play, want’  
papa voordoen, *willen*  
‘daddy show, want’  
Frans pyama aandoen, *wil nie*  
‘F pyjamas on-do, want not’

To summarize, the holistic use of *nee/unne*, etc., to express volition typically occurs in Jasmijn (1;7–1;9). Other modal elements such as *magniet* ‘may-not’ or *kanniet* ‘can-not’ are also used holistically, though they occur much less frequently. A comparison of the frequencies of modal elements used holistically and nonholistically in Jasmijn (1;7–1;9) is given in Table 4).

Table 4. *Frequencies of modal elements used in Jasmijn (1;7–1;9)*

Negative +holistic		Negative –holistic		Positive +holistic	Positive –holistic
<i>nee</i>	<i>magniet</i> <i>kanniet</i>	<i>nee</i>	<i>kanniet</i> <i>hoefnie</i>	<i>unne</i>	<i>ul, wil</i>
28	3	4	4	64	5

The holistic use of modal operators such as *nee* and *umne*, etc., appears to be characteristic of the initial stage of acquisition. Due to progress in language development, they will be used less frequently and eventually they are given up entirely.

*Andrea (1;8-1;11)*

In Andrea (1;8-1;11), *nee* also occurs in four different positions. Examples are given in (41).

- (41) The use of *nee* in Andrea (1;8-1;11). The topic element is capitalized.
- a. MIJNIE toet *nee* (1;9)  
     ‘M dessert no’  
     papa maakt. POP pot *nee* (1;10)  
     ‘daddy made. doll broken. no’
  - b. *nee* appel (1;8)  
     ‘no apple’  
     bah. *nee* bah (1;10)  
     ‘yah. no yah’  
     keruit, keruit. *nee* (1;8)  
     ‘it-out, it-out. no’  
     da *nee*. da *nee* (1;8)  
     ‘there no. there no’
  - c. papa doen. MAMA *nee* (1;10)  
     ‘daddy do. mommy no’  
     papa, DEZE *nee* (1;11)  
     ‘daddy, this-one no’
  - d. MAMA *nee* auto mee (1;9)  
     ‘mommy[’s] no car with’  
     PAPA *nee* tok op. mama *ja*. mama *ja* tok op (1;10)  
     ‘daddy no meat up. mommy yes. mommy yes meat up’  
     DIE *nee* ape. die *ja* ape (1;11)  
     ‘those no monkeys. those yes monkeys’

While no examples have been found in which *nee* occurred before a clause structure with both a topic and a predicate, there were four cases, as in (41a), in which *nee* occurred after it. In a few utterances, as in (41b), *nee* occurs either before or after a predicate. There are also a few cases, such as in (41c), in which *nee* occurs after a topic. Finally, as illustrated in (41d), *nee* occurred most frequently between a topic and a

predicate. (42) shows the frequencies with which these four types of *nee* clause were distributed in Andrea (1;8–1;11).

- (42) The distribution of *nee* in Andrea (1;8–1;11)
- |    |                                |    |
|----|--------------------------------|----|
| a. | topic + predicate + <i>nee</i> | 4  |
| b. | <i>nee</i> + predicate         | 2  |
|    | predicate + <i>nee</i>         | 2  |
| c. | topic + <i>nee</i>             | 7  |
| d. | topic + <i>nee</i> + predicate | 20 |

Andrea's (1;8–1;11) utterances with a topic–predicate structure within the scope of *nee* are given in (43).

- (43) Examples of holistic *nee* in Andrea (1;9–1;11). The topic element is capitalized.
- MIJNIE toet *nee* (1;9)  
 ‘M dessert no’
- OEF. eten. *nee* (1;10)  
 ‘dog. eat. no’
- MIJNIE in *nee*. Mijnie *nee* in (1;10)  
 ‘M in no. M no in’
- papa maakt. POP pot *nee* (1;10)  
 ‘daddy made. doll broken no’

In Andrea (1;8–1;11), there are no examples of negative modals such as *kanniet* or *magniet*. As in Jasmijn (1;9), there are a few cases in which *niet* occurs in a nonfinite context. There are seven cases in which *niet* occurs after a topic as in *passa op dram. jokke nie* (1;11) and only one case in which *niet* occurs between a topic and a type of predicate: *mauw niet da. ape* (1;11). As was the case in Jasmijn's data, these examples can be accounted for as negative imperatives.

Simultaneously with *nee*, Andrea uses the expression *ja* ‘yes’ as a positive counterpart. It functions as an affirmation of assertion, meaning ‘indeed’. Although it occurs only three times in the data, it does so in the same contexts as *nee*. The two sequences of utterances in which affirmative *ja* occurs are given in (44).

- (44) The use of affirmative *ja* in Andrea (1;8–1;11)
- |    |   |
|----|---|
| a. | papa <i>nee</i> tok op. mama <i>ja</i> . mama <i>ja</i> tok op (1;10) |
|    | ‘daddy no meat up. mommy yes. mommy yes meat up’                      |
| b. | die <i>nee</i> ape. die <i>ja</i> ape (1;11)                          |
|    | ‘those no monkeys. those yes monkeys’                                 |

In Andrea (1;8–1;11), the only positive modal verb used is *moet*. It is



used four times in one particular phrasal form, *zo moettie* ‘this-way has-to-it’, meaning ‘That’s the way it should be’.

In summary, there are few instances of the holistic use of *nee* in Andrea (1;8–1;11). As a positive alternative to *nee*, Andrea uses the affirmative *ja*, which is only found clause-internally. Both *nee* and *ja* are used to express volition. They typically occur at the initial stage. Thus, except for the phrasal use of *zo moettie*, adult-like modal verbs are lacking. Table 5 has the frequencies with which *nee/ja* are used compared to the few modal alternatives.

Figures in Table 5 show that the modal operators *nee* and *ja* are characteristic of Andrea’s initial stage of acquisition. Both are eventually given up as modal expressions.

### *Conclusion*

In summary, the holistic use of *nee* and its positive counterparts appears to be characteristic of the initial stage of child Dutch. With respect to their form and their distribution, the holistic modal operators seem to be modelled on their anaphoric use in the target language. Therefore, the meaning of holistic *nee* can be paraphrased as ‘I do not want’, while the meaning of their positive alternatives *unne*, etc., and *ja* can be described as ‘I want’. Thus, given both their structural and semantic properties, holistic modal operators in early learner languages are claimed to express “volition.”

While the holistic use of the set of modal operators expressing “volition” is characteristic of the initial stage of acquisition, some of these operators may also appear in clause-internal position. This is particularly the case in later stages of acquisition when the holistic use occurs less frequently and is eventually given up entirely.

Further evidence of the functioning of *nee*, *unne*, etc., and *ja* as modal operators is the distributional opposition between *nee* ‘no-want’ and *kanniet* ‘can-not’ or *magniet* ‘may-not’ in both children. The first instances of this opposition occur in Jasmijn (1;7–1;9). Examples are given in (45).

Table 5. *Frequency of modal elements used in Andrea (1;8–1;11)*

Negative +holistic		Negative –holistic		Positive +holistic		Positive –holistic	
<i>nee</i>	MODniet	<i>nee</i>	MODniet	–	MOD	<i>ja</i>	<i>zo moettie</i>
15	–	20	–	–	–	3	4

- (45) The opposition between *nee* v. *kanniet* and *magniet* in Jasmijn (1;7–1;9)  
 PETER die *nee* (1;9)  
 ‘P that-one no’  
 CYNTHIA teenie *magnie* (1;8)  
 ‘C toe allowed-not’  
*nee* ope make dees (1;9)  
 ‘no open make this-one’  
*kannie* bal pakke (1;9)  
 ‘cannot ball get’

The distributional opposition between *nee* and *kanniet* or *magniet* explains why it is that in the children’s data there are no examples of *kannee* ‘can-no’, *magnee* ‘may-no’ or *neekan* ‘no-can’, *neemag* ‘no-may’. Since *nee* means ‘volition’, while *kanniet* expresses ‘possibility’ and *magniet* ‘permission’, it is impossible for *nee* to cooccur with the positive alternatives *kan* or *mag*.

The holistic use of modal operators expressing “volition” is still present in Jasmijn (1;10–1;11), when a whole range of other modal operators also come to be used. Characteristic of this later stage of acquisition, however, is the fact that here modal operators typically occur nonholistically, that is, between the topic and the predicate. Examples of the holistic use of *nee* and *ulle* as they still occur in Jasmijn (1;10–1;11) are given in (46).

- (46) The holistic use of *nee* and *ulle* in Jasmijn (1;10–1;11)
- a. *nee* POES vlees (1;10)  
 ‘no kitty meat’  
*nee* TOM POES buite. Cynthia ook nie (1;10)  
 ‘no TP outside. C also not’  
 deze. magwel. *nee* CYNTHIA afpakke (1;10)  
 ‘this-one. allowed-indeed. no C away-take’  
*nee* POESJE deze hebbe (1;10)  
 ‘no kitty this have’  
*nee* dikke bil. *nee* dikke bil CYNTHIA zegge (1;10)  
 ‘no big bottom. no big bottom C say’  
 opa ook nie? *nee* OPA gras (1;10)  
 ‘grandfather also not? no grandfather grass’  
 Peter hou vas *nee* val IK (1;11)  
 ‘P hold tight no fall I’  
 Cynthia niet. Cynthia bove. *nee* CYNTHIA kamer (1;11)  
 ‘C not. C upstairs. no C room’

- b. *ulle* ik TORE make (1;10)  
 ‘want I tower make’  
*ulle* IKKE doen (1;10)  
 ‘want I do’  
*ulle* PETER doen (1;10)  
 ‘want P do’  
*ulle* PETER make (1;10)  
 ‘want P make’  
*ulle* BOLLEHOF oma opete (1;11)  
 ‘want bad-wolf grandma up-eat’  
*ulle* IK schommele (1;11)  
 ‘want I swing’  
*ulle* IK zoeke (1;11)  
 ‘want I look-for’

In Jasmijn (1;10–1;11), modal operators such as *mag(wel)* ‘may-indeed’, *magniet* ‘may-not’, and *kanniet* ‘can-not’ also occur holistically. Examples are given in (47).

- (47) The holistic use of *mag(wel)*, *magniet*, and *kanniet* in Jasmijn (1;10–1;11)  
 Mijnie ook. MAGWEL (1;10)  
 ‘M too. allowed-indeed’  
*magwel. magwel* POESJE opete (1;11)  
 ‘allowed-indeed. allowed-indeed kitty up-eat’  
*mag* POP wel snoep hebbe (1;11)  
 ‘allowed doll indeed candy have’  
 doetIE huile. *magwel* (1;11)  
 ‘does-he cry. allowed-indeed’  
 CYNTHIA dit doen voor mij. *magwel* (1;11)  
 ‘C this do for me. allowed-indeed’  
 CYNTHIA prikke. *magwel* (1;11)  
 ‘C prick. allowed-indeed’  
*magwel. DEURTJE* opengaan (1;11)  
 ‘allowed-indeed. door open-go’  
*kanniet* POES in (1;11)  
 ‘cannot kitty in’  
*kanniet* ZELLEF (1;11)  
 ‘cannot myself’  
 POES bal pakke. *magniet, magwel* (1;11)  
 ‘kitty ball get. allowed-not, allowed-indeed’  
 POES opgete. *magniet* (1;11)  
 ‘kitty up-eaten. allowed-not’

mama, valtIE. *magniet* (1;11)  
 ‘mommy, falls-he. allowed-not’

Evidence for a holistic stage in the use of modal operators is not as conclusive in Andrea (1;8–1;11) as it is in Jasmijn (1;7–1;9). At the relevant stage, Andrea uses *nee* and *ja* mainly nonholistically. Only with *nee* does Andrea provide evidence of its holistic use. However, as will be shown below (see section 4, Table 7), in Andrea (2;0-2;1) *mag-ikke* ‘may-I’ occurs with the same distribution as *nee*. At the relevant stage, *mag-ikke* is a fixed phrase incorporating the pronominal element *ikke*. It is also used to express volition. The fact that a pronominal element is already part of this modal expression may explain why it does not occur in the earliest stage.

#### 4. The conceptual-ordering stage

The major development in Jasmijn (1;10–1;11) and Andrea (2;0–2;1) concerns the acquisition and frequent use of modal expressions such as *kanniet* ‘cannot’, *magniet* ‘may-not’, *kan(wel)* ‘can-indeed’, and *mag(wel)* ‘may-indeed’. In Jasmijn’s data these phrases occur in the same contexts as *nee* ‘no-want’ and *ulle* ‘want’, while in Andrea’s data they occur in the same contexts as *nee* ‘no-want’ and *mag-ikke* ‘may-I’. Hence, a distributional opposition has developed between the negative modal elements *nee*, *kanniet*, and *magniet*, on the one hand, and their positive modal counterparts *ulle* or *mag-ikke*, *kan(wel)*, and *mag(wel)*, on the other.

As the data will show, the acquisition of *kanniet*, *magniet*, *kan(wel)*, and *mag(wel)* coincides with the acquisition of a structural topic position. This topic position is similarly present in a particular and frequent use of modal verbs in the adult model. In target Dutch, modal verbs commonly occur in utterances such as *Dat kan niet* ‘that cannot’, *Dat kan wel* ‘that can indeed’, *Dat mag niet* ‘that may not’, *Dat mag wel* ‘that may indeed’, etc. In this type of utterance the pronoun *dat* occupies the topic position. As a pronominal topic it typically refers to a state of affairs that is to be inferred from context. Modal verbs projecting a structural topic position seem to serve as a target model for the production of modal phrases in early child Dutch. Evidence comes from the use of *wel* in *kanwel* and *magwel* in child utterances such as in *magwel pek hebbe* ‘may-indeed candy have’ (Jasmijn 1;11) or *kanhel papa zitte* ‘can-indeed daddy sit’ (Andrea 2;1). In adult Dutch *kanwel* and *magwel* instead of *kan* and *mag* is only possible in utterances such as *Dat kan*

*wel* or *Dat mag wel*, that is, in structures in which the pronoun *dat* occurs in topic position.

In the following it will be shown that these modal expressions play a central role in what is called “the conceptual-ordering stage.” The term “conceptual ordering” refers to the fact that both the selection and the sequential ordering of constituents in learner grammar is determined by principles of information structuring. It will be argued that at the relevant stage of acquisition child utterances consist of three structural positions each for constituents with a particular informational function.

*Jasmijn* (1;10–1;11)

(48) has some examples of utterances with the negative modal operators *nee* and *kanniet* (also *wilniet*), *magniet*, *hoefniet* in Jasmijn’s data from (1;10–1;11). The four types of structure that these modal operators occur in are given in (49) along with their frequency of use.

(48) Examples of the negative modal operators *nee* and *kanniet*, etc., in Jasmijn (1;10–1;11)

<i>nee</i>	<i>MODniet</i>
a. <i>nee</i> TOM POES buite (1;10) ‘no TP outside’	<i>kanniet</i> POES in (1;11) ‘can-not kitty in’ POES bal pakke <i>magniet</i> (1;10) ‘kitty ball get may-not’
b. <i>nee</i> oplikke (1;11) ‘no up-lick’ <i>nee</i> gras lope. Cynthia ook nie? (1;10) ‘no grass walk. C also not?’ <i>nee</i> trut [= ik ben geen trut] (1;11) ‘no bitch [= I am not a bitch]’	<i>kanniet</i> opete (1;11) ‘can-not up-eat’ <i>opemake kanniet</i> (1;11) ‘open-make can-not’ mama, <i>kanniet</i> opzitte kleeed? (1;11) ‘mommy, can-not on-sit rug?’ <i>magniet</i> trut. <i>magniet</i> trut zegge (1;11) ‘may-not bitch. may-not bitch say’
c.	<i>kanniet</i> (1;10) ‘0 can-not’ MIJNIE <i>kannie</i> (1;10) ‘M can-not’ <i>hoefnie</i> meer (1;11) ‘0 have-to-not more’ DAT <i>wilniet</i> (1;10) ‘that want-not’
d. POES <i>nee</i> teenie bijte (1;10) ‘kitty no toe bite’	MIJNIE <i>kannie</i> optaan (1;10) ‘M can-not up-get’ MAMA <i>kanniet</i> kusje (1;11) ‘mommy can-not kiss’

(49) Frequency of occurrence of *nee* and *kanniet*, etc., in Jasmijn (1;10–1;11)

<i>nee</i>		<i>MODniet</i>		
a.	<i>nee</i> + topic + predicate	7	<i>MODniet</i> + topic + predicate/ topic + predicate + <i>MODniet</i>	5
b.	<i>nee</i> + predicate	20	<i>MODniet</i> + predicate/ predicate + <i>MODniet</i>	26
c.	topic + <i>nee</i>	1	topic/0 + <i>MODniet</i>	7
d.	topic + <i>nee</i> + predicate	5	topic + <i>MODniet</i> + predicate	6

(50) has some examples of utterances with the positive modal operators *ulle*, *wil* (or *unne*, *il*), and *magwel*, etc., in Jasmijn's data from (1;10–1;11). The four types of structure that these modal operators occur in as well as their frequency of use are given in (51).

(50) Examples of positive modal operators *ulle*, etc., and *magwel*, etc., in Jasmijn (1;10–1;11)

<i>ulle</i> , etc.		<i>MOD</i>	
a.	<i>ulle</i> ikke doen (1;10) 'want I do'		<i>magwel</i> poesje opete (1;11) 'may-indeed kitty up-eat' poes bal pakke <i>magwel</i> (1;10) 'kitty ball get may-indeed'
b.	<i>il</i> dit oppe hand doen (1;11) 'want this on-the hand do' <i>unne</i> pleister op (1;10) 'want plaster on'		<i>magwel</i> pek hebbe (1;11) 'may-indeed candy have' <i>kanwel</i> optille (1;10) 'can-indeed up-lift' kusse hebbe <i>magwel</i> (1;10) 'pillow have may-indeed'
c.	dit <i>wil</i> ik (1;11) 'this want I'		deze <i>magwel</i> (1;10) 'this may-indeed' koppie thee <i>magwel</i> (1;11) 'cup-of tea may-indeed'
d.	poes <i>il</i> mij vinger happe (1;11) 'kitty want my finger bite'		Peter <i>moet</i> zitte (1;11) 'P has-to sit'

(51) Frequency of occurrence of *ulle*, etc., and *magwel*, etc., in Jasmijn (1;10–1;11)

<i>ulle</i> , etc.		<i>MOD</i>		
a.	<i>ulle</i> + topic + predicate	7	<i>MOD</i> + topic + predicate	6
b.	<i>ulle</i> + predicate	31	<i>MOD</i> + predicate/ predicate + <i>MOD</i>	10
c.	topic + <i>ulle</i>	1	topic/0 + <i>MOD</i>	13
d.	topic + <i>ul(le)</i> + predicate	6	topic + <i>MOD</i> + predicate	2

The evidence in (48) through (51) shows that at the relevant stage of acquisition, both the negative modal expressions *nee*, *kanniet*, *magniet*, and *hoefniet* as well as their positive counterparts *ulle*, *kanwel*, *magwel*, and *moet* occur in the same syntactic configurations. As is the case in adult Dutch, these modal elements are used for the expression of an array of modal meanings. Thus, as summarized in (52), at (1;10–1;11) Jasmijn seems to use *nee* and *ulle/wil* to express “volition,” *kanniet/wilniet* and *kanwel* to express “ability,” *magniet* and *magwel* to express “permission,” and *hoefniet* and *moet* to express “obligation.”

(52) The system of modal elements in Jasmijn (1;10–1;11)

	Negative modal	positive modal
Volition	<i>nee</i> 'I want not'	<i>ulle/wil</i> 'I want'
Ability	<i>kannie/(wilniet)</i> 'It is not possible'	<i>kanwel</i> 'It is possible'
Permission	<i>magniet</i> 'It is not allowed'	<i>magwel</i> 'It is allowed'
Obligation	<i>hoefniet</i> 'It does not have to'	<i>moet</i> 'It has to'

The structural configuration as described in (49a) and (51a) shows that the holistic function of modal elements, as was already present in Jasmijn's earlier data, is still present at this stage of acquisition. Structures such as (49c), (51c), (49d), and (51d) are evidence that modal operators project a structural topic position. Structures such as (49b) and (51b) are ambiguous: on the one hand, the modal element may operate holistically as in (49a) and (51a); on the other hand, a topic, as in (49d) and (51d), may have to be inferred from context.

At the relevant stage of acquisition, structures such as (49c), (51c), (49d), and (51d) begin to occur. The nominal element in initial position is claimed to be functioning as a topic. Evidence of a structural topic position can be found in examples with both an agent in initial position, such as *Mijnne kanniet optaan* (1;10) 'M can-not up-get', *mama kanniet kusje* (1;11) 'mommy can-not kiss', and examples with an object in initial position, such as *deze kanniet opeten* (1;11) 'this-one can-not up-eat', *koppie thee magwel* (1;11) 'cup-of tea may-indeed'. Further evidence comes from the use of *nee*. Since *nee* is claimed to be used in similar distribution to *kanniet* or *magniet*, it should also project a structural topic position. Examples from Jasmijn's data show that this is indeed the case. As illustrated in utterances such as *poes nee teenie bijte* (1;10) 'kitty no toe bite' and *dit nee afdoen* (1;10) 'this no off-do', *nee* can be used with

both an agent and an object in clause-initial position. Finally, given a structural position for a topic element, it is possible to leave this position empty if the referent can be inferred from context. This explains why in child utterances with a modal operator and a transitive verb such as *doen* 'do', *pakken* 'get', *losmaken* 'loose-make', *openmaken* 'open-make', *opeten* 'up-eat', *stukmaken* 'kaput-make', *hebben* 'have', *zien* 'see', *zoeken* 'look for' the object is often missing. Examples of this type of utterance are given in (53).

- (53) Utterances with a transitive verb and an empty object position in Jasmijn (1;10–1;11)
- kánnie dóen. ulle Peter doet* (1;10)  
 '0 can-not do. want P does'
- kannie pakke* (1;11)  
 '0 can-not get'
- kanniet losmake* (1;11)  
 '0 can-not loose-make'
- magniet opgete* (1;11)  
 '0 may-not up-eaten'
- kanniet opemake* (1;11)  
 '0 can-not open-make'
- kanniet opete* (1;11)  
 '0 can-not up-eat'
- dit is tuk. magniet tukmake* (1;11)  
 '0 this is kaput. may-not kaput-make'
- kanniet hebbe* (1;11)  
 '0 can-not have'
- kanniet zien* (1;11)  
 '0 can-not see'
- kanniet zoeke* (1;11)  
 '0 can-not look-for'

The figures in Table 6 summarize the frequencies with which modal verbs in Jasmijn's data are used in the same structural configuration as *nee* and *ulle*, etc. Compared to the number of modal verbs at the holistic stage (see Table 4), it is obvious that a significant increase has occurred.

Table 6. *Frequency of modal elements used in Jasmijn (1;10–1;11)*

<i>nee</i>	MODniet	<i>ulle</i>	MOD
33	44	45	31



In summary, the acquisition of modal elements such as *magwel* and *kanniet* establishes a closed class of modal operators, which comprises adult-like modal elements such as *kan(wel)*, *mag(wel)*, *kanniet*, and *magniet* but also non-adult-like modal elements such as *nee* and *ulle*. At the relevant stage, these modal operators provide a projection of a structural topic position. As a consequence, the clause-initial position of holistic *nee/ulle*, etc., has to be given up in favor of a clause-internal position. The acquisition of a structural topic position is a characteristic property of this particular stage of acquisition. Elements occurring in topic position are used to establish external reference either to the outside world or to a previous utterance. Given the fact that the topic position has become a structural property of child grammar, external reference may also be established through a zero topic if the referent is assumed to be understood.

On a discourse-functional level, the modal elements as listed in (52) each carry a particular pragmatic meaning. Thus *ulle*, *mag-ikke*, and *nee* are used to express "volition," *kan(wel)* and *kanniet* express "ability," *mag(wel)* and *magniet* express "permission," and, finally, *moet* and *hoefniet* express "obligation." With the acquisition of a closed class of modal elements Jasmijn has also created a structural position for the use of elements with a functional pragmatic meaning. Given such a structural position, the child's grammar may allow for the use of other pragmatic devices, too. At the relevant state of Jasmijn's grammar, this is indeed what happens. These other pragmatic devices appear to be *doet(ie)* 'does-he' and *doemaar* 'do-please', *kommest* 'come-just' and *kommaar* 'come-please'. In target Dutch, *doet-ie* is a complex verb form that consists of the finite verb *doet* 'does' and the 3rd person sg. clitic *ie* 'he'. Furthermore, adult expressions such as *doe maar*, *kom eens*, and *kom maar* entail the imperative forms *doe* 'do' and *kom* 'come' with no explicit subject and the particles *eens* and *maar* meaning 'just', 'please'. In child Dutch, however, *doetie* and *doemaar*, *kommest* and *kommaar* occur unanalyzed. They seem to fulfil particular pragmatic functions. *Doetie*, and occasionally another finite alternative of *doen*, may indicate that the utterance has to be interpreted as an assertion, whereas *doemaar*, *kommest*, *kommaar* are obviously used to express imperatives.

The acquisition of elements for the expression of an assertion or an imperative happens mainly in Jasmijn (1;11). Examples are given in (54) and the frequencies of occurrence are given in (55).

- (54) *Doetie*, etc. (assertions), and *doemaar*, etc. (imperatives) in Jasmijn (1;10–1;11)
- a. *doetie omdraaie* (1;11)  
'does-he over-turn'

- doetie* alles opete (1;11)  
 ‘does-he everything up-eat’  
*doetie* alles Cookiemonster opete (1;11)  
 ‘does-he everything C up-eat’
- b. Peter, *komm*es daahee ligge (1;10)  
 ‘P, come-just there-to lie’  
*doemaar* tafeltje make (1;11)  
 ‘do-just table make’
- (55) Frequencies of *doetie* (assertions) and *doemaar* (imperatives) in Jasmijn (1;10–1;11)
- a. *doetie* + predicate           9  
 b. *doemaar* + predicate       12

In child Dutch, *doetie* is an unanalyzed form with an inherent topic element. This explains why it projects no initial topic position. The same holds for the imperative devices *doemaar*, etc. They provide no topic position either.

The negative equivalent of *doemaar* and *doetie* is *niet*. Examples are given in (56). Frequencies of occurrence are given in (57).

- (56) *Niet* to express negative assertions (questions) and imperatives in Jasmijn (1;10–1;11)
- a. allemaal *niet* zitte (1;11)  
 ‘everybody not sit’  
 die *niet* afpakke (1;11)  
 ‘that-one not away-snatch’  
 heen lope. Peter *niet* vast (1;11)  
 ‘alone walk. P not tight’  
*niet* Cynthia bed slape (1;11)  
 ‘not C bed sleep’  
 nee gras lope. Cynthia *ook niet?* (1;10)  
 ‘no grass walk. C also not?’  
 niet dit. die *niet* (1;10)  
 ‘not this-one. that-one not’
- b. *niet* omgooie. Cynthia maakt (1;11)  
 ‘not over-throw. C made’  
*niet* voor poes (1;11)  
 ‘not for kitty’
- (57) Frequencies of *niet* to express negative assertions and imperatives in Jasmijn (1;10–1;11)
- a. topic + *niet* + predicate       22  
 b. *niet* + predicate               14

The difference between utterances with *niet* in (56a) and (56b) is given by the presence or absence of a topic position. In assertions such as (56a) there is a topic position available, while in imperatives, as is the case with *doemaar*, etc., in (54), no topic position is provided.

Finally, it seems important to note that, at the relevant stage of acquisition, utterances with temporal auxiliaries such as *heb* 'have', *heeft* 'has', and *ben* 'am', *is* 'is' are systematically lacking. Jasmijn has only two examples of the temporal auxiliary *heb* 'have': *heb pop inmedaan* (1;11) '[I] have doll in-done' and *pop, heb je slapen?* (1;11) 'doll, have you slept?' This nearly complete absence of auxiliary verbs shows that target-language properties of the tense–aspect system are not yet instantiated.

*Andrea* (2;0–2;1)

(58) has a few examples of utterances with the negative modal expressions *nee* and *kanniet*, *magniet*, etc., in Andrea's data from (2;0–2;1). The four types of structure that these modal operators occur in as well as their frequency of use are given in (59).

(58) Examples of the negative modal operators *nee* and *kanniet*, etc., in Andrea (2;0–2;1)

<i>nee</i>	<i>MODniet</i>
a. —	—
b. <i>nee</i> kijke (2;0) 'no look'	<i>hoeniet</i> plak op (2;0) 'have-to-not glue on'
<i>nee</i> bad zitte (2;1) 'no bath sit'	<i>kanniet</i> pakke deze (2;1) 'can-not get this-one'
papa, <i>nee</i> doen (2;1) 'daddy, no do'	raam. opemake. <i>kanniet</i> (2;1) 'window. open-make. cannot'
	papa af. <i>gaat niet</i> (2;1) 'daddy off. goes not'
	<i>nee, moet niet. hier zitte. papa toe</i> (2;0) 'no, have-to not. here sit. daddy to'
	<i>handig niet</i> kusje geve (2;1) 'handy not kiss give'
c. <i>nee</i> kijke, <i>nee</i> (2;0) 'no look, 0 no'	DEZE <i>mag ook niet?</i> (2;0) 'this-one may also not?'
	<i>gaat niet</i> (2;1) '0 goes not'
	<i>unnie niet</i> (2;0) '0 want I not'

- d. JAJA *nee* luier aan (2;0) DEZE *kanniet* ope (2;1)  
 ‘J no diaper on’ ‘this-one cannot open’  
 GEKKE AAP, *nee* au DISSE *hoeniet* meeneme (2;1)  
 doen (2;0) ‘this-one have-to-not with-take’  
 ‘funny monkey, no ow do’  
 POPPIE *nee* ape (2;1) BINNE TOE *kannik* niet (2;1)  
 ‘doll no sleep’ ‘inside to can-I not’
- (59) Frequency of occurrence of *nee* and *kanniet*, etc., in Andrea  
 (2;0–2;1)

	<i>nee</i>	<i>MODniet</i>
a. <i>nee</i> + topic + predicate	0	<i>MODniet</i> + topic + predicate 0
b. <i>nee</i> + predicate	9	<i>MODniet</i> + predicate/ predicate + <i>MODniet</i> 27
c. topic + <i>nee</i>	1	topic/0 + <i>MODniet</i> 6
d. topic + <i>nee</i> + predicate	7	topic + <i>MODniet</i> + predicate 4

(60) has some examples of utterances with the positive modal operators *mag-ikke* and *kan(wel)*, *mag(wel)*, etc., in Andrea’s data from (2;0–2;1). The four types of structure that these modal operators occur in as well as their frequency of use are given in (61).

- (60) Examples of the positive modal operators *mag-ikke* and *kan(wel)*, etc., in Andrea (2;0–2;1)

	<i>mag-ikke</i>	<i>MOD</i>
a. —	—	—
b. <i>mag-ikke</i> fomme, ja? (2;0)	papa mauw is? <i>mag</i> kijke (2;0)	‘daddy kitty is? may look’
‘may-I swing, yes?’	deze hebbe, <i>mag</i> (2;1)	‘this-one have, may’
<i>mag-ikke</i> ijssie hebbe? (2;1)	<i>mag</i> , deze hebbe (2;1)	‘may, this-one have’
‘may-I ice-cream have?’	<i>kanhel</i> papa zitte (2;1)	‘can-indeed daddy sit’
<i>mag-ikke</i> ook bank zitte? (2;1)	papa uit. <i>kanwel</i> (2;1)	‘daddy out-of. can-indeed’
‘may-I too bank sit?’	<i>hoef</i> aaie? (2;0)	‘have-to caress?’
<i>mag-ikke</i> ook gijbaan? (2;0)	zo <i>moettie</i> (2;0)	‘this-way have-to-it’
‘may-I also slide?’	hier <i>kanwel</i> (2;1)	‘here can-indeed’
<i>mag-ikke</i> buite toe? (2;1)	poppie <i>kan</i> (2;1)	‘doll can’
‘may-I outside to?’		
c. —		

- d. — Jaja *mag* dop opdoen (2;0)  
 ‘I may lid ondo’  
 deze make. papa, *moet* make (2;0)  
 ‘this-one make. daddy, has-to make’  
 deze *moet* hier (2;1)  
 ‘this-one has-to here’  
*kan* uit (2;1)  
 ‘0 can out-of’

(61) Frequency of occurrence of *mag-ikke* and *kan(wel)*, etc., in Andrea (2;0–2;1)

<i>mag-ikke</i>		<i>MOD</i>	
a. <i>mag-ikke</i> + topic + predicate	–	<i>MODniet</i> + topic + predicate	–
b. <i>mag-ikke</i> + predicate	22	<i>MODniet</i> + predicate/ predicate + <i>MODniet</i>	7
c. topic + <i>mag-ikke</i>	–	topic/0 + <i>MODniet</i>	7
d. topic + <i>mag-ikke</i> + predicate	–	topic + <i>MODniet</i> + predicate	11

The evidence in (58) through (61) shows that at the relevant stage of acquisition the elements *nee*, *kanniet*, *magniet*, etc., as well as *mag-ikke*, *kan(wel)*, *mag*, etc., occur in the same syntactic configurations. As is the case in Jasmijn’s data these modal elements are used for the expression of an array of modal meanings. Thus, as summarized in (62), at (2;0–2;1) Andrea seems to use *nee/unnie niet* and *mag-ikke* to express “volition,” *kanniet*, *gaatniet*, *handig niet*, and *kan(wel)* to express “ability,” *magniet* and *mag* to express “permission,” and *moetniet*, *hoefniet*, *moet*, *hoef* to express “obligation.”

(62) System of modal elements in Andrea (2;0–2;1)

	Negative modal	Positive modal
Volition	<i>nee/unnie niet</i> ‘I want not’	<i>mag-ikke?</i> ‘may-I?/I want’
Ability	<i>kanniet/gaat niet/handig niet</i> ‘It is not possible’	<i>kan(wel)</i> ‘It is possible’
Permission	<i>magniet</i> ‘It is not allowed’	<i>mag</i> ‘It is allowed’
Obligation	<i>moet niet/hoef niet</i> ‘It does not have to’	<i>moet/hoef</i> ‘It has to’

At the relevant stage, modal elements with a holistic function as in (59a) and (61a) do not occur. As in Jasmijn’s data, structures such as (59c), (61c), (59d), and (61d) seem to involve modal operators projecting a

structural topic position. Structures such as (59b) and (61b) are ambiguous.

Evidence of a structural topic position is provided both by examples with an agent in initial position, as in *Jaja nee luiert aan* (2;0) 'J no diaper on', *Jaja mag dop opdoen* (2;0) 'J may lid on-do', *poppie kan* (2;1) 'doll can', and examples with an object in initial position, as in *deze kanniet ope* (2;1) 'this-one cannot open', *disse hoeniet meeneme* (2;1) 'this-one have-to-not with-take', *deze moet hier* (2;1) 'this-one has-to here'. Furthermore, given a structural position for a topicalized element, it is possible, as it was in Jasmijn (1;10-1;11), to leave this position empty if the referent can be inferred from context. This explains why in child utterances with a modal operator and a transitive verb such as *aaien* 'caress', *doen* 'do', *hebben* 'have', *maken* 'make', *pakken* 'get' the object is often missing or in afterthought position. Typical examples of this type of utterance are given in (63).

- (63) Utterances with a transitive verb and an empty object position in Andrea (2;0-2;1)
- nee* hoeft aaien (2;0)  
 '0 no have-to caress'  
 papa, *nee* doen (2;1)  
 'daddy, 0 no do'  
*nee* papa, *manniet* doen (2;0)  
 'no daddy, 0 may-not do'  
*kánnie nie* aaien (2;0)  
 '0 can't not caress'  
*kanniet* pakke, *deze* (2;1)  
 '0 cannot get, this-one'  
 papa, *deze* make. papa, *moet* make (2;0)  
 'daddy, this-one make. daddy, 0 has-to make'  
*mag-ikke* hebbe? foto jouw? (2;1)  
 '0 may-I have? picture your?'

The figures in Table 7 summarize the frequencies with which modal verbs are used in the same structural configuration as *nee* and *mag-ikke* in Andrea (2;0-2;1). Compared to the number of modal verbs appearing at the holistic stage (see Table 5), it is obvious that a significant increase has occurred.

Table 7. Frequency of modal elements used in Andrea (2;0-2;1)

nee	MODniet	mag-ikke	MOD
17	37	22	25

Andrea (2;0–2;1) uses similar phrases to Jasmijn (1;10–1;11) to express the pragmatic function of assertion and imperative. In order to express assertions, she uses unanalyzed *doetie* ‘does-he’, *gaatie* ‘goes-he’, and occasionally another finite alternative such as *doen* ‘do-we’ and *gaan* ‘go-we’. For the expression of imperatives she uses both *doemaar* ‘do-please’ and *kommaar* ‘come-please’. Examples are given in (64), and the frequencies of use are given in (65).

- (64) *Doetie*, etc. (assertions), and *doemaar*, etc. (imperatives), in Andrea (2;0–2;1)
- a. *doetie* viesmake (2;1),  
‘does-he dirty-make’  
*gaatie* ape (2;1)  
‘goes-he sleep’  
papa, *doen* gijbaan heg zette (2;0)  
‘daddy, do slide away put’  
Tita, *gaan* Mijnie hale (2;0)  
‘T, go M get’
  - b. *doemaa* hekke higge (2;0)  
‘do-please nicely lie’  
*komma* kijke papa. donker. donker is (2;0)  
‘come-just look daddy. dark. dark is’  
*doemaa* been vasthoue pappie (2;1)  
‘do-please leg tight-hold daddy’  
papa, *kommaa* hare kamme (2;1)  
‘daddy, come-just hair comb’
- (65) Frequencies of *doetie* (assertions) and *doemaar* (imperatives) in Andrea (2;0–2;1)
- a. *doetie*, *gaatie* + predicate 15
  - b. *doemaar*, *kommaar* + predicate 19

In child Dutch *doetie*, *gaatie*, *doen*, and *gaan* are unanalyzed forms with an inherent topic element. This explains why these devices do not project an initial topic position. The same holds for the imperative devices *doemaar* and *kommaar*. They also do not provide a topic position.

As is the case in Jasmijn (1;10–1;11), the negative equivalent of *doemaar* and *doetie* is *niet*. Examples are given in (66), and frequencies of occurrence are given in (67).

- (66) *Niet* to express negative assertions and imperatives in Andrea (2;0–2;1)
- a. Cynthia *niet* bil (2;1)  
‘C not glasses’

- mauw kijke, mauw *niet* huile (2;0)  
 ‘kitty look, kitty not cry’  
 Ruti hel bad zitte. poppie *niet* (2;1)  
 ‘R indeed bath sit. doll not’
- b. Mol tok eten, *niet* huile (2;0)  
 ‘Mole meat eat, not cry’  
*niet* koe-e, koeje (2;0)  
 ‘not cows, cows’
- (67) Frequencies of *niet* to express negative assertions and imperatives in Andrea (2;0–2;1)
- a. topic + *niet* + predicate 12  
 b. *niet* + predicate 13

Here too, the difference between utterances with *niet* in (66a) and (66b) is given by the presence or absence of a topic position. In assertions as in (66a) there is a topic position available, while, as is the case with *doemaar*, etc., no topic is provided in imperatives.

Finally, at the relevant stage of acquisition, utterances with temporal auxiliaries such as *heb* ‘have’, *heeft* ‘has’, and *ben* ‘am’, *is* ‘is’ are systematically lacking. Andrea has only one example of the use of the temporal auxiliary *heb* ‘have’: *au daant heb* (2;1) ‘ow done have’. As is the case in Jasmijn (1;10–1;11) this nearly complete absence of auxiliaries shows that target-language properties of the tense–aspect system are not yet instantiated in Andrea either.

### Conclusions

If we compare Jasmijn’s and Andrea’s data at the holistic stage with their data from the conceptual-ordering stage, the main difference is the number and distribution with which the different types of modal phrases occur. Tables 8 and 9 show the frequencies with which modal phrases were used at the two relevant stages of development.

Table 8. *Frequency of modal phrases in Jasmijn (1;7–1;9) v. (1;10–1;11)*

	nee	MODniet	niet	ulle	MOD	doetie/ doemaar, etc.
Holistic stage (1;7–1;9)	32	7	1	64	5	0
Conceptual-ordering stage (1;10–1;11)	33	44	25	45	31	22



Table 9. *Frequency of modal phrases in Andrea (1;8-1;11) v. (2;0-2;1)*

	nee	MODniet	niet	ja/ mag-ikke	MOD	doetie/ doemaar, etc.
Holistic stage (1;8-1;11)	35	0	0	3	(4)	0
Conceptual-ordering stage (2;0-2;1)	17	37	33	22	25	34

Figures for both children demonstrate that at the holistic stage the only modal operators that are used rather frequently are *nee* and its positive counterpart *ulle/ja*. At the conceptual-ordering stage there is a major increase in the number of modal operators to express an array of functional pragmatic meanings.

At the conceptual-ordering stage, the most significant characteristic is the fact that both children use modal phrases in morphologically fixed expressions that are not (yet) to be categorized as expressions of a verbal category. It does not seem accidental that this cooccurs with the absence of temporal auxiliaries.

Some of the phrasal forms used as modal operators originate from modal expressions such as *magwel* ‘may-indeed’, *kanwel* ‘can-indeed’, *mag-ikke* ‘may-I’, *hoenie* ‘has-to-not’, *moettie* ‘has-to-he’ or from light verbs such as *doetie* ‘does-he’, *doemaar* ‘do-just’, *kommies* ‘come-just’, *kommaar* ‘come-just’. Others even have a nonverbal origin, such as *nee* ‘no’, *ja* ‘yes’, *handigniet* ‘handy-not’, *niet* ‘not’. Despite their difference in origin, these modal operators are used with the same distributional properties. Hence, they constitute a syntactic category that specifically holds for early child language. Given the fact that the linguistic status of these modal operators cannot be determined from the target-language point of view, they will be categorized as proto-MOD.

The proto-MOD phrases of the conceptual-ordering stage belong to a closed class of six pairs (positive and negative) of phrasal expressions. The inventory of the different forms of proto-MOD phrases is given in (68) and (69). These phrasal forms can be analyzed as operators used to express “volition,” “ability,” “obligation,” “assertion,” and “imperative.” It is their linguistic function to express properties of illocutionary force.

(68) Proto-MOD phrases in Jasmijn (1;10-1;11)

Proto-MOD	Positive	Negative
Volition		
a. <i>ulle/nee</i>	<i>ulle</i> tore make ‘want tower make’	poesje <i>nee</i> da zitte ‘kitty no there sit’

	Ability		
b.	<i>kanwel/kanniet</i>	<i>kánwel</i> optille 'can-do up-lift'	mama <i>kanniet</i> opzitte kleed? 'mommy can-not on-sit carpet'
	Possibility		
c.	<i>magwel/magniet</i>	Cynthia prikke. <i>mágwel</i> 'C prick. may-do'	<i>magniet</i> trut zegge 'may-not bitch say'
	Obligation		
d.	<i>moet</i>	Peter <i>moet</i> zitte 'P has-to sit'	
	Assertion		
e.	<i>doetie/niet</i>	<i>doetie</i> alles opete 'does-he everything up-eat'	allemaal <i>niet</i> zitte 'everybody not sit'
	Imperative		
f.	<i>doemaa, kommaa/ niet</i>	Cynthia <i>doe maar</i> opmake 'C do-please on-make' <i>kommaa</i> meegaan 'come-please with-go'	<i>niet</i> omgooie 'not over-turn'

## (69) Proto-MOD phrases in Andrea (2;0–2;1)

	Proto-MOD	Positive	Negative
	Volition		
a.	<i>mag-ikke?/nee</i>	<i>mag ikke</i> sokkie meeneme? 'may I sock with-take?'	<i>nee</i> bad zitte 'no bath sit'
	Ability		
b.	<i>kan(wel)/kannie</i>	<i>kánhel</i> papa zitte 'can-do daddy sit'	raam. opemake. <i>kánniet</i> 'window. open-make. can-not'
	Permission		
c.	<i>mag/manniet</i>	<i>mág</i> deur opemake 'may door open-make'	<i>mánniet</i> doen 'may-not do'
	Obligation		
d.	<i>moet/hoenie</i>	papa, <i>moet</i> make 'daddy, has-to make'	disse <i>hoeniet</i> meeneme. 'this-one has-to-not with take'
	Assertion		
e.	<i>doetie, gaatie/niet</i>	<i>doetie</i> hantie geve 'does-he hand give' <i>gaatie</i> ape 'goes-he sleep'	mauw <i>niet</i> huile 'kitty not cry'
	Imperative		
f.	<i>doemaa, kommaa/ niet</i>	<i>toemaa</i> jurk uitdoen 'do-please dress out-do' papa <i>kommaa</i> hare kamme 'daddy come-please hair comb'	<i>niet</i> au doen 'not ow do'

As pointed out earlier, the proto-MOD phrases in (68) and (69) cannot yet be categorized as expressions of a verbal category of the target language. Therefore, in Hoekstra and Jordens (1994) it was argued that these MOD phrases seemed to be functioning as adjuncts. It explains why they can be both adverb-like elements such as *nee* 'no', *handigniet*

'handy-not', and *niet* 'not' and modal-verb-like elements such as *kanniet* and *magwel*.

Finally, the distributional analysis has shown that the proto-MOD elements provide a projection of a structural topic position. Given this structural topic position, children are able to use an agent or an object sentence-initially. Furthermore, where the topic referent can be inferred from context, its position may remain empty. Thus, at the relevant stage, the holistic use of *nee, ulle/ja* is given up in favor of a clause-internal use of a closed class of modal phrases. These modal phrases function as linking devices between constituents each with a particular pragmatic function. In the following they will be referred to as *illocutionary phrases* (ILP).

#### *Functional relations at the conceptual-ordering stage*

For the assessment of the functional relations between constituents it seems relevant to take into account the specific way in which each of these constituents contributes to the process of information structuring. Examples of three-constituent utterances that are typical of the relevant stage of acquisition are given in (70) and (71).

#### (70) Three-constituent utterances in Jasmijn (1;10–1;11)

Topic	ILP	Predicate	Gloss
Mijnie	kan	losmake (1;10)	'M can loose-make'
Mijnie	nee	omgooie (1;10)	'M no over-turn'
dit	nee	afdoen (1;10)	'this no off-do'
Peter	moet	zitte (1;11)	'P has-to sit'
poes	il	mij vinger happe (1;11)	'kitty want my finger bite'
Mijnie	kanniet	drinke melk drin (1;11)	'M cannot drink milk it-in'
	doettie	alles opete (1;11)	'does-he everything up-eat'
ik	doette	op zitte (1;11)	'I do-there on-sit'
Cynthia	doemaar	opmake (1;11)	'C do-please on-make'
die	niet	afpakke (1;11)	'that not away-take'

#### (71) Three-constituent utterances in Andrea (2;0–2;1)

Topic	ILP	Predicate	Gloss
Jaja	mag	dop opdoen (2;0)	'J may lid on-do'
poppie	nee	ape (2;0)	'doll no sleep'
poppie	niet	Jaja help (2;0)	'doll not J help'

disse	hoeniet	meeneme (2;1)	'this-one has-to-not with-take'
da	kanniet	zitte (2;1)	'there cannot sit'
	doetie	hantie geve (2;1)	'does-he hand give'
	gaatie	ape (2;1)	'goes-he sleep'
die	maa	hier doen (2;1)	'that-one please here do'

In (70) and (71) the element occurring in initial position is referred to as "topic." The topic is the element with anchoring function, the constituent that the utterance is about. In topic position, both children use elements such as proper names and deictic pronouns. The anchoring function of these elements concerns placement of the utterance in a particular context. The initial position is a structural position for the topic element only. Evidence is provided by the fact that *wh*-question words do not occur in early child Dutch. The phrasal expressions in second position belong to a closed-class category of elements, each having a particular pragmatic function. They are used to express "illocutionary force," that is, they indicate whether the utterance is to be understood as an expression of "volition," "ability," "permission," "obligation," "assertion," or "imperative." Where the position of these pragmatic elements remains empty, it expresses the default function of assertion. Although most of these illocutionary phrases (ILP) are like modal verbs in adult Dutch, here, in child Dutch, they are functioning grammatically as modal adjuncts. From a developmental point of view, therefore, they can be termed "protofunctional." The constituents occurring in end position are VP-like expressions. They refer to a particular state of affairs. Three-constituent utterances, as presented in (70) and (71), are used to indicate that this state of affairs holds for the anchoring element in topic position. Given this relation between the VP-like constituent in end position and the topic element in initial position, the VP-like constituent can be referred to as the "predicate." Finally, the relation between the predicate and the topic is a matter of validation. It is established by the ILPs. Hence, the ILPs function as devices for pragmatic linking.<sup>1</sup>

In sum, at the relevant stage both function and ordering of constituents occur according to principles of conceptual or information structuring. Thus, the topic as the anchoring element is usually expressed in first position, the protofunctional phrase indicating illocutionary force in second position, and the predicate expressing a particular state of affairs in final position. It is for precisely these reasons of informational structuring that this particular stage of acquisition is called the "conceptual-ordering stage" (COS).

In her study on the acquisition of negation and finiteness in second-language learner varieties, Becker (forthcoming) found that in the

so-called prebasic and basic learner variety a distinction has to be made between standard negation, generally referred to as “sentence negation,” and what she calls “negative assertion.” Sentence negation, as in *I haven't seen Mary*, is used to indicate that a particular state of affairs does not hold for a topic element. Negative assertion, as in *I have not seen Mary*, is used to indicate that a particular claim does not hold. It is “a counter assertion to the interlocutors’s implicit assumption” (forthcoming: 15), and hence it is used in opposition to the affirmative counterpart as in *I have seen Mary*. Since the opposition between a negative assertion and an affirmation is achieved by the use of contrastive intonation, the negative element of a negative assertion functions as a “focal negator” (forthcoming: 16).

At the COS of child Dutch, a similar systematic opposition occurs between modal ILPs with a positive meaning and their negative counterparts. Evidence for this is the observation referred to in Hoekstra and Jordens (1994) that modal elements at the relevant stage are systematically used with stress. This causes a “typical doubly stressed adjunction pattern” (1994: 133) in utterances such as *únne pléister op* ‘want plaster on’, *née grás lope* ‘no grass walk’, *kánwel óptille* ‘can-indeed up-lift’, *kánniet ópete* ‘cannot up-eat’, *mágwel pék hebbe* ‘may-indeed candy have’, *mágniet trút zegge* ‘may-not bitch say’ in Jasmijn (1;10–1;11) and *mág-ikke ijsie hebbe?* ‘may-I ice-cream have?’, *née bád zitte* ‘no bath sit’, *kánhel pápa zitte* ‘can-indeed daddy sit’, *kánniet pákke deze* ‘cannot get this-one’, *mág deze hebbe* ‘may this-one have’, *móet niet hier zitte* ‘have-to not here sit’, *hóeniet plák op* ‘have-to-not glue on’ in Andrea (2;0–2;1). Further evidence for the contrastive use of these modal elements comes from the distribution of *wel* ‘indeed’ in positive devices such as *kánwel* ‘can-indeed’ and *mágwel* ‘may-indeed’. Here, *wel* ‘indeed’ is a lexical means of expressing the opposition to *niet* ‘not’. Thus, while *niet* in *kánniet ópete* ‘cannot up-eat’ is used as a focal negator, *wel* in *kánwel óptille* ‘can-indeed up-lift’ is its focal affirmative counterpart.

In sum, at the COS the focal use of the negator *niet* and its affirmative counterpart *wel* are typically used with scope over stressed modal operators such as *kan* ‘can’, *mag* ‘may’, *moet* ‘have-to’, and *hoef* ‘have-to’. This contrastive use of modal operators establishes special cases of “negative assertion.” In cases of standard negation and standard assertion, however, that is, when utterances are used to indicate that a particular state of affairs holds or does not hold for a topic element, children may use unstressed modal operators or light verbs such as *doetie* ‘does-he’ or *gaatie* ‘goes-he’, or they may choose to leave the position of the ILP empty.

*Modal and scope particles*

At the conceptual-ordering stage, as illustrated in (70) and (71) modal operators in second position belong to a closed-class category of elements, each having a particular pragmatic function. These modal operators are morphologically fixed expressions, not yet attributable to an adult verbal category. They may be even from a nonverbal origin. This explains why children may also use an element from a small subset of particles as modal operators in second constituent position. At the relevant stage of conceptual ordering, this subset consists of modal and scope particles such as *g(r)aag* 'please', *eve* 'just' *wel* 'indeed', *ook* 'too', *zelf* 'self'. Examples are given in (72) and (73).

(72) Examples of modal and scope particles as ILPs in Jasmijn (1;10–1;11)

*gaag*: *gaag* melluk indoen (1;11)

'would-like milk in-do'

*eve*: *eve* melluk pakke (1;11)

'want-only milk get'

*eve* kijke poes (1;11)

'want-only look kitty'

*ook*: Mijnie *ook* heppele (1;10)

'M want-too help'

dit *ook* melk indoen (1;11)

'this want-too milk'

*zelf*: Mijnie *zelf* doen (1;11)

'M want-myself do'

(73) Examples of modal and scope particles as ILPs in Andrea (2;0–2;1)

*graag*: *graag* boekje leze (2;0)

'would-like book read'

ikke hier bijve *graag* (2;0)

'I here stay would-like'

*eve*: *eve* jurk uitdoen (2;1)

'want-only dress out-do'

papa *eve* make (2;1)

'daddy should-just make'

*ook*: papa *ook* hebbe puzzel? (2;1)

'daddy want-too have puzzle?'

ikke *ook* boot hees (= geweest) (2;0)

'I have-too boat been'

papa *ook* boot hees (2;0)

'daddy has-too boat been'

*wel*: nee bad zitte, Ruti *hel* bad zitte (2;1)  
 ‘no bath sit, R may-indeed bath sit’

The complementary distribution of modal operators as listed in (70) and (71), and the set of particles as in (72) and (73) can be explained as due to the fact that in child Dutch, modal and scope particles can also function as modal operators. Thus, *g(raag)* means *wil graag* ‘would like’, *eve* means *wil eve* ‘want just’, *moet eve* ‘have-to just’ or *ga eve* ‘am-going just’, *ook* means *wil ook* ‘want-too’, *moet ook* ‘have-to too’, *ga ook* ‘am-going too’ or *ben ook* ‘am-too’, *zelf* means *wil zelf* ‘want myself’, *kan zelf* ‘can myself’ or *ga zelf* ‘am-going myself’ and *wel* means *kan wel* ‘can-indeed’ or *mag wel* ‘may-indeed’.

The particles in (72) and (73) may have their scope either to the right, over the predicate, or to the left, over the topic. If scope is to the right, as with *eve* ‘just, want just’ or *g(r)aag* ‘please, would like’, these particles have modal meaning similar to the modal phrases used to express illocutionary force. The particles *ook* ‘too, want too’, *zelf* ‘self, want myself, can myself’, *wel* ‘indeed, can indeed, may-indeed’ function differently. They receive focus accent, while scope is to the left. Dimroth (forthcoming) has pointed out that “normal focus accent (...) indicates a contrast to other elements of a set of alternatives.” Hence, she argues that a stressed particle with scope to the left, such as stressed *auch* ‘too’ in German, is used to indicate contrastive topic. Similarly in child Dutch, *ook* ‘too’ is used to indicate that a particular state of affairs is not only relevant for the topic referent, but FOR ANOTHER OR OTHER REFERENTS, too. Use of *zelf* ‘self’ indicates that a particular state of affairs holds for the topic referent and NOT FOR ANY OTHER REFERENT. Finally, *wel* ‘indeed’ is used if the state of affairs holds for the topic referent but NOT FOR A PARTICULAR OTHER REFERENT.

In summary, at the conceptual-ordering stage of child Dutch, modal phrases as listed in (70) and (71) and particles as presented in (72) and (73) are used to express illocutionary force. They constitute a closed-class category of nonverbal constituents syntactically functioning as adjuncts. Given their syntactic status in early child Dutch, these elements are termed “protofunctional.”

### *Sequencing at the conceptual-ordering stage*

At the conceptual-ordering stage, basic constituent order is determined by principles of information structuring. These principles of constituent ordering allow some variation within particular contexts. However, the

possibilities of variation are not random. Variability in constituent ordering can be accounted for in terms of the types of constituents that may occur in anchoring position. The topic position is a structural anchoring position. It may be left empty if the referent establishing the anchoring function can be inferred from context. Examples are given in (74) and (75).

- (74) Examples of utterances with an empty topic position in Jasmijn (1;10–1;11)
- unne* appel zoeke (1;10)  
 ‘want apple look-for’  
*kanwel* optille (1;10)  
 ‘can indeed up-lift’  
*kannie* doen (1;10)  
 ‘cannot do’  
*nee* gas lope (1;10)  
 ‘no grass walk’  
*ulle* Mickey kijke (1;11)  
 ‘want M look-for’  
*magwel* dat hebbe (1;11)  
 ‘may indeed that have’  
*moet* inzitte (1;11)  
 ‘has-to in-sit’  
*kan* leze (1;11)  
 ‘can read’  
*doemaar* inzitte (1;11)  
 ‘do-please in-sit’  
*kommaa* meegaan (1;11)  
 ‘come-please with-go’
- (75) Examples of utterances with an empty topic position in Andrea (2;0–2;1)
- moet* make (2;0)  
 ‘has-to make’  
*mag* kijke (2;0)  
 ‘may look’  
*nee* hoef aaie (2;0)  
 ‘no have-to caress’  
*manniet* doen (2;0)  
 ‘may-not do’  
*kannie* nie aaie (2;0)  
 ‘can-it not caress’  
*doemaa* deze doen (2;0)  
 ‘do-please this-one do’



*mag* deur opemake (2;1)  
 ‘may door open-make’  
*kanhel* papa zitte (2;1)  
 ‘can indeed daddy sit’  
*nee* au doen (2;1)  
 ‘no ow do’  
*kanniet* pinkusse pakke (2;1)  
 ‘can-not jump-cushion get’  
*handigniet* kusje geve (2;1)  
 ‘handy not kiss give’  
*doemaa* been vasthoue (2;1)  
 ‘do please leg tight-hold’  
*kommaa* hare kamme (2;1)  
 ‘come please hair comb’

Furthermore, constituents with anchoring function may also occur in final position. Here, they are used to express a kind of afterthought. Examples are given in (76) and (77).

- (76) Anchoring element in afterthought position in Jasmijn (1;10–1;11)  
*kanniet* pakke, zelf (1;11)  
 ‘can-not get, self’  
*wilniet* oppe straat lope, Pino (2;0)  
 ‘wants not on-the street walk, P’
- (77) Anchoring element in afterthought position in Andrea (2;0–2;1)  
*kanniet* pakke, pinkusse (2;1)  
 ‘can-not get, jump-cushion’  
*kanniet* pakke, deze (2;1)  
 ‘can-not get, this-one’  
*doetie* jas hope, aap (2;1)  
 ‘does-he coat walk, monkey’  
*doetie* ape, nou? (2;1)  
 ‘does-he sleep, now?’  
 da, *kanniet* pakke, visie (2;1)  
 ‘that, can-not get, tv-set’

Finally, anchoring is not restricted to individual entities or to reference to time and/or space. Anchoring may also be established with respect to a particular state of affairs. If this obtains, it is possible for the predicate to occur in topic position. Examples are given in (78) and (79).

- (78) The predicate in topic position in Jasmijn (1;10–1;11)  
 buite meeneme, *magwel* (1;11)  
 ‘outside with-take, may’

- Cynthia prikke, *mag wel* (1;11)  
 ‘C prick, may’  
 lekker ete, *doemaar, magwel* (1;11)  
 ‘tasty eat, do-please’
- (79) The predicate in topic position in Andrea (2;0–2;1)  
 raam, opemake, *kanniet* (2;1)  
 ‘window, open-make, can-not’  
 hantie geve, *kan* (2;1)  
 ‘hand give, can’  
 tok ete, *doetie* (2;1)  
 ‘chicken eat, does-he’

### Conclusion

In early child grammar, elements of a closed-class category are used to express illocutionary force. Initially, this closed-class category is mainly represented by lexical phrases expressing “volition,” that is, the negative modal operator *nee* ‘no-want’ and its positive alternatives *unne*, etc., ‘want’ and *mag-ikke* ‘may-I’. At the holistic stage, these expressions occur in clause-initial or clause-final position. At the conceptual-ordering stage, placement of constituents occurs according to principles of information structuring. Thus, the topic as the anchoring element is usually expressed in first position, the protofunctional phrase indicating illocutionary force (ILP) in second position, and the predicate expressing a particular state of affairs in final position. The relation between the predicate and the topic is a matter of validation, which is established by the ILPs. These ILPs function as devices of pragmatic linking. They can be adverb-like elements such as *nee* ‘no’, *handigniet* ‘handy-not’, and *niet* ‘not’, modal-verb-like elements such as *kanniet* and *magwel*, and modal and scope particles such as *g(r)aag* ‘please’, *eve* ‘just’, *wel* ‘indeed’, *ook* ‘too’, *zelf* ‘self’. In the case of assertion, the position of the ILP can even be left empty. Thus, pragmatic properties of finiteness play a central role at the conceptual-ordering stage. The kinds of phrase that children use to express different pragmatic functions are evidence that a target-like finite verb category does not exist and, hence, it explains why auxiliary verbs are systematically absent.

### 5. Achieving the finite-linking stage

Further processes of acquisition can be observed in Jasmijn (2;0–2;2) and Andrea (2;2–2;4). The most salient development occurs in utterances

with nonfinite lexical verbs (Vnf). In this type of utterance both children tend to use an increasing number of modal and auxiliary verbs (MOD/AUX) as part of MOD/AUX + Vnf structures. Evidence as presented in Tables 2 and 3 (section 2) is repeated in Table 10. Percentages indicate the number of MOD/AUX + Vnf structures in utterances with either Vnf or MOD/AUX + Vnf. The figures show that, starting with Jasmijn (2;0) and Andrea (2;2), the number of clause structures with MOD/AUX + Vnf rapidly increases, while clause structures with only a Vnf simultaneously decrease.

With respect to the figures in Table 10 it should be noted, however, that the more frequent use of modals with infinitives (MOD + inf) and the more frequent use of auxiliaries with past participles (AUX + pp) occur at different stages of development. This is shown in Tables 11 and 12. At the conceptual-ordering stage of both Jasmijn (1;10–1;11) and Andrea (2;0–2;1) MOD + inf structures are used in 30% and 17% of the

Table 10. *Frequency of MOD/AUX + Vnf in clause structures with a Vnf*

Jasmijn Age	MOD/AUX + Vnf (%)	Andrea Age	MOD/AUX + Vnf (%)
1;10	30	2;0	9
1;11	24	2;1	26
2;0	43	2;2	30
2;1	51	2;3	68
2;2	78	2;4	71

Table 11. *The acquisition of modal and auxiliary verbs in Jasmijn (1;10–1;11) v. (2;0–2;2)*

	inf	MOD + inf	%	pp	AUX + pp	%
Conceptual-ordering stage (1;10–1;11)	243	107	30	55	2	4
Finite-linking stage (2;0–2;2)	85	134	61	30	18	38

Table 12. *The acquisition of modal and auxiliary verbs in Andrea (2;0–2;1) v. (2;2–2;4)*

	inf	MOD + inf	%	pp	AUX + pp	%
Conceptual-ordering stage (2;0–2;1)	295	61	17	29	3	9
Finite-linking stage (2;2–2;4)	158	161	50	32	53	62

relevant cases, while utterances with AUX + pp only occur with frequencies of 4% and 9%, respectively.

The fact that MOD + inf and AUX + pp are not acquired synchronically indicates that different processes of acquisition are involved.

The conceptual-ordering stage of both Jasmijn (1;10–1;11) and Andrea (2;0–2;1) is a period of language development in which elements of lexical categories occur in linear ordering. At the relevant stage, modal verbs are used because of their lexical-pragmatic meaning. It is their function to express illocutionary force. Auxiliaries such as *heb/heeft* and *ben/is*, however, are grammatical elements. They are used to express tense–aspect distinctions and, as is the case with the system of inflectional morphology, they are part of the functional-grammatical system of the target language. As elements with a grammatical function, auxiliaries are part of a hierarchical structure with the lexical verb as the complement and the auxiliary as the head. The fact that auxiliaries are part of the functional-category system of the target language explains why they do not occur at the conceptual-ordering stage.

The rapid increase in the use of auxiliaries in Jasmijn (2;0–2;2) and Andrea (2;2–2;4) is evidence that the children are in the process of acquiring the functional-category system of the target language. This process entails the acquisition of morphological elements with grammatical function and of syntactic categories with hierarchical structure. The relevant stage in which morphosyntactic features are used to establish structural relations between constituents is referred to as the “finite-linking stage.”

In the target-language system, auxiliaries express distinctions of tense and aspect. At the relevant stage, however, auxiliaries seem to be part of a developing grammatical system that is used for the expression of aspect, while properties of the tense system are absent.

Given that “tense” concerns “the time which the event, action, process, etc. occupies on the time axis” (Klein 1994: 16), it is remarkable that tense-like distinctions are so strikingly absent. There are virtually no examples of the most frequently used past-tense forms *was* ‘was’, *had* ‘had’, *deed* ‘did’, *liep* ‘walked’, *ging* ‘went’, *zag* ‘saw’, *zei* ‘said’, *maakte* ‘made’, etc. Furthermore, at the relevant stage the children do not even use temporal adverbs like *gister(en)* ‘yesterday’, *vandaag* ‘to-day’, and *morgen* ‘tomorrow’ or *straks* ‘later’. Thus, it seems that distinctions with respect to the use of tense are not yet opportune. One might speculate as to what could be the reason for children not to make these distinctions. I suspect that at the relevant stage of development, children are typically concerned with situations that are located in the here-and-now. Events not occurring at the time of utterance do not seem to be their focus of

attention. On the other hand, however, what seems to be relevant for children is whether the situations they are involved in take place in reality or belong to some other world in some other modality. This explains the increasing number of modal verbs that children use. In this respect, it seems interesting to note that those few cases in which it is appropriate for children to use past-tense forms are situations in which past tense is used to refer to an imaginary world. Hence, in role-play situations children may engage in conversations such as described by Annie M. G. Schmidt:

En nu kunnen ze [Jip en Janneke] een toneelstuk spelen. (...)
 'And now can they a play perform'
 Ik was de koningin, zegt Janneke. En jij mag de koning zijn.
 'I was the queen, J says. And you may the king be'
 (Schmidt 1964: 64).

Thus, considering the absence of past-tense forms and temporal adverbs with past-tense reference, it seems that children are primarily concerned with situations that are located in the here-and-now of what they see as the real, a virtual, or a possible world.

Within the confinement of the "here-and-now," children's interests seem to focus on the different points of view from which a given situation may be looked at. That is, children may view a situation as stative, as a state of affairs that has come about, or as an event that is going to happen, continues to happen, or has been completed. Initially, children seem to encode these aspectual properties distributionally. As pointed out in section 2, distributional properties of lexical verbs in early child Dutch are evidence that children are sensitive to these distinctions. Hence, in second position, children use finite verb forms to indicate that a particular situation is static or, if it refers to a change of state, just comes about. Thus, lexical verbs that are typically used with finite morphology are *heeft* 'has/possesses', *heet* 'is called', *is* 'is/exists', *slaapt* 'sleeps', *woont* 'lives', and *gaat* 'goes', *komt* 'comes', *lukt* 'succeeds', *past* 'fits', *prikt* 'pricks', *valt* 'falls', *vin lekker* 'find nice', and *vin leuk* 'find funny'. In final position, infinitives and past-participle forms are frequently used in lexical oppositions such as *hebben* 'have' v. *gekregen* 'received', *zoeken* 'look for' v. *gevonden* 'found', *weglopen* 'run away' v. *verstopt* 'hidden', *maken* 'make' v. *kapotgemaakt* 'demolished', *eten* 'eat' v. *opgegeten* 'eaten up', *glijden* 'slide' v. *gevallen* 'fallen' (see Jordens 1990; 1415ff.). As argued in section 2, this opposition shows that children systematically distinguish between verbs expressing the intention of an agent to carry out a particular action and verbs expressing the result state of an action. Result-state properties also determine the use of NP + particle structures in early

child Dutch. As shown in Jordens (2000), particles in two-word utterances are used to express either a result state of a causative action as in *pen in* ‘pencil in’ or *dop op* ‘lid on’ or a result state of movement as in *poessie in* ‘kitty in’ or *stoel op* ‘chair on’.

This lexical-distributional encoding of aspectual properties of situations and events shows that in early child Dutch, children are sensitive to distinctions that will allow them to acquire differences in grammatical aspect. It seems to me that, at the relevant stage, it is the acquisition of the auxiliaries *heb/heeft* and *ben/is* that enables children to express distinctions of aspect morphosyntactically. I presume that the acquisition of auxiliaries leads to a reanalysis of the illocutionary elements from the conceptual-ordering stage as grammatical elements with an aspectual function at the finite-linking stage. As a result *heb/heeft* and *ben/is* are used to express perfect aspect, *doe/doet* are used to express imperfective aspect, and *ga/gaat* are used to express perfective aspect. Evidence comes from the distributional opposition in Jasmijn (2;0–2;2) and Andrea (2;2–2;4) between *heb/heeft*, *ben/is* + past participle, *doe/doet* + infinitive, and *ga/gaat* + infinitive. Examples are given in (80) and (81). As can be seen in (80), Jasmijn (2;0–2;2) is using the lexical verb *maken* ‘make’ in all possible aspectual contexts. Thus, she produces utterances such as *die HEEFT jou maakt* (2;1) ‘that-one has you made’; *DOE je Pino make?* (2;0) ‘do you P make?’; *ik GAAT Pino make* (2;0) ‘I go P make’. (81) shows that Andrea (2;2–2;4) produces the same distributional opposition with the lexical verb *eten* ‘eat’. She uses *ik HEEF óók appel gete* (2;4) ‘I have too apple eaten’; *Jaja DOET kitkat opete* (2;3) ‘J does kitkat up-eat’; *GAAN ze almaal ete, zie?* (2;3) ‘go they all eat, see?’.

(80) The acquisition of auxiliary verbs in Jasmijn (2;0–2;2) to express grammatical aspect

- a. perfect: *heb, heeft(t); ben, is, (was)*  
*heef* Cynthia maakt (2;0)  
 ‘has C made’  
*Ik was* poepie doen (2;0)  
 ‘I was poop do’  
*heb* je visje gehad? (2;1)  
 ‘have you fish had?’  
*Ikke hè* dit pakt (2;1)  
 ‘I have this got’  
*Ik heb* wonne (2;1)  
 ‘I have won’

- Die *heeft* jou maakt (2;1)  
 'that-one has you made'  
 Ik *heef* afspoeld (2;2)  
 'I have washed'  
 Die *is* altijd opde televisie geweest (2;2)  
 'that-one is always on tv been'  
 waar *ben* je nou geweest? (2;2)  
 'where are you now been?'  
 die *heb* ik wel geplakt (2;2)  
 'that have I glued'
- b. imperfective: *doe, doet*  
*doe* je Pino make? (2;0)  
 'do you P make?'  
 Ik *doet* neusje snuite (2;0)  
 'I do nose blow'  
 poesje *doet* likke (2;1)  
 'cat does lick'  
*doet* mama mij ... (2;2)  
 'does mommy me ...'
- c. perfective: *ga, gaat*  
 Ik *gaat* Pino make (2;0)  
 'I go P make'  
 Ik *ga* eve die glije (2;0)  
 'I go just that slide'  
*ga* je ook school toegaan? (2;1)  
 'go you too school to-go'  
*gaat* Cynthia slape? (2;1)  
 'goes C sleep?'
- (81) The acquisition of auxiliary verbs in Andrea (2;2–2;4) to express grammatical aspect
- a. perfect: *hemme, heef, ben, is*  
 kijk maa da *issie* varre (2;2)  
 'look there is-he fallen'  
 Jaja *hemme* al goonmaakt (2;2)  
 'J has already up-cleaned'  
 Ikke *hemme* deze tekend (2;3)  
 'I have this drawn'  
 da *ben* ikke ook wees (2;3)  
 'there am I also been'  
*isse* barnies affehope mam? (2;4)  
 'is barnies finished mommy?'

- Ik *heef* óók appel gete (2;4)  
 ‘I have too apple eaten’
- b. imperfective: *doe, doet, (doen)*  
*doen* ze same hope (hope = lopen) (2;2)  
 ‘do they together walk’  
 Jaja *doet* kitkat opete (2;3)  
 ‘J does kitkat up-eat’  
 Ik *doe* mij fesje aan mij jamaboek doen (2;2)  
 ‘I do my vest on my pyjamas do’
- c. perfective: *gaat, (gaan)*  
 Jaja *gaat* daar zitte en papa *gaat* daar zitte (2;2)  
 ‘J goes there sit and daddy goes there sit’  
*gaan* ze almaal ete, zie? (2;3)  
 ‘go they all eat, see?’  
*gaat* ikke ook mee naa paardrije? (2;4)  
 ‘go I also with to horse-ride’

As soon as the auxiliary verbs *heb/heeft, doe(t),* and *gaa(t)* have come to be used to express aspectual distinctions, the relation between the elements in second position and the predicate in final position is reinterpreted. Having established a grammatical relation between auxiliary verbs on the one hand, and the predicate on the other, the children have, in fact, discovered the relation between the structural position of a head and its complement.

In summary, at the finite-linking stage the illocutionary elements with lexical-pragmatic function (i.e. proto-MOD) are reanalyzed as auxiliary verbs (AUX) with grammatical-aspectual function. This process of restructuring seems to be triggered by the acquisition of the auxiliary verb forms *heb/heeft* and *ben/is*. While the illocutionary elements at the conceptual-ordering stage were used as adjuncts, the auxiliary verbs at the finite-linking stage function as the head of a head-complement structure. The lexical-semantic and grammatical-syntactic properties that play a role in this process of restructuring are given in (82).

(82) From “illocutionary force” to the function of a “head”

*Conceptual-ordering stage:*      *Finite-linking stage:*

Jasmijn (1;10–1;11)

Jasmijn (2;0–2;2)

Andrea (2;0–2;1)

Andrea (2;2–2;4)

*proto-MOD*

*AUX*

grammatical status:

grammatical status:

lexical category

functional category



meaning:	meaning:
illocutionary force	grammatical aspect
syntactic function:	syntactic function:
adjunct	head

At the relevant stage, major changes in child grammar are the consequence of a developmental process due to which lexical adjuncts expressing illocutionary force are reanalyzed as grammatical heads expressing aspect. Given that such a reanalysis has taken place, one can explain why it is that modal elements such as *nee* 'no', *ulle* 'want', or *handigniet* 'handy-not' become obsolete all of a sudden. These modal expressions are part of a system in which they may occur due to the fact that illocutionary elements syntactically function as adjuncts. They do not qualify as heads of a head-complement structure. Similarly, we have an explanation for why *mag-ikke* 'may-I' as a phrasal element is also given up. Phrasal elements cannot function as heads either. In order for *mag-ikke* to become part of a head-complement structure it has to be analyzed as two different words, *mag* 'may' functioning as a head, and *ikke* 'I' functioning as a specifier.

Furthermore, particles also do not qualify as heads of a head-complement structure. This explains why it is that modal and scope particles such as *al* 'already', *g(r)aag* 'please', *eve* 'just', *niet meer* 'no more', *nog* 'again', *nog e keer* 'one more time', *same* 'together', *wel* 'indeed', *ook* 'too', *weer* 'again', and *zelf* 'self' will occur as modifiers of VP structure simultaneously with the acquisition of AUX. Examples of the use of these particles are given in (83) and (84).

(83) Examples of modal and scope particles as part of VP in Jasmijn (2;0–2;2)

<i>eve</i> :	el <i>eve</i> pakke (2;0) 'want just get'
<i>eve</i> :	ik ga <i>eve</i> die glije (2;0) 'I go just that-one slide'
<i>zelf</i> :	ik mag niet <i>zelf</i> pakke chocola (2;1) 'I may not self get chocolate'
<i>ook</i> :	mama, ga je <i>ook</i> school toegaan? (2;1) 'mommy, go you too school to-go?'
<i>wel</i> :	mag ik <i>wel</i> hebbe (2;2) 'may I indeed have'
<i>ook</i> :	ik wil <i>ook</i> zitte (2;2) 'I want too sit'
<i>nog</i> :	die mag je <i>nog</i> hebbe (2;2) 'that-one may you also have'

- niet meer*: mag poekie *niet meer* aankome (2;2)  
 ‘may kitty no more touch’
- weer*: *weer* zo nou’s *weer* aflope (2;2)  
 ‘again this-way now is again finished’
- (84) Examples of modal and scope particles as part of VP in Andrea (2;2–2;4)
- eve*: tijger mag *eve* zitte (2;2)  
 ‘tiger may just sit’
- ook gaag*: mag ik *ook gaag* teke? (2;2)  
 ‘may I too please draw?’
- same*: doen ze *same* zitte (2;2)  
 ‘do they together sit’
- al*: Jaja hemme *al* goonmaakt (2;2)  
 ‘J have-it already clean-made’
- wel*: da mág Jaja *wel* mee peje (2;3)  
 ‘there may J indeed with play’
- ook*: Jaja wilt óók dakik ijsje opete (2;3)  
 ‘J wants too in a little while ice-cream upeat’
- eve wel*: mag ik *eve wel* deze aankome? (2;3)  
 ‘may I just indeed this-one touch?’
- eve*: ik gaat *eve* tomaatjes pukke (2;3)  
 ‘I goes just tomatoes pick’
- ook*: da ben ikke *ook* wees (2;3)  
 ‘there am I too been’
- nog*: Jaja wil *nog* visse (2;4)  
 ‘J wants again fish’
- nog e keer*: Jaja wille *nog e keer* doen (2;4)  
 ‘J wants-it one-more-time do’
- ook nog*: Jaja moet *ook nog* mekkik dinke (2;4)  
 ‘J has-to too again milk drink’
- weer*: nou mag papa *weer* teke (2;4)  
 ‘now may daddy again draw’
- zelf*: fiets gaat *zelf* hope (2;4)  
 ‘bike goes self walk’
- ook*: ik heef *ook* appel gete (2;4)  
 ‘I have too apple eaten’
- al*: Jaja heef *al* Tompoes brokjes geeft (2;4)  
 ‘J has already T bits given’
- eve*: doemaa *eve* mij helpe (2;4)  
 ‘please-do just me help’

Finally, reinterpretation of proto-MOD as the head of a constituent

projecting a functional category entails that the head–complement direction becomes fixed. This explains why it is that at the relevant stage modal and auxiliary verbs regularly occur in a position before the predicate. Thus, examples as in (78) and (79) with modal phrases used in end position do not occur any more.

The acquisition of a head–complement relation is the result of a process of grammaticalization that has been triggered by the use of auxiliary verbs. This also holds for the acquisition of a relation of specifier–head agreement. Morphological variation of auxiliary and modal verbs provides information with respect to person and number of the external argument. In Dutch, however, the inflectional system of auxiliaries and modal verbs evidences a high degree of syncretism. Use of a pronominal system compensates for this. Hence, in Dutch, reference to the external argument is the result of a joint effort between inflectional morphology and the use of pronouns.

Evidence of the amount of variation in inflectional morphology is given in (85) and (86). At the finite-linking stage, use of these auxiliary verbs shows that both children regularly discriminate between 1st and 3rd person singular form. The 2nd person singular form is mainly used in questions. Furthermore, there are also a few examples of the 3rd person plural form.

- (85) Variation in inflectional morphology in Jasmijn (2;0–2;2)
- a. *heb, heef* ‘have-1sg’, *heb?* ‘have-2sg’, *heef(t)* ‘has-3sg’;  
*was* ‘was-1sg’, *ben?* ‘are-2sg’ *is* ‘is-3sg’
  - b. *doet* ‘do-1sg’, *doe?* ‘do-2sg’, *doet* ‘does-3sg’
  - c. *ga(at)* ‘go-1sg’, *ga?* ‘go-2sg’, *gaat* ‘goes-3sg’
- (86) Variation in inflectional morphology in Andrea (2;2–2;4)
- a. *heef, hem* ‘have-1sg’, *hem* ‘has-3sg’;  
*ben* ‘am-1sg’, *is* ‘is-3sg’
  - b. *doe* ‘do-1sg’, *doet* ‘does-3sg’, *doen* ‘do-3Pl’
  - c. *ga(at)* ‘go-1sg’, *gaat* ‘go-3sg’, *gaan* ‘go-3Pl’

Simultaneously with the acquisition of inflectional variation, pronouns will be used to refer to the external argument. This can be observed in (80) and (81). The pronominal form that occurs most frequently is the 1st person singular *ikke* or *ik* ‘I’ used to refer to the speaker. The 2nd person singular *je* ‘you’ is used in questions to refer to the addressee. Finally, the demonstrative pronoun *die* refers to a 3rd person singular and *ze* refers to a 3rd person plural.

The evidence as provided in (80), (81), (85), and (86) shows that inflectional morphology and the use of the pronominal system are acquired simultaneously. Since the inflectional and the pronominal system

are part of one enterprise, that is, the acquisition of specifier–head agreement, it seems obvious why they are both acquired at the finite-linking stage.

Evidence of the establishment of a system of pronominal reference can also be found in relation to the use of the modal verb *willen* ‘want’. At the conceptual-ordering stage the positive alternative to *nee* ‘no’ was a phrasal form such as *ulle* ‘want’ in Jasmijn or *mag-ikke* ‘may-I’ in Andrea. Due to the acquisition of the head–complement relation between auxiliaries and lexical verbs these particular formal means had to be given up. As argued above, these illocutionary phrasal forms can only function as adjuncts. They do not qualify as heads of a functional head–complement structure. Inflected verb forms such as *wil*, *wilt*, or *wil nie*, however, can be used as heads of head–complement structures. In order to establish external reference unambiguously, they have to be used with a personal noun or a pronoun in specifier position. This explains why, at the relevant stage, both children suddenly use *wil* or *wilt* with the pronoun *ik*, *ikke*, or *je* as the external argument in specifier position. With the sole exception of *ik wil melk pakke* (Jasmijn 1;11) ‘I want milk get’, examples as in (87) and (88) do not occur earlier in development.

- (87) *Wil/wilt* with nouns and pronouns in specifier position in Jasmijn (2;0–2;2)  
 ik *wilt* opslaan (2;0)  
 ‘I wants on-hit’  
 poes *wil* kijke naa boter (2;0)  
 ‘kitty want look at butter’  
*wil* je’s opedoen? (2;1)  
 ‘want you just open-do?’  
 mama *wilt* zo eve kijke (2;2)  
 ‘mommy wants so just look’  
 die *wilt* ik hebbe (2;2)  
 ‘that-one wants I have’
- (88) *Wil/wilt* with nouns and pronouns in specifier position in Andrea (2;2–2;4)  
 Jaja *wilt* jou kijke (2;2)  
 ‘J wants you look’  
 poesje *wilt* op trap zitte (2;3)  
 ‘kitty wants on stairs sit’  
 Jaja *wil* worst oppe hand doen (2;3)  
 ‘J want sausage on-the hand do’  
 ikke *wil* deur dit make (2;3)  
 ‘I want door closed make’

- ik *wilt* óok plante water geve (2;3)  
 'I wants too plants water give'  
 nou *wilt* Jaja naarre kippetjes kijke (2;4)  
 'now wants J to-the chicken look'  
 ik *wil* nog poetse oppe muur (2;4)  
 'I want also rub on-the wall'

The simultaneous acquisition of inflectional variation and the use of pronouns is evidence of the acquisition of a grammaticalized means of establishing reference to the external argument. The relation between, on the one hand, inflectional morphology and, on the other, use of pronouns in external argument position demonstrates the acquisition of specifier–head agreement.

The analysis of utterances in terms of both a head–complement and a specifier–head relation is a major achievement at the finite-linking stage. Whereas the relation between constituents at the conceptual-ordering stage is based on adjunction, it is thanks to the acquisition of auxiliaries that utterances are structured hierarchically. As shown in Figure 1, AUX functions as the head of a head–complement relation, while the NP in external argument position is the specifier of specifier–head agreement.

At the finite linking stage AUX constitutes a functional category. The semantic function of the AUX system is represented in (89).

- (89) The semantic function of AUX at the finite linking stage  
 perfect: *heb, heeft* 'have, has'; *ben, is* 'am, is'  
 imperfective: *doe(t)* 'do, does'  
 perfective: *ga(at)* 'go, goes'  
 prospective: MOD  
     volition: *wil(t)* 'want, wants'  
     ability: *kan* 'can'  
     possibility: *mag* 'may'  
     obligation: *moet* 'have-to, has-to'

As shown in (89), the elements of AUX are used to express perfect, imperfective, and perfective aspect. Examples of the use of these elements were given in (80) to (81). Furthermore, (89) also shows that prospective aspect is carried by the elements of the category MOD. While MOD thus functions to express prospective aspect, the particular modal verbs are used to express illocutionary force: volition *wil, wilt*, ability *kan*, possibility *mag*, and obligation *moet*.<sup>2</sup> At this point, it should be noted that the position of AUX cannot be left empty. Thus zero marking cannot be used as a means of assertion. On the other hand, there is also no particular auxiliary element to express assertion either. AUX as a

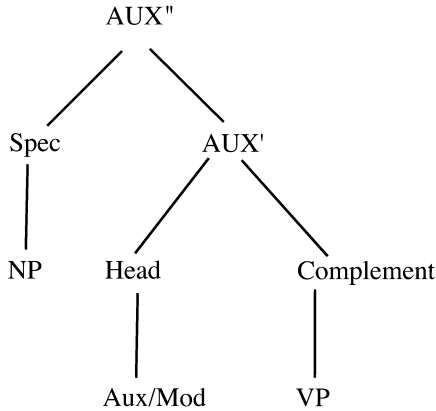


Figure 1. *The hierarchical structure of the AUX phrase*

category therefore carries both the aspectual distinctions and the illocutionary function of assertion. This is the default case. In particular cases, an assertion can be marked with the illocutionary function of volition, ability, possibility, or obligation. This is achieved through the use of a modal verb. Hence, the illocutive function of assertion seems to be a function of the absence of modality.

Having acquired the hierarchical structuring of AUX phrases as represented in Figure 1, children are able to reanalyze VP structure as well. Given that the lexical verb functions as the head of VP and the NP as the complement of V, reanalysis on the basis of hierarchical structuring provides the opportunity to account for structures in which the external argument occurs in specifier position of VP. This developmental process with respect to the analysis of VP structure is precisely what seems to occur. At the relevant stage, children's grammars appear to develop a specifier position as part of VP. According to the resulting structure as represented in Figure 2, it is now possible for children to use the external argument in specifier position of VP. In doing so, the initial specifier position of AUX becomes available as a possible landing site for the internal argument or an adverbial element establishing reference to time or space.

The examples in (90) and (91) are taken from Jasmijn (2;0–2;2) and Andrea (2;2–2;4). They provide considerable evidence for the productive use of the internal argument or a deictic adverb in initial, specifier position and the external argument, in the form of a pronoun or a noun, in the position of the specifier of VP.<sup>3</sup>

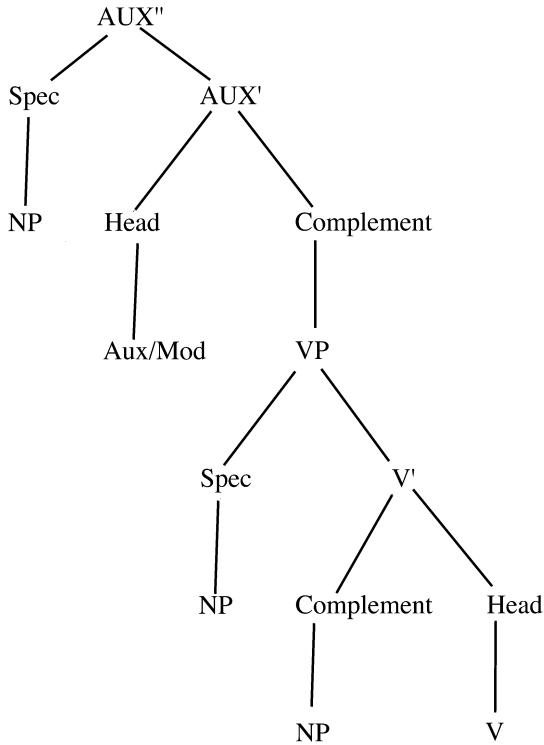


Figure 2. *The hierarchical structure of utterances at the finite-linking stage*

- (90) Examples of topicalization in Jasmijn (2;0–2;2)
- 0* heeft *Cynthia* maakt (2;0)  
'has C made'
  - 0* mag *jij* opete (2;1)  
'may you up-eat'
  - die* heeft *mama* maakt (2;1)  
'that-one has mommy made'
  - dan* moet *Cynthia* weer make (2;2)  
'then has-to C again make'
  - 0* mag *jij* hebbe (2;2)  
'may you have'
  - hier* mag *je* neus snuite (2;2)  
'here may you nose blow'
  - da* mag *je* ook mee hebbe (2;2)  
'that may you also with have'

- die* wilt *ik* hebbe (2;2)  
 'that want I have'  
*die* mag *boze wolf* niet potmake, de muts (2;2)  
 'that may bad wolf not ruin, the cap'  
*daa* kan *ik* niet meer lope (2;2)  
 'there can I not anymore walk'  
*0* mag *poekie* niet meer aankome (2;2)  
 'may kitty not anymore touch'  
*nou* gaat *ie* weer naar huis toe gaan (2;2)  
 'now goes he again home to go'  
*die* heef *Cynthia* gemaakt (2;2)  
 'that has C made'  
*waa* ben *je* nou geweest? (2;2)  
 'where are you now been?'
- (91) Examples of topicalization in Andrea (2;2–2;4)
- 0* mag *jij* leuke opete mette ei (2;2)  
 '0 may you nice up-eat with-the egg'  
*0* moete *mammie* ook kope (2;2)  
 '0 has-to mommy also buy'  
*Ruti* nome hemmik (2;2)  
 'R taken have-I'  
*0* heb *ik* oppegete (2;2)  
 'have I up-eaten'  
*nou* mag *Jaja* peenie in (2;2)  
 'now may J pacifier in'  
*0* mag *ik* doen (2;3)  
 'may I do'  
*dà* mag *papa* wel doen (2;3)  
 'that may daddy indeed do'  
*hier* moet *poesje* eve kamme (2;3)  
 'here has-to kitty just comb'  
*zo* kan *Jaja* niks zien (2;3)  
 'this-way can J nothing see'  
*zo* kan *ikke* *Jaja* wél niks zien (2;3)  
 'this-way can J indeed nothing see'  
*hier* kan *ikke* op saan (2;4)  
 'here can I on stand'  
*hier* wilt *Jaja* ook denkik naa toe (2;4)  
 'here wants J also think-I to'  
*broodje* mag *Cynthia* wel opete (2;4)  
 'bun may C indeed up-eat'



*nou mag papa weer teke* (2;4)  
 'now may daddy again draw'  
*die hem ik van Jasmijn kege* (2;4)  
 'that-one have I from J got'

### Conclusion

At the finite-linking stage, the acquisition of both the head-complement relation and specifier-head agreement are triggered by the use of utterances with the auxiliary verbs *heb/heeft* and *ben/is*. It is the function of an auxiliary verb together with the past-participle form of a lexical verb to express perfect aspect grammatically. The expression of grammatical aspect is evidence of the acquisition of a head-complement relation. Furthermore, it is the inflectional properties of auxiliaries that establish agreement with the NP in external argument position and, hence, a specifier-head relation. Having acquired both the head function of auxiliaries and specifier-head agreement the children have learned the grammatical properties that determine the projection of the inflectional phrase in Dutch.

The acquisition of hierarchical structuring at the finite-linking stage cooccurs with the development of a specifier position of VP. It provides the opportunity to use the initial specifier position of AUX as a possible landing site for the internal argument or an adverbial element for the expression of reference to time or space.

## 6. Summary

In early child Dutch, lexical verbs occur with both finite and nonfinite morphology. While nonfinite lexical verbs are used productively, lexical verb forms are used unanalyzed. Finiteness is thus a grammatical construct that is the result of a process of language development. Within this process of development, stages of acquisition can clearly be discriminated.

Characteristic of the initial stage of acquisition is the use of holistic *nee* with scope over the clause structure as a whole. It may occur in clause-initial or clause-final position. With respect to its form as well as its distribution, holistic *nee* is modelled on its anaphoric use in the target language. Therefore, as with anaphoric *nee*, the meaning of holistic *nee* can be paraphrased as 'I do not want'. At this "holistic stage," modal phrases mainly express "volition." Thus, children use *nee* 'no' or a few

positive alternatives such as *ulle* 'want', *ja* 'yes', or *mag-ikke* 'may-I' to indicate that they do not want or do want to achieve a particular state of affairs.

Children achieve the next developmental stage when they start to use a greater variety of illocutionary elements. Here, apart from *nee* and *ulle*, *ja* or *mag-ikke*, they also use *kanwel* 'can-indeed', *kanniet* 'can-not', *handigniet* 'handy-not', *magwel* 'may-indeed', *magniet* 'may-not', *moettie* 'has-to-he', *hoenie* 'has-to-not', *doettie* 'does-he', *doemaar* 'do-please', *kommaar* 'come-please', *niet* 'not'. These elements are morphologically fixed phrases. They are part of a basic utterance structure that consists of a sequence of three structural positions. Constituents in these positions are related by adjunction, while their ordering depends on principles of information structuring. The relevant stage of acquisition is referred to as the "conceptual-ordering stage." Of the three constituents, the element in initial position functions as the "topic." A topic element can be an NP, often a proper name, or a deictic adverb. Topics have "anchoring function," that is, they establish the embedding of an utterance in context. Modal elements occur in second position. They belong to the closed-class category of modal expressions mentioned above. They are used to express illocutionary force, that is, each of these phrasal expressions has a particular pragmatic meaning. They allow children to express "volition," "ability," "possibility," "obligation," and "assertion." Since "assertion" is the default pragmatic function, the position of the element used to express assertion may be left empty. At the conceptual-ordering stage, modal phrases are lexical linking devices with no syntactic function. Therefore, modal and scope particles such as *graag* 'please', *eve* 'just', *wel* 'indeed', *ook* 'too', and *zelf* 'self' may also occur in second constituent position. Finally, the constituents in end position are termed "predicates." A predicate can be a VP or a VP-like expression; it refers to a particular state of affairs. The relation between the predicate and the topic is a matter of validation. It is established by the modal phrases expressing illocutionary force (ILPs). Hence, these ILPs function as devices of pragmatic linking.

The following, adult-like, developmental stage is achieved as soon as children are able to express grammatical-aspectual properties of the target language. This stage of acquisition is referred to as the "finite-linking stage." Developmental progress here is tightly connected with the acquisition of the auxiliaries *heb/heeft* 'have/has' and *ben/is* 'am/is'. In fact, it is the driving force behind a reanalysis of the initial, lexical-pragmatic use of modal phrases. Past-participle forms with the auxiliaries *heb/heeft* and *ben/is* are used to express perfect aspect. They cause a reanalysis of the illocutionary phrases *doe(t)* 'do/does' and *ga(at)* 'go/goes' to express

grammatical aspect, too. As a result of this, there is a distributional opposition between *heb/heeft* and *ben/is* expressing perfect aspect, *doe(t)* expressing imperfective aspect, and *gaa(t)* expressing perfective aspect.

At the finite-linking stage, the auxiliaries *heb/heeft*, *ben/is*, *doe(t)*, and *ga(at)* are grammatical means to express different kinds of aspect. They function as the head of a functional projection of an AUX phrase. Due to the acquisition of AUX, modal expressions with illocutionary force are reanalyzed as AUX as well. Illocutionary phrases such as *nee* 'no' and *ulle/ja* 'want', *mag-ikke* 'may-I', or *handigniet* 'handy-not', *niet* 'not' are unable to function as auxiliaries. Therefore, at the finite-linking stage, they will become obsolete. The same is true for particles such as *eve* 'just', *g(r)aag* 'please', and *ook* 'too'. They do not qualify as heads of a functional projection either. However, while neither particles nor the negator *niet* can function as instantiations of AUX, they may remain functioning as modifiers of VP structure.

Auxiliaries are small in number but relatively frequent in occurrence. They exhibit some morphological variation, providing information with respect to person and number of the external argument. However, given the degree of syncretism in the target system of morphological inflection, children are confronted with the problem of ambiguity. Use of the adult pronoun system accommodates this. In adult Dutch, reference to the external argument is the result of a joint effort between inflectional morphology and the use of pronouns. This explains why pronouns come to be used. Thus, at the relevant stage, children produce utterances such as *Ik heef afspoeld* 'I have washed' (Jasmijn 2;2) and *Ik heef óók appel gete* 'I have too apple eaten' (Andrea 2;4). The relation between, on the one hand, inflectional morphology and, on the other hand, use of pronouns in external argument position evidences the acquisition of specifier-head agreement.

It is a major achievement of acquisition when modal phrases expressing illocutionary force are reanalyzed to function as the head of an AUX phrase. Whereas the relation between constituents at the conceptual-ordering stage is based on adjunction, it is thanks to the acquisition of the auxiliaries *heb/heeft* and *ben/is* that constituents are structured hierarchically at the finite-linking stage. Having acquired auxiliaries and modal verbs as instantiations of AUX, children have learned the grammatical properties that determine the projection of the inflectional phrase in Dutch.

Reanalysis of VP structure similar to the AUX phrase establishes both a head-complement relation between V and NP and a possible specifier position for the external argument of VP. A position for a specifier of VP was not available at the conceptual-ordering stage. If the external

argument occurs in specifier position of VP, the initial position becomes available as a possible landing site for other types of constituent, such as the internal argument or an adverbial. Use of the initial, specifier position for elements other than the external argument is what constitutes the syntactic phenomenon of topicalization. Evidence is provided by utterances such as *Die heef mama maakt* 'that-one has mommy made' (Jasmijn 2;1); *Die heb ik wel geplakt* 'that have I glued' (Jasmijn 2;2) and *Nou mag papa weer teke* 'now may daddy again draw' (Andrea 2;4); *Da ben ikke ook wees* 'there am I also been' (Andrea 2;3).

In sum, finiteness is a complex grammatical construct. Properties of finiteness are first learned with a closed class of modal phrases that are used morphologically unanalyzed. These modal phrases are the linguistic means indicating illocutionary force. They constitute a lexical category of linking elements that are used to indicate that a particular state of affairs holds for a topic element. Due to the acquisition of auxiliary verbs, modal phrases are reanalyzed as heads of a functional projection of an AUX phrase. As such they become grammaticalized as morphosyntactic means that carry features of grammatical linking both between AUX and VP and between AUX and the element in external argument position. Hence, auxiliaries play a crucial role in the acquisition of the inflectional phrase in Dutch.

At the finite-linking stage, finiteness is expressed through the syntactic category AUX. Evidence from early child Dutch shows that elements of AUX carry both the illocutionary functions of their precursors and the aspectual functions of later stages of development. Furthermore, with the expression of aspect, auxiliaries come to function as the heads of head-complement structures also carrying morphological properties of agreement. It is this kind of analysis of the acquisition of AUX that not only accounts for a particular process of grammaticalization, but also provides evidence of the way in which different functions of finiteness interact in the target-language system.

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1. At this point it seems relevant to note that utterances with sentence-internal *no*, *don't*, *can't*, and *not* in the acquisition of L1 English and *nein* ‘no’, *braucht nicht* ‘has-to not’, and *nicht* ‘not’ in the acquisition of L1 German seem to be produced according to the same principles of information structuring as *nee*, *kanniet*, *niet*, etc., in L1 Dutch. The examples in (i) and (ii) provide cross-linguistic evidence of a basic constituent order with a structural topic position that is out of the scope of the negator.

- (i) Examples of sentence-internal *no*, *don't*, *can't*, *not* in English (Clark and Clark 1977: 349)

he *no* bite you  
 I *no* want envelope  
 that *no* fish school  
 I *don't* have a book  
*don't* bite me yet  
 I *can't* catch you  
 I *not* crying  
 I *not* see you any more  
 this *not* ice cream

- (ii) Examples of sentence-internal *nein* ‘no’, *brauchtnicht* ‘has-to-not’, *nicht* ‘not’ in German (Wode 1977; Felix 1978)

ich *nein* schlafen  
 ‘I no sleep’  
 das *nein* aua  
 ‘that no ouch’  
 ich *nein* hat eins  
 ‘I no has one’  
 Henning *brauchtnicht* uni  
 ‘H has-to-not university’  
 ich *nicht* essen mehr  
 ‘I not eat more’  
 Eric *nicht* schlafen  
 ‘E not sleep’

2. In her study on finiteness in second-language acquisition, Parodi (2000) also distinguishes between the semantic function of auxiliaries and modals. However, since auxiliaries are part of the tense–aspect system of the target language, I would not agree in classifying them as “semantically empty” (2000: 361). On the other hand, modals “certainly have semantic content” (2000: 361) that differs from the semantic function of auxiliaries. But, in the case of auxiliaries, the semantic contribution is of a grammatical nature, whereas in case of modals it is lexical.

I would also not agree in characterizing the semantics of modals as “added to that of the main verb” (2000: 361). Rather, it seems to me that the lexical meaning of modals serves a pragmatic function. It is added to the default function of assertion, thereby providing the possibility of expressing an array of illocutionary functions.

3. There is no evidence of this in Jasmijn (1;10–1;11) and Andrea (2;0–2;1). At the conceptual-ordering stage, Andrea has only a few examples, as shown in (i).
- (i) Early cases of “topicalization” in Andrea (2;0–2;1)
- zo moettie?* (2;0)  
 ‘so has-to-he?’  
*0 hem ik, die hem ik* (2;0)  
 ‘have I, that-one have I’  
*zo doek ik* (2;1)  
 ‘so do-I I’  
*boeffie ben ik* (2;1)  
 ‘toughie am I’  
*lekker vin ik* (2;1)  
 ‘tasty find I’

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