



Precursors of Narrative Ability: An In-Depth Study of Three Dutch Children

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Summary

This study is about the development of narrative ability in children. Narrative development refers to the growing ability to create extended texts, spoken as well as written, and is a major linguistic development between ages four and twelve. At school the emphasis gradually shifts from the oral narrative to the written modality. Listening to story books will be increasingly replaced by textbook comprehension and the drafting of texts. The assessment of oral narrative skills has become an established method to assess advanced language skills. Considering the importance of narrative skills it is highly relevant to search for potential precursors in the first years of life in relation to later narrative ability. The theoretical framework of this investigation draws its inspiration from the pragmatics of connected discourse. Connected discourse emerges from conversations between children and their caretakers. The present study will analyse data obtained from an in-depth longitudinal study of three children in two Dutch families, video-recorded in spontaneous interaction every three months. First a review is given of the research to date on precursors of narrative ability (**Chapter 2**). A narrative is defined as talk centered on a particular topic that extends over several utterances and/or conversational turns. Narratives can be divided in several subgenres: scripts, personal narratives and fantasy or fictional narratives. This study takes a multilevel approach to narrative ability, focusing on three components: *narrative productivity*, *narrative story structure* and *narrative complex language*. In the search for potential precursors of narrative ability a considerable amount of research has focused on three areas and these will be the focus also here: (1) the impact of discussing the nonpresent, (2) children's ability to express temporality and (3) developing skills to elaborate on topics on past events.

Discussing nonpresent topics in parent-child interaction starts in the middle of the second year. The developmental progression reflects the degree of context embeddedness (Ninio & Snow, 1996). The more a discussion is contextualized or built on a joint perceptual focus, the earlier young children participate in that conversation verbally. Despite cognitive and communicative limitations on children's participation, they can nonetheless participate in all major types of discussion by the age of two years. In an study into the influence of nonpresent talk interaction on two narrative genres at age five it appeared that the more children were engaged in nonpresent talk at 1;8 and 2;8, the better narrators of personal experience they tended to be at age five (Uccelli, Hemphill, Pan & Snow, 2005). The same effect has been shown for the fictional narrative (Lange & Carroll, 2003).

These findings indicate that participation in early discussions about the nonpresent positively influences overall performance in both personal and fantasy narration at age five. The suggestion is that the more parents engage in nonpresent talk with their young children, the more opportunities children have to learn to represent past events, to report intentions, feelings and reactions, and to tie experience in one context to experience in another context. These are all skills believed to be critical to later autonomous narrative production.

In order to produce a narrative the expression of temporality is crucial (Berman & Slobin, 1994). Temporality in language can be expressed using grammatical morphemes such as tense marking on verbs, or lexical items such as temporal/ aspectual adverbs, connectives and expressions (e.g. *yesterday, later, then*). Dutch children produce verbs from an early age although many utterances are still without a verb even in the two-word stage, that is past the age of two years. Dutch children have acquired the rule that a sentence requires a verb by age four since they then omit the verb in less than 4% of obligatory contexts. Once verbs are regularly produced, lexical verbs are frequently produced as root infinitives (*vallen* instead of *valt*, 'fall' instead of '(he) falls'). Root infinitives are rarely used to refer to past events (Blom, 2008). At age two tense marking starts with present tense singular and this form is used alongside root infinitives. The increase of finite sentences is gradual. In the same period that root infinitives are used, children start using bare past participles. These so called root participles have a completed aspect denotation. Many of these early Dutch root participles do not have the participial prefix *ge-*; the auxiliary verb is also missing; the participial suffix *-t* or *-(e)n* is however expressed (*maakt* 'made' instead of *gemaakt* 'made' (= perfect tense). According to earlier research on Dutch (De Houwer & Gillis, 1998) the use of the future auxiliary *zullen* ('shall'/will') is rare under age four, as is the *simple past* form, for example *hij maakte* 'he made', and the *past perfect*, for example *zij hadden gemaakt* 'they had made'. Children also have to learn to use temporal/ aspectual markers (TAMs). Uccelli (2009) investigating three-year-old Spanish speaking narrators found aspectual markers such as ALREADY to express result, and AGAIN to express recurrence, and so called 'general sequencers' such as THEN and AFTER, and WHEN to mark immediate anteriority or simultaneity. It was found that as the use of past tense to report events was mastered by 2;9-2;10, the number of different TAMs also increased.

Topic elaboration in past event talk is also potentially relevant for later narrative ability. It has been shown that two and three year old children tend not to recall memories of events without external scaffolding. The role of the adult appears therefore to be crucial. The exposure to reminiscence has been claimed to scaffold children's ability to produce and understand narratives. Characteristics in the language of the mother and the children were investigated in order to find effects on children's narrative skills at age 5;10 (Reese, 1995). Past event talk in mother-child

interactions at age three and four was a strong predictor of narrative ability at age five. Also children's increasing participation in conversations emerged as a positive predictor of later performance, especially for their story comprehension and story production scores. Furthermore it was found that the reminiscing style parents adopt in their interaction relates to what children remember about past events (Fivush, Haden & Reese, 2006). Children of parents with a high-elaborative style recalled more about personal life events than children of parents with a low-elaborative style in conversations, and it was found that a highly elaborative reminiscing style had a facilitating effect on children's narrative ability.

From the review of the literature it had to be concluded that there is no consensus on the definition of nonpresent talk. Therefore nonpresent talk had to be redefined. It also indicated that previous research has often been narrow in the interpretation of narrative ability focusing on only one component. This study focuses on three components: *narrative productivity*, *narrative story structure* and *narrative complex language*. Further, it becomes clear that still little is known of children's narrative ability in their spontaneous speech. In the present study elicited narratives as well as narratives in spontaneous speech are systematically researched on the three narrative components. The aim is to identify precursors of narrative ability in early nonpresent talk in parent-child interaction. The three potential precursors are addressed in three separate chapters and explored on the basis of the following general research questions:

1. What is the relationship between nonpresent talk and later narrative ability? (Chapter 5).
2. What is the relation between early temporality development in nonpresent talk and later narrative ability? (Chapter 6).
3. What is the relation between elaboration in nonpresent talk and later narrative ability? (Chapter 7).

The subjects for this study are three first-born monolingual Dutch children, Hazel, Floor and Stijn, from two families, with comparable middle-class background (**Chapter 3**). Hazel and Floor are full term non-identical twin sisters. All three children were followed longitudinally for ten years between the ages of three months and ten years in regular spontaneous interaction with their parents. Video recordings took place every three months, every recording being one to two hours long. They were filmed at home in daily situations. Since the discussion of nonpresent talk starts around age two and develops considerably in the third year, it was decided to start the study at 1;9 and to continue until 3;9. The recordings were analyzed at three month intervals until 3;3, thereafter at six month intervals, making a total of seven recordings per family. All nonpresent talk (NPT) segments were identified, NPT being defined as a topic-specific discussion in the social interaction between two or more participants that relates to and/or comments on the not-here-and-not-now.

Such a discussion may refer to: (1) past events, (2) future events, (3) fantasy, and/or (4) other non-observable thoughts, feelings, likes and dislikes. The NPT segments were transcribed into orthographic Dutch. Each segment was coded for source (file, child, age) and the length of recording (in seconds) was noted. To be able to compare the three children to each other and to their peer group in terms of their general language level, language tests were administered at age 4;3 and again at age 7;0. At 4;3 two vocabulary subtests of the TAK were administered and the language and communicative behavior at school was investigated using a teacher questionnaire. At age 7;0 two subtests of the Renfrew Language Scales (Dutch adaptation) were administered. Two narrative tasks were selected in order to assess the children's narrative ability at age seven: a story generation task, the *Frog story*, and a story retelling task, the *Renfrew's Bus story* task. In addition spontaneously produced narratives around age seven were analysed.

The general language level of the three children at age four and age seven and their narrative ability at age seven had to be determined as the baseline for the exploration of the precursors and to pinpoint similarities and differences between the three children (**Chapter 4**). At age 4;3 all three children scored on the mean score or above in comparison to Dutch peers for receptive and expressive vocabulary as measured by the TAK. On social language ability in the classroom all three scored 'high' or 'rather high'. In comparison to each other Hazel excelled on receptive vocabulary, Stijn on expressive vocabulary and social language ability. At age 7;0 all three children had an average score on their expressive vocabulary, in comparison to Dutch children aged between 7;0 and 7;6. On the APT, measuring specific vocabulary and grammatical structures, Hazel scored very high in comparison to Dutch peers, Floor and Stijn both scored average. In comparison to each other Hazel scored highest on grammatical structure and specific vocabulary and Stijn highest on expressive vocabulary, as he did at age four. For story generation, as measured with the *Frog story* test, the three children also scored comparable to their peers, Hazel performing best on *narrative productivity* as well as *narrative complex language*, Floor best on *narrative story structure*. On story retelling, as measured with the *Bus story* test, Stijn was highest on *narrative productivity*, and Hazel again on *narrative complex language*. Narrative ability measured in spontaneous narratives showed Stijn highest in *narrative productivity* and Floor highest on *narrative story structure* as well as on *narrative complex language*. When viewing the three separate components of narrative ability the children could be ranked. Stijn ranked highest on *narrative productivity*. This results from the fact that he produced the most and the longest narratives in spontaneous speech and in one of the two elicited tasks. On *narrative story structure* Floor ranked highest; she excelled in telling a clear and coherent story to the listener. On *narrative complex language* Hazel ranked

highest. The potential precursors to be considered in the following chapters were related to these characteristics of the three children. .

In examining how NPT develops between 1;9 and 3;9 in the three children and how it relates to their narrative ability at age seven (**Chapter 5**) general developmental trends for the three children were discussed, variation between the two families, and individual differences between the children. The specific research questions in this chapter focused on (a) the extent NPT increases in frequency, (b) the frequency as related to specific settings, (c) child's ability to initiate NPT, and (d) how individual differences in the development of NPT are related to narrative ability at age seven. A highly detailed coding scheme was developed for NPT. Discussing Past events and discussing Future events were each divided into four subcategories according to the size of distance from 'the now', the speech moment. Fantasy talk was divided into three subcategories, NPT Other into four subcategories, covering all types of NPT that were not past, and not future or fantasy talk. It appeared that the quantity NPT at age 3;9 had only slightly increased in comparison to 1;9. At time point 2;9, however, the occurrence of NPT was highest, declining by 3;9. Calculated for the individual children it appeared that Stijn is most frequently engaged in NPT, followed by Hazel, and then Floor. A more detailed picture of the development of NPT emerges when including the (sub) categories of NPT. Over the two year period studied NPT Other forms the largest category, immediately followed by NPT Past. NPT Future and NPT Fantasy are both much smaller categories, implying that between ages 1;9 and 3;9 discussing past events occurs much more frequently than discussing future events or fantasy talk. It is striking how from age 1;9 temporal reference gradually moves further away from the here-and-now. At age 1;9 most past events were restricted to the recent past, at 2;9 to what has happened on the preceding days and week, at 3;9 events that happened more than 6 months ago were also reported. For NPT Future the same developmental trend could be observed, starting somewhat later. Up to 2;9 all talk referred to the immediate future, close to the here-and-now. Talking about future events increased from age 2;9 on, discussing events in the future weeks and even months ahead. The frequency of Fantasy talk increases from 2;6 on and peaks at 2;9. This is true in both families, but in the Stijn family there is proportionally more Fantasy talk than in the Hazel- Floor family. The rise in Fantasy talk is due to 'symbolic play' and 'role play'. The category NPT Other was found to be large and varied. The subcategories were dependent on age. The subcategory *Talking about knowledge & memory* is the only subcategory present at all ages, and it became increasingly frequent from 2;6 on. It appeared that most NPT occurred in one particular setting, namely sitting together in order to eat or drink. This setting includes regular mealtimes as well as sitting down for coffee in the morning, tea in the afternoon or during 'snack time'. The two families scored similarly for most settings, but the Stijn family had more

parent-child routines while Hazel and Floor were more often engaged in toy play, suggesting that settings in which NPT takes place can also reflect family preferences.

In the Hazel-Floor family up to age 2;6 more initiatives are taken by the adults than by the children. However after 2;6 Hazel and Floor take relatively more initiatives than their parents. This change does not occur in the Stijn family, although the percentage of parent initiations did gradually decrease. It is interesting to observe that child preferences may play a role. Hazel and Floor took most initiative in discussions on past events and knowledge. Stijn initiated more in Fantasy talk and in retelling stories. Comparing the three individual children, it turns out that Hazel takes far more initiating moves in NPT than Floor, and also more than Stijn. The conclusion is Stijn is more frequently engaged in NPT but Hazel demonstrates the most initiating behavior in NPT. Based on previous research a relationship between engagement in NPT and later narrative ability was predicted. In the current study however the relation seems to be restricted to one component of narrative ability, *narrative productivity*. Child's initiating behavior in parent-child interaction, starting in the first year of life, is considered to be a sign of advanced language acquisition. The data of this study support these findings. In the current study the child (Hazel) who scored highest in the amount of initiating behavior of NPT between 1;9 -3;9 excelled at age seven on one component of narrative ability, *narrative complex language*. These findings suggest two candidate precursors of later narrative ability: the amount of engagement in NPT and child's ability to initiate NPT; both, however, seem to be related to different components of narrative ability at age seven.

Temporality is measured by analyzing three variables: *verb use*, *tense marking* and *temporal/adverbial markers* (TAMs) (**Chapter 6**). In order to explore the role of the parents in the expected variation, *parental tense marking* and their production of TAMs in NPT is also investigated. The percentage of all three children's utterances containing a verb sharply increased in relation to their total number of utterances, and most sharply between 1;9 and 2;9. The number of pragmatically acceptable verbless child utterances decreased. Stijn showed a somewhat different pattern to the girls in this respect; he retained a much higher percentage of pragmatically acceptable verbless utterances than the girls. The second measure of *verb use*, 'proportion of verbs related to all other words' substantially increased after 1;9. Stijn had a lower percentage of verbs at all time points compared to the girls. Despite the expected general developmental pattern of increasing verb use there was individual variation between the three children. Stijn continued to produce more verbless utterances in the category pragmatically acceptable and had a lower percentage of verbs in relation to all other words. On *verb use* as measure of temporality development it was concluded that overall over the two year period the two girls were somewhat more advanced than the boy. For *tense marking* it was shown that the emergence of the five tenses in NPT extends over a period of

two years. The general order of emergence is similar to the order observed in all speech. The data do not confirm, however, previous findings for Dutch in that past simple, past perfect and future tense are rare in Dutch children younger than 4;0. From 2;6 – 3;9 all three children developed in their tense marking ability and progressed to the use of the correct form. At age 2;9 Floor was the first to produce all past tense forms correctly. Hazel achieved 100% correctness at 3;9, Stijn, however, had not yet reached the acquisition criterion by 3;9. In sum, and ranking the children on this measure of temporality, Hazel is quickest in the spontaneous production of all different tenses. Floor is quickest in using the correct form in past tense marking, and Stijn is the slowest. Regarding *the parental role in tense marking* all parental utterances were analyzed at 1;9, 2;9 and 3;9 for their occurrence of verbless utterances and tense marking categories. The percentage of tense marked utterances in NPT increased over the two year period, and the parental verbless utterances decreased. The category ‘past simple’ increased over time. Parental use of ‘present perfect’ and ‘past perfect’ was also clearly increasing, reflecting a greater involvement in temporality between 1;9 and 3;9. The children’s TAMs developed slowly up to age 2;6 in terms of the variety of markers used (five categories defined). The order of emergence of the children’s categories of TAMs was firstly ‘aspectual markers’ and ‘temporal adverbs’ (from 1;9 – 2;9), then ‘temporal markers of anteriority, posteriority and simultaneity’ (from 2;9 – 3;9) and last ‘general sequencers’ and ‘longer expressions of time reference’ (at 3;9). From age 2;9 on the children basically had the means to express events ordered in time. Comparing the present study to the research into Spanish children (Uccelli, 2009) the same categories were found. However in the current study it was possible to observe the emergence of ‘longer expressions of time reference’ at 3;9, such as *toen Hazel en Floor nog klein waren* ‘when Hazel and Floor were little’. In the *parental production of TAMs* it is striking that at 2;0, nine months before children’s temporal markers appeared for the first time, these had already been introduced by the parents. From age 2;3 on the children were increasingly exposed to more specific types of temporal adverbs. These were produced by the children themselves from 3;9 on. The conclusion is clear in that the amount of different marker types offered by the parents stays some months ahead of the production of the children. Ranking the children on the *verb temporality measures*, Hazel and Floor were found to perform comparably well while Stijn ranks third on all measures, with the exception of the use of longer expressions of TAMs. Based on previous research a relationship between temporality expression in NPT 1;9 – 3;9 and later narrative ability was predicted. The data of the current analysis support the previous findings. Hazel’s relatively fast development of *verb use* and *tense marking* can be linked to her high scores on *narrative complex language* at age seven. It is concluded that a third candidate precursor of later narrative ability is emerging: child temporality development in NPT as related to *complex language in narrations*.

The search for precursors of narrative ability focused also on a third potential precursor: topic elaboration (**Chapter 7**). Elaboration is considered by examining parental elaboration and child elaboration. In order to approach the reviewed notion of 'past even talk' (Reese, 1995) the category NPT Past and the subcategory NPT Know were analyzed. NPT Past was taken together and no distinction was made between immediate past and further past. NPT Know is defined as NPT containing the exchange of information with respect to knowledge of the world. In order to measure parental elaboration two analyses were performed: 'open ended questions versus yes-no questions' (Sparks & Reese, 2013) and an analysis of elaboration operationalized as 'topic extension' (Reese, 1995). For child elaboration in NPT Past and NPT Know a new coding scheme was designed accounting for all different types of child contributions found in the NPT of this study. A four-point scale for these child contributions was used moving from a minimal contribution to the ongoing conversation, such as pointing as a non-verbal contribution (stage 1), via minimal responses such as yes/no answers (stage 2) to responding verbally to the topic of the ongoing conversation (stage 3), to the final skill of independently elaborating the ongoing conversation. Focusing on the ratio of open ended questions and yes-no questions in relation to the total number of parental utterances, both families had relatively more yes-no questions than open ended questions, especially at the younger ages. This is true for NPT Past as well as for NPT Know. One explanation for the relatively high amount of yes-no questions compared to the literature is the age of the children since they are younger than in the reviewed research. It was concluded that the 'ratio open ended questions versus yes/no questions', is not appropriate to measure parental elaboration at this young age. Parental elaboration measured as 'topic elaboration', the second measure, appeared to be higher in the Stijn family than in the Hazel - Floor family. When the children's participation behavior in NPT was analyzed, large differences appeared between the children. The total amount of Stijn's NPT contributions per hour was four times higher than Floor's and more than twice as high as Hazel's. Most NPT took place in the Stijn family and Stijn also had the highest total of NPT contributions. The three children increasingly started to contribute to the ongoing NPT by responding to the adult with an adequate verbal contribution to the ongoing conversation (stage 3) and even by elaborating the ongoing NPT by adding new information themselves (stage 4). The percentages of this category varied between 9.8% and 28.7%. Floor had the highest elaboration score, implying that, although Floor does not often participate in NPT Past conversations, the quality of her contribution is high. She is most advanced in elaboration (stage 4). Ranking the children on the *amount* of contributions per hour in NPT, Stijn obviously ranks first. Ranking them on the *relatively use of topic elaboration* (the highest stage 4 category), Floor ranks first. Based on previous research findings the parents that are most elaborative in NPT were expected to have the children with the highest narrative ability at

age seven. These expectations were only partially met. Stijn's parents were most elaborative in NPT and indeed Stijn had the highest score on *narrative productivity* in spontaneous speech. The expectation that the absolute number of parental elaborations is related to the number of child elaborations was confirmed. Both Stijn and his parents had the highest numbers. One other expectation for the parents was not met: Floor ranked highest on *narrative story structure* in fictional narratives but her parents did not have the most topic elaborations. As regards the child factors, based on previous research the child with a higher elaboration in NPT was expected to have a higher narrative ability at age 7 on the components *narrative productivity* and *narrative story structure*. These expectations are again only partially met. Floor had the highest elaboration score in NPT and she scored highest at age seven on *narrative story structure*. The hypothesis that the child with the highest NPT elaboration score is related to *narrative complex language* at age seven is not confirmed. To conclude, a fourth and a fifth candidate precursor of later narrative ability emerged: high parental elaboration in NPT as related to *narrative productivity* at age seven, and high child elaboration in NPT as related to *narrative story structure*.

In **Chapter 8** a summary of the results is presented and their implications discussed. Some interesting developmental trends emerged which are worth studying more deeply, such as the increase of Fantasy talk in NPT around age 2;9 and differences in child elaboration in NPT Past and NPT Know. It is clear that all potential precursors found in this (multiple) case study and all general findings on development need to be investigated in large-scale studies. However the present study draws attention to *child factors* relating to later narrative ability. Most previous research focused on *parental factors* influencing narrative skills. *Child factors* may be equally important. Future research has to further explore the potential precursors that were suggested by this study. Moreover narrative ability has further to be considered as a multilevel concept. The three components delivered complementary information on what narrative ability at age seven involves. In further research on narrative ability all three components, *narrative productivity*, *narrative story structure* and *narrative complex language*, need to be explored. This has not been done to date. Moreover, this study showed different results for narratives in *elicited tasks* and in *spontaneously* produced daily interaction. More research is needed to compare narrative ability in spontaneous and elicited narratives. The position of narrative ability and its precursors in the school curriculum and in early education needs to be considered in the light of these findings. To date the acquisition of narrative skills and their precursors in NPT have as yet not been recognized as 'core objectives'. This study suggests that a more systematic focus on narrative ability and its precursors in NPT in the school curriculum as well as in early education is needed. To conclude, further research should also focus

on the developments in NPT as investigated in this study in children with suspected SLI, and in bilingual children, in order to gain more insights into possible prevention and intervention.