Distinguishing between obligatory and optional grammatical categories in 'thinking for speaking': The use of the '*aan het* construction' by six-year-old Flemish children

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This paper explores whether the influence of a grammatically encoded category depends on being obligatory or non-obligatory. This paper tests Slobin's approach to linguistic relativity. According to Slobin (1996; 2003; 2008), the presence of a grammatically encoded category directs the focus of speakers in the 'thinking for speaking' process. Slobin adduces evidence for this claim based on experiments with children in which he focused on the expression of the progressive aspect in various languages, e.g. the present and past continuous in English (is/was running), in comparison with languages that lack such a category. However, Slobin fails to distinguish between obligatory and optional categories. Though both are encoded form-meaning pairings in a language's grammar (cf. Levinson 2000, Belligh & Willems 2021), only the former must be used in speech in specific contexts. The present article focuses on this distinction and tests Slobin's account by examining the influence of a grammatical category, such as the '*aan het* construction' in Dutch, which encodes progressive aspect even though it is non-obligatory in speech. Our findings suggests that Slobin's thesis should be adjusted: Categories that are encoded **and obligatory** are generally expressed while categories which are encoded **and optional** are generally much more ignored. Speakers attend to encoded grammatical categories that are non-obligatory only when the speakers' attention is explicitly directed to certain aspects of an event.

1. Introduction

The interrelation between language, thought and culture has been widely debated. The idea that the structure of a language can influence thought processes has divided linguists. This idea is generally known as the *Whorfian hypothesis*, named after one of the best-known proponents of the claim, Benjamin Lee Whorf, or the *Sapir-Whorf hypothesis*, after Edward Sapir, under whom Whorf studied. Both thinkers promulgated the idea that one's perception of the world and the ways in which one

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thinks about the world are deeply influenced by the structure of the language(s) one speaks. According to Sapir, "no two languages are ever sufficiently similar to be considered as representing the same social reality" (1929:209). Sapir was interested in investigating the possible influence that words have over individual speakers and groups of speakers. However, Sapir never designed a conceptual framework or methodology to test his ideas. Whorf, a former student of Sapir, took on this task. Whorf expanded on Sapir's ideas and added that the world conveys multiple impressions that are substantially organized by means of our native linguistic system. The linguistic system divides impressions into concepts and assigns significance to them (Whorf & Carroll 1956:213). However, the question concerning a language's influence on thought processes is not a causal but a dynamic question. Language and cognition are inseparable and should be viewed together because of their constant influence on each other (Whorf & Carroll 1956:156). Whorf's views on language and cognition were considerably more radical than those of Sapir (cf. Coseriu 1982:274-275; Trabant 1986:169). Whorf was interested in the inference that different grammatical systems have on the ways in which speakers conceptualize the world and in turn how they think about the world. This idea would alternatingly gain and lose prominence over the following decades. A simplified version of Whorf's hypothesis was later split up into a strong and a weak version. The strong version advocates linguistic determinism: language **determines** thought and cognition at large. The weak version is known as linguistic relativity and makes the more modest claim that the linguistic categories of a language **influence** a speaker's thought patterns.

A recent proponent of linguistic relativity is Dan Slobin. Slobin considers thinking an activity rather than an abstract concept (1996, 2003). There is no denying that we "think" what we "say", and thus Slobin encourages linguists to focus on the thinking *process* that takes place during the formulation and expression of an utterance. According to Slobin, linguists should pay particular attention to this thinking process since, Slobin (1996:89) argues, speakers "attend to" the grammatical categories encoded in their language when expressing experiences and conceptualizations. Slobin refers to this relation between language and thought process as 'thinking for speaking' (Slobin, 1996:71). What makes Slobin's research particularly interesting from an empirical point of view is that it takes a closer look at encoded grammatical categories (Slobin, 1996) in a language and their role in referring to a certain event. Slobin maintains that speakers are directed by their native language to pay close attention to particular aspects of experience based on what is "grammatically encoded" in the language

they speak, for example native English speakers are directed to pay close attention to the progressive aspect as it is encoded in their native language (Slobin, 1996:74). Moreover, Slobin (1996:71) claims that from an early age onwards children pay attention to such categories that are grammatically encoded in the language they are acquiring, and, conversely, that they do not attend to categories that are not grammatically encoded (Slobin, 1996:83; Slobin, 2008). A detailed summary of Slobin's study will be provided in Section 3.

Slobin's research has inspired this study, which explores the speech of six-year-old Flemish children through Slobin's approach to linguistic relativity, specifically his theory of 'thinking for speaking' (Ghillebaert, 2020). As previously mentioned, Slobin (1996; 2008) claims that the presence or absence of an encoded grammatical category in a language directs the focus of the speaker in the 'thinking for speaking' process. However, Slobin fails to distinguish between obligatory and non-obligatory categories. Though both obligatory and non-obligatory categories are encoded form-meaning pairings in a language's grammar (cf. Levinson 2000, Belligh & Willems 2021), only obligatory categories *must* be used in speech in specific contexts. This essay focuses on this particular distinction and tests Slobin's account by examining the influence of a grammatical category, such as the '*aan het* construction' in Dutch, which encodes the progressive aspect even though it is optional in speech, i.e. it is an encoded grammatical category that speakers are free to choose in speech. In the next section, the research questions and hypotheses will be presented.

2. Research questions and hypotheses

The purpose of the present paper is to explore whether the influence of a grammatically encoded category with regard to 'thinking for speaking' depends on being obligatory or non-obligatory. Specifically, I examine the expression of continuity by six-year-old Dutch-speaking children and the use of the '*aan het* construction', which is an optional grammatical category that encodes the progressive aspect in Dutch.

The empirical test conducted for the purpose of this study consists of two different conditions. On the one hand, I test, in line with Slobin's study, to what extent native Dutch-speaking children convey continuity in their spontaneous speech on the basis of an elicitation task. On the other hand, I extend Slobin's test by expanding the conditions under which speakers are asked to describe certain activities in order to establish if my informants attend to expressions which, although not

obligatory in their language, encode continuity. Dutch actually has several constructions that encode the progressive aspect and thus express continuity: the prepositional periphrastic construction '*aan het* + infinitive' (1), the posture verb construction 'posture verb + *te* + infinitive' (2) and the 'zijn + *bezig* + *met/te* + infinitive' (3).

(1) *Twee meisjes aan het spelen*.
'Two girls are playing.'
(Lit.: 'Two girls at the play-INF')

(2) *Zit er een kindje bloemen te plukken*.
'A sitting child is picking flowers.'
(Lit.: 'Sit there a child flowers to pick')

(3) *Ze zijn bezig met schommelen*.
'They are swinging.'
(Lit.: 'They are busy with swing-INF')

Unlike English, these constructions are non-obligatory (i.e., optional) in Dutch. **Optionality** means that the category can be unspecified, i.e. the speaker does not make the progressive aspect explicit in their language use, as in (4), or the category can be explicitly expressed by means of a dedicated expression, as in (5). In English, the progressive aspect is **obligatorily** expressed in the form of the present continuous (6).

(4) *Zij speelt piano.*
'She plays/is playing the piano.'
(Lit.: 'She play-PRES.3sg piano')

(5) *Zij is piano aan het spelen.*
'She is playing the piano.'
(Lit.: 'She is piano at the play-INF')

(6) *She is playing the piano.* [in progress]
*She plays the piano. [does not convey progress]

Slobin (1996) does not explore whether an optional encoded grammatical category that encodes continuity, such as the Dutch constructions in (1)-(3), may also have a bearing on 'thinking for speaking'. Slobin focuses, instead, on the difference between languages in which the progressive aspect is grammatically encoded (e.g. English) and languages in which it is not. Optional grammatical encoding of the progressive aspect, however, does not constitute a separate category in his research since he does not distinguish between an **obligatory encoded** grammatical category and an **optional encoded** grammatical category. By contrast, in the present paper I focus on an optional grammatical category that encodes continuity in Dutch, namely the '*aan*

het + infinitive', and establish whether and to what extent this contributes to 'thinking for speaking'.

The **research questions** of the present paper are:

Do six-year-old Dutch-speaking children spontaneously express continuity despite the fact that the progressive aspect is a non-obligatory grammatical category in Dutch?

Is there evidence that six-year-old Dutch-speaking children use a non-obligatory construction that grammatically encodes progressive aspect in Dutch?

To answer this question, I conducted an elicitation task among native-Dutch-speaking children between five and six years of age. I tested the speech of children consecutively under two different conditions, viz. a condition in which the children are asked to describe two activities spontaneously, which is in line with Slobin's study, and a second condition in which the children are specifically prompted to convey the continuity of one of the activities as compared to another one. The second condition is a means to induce the speakers to use the non-obligatory '*aan het* construction', which encodes continuity in Dutch.

The **hypothesis** that underpins this study is twofold. The **first** hypothesis is that Dutch children will initially, under the first condition, not convey continuity explicitly in their spontaneous utterances because in the 'thinking for speaking' process their language does not require them to express the progressive aspect. This is because the '*aan het* construction' is a non-obligatory grammatical category in Dutch (Slobin, 1996:74) and speakers are expected to attend to optional encoded grammatical categories to a much lesser degree than to obligatory grammatical categories.

The **second** hypothesis is that the children will try to convey continuity after the notion of continuity has been brought to their attention through additional elicitation, i.e. the second condition. Furthermore, the expectation that underpins the second hypothesis is that Dutch speakers are likely to express continuity by using the prepositional periphrastic construction with '*aan het* + infinitive' due to its encoding of an ongoing activity (i.e., continuity) and its common use in ordinary language (Algemene Nederlandse Spraakkunst 2012; Van Pottelberge, 2004; Ghillebaert, 2020). Behrens provides evidence for this claim as he found that "the *aan het*-construction occurred with higher frequency (375 occurrences, or 84.65%) than posture verb constructions (59 occurrences, or 13.31%)" (2013,127). Thus, the sentence *Jan is* ***aan***

het *spelen* ('Jan is playing') conveys continuity in a way that is similar to the English translation. Further details of the '*aan het* construction' and other constructions which express the progressive aspect will be provided in Section 4.

If the first hypothesis is supported by the findings, then this outcome modifies Slobin's claim, viz. that the presence or absence of a particular encoded grammatical category in a language is pivotal in directing the focus of the speaker to a specific quality of an activity, viz. continuity. It would demonstrate that speakers initially do not focus on the continuity in the activity that is presented to them in the elicitation task, even though Dutch grammar has a number of dedicated constructions to encode the progressive aspect. It would prove that speakers attend to optional encoded grammatical categories to a much lesser degree as Dutch does not require them to express the progressive aspect by means of an encoded category, unlike the English continuous form, which is an obligatory encoded grammatical category.

If the second hypothesis is supported by the findings, then this would provide evidence for an important further qualification of Slobin's findings. It would still demonstrate that the speakers initially do not focus on continuity because Dutch grammar does not require them to express progressive aspect. However, it would additionally show that speakers attend to an optional construction that grammatically encodes the progressive aspect in Dutch under specific conditions. In particular, the use of the optional grammatical category can be induced by drawing the speakers' attention to the continuity of the event depicted in the elicitation task. Hence, despite being optional, the construction that grammatically encodes progressive aspect would nevertheless appear to be readily **available** in the 'thinking for speaking' process.

If both of these hypotheses are supported by the findings, then this would suggest that the speakers initially do not focus on the continuity in the activities that are presented to them in the elicitation task. This is because Dutch grammar does not require speakers to use a grammatical category that encodes progressive aspect. Consequently, no corresponding grammatical category is bound to be **selected** in the process of 'thinking for speaking' even though it is **available**. Additionally, it would show that speakers attend to an optional encoded grammatical category to a much lesser degree than to an obligatory category such as the continuous in English.

3. The 'Thinking for speaking' theory: a case study

In recent years, considerable effort and attention has been devoted to the study of the cognitive organization of content for linguistic expression and specifically the role of encoded grammatical categories in guiding these representations. The research of Stephen Levinson's group renewed views surrounding the topic of language and thought (Gumperz and Levinson 1996b; Levinson 1996, 1997). In line with Gumperz and Levinson's publication from 1996, Slobin developed a new approach to linguistic relativity (Slobin, 1996) that shifted the focus from thinking in general to thinking processed during the formulation of an utterance, i.e. 'thinking for speaking'. This provides linguistic relativity with a more concrete focus on thinking as an activity rather than an abstract concept. The basic claim is that language influences our thought processes specifically when speakers use language. This influence should neither be overlooked nor viewed as trivial as communicating is an important part of daily cognitive activities. Slobin's idea of 'thinking for speaking' is a moderate take on the Whorfian hypothesis as Slobin does not claim that language determines thought. He states that each language possesses a set of encoded grammatical categories that determine what can be grammatically expressed in a language (Slobin, 1996). Slobin claims that the presence or absence of a particular grammatical category in a language directs the focus of the speaker in the 'thinking for speaking' process to a specific feature of an activity when expressing experiences and conceptualizations. The assumption is thus that the speaker will attend to encoded grammatical categories, and not to non-encoded grammatical categories, given that only the former but not the latter are available during the 'thinking for speaking' process.

Slobin attempts to substantiate his claims by collecting narratives from speakers of different languages, on the basis of the children's picture book *Frog, where are you?* (Mayer, 1969). Since the story does not contain written words and is easy to understand, it is suitable for collecting narratives. The participants were of different ages, viz. three- to five-year-olds, nine-year-olds, and adults. The native languages of the participants were English, Spanish, German and Hebrew.

The research focused, in part, on the expression of continuity, which can be expressed by the grammatical category of the progressive aspect. The progressive aspect can be encoded in a language, such as in English, but it can also not be encoded, such as in German and Hebrew, according to Slobin (Slobin, 1996:79). In English, the progressive aspect is expressed by a continuous (or progressive) tense. Slobin uses the picture book to evoke the use of the progressive aspect as the book contains pictures of

ongoing activities which readily evoke temporal descriptions, and hence are expected to trigger the use of the progressive aspect in languages that possess a corresponding encoded category. One of the pictures (Fig. 1) displays two simultaneous activities, one punctual and completed activity, and another non-punctual, durative activity (Slobin, 1996:79). The completed activity depicts a boy who just fell from a tree while the durative activity depicts a dog running away from a swarm of bees.

Based on the fact that the progressive is an (obligatory) encoded category in the English language, Slobin's **hypothesis** is that English speakers will distinguish the activities from each other by means of tense/aspect, e.g.:

(7) The child ***fell*** and the dog ***is running***.

By contrast, German and Hebrew speakers are expected not to distinguish the activities by means of the progressive aspect since it is not encoded in the verb system in their language. The expectation is, therefore, that German speakers will say something like, e.g.,

(8) Der Junge fällt vom Baum und der Hund läuft weg.
'He fell down from the tree and the dog ran away'.

If this hypothesis is supported by the findings, it would suggest that the English speakers focus on the continuity in the activity that is presented to them because their language encodes the progressive aspect and therefore a progressive construction is available during the 'thinking for speaking' process to which speakers are likely to attend. Furthermore, it would suggest that the German and Hebrew speakers do not focus on the continuity in the activity that is presented to them because German and Hebrew do not encode the progressive aspect in the verb, and hence no corresponding grammatical category is available in the process of 'thinking for speaking'.

Figure 1. *A completed and an ongoing activity (Slobin, 1996: Fig. 3.1)*

Slobin's findings are provided in Table 1. They show the percentage of speakers who did *not* distinguish between tense/aspect when narrating the activities shown to them in Figure 1.

	Preschool (3–5)	School (9)	Adult	OVERALL
Hebrew	71	100	63	78
German	54	80	78	71
English	26	22	33	27
Spanish	23	18	0	21

Table 1. *Percentage of narrators using same tense/aspect form for "fall" and "run" clauses in Fig. 3.1 (Slobin, 1996: table 3.1)*

As expected, Hebrew and German speakers tend not to use a different tense/aspect when referring to the two activities, in contrast to English speakers, who mostly do. These results are found across all age groups. However, the table also shows that speakers do **not strictly** adhere to the encoded grammatical categories provided by their language, even though they are clearly guided by them and do not often diverge from them (Slobin, 1996:82). This indicates that "other options are possible" and thus *thinking* can be separated from *speaking* (Slobin, 1996:80). This provides evidence for linguistic relativity and contradicts linguistic determinism. Conversely, some children try to compensate for the lack of the encoded progressive aspect in some other way. For instance, German children sometimes reduplicate their words: *Der Hund rennt rennt rennt* ('De dog runs runs runs'). Continuity is thus conveyed by means of repeating the verb 'run', while no such reduplication is found with the verb 'fall'. Other compensation tactics include using a different tense to mark the activity. For example, a Hebrew child used the past

tense to describe the completed action and the present tense to describe the ongoing activity: 'the boy fell from the tree and the dog runs away'; or used other lexical means to convey continuity, e.g. *er rannte schneller und immer schneller* ('the dog runs faster and ever faster').

In general, the results support Slobin's claim: categories that are encoded ('grammaticalized') are generally expressed while categories that are not encoded are generally ignored. Language thus directs the speaker to attend to encoded grammatical categories and not to non-encoded grammatical categories during 'thinking for speaking'.

However, Slobin does not distinguish between obligatory and non-obligatory (or optional) encoded grammatical categories. Inspired by Slobin, I conducted a similar elicitation task (Ghillebaert, 2020). My focus, however, was on the distinction between obligatory and optional categories. The study tests Slobin's account by examining the influence of a grammatical category, such as the '*aan het construction'* in Dutch, that **encodes** the progressive aspect even though it is **optional** in speech, i.e. an optional encoded grammatical category. Like Slobin, I use drawings to obtain brief narrations from native-Dutch speaking children. However, I add an additional condition to the experiment. In the next section, I give a detailed description of my research question.

4. The expression of aspect

In most languages people speak of certain events or situations as having taken place in the present, past or future. Additionally, some languages can convey whether a situation is completed or ongoing, i.e. perfective or progressive (Li & Shirai, 2000:12-13). However, the ways in which these temporal and aspectual meanings are expressed differ widely across languages. Tense and aspect are two possible resources which languages have at their disposal to convey temporal and aspectual meanings. Aspect is a grammatical category[1] connected to a verb; it denotes the contour of an action, event, or state over time. While aspect denotes the contour of a single event *over time*, tense denotes the relationship *in time* between events (Li & Shirai, 2000:2). Some languages, such as Hebrew, do not grammatically mark aspect, while other languages, such as Chinese, only encode aspect and not tense (Li & Shirai, 2000:4).

[1]Grammatical aspect is separate from lexical aspect. Lexical aspect is the "semantic characteristic inherent in the lexical content of a word", e.g. *to jump* has as part of its semantic characteristic that it is inherently momentary and instantaneous (Li & Shirai, 2000).

In this paper, the focus lies on the progressive aspect in Dutch. This chapter gives a detailed explanation of the progressive aspect and a description of the constructions which encode the progressive aspect in Dutch.

4.1 The expression of the progressive aspect

The progressive aspect is a grammatical category that denotes an action that is dynamic, i.e. an action or event in progress (Li & Shirai, 2000:19). The progressive aspect is a subcategory of the imperfective aspect. Both communicate the internal structure of an event without regard to the event's start or end point. However, the imperfective aspect does not include the 'action in progress' meaning. Compare these two sentences:

(1) *I used to walk to school.* [Imperfective, habitual]

(2) *I was walking to school.* [Imperfective, progressive]

In several languages, such as in English, the term 'progressive aspect' is used interchangeably with the term 'continuous aspect'. However, other languages do make a distinction between the progressive aspect and the continuous aspect. For instance, in Chinese, the former denotes a current activity, such as 'they are singing', while the latter denotes a current state, such as 'he is wearing a hat' (Yip & Rimmington, 2004:105,108). As with many other grammatical categories, languages often differ in the precise semantics of the progressive aspect. In this paper, I specifically explore the use of the progressive aspect to describe an ongoing activity rather than a change of state.

In some languages the progressive aspect **needs to be expressed**, i.e. speakers have to convey on the basis of a grammatically encoded distinction whether an action is ongoing or not. Examples are English and Spanish (Slobin, 1996:79). In English, the progressive aspect is encoded by a 'continuous (or progressive) construction', which consists of the copula *to be* combined with the present participle, as in (3).

(3) *The dog is running (away).*

In English, there is an opposition in meaning between the unmarked simple verb form and the present participle, i.e. the verb marked with *-ing* (Flecken, 2011:481). The present participle has the prototypical progressive meaning as it conveys an ongoing situation, whereas the unmarked simple verb lacks this progressive meaning. The simple form is used to express habituality as in (4), or to represent a state or

characteristic of a person over an unlimited period of time, as in (5) (Flecken, 2011:481).

(4) *He reads the newspaper.* (every morning)

(5) *He reads books*. (general statement)

By contrast, in other languages, such as German and Dutch, the progressive aspect **does not have to be** expressed. As a matter of fact, the English sentence (1) can be translated into German (Slobin 1996:81) or Dutch as (6) and (7).

(6) *Der Hund läuft (weg).*
'The dog runs/ the dog is running (away)'
(Lit: 'The dog runs (away).')

(7) *De hond loopt (weg).*
'The dog runs/ the dog is running (away)'
(Lit: 'The dog runs (away).')

Even though the distinction does not need to be made in speech, Dutch still has several constructions that encode the progressive aspect in explicit terms. However, in contrast with the obligatory English continuous construction, Dutch progressive constructions are optional. In what follows, I provide an overview of the constructions that encode the durative progressive in Dutch. First, I discuss the posture verb constructions and the motion verb construction. Secondly, I introduce the adjectival '*zijn bezig te/met* + infinitive construction'. Lastly, I present the '*aan het* construction'.

4.1.1 The 'posture verb + te cx' and the 'motion verb + te cx'

Firstly, there is the 'posture verb + *te* construction', i.e. '*liggen/zitten/staan/hangen* + *te* + infinitive', and the similar 'motion progressive construction', i.e. '*lopen* + *te* + infinitive'. These constructions can only be used with either one of the following verbs: *liggen* ('lie'), *zitten* ('sit'), *staan* ('stand'), *hangen* ('hang') or *lopen* ('run') (*Algemene Nederlandse Spraakkunst*, 2012), as in the following examples:

(8) *Hij ligt te slapen.*
'He is sleeping.' (Lit: 'He lies to sleep.')

(9) *Ik zit te werken aan mijn bureau.*
'I am working at my desk.'
(Lit.: 'I sit to work at my desk.')

(10) *Ze staan te praten.*
'They are talking.' (Lit: 'They stand to talk.')

(11) *De appels hangen te rotten aan de boom.*
'The apples are rotting on the tree.'
(Lit: 'The apples hang to rot on the tree')

(12) *Ik loop te piekeren.*
'I am worrying.' (Lit: 'I run to worry.')

The conjugated posture/motion verb primarily coincides with the posture or position of the subject that performs the action or is in the condition expressed by the infinitive verb (*Algemene Nederlandse Spraakkunst*, 2012; Lemmens, 2015:5). However, in some cases the meaning of the posture/motion verb is lost or weakened, which is an example of semantic bleaching, and only the grammatical function of expressing the progressive aspect remains. Semantic bleaching can be seen as the first step toward grammaticalization. As a result, the conjugated posture/motion verb does not, in some cases, need to coincide with the posture or position of the subject as in the following examples (*Algemene Nederlandse Spraakkunst*, 2012):

(13) *De minister zit te beweren dat we moeten bezuinigen.*
'The minister is claiming that we have to cut back.'
(Lit: 'The minister sits to claim that we have to cut back.')

(14) *Lig niet zo te zeuren!*
'Don't whine(PROG) like that!'
(Lit: 'Lie not so to whine!')

These sentences primarily occur in spoken language and often carry an added connotation of annoyance (*Algemene Nederlandse Spraakkunst*, 2012). Notably, semantic bleaching does not occur with the verb *hangen* ('hang'). This indicates that the posture verb construction combined with *hangen* ('hang') is less grammaticalized (Geleyn & Colleman, 2014:5).

As previously mentioned, the 'posture verb construction' is less prevalent than the '*aan het* construction'. Behrens provides evidence for this claim. He found that "the *aan het*-construction occurred with higher frequency (375 occurrences, or 84.65%) than posture verb constructions (59 occurrences, or 13.31%)" (2013:127).

4.1.2. The '*zijn bezig te/met* + infinitive construction'

Another construction that encodes the progressive aspect consists of the adjective *bezig* ('busy'), which linguistically indicates that the subject is involved in an activity, paired with the verb *zijn* ('to be') (Geleyn & Colleman, 2014:6). The '*zijn bezig* construction' is often paired with the following prepositions: *aan* ('at'), *met* ('with') and *(om) te* ('to'), as in the following examples (*Algemene Nederlandse Spraakkunst*, 2012):

(15) *Kirsten is bezig een roman te lezen.*
'Kirsten is reading a novel.'
(Lit.: 'Kirsten is busy a novel to read.')

(16) *We waren net bezig met eten.*
'We were just eating.'

(Lit.: 'We were just busy with eat.')

Interestingly, the '*zijn bezig* construction' can be distinguished from the other progressive constructions as it seemingly adds meaning, namely that the activity is comprised of a complex internal structure that consists of different stages of progress (Geleyn & Colleman, 2014:6). This is illustrated by the following examples. In (17) a positive outcome seems closer than in (18) since the '*zijn bezig* construction' adds this layer of complexity (ANS, 1997:1049; Geleyn & Colleman, 2014:6).

(17) *De industrie is dat probleem aan het overwinnen.*
'The industry is overcoming that problem.'
(Lit.: 'The industry is that problem at the overcome.')

(18) *De industrie is bezig dat probleem te overwinnen*
'The industry is overcoming that problem.'
(Lit.: 'The industry is busy that problem to overcome.')

Nevertheless, the '*zijn bezig* construction' is not as frequently used as the 'posture verb constructions' and the '*aan het* construction' in Dutch (Geleyn & Colleman, 2014:6).

4.1.3. The '*aan het* construction'

Finally, the prepositional periphrastic construction '*aan het* + infinitive' also encodes the progressive aspect. Van Pottelberge (2004) conducted extensive research on this specific construction and found that it only occurs in six modern West-Germanic languages: Dutch, High German, Low German, West Frisian, Pennsylvania German and Afrikaans.

However, in all of these languages the construction varies in frequency and restrictions of use.

The Dutch '*aan het* construction' is often combined with the verb *zijn* ('be') and consists of the locative preposition *aan* ('at'/'on'), the definite article *het* ('the') and an infinitive form of the verb, as in:

(19) *De hond is aan het lopen.*
'The dog is running.' (Lit.: 'The dog is at the run.')

The '*aan het* construction' is the most frequently used construction to express the progressive aspect in Dutch (Flecken, 2011:483; Stutterheim et al., 2009:205). Furthermore, the construction can also be combined with other verbs besides *zijn* ('be'), such as *blijven* ('stay'), *raken* ('touch'), *krijgen* ('get'), etc., as in the following examples (Geleyn & Colleman, 2014:5; Van Pottelberge, 2004:274):

(20) *De honden gaan aan het blaffen.*
'The dogs start barking'
(Lit.: 'The dogs go at the bark-INF.')

(21) *Hij krijgt de mensen aan het lachen*
'He gets the people to start laughing.'
(Lit.: He gets the people at the laugh-INF.')

The combination of the '*aan het* construction' together with these verbs adds another layer of meaning, such as causality, a starting point, etc. (Donaldson 1993:221; Geleyn & Colleman, 2014:5; Van Pottelberge, 2004:274). However, I specifically focus on the '*aan het* construction' because it is used with greater frequency than the other constructions.

Importantly, in contrast to the 'continuous construction' in English, the three abovementioned constructions, which encode the progressive aspect in Dutch, including the '*aan het* construction', are not obligatorily encoded. Therefore, though it is required in English to mark the difference between an 'activity in general' and an 'ongoing activity' grammatically, no such distinction is required in Dutch. The difference between the obligatory grammatical distinction in English and the optional grammatical distinction in Dutch with regard to the '*aan het* construction' is shown in Table 2 by means of two series of examples in the two languages.

	'Activity in general'	***'Ongoing activity'***
English	She plays the piano.	She is playing the piano.
	Zij speelt piano.	

Dutch		Zij is piano aan het spelen
	'Activity in general'	***'Ongoing activity'***
English	She often played the piano.	She was playing the piano when I left.
Dutch	Zij speelde vaak piano. Zij speelde piano toen ik wegging.	
		Zij was vaak piano aan het spelen. Zij was piano aan het spelen toen ik wegging.

Table 2. A comparison of obligatory encoding and non-obligatory encoding regarding the progressive

5. Methodology

In order to assess my hypotheses, an elicitation task similar to Slobin (1996) was conducted among native Dutch-speaking children.

5.1 Participants

The participants in this study are monolingual native Dutch-speaking children from the Flemish part of Belgium. The study was conducted with forty-three children between the ages of five and six. The main reason for choosing children of this age is that at this age children have not yet been exposed to grammatical lessons, which might influence the child's linguistic knowledge and therefore alter the child's independently developed linguistic knowledge.

The children were selected from two kindergartens in West-Flanders. This province was chosen as the researcher is well acquainted with this particular West-Flemish dialect and because of existing connections in a West-Flemish school.

Permission to conduct the elicitation task was granted by the school and the parents. The researcher met with the principal of both schools to explain the research; further practical matters were handled by email correspondence. To obtain informed consent from the parents, a letter of consent accompanied by a description of the elicitation process was distributed to the parents via the teacher.

Initially, forty-eight parents granted permission. However, five children were not present the day the elicitation task was conducted, which eventually resulted in forty-three children completing the elicitation tasks. Gender was not taken into account when selecting the children.

5.2 Materials

Slobin uses the picture book *Frog, where are you?* (Mayer, 1969) to conduct his elicitation task. However, those drawings are not solely meant to induce the progressive aspect in speech and accordingly also depict elements which could distract the children. I therefore decided to select new drawings which explicitly depict a continuous activity (Fig. 2).

In order to present the children with a clear continuous situation, two pairs of drawings were used. The first drawing in each pair shows an ongoing activity. The second drawing in each pair shows the same ongoing activity but now accompanied by a completed activity. This establishes the visual basis for a narrative which entails continuity since the first activity is still transpiring when the second activity occurs. To corroborate this, a pilot elicitation task was conducted with twelve adults. The participants of the pilot task were adults in order to test the 'normal' use of the 'aan het construction'. The results confirm that the pairs of drawings depict a continuous situation since the '*aan het* construction' was used ten times.

Two pairs of drawings will be used in the elicitation task. The first pair, A and B, depicts two girls: one girl is swinging on a swing, while the other girl is pushing her (A). In the second drawing, another girl joins the first two girls and picks a flower (B). The second pair, C and D, shows two people who are watching TV (C). In the second drawing, the doorbell rings while the two people are watching TV (D). The materials were not shown to participant before the elicitation task.

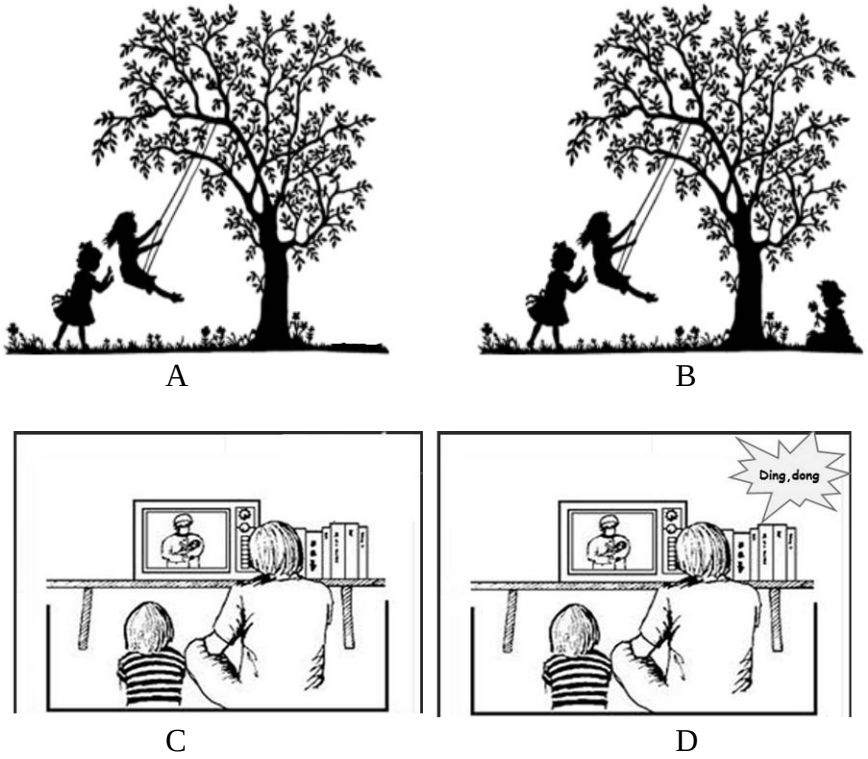

Figure 2. *Drawings used in the elicitation task*

5.3 Elicitation task

Two terms will be used in this research to describe the process of the elicitation task: **eliciting** and **priming**. The first term is used when the researcher tries to evoke the non-obligatory '*aan het* construction' in Dutch by explicitly saying to the participants that the first activity is ongoing. The latter term is used to signify that the researcher has used the '*aan het* construction' in her question. In the latter case, the child is expected to copy the construction. However, the researcher only uses priming at the end of the task to check the child's knowledge of the construction. Priming is not used in the two conditions since the study wants to gain insight into the child's independent 'thinking for speaking' process by guiding them through elicitation but not by providing the construction as a prime. The distinction I make between the obligatory and the non-obligatory use of an encoded category of progressive aspect associated to the way the non-obligatory category is elicited in the children's language production has, to my knowledge, not been tested in previous research.

The children were invited separately into a spare classroom accompanied by the researcher. Each child gets to see two pairs of

drawings. The researcher first shows the pair of drawings A and B. The researcher explains that the drawings are successive by pointing out that they can be compared to what one finds in a comic book, ensuring that the children are conscious of the directed connection between the two drawings and do not see them as independent of each other. The speech of the children is tested under two conditions, one spontaneous and one elicited.

In the **first condition**, the researcher asks what activities the child sees. This results in a spontaneous answer from the child. This condition is in line with Slobin's study and reveals the extent to which six-year-old Dutch-speaking children convey continuity in their speech. If the child uses the prepositional periphrastic construction '*aan het* + infinitive' spontaneously, then the second condition cannot be tested and the researcher goes on to the next pair of drawings after removing the first pair from sight.

However, if the child does not use the '*aan het* construction' in the first condition, the second condition is tested. In the **second condition** the children are prompted to convey continuity. The prompt consists in the researcher pointing out the continuity of the first one of the two activities and saying: *De twee meisjes*/*Ze zijn al even bezig met deze activiteit* ('The two girls/They've been doing this activity for a while'). This sentence is meant to induce the child to express continuity explicitly, viz. to use the non-obligatory '*aan het* construction'. Following the child's response in the second condition, the researcher goes on to the next pair of drawings regardless of whether the child actually used the construction or not.

The researcher moves on to the second pair of drawings, C and D, removing the previous pair (A and B) from sight. The speech of the children is tested under the same two conditions. In the first condition the researcher tries to evoke a spontaneous reaction from the child by asking the child what he or she sees in the second pair of drawings (C and D). Note that the child's answer is less spontaneous than with regard to A and B, because the child might have deduced the task as a result of the previous elicitation based on the first pair of drawings (A and B). If the child uses the '*aan het* construction', no further questions are asked about the second pair (C and D). By contrast, if the child does not use the construction, he or she is prompted to convey continuity in condition two by the researcher, who elicits the expression of continuity, viz. the use of the '*aan het* construction', by pointing out the continuity of one of the activities in C and D in the same manner as before.

If the child does not use the '*aan het* construction' after elicitation in either pair of drawings, then, at the end of the elicitation task, the

researcher eventually passes to priming to check the child's knowledge of the construction and her or his capability of using it in a control condition. This is the experiment's **control condition**. Priming is left until the end of the interview, subsequent to the first and second pair of drawings, to ensure that the elicitation task regarding all four drawings (A and B and C and D) is not influenced by any priming. Priming consists of the researcher using the construction: *Wat zijn deze kinderen **aan het** doen?* ('What are these children doing?'). The control condition was implemented with regard to drawing AB and drawing C separately, according to the speaker's use of the '*aan het* construction' when describing these drawings. The control condition was only implemented for the drawings for which the speaker did not use a dedicated construction after elicitation. For example, if a child used the construction to describe the ongoing activity seen in the first pair of drawings (A and B), then there was no need for the control condition in regard to that specific pair of drawings. However, if that same child did not use the '*aan het* construction' to describe the ongoing activity seen on the second pair of drawings (C and D), then the control condition would still be implemented, but only with regard to the second pair (C and D). The control condition was only implemented with regard to both pairs of drawings when the child failed to use the construction to describe either pair of drawings (A and B and C and D). The tree diagram visualizes the process of the elicitation task, whereas the tree diagram in Figure 4 visualizes the process of the control condition.

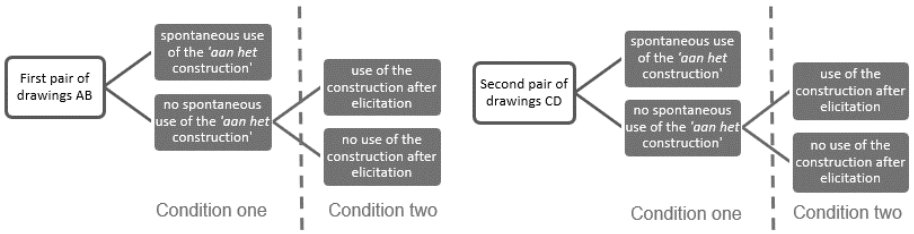

Figure 3. *Process of the elicitation task*

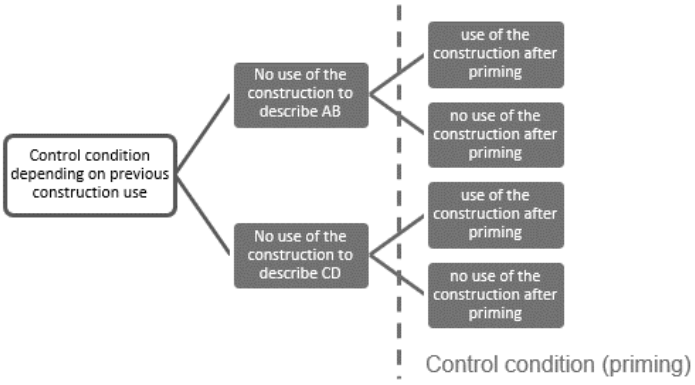

Figure 4. *Process of the control condition*

5.4 Data analysis

To record the elicited speech, Android's standard sound recording app was used. Once all elicitation tasks were conducted, the children's answers were transcribed and the data was entered into an Excel spreadsheet. During transcription it became clear that a number of elicitation tasks had not been conducted correctly. Nine elicitation tasks were excluded because the researcher did not follow the correct procedure. These mistakes consisted of the researcher either not properly eliciting or by prematurely priming the '*aan het* construction' (the latter by using the construction in the elicitation process). Thirty-four elicitation tasks were retained for analysis.

In the Excel file (Appendix 1), every row signifies a new elicitation task with a single child. Each elicitation task was given a number in the column ID. The responses were divided into six columns: Condition one drawings AB, Condition two drawings AB, Condition one drawings CD, Condition two drawings CD, Control condition (priming) drawings AB and Control condition (priming) drawings CD.

To facilitate analysis, additional columns were added per response: Construction use yes/no, Alternative construction use yes/no and a column for additional remarks.

An overview of the data was created by means of pivot tables. This is a tool in Excel which automatically creates a table that tallies the results of the selected columns. The table displays how many children used the construction and under which condition. However, because not all of the children were tested on the second condition, a table is not an ideal way to represent the data collected by means of the experiment . If a child already used the construction in condition one, condition two was not

conducted. Therefore, a tree diagram was used to visualize the data better.

6. Results

The expectation was that the Dutch-speaking children would not convey continuity explicitly in their spontaneous utterances under the first condition, because their language does not require them to express the progressive aspect. Additionally, the expectation under the second condition is that the children would try to convey continuity and that this would likely be by using the prepositional periphrastic construction '*aan het* + infinitive', after the notion of continuity had been elicited.

The responses to the first pair of drawings (A and B) and the second pair of drawings (C and D) are summarized in Figure 5 and Figure 6, respectively, by means of a tree diagram showing the number of uses of the '*aan het* construction' with regard to the two conditions. Figure 7 shows the results in regard to the control condition.

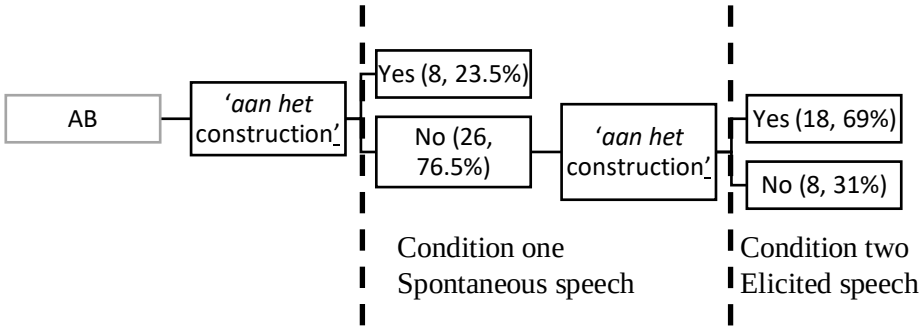

Figure 5. *Results concerning the first pair of drawings AB*

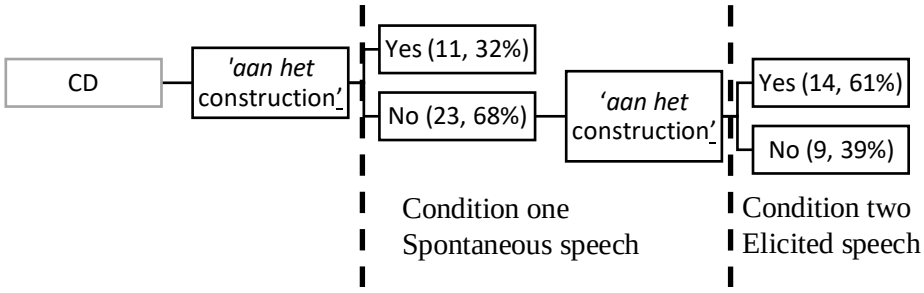

Figure 6. *Results concerning the second pair of drawings CD*

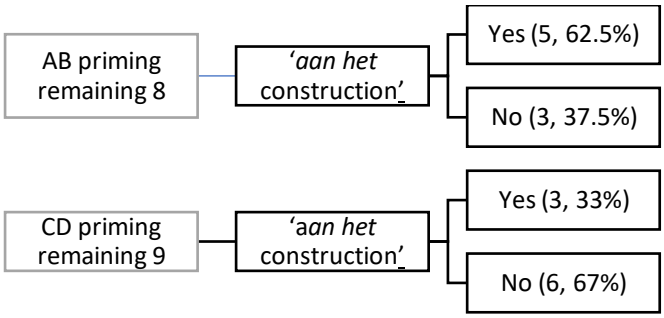

Figure 7. *Results concerning the control condition*

6.1 Results of the first pair of drawings AB

The results will be discussed in the same order as the process of the elicitation task. I start with the presentation of the research data concerning the first pair of drawings, A and B. Drawing A depicts two girls: one girl is swinging on a swing, while the other girl is pushing her. Drawing B depicts the same scene. However, another girl joins the first two girls and picks a flower.

6.1.1 Condition one: spontaneous speech

The responses under condition one show the extent to which the children convey continuity in their spontaneous speech.

Regarding the results of the first pair of drawings (A and B) (Fig. 5) in condition one, eight (23.5%) of the thirty-four children used the '*aan het* construction' in their spontaneous speech. Similar to what Slobin's research revealed, five children tried to convey continuity by using a **linguistic alternative** to the '*aan het* construction'. Three children used a lexical alternative. Two of these children used the word *nog* ('still'); the other child used the word *dan* ('then'). The first word conveys the progressive aspect of an activity, indicating that the activity is ongoing. The latter word indicates that an activity is being interrupted or followed by another activity. The fourth child conveyed continuity by giving a detailed and repetitive description of the ongoing activity: *die meisje duwt die jongen en de jongen zit op die schommel, de meisje duwt tegen de schommel en de jongen zit erop, de jongen plukt bloemetjes* ('The girl pushes the boy and the boy sits on the swing, the girl pushes the swing and the boy is sitting on it, the boy picks flowers'). The fifth child used the 'zitten + *te* + Verb construction' to convey continuity: ***zit*** *daar een kindje naar een bloemetje* ***te ruiken*** ('a child is sitting there, smelling a

flower'). This child, however, uses the progressive to refer to the activity which was not explicitly meant to show continuity in the experiment.

When taking these linguistic alternatives into consideration, thirteen of the thirty-four children (38%) tried to convey continuity in their (spontaneous) speech despite this being non-obligatory in their language.

6.1.2 Condition two: elicited speech

The responses under condition two show the extent to which the children attend to expressions that encode the progressive aspect, although not obligatory in their language, after being prompted to convey continuity. The prompt consists in the researcher pointing out the continuity of the first one of the two activities and saying: *De twee meisjes*/*Ze zijn al even bezig met deze activiteit* ('The two girls/They've been doing this activity for a while').

Regarding the first pair of drawings (A and B), the twenty-six children who did not use the '*aan het* construction' in condition one were prompted to use the construction in the second condition. After elicitation, eighteen (69%) of the twenty-six remaining children used the '*aan het* construction'. This shows a notably higher construction use than under the first condition. Seven out of the eight children, who did not use the construction, used a linguistic alternative to show continuity. Two children used a lexical alternative to convey continuity. The first child used *nog* ('still') to convey continuity while the other child repeated the words *en daar ook* ('and there too') several times when referring to the first activity to indicate that it is ongoing. The remaining five children used a fragmentary answer that indicated continuity, assuming that the omitted part was most likely the '*bezig* + *zijn* construction'. When children did not respond, the researcher encouraged them by asking the question *Waarmee zijn deze kinderen bezig?* ('What are these children in the process of [lit. 'busy with']?'). Two children answered this question by saying: *met de schommel* ('with the swing'), which can be viewed as a fragmentary answer in which the initial part of the sentence has been omitted, viz. (*Ze zijn bezig) met de schommel* ('[they're busy] with the swing'). Three children answered the question with *met te schommelen* ('with to swing'). Hence a similar omission occurred: (*Ze zijn bezig) met te schommelen* ('[they're busy] with to swing/swinging'). However, it should be pointed out that this fragmentary answer is non-standard Dutch. One child initially used this incorrect fragmentary answer but corrected himself and subsequently

used the '*aan het* construction': *met te schommelen, zijn* ***aan het*** *schommelen* ('with to swing, are swinging').

6.2 Results of the second pair of drawings CD

Drawing C shows two people who are watching TV. Drawing D shows the same scene. However, the doorbell rings while the two people are watching TV.

6.2.1 Condition one: spontaneous speech

With the second pair of drawings (C and D) (Fig. 6) in condition one, eleven (32%) of the thirty-four children used the '*aan het* construction' in their spontaneous speech. This slightly higher construction use may be the result of the previous elicitation regarding the first pair of drawings (A and B) (e.g., the child might have deduced the task). Only two children tried to convey continuity by using a **linguistic alternative**. The first child used a lexical alternative (dialect) word: *ommekeer* ('suddenly'), which signifies that an unexpected interruption or event will follow. The other child used a future tense to describe the second activity shown in drawing D: *iemand gaat komen* ('someone will come'). The use of the future tense to describe the second activity implies that the first activity, shown in drawing C, will continue into the future, thus indicating continuity. Overall, thirteen (38%) of the thirty-four children, including the children who used linguistic alternatives, tried to convey continuity in their spontaneous speech.

6.2.2 Condition two: elicited speech

In condition two regarding the second pair of drawings (C and D), the twenty-three children who did not use the '*aan het* construction' in condition one were prompted to use the construction in the second condition. Fourteen (61%) of the twenty-three remaining children used the '*aan het* construction' after elicitation, viz. by the researcher pointing out the continuity of the first one of the two activities. This shows a slightly higher use of the construction than under the first condition. Only one child used a linguistic alternative, viz. a fragmentary answer that indicated continuity (the omitted part was the '*bezig + zijn* construction'). His answer to the question *Waarmee zijn deze kinderen bezig?* ('What are these children in the process of [lit. 'busy with']?') was: *tv te kijken* ('watching tv'). The other children used neither the construction nor a linguistic alternative. One possible

explanation is that this pair of drawings was less comprehensible to the children since it contained written text, which the researcher had to read out.

6.3 Results of the control condition

The control condition checks the children's knowledge of the '*aan het* construction' and their ability to use it by priming the construction. To this end, the construction is used as part of the researcher's question: *Wat zijn deze kinderen* ***aan het*** *doen?* ('What are these children doing?').

6.3.1 First pair of drawings AB

In the control condition regarding the first pair of drawings (A and B), the knowledge of the '*aan het* construction' of the eight children who did not use it in condition two was checked. Still, three (37.5%) of the eight remaining children used neither this construction nor any linguistic alternative in their speech after priming. One child tried to use the periphrastic morphemes of the construction, *aan* 'to' and *het* 'the', but used them as separate words instead of adding an infinitive: *de meisje duwt* ***aan het*** *jongen en hij schommelt* ('the girl pushes to the boy and he swings'). This might suggest that the child either has not fully mastered or does not fully comprehend the '*aan het* construction' and is not capable of using it appropriately.

6.3.2 Second pair of drawings CD

In the control condition regarding the second pair of drawings (C and D), the knowledge of the '*aan het* construction' of the nine children who did not use it in condition two was checked. Six (67%) of the remaining nine children used neither the construction nor any linguistic alternative in their speech after priming.

6.4 Summary of the results

To sum up the results of both pairs of drawings (A and B and C and D) regarding the first condition, on average twelve of the thirty-four children (an average of 38% of the informants) spontaneously tried to convey continuity, of which 73% used the non-obligatory '*aan het* construction'. Moreover, only three children consistently used the '*aan*

het construction' in their spontaneous speech to describe both pairs of drawings (A and B and C and D).

Summing up the results of both pairs of drawings (AB and CD) regarding the second condition, on average 83% of the remaining children[2] conveyed continuity after elicitation, of which an average of 79% used the non-obligatory '*aan het* construction'.

Finally, the results of both pairs of drawings (A and B and C and D) regarding the control condition, on average 52% of the remaining children did not convey continuity with regard to either pair of drawings, of which two children consistently failed to use the construction throughout the elicitation task.

7. Discussion

The purpose of this research paper was twofold. Firstly, I tested, in line with Slobin's study, the extent to which six-year-old Dutch-speaking children convey continuity in their spontaneous speech on the basis of an elicitation task. Secondly, I broadened Slobin's test by expanding the conditions under which children were asked to describe certain activities in order to establish whether the informants attend to expressions which, although not obligatory in their language, encode continuity. The **research questions** are:

Do six-year-old Dutch-speaking children spontaneously express continuity despite the fact that the progressive aspect is a non-obligatory grammatical category in Dutch?

Is there evidence that six-year-old Dutch-speaking children use a non-obligatory construction that grammatically encodes progressive aspect in Dutch?

Twenty-one[3] out of thirty-four children (i.e., 62% of the informants) did not spontaneously convey continuity in their description of the first pair of drawings (A and B). Furthermore, twenty-one[4] of thirty-four children (i.e., 62%) did not spontaneously convey continuity in their description of the second pair of drawings (C and D). These findings show that the

[2] This is calculated by the average of the remaining informants who did not use the '*aan het* construction' under condition one: the average of the remaining children is 72%.

[3] Twenty-six children who did not use the '*aan het* construction' minus five children who used a linguistic alternative.

[4] Twenty-three children who did not use the '*aan het* construction' minus two children who used a linguistic alternative.

majority of the Dutch-speaking children initially do not focus on continuity in the activities presented to them by means of the drawings. This confirms the hypothesis that, in the 'thinking for speaking' process, the language does not require the children to express continuity because the '*aan het* construction' is a non-obligatory grammatical category in Dutch. Therefore, because the language does not require speakers to use an expression that encodes the progressive aspect, no corresponding grammatical category is selected. These results call for a modification of Slobin's claim. Being a grammatically encoded category is a **necessary but not sufficient** condition for 'thinking for speaking'. Our experiment shows that the encoded category must also be obligatory. If it is optional, such as the '*aan het* construction' in Dutch, then speakers seem to be much less prone to attend to the category in the 'thinking for speaking' process.

However, a second condition was tested where the children who did not spontaneously use the '*aan het* construction' in the first condition were prompted to convey continuity. Eighteen of the remaining twenty-six children[5] (i.e., 69%) convey continuity after elicitation in their description of the first pair of drawings (A and B) by means of the '*aan het* construction'. Similarly, fourteen of the remaining twenty-three children[6] (i.e., 61%) convey continuity after elicitation in their description of the second pair of drawings (C and D) by means of the '*aan het* construction'. The difference between the two results might be explained by written text contained in the latter, which made it less comprehensible. These results show that the non-obligatory grammatical category which encodes the progressive aspect can be induced by elicitation. This also illustrates that speakers attend to the non-obligatory grammatical category during 'thinking for speaking'. Therefore, the construction appears to be **available** in the 'thinking for speaking' process. When the speakers are prompted to acknowledge the relevance of the progressive aspect in this specific situation, they **select** the **available** but **optional** progressive grammatical category in the 'thinking for speaking' process. This results in a refinement of Slobin's findings: namely, that a non-obligatory grammatical category that encodes continuity, such as the Dutch '*aan het* construction', may also have a bearing on 'thinking for speaking' but to a much lesser degree. Thus, our experiment shows that an optional encoded category **can have a bearing** on 'thinking for speaking' **under specific conditions**, viz. when the meaning of the construction is elicited. Recall, however, that

[5] Twenty-six children who did not use the '*aan het* construction' in the first condition to describe the first pair of drawings AB.

[6] Twenty-three children who did not use the '*aan het* construction' in the first condition to describe the second pair of drawings CD.

even then almost one third of the participants still did not use the semantically dedicated '*aan het* construction'.

A control condition was implemented to determine whether those children did not use the '*aan het* construction' in the elicitation task nonetheless possessed knowledge of the construction. On average, 13% of all children did not use the construction after priming. It is difficult to prove lack of knowledge, but because the children were given opportunities to utilize that knowledge throughout the elicitation task, the results might suggest that some children do not (yet) have the '*aan het* construction' readily available in their 'thinking for speaking' process. This was especially clear for one child who misused the periphrastic morphemes of the construction.

8. Conclusion

To conclude, Slobin's adjusted conclusion should be that Categories which are encoded **and obligatory** are generally expressed while categories which are encoded **and optional** are generally much more ignored than we might expect if we do not make the distinction between the obligatory and the optional use of an encoded category. Speakers attend to encoded grammatical categories that are non-obligatory primarily when the speakers' attention is explicitly directed to certain aspects of an event. We should therefore take into account the difference between the encoding of a linguistic category in the grammar of a language and its prevalence in 'normal language use'.

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