Second language acquisition in early childhood: a longitudinal multiple case study of Turkish-Dutch children

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Second language acquisition in early childhood: a longitudinal multiple case study of Turkish-Dutch children

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Contents

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1 Language acquisition and childhood bilingualism

This study is about Dutch second language acquisition by Turkish-Dutch pre-school children. The parents of the children are first- and/or second-generation Turkish immigrants in the Netherlands. At home, the children mostly hear Turkish spoken around them, although Dutch is not completely absent either. Some parents are fluent Turkish-Dutch bilinguals themselves, whereas others have only limited command of the Dutch language. In almost all homes, children encounter code-switching, the alternative use of both languages in their daily lives.

At different ages, the children are submerged in the Dutch language when they enter daycare or a pre-school playgroup. Some of the children participate in the pre-school component of programmes for *voor- en vroegschoolse educatie* ('early childhood education'). It is the explicit aim of these programmes to give children from possibly 'disadvantaged' backgrounds the opportunity to learn the Dutch language and to enable them to get off to a better start in primary school, in which Dutch is the language of instruction.

Although there are currently many children in the Netherlands who grow up in bilingual contexts similar to the one just sketched, not much research has been done on second language acquisition in such situations. Studies on bilingual language acquisition usually focus on children learning two languages from birth and often growing up in families in which the parents speak different languages with the child. Studies on second language acquisition in childhood, on the other hand, tend to take an interest mostly in older school-age children.

Another difference between the children in this research project and in other studies on childhood bilingualism is the restricted amount of second language input the children receive. Children learning two languages from birth are usually exposed to both languages in considerable proportions. School-age children with home languages other than that spoken at school are 'submerged' in their second language for several hours a day on all weekdays. The children in the present study who participate in pre-school playgroups, however, attend those groups only three or four times a week, for about 2-3 hours a day. They thus receive – outside the home – only about 11 to 12 hours of input per week, i.e., no more than an estimated 10-15% of their total weekly

language input, which basically needs to be seen as the amount of exposure to the Dutch language.

The lack of interest in children starting to learn a second language around their second birthdays and receiving relatively low amounts of input in this language is partly due to theoretical linguistic considerations, as will be discussed later in this chapter. The rise of so-called usage-based linguistics, with novel theories of language acquisition and the role of input following in its wake, provides a new theoretical rationale for studying second language acquisition in the pre-school age and among children receiving low amounts of input. Not much empirical research in this field has yet been conducted. The present study may be considered an exploration into the relation between input patterns, age, and second language acquisition from a usage-based perspective.

This chapter starts with a general overview of theories on language acquisition (Section 1.1). It continues with an explanation of usage-based linguistics (Section 1.2) and a usage-based theory of first language acquisition (Sections 1.3), followed by theoretical considerations on second language acquisition (Section 1.5). The issue of the relation between second language acquisition and age is the special focus of Section 1.6. Subsequently, a number of topics in 'childhood bilingualism' are discussed, such as the difference between simultaneous and successive bilingual acquisition. The chapter is rounded off with a presentation of the rationale for the present study (Section 1.7).

1.1 Theories on language acquisition

Already in the nineteenth century, child language development flourished as a research field (Blumenthal, 1970). In the period between 1800 and 1875, numerous diary studies of child development were published. They followed Tiedemann's (1887) methodology of investigating child development by making notes of daily observations in diaries and by writing 'baby biographies'. Language acquisition was an important topic in these studies of child development in general, although the quality of the analyses differed widely. At the end of the nineteenth century, the 'child study movement' had reached a golden age, and met with broad popular and government support in many western countries (Blumenthal, 1970). Around the beginning of the twentieth century, institutes for the study of child development were founded in almost all western countries and scientific journals appeared that were dedicated to this field of study. Numerous studies were published on language acquisition in most European languages, including Van Ginneken's (1917) study on Dutch.

Whereas some studies were largely anecdotal, others reported carefully and reliably conducted investigations of child development. A leading publication in this period was Stern & Stern's (1907) *Die Kindersprache*, a description of the daily observations made of two of their children during the first six years of their lives. In 1927, in its fourth edition, Stern revised his theoretical discussions on the basis of new publications. More than one hundred references were added in this edition, including Piaget's (1923) work on language and cognition in childhood. Issues that Stern & Stern and their contemporaries discussed were whether children's earliest utterances can be categorised as self-expressive in nature or more social and communicative; whether child language is imitation of parental input or spontaneous and creative; whether language

development should be described in stages as a gradual 'unfolding process'; whether early child speech should be seen as adultlike in being constituted of words of different categories or whether, as Stern & Stern and others concluded, the 'sentence' was the basic unit of early child language. This latter issue was raised against a trend in American child language research at the time, which emphasised counting words in child speech and determining vocabulary size and sentence length (Blumenthal, 1970; Clark, 2003).

1.1.1 Behaviourism

Another trend at the beginning of the twentieth century was the rise of behaviourism in psychology in the United States. Behaviourism claims that the mind is nothing but behaviour (Lashley, 1951). Animals and humans learn behaviour through processes of stimulus and response. An influential early publication that applied behaviourist ideas to language learning is Allport (1924). In his view, children's initial meaningless sounds become habits through repetition. These habits later become extended from repetition of the child's own productions, to the imitation of stimuli outside the child, for example utterances by adults. In the next stage, children learn to associate sounds with objects, a process that leads to word learning. When they genuinely start to comprehend adult speech directed to them, learning of phrases and sentences becomes possible. How exactly children learn to produce sentences and acquire grammar remains unclear in Allport's account (Blumenthal, 1970).

Skinner's *Verbal Behavior* (1957), draft versions of which had been circulating widely from as early as 25 years before it was published (Blumenthal, 1970), tried to give a more complete behaviourist account of language learning and language use. According to Skinner, verbal behaviour is not a passive process of reflexes in stimulus-response processes, but the language user is more actively involved in 'operant conditioning', in which the consequences of behaviour, 'reinforcement' or 'punishment', stimulate learning. Through inductive procedures, rules can be extracted and used in language production. Children learn language from "long experience in a verbal community" (Skinner, 1966: 29).

Most American linguists followed Bloomfield (1933) in his acceptance of behaviourism as an explanation for language learning (Blumenthal, 1970; Joseph, 2002). Lashley (1951), however, formulated some points of severe criticism of behavioural accounts of language use. According to him, it is problematic that behaviourism aims to describe syntax solely in terms of a sequential ordering of words, whereas there is quite some evidence that words are hierarchically organised in sentences. Moreover, behaviourism denies the existence of the mind, which makes it impossible to think of utterances as expressing 'ideas', something someone has 'on his mind'. The most vehement criticism of behaviourism was presented in Chomsky's (1959) review of Skinner's (1957) book. According to Chomsky, Skinner had failed to give a behaviourist account of such a highly mental process as language use. Chomsky defined grammar as the human faculty to produce and comprehend an infinite number of sentences. If language consisted only of responses to empirically observable stimuli, it would never be truly creative.

1.1.2 Chomskyan generative linguistics

In later years, Chomsky (1980) polarised his position with respect to behaviourism even more strongly by taking a very specific stance on language acquisition (Joseph, 2002; Thomas, 2002). He formulated the argument of the 'poverty of the stimulus', also called the 'learnability problem', or 'the logical problem of language acquisition', according to which linguistic knowledge cannot be derived from the environment, because the linguistic input children receive is too 'poor' (Thomas, 2002). The input is not always grammatical, but contains many false starts and interruptions, and it is often rather limited in scope. More fundamentally, input presents evidence solely about what is grammatical in a language, but not about what is ungrammatical or ambiguous (Longa & Lorenzo, 2008). Nevertheless, children appear to know things about ungrammatical and ambiguous structures in their language as well (Hornstein & Lightfoot, 1981). Chomsky's conclusion is that human beings are at birth endowed with a 'language acquisition device', which guides the process of language learning. The innate language acquisition device is independent of other cognitive processes. Although children may use their general learning capacities for word learning or the acquisition of the social components of language use, the acquisition of grammar is an independent process.

Although children's early speech is obviously different from adult speech, Chomskyan linguists claim with the so-called 'continuity assumption' that the same abstract grammatical knowledge underlies adult language and child speech in all its stages (Pinker, 1984). Children are free to 'try out' grammatical structures in the process of language acquisition, and in that sense their language production may differ from the adult language they are learning. However, their language production will never go against what is possible in human language in general. Human language follows certain patterns in what is possible and what is not, and child speech always complies with these restrictions. As Crain, Gualmini & Pietrovski (2005: 179) formulate it: "Child languages can differ from the local adult language only in ways that adult languages can differ from each other." The language acquisition device guides the process of language learning and children are thus not expected to violate any of the innate general linguistic knowledge contained in it.

Chomskyan generative theory in general occupied itself with formulating the exact contents of language universals and particulars of specific languages. Because of its intricate formal notational systems, the discussions were not always easy to follow for outsiders. Moreover, theories evolved and changed over time. A recent reformulation is the so-called 'minimalist program', in which Chomsky (1995, 2000) aims to simplify generative theory as much as possible. Longa & Lorenzo (2008) claim that the minimalist program offers openings to considering the acquisition of grammar not as a uniquely linguistic phenomenon, but as a more general cognitive one. They also observe, however, that this position has not yet taken much ground in Chomskyan generative research.

1.1.3 Functional linguistics

Parallel to structural or 'formal' generative theories of language, 'functional' theories of language were developed. There is no single functional theory of language, but rather a variety of functional theories, models and approaches (Budwig, 1995). Budwig formulates three assumptions that all functional models, despite their sometimes large differences, agree on. First, functional theories of language claim that language has evolved and is acquired in relation to the communicative functions it serves. Where formal theories of language, such as Chomskyan generativism, make a distinction between the subject and the object of a sentence for example, functionalists prefer to analyse sentences according to the functional roles of their constituent parts, such as 'agens' and 'patiens'. Language is thus not a completely arbitrary and autonomous system, but rather one that is organised in relation to the needs of those who use it. Second, functional linguistics takes the meaning of language to be its core, with the 'forms' being the means through which meaning is established. Functional theories of grammar thus usually do not accept including 'empty' elements in their description that do not serve a meaningful function. A third common characteristic of functional theories is their disbelief in formal theories of language, especially Chomskyan generative grammar. Nevertheless, there are also some rather 'formal' functional theories, which accept the notion of a language acquisition device, for instance, but give it a functionalist content (see Van Valin, 1991).

Within the field of child language acquisition, many researchers call themselves 'functionalist', even if they do not adhere to any specific functional theory of language (Van Valin, 1991). They identify themselves as such often because of a disappointment in the usefulness of the quickly changing formal theories of language to understand child language (Clark, 2003). In general, they share the belief that language develops from the communicative function it serves and that language acquisition is intrinsically related to cognitive and social development (Budwig, 1995). Functionalist child language researchers have a "strong commitment to the view that meaning, use, communicative intentions and interaction are crucial to understanding language development" (Van Valin, 1991: 7-8).

Michael Tomasello is a leading developmental psychologist who studies cognition and communicative behaviour in primates and human children. For him, it is essential to use linguistic theories that describe language in terms of basic psychological and socio-psychological processes (Tomasello, 1992a). Functional theories, and cognitive linguistic theories in particular, such as Langacker's (1987; 1991; 2008), serve this function in Tomasello's early work (Tomasello, 1992b), being taken over by 'construction grammar' theories in his more recent work (Tomasello 2003; 2006). What many of these theories have in common is that they take a 'usage-based' approach to language and language acquisition. A discussion of usage-based approaches to language is presented in the next section, followed by an overview of Tomasello's usage-based theory of language acquisition in Section 1.3.

1.2 Usage-based approaches to language

A general claim of usage-based models of language is that the structure of speakers' linguistic knowledge, in other words their 'grammar', is shaped by language use (Langacker, 1987; 1988; Kemmer & Barlow, 2000). More specifically, usage-based models argue that redundancy is a main characteristic of grammar. Linguistic structures are not necessarily represented as either a rule or a fixed expression, but often as both. A speaker may produce (or understand) an expression like *auto's* 'car-PL: cars'[1] by applying a morphological rule for Dutch plural marking to the word *auto* 'car', but it is also very well possible that he has *auto's* 'cars' additionally stored as one fixed expression. Although redundancy makes grammar a less 'neat' system than formal systems with only rules and lists of exceptions, usage-based approaches claim it captures better the actual 'messy' psychological reality of linguistic representation (Langacker, 1988).

Over time, language users build up an inventory of expressions that are conventional for expressing certain meanings in specific circumstances. With their general cognitive abilities, people structure this inventory based on observed similarities. This leads to abstraction of recurrent patterns, which Langacker (1987) calls 'schemas'. As Langacker (2008) points out, categorising any two uses of an expression as similar involves abstraction from the specifics of the context. At higher levels, the use of expressions like *auto's* 'cars', *computers* 'computers', and *snoepjes* 'sweets' may lead to the abstraction of the form and meaning of *-s* as one of the plural suffixes in Dutch. For abstraction, the general cognitive capabilities of the human brain are employed, categorising the linguistic experience on the basis of identity, similarity and difference (Bybee, 2006). A complex dynamic system arises, similar to complex systems that have been identified in biology (Bybee, 2006; Larsen-Freeman, 1997).

Frequency is believed to play an important role in how speakers organise their linguistic knowledge (Kemmer & Barlow, 2000; Bybee, 2006). High frequency of individual expressions ('token frequency') leads to entrenchment of expressions. Entrenched units are more likely to be stored as wholes, even if their structure can be predicted from more general rules. Entrenchment leads to greater fluency in language use. Another kind of frequency, with a different effect on the organisation of linguistic knowledge, is 'type frequency'. If the frequency of different expressions that occur in a certain pattern or schema is high, this leads to reinforcement of the abstraction of that schema. For example, if more different words occur with the Dutch plural suffix *-s*, the abstraction of that pattern becomes stronger. Eventually, abstraction may lead to categories as abstract as 'noun' or 'verb'. As a result, speakers' linguistic knowledge depends highly on stored instantiations of patterns, but the system is creative enough to generate expressions never used before.

Attempts to describe linguistic abstractions in a usage-based model are found in several variants of 'construction grammar' (e.g., Croft, 2001; Goldberg, 2006; Langacker, 2008). Constructions are defined as conventionalised pairings of form and

[1] The notation of translations is as follows: first a literal translation with glosses of (some of) the separate morphemes. After the colon follows a 'fluent' translation.

meaning (Goldberg, 2006). By definition, constructions do not contain elements that are empty or meaningless, as some elements in generative grammar are. If expressions or patterns differ in form, they must have a different function or meaning. If two similar expressions have different meanings or functions, the expressions must be defined as separate constructions. The strength of construction grammar is that it is able to account for very general patterns in languages as well as for idioms and everything in between, with the same kind of elements: they are all of them constructions.

The organisation of constructions is believed to resemble some kind of multidimensional network model (Langacker, 1988; Tomasello, 2001). In such a network, all expressions encountered in linguistic experience are stored. Ties are established between expressions if some kind of commonality is observed. As described before, token frequency leads to entrenchment of expressions or schemas, whereas type frequency leads to the abstraction of higher-level schemas. Some core regions of the network are used frequently in language production or comprehension, whereas others are more peripheral and are used only rarely. It is expected that the network of each individual speaker is different, as the cumulative linguistic experience of each person is different. When they are able to understand each other, the networks of two individual speakers are apparently similar enough. Networks influence each other when persons interact: "the more speakers talk to each other the more they will talk alike" (Kemmer & Israel, 1994: 157; cited in Kemmer & Barlow, 2000).

A final characteristic of usage-based models of language is a commitment to a methodology of studying actual language use (Kemmer & Barlow, 2000; Bybee, 2006). Computerised linguistic corpora have become available, such as the *Corpus Gesproken Nederlands* (Corpus of Spoken Dutch; Taalunie, 2010) for Dutch, and of course the internet as a google-able source of information. This is a great improvement on 'armchair linguistics', which allowed judging the acceptability of made-up linguistic expressions without checking their conventionality in actual language use. Despite the fact that most corpora have their flaws, usage-based corpus linguistics has provided interesting insights into how grammar is shaped by language use.

1.3 A usage-based theory of first language acquisition

Usage-based linguistics enables the researcher of language acquisition to look at child language in its own terms (Tomasello, 2001; 2003). It is no problem for usage-based models of language if children work with less abstract structures than adults do, because the more mature adult abstractions can be attained over time when more linguistic experience has been built up. The same cognitive mechanisms of entrenchment, categorisation and abstraction are at work in both child and adult language use.

According to Tomasello (1999; 2003), an important development in a human being's first year of life is the emergence of the skill of intention reading at the age of 9-12 months. He argues that this skill is probably uniquely human and that it appeared relatively late in human evolution. Intention reading is required for activities such as sharing attention with other persons to objects and events of mutual interest, to follow

the attention and gesturing of others to objects outside the immediate interaction, and to direct the attention of others by pointing, showing and other gestures (Tomasello, 2003). Intention reading paves the way for cultural learning – learning what other persons' intentions are when they do specific things or use certain symbols, including linguistic expressions.

A second set of skills that are a prerequisite for language learning (and other types of learning as well) are pattern-finding skills. These emerge early in human development and are also found in primates and other animals (Tomasello, 1999; 2003). Pattern-finding skills include the ability to form perceptual and conceptual categories of 'similar' objects and events, the ability to perform statistically based distributional analyses on things that are experienced in sequence, and the ability to create analogies across two or more complex wholes based on similarity in function (Tomasello, 2003). These skills enable children to recognise recurrent patterns, to categorise them according to form and/or function and to make abstractions.

Children's first linguistic productions are usually single words or 'holophrases'. Their meaning is one of a whole expression, rather than of a single word as used in adult speech. For example, the expression *die* 'that (one)' may mean 'I want that one', 'look, that is interesting', (pointing at a clasp) 'please, unfasten me', etc.. Children understand that adults use longer linguistic expressions to convey such messages, but manage to 'reproduce' only one element in their own speech.

Building up more experience with language, they start to combine several holophrases into single expressions. These early word combinations usually have a specific structure in which one word expresses the speech act function of the utterance, and the other fills in some slot (Tomasello, 2001; 2003). As presented in Chapter 4, Dutch children produce early word combinations such as *die paard* 'that horse: that is a horse' in naming activities. In their speech at that moment, utterances of the form *die* X 'that X', meaning 'that is a(n) X' regularly show up. Such schemas with a fixed element are called 'pivot schemas' (Braine, 1976; Tomasello, 2003) and regularly appear in early child speech.

From these low-level schemas more complex constructions arise over time. Initially, many constructions still contain fixed elements. Tomasello (1992b) argued that in his daughter's speech, patterns of verb use for some time differed widely per verb. Each verb was an 'island' with its own specific characteristics. The development towards targetlike expressions with verbs was gradual and the girl went through each stage of development separately for each verb. Nevertheless, from the very beginning children also make abstractions, as even such lexically-specific constructions are abstractions over usage events (Langacker, 2008). Rather early on, many children also generalise relatively abstract categories in their grammars, such as a 'name' or 'noun' category (Lieven & Tomasello, 2008).

Tomasello (2000; 2003) claims that children are conservative learners. They are in general unwilling to go beyond things they have frequently heard in the input or that they have often used themselves and that are thus heavily entrenched. It takes time before they abstract relations between constructions and realise that similar words (e.g., 'verbs') can be used in several constructions, even if they have not heard a specific verb in a specific construction before. In experiments, older children (i.e., after age three or

four) and adults have much less trouble using newly learned words in constructions they have not heard them in before (Tomasello, 2003).

What is important in a usage-based account of language acquisition is the role of the input (Lieven, Behrens, Speares & Tomasello, 2003). As children build up linguistic structures from experience with language, characteristics of the input play an important role. Expressions that are frequent in the input are more likely to be produced by children and over time become more entrenched. Type frequency in specific slots of constructions helps children abstract schemas. In addition, perceptual saliency plays a role, as words or morphemes that are prosodically stressed are more likely to be remembered and reproduced by children. 'Recency' is another factor that plays a role and causes children to generally better remember the end than the beginning of an utterance (Freudenthal, Pine, Aguado-Orea & Gobet, 2007).

In sum, children use their pattern-finding skills to extract patterns from the input they hear in contexts in which they understand more and more what is going on. On the basis of their linguistic experience, they build up a 'structured inventory of constructions', with representations ranging from fixed expressions to constructions with fixed elements and fully abstract schemas. Children have had less linguistic experience than adults and in several respects are cognitively less mature, as a result of which their grammars may deviate from that of adults. But as the mechanisms that are at work in structuring the inventory of constructions are the same, over time they become fluent mature language users themselves.

For the present study, which investigates child language as recorded in contexts of actual use, usage-based theories of language are particularly attractive. The research programmes initiated in this field, formulating and testing usage-based hypotheses about language acquisition, both in experiments and in naturalistic case-studies, have yielded many new insights into how children (and adults) learn languages. These theories, insights and – to some extent – methodologies are therefore taken as a starting point in the analyses presented in this dissertation.

Tomasello (2001: 62) calls the emergence of usage-based linguistics "truly liberating" for the study of language acquisition. According to usage-based theories of language, general cognitive and social abilities account for language use in general as well as for the process of language acquisition. They thus do not need to postulate a specifically linguistic, innate 'language acquisition device'. This also frees them of the need to explain a hypothesised 'continuity' between child and adult language in spite of the clearly observable differences between the two. Usage-based approaches are still able to describe language as infinitely creative, although it has also been observed that in practice child as well as adult speech is not that creative at all, but consists of large numbers of fixed expressions (Langacker, 2008).

Like functional linguistics, usage-based approaches to language acknowledge that language is learned in social contacts. In addition, construction grammars do not allow for abstract 'empty' grammatical elements, but assume that all forms have functions. In that sense usage-based linguistics is also functional.

Finally, usage-based linguistics can also be said to be a partial return to behaviourism as it tries to explain language use and learning from general cognitive skills. As Jackendoff (2002: 56) puts it:

> *"It is […] argued […] by those of a behavioristic bent, that rules of grammar are like ingrained habits. This is closer to acceptable, as long as we accept the idea of a habit not just as a propensity to behave, but as a complex ingrained cognitive organization of perception and behavior."*

Tomasello (2003: 3) comments in the following way on behaviourism and modern learning theories:

> *"[…] modern developmental psychologists and cognitive scientists no longer think of children's learning as isolated association-making and induction, but rather they think of it as integrated with other cognitive and social-cognitive skills – in ways that Skinner and the Behaviorists (and Chomsky in his critiques) could never have envisaged."*

The main difference with the behaviourism of the first half of the 20th century is that the general cognitive skills that underlie language learning are now understood to be much more complex than Skinner and other behaviourists described them.

1.4 Second language acquisition

Usage-based linguistics holds that the processes that are at work in the learning, storage, and use of a first language are also employed for languages learned later in life. Like first language grammars, grammars of second languages can be described as inventories of constructions built up from experience with that language. The structure of these inventories is formed by entrenchment, categorisation, and abstraction of stored conventional expressions (N. Ellis, 2002; 2008).

Nevertheless, it is easily observed that speakers who learn a language at a later age differ in their use of that language from speakers whose mother tongue it is. Often, second language speakers are recognised as 'foreigners' because of their pronunciation, but also their choice of words or expressions may be different, as well as the structure of their sentences. Second language learners do not often reach levels of proficiency that are native-like; they typically need more time to learn the language, and more individual variation is found in second language use, both across individuals and within learners across time (Meisel, 2007).

Linguists working in the Chomskyan generative tradition explain the differences between first and second language acquisition by assuming that due to maturation, the language acquisition device is not available anymore at a later age, or only partly (see e.g. White, 2003 for an overview of hypotheses). Clahsen & Muysken (1986), for example, argue that the differences in word-order patterns they observed in the acquisition of German as a first language by children and as a second language by adults, are explained by the fact that children make use of the language acquisition device, whereas adults use only 'general learning (problem solving) strategies'.

Other researchers within the generative paradigm have argued that the language acquisition device is also available to adults learning a second language, a view that Clahsen & Muysken (1989) later also adopted. Researchers who claim that the language acquisition device is available in adult second language acquisition explain the differences between first and second language acquisition in other ways. Some studies claim, for example, that the underlying 'deep' structures of second language learners' utterances are the same as those of first language users, but that they fail in correctly 'spelling out' to the 'surface' structure, which results in non-targetlike speech (Haznedar, 2001; Prévost & White, 2000).

Usage-based theories of second language acquisition do not assume that there is an innate device specifically dedicated to language acquisition, but claim that the same processes are at work in both first and second language acquisition. These processes are similar to the 'general learning strategies' that Clahsen & Muysken (1986) in their earlier work reserved for adults only.

How do usage-based theories account for the differences between first and second language acquisition? Language learning is based on the input speakers receive. In general, children who learn a first language, are engaged 'fulltime' in interactions in which they receive specific language input. Adults learning a second language usually receive much lower amounts of input. Since input is a very important factor in usage-based theories of language learning, differences in amounts of input are expected to result in different learning outcomes. In addition, it has been suggested that not only the quantity but also the quality of the input in first language acquisition and adult second language learning is different (Wray, 2008a).

Nevertheless, the differences in output cannot all be explained by differences in input. According to N. Ellis (2008), the main difference between first and second language acquisition is that second language speakers have, through their experience in the first language, learned to 'hear' specific things in the input, and to disregard others. This 'learned attention', as he calls it, plays a role in memory and in learning in general. In language acquisition, its effect is that patterns that are entrenched in the first language may determine how a speaker of that language categorises the input received in a second language. A well-known example in language learning is the difficulty Japanese learners have with the English phonemes /r/ and /l/, as these sounds are not distinct phonemes in their first language. It is difficult to 'break up' a category that has become highly entrenched in the first language. Important in N. Ellis' (2008) usage-based account is that learned attention is a general learning process. First and second language acquisition are still 'similar'. The difference is found in the fact that in second language acquisition a stronger, already built-up structured inventory of constructions gets 'in the way' of acquiring a second.

According to Wray (2002; 2008a; 2008b), a major difference between adults learning a second language and children learning a first language is that adults analyse the input they receive more and into smaller lexical units. Her model concurs with the usage-based assumption of redundancy: linguistic structures are not necessarily represented as either a rule or a fixed expression, but often as both. Using longer expressions as fixed units has the advantage of there being less of a processing load and therefore higher fluency, as well as of often being more conventional in the choice of words. Adult

native speakers of a language generally prefer to use expressions that are common and idiomatic in language, even though they are able to formulate their thoughts in other ways as well.

Children learning a first language are initially 'holistic' learners. They adhere as much as possible to rather large expressions they hear in the input and only analyse the smaller parts of those expressions when the input provides clear evidence of their existence. Adult second language learners, on the other hand, have an 'analytic' learning style. They analyse the input in smaller units and then need additional rules to combine them. Wray (2002; 2008a) does not discuss the nature of these additional rules. They are probably based on learners' knowledge of their first language and/or on general strategies of indicating information structure as observed in 'basic learner varieties'. There is evidence that several aspects of early learner varieties are pragmatically motivated, rather than input-driven (Dimroth, 2006). For example, irrespective of their first language or the second language they are learning, second language learners tend to juxtapose words according to their function of topic or focus in the sentence in the early stages (W. Klein & Perdue, 1997; W. Klein, 1998).

Wray (2002; 2008a) attributes adult second language learners' analytical style of learning mainly to the influence of classroom teaching. However, she observes that adults acquiring a second language in 'naturalistic' environments without receiving explicit teaching also use analytic learning styles, although to a lesser extent.

Some second language learners become very fluent speakers, whereas others 'fossilise' at a stage in which their 'variety' of the second language is basic and deviant from second language norms. A range of factors play a role in this process: the amount and quality of the input, linguistic differences between the first and second language, motivation to learn the language, 'aptitude' or talent for language learning, and developmental differences in age (R. Ellis, 2004; Robinson, 2001).

It can thus be concluded that from a usage-based perspective, first and second language learning are basically the same, as they both make use of general cognitive learning mechanisms. Differences in the speech of first and second language users mainly arise from differences in the contexts in which a language is learned, and the presence of another language in second language acquisition. In the next section, differences in second language acquisition at different ages are discussed.

1.5 Second language acquisition and age

One of the most widely debated issues in the study of second language acquisition is whether there is a so-called 'critical period' for language acquisition (Hyltenstam & Abrahamsson, 2003). The concept of a 'critical period' comes from biology. It describes the phenomenon that certain things are not learned when they are not trained during a specific, limited time period in development. For example, in order to be able to use both eyes for vision (binocularity), cats need to use both eyes between week four and twelve of life, certain monkeys between week one and nine, and human children between year one and three (Almli & Finger, 1987; cited in Singleton, 2005). If they do not use both eyes in their critical period, they are deprived of binocularity for the rest of their lives.

The critical period hypothesis for language acquisition was first formulated by Lenneberg (1967), who claims that humans are able to learn their first language between the ages of two and twelve. According to Lenneberg, before about the age of two, children are physically not yet mature enough for speech production (however, later research has shown that language learning starts at birth or probably already *in utero*; Singleton, 2005). After the age of twelve, hemispheric lateralisation in the brain is complete, and language acquisition is no longer possible. Lenneberg makes this claim for first language acquisition on the basis of empirical data of deaf children of hearing parents who do not have contact with a sign language during the first years of their lives and on empirical data of so-called 'wolf children'. He does not claim, however, that second language acquisition is no longer possible after that age, although he admits that it is usually more difficult.

In second language research, the critical period hypothesis has centred around the question whether second language learners are able to attain 'native-like' proficiency in a second language (Hyltenstam & Abrahamsson, 2003; Singleton, 2005). Recently, research on age effects has also shifted its attention to the path of development (e.g., Schwartz, 2003; Unsworth, 2005). Does the way a second language is learned change when the age of onset is later? For generative linguists, it is relevant to formulate such questions in biological terms because they believe that an innate language acquisition device is part of human biology and thus possibly subject to maturational effects. Linguists working from a usage-based approach to language do not assume there is such an innate device specifically devoted to language acquisition, and thus a critical period for language acquisition only is not expected to be found. Nevertheless, the general observation that learning a second language at a later age is usually more difficult needs to be explained by usage-based linguistics as well. A usage-based explanation would focus on differences in general cognitive abilities between children and adults.

Bialystok & Hakuta (1999) claim that there is empirical evidence from studies in lifespan cognition that general cognitive mechanisms become less efficient or effective with age. In word learning tasks, older learners are more sensitive to timing factors in the presentation of the task material and need longer intervals than younger learners to recall new words. Older learners are also more cautious in giving an answer if they are not sure whether it is correct. In addition, they need more trials to learn lists of associations. Finally, older learners are less well able to remember details and only recall the gist.

Bialystok (1997) gives an explanation that is close to N. Ellis's (2008) account of the difference between first and second language acquisition: older learners have already stored linguistic representations, and the more entrenched these are, the more difficult it is to change them. A new linguistic experience is more likely to be stored as part of an existing category, which may lead to non-targetlikeness if the new experience is a second language and the existing category belongs to the first language. This is particularly true for differences in pronunciation, but other parts of the language may also be treated like this. Children are still in the process of building and changing categories in their linguistic system, which makes it easier for them to make a new category on the basis of new experiences. The difference is thus one of learning style

and according to Bialystok it is not pre-determined. Adults may also 'overcome' their rigour and become (almost) nativelike in a second language.

Wray (2002) claims that the difference between holistic versus analytic learning styles in first and (later) second language acquisition can also be observed in second language learners of different ages. Teenage and adult learners tend to focus on learning words and ways of combining words into phrases. Young children, on the other hand, initially acquire mostly phrases, and only analyse them into smaller units when the need arises. The transition from holistic to analytical learning starts at about age five or six. It coincides with and is strengthened by the acquisition of literacy with its focus on words as basic units of language.

Wray (2002) also underlines the role of the social-interactional differences between children and adults and their influence on second language acquisition. According to her, children learning a first language are involved in only a small number of different types of social interaction during the initial phases of language learning and need to adopt only a limited number of social roles. Within this 'socio-interactional bubble' they can focus on a small interactional repertoire. Adult second language learners, on the other hand, usually have to get involved in a large number of different types of social interaction from the very beginning. Moreover, they are sensitive to the possible social consequences of inappropriate linguistic behaviour. An example Wray (2002: 145) gives is that of demanding food:

> *For instance, whereas for the infant the primary way of getting fed has to be demanding food of a carer, an adult has other options too, including going to a shop and buying food. The availability of this option makes it less imperative, in most situations, for an adult learner to master the linguistic means of demanding or requesting food. But take away that shopping option, by, for instance, placing the adult learning in an L2-speaking household with little freedom to go out alone, and the imperative of meeting that, and other, needs through the agency of the L2 hosts is reinstated. Yet even with, essentially, the same agenda as that of an infant, the adult will, of course, select from a different range of possible responses, preferring, say, to suppress certain desires, or use a dictionary or phrase book to help form a comprehensible request, rather than reaching towards the desired object and wailing or saying 'that's mine'.*

Child second language learners learn their second language in situations that are similar to first language learners', although, when they attend a daycare centre or pre-school playgroup, the types of social interactions they are involved in are already increasing. Nevertheless, they are still treated as children, and not blamed much for the mistakes they make. Wray (2002) also observes in her overview of case-studies on child second language acquisition, however, that some pre-school children are more sensitive to their perceived 'deficiency' in the second language than others. The most successful child second language learners are those who aim at establishing social interactions with their peers (Wong Fillmore, 1976). Learning the language these peers speak for them primarily has an instrumental value.

Since in usage-based theories of language it is claimed that the same cognitive processes underlie first and second language learning and use at all ages, it is not surprising that Bialystok's (1997) views on the differences between child and adult

learners of a second language are similar to N. Ellis's (2008) ideas about the differences between first and second language acquisition. In addition, Wray (2002) explicitly states that the same mechanisms are at work in first and second language acquisition at different ages. The differences that are observed between learners of different ages are mainly explained by the extent to which patterns of the first language have been entrenched, the amount and quality of input, and developmental tendencies in general cognitive learning skills. These three phenomena change with age, which results in different language learning paths and outcomes at different ages.

1.6 Childhood bilingualism

The children in the present study are bilingual, or in the process of becoming so. They are far from alone in this enterprise. In the Netherlands, a survey conducted between 1997-2000 among almost 100,000 primary school children showed that 32% of them speak one or more languages at home other than Dutch (Extra et al., 2002). In the larger cities of Den Haag (49%) and Utrecht (47%) even more children grow up with one or more language at home other than Dutch (ibid.). Although there is no consensus on how a bilingual should be defined, a widely used definition is Grosjean's (2008: 10): "those people who use two (or more) languages (or dialects) in their everyday lives."

Grosjean (2008) lists five features that characterise bilinguals. First, they are often influenced by the 'complementarity principle': they acquire and use two languages for different purposes, in different domains of life, and with different people. Second, as a consequence, they are usually not equally fluent in both languages. Third, some bilinguals are still in the process of acquiring a language, whereas others have attained a certain stable level of proficiency. Fourth, the language repertoires of bilinguals may change over time, as needs and situations change. Finally, bilinguals usually interact both with monolinguals and with bilinguals and they are able to change their linguistic behaviour accordingly. For example, the mixed use of two languages, also called 'code-mixing', is often an accepted mode of communication among bilinguals, but not appropriate for interactions with monolinguals. Differences between individual bilinguals on these features lead to many different types of bilingualism and bilingual language use.

The acquisition of bilingualism in childhood is usually divided into two types: simultaneous and successive (or consecutive) bilingual acquisition (McLaughlin, 1978; Romaine, 1989). Simultaneous acquisition occurs when a child learns two or more languages from very early on in life. Researchers do not agree at what age learning a second language has to start in order to be simultaneous rather than successive acquisition. McLaughlin (1978) put the cut-off point at the third birthday. Although he admits that this cut-off point is rather arbitrary, he argues that by that time most children have acquired the basic grammatical features of their first language. De Houwer (1990) and Meisel (1990) only consider bilingual acquisition to be truly simultaneous if exposure to both languages occurs from within a week after birth onwards. On simultaneous acquisition of two languages, McLaughlin (1978: 72) writes: "In such cases, it is inappropriate to speak of first and second languages. Both

languages are first languages, although one usually dominates in certain situations or with certain persons."

Successive bilingual acquisition occurs when a child starts the acquisition of the second language later in childhood. Some linguists argue that before a certain age (e.g., age five; Meisel, 2004), successive bilingual acquisition is essentially still the same as simultaneous bilingual acquisition (Meisel, 2004; Unsworth, 2005). After this age, the acquisition of the second language is 'truly' second language acquisition.

The discussion about the cut-off point between simultaneous and successive bilingual acquisition is closely related to the issue of the 'critical period' (see Section 1.5). Not surprisingly, it is especially linguists working from the Chomskyan generative framework who care about these questions, as they are proponents of an innate language acquisition device and the existence of a critical period for language acquisition. Some of them regard the study of early and later successive bilingualism as a way of gaining more insight into the closing of the critical period (Schwartz, 2004; Unsworth, 2005).

Usage-based theories of language reject the concept of an innate language acquisition device and thus also the existence of a critical period. What do they say about the difference between simultaneous and successive bilingual acquisition? Usage-based theories of language acquisition are relatively recent and not much research within this paradigm has been done into childhood bilingualism. On the basis of its assumptions, however, some ideas can be formulated.

The main parameter in language acquisition is the input a child receives. Firstly, the amount of input in each language determines to what extent the child has the chance to learn these languages. Highly unequal amounts of input may lead to lesser proficiency in a language, and to phenomena such as the acquisition of only receptive knowledge of one language, or unwillingness to speak one of the languages. At present, it is unclear what amounts of input are needed for children to acquire productive knowledge of a language.

Second, usage-based theories claim that the same general cognitive processes underlie adult language use, first language acquisition, and child as well as adult second language acquisition. Successive and simultaneous language acquisition are thus also essentially the same. If differences are found between the two (and there are indeed), such differences should be attributed to age-related differences in general cognition (see also Section 1.5).

Third, there can be differences resulting from the influence of 'the other' language. There is a considerable body of empirical evidence that the two languages of a bilingual can influence each other (e.g., Döpke, 2000; Haznedar, 2007; Herkenrath, Karakoç & Rehbein, 2003; Hulk & Müller, 2000; Serratrice, Sorace & Paoli, 2004). Obviously, only things that are part of the linguistic repertoire in the one language can influence the other. The level of proficiency, especially in cases of rather unbalanced bilingualism, thus also plays a role in cross-linguistic influence.

A worried researcher of early simultaneous bilingual acquisition once[2] asked Michael Tomasello whether his emphasis on the role of the input would not imply that bilingual children have the disadvantage of receiving less input in each language than a monolingual child in his one language. Tomasello could not deny that that is indeed a consequence of his theory. However, it is very well possible that children can learn a language with lower amounts of input than the average monolingual child receives. Moreover, even among monolingual children there appear to be large differences in the amount of input received. Hart & Risley (1995), for example, showed that American children who grow up in families with higher 'professional' socio-economic status receive on average 1.6 times more input than working-class children and 2.8 times more than families living on 'welfare'[3]. When comparing the ten most talkative families with the least talkative ones it appeared that children in the latter received as much as 4.3 times less parental input than children in the former[4].

In sum, the need for cut-off points is the result of linguistic theories that predict a fundamental difference between first and second language acquisition. Usage-based accounts, on the other hand, would see the difference between simultaneous and successive bilingual acquisition as a continuum. The main factors resulting in actual differences between the two types of acquisition are general cognitive development, the level of proficiency in the first (or other) language, and the amount of language input received.

1.7 The present study

The primary goal of collecting the data in this study was to describe the bilingual development of Turkish-Dutch children between the ages of two and four in a multiple case-study design. In the present study, the focus is on one side of the bilingual picture, namely the acquisition of Dutch as a second language. Aspects of the acquisition of Turkish by the same children have been discussed in other presentations and publications (Backus & Van der Heijden, 1998; Nap-Kolhoff 2005; 2007; under review; Van der Heijden, 1997; 1999; Yağmur & Nap-Kolhoff, 2010).

Although descriptive studies may create the impression that they are neutral with respect to theory, this is never really the case. Which phenomena are deemed interesting for inclusion in a description of a child's linguistic development mainly depends on the theoretical approach of the researcher towards the data under investigation. The linguistic framework used in this study is the usage-based approach described earlier in this chapter. The description focuses on the development of usage patterns that appear in the data, as well as possible relations to the received language input. Such a description is given for one child, Mehmet, in Chapter 3.

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[2] Johanne Paradis asked Michael Tomasello this question during 'Where does language come from? A debate on the nature of language acquisition' at Boston University, 11 June 2004. See http://realserver.bu.edu:8080-/ramgen/a/v/av/linguistics/2004-11-06.rm.

[3] Calculated on the basis of the number of utterances produced by parents during several one-hour recordings made by familiar observers in 42 families. See Hart & Risley, 1995: 176, Table 5.

[4] Calculated on the basis of Hart & Risley, 1995: 228-229, Appendix A.

It would have been possible to devote the remainder of this book to similar chapters about the other children in the bilingual corpora under investigation. It was decided instead, however, to pick up some issues emerging from Mehmet's data and study them in more detail for all the children in the other chapters. The central focus of these analyses is a comparison of what is observed in the bilingual children's data with children learning Dutch as a first language and in most cases also with Turkish adults learning Dutch as a second language. The motivation for this approach is not to show how 'deficient' the bilingual children are when compared to their monolingual Dutch peers, or how smooth their developmental path is in comparison to the struggling and stumbling Turkish adults – if this were indeed the case. The goal of the enterprise is to gain more insight into the theoretical issues discussed in this chapter with respect to differences between first and second language acquisition and between child and adult second language learners. Not much research has been done into these questions from a usage-based approach to language, and an empirical exploration is a contribution to the field.

Three linguistic phenomena have been selected for answering the explorative research questions regarding the comparison of the child second language data with first language acquisition and adult second language acquisition: object naming constructions (Chapter 4), pronominal possessive constructions (Chapter 5), and finite and non-finite verbs (Chapter 6). The reasons for choosing these three topics are given separately in the subsequent chapters. But first, Chapter 2 presents some methodological issues with respect to the research design, the informants, and the data are discussed.

2 Research design, informants, and data

The present study investigates longitudinally the Dutch language development of Turkish two- to four-year-old children in the Netherlands on the basis of spontaneous speech data. In this chapter, the design of the study is discussed (Section 2.1), as well as the nature of the data, the way the data were collected and the backgrounds of the informants (Sections 2.2 and 2.3).

2.1 Design of the study

Spontaneous speech data are the most natural kind of linguistic data one can get. What is recorded is what children actually say in interactions that are normal to them. In a longitudinal design, such data are illuminating regarding processes of language development. An advantage of spontaneous speech data is that they can be collected repeatedly over a longer period, without a learner effect showing up, as would be the case with experimental data or elicited speech data.

On the other hand, there is a price to pay. First, recording and transcribing spontaneous speech data is labour-intensive, especially when a substantial amount of data is to be collected. Second, it is difficult to avoid that an observer who is a stranger in the child's life is present during the recording sessions. Is the child still acting and talking as he or she would without the presence of the observer? This phenomenon is related to what Labov (1966) called the 'observer's paradox': what we want to observe is what happens when the observer is not observing. Another disadvantage of using spontaneous speech data is that there is no way of controlling what a child is going to do or say during a recording session. Of course, certain measures can be taken to direct the behaviour of the child or to elicit speech. For instance, children in the home usually show more active and talkative behaviour when the television is turned off. But how natural is it to keep the television turned off to a child growing up in a family where the television is always on?

The main reason to opt for spontaneous speech data despite its drawbacks is that this kind of data is most insightful when a new language acquisition context is explored and general patterns of language development are studied (Tomasello & Stahl, 2004),

which is precisely what the present study is about, not much being known so far about the Dutch language development of Turkish children in the Netherlands between the ages of two and four.

Since collecting and analysing spontaneous speech data is so labour-intensive, the choice for a longitudinal design of necessity limits the number of informants that can be studied. Thus, the present study can be characterised as a multiple case study, looking at the language development of only a few children, be it in great detail.

Spontaneous speech data of seven children, originating from two bilingual corpora, are used. The Nap-Kolhoff bilingual corpus was collected between 2003 and 2005 by the author of this study and consists of data from three boys, Mehmet, Batuhan, and Yunus. The Van der Heijden bilingual corpus contains spontaneous speech data from four girls, Selma, Filiz, Berrin, and Şükran. The collection of this corpus was coordinated by Hanneke van der Heijden at Tilburg University in the early 1990s and funded by the Netherlands Organisation for Research (NWO). Although some analyses of the Van der Heijden bilingual corpus have been published before (e.g., Van der Heijden, 1997; 1999; Backus & Van der Heijden, 1998; Van der Heijden & Verhoeven, 1994), the present study is the first to provide of a more integral analysis of the data.

There are several differences between the way the data for the two corpora were collected. The specifics are elaborated on later in this chapter (Sections 2.2 and 2.3). First, however, some considerations are discussed regarding the design of the study that apply to both corpora.

An obvious disadvantage of a multiple case study is that on the basis of a study of only a few children no generalisations can be made about the whole population of Turkish children in the Netherlands. The only best one can do is to pay close attention to the selection of the informants. In the present study, two principles were taken into consideration in establishing relevant selection criteria: ecological validity and degree of bilingualism. To ensure ecological validity, the informants were to come from families that are prototypical for the Turkish community in the Netherlands. The second principle is that all informants should receive input in both Dutch and Turkish and thus have the potential of developing at least some degree of bilingualism. The principle of bilingualism was allowed to override the principle of ecological validity if the two were in conflict.

What constitutes a 'prototypical' Turkish child growing up in the Netherlands? Of course, it is impossible to answer this question definitively, as every family has its unique characteristics. Nevertheless, demographical data show us some characteristics. For instance, as most Turkish children in the Netherlands have parents with a low or intermediate educational background, a representative case study should not include a child from parents with a university degree. Also, most children have parents who both have a Turkish background, so it is not desirable to study children from mixed marriages, even if the latter situation will probably result in a higher degree of bilingualism. Because the situation for Turkish children born in the late 1980s was different from that of children born around the year 2000, different selection criteria were formulated for the Nap-Kolhoff and Van der Heijden bilingual corpora.

Although adherence to the principle of ecological validity ensures that the informants in the present study can be considered prototypical of the population of Turkish children in the Netherlands, they nevertheless each live their own unique contexts: with or without siblings, having parents belonging to the first- and/or second-generation of Turkish immigrants, originating from specific regions in Turkey, etc. All those differences may (or may not) be reflected in the Dutch language development of the child. In order to make the specific characteristics of the informants insightful for the reader, this chapter contains detailed descriptions of the backgrounds of the informants and the families they live in (Sections 2.2 and 2.3).

When spontaneous speech data are collected, several decisions need to be made about "when, how long, how frequently, where, under what conditions, and with whom should we record the child […]" (Bornstein, Painter & Park, 2002: 688). The answer to the 'when'-question is clear in our case, as it is the aim of the present study to track the Dutch language development of Turkish children in the period before kindergarten, between the ages of two and four.

A different issue is how long the recordings were to be and how frequently recordings were to be made. In recent language acquisition studies increasingly dense sampling methods are being applied (e.g., Lieven et al., 2003; Abbot-Smith & Behrens, 2006). Dense sampling involves recording a child's speech, as well as the input he or she receives, for several hours per week. Often the mother is employed by the research institution in order to compensate for the heavy burden such an investigation puts on family life. The data acquired by dense sampling are insightful, particularly when fairly infrequently occurring phenomena are studied, but also with respect to their relationship to the received input. For the present study, however, is was not feasible to carry out this type of data collection, because the investment of labour for collecting and transcribing data would be beyond the scope projected. Therefore, the rate of sampling in the present study is the one employed in many explorative studies, with recordings taking place twice a month. The answers to the 'where', 'under what conditions', and 'with whom'-questions are different for the two bilingual corpora used. They are discussed in the relevant sections (2.2 and 2.3).

All spontaneous speech data were audio-recorded and subsequently transcribed. Although the original idea was to make video recordings for the collection of data of the Nap-Kolhoff corpus, this idea was eventually abandoned, because it was considered too heavy a burden on the good will of the participating families and pre-school playgroups, as well as on the naturalness of the situation.

The transcriptions were made by applying the conventions of the *Codes for Human Analysis of Transcripts* (CHAT; MacWhinney, 2000). Although there are several other transcription codes and software available, CHAT was chosen because it is the most widely used coding system in child language research. In addition, using CHAT makes it possible to use the analysis software CLAN (MacWhinney, 2000), which has been well- developed over the past three decades.

The foundation of the CHAT transcription conventions is the concept of 'utterance', i.e., the speech data need to be segmented into utterances. The LIPPS group

(1999) notes that there are several ways of defining utterances, for instance as an intonational unit, or on the basis of pauses. In the present study, the major criterion used in deciding on utterance boundaries was the intonational contour of word groups. CHAT has several codes for marking elliptic utterances, hesitations, self-corrections, and overlap between speakers. As the CHAT conventions consist of many codes for indicating all kinds of details in the speech data, a choice had to be made what codes to use in the transcriptions for the present study. An overview of the codes used is given in Appendix A. In addition, specific analyses of the data needed extra coding. The details of those codes are discussed in the chapters in which these analyses are presented.

As a preview of the remainder of this chapter, Table 2.1 gives an overview of the available data for the seven children in the two corpora. For each child, between 7 and 35 hours of data were collected. The large differences between the two corpora in terms of hours recorded is due to differences in recording methods, described in more detail below. Data are available in the period between the ages of 2;6 and 3;6 for all children. For some children, mainly for those in the Van der Heijden corpus, there are also data available from before the age of 2;6. Data for the children in the Nap-Kolhoff corpus were collected after the age of 3;6 as well, up to the age of 4;0 in one case. More information about the nature of the data and the backgrounds of the informants is presented separately for the two corpora in the remainder of this chapter.

Table 2.1 Transcribed spontaneous speech data (in minutes) for each informant at different ages

	Nap-Kolhoff bilingual corpus			Van der Heijden bilingual corpus			
Age	Mehmet	Batuhan	Yunus	Selma	Filiz	Berrin	Şükran
2;1	-	-	-	180	80	-	-
2;2	-	-	-	90	60	310	135
2;3	30	-	-	-	-	-	-
2;4	22	-	-	-	150	-	100
2;5	15	30	-	120	-	250	90
2;6	30	28	-	-	-	100	-
2;7	-	-	30	300	60	-	180
2;8	56	48	-	-	80	150	-
2;9	17	-	-	-	90	-	-
2;10	30	17	-	315	90	335	90
2;11	48	48	-	-	-	-	120
3;0	45	30	45	135	170	-	210
3;1	30	16	30	220	-	360	-
3;2	45	22	40	-	-	-	-
3;3	48	30	45	210	120	160	180
3;4	45	15	45	140	80	150	
3;5	50	45	17	-	-	-	-
3;6	15	45	45	180	130	305	250
3;7	-	51	30	-	-	-	-
3;8	47	15	30	-	-	-	-
3;9	-	-	30	-	-	-	-
3;10	18	47	-	-	-	-	-
3;11	-	20	-	-	-	-	-
4;0	30	20	-	-	-	-	-
Total	621	527	387	1,890	1,110	2,120	1,355

2.2 Nap-Kolhoff bilingual corpus

The Nap-Kolhoff bilingual corpus consists of longitudinal speech data from three Turkish boys, Mehmet, Batuhan, and Yunus, and was collected by the author of the present study between April 2003 and January 2005. The following sections discuss the selection of the informants and describe the backgrounds of the three boys (2.2.1). In addition, decisions made about data collection are discussed, as well as the procedures (2.2.2).

2.2.1 Informants

As was discussed before, the selection of informants is an important issue when the research design is a multiple case study and in the present study the process is guided by the principles of ecological validity and degree of bilingualism. Before selection criteria can be formulated on the basis of these principles, an overview of the demographical situation of Turkish immigrants in the Netherlands, and especially the situation of Turkish children born in the early 2000s needs to be sketched.

In 2003, 70,587 children under the age of ten living in the Netherlands had at least one parent who was born in Turkey (CBS, 2003). These children, who can be considered as having a Turkish immigrant background, constitute 3.5% of the total Dutch population of that age. 95% of the Turkish immigrant children under the age of ten were born in the Netherlands, thus belonging to the second generation (CBS, 2003). Because statistics like these determine ethnic minority membership on the basis of the birth country of the child and/or at least one of his/her parents, third-generation immigrants by definition are left out of the picture. CBS (2001), however, estimated the size of third- generation immigrants by including information about the grandparents of the children. They conclude that, although labour migration from Turkey to the Netherlands had a history of about forty years in the early 2000s, a third generation of Turkish immigrants in the Netherlands had hardly started to emerge in this period. They calculated that fewer than 1% of the Turkish children under the age of ten belonged to the third generation.

The majority of the families in which Turkish children were born in the early 2000s, consisted of parents who both have a Turkish background. Hooghiemstra (2003) shows that 94% of the marriages with at least one partner with a Turkish background contracted in the Netherlands were homogamous. Because labour migration from Turkey to the Netherlands had been halted as early as the mid and late 1970s, many of the Turkish immigrants of the generation of those parents were either second-generation immigrants, or so-called intermediate-generation immigrants, who arrived between the ages of 6 and 17 and received (part of) their education in the Netherlands (Tesser, Merens & Van Praag, 1999). Table 2.2 gives an overview of the generations that different age groups of Turkish immigrants in 1998 belonged to.

Table 2.2 Types of Turkish immigrants per age group, 1998 (Tesser, Merens & Van Praag, 1999)

Type of immigrant	15-24	25-39	40+
First generation (arrived before/in 1980)	-	6%	77%
First generation (arrived after 1980)	8%	27%	15%
Marriage migrants	8%	18%	4%
Intermediate generation	22%	30%	4%
Second generation	62%	20%	-

Table 2.2 shows that in 1998, 92% of the inhabitants of the Netherlands with a Turkish background older than 40 belonged to the first generation. Of the Turkish immigrants between the ages of 25 and 39, however, only 33% belonged to the first generation, and of those between 15 and 24 years of age just 8%. A considerable number of inhabitants

of the younger age groups are so-called 'marriage immigrants': men and women from Turkey who migrate to the Netherlands, because they marry someone living in the Netherlands, who usually has a Turkish background as well. A closer examination of the marriage patterns of second-generation Turkish immigrants (see Table 2.3) reveals that about 70% of the second-generation Turks finds a marriage partner who lived in Turkey before the marriage. In fact, marriage migration is the main reason for the virtual absence of a third generation among Turkish immigrants in the Netherlands. Children who are born into families with one parent who, being a marriage migrant, is counted as first-generation immigrant, appear in the statistics as second- rather than third-generation immigrants.

It can be concluded that, although most of the children born in the early 2000s are considered to be second-generation immigrants, they often have at least one parent who was born in the Netherlands as well or who migrated to the Netherlands at a young age.

Table 2.3 Marriage patterns of second-generation Turkish immigrants in the Netherlands, 2000 (Hooghiemstra, 2003)

Background of partner	Men	Women
Dutch	5%	5%
Turkish, living in the Netherlands	19%	24%
Other, living in the Netherlands	1%	1%
Turkish, from Turkey	72%	69%
Other, from outside the Netherlands	3%	1%

Although more and more students with a Turkish immigrant background find their way to Dutch universities (CBS, 2003), generally the educational level of Turkish immigrants is not very high. Dagevos, Gijsberts & Van Praag (2003), on the basis of a large survey among Turks in the Netherlands, report that 43% of the men and 61% of the women had not completed more than primary education. Table 2.4 shows the educational level of different Turkish immigrant groups. Most of the second-generation immigrants have an educational level of at least intermediate secondary level (*MBO*), but the majority of first- and intermediate-generation immigrants and marriage immigrants have completed primary education at the most.

Table 2.4 Educational level of 15to 64-year-old Turkish immigrants in the Netherlands, per type of immigrant, 2002 (Dagevos, Gijsberts & Van Praag, 2003)

	Primary at the most	Lower secondary	At least intermediate secondary
First generation (arrived before/in 1980)	77%	12%	11%
First generation (arrived after 1980)	57%	16%	27%
Marriage migrants	40%	22%	38%
Intermediate generation	46%	30%	24%
Second generation	11%	31%	58%

Large-scale research on home languages in the Netherlands other than Dutch shows that most Turkish children in primary and secondary schools report speaking Turkish with their fathers (79-87%) and mothers (82-87%) (Extra et al., 2002). Although it is very well possible that language use in younger Turkish families is increasingly shifting to Dutch, Turkish will probably remain an important and vital language, particularly in families in which one of the parents is a first-generation immigrant. A minority (6%) of the Turkish children in Extra et al.'s study report speaking Kurdish at home next to Turkish.

On the basis of the demographic information discussed above about the immigration background of Turkish children in the Netherlands and their parents, the educational level of their parents, and the languages spoken in the homes of the children, the following criteria were formulated for the selection of informants in the present study:

(1) The child was born in the Netherlands;
(2) At least one of the parents lived in the Netherlands during their youth;
(3) The educational level of the parents of the child is low;
(4) The mother tongue of the child's parents is Turkish.

For most Turkish children in the Netherlands, Turkish is the language learned first. Input from Dutch is mostly received outside the home, for instance in (pre)schools, although the Dutch language is certainly not completely absent at home either. In order to secure some degree of bilingualism in the pre-school period before kindergarten, a fifth criterion was applied in the present study:

(5) The child attends a pre-school playgroup.

Driessen & Doesborgh (2003), on the basis of a large survey study among children in the second year of kindergarten (*groep 2*), report that 55% of the Turkish children had gone to a pre-school playgroup. That study has some serious flaws in it, however, which may have led the researchers to overestimate the proportion of Turkish children

attending pre-school playgroups.[5] Of the Dutch children in their study, 78% had attended a pre-school playgroup. Other studies report lower proportions and estimate that about 60% of all children (Dagevos, Gijsberts & Van Praag, 2003) and 20-25% of all non-western minority children (Tilburg Municipality, 2001) go to pre-school playgroups. The fifth selection criterion thus conflicts with the principle of ecological validity, as the majority of Turkish children do not visit pre-school playgroups. Nevertheless, a substantial number of Turkish children do attend pre-school playgroups where they receive Dutch language input for several hours per week. Therefore, this criterion was applied to guarantee that all informants had Dutch language input. More information on pre-school playgroups in the Netherlands is given below in the description of the backgrounds of the children, who attended quite typical pre-school playgroups.

Procedures

In the first months of 2003, several playgroups in neighbourhoods with relatively large Turkish immigrant populations were asked to participate in the investigation. *Kinderstad*, an organisation supporting most of the pre-school playgroups and other daycare facilities in Tilburg, assisted in this process. Two playgroups agreed to participate and were visited to make an inventory of possible candidates among their children. One of the playgroups allowed the author to talk about the study to the parents when they brought their children to the playgroup. The other playgroup had a Turkish staff member who regularly visited Turkish parents within the framework of the pre-school programme *Opstapje* (NJi, 2010) and asked the parents if they wanted to participate in the study. The author subsequently visited several families, informed them about the project, and asked them some background questions in connection with the selection criteria described above. Eventually, the parents of five children agreed to participate.

Data collection (see 2.2.2) started with these five children, although only three children were to be included in the final database. This decision was motivated by the possibility that one or two children would drop out due to unforeseen factors. Indeed, one of the children developed severe behavioural problems in the pre-school playgroup and had to leave. In April 2004, it was decided to cease data collection for one more child, in order to gain time for data transcription. In the end, data from three children, i.e., Yunus, Batuhan, and Mehmet, were included in the Nap-Kolhoff corpus. The remainder of this section is devoted to a description of these three informants, of their families, and of the pre-school playgroups they attended. The information is based on observations of the author of the present study and on interviews conducted with the parents and pre-school playgroup teachers towards the end of the period of data collection.

[5] The main flaw in the study is that only 58% of the parents of Turkish and Moroccan children returned the questionnaire in which they were asked to report whether their child had attended a pre-school playgroup. It is not unlikely that particularly those parents who did not send their children to a pre-school playgroup were overrepresented in the group which did not return the questionnaire.

Mehmet

Mehmet was born in January 2001 in Tilburg, in one of the neighbourhoods most densely populated with inhabitants from non-western minority groups (30%; 15% on average in Tilburg)[6]. 8%[7] of the population had a Turkish background (3% on average in Tilburg). Shortly before his second birthday, however, Mehmet moved to an adjoining neighbourhood with relatively few inhabitants from non-western minority groups (6%) and only 1% inhabitants with a Turkish background.

Mehmet's mother is a second-generation Turkish immigrant, who was born in Tilburg as well. She was trained as a dental nurse at upper vocational level (*MBO*), but during the period of data collection was working as a cashier in a supermarket for 24 hours per week. Occcasionally she would think of taking a course to become a pre-school playgroup teacher, but the care for her family had so far made this impossible. At the age of twenty she had married a young Turkish man from Aksaray, a region in central Anatolia where her parents came from. Mehmet's mother reported being more proficient in Dutch than in Turkish, Dutch being the language of her schooling.

Mehmet's father had migrated to the Netherlands immediately after finishing his training in electrical engineering at upper vocational level (*meslek lisesi*). In Tilburg, he had a full-time job in a factory and had become a team leader. During the period of data collection he started an enterprise as a car dealer, although he was still working in the factory. It was his ambition to become a full-time car dealer. He had received some formal Dutch language instruction in language courses, but stated that he had learned most of the language at work. Although he reported being more proficient in Turkish than in Dutch, his Dutch language proficiency was advanced as well.

Mehmet was the only child in the family until the end of the period of data collection, when his parents were expecting a second child. In the home situation of Mehmet, both Dutch and Turkish were spoken regularly, also in code-switching registers. When both his parents were at work, he was taken care of by his grandparents, who spoke Turkish with him. Following the advice of the child care centre (*consultatiebureau*), Mehmet's parents decided to speak Turkish with him until his third birthday. After that, they tried to switch to Dutch in order to prepare him for school. His parents were satisfied with the amount of Turkish he had learned in the first three years of his life, but experienced that the switch to Dutch was difficult. Mehmet's father read Dutch books with him and practised Dutch words, during the time that Mehmet was awake only Dutch television channels were on, and his parents tried to speak Dutch with each other whenever Mehmet was around. The main difficulty was that Mehmet felt more comfortable in Turkish and did not like to speak Dutch. Having had this frustrating experience, his parents were planning to speak Dutch from the beginning to their second child.

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[6] Source: http://tilburg-stadsmonitor.buurtmonitor.nl/ (data for 2003). Persons are counted as member of non-western minority groups if they and/or (one of) their parents were born in Africa, Central and South-America, Asia (excluding Japan and Indonesia), Eastern Europe, Mediterranean Countries.

[7] See footnote 6. Persons are counted as being Turkish if they and/or (one of) their parents were born in Turkey.

From his second to his fourth birthday, Mehmet went to a pre-school playgroup in the neighbourhood on Monday afternoons and on Tuesday, Thursday, and Friday mornings, in all about twelve hours per week. Mehmet's parents indicated that they found it important to send their son to this playgroup, because it would prepare him for kindergarten and give him the opportunity to play with children of the same age. Another important reason for them was that they felt it was good for his Dutch language development.

The playgroup was located in the building of the local primary school and had two groups of fifteen children of mixed ages (two to four). Mehmet's group consisted of children with various ethnic backgrounds: Dutch (two children), Turkish (three children, including Mehmet himself and Batuhan), Moroccan (three children), Somali (two children), Antillean (two children), Surinamese, and Indonesian. About half of the children had almost no language proficiency in Dutch when they entered the playgroup at the age of two.

The staff of the playgroup consisted of three teachers with a higher professional education background (*HBO*) or upper vocational training (*MBO*), and several volunteers and trainees. Of the three teachers, one had an Indonesian, one a Hindustan-Surinamese, and one a native Dutch background. The Hindustan-Surinamese teacher took part in most of the interactions in the present study. The playgroup used the programme *Puk & Ko* (Zwijsen, 2010) for stimulating Dutch language proficiency as well as socio-communicative development of the children through different kinds of activities. During a morning or afternoon with the children, two teachers and one or two volunteers and/or trainees would be present. A morning in this playgroup was very similar to the typical morning in Yunus's playgroup described below. The most important difference was that Mehmet's playgroup offered coffee to the parents during the first half hour and stimulated them to stay and play with their children in their own language or in Dutch.

For many years already, Mehmet's playgroup had been a reflection of the multicultural composition of its neighbourhood and had therefore started with the implementation of a specific programme for children from minority backgrounds and/or lowly educated families in the 1990s. This programme, *Opstapje* (NJi, 2010), aims at preparing the children for primary school and consists of (1) stimulation of activities at home to promote mother-child interactions, (2) visits from a trained staff member from the same language background as the mother, (3) participation of the child in a pre-school playgroup, and (4) meetings for parents. The programme is available in several minority languages, including Turkish, although the parents are free to choose Dutch as well. Mehmet participated in the Dutch language programme. The Turkish *Opstapje* staff member also interacted with the Turkish children in the playgroup every now and then. The pre-school playgroup was decorated with pictures and objects from different cultures and celebrated Dutch feasts like *Sinterklaas* (Santa Claus) and Carnival as well as feasts of minority groups, such as the Islamic Ramadan Feast. Moreover, the teachers had learned several words in the most important home languages of the children in the playgroup. In Turkish, they could say things like *otur* ('sit down'), *topla* ('tidy up'), *yapma* ('don't do that'), and *çiş* ('pee', 'going to the toilet'). Although the cultural and linguistic background of the children was thus acknowledged and

appreciated in the playgroup, the general attitude was that when the children grew older they should speak Dutch. Towards their fourth birthdays the children regularly heard the request *Nederlands praten!* ('Talk Dutch!').

Mehmet is a cheerful and lovable child. Drawing pictures, reading books, or doing puzzles were activities he did not like very much, but he loved everything that had to do with cars. When he turned four, his parents sent him to a school in the neighbourhood where they lived and where he was the only Turkish child in his class.

Batuhan

Batuhan was born in November 2000 in Tilburg, in the same neighbourhood where Mehmet was born. Batuhan had one brother, who is nine years older, and a sister, who is six years older. Batuhan's parents originated from the province of Yozgat in central Anatolia. His mother had migrated to the Netherlands with her parents at the age of eight, after having finished the first year of primary school (*ilkokul*) in Turkey. In the Netherlands, she finished primary school and afterwards went to a domestic science school (*huishoudschool*). She was a fluent speaker of Dutch, although she felt more comfortable in Turkish, which she considered her 'own' language.

Batuhan's father lived with his parents in the Netherlands for one year during his youth, but then went back to Turkey. He finished secondary school (*lise*) in Turkey and immediately afterwards married Batuhan's mother and migrated to the Netherlands. In Tilburg, he owned a Turkish cafeteria for some time, but during the last months of the period of data collection he had become unemployed. When her husband became unemployed, Batuhan's mother started working at a distribution centre of the postal services, which placed a heavy burden on the stability of the family. The Dutch language proficiency of Batuhan's father was very limited.

The language spoken in the family was mostly Turkish, although Batuhan's mother indicated that her school-age children sometimes also spoke Dutch at home. Because Batuhan's father as well as many of the visitors who came to their house did not speak Dutch, Turkish was the dominant language in the home. Batuhan's parents wished their son would learn to speak both Turkish and Dutch fluently. They valued Turkish as the language of his ethno-cultural background, and Dutch as the language of the society he lived in.

From his second to his fourth birthday Batuhan attended the same pre-school playgroup Mehmet went to, where they were in the same group. For Batuhan's parents the most important reason for sending him to a pre-school playgroup was that it would ease the transition to kindergarten at the age of four. Batuhan visited the playgroup on Monday afternoons, and Tuesday, Thursday, and Friday mornings. In total, he attended the pre-school playgroup for about twelve hours per week.

Batuhan is a quiet child, who loved doing things on his own, like doing puzzles or drawing pictures. However, he also loved riding his bike in the street where he lived, which regularly made him a victim of small accidents, and once during the summer holidays of a bigger one.

Yunus

Yunus was born in September 2000 in a neighbourhood in Tilburg with relatively many inhabitants from non-western minority groups (24%; 15% on average in Tilburg)[8]. 6%[9] of the population had a Turkish background (3% on average in Tilburg). Yunus has a brother who is nine years older and a sister who is five years older. Yunus's mother was born in Turkey in the western Anatolian province of Aydın. After finishing her primary education (*ilkokul*), she worked on the land of her parents. In the early 1990s, when she was nineteen years old, she married a second-generation Turkish immigrant in the Netherlands and moved to Tilburg. At the time of data collection she was working as a cleaning lady in a hospital for twenty hours a week. Her Dutch language proficiency had not reached more than a basic level. Yunus's father was born in Tilburg and had finished a technical secondary school (*MTS*). He had a full-time job in a factory, and played in a Turkish music band in his free time. Because he was working in shifts, he was at home regularly in the daytime. He reported being a balanced bilingual in Dutch and Turkish. The retired parents of Yunus's father were living with the family in the same house, although, at the end of the period of data collection, they were planning to go back to Turkey. Other relatives lived close-by in the same neighbourhood.

The language spoken within the family was mostly Turkish. When asked to report on his language use during one particular week when Yunus was almost four, his mother said that she had suddenly realised that he talked Turkish with her and other adults, but Dutch with his siblings and cousins. When he was younger, he only spoke Turkish. Yunus's parents characterised the bilingual upbringing of their children as unconscious: they had never really thought about it. They expected Yunus to eventually be more fluent in Dutch than in Turkish. With respect to his Turkish proficiency, they thought it sufficient if he would not 'forget' the language, so that he would be able to speak Turkish with his mother and his family in Turkey, but he did not need to be able to write in this language. His parents thought he would learn Dutch in the pre-school playgroup and at school.

From his second to his fourth birthday, Yunus went to a pre-school playgroup in the neighbourhood. His parents' reasons for sending their son to a pre-school playgroup, were that it would give him the opportunity to play with other children of his own age, that he would learn how to behave at school, and that it would enable him to start learning Dutch at an earlier age. He attented the playgroup on Tuesday and Thursday afternoons and on Wednesday and Friday mornings, in total about eleven hours per week. The pre-school playgroup had two groups for two-year-old children in a local community centre (*buurthuis*) and two groups for three-year-olds in the building of a primary school. Yunus's group consisted of twelve children. Eight children had a Dutch background, three (Yunus and two cousins) had a Turkish background, and one child's parents were Chinese. The four non-Dutch children did not speak Dutch before they entered the playgroup. Many of the Dutch children spoke the Tilburg dialect.

The playgroup had nine staff members. Seven staff members had a Dutch background and two were Antillean. Two of the staff members were certified at higher

[8] See footnote 6.
[9] See footnote 7.

professional education level (*HBO*), four at the upper vocational level (*MBO*), and the others were doing an internship. The playgroup used a pre-school programme called *Puk & Ko* (Zwijsen, 2010), which aims at stimulating language skills and social-cognitive development. A typical morning in the playgroup started at 8.45 with free play and activities in smaller groups. At 10.15 the teachers would help the children go to the toilet. Then, after putting back all the toys, the teachers and children would take a seat at the table, eat some fruit and drink lemonade. Afterwards, they would sing songs together and do an activity from the *Puk & Ko* programme. The morning ended with free play in the gym or outside in the playground, depending on the weather. At 11.30 the parents would come to take their children home.

The programme in the playgroup was carried out in a very structured way and accompanied by many small rituals. For example, the fruit time would start with all children taking a seat at the table. While the plate with fruits was hidden on top of a cupboard, all the children closed their eyes. One lucky child was called out to get the fruit. The other children then counted to three (two-year-olds) or five (three-year-olds) and were then allowed to open their eyes, while the chosen child put the plate on the table. The plate was then passed on and each child took one small piece of fruit, until the plate was empty. The ritual was repeated with the lemonade.

Because the majority of the children had a native Dutch background, Yunus's playgroup had no special policy towards minority children, in contrast to the playgroup Mehmet and Batuhan attended. The playgroup was, however, aware of its function of preparing children of disadvantaged backgrounds for primary school, as most of the native Dutch children in the neighbourhood were from families with a low socio-economic background as well. In the playgroup, it was tolerated if non-Dutch children spoke other languages than Dutch in the playgroup, as long as this did not dominate the group. The latter reservation was motivated by the fact that for some time, Yunus and his cousins had run a Turkish speaking 'gang', bullying the other children in the playgroup. The teacher participating in the interactions in the present study said that they used to encourage minority parents to talk Dutch with their children at home, but that for a few years now they had been advising them to talk to their children in their mother tongue, because the child health centre said that would be better for their general linguistic development.

Yunus is an open and confident child, who has the gift of making others laugh. Like his father, he loved music and already at the age of two, he could name many Turkish singers he saw in video clips on Turkish television channels. He liked playing football and riding a bike, as well as playing with his cars or drawing pictures. The family did not have many books. Via the pre-school playgroup, Yunus had a subscription to a local library. The books taken out of the library were read to him by his sister.

2.2.2 Data

General considerations regarding the nature of the collected data and the way of data collection were reviewed at the beginning of this chapter. In this section, specific decisions are presented that were made for the collection of data for the Nap-Kolhoff bilingual corpus. Important issues in collecting spontaneous speech data are where,

under what conditions and with whom the children are to be recorded (Bornstein, Painter & Park, 2002). Because the aim of the data collection was to record the language production of the bilingual children in both languages in natural contexts, it was decided to make recordings in the homes of the children, where they receive mainly Turkish language input and in their pre-school playgroups, where the children receive most of their Dutch language input. In the present study, the Dutch language data in the corpus receives most attention.

With respect to the conditions under which the recordings were to be made, several decisions had to be taken. Bornstein et al. (2000) showed in a study on recorded speech in different kinds of contexts that children produce richer language data when they are interacting with their mothers than when doing so with unknown people. In a later study Bornstein, Painter & Park (2002) showed that a method that would yield the richest data is one in which the parents are given a tape recorder and are instructed to record a moment when they believe their child is most talkative. Typical moments the parents recorded were when the child was at play, during meals, or when they were reading a book. Some parents made recordings when their child was having a bath, when the child was getting dressed, or when they were riding in the car, arriving home from daycare. In the present study, initially the recording equipment was left in the house of the child for the parents to record a moment of their choice. It appeared, however, that it was difficult for the parents to maintain the discipline of actually finding the time to record. In addition, the equipment (minidisc recorder, see below) was rather complicated to handle. Therefore, it was decided to have the author visit the homes and pre-school playgroups and make the recordings in the presence of this 'stranger'. However, the situation was less dramatic than in the study of Bornstein et al., who had two complete strangers visit the house of the parents. In the present study, only one investigator visited the children. Moreover, over time she became at least to some extent familiar to the children.

Sorsby & Martlew (1991) showed that not all types of interactions elicit rich speech from children. In their study, picture book reading produced richer interactions than playing with play-doh. As similar findings were reported in the pilot recordings of the present study (see below), it was decided to collect speech data from Mehmet, Batuhan, and Yunus in sessions with specific activities. The author brought to the sessions a bag with picture books she encouraged the pre-school playgroup teachers and mothers to use when playing with the informants. In order to avoid triggering language use in either Dutch or Turkish, picture books without text were chosen. An overview of the picture books used is given in Appendix B. Of course, the interactions still had to be natural for the children. Picture book reading happens regularly in pre-school playgroups, although not often with individual children. In the homes, the familiarity with book reading was more diverse. In all cases, the investigator never forced picture book reading on either the child or the aldult. If the child or the adult preferred to do something else, this was no problem. Particularly in the interactions recorded in the homes of the children, picture book reading formed only a part of the total sampling session. The sessions in the pre-school playgroups were made with a teacher and the children individually. In order to keep the situation as natural as possible, these sessions

were held in places familiar to the child and during normal playgroup mornings or afternoons, not after school time.

Procedures

In November and December 2002, several pilot recordings were made with children in a daycare centre in Tilburg for children of mothers who were attending Dutch language classes. In this way, the recording equipment was tried out and the suitability of the stimulus materials was tested for Turkish-Dutch children between the ages of two and four.

In April 2003, the collection of data with the target informants started. Over a period of 14 to 20 months, the author visited the children on a monthly basis in their homes at times previously established with their mothers. An audio recording of one hour was made, while the mother was encouraged to play with her child in a normal way. In addition, the author brought some of the stimulus materials for speech elicitation (see above). Although the author herself was always present, she tried to remain in the background as much as possible during the recordings. The recordings in the homes typically consisted of activities of mother and child with the stimulus materials, some interactions involving the child's toys, some interactions of preparing and eating lunch or drinking tea, as well as a few interactions with the author. Sometimes other family members or visitors were present during (part of) the recordings. Because the author also visited the children in the pre-school playgroups, the children and mother usually referred to her as *juffrouw* ('teacher', 'miss').

The pre-school playgroups of the children were also visited every month. For the audio-recordings special picture book sessions were held with one teacher in a separate, but familiar room when the other children were playing in the gym or outside. The recordings with Yunus were made with the same teacher, Alice. Mehmet and Batuhan were recorded in interactions with Jolande, who left the playgroup after two months. Her role was taken over by Saskia. Usually the author was present in a corner of the room and made notes of contextual information. In addition to these recordings, the author observed the children during the morning or evening in the playgroup and noted relevant observations in a diary.

The audio-recordings were made by means of a portable minidisc recorder (Sharp MD-MT190), a stereo condenser portable microphone (AIWA CM-TS22), and minidiscs (Fuji MD80). The recordings were digitised as advised on the TalkBank website[10] using the software programme CoolEdit96 at 22,050 Hz, 16 bits, mono, with no compression and saved as wave (.wav) files. The digitised sound files were imported in the CLAN transcription programme (MacWhinney, 2000). All transcripts were made by the author and checked by a bilingual Turkish-Dutch student assistant. Of the home recordings, 30 minutes were transcribed, starting ten minutes after the beginning of the recording. The playgroup recordings were transcribed completely.

[10] http://talkbank.org/da/audiodig.html

Available transcripts

Tables 2.5-2.7 give an overview of all the transcripts available for the three children in the Nap-Kolhoff bilingual corpus. When in a specific month no data are available, this is either due to this month being part of a holiday season or to a technical failure of the recording equipment. A gap of a few months between the last two home recordings of Mehmet was caused by the fact that his mother was hospitalised in this period. For Mehmet, 29 recordings were made between the ages of 2;3 and 4;0. The transcripts of these recordings consist of 5,954 utterances in total produced by Mehmet. Batuhan was recorded between the ages of 2;5 and 3;11, which resulted in 24 recordings with 3,349 child utterances in total. For Yunus 16 recordings were made in the pre-school playgroup (ages 3;0-3;6), while home recording sessions were held between the ages of 2;7 and 3;9. For Yunus, sixteen transcripts are available consisting of 3,079 utterances in total produced by Yunus himself.

Table 2.5 Transcripts of recordings at home and in the pre-school playgroup for Mehmet (age and number of child utterances)

Home			Playgroup		
Transcript	Age	Utterances	Transcript	Age	Utterances
meht01	2;03.22	221	mehp01	2;04.27	76
meht02	2;04.27	14	mehp02	2;05.22	92
meht03	2;06.01	264	mehp03	2;08.14	68
meht04	2;08.02	257	mehp04	2;09.18	116
meht05	2;09.12	144	mehp05	2;11.07	59
meht06	2;10.09	393	mehp06	3;00.13	2
meht07	2;11.07	185	mehp07	3;02;16	26
meht08	3;00.11	306	mehp08	3;03.13	169
meht09	3;01.21	235	mehp09	3;04.16	122
meht10	3;02.21	188	mehp10	3;05.15	150
meht11	3;03.18	191	mehp11	3;06.11	124
meht12	3;04.30	308	mehp12	3;08.19	186
meht13	3;05.27	244	mehp13	3;09.10	158
meht14	3;08.21	294	mehp14	3;10;00	167
meht15	4;00.17	432			
Total		3,676			1,515

Table 2.6 Transcripts of recordings at home and in the pre-school playgroup for Batuhan (age and number of child utterances)

Home			Playgroup		
Transcript	Age	Utterances	Transcript	Age	Utterances
batt01	2;05.11	170	batp01	2;06.24	27
batt02	2;06.23	116	batp02	2;07.19	62
batt03	2;08.03	216	batp03	2;10.11	62
batt04	2;11.19	250	batp04	2;11.04	18
batt05	3;00.11	174	batp06	3;01.04	178
batt06	3;03.04	169	batp07	3;02;10	234
batt07	3;05.07	317	batp08	3;04.13	94
batt08	3;06.14	191	batp09	3;05.10	187
batt09	3;07.11	172	batp10	3;06.13	164
batt10	3;10.19	159	batp11	3;07.12	206
			batp12	3;08.08	90
			batp13	3;10.16	154
			batp14	3;11.07	169
			batp15	3;11.27	121
Total		1,934			1,515

Table 2.7 Transcripts of recordings at home and in the pre-school playgroup for Yunus (age and number of child utterances)

Home			Playgroup		
Transcript	Age	Utterances	Transcript	Age	Utterances
yunt01	2;07.25	250	yunp01	3;00.22	57
yunt02	3;00.05	171	yunp02	3;02.01	64
yunt03	3;01.03	224	yunp03	3;03.08	112
yunt04	3;02.07	314	yunp04	3;04.05	105
yunt05	3;03.05	214	yunp05	3;05.16	186
yunt06	3;04.02	220	yunp06	3;06.22	147
yunt07	3;06.26	200			
yunt08	3;07.23	242			
yunt09	3;08.21	347			
yunt10	3;09.18	226			
Total		2,408			671

2.3 Van der Heijden bilingual corpus

The Van der Heijden bilingual corpus consists of longitudinal spontaneous speech data originating from four Turkish girls, Selma, Berrin, Filiz, and Şükran, and was collected between February 1990 and October 1991. The following paragraphs provide information about the selection of informants and their backgrounds (2.3.1) as well as considerations regarding the way of data collection and the procedures (2.3.2).

2.3.1 Informants

For the selection of informants for the Van der Heijden bilingual corpus, the two principles of ecological validity and bilingualism applied for the informants in the Nap-Kolhoff bilingual corpus (see 2.2.1) were taken into consideration as well. However, because the situation in the 1990s was different from that in the early 2000s, the formulated selection criteria were slightly different.

In 1990, 50,552 children under the age of ten living in the Netherlands had at least one parent who was born in Turkey (Roelandt, Roijen & Veenman, 1991). These children, who can be considered as having a Turkish immigrant background, constituted 2.8% of the total Dutch population of that age. Table 2.8 shows that 93% of the children with a Turkish background under the age of five and 87% of the children between the ages of five and nine, had been born in the Netherlands.

Table 2.8 Proportion of different age groups of Turkish immigrants in the Netherlands belonging to the first or second generation, 1990 (Roelandt, Roijen & Veenman, 1991).

	0-4	5-9	10-14	15-19	20-24	25-29	30+	Total
First generation	7%	13%	36%	80%	96%	99%	100%	69%
Second generation	93%	87%	64%	20%	4%	1%	0%	31%

Table 2.8 also reveals that of the generation of their parents, hardly anyone had been born in the Netherlands. Of the age group between 20 and 24, only 4% had been born in the Netherlands, and among the older age groups this percentage is even smaller. Some of those counted as first-generation immigrants, could probably belong to the intermediate generation, which means that they arrived in the Netherlands between the ages of 6 and 18. Summarising, it can be concluded that most of the Turkish children in the Netherlands born in the late 1980s, are second-generation immigrants. Their parents, however, were born in Turkey and belong to the first or intermediate generation.

Table 2.9 presents the educational level of Turkish immigrants in 1991. It shows that more than 70% of the men and 80% of the women between the ages of 15 to 64 who were not attending school anymore, had an educational level of primary school at the most. The majority of the others had attained lower secondary level, and only a small proportion had reached a higher educational level.

Table 2.9 Educational level of 15 to 64-year-old Turkish immigrants in the Netherlands, per type of migrant, 1991 (Tesser, 1993)

	Primary at the most	Lower secondary	At least intermediate secondary
Men	71%	20%	9%
Women	81%	13%	6%

As most of the parents of Turkish immigrant children born in the late 1980s were first- or intermediate-generation immigrants, it is likely that the main language in their families was Turkish. Although languages other than Turkish spoken in Turkey are present in the Netherlands as well, they are spoken by only a minority of the children. Extra et al. (2002) report that 6% of the Turkish children in their home language survey speak Kurdish at home.

On the basis of the demographic information discussed above about the immigration background of Turkish children born in the late 1980s and their parents, the educational level of their parents, and the languages spoken in the homes of the children, the following criteria were formulated for the selection of informants in the Van der Heijden corpus:

(1) The child was born in the Netherlands;
(2) The parents are first- or intermediate-generation Turkish immigrants;
(3) The educational level of the child's parents is low;
(4) The mother tongue of the child's parents is Turkish.

With regard to the principle of degree of bilingualism for formulating selection criteria in the Van der Heijden corpus, different decisions were made than for the Nap-Kolhoff bilingual corpus. In the early 1990s, minority group children attended pre-school playgroups or daycare facilities only infrequently. In order to guarantee some degree of bilingualism among the informants, children were selected who had different kinds of experiences with pre-school facilities, like daycare centres and pre-school playgroups. Thus, the fifth criterion in the Van der Heijden corpus was:

(5) Attending a daycare centre or pre-school playgroup varies among the informants.

In the remainder of this section, the four children, their families, and the pre-school facilities they attended are described in more detail. The information was obtained from interviews with the parents and the staff of the pre-school playgroups and daycare centres by Hanneke van der Heijden (Van der Heijden, 1998).

Selma

Selma was born in January 1988 in Deventer, a town in the eastern part of the Netherlands. Her parents originated from the central Anatolian province of Yozgat. Her mother had attended primary education in Turkey and had migrated to the Netherlands with her parents at the age of sixteen. In the Netherlands, she attended an international *schakelklas* for two years, a type of education for newly arrived immigrant children that prepares them for Dutch secondary education, and subsequently she attended a domestic science school (*huishoudschool*) for two years. Afterwards, she worked in a meat factory but quit her job when she got pregnant of her second child who was born when Selma was aged 3;0. Selma's father migrated to the Netherlands when he married her mother. He had finished primary school in Turkey, but did not

receive any further education in Turkey or in the Netherlands. He worked in the same meat factory as his wife. Both parents were more proficient in Turkish than in Dutch. Selma's mother had reached a moderate command of Dutch, whereas her father only spoke Dutch on a basic level.

Selma's parents reported that they usually spoke Turkish with both Selma and her younger brother. Only her mother would turn to Dutch now and then. Selma's mother reported that she found it important for her children to learn both Turkish and Dutch. From the time she was ten weeks old, Selma went to an international daycare centre in her home town for five days a week from 9 a.m. to 5 p.m.

Experiments with international daycare centres were introduced in 1979 and 1980 in twelve towns in the Netherlands, with funding from the Ministry of Culture, Recreation and Social Work (Veen & Vermeulen, 1993). The aim was to facilitate access to daycare for children from minority groups. One of the measures was to employ caretakers who themselves had an minority background. Furthermore, these daycare centres made adjustments to several practical regulations concerning opening hours, fees, food, etc., in order to facilitate access of minority groups. International daycare centres did not restrict their policies to minority children, but aimed at giving all children an international education.

In the first months of data collection, Selma did not attend the daycare centre very regularly, due to health problems of her mother. Until her third birthday Selma went to an infant group with children up to age three. She then switched to a toddler's group of three- and four-year-old children. In both groups, Selma was the only Turkish child who attended daycare full-time, although two other Turkish children also attended the centre several mornings or afternoons per week. Almost all other children were native Dutch.

In both age groups, at least one Turkish and one Dutch caretaker was always present. All Turkish caretakers had (near-)native proficiency in Dutch. It was the official language policy of international daycare centres that Turkish caretakers would speak Turkish with the Turkish children whenever no Dutch children were directly involved in the activity. In practice, however, this model was not applied consistently and Turkish caretakers regularly talked Dutch to Selma when no Dutch children were around. The Dutch caretakers knew a few Turkish words (e.g., *su* ('water'), *salata* ('salad')) and used them sometimes when addressing Turkish children. Recurring activities in the daycare centre were free play inside the centre as well as outside in the playground, reading books in small groups, having lunch, and going for little walks in the neighbourhood. Most children also slept a few hours during the day. The daycare centre put a great deal of effort into creating a facilitating atmosphere for language acquisition. Children were stimulated to talk, and language input was given in abundance by the caretakers. Children were repeatedly asked to tell about events they had experienced, caretakers told stories, sang songs (also in Turkish) at least once a day, and books were read and discussed in groups or with individual children.

Selma was a rather shy child and very conscious of the fact that she was learning two languages. To her little brother she was like a little mother. When Selma was 3;6 years old, her mother decided to let her visit the daycare centre for only three days a

week, because she was at home anyway. Selma, however, liked the daycare centre very much. The children she played with outside the daycare centre were mostly her cousins.

Berrin

Berrin was born in January 1988 in the town of Nijmegen, in the east of the Netherlands, in a neighbourhood with a high percentage of Turkish inhabitants. Her mother was born in the Anatolian region of Konya, where she finished primary education. Her husband, Berrin's father, was born in the same area. After having attended primary education, general secondary education (*ortaokul*) and one year of higher secondary education (*lise*), he migrated to the Netherlands in the early 1970s. He worked as a mechanic. Berrin's mother joined him in Nijmegen two years later and worked as a housewife. Berrin has two elder sisters and one elder brother, who were fourteen, twelve, and eleven years older respectively.

Both Berrin's parents were more proficient in Turkish than they were in Dutch. Their Dutch language proficiency had reached a basic level, which sufficed for their daily needs. Berrin's siblings were proficient in both Dutch and Turkish. According to her mother, Turkish was the main language of communication in the family. From the time she was six weeks old, Berrin went to an international daycare centre in her home town for three days a week. From her second birthday onwards, she went to the daycare centre for five days a week from 9 a.m. to 5 p.m.

The situation of the international daycare centre in Nijmegen was similar to the one Selma attended in Deventer. The main difference was that the composition of the children in Berrin's group was more mixed. The Turkish children constituted the largest minority group. Another difference was that in Berrin's group verbal interaction was in general less stimulated by the caretakers. Children were less frequently asked to tell stories, songs were not sung very often, and books were not read or only occasionally.

Filiz

Filiz was born in April 1988 in Utrecht, in a neighbourhood with a less than average proportion of non-western minority groups (12% in the neighbourhood, 19% in Utrecht)[11]. The proportion of inhabitants with a Turkish background was also smaller (2% in the neighbourhood, 4% in Utrecht)[12]. Filiz's parents originated from the province of Burdur in west-eastern Anatolia. Seven years before Filiz's birth in April 1988 they migrated to the Netherlands. No data has been collected about the educational level of her parents or their migration history. Filiz's mother worked in a hospital as head of the cleaning service. Filiz's father had worked in a tube factory but had become ill and afterwards found a job as a cleaner in the same hospital as his wife. Both parents were fluent in Dutch, but more proficient in Turkish. Filiz had one sister who was five years older and when she was 3;2 years old another sister was born.

[11] Data for 1995, which is a few years after data collection was finished. Source: http://utrecht.buurtmonitor.nl/. See footnote 8.
[12] See footnotes 9 and 11.

After having been on a waiting list for a long time, Filiz started attending a pre-school playgroup in her neighbourhood for about seven hours per week when she was 3;4 years old. In this playgroup, she was the only child who was not native Dutch. The staff members were all native Dutch, except for one trainee who had a Turkish background. Outside the playgroup Filiz regularly had contact with native Dutch children and families in the neighbourhood.

Şükran

In the same neighbourhood in Tilburg where Yunus would later grow up (see above), Şükran was born in December 1988. In 1994, a few years after data collection for Şükran had ended, 14%[13] of the inhabitants were of non-western minority descent (11% on average in Tilburg in that year) and 4%[14] had a Turkish background (3% on average in Tilburg). When Yunus was born in the neighbourhood a few years later, the percentages of non-western minorities and Turkish immigrants had doubled.

Şükran's parents originated from the central Anatolian province of Yozgat. Her mother had migrated to the Netherlands thirteen years before Şükran was born. She had worked in several factories until the care for her family made this impossible. During the period of data collection, she did not work outside the home. Şükran had two sisters, who were nine and two years older, and one younger sister who was born when she was 2;6 years old. Her father did not live with the family.

Şükran's mother was happy that they lived in an environment with mostly Dutch neighbours, with whom they had frequent contact. However, the family's closest contact was with relatives. Some of them lived in their house during part of the period of data collection, when Şükran was aged 2;0 to 2;5. Her grandmother from Ankara stayed with the family for six weeks when she was 2;7 and 2;8. Şükran's mother reported being more proficient in Turkish than in Dutch. In Dutch she had reached a basic level of proficiency, which fulfilled her needs in daily life. Şükran did not attend a pre-school playgroup or daycare centre.

2.3.2 Data

General considerations regarding the nature of the collected data and the way of data collection have been reviewed at the beginning of this chapter. In this section, specific decisions are presented that were made for the collection of data for the Van der Heijden bilingual corpus. With respect to the 'where' of the recordings, it was decided to visit each child in one place only. Thus, the children who attended a daycare centre were recorded there, and the children who did not attend a daycare centre were visited at home. The only exception is Filiz, who started attending a pre-school playgroup during the last months of data collection. During these months, she was recorded in the playgroup as well. In order to guarantee both Dutch and Turkish speech production by the children, recording sessions were held separately with the two researchers, who were native speakers of either Dutch or Turkish.

[13] Data for 1994, which is a few years after data collection was finished. See footnote 8.
[14] See footnotes 9 and 13.

A major difference with the Nap-Kolhoff data are the conditions under which the recordings were made. For the data collection of the Nap-Kolhoff bilingual corpus, it was decided to record relatively short sessions (15-60 minutes) in situations that were supposed to elicited rich spontaneous speech productions (see above). For the data collection of the Van der Heijden corpus, however, the recording sessions were longer, e.g., whole mornings at a daycare centre. The advantage of this procedure is that more natural kinds of interactions were recorded, particularly in the daycare centres. It did not always yield rich data, however, and transcription appeared to be rather labour-intensive. In order to elicit similar kinds of spontaneous speech during the sessions with the different investigators, a large numbers of toys were brought to the recording sessions. Appendix B gives an overview of the books and toys that were used during the recording sessions, in addition to toys owned by the children themselves or by the daycare centres.

Procedures

Between the ages of 2;1 and 3;6, each child was visited twice a month. One of the monthly recordings was made by a Dutch researcher, Hanneke van der Heijden, and aimed at eliciting Dutch language speech data. The other recording was made by a Turkish research assistant, who elicited Turkish language data. Both researchers spoke the other language as well, however. The Turkish research assistant had lived in Turkey until the age of ten and had then migrated to the Netherlands. Both researchers addressed each informant only in their native language, although they sometimes spoke to other adults in the other language. When an informant addressed the researchers in the other language, the researchers responded in their native language.

Berrin and Selma were recorded in the international daycare centres. Speech was usually recorded during a whole morning. The only difference with a regular morning at the daycare centre was that one of the researchers was present who interacted with the informants as well as with other children. In these recording sessions, the child was surrounded by other children, caretakers, personnel, and sometimes also by visiting parents. Filiz and Şükran were recorded at home, where the mother of the child was present, sometimes together with the child's siblings, the father, or other relatives and visitors. The researchers also did several experimental tasks with the children, but those are not used in the present study.

The recordings were made with a tape recorder (Philips D6350) and a wireless transmitter and microphone hidden on the back of a jacket. In this way, the child could move around freely in the house or daycare centre, while all its speech was recorded. The transmitter-receiver set used was an Azden Wireless microphone system WMS-20 II. The recordings were made on 90 minute TDK IEC I/Type I tapes.

Although monthly recordings were made with all four children, only part of the recordings were transcribed and included in the Van der Heijden corpus. Transcriptions were made of the richest recordings with an interval of two to four months. The selected recordings were transcribed by means of a Sanyo Memo-scriber TRC 9010. The transcripts were coded according to the CHAT coding system (see 2.1). The author

of the present study updated the transcripts in the Van der Heijden bilingual corpus to the latest CHAT conventions in 2006.

Available transcripts

An overview of the available transcripts in the Van der Heijden corpus is given in Tables 2.10-2.13. For Selma, twelve transcripts are available and for the other children fourteen. The total number of child utterances ranges from 3,743 (Şükran) to 5,988 (Filiz).

Table 2.10 Transcripts of recordings with Turkish and Dutch researchers for Selma (age and number of child utterances)

Turkish researcher			Dutch researcher		
Transcript	Age	Utterances	Transcript	Age	Utterances
selt01	2;02.13	222	seln01	2;01.23	274
selt02	2;07.09	550	seln02	2;05.05	326
selt03	2;10.13	187	seln03	2;07.14	214
selt04	3;00.30	136	seln04	2;10.05	516
selt05	3;04.02	146	seln05	3;01.27	384
			seln06	3;03.11	461
			seln07	3;06.04	327
Total		1,241			2,502

Table 2.11 Transcripts of recordings with Turkish and Dutch researchers for Berrin (age and number of child utterances)

Turkish researcher			Dutch researcher		
Transcript	Age	Utterances	Transcript	Age	Utterances
bert01	2;02.27	76	bern01	2;02.13	106
bert02	2;05.15	285	bern02	2;05.09	291
bert03	2;06.08	620	bern03	2;08.30	190
bert04	2;10.02	663	bern04	2;10.17	368
bert05	3;01.16	346	bern05	3;01.09	277
bert06	3;04.29	422	bern06	3;03.29	281
bert07	3;06.20	492	bern07	3;06.24	264
Total		2,904			1,777

Table 2.12 Transcripts of recordings with Turkish and Dutch researchers for Filiz (age and number of child utterances)

Turkish researcher			Dutch researcher		
Transcript	Age	Utterances	Transcript	Age	Utterances
filt01	2;02.22	349	filn01	2;01.30	343
filt02	2;04.27	211	filn02	2;04.22	114
filt03	2;07.20	494	filn03	2;08.27	627
filt04	2;10.12	696	filn04	2;09.28	573
filt05	3;00.23	395	filn05	3;00.18	599
filt06	3;04.30	651	filn06	3;03.24	420
filt07	3;06.00	110	filn07	3;06.10	406
Total		2,906			3,082

Table 2.13 Transcripts of recordings with Turkish and Dutch researchers for Şükran (age and number of child utterances)

Turkish researcher			Dutch researcher		
Transcript	Age	Utterances	Transcript	Age	Utterances
sukt01	2;02.24	110	sukn01	2;02.12	290
sukt02	2;04.28	428	sukn02	2;05.18	540
sukt03	2;07.28	391	sukn03	2;07.06	198
sukt04	2;10.17	677	sukn04	2;11.14	380
sukt05	3;00.29	380	sukn05	3;00.26	533
sukt06	3;03.30	469	sukn06	3;03.22	561
sukt07	3;06.16	435	sukn07	3;06.22	297
Total		2,890			2,799

2.4 Comparison of the two corpora

Both the Van der Heijden bilingual corpus and the Nap-Kolhoff bilingual corpus consist of longitudinally collected spontaneous speech data for several Turkish immigrant children in the Netherlands between the ages of two and four. Although in selecting the informants the same two principles, ecological validity and degree of bilingualism, were applied, there are differences between the corpora, due to the fact that the children in the Van der Heijden corpus were born in the late 1980s and the children in the Nap-Kolhoff corpus in the early 2000s. Because of societal changes in the years between, the backgrounds of the children differed, resulting in differences in the patterns of language input. In addition, the children in the Van der Heijden corpus attended different kinds of pre-school facilities with different intensities, whereas the children in the Nap-Kolhoff corpus all visited similar pre-school playgroups since their second birthdays. Tables 2.14 and 2.15 give a summary of the backgrounds of all seven informants.

Table 2.14 Background characteristics of the children in the Nap-Kolhoff bilingual corpus (Mehmet, Batuhan, and Yunus) and the Van der Heijden bilingual corpus (Selma, Berrin, Filiz, and Şükran)

Child	Generation		Education mother	Siblings	
	Mother	Father		Older	Younger
Mehmet	Second	First	secondary: mid	-	-
Batuhan	Intermediate	First	secondary: low	2	-
Yunus	First	Second	primary	2	-
Selma	Intermediate	First	secondary: low	-	1
Berrin	First	First	*	1	1
Filiz	First	First	primary	3	-
Şükran	First	First	*	2	1

*Information not available

Table 2.15 Daycare/playgroup attendance of the children in the Nap-Kolhoff bilingual corpus (Mehmet, Batuhan, and Yunus) and the Van der Heijden bilingual corpus (Selma, Berrin, Filiz, and Şükran)

Child	Type	Age at start	Hours/week
Mehmet	Pre-school playgroup	2;0	12
Batuhan	Pre-school playgroup	2;0	12
Yunus	Pre-school playgroup	2;0	11
Selma	Daycare centre	0;2	40
Berrin	Daycare centre	0;2/2;0	24/40
Filiz	Pre-school playgroup	3;4	7
Şükran	-	-	-

The three boys in the Nap-Kolhoff corpus all have one parent belonging to the first generation and one belonging to the second or intermediate generation. The four girls in the Van der Heijden corpus all have parents who are both first-generation immigrants. Only Selma's mother belongs to the intermediate generation, as she arrived in the Netherlands at school age. The difference between her and Batuhan's mother, who is also of the intermediate generation, however, is considerable. Selma's mother migrated at the age of sixteen, Batuhan's mother at the age of eight.

Mehmet's mother is the only mother in the case studies who finished education at a level higher than primary school or lower secondary education. Mehmet is also the only child who did not have any siblings. The two other children in the Nap-Kolhoff bilingual corpus had two older siblings. Of the children in the Van der Heijden corpus, two had both younger and older siblings, one had only older siblings, and one had a younger sister.

The children in the Nap-Kolhoff bilingual corpus attended a pre-school playgroup for about 12 hours per week. Attending pre-school facilities varied more for the children in the Van der Heijden corpus. Selma went to an international daycare centre from the age of 0;2 for 40 hours a week. Filiz also attended an international daycare centre from the age of 0;2. Until the age of 2;0 she did so less intensively, i.e. for 24

hours a week. Berrin went to a pre-school playgroup for seven hours a week from the age of 3;4, and Şükran did not attend any pre-school facility at all.

There are also differences between the corpora that are due to decisions made about the method of data collection. The children in the Nap-Kolhoff corpus were recorded by one researcher in two places (at home and in the pre-school playgroup). The children in the Van der Heijden corpus were recorded in one place (at home or at the daycare centre), but with two researchers. Also, for the Van der Heijden corpus transcripts are available with relatively large intervals until the age of 3;6, whereas for the Nap-Kolhoff corpus transcripts are available up to, in some cases, the age of 4;0 and with less long intervals between the transcripts. Finally, the length of the recording sessions also differed between the corpora. In the Van der Heijden corpus, recording sessions lasted a whole morning or afternoon. In the Nap-Kolhoff corpus, recording sessions of about an hour were made in the homes of the children, whereas the recording sessions in the pre-school playgroup lasted about twenty minutes. The researcher remained present in the pre-school playgroup for the whole morning or afternoon, and observed the child also when no recordings were taking place. The total amount of recording time was much lower, however. The method used in the Nap-Kolhoff bilingual corpus resulted in 1.5 to 4 times more child utterances in relation to the recorded time.

In Table 2.16, an overview is presented of the available transcripts in both bilingual corpora. For each child, between 12 and 29 transcripts are available. The total amount of Turkish and Dutch utterances produced by the informants varies from 3,079 to 5,988.

Table 2.16 Number of transcripts and utterances (by informants) available for each child

Child	Age	Transcripts	Utterances
Mehmet	2;3-4;0	29	5,191
Batuhan	2;5-4;0	25	3,449
Yunus	2;7-3;9	16	3,079
Selma	2;1-3;6	12	3,743
Berrin	2;2-3;6	14	4,681
Filiz	2;1-3;6	14	5,988
Şükran	2;2-3;6	14	5,689
Total		124	31,820

3 Mehmet's Dutch language development: a case study

In this chapter, a chronological summary of Mehmet's Dutch language development is sketched. From the first recording at age 2;3 onwards, three months after he starts attending a pre-school playgroup, Mehmet is observed using Turkish-Dutch code-switching in interactions with his mother, being involved in so-called 'dilingual discourse' (see below) with his pre-school teachers, and going through a 'silent period' at age 3;0. After this silent period, his Dutch utterances become more complex and at the age of 4;0 he has a fairly fluent, though not yet native-like command of the Dutch language. The aim of this chapter is to provide insight into the process Mehmet went through and the time and experience he needed to get where he got after almost two years. In the remainder of this dissertation, specific topics in the linguistic development are discussed in more detail and for more children. This chapter gives a general impression on the basis of Mehmet's data as a single case study. Mehmet's development is divided into the period before (Section 3.1) and after (Section 3.2) the silent period. Within these periods, each data recording is discussed separately.

3.1 Before the silent period (2;3-3;0)

3.1.1 Age 2;3

After a few visits to the family, the first recording with Mehmet and his mother is made when Mehmet is 2;3 years old. They mainly talk Turkish with each other. Nevertheless, there are several Dutch utterances occurring in the speech of both Mehmet and his mother, usually in mixed Turkish-Dutch utterances. In total, 28 utterances contain one or more Dutch words (15% of all utterances). For example, when Mehmet begs his mother to give him some cookies, he uses the Dutch words *koek* 'biscuit') and the diminutive *koekje* ('biscuit-DIM'). These words also occur in Turkish utterances, like *koekje istiyom* '(I) want a biscuit'[15] and *ben koek istiyom* 'I want a biscuit'. Neither Mehmet nor his mother ever use a Turkish equivalent for 'cookie' during the recordings.

[15] Turkish words and phrases and their translations are underlined.

Other Dutch words in Mehmet's speech are *liedje* 'song' and *kapot* 'broken'. He also uses the phrases *eet smakelijk* 'enjoy your meal' and *daag* 'bye'. Mehmet's mother regularly uses Dutch interactional markers in her Turkish utterances, such as the tag question *hè?* 'right?', which asks for confirmation, and *ja* 'yes' and *nee* 'no'. The latter two also appear a few times in Mehmet's speech during this recording. The use of these interactional markers increases in the following recordings and some examples are given in Section 3.1.4 (age 2;6).

Another word that is found in Mehmet's speech is the function word *die* 'that (one)'. For example, when he names a friend of his in a picture he is looking at with his mother, Mehmet says *die Melek* 'that Melek: that is Melek'. From the context it is clear that he means to say 'that is Melek', which would be *dat is Melek* in the target language. In the target construction, the demonstrative *dat* 'that' is used, as well as the copula *is* 'is'. Mehmet, however, uses the demonstrative he knows (*die*, 'that') in a construction without a copula. This would appear to be similar to Turkish, which employs equivalent expressions, such as *o Melek* 'that (is) Melek'. The construction *die* X 'that X' appears again in Mehmet's data at the age of 3;1, when he starts talking about picture books in Dutch during recordings with a teacher of his pre-school playgroup. It will become one of his most frequent constructions, still in use during the recording at age 3;11. An in-depth analysis of the use and the development of these 'object naming constructions' is presented in Chapter 4, in which it is shown that such constructions are also very common in monolingual Dutch children's early speech.

At the end of the recording at the age of 2;3, Mehmet and the investigator are looking at a picture book about sea animals and he asks her to name the animals, while he is eating. The only word he is able to imitate and remember is the Dutch word *orka* 'killer whale'. With this word and the words he already knows, he makes a new sentence: *orka lekker nee* 'killer whale delicious no', meaning that killer whales do not taste very nice. Such creative utterances are rare in the data at this age.

3.1.2 Age 2;4

When Mehmet is 2;4 years old, a second recording is made in his home. Unfortunately, due to a technical problem, only a few minutes are actually recorded. During those minutes, when he is playing with his toy cars, Mehmet only speaks Turkish.

At this age, also the first recording is made in the pre-school playgroup. Jolande, one of the permanent teachers of the playgroup, plays for about twenty minutes with Mehmet in an empty room in which the investigator had installed the recording equipment beforehand. The investigator is not present during the recording. Jolande and Mehmet had taken some picture books into the room that had been provided by the investigator, as well as wooden trains and rails and some toy animals belonging to the playgroup.

Although the recording at age 2;3 showed that Mehmet does have some knowledge of Dutch words and phrases, it appears that it is difficult for him to use this knowledge in a dialogue with someone who does not speak Turkish. Only five of Mehmet's utterances contain Dutch words (9%) and most of the conversations with Jolande are what Saville-Troike (1987) calls 'dilingual discourse', in which the speakers do not

understand each other's language. Nevertheless, successful interactions are possible when there is appropriate understanding of the situation and both speakers have shared scripts for overall situational purposes, act sequences, and roles. They simply 'guess' what the other is saying from the context, and continue the conversation in their own language. In (1), an example of such a dilingual discourse is given. Mehmet and Jolande are playing with the wooden trains and they try to attach the different carriages to each other.

(1) *TEA: *nou, maak jij em er maar eens aan.* 'now, you attach it to it'
*CHI: *ben takɣyom* . 'I attach it'
*CHI: *oh tak onu # tak.* 'oh, attach it # attach'
*TEA: *ja, ik weet het ook <niet meer, hoor> [>].* 'well, I don't know it anymore either, you know'
*CHI: *tak [/] tak [<].* 'attach, attach'
*TEA: *ʒo.* 'there you are'
*TEA: *en deʒe?* 'and this one?'
*TEA: *moet ie daar ook nog aan?* 'should it be attached as well?'
*CHI: *hm onu ʧkamɣom.* 'hm I can't get that out'

Mehmet tries to attach a carriage to the train. His teacher comments on this with a Dutch utterance in which she proposes that he should indeed try it himself. It is unclear whether Mehmet understands Jolande's comment, but he reacts to it in Turkish, saying that he is going to attach the trains. However, he does not manage to attach the carriages, and then urges Jolande to do it – in Turkish. He repeats his request, but Jolande does not understand what he means, on which she also comments (*ja, ik weet het ook niet meer, hoor*, 'well, I don't know it anymore either, you know'). Probably from his gestures, it becomes clear what Mehmet wants Jolande to do. She attaches the train, proposes to attach another one and consistently comments on Mehmet's actions. For Mehmet, a new problem arises, which he tells Jolande about – again in Turkish. During the whole recording, such dilingual interactions appear, some with more successful outcomes than others.

There are a few cases (5 utterances; 9%) in which Mehmet produces Dutch words. In one case, he names the activity he is about to carry out (*opruimen* 'clear-INF away'). When Jolande comments on Mehmet's beating on the floor with a toy cow by saying *ja, dat vindt het koetje niet leuk, hoor* 'well, the cow does not like that, you know', Mehmet utters a phrase children probably hear a lot in the playgroup: *mag niet* 'is not allowed'. The other Dutch words are ones he also used during the recording at home with his mother: *die* 'that (one)', *nee* 'no', and *ja* 'yes'. A new use of *ja* 'yes' is as an exclamation marker of success. When Mehmet manages to put something into a train, he expresses his joy with a mixed Turkish-Dutch utterance: *ja, girdi*, 'yes, it went in'.

3.1.3 Age 2;5

At age 2;5, only one recording in the pre-school playgroup is available. Again, Jolande takes Mehmet to an empty room, where they play with toy animals, wooden blocks and wooden puzzles. Jolande comments in Dutch on their play, and Mehmet speaks mostly Turkish. A few utterances containing Dutch words (9 utterances, 12%) appear in his speech during this recording. When Mehmet is playing with a toy car, he spontaneously says *doei* 'bye', when he lets the car drive away. Jolande answers this goodbye saying *doei doei* 'bye bye', after which Mehmet says *doei* 'bye' again. Sometime later this happens again and Mehmet uses two greetings in one expression, *dag doei* 'ciao bye'.

The word *opruimen* 'clear-INF away' Mehmet had already used in an earlier recording. New words that appear are *boekje* 'book-DIM', and *papa* 'dad'. In addition an instance of *die* X 'that X' without a copula (see age 2;3) is recorded again. At some point, Jolande and Mehmet are playing with toy figures of a father, a mother, and a baby. Jolande gives the Dutch word for 'baby' and Mehmet later comments: *die baby* 'that baby: that is a baby'.

3.1.4 Age 2;6

When Mehmet is 2;6 years old, a recording is made again in his home. For some days, Mehmet had stayed at home, because he was suffering from German measles. During the recording, he is already feeling much better, but he is still more quiet than usual. Most of Mehmet's utterances during this recording are Turkish, but some (16 utterances, 12%) are Dutch or contain Dutch words. Most of these Dutch or mixed Turkish-Dutch utterances contain the interactional markers *ja* 'yes' or *no* 'no'. *Ja* 'yes' is used by Mehmet mostly when contradicting a negative statement by his mother. For example, at some point they have an argument in which they mostly speak Turkish. When his mother says *sen sevmiyon beni* 'you don't love me', Mehmet tries to convince her of the opposite by saying *ja* 'yes'. In Dutch as a target language, contrastive *jawel* 'yes' rather than *ja* would be used in such situations. *Ja* 'yes' is also used by Mehmet when he agrees with his mother, for examples when he proposes that the investigator should also go to Turkey during the summer holidays. He adds the tag question *hè?* 'right?' and his mother confirms his proposal (*Elma da gelsin*, 'let Elma also come'). Mehmet expresses his agreement by replying *ja* 'yes'. Mehmet uses *nee* 'no' once in reaction to a positively formulated threat from his mother (*ceza veririm ondan sonra*, 'I am going to punish you afterwards').

Another Dutch interjection used by Mehmet during this recording is *okee* 'okay'. Mehmet tells his mother in Turkish what he sees on a page of the book they are reading. His mother answers with a confirmative 'mmhm', after which Mehmet says *okee* 'okay'. He then turns to the next page. This use of *okee* 'okay' as marking the finishing of an activity or discourse, reappears in later recordings (see age 3;4). Other Dutch or mixed utterances in this recording contain concrete words (*friet* 'chips', *buurvrouw* 'neighbour', *appel* 'apple') as well as fixed expressions (*klaar* 'finished', *weet ik niet* 'I don't know'). The question why Mehmet uses these Dutch words specifically can partly be explained by the fact that they relate to typically Dutch language domains in

his life: the neighbourhood (*buurvrouw*, 'neighbour') and eating out (*friet*, 'chips'). *Klaar* 'finished' is a word typically used when successfully completing activities in the pre-school playgroup. *Appel* 'apple' is also a word that is often used in this domain, as eating fruit is a fixed activity in the playgroup routines.

3.1.5 Age 2;8

When Mehmet is 2;7 years old, the family is on holiday in Turkey and no recordings can be made. A month later, recordings are made with Mehmet both at home and in the playgroup. Most of Mehmet's utterances during the recording at home are Turkish, but some are Dutch or contain Dutch words (14 utterances, 6%). Three utterances contain the Dutch word *ja* 'yes' and one *nee* 'no'. The situations in which these interactional markers are used are similar to those described for age 2;6. Other Dutch words are *stoel* 'chair' and *bank* 'sofa', words his father had been practising with him. In addition, Mehmet produces the words *lezen* 'read-INF', *ijs* 'ice' meaning *ijsthee* 'ice tea', and *mama* 'mum'. The latter word is interesting, because it is the first time during the recordings that Mehmet calls his mother using the Dutch word *mama*, not the Turkish *anne* 'mum'. At age 3;4 he will start using *mama* more frequently than *anne* during the recordings. The formulaic expression *mag niet* 'is not allowed', which was also recorded at age 2;4, appears in this recording as well.

Finally, Dutch words appear when Mehmet goes to the toilet. Mehmet's parents encourage him to talk about toilet matters in Dutch, because he needs to be able to say these kinds of things in the pre-school playgroup. The first time Mehmet goes to the toilet during the recording, he says *klaar* 'finished' when he is finished. Later, when Mehmet sees a child in a bathroom in a picture book, he uses the Dutch verb *plassen* 'pee' to describe what the toilet is for: *burda &=pl [///] plassen yapıyo burda* 'here pee do-PROG-3SG here: here he is doing pee here'. The incorporation of Dutch verbs in Turkish by making compounds with the Turkish verb *yapmak* 'to do' has been noted frequently in studies on Turkish-Dutch code-mixing (Backus, 1996; 2004). It is a construction Mehmet's mother also uses regularly. For instance, when Mehmet goes to the toilet a second time, his mother uses the expression *poep yapmak* 'to do pooh'. Mehmet then explains his present needs when he says *ikke niet poep yapayım* 'I not pooh do-PRES-1SG: I am not going to do pooh'. It is interesting that this mixed utterance is relatively complex in comparison to Mehmet's other Dutch utterances recorded so far. It is the first time he uses *ik* or *ikke* 'I' outside the fixed expression *weet ik niet* 'I don't know'.

What is also interesting here is that the negation of this construction is in Dutch (*niet*, 'not') and not on the Turkish verb (i.e., *yapmayım*, 'do-NEG-PRES-1SG: I am not going to do'). In an earlier rather complex utterance at age 2;3, Mehmet used *nee* 'no', rather than *niet* 'not', as negator. It is a widely observed phenomenon in first and second language acquisition of Dutch that learners initially use *nee* 'no' as a verbal negator in addition to targetlike *niet* 'not' (Hoekstra, 1994; Schaerlaekens, 1973). An explanation given for similar patterns in English language acquisition is that in general, *nee* is more frequent in the input than *niet*, and learners thus pick it up earlier. Only later

do they realise it is not appropriate to use this word when negating verbs (Cameron-Faulkner, Lieven & Theakston, 2007).

The recording in the pre-school playgroup at this age is made with another teacher, Nel. Jolande, who had interacted with Mehmet during the first two playgroup recordings, had left the playgroup to assist in starting up a new playgroup in another part of Tilburg. Nel takes over playing with Mehmet during the recordings until the end of the period of data collection.

During this recording, Mehmet produces 67 intelligible utterances, but all of them in Turkish. He plays mostly in silence with some toy trains, with Nel commenting on it. Incidentally, he says something himself about what he is doing, for example *bak, gidiyo* 'look, it go-PROG-3SG: look, it goes'. That Nel is also proficient in 'dilingual discourse' is evidenced for instance by her answer to this comment by Mehmet: *ja, gaat treintje rijden*? 'yes, is train going to run?'. When they have a look at a giant picture book, Mehmet manages to lead the conversation by asking Nel in Turkish to name objects for him (*bu ne?* 'what is this?', *bu?* 'this?'). Nel gives him answers to all (36!) of his questions, easily guessing what those Turkish questions mean. At some point, Nel tries to switch roles and have Mehmet answering her (Dutch) questions. Mehmet does not cooperate, however, and does not produce any Dutch word during the whole recording.

3.1.6 Age 2;9

At the age of 2;9, two recordings are made with Mehmet, one at home and one in the pre-school playgroup. During the recording at home, Mehmet produces relatively more utterances containing Dutch words (27 utterances, 19%) than he had done during earlier recordings. One of the reasons is probably that his mother urges him to talk Dutch several times, because she wants to show the investigator how his Dutch has been progressing lately.

Mehmet produces a number of new words he had not used during the recordings before (*fietsje* 'bike-DIM', *hondje* 'dog-DIM', *stout* 'naughty'), and he had learned to count to ten in Dutch. The only problematic number is *drie* 'three', which he finds difficult to pronounce. It is interesting that there had not been any counting in Turkish during this recording, nor during earlier ones. Mehmet's mother appears to perceive counting as a typical 'school'-like activity, which he needs to learn in Dutch (see Nap-Kolhoff & Van Steensel, 2005). In addition, Mehmet knows the standard answers to the questions *hoe heet jij* 'what's your name?' (answer: *Mehmet*) and *hoeveel jaar ben jij?* 'how old are you?' (answer: *twee jaar* 'two years (old)') in Dutch.

Another thing that is new during this recording session is an instance of *jawel* 'yes'. *Jawel* 'yes' is used in Dutch in contrastive situations. Mehmet, however, had been using *ja* 'yes' in those situations (see age 2;6). During this recording session, Mehmet is not cooperating with his mother, who wants him to show the investigator that he can complete a specific wooden puzzle. Following Mehmet's refusal to do the puzzle his mother says in Turkish that now the investigator will say that he cannot do it: *yapamıyormuş diyor* 'she says, he cannot do it'. Mehmet contradicts the statement saying *jawel* 'yes'.

Before this recording session, the verb *mag* had only been used in the fixed expression *mag niet* 'is not allowed'. In this session, it appears in a new phrase: *mag ik seker?* 'am I allowed/can I have sweets?'. The use of a Turkish word in this utterance suggests that it is not a direct imitation of his mother's speech, as she would have used the Dutch word *snoepjes* 'sweets'). It is possible that Mehmet uses the phrase *mag ik* X 'am I allowed/can I have/do X' more often when he wants to have or do something. Unfortunately, there are no more instances recorded at this age, although the expression does occur again at age 3;0 and also during later recordings.

Two other Dutch multi-word utterances appear in this session when Mehmet's mother is asking him questions about how things were in the playgroup that morning. When she asks in Dutch *wat heb jij allemaal op de crèche gedaan?* 'what did you do in the playgroup?', he answers *puzzel maak, auto spelen* 'puzzle do, auto play-INF'. It is interesting to note that he uses the singular present form *maak* 'make' when he says he did one or more puzzles, and the plural or infinitive form *spelen* 'play-INF'. In Chapter 6 the status of these different forms in the light of studies on so-called 'root infinitives' (e.g., Blom, 2003) is discussed. Still answering his mother's question, Mehmet says that he also ate an apple in the playgroup. His mother adds that he probably also ate a banana. Mehmet then answers *banaan lekker* 'banana delicious', which again is a copular sentence without the copula *is* 'is' and similar to sentences he produced during earlier recordings.

The recording made in the pre-school playgroup is made in a different room than the earlier recordings. Nel thought it would be better if the recordings were made in the classroom where the playgroup activities always take place. This room is more familiar to Mehmet and the idea was that he would be more at ease. From this time onwards until the last playgroup recording session at age 3;10, the recordings are therefore made when the other children are playing outside or in the gym. After the recording session there is always sufficient time left for Mehmet to join his playmates. As the playgroup classroom is rather spacious, the investigator from now on is present in a corner of the room, making notes of the interactions.

Most of the time in this session is devoted to looking at a giant picture book. Although Mehmet does not use any Dutch words during the last recording session in the playgroup, he now produces 48 utterances (49%) containing Dutch words or phrases. Many of these utterances are imitations of previous utterances of his teacher. The imitations start when Nel confirms Mehmet's use of the Turkish word *at* 'horse' as a correct answer to her question what an animal in a picture is called. Nel had learned a short-list of words in Turkish and other languages spoken by the children in the playgroup, which is why she recognised the word Mehmet uses. In addition to her confirmation, Nel gives the Dutch word for horse, *paardje* 'horse-DIM' and Mehmet spontaneously imitates her. When Mehmet also imitates other Dutch words that Nel gives as models, she starts confirming Mehmet's imitations and during the rest of the interaction this 'game' is repeated over and over again. An example of such an interaction is given in (2).

(2) *TEA: *wie is dat*? 'who is that?'
*CHI: *ördek*. 'duck'
*TEA: *eendjes*. 'duck-DIM-PL: ducks'
*CHI: *eendjes*. 'duck-DIM-PL: ducks'
*TEA: *eendjes*. 'duck-DIM-PL: ducks'

Other words literally imitated by Mehmet are *koe* cow', *traktor* 'tractor', *paard* 'horse', *kat* 'cat', *hond* 'dog', *appel* 'apple', *kip* 'chicken' and *fiets* 'bicycle'. Several of these words are used spontaneously by Mehmet later in the recording session when Nel asks him to name an animal or object again in another picture.

A number of times, Mehmet imitates the last word of an utterance by Nel that she did not intend to be imitated. For example, when Nel asks *hoe doet een kat?* 'what sound does a cat make?', Mehmet just imitates *kat* 'cat', instead of answering her intended question. Similarly, when Nel asks *wat zijn de mensen hier nou aan het doen aan de tafel?* 'what are the people doing here at the table?', Mehmet imitates the word *tafel* 'table'. From *hier zijn mensen aan het eten, brood* 'here people are eating, bread', Mehmet repeats *eten, brood* 'eating, bread' and from *en hier, in het gras?* 'and here, in the grass?' he imitates *gras* 'grass'. Sometimes only parts of words are imitated, but sometimes also larger chunks. In all cases, the syllable bearing prosodical stress is imitated. This leads to the omission of the first syllable of a word (e.g., imitating *nijn* from *konijn* 'rabbit') or of the last syllable (e.g., *helikop* imitated from *helikopter* 'helicopter'). Sometimes, Mehmet leaves out a morphological marker (e.g., *eendje* 'duck-DIM' imitated from *eendjes* 'duck-DIM-PL'), although it is of course unclear to what extent Mehmet is aware of the fact that it concerns a morphological marker. Finally, there is also a case in which Mehmet imitates a definite article together with a word, probably not realising that it is not part of the word (*de piloot* 'the pilot' imitated from *dat is de piloot* 'that is the pilot').

3.1.7 Age 2;10

A month later, when Mehmet is 2;10 years old, a recording is made in his home again. Of the 268 utterances he produces during this recording session, 60 (22%) are Dutch or contain Dutch words. About half of these utterances contain words used by Mehmet during earlier recordings: *ja* 'yes', *nee* 'no', *hondje* 'dog-DIM', *papa* 'dad', *mama* 'mum', cardinal numbers, and the phrase *twee jaar* 'two years (old)', still valid as an answer to a question about his age. New words and phrases are *blauw* 'blue', *busje* 'bus-DIM', *handen wassen* 'wash-INF hand-PL', *daag hallo* 'goodday hello', and *kiekeboe* 'peek-a-boo'.

Most of the remaining utterances containing Dutch words are imitations, similar to the imitations started at age 2;9 in the recording session with Nel in the playgroup. Mehmet imitates *huisje maken* 'make a house-DIM' from a proposal of his mother about what they should build with the wooden blocks they are playing with, *zo!* 'like this/that's it' after they finished building the house, *wassen* 'wash-INF' from *zie je dat, wassen?* 'do you see that, washing' about a picture in a picture book and first *rode* 'red' and then *rode schoentjes* 'red shoe-DIM-PL' from *kijk eens, rode schoentjes* 'look here, red shoes'. Other words imitated by Mehmet are *voetjes* 'foot-DIM-PL', *plassen* 'pee-INF', *snoepje* 'sweet-DIM', *poppetje* 'doll-DIM', *nat* 'wet' and *konijntje* 'rabbit-DIM'.

Finally, Mehmet uses the verb *moet* 'has to' several times when he is talking with his mother about a picture book in which a child is preparing to go to bed. Mehmet's mother explains that the child is putting on his pyjamas. Mehmet sees that the child is not yet lying in bed and then gives his interpretation of what is going on, *ah o yatmıyor, moet moet diyor* 'ah he is not lying down, must must, she says'. In Dutch, *moet* 'has to' is not used without a specification of what it is that has to be done. Mehmet's mother therefore expands her son's utterance to *ja, moet slapen* 'yes, has to sleep'. The fact that she then says, *hè, hij is ook zo stout als jij* 'right, he is just as naughty as you are', indicates that this is something they also talk about outside of the context of picture books. Later, when they are reading a book the family took out of the library about a child who refuses to go to bed before he has found his cuddly doll, Mehmet again says *moet* 'has to' several times as a single-word utterance to indicate that the child is not doing what he has to do.

3.1.8 Age 2;11

When Mehmet is 2;11 years old, two sessions are recorded on the same day, one in the playgroup in the morning, the other at home in the afternoon. During the recording session in the playgroup, Mehmet is not very talkative, but of the utterances he produces, the majority is Dutch or contains Dutch words (39 utterances, 64%). When looking at a picture book, Mehmet is able to give answers to several naming questions put by Nel: *auto* 'car', *traktor* 'tractor', *konijn* 'rabbit', *fiets* 'bicycle', *hondje* 'dog-DIM', *kip* 'chicken', *bal* 'ball', and *poesje miauw* 'cat-DIM miaow'. The latter expression is a common phrase for referring to cats in the playgroup and also the first line of a song about a cat. When Nel asks Mehmet to name two dolls that had been there in the playgroup for some time already because of a national feast celebrated in the playgroup two weeks earlier, he also gives the right answers, *zwarte Piet* 'Black Peter' and *Sinterklaas* 'St. Nicholas'.

Imitations by Mehmet of words produced by his teacher also occur often during the picture book interactions: *geit* 'goat', *schaap* 'sheep', *koe* 'cow', *aap* 'monkey', *huis* 'house', *boot* 'boat', *boom* 'tree', *kindje* 'child-DIM', *ster* 'star', *vogel* 'bird', *beertje* 'bear-DIM', and *mandje* 'basket-DIM'. Most of these imitations are appropriate repetitions of words modelled by Nel. There is only one episode in which Mehmet seems to be unable to guess what Nel means and therefore, perhaps as a strategy for having the conversation go on, just imitates her last words (see (3)).

(3) *TEA: *hier?* 'here?'
*CHI: *kip.* 'chicken'
*TEA: *kip.* 'chicken'
*TEA: *en <hier> [>] in het mandje?* 'and here, in the basket?'
*CHI: *kip [<].* 'chicken'
*CHI: *mandje.* 'basket'
*TEA: *mandje.* 'basket'
*TEA: *en wat zit er in het mandje?* 'and what is in the basket?'
*CHI: *mandje.* 'basket'

In (3), Nel asks Mehmet to name an animal in the picture and Mehmet correctly answers *kip* 'chicken', which Nel confirms by repeating it. Nel now tries to focus Mehmet's attention on a basket in the picture to see if he knows the word for eggs. While she asks her next question, Mehmet repeats the word *kip* 'chicken', and after Nel finished her question, he repeats *mandje* 'basket-DIM', a word he probably does not know. Nel confirms his imitation by repeating it and then asks her question again. Mehmet, however, still does not understand her question, and just repeats *mandje* 'basket-DIM' again, probably as a strategy to keep the conversation going.

Incidentally, the Turkish utterances Mehmet produces are names for objects he does not know the Dutch words for, but they mostly concern questions like *bu ne?* 'what is this?', *bu* 'this?' and *bu kimin?* 'whose is this?'. Nel, who does not know the exact meaning of these sentences, interprets all the questions as inquiring about the name of an object or person and usually answers them accordingly. Twice, Mehmet asks such a question in Dutch, producing the demonstrative he already used in earlier sessions with a questioning intonation, *die?* 'that?'.

During the recording made at home, Mehmet is more talkative. As his mother had been instructed to talk Turkish rather than Dutch with her son during the recording session, or whichever language felt most natural to her, most of Mehmet's utterances are indeed Turkish. A rather large proportion (75 utterances, 42%), however, contain Dutch words or phrases. Most of these utterances are single-word utterances and imitations.

Some of Mehmet's Dutch utterances combine two or three Dutch words in one utterance. For example, when his mother is naming colours in a picture, Mehmet asks for the colour of an object his attention is focused on by saying *en die?* 'and that (one)?'. It is the first occurrence of the construction *en X* 'and X', which will become a very frequent two-word construction in a few months' time. When his mother later names the colour blue, he confirms her answer by saying *blauw, ja* 'blue, yes'. Another two-word utterance is *juffrouw Jolande* 'miss Jolande'. In the entire data set, the word *juffrouw* 'miss' only appears in combination with the name of one of the teachers. It is the usual way of addressing teachers in his playgroup. Another fixed phrase that Mehmet produces spontaneously is again related to the Feast of St Nicholas, when he talks about the presents he got from St Nicholas: *zakje snoep* 'bag-DIM sweets: bag of sweets'. A final multi-word utterance produced during this recording is a negation: *nee, niet baby* 'no, (I am) not (a) baby'.

3.1.9 Age 3;0

When Mehmet is 3;0 years old, recordings are made at home and in the pre-school playgroup. During the recording session at home, Mehmet produces 142 utterances (48%) containing Dutch words. Some spontaneously used new words in this recording session are *poesje* 'cat-DIM', *muis* 'mouse', *olifant* 'elephant', *olifantje* 'elephant-DIM', *kindje* 'child-DIM', and *gele* 'yellow (one)'. In addition, Mehmet imitates several words from his mother's immediately preceding speech. Although Mehmet's first imitations at the age of 2;9 were almost all literal imitations of the last words or (stressed) syllables

produced by the interlocutor, Mehmet now often imitates only parts of utterances, e.g., *kip* from *kippen*.

Ja 'yes' and *nee* 'no' again occur frequently as interactional markers, not only in Turkish, but more and more also in Dutch utterances (e.g., *ja, twee* 'yes, two', *nee, mag niet* 'no, is not allowed', *nee, die* 'no, that (one)'. Moreover, the expression *mag ik X* 'am I allowed X: may I have X' (see age 2;9) occurs a few times when Mehmet is colouring a picture and asks his mother for specific colouring pencils (e.g., *mag ik geel?* 'am I allowed yellow: may I have yellow?).

The recording made in the playgroup at this age is remarkable in comparison to earlier recordings, as Mehmet does not produce any Turkish words. Figure 3.1 presents the proportion of utterances containing Turkish words and those that do not, produced by Mehmet during the different recordings made in the pre-school playgroup. The figure shows that this recording at age 3;0 is the first recording in the playgroup in which Mehmet does not produce any Turkish words. Moreover, the figure also shows that this is going to remain quite stable until the end of data collection period. Only between the ages of 3;3 and 3;5 there are a few Turkish words that Mehmet uses, usually names for objects, animals, and colours (*kamyon* 'truck', *araba* 'car', *at* 'horse', and *yeşil* 'green'). In addition, two longer utterances containing Turkish words appear, probably because they express things Mehmet does not know how to say in Dutch yet: *şimdi gidiyor* 'now it goes/leaves' and *kim jarig?* 'who (is) having birthday?'.

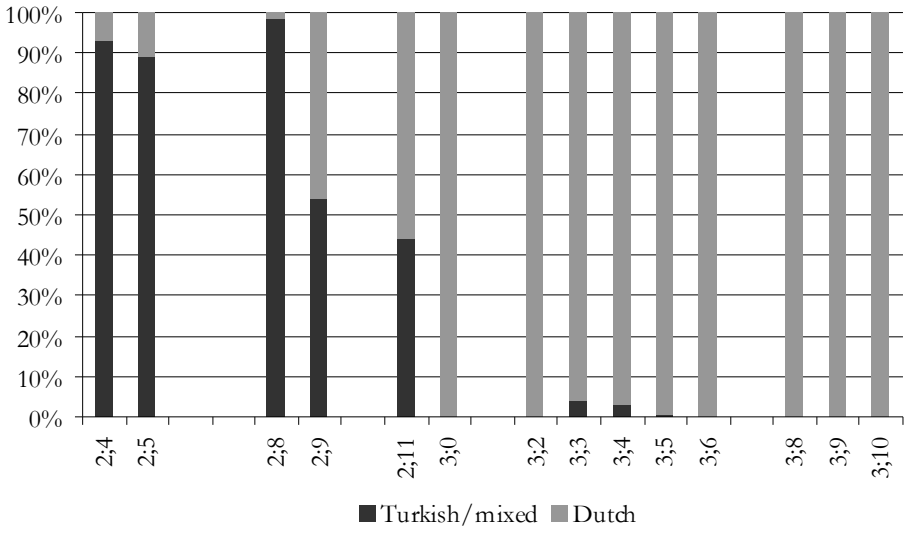


Figure 3.1 Proportion of Turkish or mixed and Dutch utterances produced by Mehmet during the playgroup recordings

The fact that Mehmet does not produce any Turkish words during the playgroup recording session at age 3;0 is not the only remarkable thing about the recording. Mehmet hardly produces any Dutch words either. Once, he answers *auto* 'car' to a question by Nel what a specific vehicle in the picture is called and another time he answers *slapen* 'sleep-INF' when Nel asks what was going on in a specific picture. Although there were no indications that Mehmet was ill or somehow not at ease, Mehmet did not say anything else during the recording session.

Mehmet appears to have reached a so-called 'silent period', at least in the pre-school playgroup. Saville-Troike (1988: 568) describes the silent period of children as "a period during which they refrain from initiating interaction with speakers of the new language, and produce little if any overt social verbalization in the second language." Whether children go through a silent period and if so, how long it lasts, appears to vary highly between individuals (Granger, 2004). It is generally assumed that children use this period to 'listen' and process the input they receive. They are thus still learning and developing. Some children are observed using 'private speech' in which they practise patterns in the second language. In general, when children start talking again, their utterances have gained in complexity (Saville-Troike, 1988).

3.1.10 Summary

During his first year in the pre-school playgroup, Mehmet's productive use of Dutch is limited. Initially, he speaks almost exclusively Turkish during the recordings, even though his teachers do not understand that language. Only incidentally does he produce a Dutch word (e.g., *papa* 'dad', *boekje* 'book-DIM', *opruimen* 'clear-INF away') or expression (e.g., *mag niet* 'is not allowed'). At age 2;9, Mehmet discovers imitation as a tool for learning new words and for keeping the conversation going. Three months later, at age 3;0, he enters a silent period. He seems to have realised that Turkish is not the appropriate language in the pre-school playgroup, but he still lacks productive skills to speak Dutch.

During this whole period between his second and third birthdays, Mehmet's Dutch utterances produced at home in conversations with his mother are more sophisticated. Already during the first recording at age 2;3, Mehmet produces several Dutch words and combines them into longer utterances. These utterances can be characterised as 'telegraphic speech' (Fraser, Bellugi & Brown, 1963), as they lack most function words. This is also typical of early speech production in first language acquisition. In addition, Mehmet uses several Dutch interactional markers (e.g., *ja* 'yes', *nee* 'no', *okee* 'okay'). These also appear in utterances that are otherwise Turkish, which is similar to the way his mother uses them. At age 3;0, during his silent period in the pre-school playgroup, Mehmet keeps producing some Dutch utterances (in addition to Turkish ones) during the recordings made at home. He seems to feel more at ease using this language in a context in which he is always able to fall back upon his knowledge of Turkish.

All in all, Mehmet's Dutch language proficiency is not yet very fluent after attending a pre-school playgroup during a year for about twelve hours a week, spread over four days. In his second year, his fluency will improve a great deal, although his speech is far from targetlike, even at the end of his period in the pre-school playgroup at age 4;0.

3.2 After the silent period (3;1-4;0)

3.2.1 Age 3;1

A month after the silent period in the pre-school playgroup at age 3;0, a new recording is made with Mehmet and his mother at home. This is the first recording at home in which Mehmet produces more utterances containing Dutch words (136 utterances, 67%) than exclusively Turkish utterances. During this recording session, Mehmet imitates several (parts of) utterances of his mother, and uses several new words (e.g., *mij* 'me/my', *kijk* 'look', *meisje* 'girl', *zwarte* 'black (one)', *oranje* 'orange', and *broek* 'trousers'). In addition, several fixed expressions appear in this recording, such as *kijk eens* 'look once: look here', *slaap kindje* 'sleep child-DIM (first line of a lullaby)', and *wat is dat?* 'what is that?'.

At age 2;8, Mehmet had already used the first person subject pronoun *ikke* 'I'. *Ikke* also appears in this recording. Mehmet uses it to express a wish to have or do something, for example to wash his toy cars (*ikke auto wassen* 'I car wash-INF: I (want to) wash (the) car') or to drink some milk (*ikke melk* 'I milk: I (want) milk'). The new word *mij* 'me/my' is another personal pronoun produced by Mehmet. In Dutch, there are several types of personal pronouns, related to case marking (as in English, case marking appears in Dutch virtually only in personal pronouns). Whereas *ik(ke)* is used for subject pronouns, *mij* is used for direct or indirect objects. *Mij* is also used as an alternative form of the possessive pronoun *mijn* 'my' (see Chapter 5 on possessives). It is a common phenomenon in Dutch first language acquisition that children use *mij* 'me' as a subject.

During this recording session, Mehmet uses *mij* 'me' eight times. In some of the cases it is clear from the context that he uses *mij* 'me' as a possessive; in other cases it cannot be decided if Mehmet really uses it as a possessive or as an object or subject pronoun. In all but one case, however, Mehmet expresses that he has or wants to have something. Sometimes, his mother thinks he should have said *ik* 'I' instead and tries to teach him to do so. Only in one case is it clear that Mehmet does indeed use *mij* 'me' as a subject pronoun. His mother talks about the fact that there are boys and girls, and asks Mehmet to name children he knows who are boys. Mehmet names some boys and then adds '*mij*' 'me' to the list. His mother again teaches him to use *ik* 'I' instead (*'ik' moet je zeggen*, "I' you should say').

3.2.2 Age 3;2

At age 3;2, recordings are made in the pre-school playgroup as well as at home. During the recording session in the playgroup, Mehmet is again rather silent. He does not produce any Turkish or mixed utterances, but not many Dutch ones either (28 utterances). During the recording session at home he is much more talkative, also in Dutch (97 utterances containing Dutch words, 54%). This shows that the silent period is much stronger in the pre-school playgroup than it is at home. Probably, Mehmet feels more at ease using Dutch in a context in which he can always switch to Turkish if necessary, than in a Dutch-only context.

During the recording in the pre-school playgroup, Mehmet mostly uses single- word utterances with words he has already used before. A new word is *paard* 'horse', which he had already used before in the diminutive form *paardje* 'horse-DIM', but not spontaneously in this form. Although there is no room to go into the use of the diminutive suffix in more detail, the general observation is that after the silent period, Mehmet starts to use diminutive forms next to non-diminutive forms as alternative equivalents, but without a very clear meaning difference in most cases. This probably reflects the use of diminutives in adult speech very well (Booij, 2002).

Another example, which shows that Mehmet is segmenting the input speech and extracting only the (for him) relevant words, is found in an imitated utterance. When Nel says *ook een eekhoorn* 'also a squirrel' about a picture, Mehmet imitates *ook eekhoorn* 'also squirrel'. Whereas earlier he would imitate articles as unanalysed parts of an utterance (see age 2;9), Mehmet now seems to process the article *een* 'a'. As he is not yet using any articles himself, he leaves it out of his own production.

A final innovation in Mehmet's speech during this otherwise rather silent recording session is a new instance of the pronoun *mij* 'me/my'. During the last recording at age 3;1, he had started using this pronoun, but only as a single word utterance. In this recording, Mehmet combines it with a nominal to be more explicit about what he wants to have: *mij auto* 'me/my car'.

During the recording at home, several other innovations in Mehmet's Dutch speech occur. Two instances of two-word utterances denoting location appear in this recording: *Elma crèche* 'Elma crèche: Elma was in the crèche (pre-school playgroup)' and *mama thuis* 'mum home: mum is at home'. Moreover, Mehmet starts using the copula form *is* 'is' in object naming utterances: *dit is koe* 'this is cow', *dat is eekhoorn* 'that is squirrel'. During this recording, *die* X 'that one X' without a copula does not occur. Two other inflected verb forms also appear in this recording. When his mother finishes a telephone conversation with his father, Mehmet concludes *papa komt* 'dad comes'. In this utterance, he uses the present tense suffix for third person reference *–t*, which he had not used before. Later, when his mother tells him to ask the investigator how old she is, what her name is, etc., he says *Elma heet jij, hè?* (Elma you are called, right?). Mehmet had not used the verb *heten* 'to be called' or the personal pronoun *jij* 'you' before during the recordings. Both utterances are probably rather fixed expressions he regularly hears in specific contexts: *papa komt* 'dad comes' after incoming phone calls from his father and *Mehmet heet jij, hè?* 'Mehmet you are called, right?' when he is too shy to answer a question about his name himself.

Some interesting innovations can be observed with respect to sentential negation. In earlier recordings, it had been observed that Mehmet initially used *nee* 'no' as a sentential negator, and later *niet* 'not'. In this recording session, several instances of *niet* are found. Some of them are parts of formulaic expressions, such as *echt niet* 'really not: not at all', *mag niet* 'is allowed not: is not allowed', and *weet ik niet* 'know I not: I don't know'. In other expressions, its use is more productive, as in *nee, niet die* 'no, not that one'.

Interestingly, the negator *nee* also reappears in this recording. When his mother asks him to say something in Dutch that he said before in Turkish, Mehmet produces

Hollandaca nee auto Batuhan 'Dutch no car Batuhan'. The context of this utterance is that he is telling his mother what he did in the pre-school playgroup that morning. When they played outside, Batuhan was playing with a toy car Mehmet wanted to play with. The meaning of the utterance is probably something like 'Batuhan should not have had the car'. Later during the conversation, his mother asks him with whom he played in the playgroup. Mehmet answers *nee Elma* 'no Elma: not with Elma'. As Mehmet is extremely unwilling to be engaged in the conversation his mother was forcing on him, it is possible that Mehmet produces poorly formed Dutch utterances on purpose, just to annoy his mother. It is intriguing, however, that he now puts the word *nee* 'no' in front of the negated statement (similar to creative *niet* 'not'), rather than at the end, which he did when he was 2;3 years old (*orka lekker nee* 'orka delicious no: orka is not tasty').

3.2.3 Age 3;3

For the month in which Mehmet is 3;3 year old, again two recordings are available. During the recording session in the pre-school playgroup, Mehmet is talkative again after the silent period witnessed in the last two playgroup recordings. He produces 150 Dutch utterances (97%). What is remarkable in this recording session is the appearance of new function words such as *van* 'of' and *jij* 'you' and expressions like *nog één* 'more one: another one' and *nog een keer* 'more a time: one more time'. He often uses these words in multi-word utterances.

Van 'of' only appears in combination with *mij* 'me': *van mij* 'of me: mine', which is a targetlike possessive expression in Dutch. In Chapter 5, possessive forms are investigated in detail. What is interesting is that in the target language, *van mij* cannot be used preceding the nominal it specifies, but only as a separate clause (e.g., *die auto is van mij* 'that car is of me: that car is mine'). Mehmet uses *van mij* to precede nominals as well, however, as in *die van mij fietsje* 'that of me bike-DIM: that (is) my bike'.

Nog een keer 'one more time' is an expression that appears often during this recording session. Although it expresses in the target language that an activity is repeated, Mehmet uses it to refer to objects of which he just found another instance. Only in *ik die nog één* 'I that one more: I want (to do) that once more' Mehmet uses the target language expression for reference to objects (*nog één* 'one more'), but this time he is talking about a repeated activity, namely reading a book.

Although Mehmet had replaced *die* X 'that X: that is X' with *dit/dat is* X 'this/that is X' in the previous recording session, *die* X returns in the present session. The copula *is* is only found in combinations with *waar* 'where' (*waar is die?* 'where is that one', *waar is auto* 'where is car?'). *Die* X, however, occurs very freqently. The slot in *die* X is usually filled with a specification of what *die* refers to, such as a name for it (e.g., *die bal* 'that bal: that is a ball') or the person to whom it belongs (*die van mij* 'that of me: that is mine'). The word order of *die* X appears to be not completely fixed, as there is one instance of the reverse order in *varken die* 'pig that (is)'. It is not clear to what extent intonation varies with different word orders.

During the recording made at home, Mehmet produces 121 utterances containing Dutch words (66%). The multi-word utterances he produces are very similar to the

ones produced in the playgroup. Five times he produces a *die* X 'that X: that is X' utterance, one of them again having an explicit attributive reference to possession in the slot (*die van mij papa*, 'that of me dad: that is my dad'). Moreover, there are also instances in which the specification is not giving a name or mentioning possession, but a reference to an activity or a property of the object: *die slapen yapıyor* 'that sleep-INF do-PROG-3SG: that one is doing sleep (is sleeping)' and *die kapot* 'that (is) broken'. An utterance in which a specific word is used instead of *die* 'that' also occurs: *boekje kapot* 'book-DIM broken: book is broken'.

Mehmet also produces a few instances of *ik* X 'I X'. Although most of these contain only one element in the slot (e.g., *ik Nemo* 'I Nemo: I want to watch the movie Nemo', *ik voetballen* 'I play-INF football'), in some cases more specifications are given with additional words. For example, Mehmet reformulates his urgent request to watch the movie Nemo several times: *ik Nemo kijk* 'I Nemo watch: I want to watch Nemo', *anne, ik Nemo kijken* 'mum, I Nemo watch-INF: mum, I want to watch Nemo'. Interestingly, there is also one instance in which he actually uses a verb to express the desire, *anne, Nemo wil ik* 'mum, Nemo I want'.

Moreover, there are in this recording session also instances of *ik* X 'I X' that do not express a desire or intention, but instead describe an actual state: *ik baby* 'I (am) baby' and *ik kapot* 'I (am) broken'. Mehmet uses the word *kapot* 'broken' several times during the recording to express not only things really being broken, such as toy cars, but also to describe situations that are not exactly as they should be. For example, when he produces *ik kapot* 'I broken', Mehmet is running through the living room and purposefully falling flat on the floor. He then remarks on his lying on the floor with *ik kapot* 'I broken'. Summarising, it appears that parallel to the extension of *die* X 'that X' from identifying names and possession to describing ongoing activities and actual states, the use of *ik* X in Mehmet's speech is extended to describe actual states in addition to desired or intended objects and actions.

3.2.4 Age 3;4

When Mehmet is 3;4 years old, two recordings are made. In the playgroup, he is again rather talkative (105 Dutch utterances, 98%). Most of his utterances are rather similar to what he produced last month. However, there are some new interactional words and expressions appearing in this recording. Mehmet starts using *hé* 'hey' to attract attention from his interlocutor (e.g., *hé, auto* 'hey, car', *hé, bal* 'hey, ball'). Its use is similar to the imperative *kijk* 'look', which he also uses during this recording, as he already did during earlier ones. In addition, Mehmet employs several ways of indicating the end of a conversation or activity. As Mehmet is rather impatient and wants to finish the recording session as soon as possible, he wants to make this clear to Nel a number of times. For example, he uses *okee dan* 'okay then' when he feels Nel should stop singing a song about an animal in the picture book and *zo, klaar* 'like that/that's it, finished' as well as other instances of *klaar* 'finished' to indicate that as far as he is concerned, he has said enough about the books.

Utterances naming objects again mostly appear without a copular form. Mehmet uses *is* 'is' mainly in fixed expressions, such as *wat is dat?* 'what is that?' and *waar is* X

'where is X'. However, there are two other utterances that contain *is* 'is' in this recording: *deze is &dibi* 'this is &dibi', in which it is unclear what *&dibi* means[16], and *niet die is bus* 'not that is bus'. Both utterances are different from the instances of *die* X 'that X', as the first one uses a different demonstrative (*deze* 'this') and the second one is a negation with *niet* 'not'. It is unclear what exactly triggered the use of *is* 'is' here. Mehmet also uses another finite verb form, although most of his verbs occur in infinitival form. For example, when Mehmet suddenly realises that one of the children in the playgroup is absent that morning, he asks Nel: *Omar niet komt?* 'Omar not comes: Omar does not come?'. This utterance is similar to Mehmet's earlier *papa komt* 'dad comes', but with the negator *niet* added.

Finally, Mehmet uses the article *een* 'a' for the first time. When Nel asks Mehmet to name what he is pointing at (*wat is dat?* 'what is that?'), he answers *een motor* 'a motorcycle'. Later when Nel is trying to have him point to the pigs in the picture, although he wants to name other things, he says *een auto* 'a car'. The pronunciation of *een* /ən/ 'a' is clearly different from *en* /En/ 'and'. So far, the use of articles is very infrequent in Mehmet's speech, and in most cases where the target language would require indefinite articles, Mehmet leaves them out.

During the recording made at home, Mehmet produces 217 utterances that contain Dutch words (76%). Most utterances are very similar to what he produced during the recording in the pre-school playgroup. What is new is the use of the first-person copular form *ben* 'am' in *ik ben autootje* 'I am car-DIM: I am a car'. Furthermore, he produces the first-person affirmative expression *ik weet, hè?* 'I know, right?', whereas he only used the negated version *weet ik niet* 'I don't know' before.

In one, rather remarkable, utterance Mehmet uses what appears to be quite an abstract construction. To a question from the investigator what a child in a picture is doing, Mehmet answers *etentje eten* 'food-DIM eat-INF', meaning '(it) is eating food'. This utterance seems to be a translation of the Turkish equivalent *yemek yemek* 'to eat food'. The expression *etentje eten* Mehmet is not likely to have heard in the Dutch input, as Dutch (similar to English) uses the verb *eten* 'to eat' as a generic term, but not 'to eat food'. It must thus have been a creative expression constructed by Mehmet himself, showing that the construction 'X-DIM X-INF' is part of his Dutch linguistic knowledge. The meaning of this construction is probably similar to *autootje wassen* 'car-DIM wash-INF' and *handje wassen* 'hand-DIM wash-INF' during earlier recordings: the element in the second slot is an action performed on the element in the first slot.

3.2.5 Age 3;5

When Mehmet is 3;5 years old, a recording is made in the pre-school playgroup as well as in his home. During the recording made in the pre-school playgroup, he produces only one mixed utterance. The remainder of his utterances are exclusively Dutch (146 utterances, 99%). Mehmet produces quite a number of new words during this recording

[16] He uses the word again in the recording made at home. In Turkish, *dibi* means 'its bottom', but that meaning does not make sense in the context in which Mehmet uses it. His mother does not know what it means either.

session, such as *luchtballon* 'hot-air balloon', *zwembad* 'swimming pool', *lammetje* 'lamb-DIM', *olifant* 'elephant', *zwemmen* 'to swim', and *op* 'up: finished'.

A new expression is *kijk dan* 'look then', in which *dan* 'then' is used as an intensifier of the imperative to mark impatience, similar to *dan* 'then' in *okee dan* 'okay then' in the previous recording. In addition, Mehmet uses the indefinite article *een* once, in an answer (*een hondje* 'a dog-DIM') to Nel's question *Mehmet, wie zit hier te kijken?* 'Mehmet, who is looking around here?'. He also once uses the article *de* 'the' when he describes a picture (*ja, en de autootje*, 'yes, and the car-DIM'). The use of *de* with a diminutive nominal is not targetlike, as all diminutives require the use of the article *het* 'the'.

In the previous recording, it was observed that Mehmet started using the verb *weten* 'to know' in other expressions than merely *weet ik niet* 'I don't know'. In the present recording, Mehmet seems to reanalyse the verb even further. This reanalysis is presumably triggered by the fact that the fixed expression has the subject *ik* 'I' in second rather than first position. It could be that Mehmet is in the process of finding out that sentences in Dutch do not usually start with a verb, and therefore feels he needs to reformulate it. In (4), an extract from a conversation with Nel is given, in which Mehmet produces several reformulations. Mehmet appears to be to playing around with the words of the expression, putting *ik* in the first position, adding the infinitival suffix to *weet* 'know', negating the sentence, but then reduplicating *ik* 'I'.

(4) *TEA: *wat zijn dit?* 'what are these?'
*CHI: *ik weet.* 'I know'
*TEA: *wie doet boe@o?* 'who says mooh?
*CHI: *ik niet ik weet [>].* 'I not I know'
*TEA: *boe@o [<].* 'mooh'
*TEA: *boe@o.* 'mooh'
*CHI: *ah!* 'ah!'
*CHI: *ik weet.* 'I know'
*TEA: *Mehmet, zo kunnen we geen boekjes lezen,, heh?* 'Mehmet, in this way we cannot read books, right?'
*TEA: *dan kun je niet naar buiten.* 'then you cannot go outside'
*CHI: *ah [=! singingly].* 'ah'
*TEA: *wil je buiten spelen?* 'do you want to play outside?'
*CHI: *ja.* 'yes'
*TEA: *dan moet je wel even meewerken.* 'then you should cooperate a bit'
*CHI: *ik weten [/] weten.* 'I know-INF'
*TEA: *nee, eerst je oogjes open.* 'no, first open your eyes'
*CHI: *ik weet.* 'I know'

During the recording made at home, Mehmet also talks almost exclusively Dutch (185 utterances without Turkish words, 94%), which shows that he is feeling at ease using the language. Among the new words that occur in this recording are *muis* 'mouse, *vis* 'fish', *trekken* 'to pull', *vallen* 'to fall' and *kan* 'can'. In this recording session, the first references to time occur in the adverbials *eerst* 'first', *nou* 'now' and *nu* 'now', as well as demonstrative references to space with *hier* 'here' and *daar* 'there'.

The modal verb *kan* 'can' occurs in first-person form in two utterances: *ik kan voetballen* 'I can play-INF football' and *ik kan een auto* 'I can a car'. The latter utterance is a proposal to sing a song Mehmet knows, namely a song about a car. In the target language, the verb *kennen* 'to know' would have been used rather than *kunnen* 'to be able to'. It is possible that Mehmet uses his knowledge of Turkish in this context, as both meanings can be expressed in that language with verb *bilmek* 'to know' (in the case of 'can' as a suffix *-bil*). An alternative explanation is that Mehmet mis-analysed the low frequency verb *kennen* 'to know' as *kunnen* 'to be able to'.

A situation in which Mehmet reformulates an earlier fixed expression, as in (4), develops in the present recording with the expression *waar is* X 'where is X'. Mehmet likes to a play a game in which adults hide themselves and Mehmet asks 'where are you?'. He had played this game in Turkish several times during earlier recordings, but now tries it in Dutch. His mother explicitly tries to correct his non-targetlike utterances in the extract in (5).

(5) *CHI: *jij waar is?* 'you where is?'
*INV: *wat zeg je?* 'excuse me?'
*CHI: *jij waar is?* 'you where is?'
*MOT: *<waar ben jij> ["], moet je zeggen.* 'where are you, you should say'
*CHI: *jij ben jij waar is?* 'you are you where is?'
*INV: *0 [=! laughs].*
*MOT: *ja [=! laughs].* 'yes'
*MOT: *<waar ben jij> ["], schat.* 'where are you, dear'
*INV: *ik ben hier.* 'I am here'
*MOT: *goed maak je t nog niet allemaal.* 'you're not yet saying everything right'
*INV: *ja [=! laughs].* 'yes'
*INV: *nou, &g +...* 'well, ...'
*MOT: *heh?* 'huh?'
*MOT: *&wu <als jij> [/] als jij dat vraagt moet je zeggen <waar ben jij> ["].* 'if you ask that, you should say 'where are you'
*CHI: *jij waar ben jij?* 'you where are you?'

First Mehmet translates his Turkish question, *sen nerdesin* '(you) where are you' with his usual way of asking for a location, namely with *waar is* (where is?), resulting in *jij waar is* 'you where is'. His mother then tells him to say *waar ben jij* 'where are you', but Mehmet repeats it only partially in *jij ben jij waar is* 'you are you where is', which his mother and the investigator think is very funny. His mother then models the right phrase for him again and Mehmet imitates it correctly, although still adding *jij* 'you' at the beginning: *jij waar ben jij?* 'you where are you?'.

A final interesting utterance during this recording is found when Mehmet again suggests singing a song. After singing a song about a red car, he wants to sing the version of a blue car: *nou en nog en blauw auto* 'now and more and blue car: now also (the) blue car'. It is remarkable that Mehmet uses the connective *en* 'and' to connect the different elements of the sentence. His utterance would have been intelligible if he had left the *en*s out, but they seem to help him in making the sentence fluent.

3.2.6 Age 3;6

At age 3;6, there is only one recording session, in the pre-school playgroup. Mehmet produces exclusively Dutch utterances during this recording (122 utterances). A few utterances are remarkable. First, Mehmet seems to be 'playing around' with the diminutive suffix, which he had already been observed using in earlier recordings. An intriguing word is *sneeuwtjes* 'snow-DIM-PL, because *sneeuw* 'snow' is a mass noun in the target language that can neither be used with the diminutive suffix nor with the plural suffix. Mehmet utters it in mid-July (!) when he is looking outside where it is raining and Nel asks *wat valt d'r allemaal uit de lucht? wat gebeurt er buiten?* 'what is falling from the sky? what is happening outside?'. During this recording Mehmet also attaches the diminutive suffix to the word *die* 'that' when he directs Nel's attention to something in the book that he finds interesting: *en dietje* 'and that-DIM'. The diminutive form of *die* 'that' does not exist in the target language either.

Mehmet had not used the plural suffix *-s* before, except for imitations, although he did seem to have passive knowledge of it, which is witnessed by the fact that he regularly also left the plural suffix out in imitations. During the present recording, he produces the word *auto* 'car' several times with a plural suffix, when he is talking about a new book in which a red truck and many cars feature. He says *en auto's* 'and car-PL, *en auto's daar* 'and car-PL there' and *en hier allemaal auto's* 'and here all car-PL'.

A final remarkable observation about Mehmet's utterances during this recording session is that he uses the demonstrative *dit* 'this' several times. He had only used it before at age 3;2, when he said *dit is koe* 'this is cow'. Now he produces *en dit bus* 'and this (is) bus', *en dit rood* 'and this red' and *hé, rood is dit hier* 'hey, red is this here'. The latter utterance also shows the use of copular *is* in other than fixed expressions.

3.2.7 Age 3;8

When Mehmet is 3;7 years old, no recording is made, because the family is in Turkey for the summer holidays. A month later, recordings are made in the playgroup and at home. During the recording session in the playgroup, Mehmet exclusively talks Dutch (171 utterances). Several rather complex utterances appear in this recording. For example, Mehmet produces *die kan ik niet opeten, hè?* 'that I cannot eat up, right?', *is van mij tas* 'is of me bag: is my bag', *ik autootje ben* 'I car-DIM am: I am (a) car', and *ik wil ik daar spelen* 'I want I there play-INF: I want to play there'. The examples show that Mehmet is using different verb forms (finite/infinitival) and also different verb positions in the sentence (verb second, initial, and final position). Chapter 6 discusses the use of verb forms in specific sentence positions in more detail.

An innovation during this recording session is the frequent use of *zo* 'like this' and especially *zo maken* 'like this make-INF'. Mehmet uses utterances like *die zo maken* 'that like this make-INF' accompanied by gestures to indicate which activity he is trying to express. It apears to be a strategy to describe verbs he does not know or remember at that moment. During this recording *zo maken* expresses 'hanging up the laundry', 'closing the book', 'covering your face', 'counting', and 'tumble (washing machine)'. It is intriguing that Mehmet uses the word *maken* 'make-INF' as a general activity word,

rather than *doen* 'do-INF', the more frequent and adequate (appropriate) word in the target language. Mehmet uses the word 'do' only once in *die doet zo* 'that does like this', but this is probably partly an imitation of Nel's previous utterance (*wat doet deze*[17] *kindje* 'what does this child (do)?'). An explanation for Mehmet's use of *maken* is that Turkish has only one verb, *yapmak*, which expresses both the meanings of Dutch *maken* and *doen*. If Mehmet is trying to find translation equivalents for the Turkish verb, it is not surprising that some confusion should arise. In addition, the meaning *maken* in Dutch is more salient with respect to the 'transitivity' (Hopper & Thompson, 1980) it expresses. When you 'make' something, it is affected more by the action (it did not exist in that form before) than when you 'do' something. Mehmet may thus have generalised the translation of Turkish *yapmak* 'to do/make' in expressions like 'to make a house' or 'to make a puzzle' to all meanings of *yapmak*. The fact that most of the other bilingual children in the corpora investigated in the present study do not overgeneralise *maken* as a general do-verb may indicate that these children are – for some reason – more sensitive to frequency patterns in the input. The higher amounts of Dutch language input may explain this sensitivity for at least some of these other bilingual children.

Another utterance in Mehmet's speech that seems to be a result of almost direct translation from Turkish is *en daar is veel auto van mij* 'and there is many car of me: and there I have many cars'. Mehmet is talking with his teacher about toys he has at home and with this utterance he tries to convey that he has many cars at home. In the target language, the possessive verb *hebben* 'to have' would have been used in such a situation, but Mehmet does not have that verb in his Dutch language repertoire yet. The utterance he produces, with a locative, looks much like its Turkish equivalent, the *var/yok* 'there is/there is not' construction. Turkish does not have a verb to express the meaning of 'to have', but uses the adverbs *var* 'present' and *yok* 'absent' in combination with a possessive phrase to indicate the possessor and the possession (in this case: 'many cars of me') and often a location 'there'. Mehmet's utterance seems to be a translation equivalent of this construction into 'his' version of Dutch (e.g., using *van mij auto* 'of me car' instead of targetlike *mijn auto* 'my car'). In later recordings, similar utterances appear again.

During the recording made at home, Mehmet's mother urges Mehmet to talk Turkish instead of Dutch. As a result, only 20% of his utterances contain only Dutch words (61 utterances) and 10% are mixed (32 utterances). Most of his Dutch utterances are similar to those used before.

Among some of the more interesting or innovating utterances is one in which he uses a definite article. In response to his mother's (Turkish) question what something in a picture is called, he says *en de auto* 'and the car'. His use of articles is still very rare, although it is perhaps no coincidence that the definite article *de* 'the' should appear relatively often after the connective *en* 'and' (see also age 3;5). As will be seen in the next month, *en+de* appears to constitute a fixed unit for Mehmet.

During this recording session, Mehmet uses the plural personal pronoun *wij* 'we' for the first time. When he sees a nice car in a picture, he says to his mother *mam, hier die*

[17] In Standard Dutch, *dit* would be more appropriate than *deze*, but in Surinamese Dutch, *deze* is possible as well. Nel has a Surinamese background.

auto wij 'mum, here that car we'. It is not exactly clear what he means by this, but probably either that the family, 'we', have a car like that or that he would want them to have such a car.

Another interesting feature is Mehmet's overgeneralisation of the diminutive suffix on numerals. As a matter of fact, the diminutive suffix can be used in Dutch on the word 'one' (*eentje* 'one-DIM'), which expresses a meaning like 'a single one'. Mehmet regularly uses this word, and in this recording extends the use of the diminutive to the numeral 'two'. When he sees a picture with two busses among a lot of cars, he says *tweentje bus* 'two-DIM bus'.

Finally, there is another instance of Mehmet using *nee* 'no' rather than *niet* 'not' for sentential negation. Although he generally uses *niet* 'not', during this recording he does not want the investigator to leave him and go to the toilet, which he expresses saying *nee mag jij wc* 'no are allowed you toilet: you are not allowed (to go to the) toilet'.

3.2.8 Age 3;9

When Mehmet is 3;9 years old, a recording is made in the playgroup, but not in his home, because his mother is rather ill and has been hospitalised for an extended period of time. During the recording in the playgroup, Mehmet produces 153 utterances, all in Dutch. Since age 3;4 Mehmet has not been imitating as much as he did before between ages 2;9 and 3;3. During the present recording he imitates only a few words and phrases, but one of these is rather interesting as it is a typical 'mistake' in Dutch child language. The word *varken* 'pig' is a singular form, but it has been observed before that children sometimes analyse it as a plural form because of its *-en* ending, and subsequently use *vark* – a word which does not exist in Dutch – as its singular form (Extra, 1978). In this recording, Mehmet also imitates *vark* when his teacher says *varken.* This mistake shows that Mehmet processes the *-en* ending as if it were a plural suffix attached to a root. This indicates that he is now able to analyse the plural morpheme *-en* (see age 3;6 for the plural suffix *-s*).

Most of Mehmet's utterances during this recording are in line with what he produced before. One very remarkable innovation emerges in this recording, and it is related to the rather rare definite article *de* 'the' in earlier recordings. In the present recording, Mehmet produces *de* 35 times. In all cases, however, the article is preceded by *en* 'and'[18] and the combination *en+de* appears to be a fixed unit.

In about half of the utterances, *en+de* appears at the beginning of the utterance and seems to function like *en* X 'and X' in earlier recordings. *En* X frequently appeared in Mehmet's speech, usually to mark a continuation of a set of similar activities. During picture book interactions in the present recording, Mehmet produces utterances like *en+de aapje* 'and+the monkey-DIM', *en+de konijn* 'and+the rabbit', and *en+de ook kindje* 'and+the also child-DIM' when naming things in the picture. In the latter example, the

[18] It is acoustically unclear whether Mehmet says *en* or *in* in most cases and therefore all cases are transcribed here as *en*. One reason for this choice is that Mehmet had not produced *in* 'in' before. Nevertheless, in several cases *en* has a clear locational meaning, which can be expressed in the target language with the preposition *in* 'in'.

occurrence of the adverb 'ook' between *de* and the nominal shows that Mehmet does not treat *de* 'the' as forming a unit with the nominal.

In the remaining utterances with *en+de*, three different kinds of functions can be distinguished. First, in some utterances, *en+de* appears to be related to the temporal adverbial expression *en dan* 'and then', which Mehmet also frequently uses in this recording. For example, when Mehmet and Nel are talking about eating on an airplane, which Mehmet did during the summer holidays, Nels asks him *heb je in een grote*[19] *vliegtuig gezeten?* 'were you on a big airplane?' (Dutch, literally: 'Did you sit in…'). Mehmet answers, *en ik zitten* 'and I sit-INF' … *en dan ik zitten* 'and then I sit-INF' … *en dan ik vlieg* 'and then I fly' … *en+de die eten* 'and+the that eat-INF'. Now the utterance becomes rather unclear, as Mehmet repeats it again and adds that he also drank on the airplane: *en dan ik, nou en+de drinken eten en+de* 'and then I, now and+the drink-INF eat-INF and+the'. The exact meaning of *en+de* in this utterance seems to be mostly one of temporally connecting different elements in the story line, similar to the use of *en dan* 'and then' in the same utterances. This type of *en+de* could be analysed as a phonetically reduced form of *en dan*.

In a second group of utterances, *en+de* has a locational meaning. For example, at the beginning of the episode about the airplane, Mehmet and Nel are talking about a picture in which people are having a party and are eating. This reminds Mehmet of a special occasion involving eating, and he starts talking about eating on the airplane. He says, *ja, ik ook eet ik en+de vliegtuig* 'yes, I also eat I and+the airplane'. In other utterances too, Mehmet uses *en+de* to mark location, as when answering questions about where his mother was (*en+de dokter,* 'and+the doctor'), and where she is now (*en+de thuis* 'and+the home').

The function of *en+de* in the third group of utterances is more abstract. It apears to be functioning there mostly as a general connector of parts of an utterance. For example, when talking about a picture of a toy shop, Mehmet points at the things he also has at home. In this episode, he produces *ik en+de die speel* 'I and the that play', probably meaning that he also plays 'with' those kind of things or would like to play with them. When he points at several toys he also has at home, he says, *van mij thuis en die en+de die* 'of me at home and that and+the that' and later *en van mij thuis en+de die twee* 'of me at home and the that two'. *En+de* 'and+the' seems to be linking the first part of the utterance *van mij thuis* 'and of me at home' with what it is that he has at home. In these utterances, *en+de* could also be analysed as meaning 'also', although it is unclear why Mehmet did not use *ook* 'also' for instance, which he regularly uses in other utterances.

A final utterance in which *en+de* seems to function as a connector between different elements of an utterance, is found when Nel and Mehmet talk about a picture of a zoo in which an elephant just stole the bag of a lady with his trunk. When Nel asks *oh oh, wat gebeurt er hier nou allemaal?* 'oh oh, what is happening here?', Mehmet first answers *en+de tas* 'and+the bag' and then *olifant en+de tas* 'elephant and+the bag'. In the previous episodes, Mehmet had always had trouble expressing the different elements in the picture: the elephant, the bag, the lady and the (change of) possession. Usually he

[19] In Standard Dutch, *groot* would be more appropriate than *grote*, but in Surinamese Dutch, *grote* is possible as well.

started with the possessive element, and then added one of the other elements, which did not always result in a comprehensible statement. Now he manages to mention the elephant first and then expresses some unspecified relation to the bag with *en+de*.

In sum, *en+de* is a rather remarkable unit in Mehmet's speech in this recording. It seems to function as a filler. Fillers are "unglossable syllables" (Peters, 2001: 229) some children incorporate in their utterances. In studies on first language acquisition, it has been found that children vary widely in whether they use fillers or not, and if they do, what function these fillers fulfil. Usually, the use of fillers is closely related to phonological and prosodical features of the input and often they fulfil a morphological or grammatical function (Peters, 2001). A more comprehensive analysis of Mehmet's *en+de* than the one presented here is not possible, however, as more data are not available. This use of *en+de* does not return in the following recordings.

3.2.9 Age 3;10

When Mehmet is 3;10 years old, only a recording is made in the pre-school playgroup. During this recording session, Mehmet produces 168 utterances, all of them in Dutch. The idiosyncratic filler *en+de* 'and+the' does not return in this recording, although Mehmet uses the targetlike locative expression *in de* 'in the' a few times. Although it is still not clear whether this expression is acoustically different from the earlier *en+de* 'and+the', it is now transcribed as *in* 'in', because of its clear locational meaning. Mehmet wants to play in the gym and uses utterances like *en nou ik gymzaal spelen* 'and now I gym play-INF' without marking the locative, as well as utterances like *ik nou in de gymzaal spelen* 'I now in the gym play-INF'. In addition, when he talks about his mother, who had been hospitalised, Mehmet says *veel mama in de ziekenhuis slaap, veel* 'much mum in the hospital sleep, much'. Only once does he use *in de* to express 'with' rather than 'in': when Nel asks him with whom he is going to play in the gym, he answers *in de Batuhan spelen* 'in the Batuhan play-INF: play with Batuhan'.

The filler *en+de* 'and+the' apparently helped Mehmet reach a state in which he is able to produce longer utterances. Rather elaborate utterances such as *ik nou veel auto kijken boekje auto* 'I now many car look-INF book-DIM car: I now (want to) look at the book (with) many cars', *en dan die thuis komen die van mij mama* 'and then that home come-INF that of me mum: and then my mum came home', and *konijn kopen pap van mij* 'rabbit buy-INF dad of me: dad bought a rabbit for me (or: my dad bought a rabbit)' appear in the present recording. In many of these utterances, Mehmet uses the verb in infinitival form. In studies on Dutch first language acquisition, it has been observed that children systematically put infinitival verb forms in sentence-final position. In the examples just mentioned, however, the verb is not always put in final position. Does this mean that early second language acquisition is in this regard structurally different from first language acquisition? In Chapter 6, this question is addressed in more detail. A possible explanation for the current examples is that Mehmet is using his knowledge of Turkish word order. In Turkish, the verb is generally put at the end of the sentence, but so-called 'backgrounded' information, which is already given in the discourse, can occur after the verb (Doğruöz, 2007; İşsever, 2003). In the examples above, the

information after the verb could be interpreted as given or backgrounded information in the context in which they occurred.

3.2.10 Age 4;0

When Mehmet is 4;0 years old, a new recording is made in his home. Two weeks before, Mehmet had started attending the first year of kindergarten in a primary school where he is the only Turkish child in his class. As is observable from his speech in this recording, his Dutch language proficiency is being 'boosted' in this new environment. During the recording, Mehmet produces 373 utterances that contain Dutch words, which is 87% of all utterances.

A new development in this recording session is that Mehmet starts using more prepositions. In earlier recordings, he had used the preposition *van* 'of', but only in the possessive expressions *van mij* 'of me' and *van jou* 'of you'. In addition, he had used the unit *in de* 'in the' for expressing location. In the present recording, when his mother asks Mehmet to name the groups there are in kindergarten, she uses the construction *het groepje van* X 'the group-DIM of X'. Mehmet imitates this use of *van* and calls his own group *van Damian* 'of Damian', adding later *van…ook van Mehmet* 'of… also of Mehmet'. Similarly, he describes a book by saying *een boek van eekhoorns* 'a book of (about) squirrels'. When Mehmet talks about what he did in kindergarten that morning and his mother asks what he played with, he answers *met uhm… met blokjes* 'with uhm… with block-DIM-PL'. Later, when he is dividing toy animals between himself and his mother, he says *ik bij twee*, *jij eentje* 'I at two, you one: two for me, one (for) you'. This use of *bij* 'at' is not targetlike. Finally, Mehmet exclaims *water op die!* 'water on that!' when he sees a truck in a picture book. It is not exactly clear what he means by that utterance (that there is water on the truck?). Mehmet's mother had just used the preposition *op* 'on' in her preceding utterance. Although Mehmet thus seems to be imitating many of the prepositions from directly preceding speech of his mother, it is significant that he picks them up and uses them, because he had not done so before.

A new development in Mehmet's speech is that he starts to use the copula form *is* 'is' structurally. In earlier recordings, he had used it sporadically, mostly in fixed expressions, such as *wat is dat?* 'what is that?' and *waar is* X*?* 'where is X?'. In the present recording, the copula is used in almost all cases where it would be needed in the target language. Some examples of utterances with *is* are *die is ook schaap* 'that is also sheep', *mam, die is mooi auto* 'mum, that is beautiful car', *nu is ie afgelopen* 'now it's finished', and *die is bijna weg* 'that (one) is almost gone'. Note that in many cases, the demonstrative *die* 'that' appears, even in cases of object naming, in which the demonstratives *dat* 'that' or *dit* 'this' are more appropriate in the target language. This issue is further discussed in Chapter 4. In addition to singular *is*, the plural copular form *zijn* 'are' also occurs in one utterance. The only utterance in which a copula would have been needed, but is not supplied by Mehmet, is *nu ik lief, hè?* 'now I sweet, right: now I am sweet, right?'. Mehmet does not use the first person copular form *ben* 'am' at all during this recording.

Finally, many verbs again occur in the present recording. Most of them are in infinitival form, occurring in many positions in the sentence. Several verbs also occur in finite form. This concerns mostly verbs which occur in the input also most frequently

in finite form, such as the modal verb forms *ik kan* 'I can' and *ik hoef* 'I need'. In addition, the finite third person verb forms *gaat* 'goes', *maakt* 'makes', and *komt* 'comes', as well as first person *maak* 'make', appear in Mehmet's speech. Verb forms and verb position are considered in more detail in Chapter 6.

3.2.11 Summary

After the silent period in the pre-school playgroup at age 3;0, Mehmet initially produces single-word utterances, fixed expressions and some word combinations, like he did before the silent period. At age 3;3, an enormous increase in his Dutch language use in the pre-school playgroup occurs. While he produced a total of 125 utterances containing Dutch words in all earlier playgroup recordings, he now produces 150 of such utterances in one recording. The structure of a large amount of the multi-word utterances in this recording and the following ones can be characterised as 'pivot schemas' (Braine, 1976; Tomasello, 2003). Pivot schemas are word combinations in which one word is fixed (the 'pivot'), usually in a specific position. This fixed word determines the speech act function of the utterance (Tomasello, 2003). Pivot schemas used by Mehmet[20] are *die* X 'that X: that is a X', *ik* X 'I X: I (want) X', and *van mij* X 'of me X: my X'. During this period, Mehmet now and then uses definite and indefinite articles and the copula *is* 'is', but their appearance is in general very rare.

In the period between ages 3;4 and 3;9 several overgeneralisations or 'errors' occur in Mehmet's speech which betray the fact that he is re-analysing the input and fixed expressions already in his repertoire. Several times, he attaches a diminutive suffix to a word that does not take this suffix in the target language and which he is thus unlikely to have heard in the input (e.g., *sneeuwtjes* 'snow-DIM-PL', *dietje* 'that-DIM', *tweentje* 'two-DIM'). In addition, he reformulates the fixed expression *weet ik (niet)* 'I (don't) know' several times (e.g., *ik weten* 'I know-INF', *ik niet ik weet* 'I not I know'), which shows that he is re-analysing the position of the subject pronoun in first rather than second position and the infinitival rather than the finite form. In other utterances he generally uses the infinitival form of the verb, which children learning Dutch as a first language also typically do in early stages. Only in fixed expressions such as *weet ik niet*, does Mehmet use the finite verb form, as well as for some verbs that generally occur more frequently in finite form in the input. Another overgeneralisation is found in his use of the fixed expression *waar is* X*?* 'where is X?'. When he wants to use this expression for a second-person question, he says *jij waar is?* 'you where is: where are you?', and later, when his mother models the correct form *waar ben jij?* 'where are you?', he says *jij ben jij waar is?* 'you are you where is?' and *jij waar ben jij?* 'you where are you?'.

Some other non-targetlike or unexpected patterns in Mehmet's speech seem to originate in translations from Turkish. For example, instead of using the Dutch verb *hebben* 'to have', he translates the Turkish existential *var/yok*-construction. Also, some

[20] The identification of pivot schemas is based on the 'frequent' occurrence of a specific word in two- or three-word combinations (Braine, 1976). Although it is unclear what the minimum frequency of a pattern is to be counted as a pivot schema, the examples given here are unambiguous, as they all appear with rather high frequencies in the dataset. Mehmet produces *die* X 48 times as an object naming construction (see Chapter 5), but also with other meanings, and *van mij* X 21 times (see Chapter 6).

confusion seems to arise when two Dutch words have only one equivalent in Turkish (e.g., *bilmek* 'to know/can', *yapmak* 'to do/make'). Finally, the word order patterns Mehmet uses deviate substantially from what has been reported for children learning Dutch as a first language. It is possible that Mehmet uses Turkish word order patterns which are related to the expression of information structure (new or given information), and result in a wide variety of possible word orders.

Mehmet also develops a few general strategies for making his speech more fluent despite his sometimes limited knowledge of it. For example, he uses *zo maken* 'like this make-INF' accompanied by gestures to describe activities he does not know or remember the Dutch word for. At age 3;5, he uses the connective *en* 'and' to connect the different elements of a rather long utterance, which returns as the remarkable and idiosyncratic filler *en+de* 'and+the' proliferating at age 3;9.

During the last two recording sessions at ages 3;10 and 4;0, Mehmet's utterances become longer and in general more comprehensible. He starts using some prepositions, although still incidentally. He begins to provide the copula *is* 'is' structurally in situations in which it is expected to appear in the target language. He still does not use articles structurally, nor does he use finite verb forms or Dutch word order. Although he has become much more fluent in Dutch, his proficiency is still far from targetlike and much below the level of first language learners of Dutch of the same age.

3.3 Discussion and conclusion

In spite of generally held beliefs that young children learn languages easily, Mehmet seems to have a hard time reaching some degree of fluency in Dutch while attending a pre-school playgroup for two years. Although an intensity of about twelve hours a week is perhaps not very high, it is supposed to be one of the most intensive so-called 'early childhood educational' programmes for children in the Netherlands. Of course, Mehmet acquires quite some receptive knowledge of Dutch and at the end of the period, at age 4;0, he is able to express most of what he wants in comprehensible albeit not targetlike speech. At the end of the period of data collection, Mehmet's mother explicitly stated that she was disappointed at the level her son had reached over a period of two years. She was at that time expecting a second child and she intended to speak a lot more more Dutch at home than she had done with Mehmet.

Although Mehmet displays some idiosyncratic features in his Dutch speech, his pace of development is similar to that of the other children in the present study. Batuhan reaches a less fluent level at the age of 4;0 and Yunus, for whom data are available until age 3;9, is not developing faster either. Some of the girls in the Van der Heijden bilingual corpus reach higher levels of Dutch proficiency, but they started attending a daycare centre at a much younger age and for more hours a week.

Studies that report a very quick pace of second language development (e.g., Saville-Troike, 1988; Wong Fillmore, 1976) usually involve children of about age four or five. Wong Fillmore (1976) claims that the main reason why one of her informants is extremely successful is her great social need: she really wants to interact with her playmates, and learning English is highly relevant for her. The two-year-olds in the present study, however, do not feel such a need to the same extent. Before their third

birthdays, they were generally happy to play on their own in the pre-school playgroup, without much conversation. It is as they grow older that they come to interact more with other children.

In this chapter, Mehmet's Dutch utterances have been followed over a two-year period. An attempt has been made to give explanations for some of the observed patterns. It is important to point out, however, that these explanations are in general only preliminary and that in some cases other explanations are possible too. For many of the patterns, there is not enough data available to come up with conclusive explanations. In the remainder of this book, three constructions (object naming constructions, pronominal possessives, and verb forms) are studied up in more detail. In these chapters, more consideration is given to explanations and possible alternatives.

4 Object naming constructions

The first analysis of the data of all seven bilingual children concerns object naming constructions. In adult Dutch, the basic and most frequent object naming construction is [$_{neuter}$DEMpro COP NP], an instance of which is *dat is een auto* 'that$_{neuter}$ is a car'. The developmental path from early child utterances such as *dat auto* 'that$_{neuter}$ car: that is a car' to more adultlike production is tracked longitudinally for the seven bilingual Turkish-Dutch children and for three monolingual Dutch children. The bilingual children's use of object naming constructions in Turkish is studied as well, because this may shed light on the possible influence of the first language on the constructions the bilingual children use in Dutch.

Two reasons motivate the choice of object naming constructions as a topic. First, the Dutch object naming construction and its different components pose several interesting learning problems for first and second language learners. Is it difficult to grasp for children that neuter rather than non-neuter demonstrative pronouns are used in object naming constructions, while overall non-neuter demonstrative pronouns occur more frequently in the input? What is the influence of the fact that the copula is usually prosodically unstressed and therefore perceptually difficult to distinguish in the input? Are bilingual children faced with additional learning problems, because of their knowledge of Turkish object naming constructions, in which no copula is used and all available demonstrative pronouns can occur? Second, utterances naming objects occur frequently in the speech of several children in the corpora under investigation. A substantial degree of occurrences is a prerequisite for a validly study of a developmental linguistic phenomenon from a usage-based perspective (Tomasello & Stahl, 2004).

When reading through the transcripts of some of the bilingual children, utterances naming objects catch one's eye, because of their high frequency and their notorious non-targetlikeness. This chapter aims at providing a developmental picture of the constructional structure of those utterances over time. The outcomes are compared to the object naming constructions produced by native Dutch adults, to Dutch children's monolingual development, and to the bilingual children's object naming utterances in their first language, Turkish. From a usage-based perspective, it should be possible to explain the monolingual children's developmental path from the characteristics of adult

input (frequency, salience). The bilingual children are compared to the monolingual children to address the question to what extent knowledge of Turkish as a first language and limited amounts of Dutch language input play a role in the bilingual children's early second language acquisition of Dutch.

4.1 Object naming constructions

Object naming is the communicative act of informing an interlocutor about the name or label for an object or group of objects. The term 'object' here refers to concrete persons, animals, or things. Examples of object naming utterances are 'this is grandpa' (pointing at a photograph), 'those are mice' (pointing at a picture), or 'that is a fork' (answering the question 'what is that?'). English and Dutch use copulas in object naming constructions, but many languages, including Turkish, use juxtaposition (e.g. *bu çatal* 'this fork: this is a fork').

Stassen (1997), who uses the term 'identity statements'[21], explains the meaning of object naming constructions on the basis of a metaphor of archiving. The files that are being archived are the categories or concepts humans store on the basis of experience with the world, for example, little (grey?) animals with long tails, or specific utensils for eating. Object naming statements refer to the labels those files have (e.g., 'mouse' or 'fork'). An important characteristic of those archives is that they are not static, but can be expanded or changed when new information becomes available. A speaker producing an object naming construction typically instructs his interlocutor to give a new label to a new or already existing file. A father can say 'this is a mouse' to a child who does not know the word for that specific animal yet. More frequently, however, object naming constructions are used to evoke the label that is associated with a concept or category. The father might use the same utterance for reminding the child of the fact that the label for those animals is 'mouse' or for indicating that this specific instance of the animal in a picture belongs to the category of mice.

In interactions with children, adults often name objects to teach them new words. In the case of bilingual children, this may include situations in which a child already has a file with a label in one language, and an adult teaches him the label in the other language. Children, on the other hand, often name objects to show they know labels for words, even though they are usually aware of the fact that this is not new information for the adult interlocutor.

Object naming is one of the first functions for which children use multiword utterances (Brown, 1973; Tomasello, 2003). Schaerlaekens (1973, pp. 92, 167) attested the utterances in (1) in the speech of two children learning Flemish as a first language.

[21] Stassen's term 'identity statements' includes what in this chapter are called object naming constructions, as well as 'equational identity statements', such as 'the Morning Star is the Evening Star'. Equational statements are absent in the child language data studied here.

(1) (a) *dat ananas* 'that pineapple: that is a pineapple' (Diederik)
(b) *dat bolleke* 'that candy: that is a candy' (Diederik)
(c) *dat auto* 'that car: that is a car' (Diederik)
(d) *dat paardje* 'that horse-DIM: that is a horse' (Arnold)
(e) *dat bal* 'that ball: that is a ball' (Arnold)

The absence of a copula in these child utterances constitutes a deviation from the adult norm. The utterances produced by the children can be characterised as 'pivot schemas' (Braine, 1976; Tomasello, 2003). Pivot schemas are word combinations in which one word is fixed (the 'pivot'), usually in a specific position. This fixed word determines the speech act function of the utterance (Tomasello, 2003), in this case object naming. The data in (1) can be characterised as instances of the pivot schema [*dat* X]. Similar pivot schemas are found in the early word combinations of children acquiring other languages, e.g., English [*that* X], Swedish [*den* X], and Hebrew [*ze* X] (Braine, 1976). These pivot schemas are not only used for object naming, but sometimes also express possessive relationships, as in *this Nina* 'this is Nina's' (boy Jonathan, in Braine, 1976: 34). However, object naming is the most frequent function encountered in our different data sets.

4.2 Object naming constructions in adult Dutch

The most frequent object naming construction in adult Dutch is [$_{\text{neuter}}$DEMpro COP NP]. As there is no research available on the use of Dutch object naming constructions, this section presents an overview of some characteristics of object naming constructions found in the speech of four native Dutch adults in interaction with children in a subset of the Nap-Kolhoff and Van der Heijden bilingual corpora. Two of the adults are pre-school teachers: Alice is Yunus's teacher and Nel is the pre-school teacher of Mehmet and Batuhan (only recordings with Mehmet are included in the subset). Elma is the investigator in the Nap-Kolhoff bilingual corpus and Hanneke is the Dutch investigator in the Van der Heijden bilingual corpus. For Elma, only the recordings with Yunus are included, while for Hanneke, only the recordings with Şükran are included in the subset. The reason for choosing Yunus and Şükran is that Elma and Hanneke talk most in the interactions with these two children. The total sample consists of 9,882 utterances produced by the adults under investigation.

4.2.1 Neuter demonstrative pronouns

The object naming construction investigated here begins with a neuter demonstrative pronoun (*dit* or *dat*) that refers to the object that is being named. Table 4.1 gives an overview of the demonstrative pronouns used in object naming utterances by the four adults.

Table 4.1 Adults' use of demonstrative pronouns in Dutch object naming utterances

	Alice	Nel	Elma	Hanneke	Total
dit	17	14	4	39	74
dat	26	57	37	20	140

All four adults use both neuter demonstrative pronouns in object naming utterances. Nel (Fisher exact $p<.001$[22]) and Elma ($p<.001$) have a preference for *dat*, whereas Hanneke has a preference for *dit* ($p<.001$). Alice also has a slight preference for *dit* when compared with the other adults, but the difference is not significant. In general, the meaning difference between *dit* and *dat* is related to actual or discourse related proximity. Hanneke's preference for *dit* could perhaps be explained from the fact that she was relatively often involved in activities of naming toy animals, whereas the other adults mostly looked at picture books with the children. Pictures in a book are probably conceived of as being less 'close' than toy animals that can actually be touched, resulting in the use of *dit* more frequently when playing with the latter. A closer analysis of the difference in meaning and use of *dit* and *dat* cannot be made on the basis of the available data, because more contextual information would be needed, for example from video-recordings.

It is remarkable that only neuter demonstratives appear in the construction, because neuter as well as non-neuter demonstrative pronouns (*die* or *deze*) can occur in similar constructions expressing property (e.g., *dit/dat/deze/die is mooi* 'this/that is beautiful) or possession (e.g., *dit/dat/deze/die is van mij* 'this/that is of me [mine]') (Donaldson, 1997). Although these property and possession expressing constructions look very similar, the main difference is that the referent to which the demonstrative pronoun refers, and the 'label' it has, are already known. When the label is known, the gender of the referent is known as well, and the demonstrative pronouns can be used in forms that correspond to that gender. In object naming constructions, however, the label of the referent is the subject of discussion, and the demonstrative pronoun takes its 'neutral' form: *dit* or *dat*.

4.2.2 Copula forms

The second component of the most frequent Dutch object naming construction is the copula in the third-person form. The inflectional paradigm of the copula is highly irregular. In the present tense indicative, the copula form *is* 'is' is used, whereas with plural referents the form *zijn* 'are' appears. The past tense forms are *was* 'was' for the singular and *waren* 'were' for the plural, respectively. Table 4.2 presents the different copula forms in object naming utterances produced by the four adults.

[22] See Appendix C for a description of Fisher's exact test.

Table 4.2 Adults' use of copula form in Dutch object naming utterances

	Alice	Nel	Elma	Hanneke	Total
is (singular, present)	32	53	40	47	172
zijn (plural, present)	11	18	1	7	37
was (singular, past)	-	-	-	5	5

The copular forms *is* 'is', *zijn* 'are', and *was* 'was' are encountered in object naming utterances, whereas *waren* 'were' is not. The singular present tense form *is* is the most frequently used copula form (81% of all forms). Elma uses this form significantly more often than the other adults (98%, Fisher exact p<.001). The plural form *zijn* is used in about 17% of the cases. Only Nel uses it significantly more (25%, p=.02). The past form *was* is only used by Hanneke, and the difference with the absence of *was* among the other adults is significant (p=.001). The individual differences between the adults can probably be attributed to differences in situations in which their speech was recorded.

It is not surprising that past tense forms tend not to occur in the object naming construction, as names are typically properties that are constant rather than subject to change of time. The cases in which Hanneke uses the past tense form occurred in two specific kinds of situations. In two cases, she named an object that was already out of sight, such as an airplane that had flown by (*dat was een vliegtuig* 'that was an airplane'). In the other three cases, the past tense, in combination with a definite article, functioned as a reminder and indicated that the name had been established by her and the child before (*dit was de olifant* 'this was the elephant').

4.2.3 The label

The third element of the object naming construction is the name for the object itself. As the examples presented so far show, it is usually expressed by a noun indicating the name and the indefinite article *een* 'a'. The exact structure of this part of the object naming construction is not analysed in detail in the analyses presented here. The main reason is that our bilingual children have not yet acquired the use of articles in their Dutch during the period of data collection (i.e., until age 3;6-4;0).

4.2.4 Word order

A final matter to be considered is the word order of the components of the object naming construction. It is a typical characteristic of copular constructions that the order can be reversed, without changing the propositional meaning. In the case of the object naming construction, this reversal results in [NP COP $_{\text{neuter}}$DEMpro]. Indeed, utterances like *een paard is dat* 'a horse is that' are found in the adult dataset analysed before. From a Construction Grammar perspective, it is not expected that the meaning of the 'label-first' and the 'normal' order are identical, because a difference in form always implies a difference in meaning. The use of the label-first order in the adult dataset is therefore analysed briefly. Table 4.3 gives an overview of the frequency of use of the label-first and the normal order in object naming utterances in the adult subset.

Table 4.3 Adults' use of normal and label-first order in Dutch object naming utterances

	Alice	Nel	Elma	Hanneke	Total
Normal order	37	62	40	58	197
Label first	6	9	1	1	17

At least one instance of the label-first order is found for each adult. In general, they constitute 8% of all object naming utterances. Only Hanneke produces significantly fewer utterances with label-first order (2%, Fisher exact p=.03) than the other adults. A closer look at the use of label-first order shows that its main function is to give the label additional focus. In the normal object naming construction, the demonstrative pronoun is typically the topic (given information), as it has been established before what it refers to, for instance by a preceding question ('what is that?') or by general attention directing devices such as pointing or the imperative 'look!'. The label is generally the focus (new information) of an object naming utterance. In some situations, however, the label may need more emphasis, and in these cases, it can be put in initial position in the utterance. Although it is not possible to analyse all occurrences of the label-first order in detail, the extract in (3) should give an idea.

(3) Alice (TEA) and Yunus are naming animals in a picture book about a farm.
*TEA: *nee , dat is toch geen paard ?* 'no, that is not a horse, is it'
*TEA: *je weet wel wat paard is* . 'Surely, you know what horse is'
*TEA: *nee , dat is een hert* . 'no, that is a deer'
*TEA: *hert is dat* . '(a) deer is that'

Prior to the episode in (3), Alice had asked Yunus to name an object in a picture and Yunus had answered *paard* 'horse'. In (3), Alice rebukes him and says he should have known it is not a horse. The correct label *hert* 'deer', however, is a word Yunus probably does not know. Alice realises this and gives the answer herself: *dat is een hert* 'that is a deer'. She subsequently repeats it a second time with the emphasis on the label in first position: *hert is dat* 'deer is that'. For all 17 label-first order utterances in the adult dataset, the function can be analysed as giving additional focus on the label, because (1) the child had used another (often incorrect) label (8 instances), (2) the adult realised the label was a difficult or new word for the child (4 instances), (3) for some other reason not always clearly identifiable from the context (5 instances). In Construction Grammar, a different form associated with a different meaning must be analysed as a separate construction. The label-first construction is thus given its own name: 'additional focus object naming construction'.

4.2.5 Non-native adult Dutch speakers' use of the object naming construction

Additional analyses were made of the speech of three mothers in the bilingual corpora: the mothers of Mehmet, Batuhan and Şükran. The purpose of these analyses is on the one hand to show the kind of Dutch input the bilingual children receive from their non-native Dutch-speaking mothers. On the other hand, the analyses provide some

insight into the difficulties adult second language speakers of Dutch have with the object naming constructions.

Mehmet's mother, who is not a native speaker of Dutch, but, being born in the Netherlands, fairly proficient in that language, produces object naming utterances that are largely similar to the native Dutch speakers reported on before. She uses only neuter demonstrative pronouns, although the distribution of *dit* (17 utterances) and *dat* (57 utterances) differs significantly from the average use among the native Dutch speakers. However, the native Dutch speakers also differed significantly from each other. Mehmet's mother uses the copula form *is* 'is', as well as *zijn* 'are' and *was* 'was'. However, *is* 'is' is more predominant in her speech than among the native Dutch speakers (71 out of 74 utterances, Fisher exact $p<.001$). She does not use the label-first order, which is a significant difference ($p=.005$) with the native Dutch speakers taking into consideration the large number of object naming utterances in normal order she produces. Mehmet's mother thus uses the Dutch object naming construction in a targetlike fashion, although she does seem to cling more strongly to its basic singular present tense form with normal word order than the native Dutch speakers.

The picture is different for Batuhan's mother, who arrived in the Netherlands when she was eight years old. Similar to several of the native Dutch speakers she uses the neuter demonstrative pronoun *dat* most frequently in the basic object naming construction (26 utterances). However, she does not use the neuter demonstrative pronoun *dit* in the object naming construction, which is significantly different from the native Dutch speakers (Fisher exact $p<.001$). Moreover, she regularly uses the non-neuter demonstrative pronoun *deze* (13 utterances) in the object naming construction, which none of the native Dutch speakers do. It is remarkable that the label in constructions with *deze* is always a noun without an article (e.g., *deze is olifant* 'this$_{\text{non-neuter}}$ is elephant'), although she frequently produces the indefinite article when she uses *dat* (e.g., *dat is een pannekoek* 'that$_{\text{neuter}}$ is a pancake'). She never uses a past tense form of the copula in the object naming construction, but this is not significantly different from the native Dutch speakers, who do not use that form frequently either. Batuhan's mother twice produces an object naming construction with label-first order. In one case, it was clearly an instance of the additional focus object naming construction, as she corrected a label given by Batuhan before. The second case was of a different kind. Batuhan's mother had asked her son to point to some dolls in a picture (*waar zijn de poppetjes?* 'where are the dolls?'). While Batuhan takes some time to find the answer, a Turkish visitor gives the answer pointing at real children, however, not dolls. Batuhan's mother corrects the visitor by pointing at the dolls and says *poppetje is deze, Deniz* 'doll is this, Deniz', emphasising *deze*. Using label-first order to put (contrastive) focus on the demonstrative pronoun rather than the label does not occur in the speech of any of the native Dutch speakers. When they want to focus on the demonstrative pronoun rather than the label, they use the normal word order with prosodical stress on the demonstrative pronoun.

Şükran's mother has a low level of Dutch language proficiency and produces only two utterances that name objects. One is an instance of the most common construction among the native Dutch speakers: *dat is Şükran* ('that is Şükran'), when pointing to a girl in a picture. The other is similar to object naming utterances in early child speech: *deze*

geld 'this money', meaning 'this is money'. In this utterance, she uses the pronoun *deze* 'this' rather than *dit* 'this' or *dat* 'that' and does not provide the copula.

On the basis of the object naming constructions produced by the three mothers presented here, it can be concluded that the most proficient second language learner uses the construction in a targetlike fashion. The less proficient mothers, however, produce several types of non-targetlike utterances. In order to explore the possible influence of Turkish as the first language in the deviations produced by the non-native Dutch speakers, Turkish object naming constructions are described in the next section.

4.3 Turkish object naming constructions

Turkish object naming utterances typically take the form [DEMpro NP]. In this section, an overview is presented of the object naming utterances produced by four Turkish adults in another subset of the Nap-Kolhoff and Van der Heijden bilingual corpora. The four adults are the mothers of Mehmet, Batuhan, and Yunus, as well as Sibel, the Turkish investigator in the Van der Heijden corpus. For the latter, only the recordings with Berrin are included in the subset. All adults are bilingual and speak Dutch to varying degrees (see Chapter 2). The total bilingual sample consists of 13,177 utterances, but as the adult speech has not been coded for language, it is not clear how large the Turkish subset is exactly. In general, however, these adults speak mainly Turkish during the recordings.

In order to give an indication of the kind of object naming utterances found in the dataset, some examples of object naming utterances produced by Yunus's mother are presented in (4).

(4) (a) *bu köpek* 'this dog: this is a dog'
(b) *o bulut* 'that cloud: that is a cloud'
(c) *at bu* 'horse this: a horse this is'
(d) *geitmiş o* 'goat-EVI that: that is (apparently) a goat'

4.3.1 The demonstrative pronoun

The Turkish language has three demonstrative pronouns, *bu* 'this', *şu* 'this/that', and *o* 'that'. The meaning of the different pronouns is related to actual or discourse related proximity (similar to Dutch and English), but also to the hearer's visual attention to the referent (Küntay & Özyürek, 2006; Özyürek, 1998). *Bu* 'this' and *o* 'that' relate to proximity, whereas *şu* is neutral with respect to proximity. A characteristic of *şu* is that it always refers to contextually new information: it draws attention to objects the hearer is not (yet) looking at (Göksel & Kerslake, 2005; Özyürek, 1998).

When naming objects, it is usually the label rather than the pronominal reference to the object that is new information and it is thus not surprising to find that *şu* is not used

often in the Turkish object naming construction[23]. Table 4.4 gives an overview of the demonstrative pronouns used by the four adults under investigation.

Table 4.4 Adults' use of demonstrative pronouns in Turkish object naming utterances

	Mehmet's mother	Batuhan's mother	Yunus's mother	Sibel	Total
bu	12	11	45	52	120
şu	-	3	-	-	3
o	25	11	37	13	86

In general, *bu* is the most frequently used demonstrative pronoun in Turkish object naming utterances (57%), whereas *o* occurs in 41% of the utterances. Mehmet's mother has a preference for *o* (68%, Fisher exact p<.001), whereas Sibel has a relatively strong preference for *bu* (80%, p<.001). The only adult who uses *şu* in a few object naming utterances is Batuhan's mother. As the use of demonstrative pronouns is highly context- dependent, the dividual differences between the adults are probably to be attributed to differences in situations in which their speech was recorded.

4.3.2 Tense

The most frequent tense form for object naming is the present tense, which is not marked by any suffix in Turkish copular sentences (see 4a-c above). In the dataset of the four Turkish adults, on average 95% of the object naming utterances is in the present tense (see Table 4.5).

Table 4.5 Adults' use of tense in Turkish object naming utterances

	Mehmet's mother	Batuhan's mother	Yunus's mother	Sibel	Total
Present	34	25	80	61	200
Evidential *-mİş*	3	-	2	3	8
Other	-	-	-	1	1

In addition, the evidential form *-mİş* occurs sporadically (5%). In some cases, the evidential is used because the adult is already talking in evidential mood as a common fictional narrative style (Aksu-Koç, 1988). In other cases, the evidential is used when the adult uses a Dutch label for a word, which had been used by a native speaker of Dutch before. The evidence for the correctness of the label is the fact that the other person used it. An example is given in (5).

[23] In the case of object naming questions, the reference is much more likely to be new information, as the question is often a way of attracting attention to an object. Indeed, *şu* occurred much more frequently in object naming questions such as *şu ne?* 'this/that what: what is this/that?' (12%).

(5) *MOT: *Türkçesi keçi, Hollandacası ben bilmiyom*. 'the Turkish (word) is *keçi* ('goat'), the Dutch (word) I do not know'
*INV: *geit*. 'goat'
*MOT: *huh?*
*INV: *geit*. 'goat'
*MOT: *geitmiş o*. 'goat-EVID that: that's (apparently) a goat'

The only other tense form found in the adult dataset is the factive past tense *-Dİ* (*postacıydı bu* 'postman-PAST this: the postman this was', which occurred when Sibel reminded Berrin of the name for a character in a picture book she had already named before.

4.3.3 Word order

The basic word order of object naming utterances is [DEMpro NP], but the reverse order [NP DEMpro] also appears in the dataset. Table 4.6 gives an overview of the 'normal' and 'label-first' order utterances in the dataset.

Table 4.6 Adults' use of word order in Turkish object naming utterances

	Mehmet's mother	Batuhan's mother	Yunus's mother	Sibel	Total
Normal order	31	25	71	57	184
Label first	6	-	11	8	25

Except for Batuhan's mother, all adults produce object naming utterances in label-first order (12%). The absence of label-first order object naming utterances for Batuhan's mother is not significant in comparison to low amounts of such utterances among the other adults. The meaning of the normal word order is similar to the normal word order of the Dutch object naming construction (see Section 4.2.4): the demonstrative reference to the object is the topic and in first position, whereas the label is the new information (focus), which is put in second position. The meaning of the label-first word order is different from Dutch, however. In Dutch, the label-first word order has been identified as an 'object naming construction with additional focus on the label'. In Turkish, the label-first order is probably better analysed as an 'object naming construction with a backgrounded (demonstrative) reference to the object'. Göksel & Kerslake (2005: 396) explain that the word order in copular sentences such as object naming constructions can be reversed to de-emphasise the element in the final position. In an utterance like (4c) *at bu* 'horse this: a horse this is', the reference of the demonstrative pronoun is taken for granted by the speaker, and perhaps only added in order to avoid confusion or as an afterthought. Although it is not possible to study the Turkish label-first (or better: demonstrative-last) construction in more detail here, such an analysis would have to take stress patterns into consideration, as backgrounded information can never be stressed in Turkish.

In sum, there are several differences between Dutch and Turkish object naming constructions, but there are also a number of similarities. An overview of the characteristics of the object naming construction in each language is given in Table 4.7.

Table 4.7 Summary of object naming constructions in Dutch and Turkish spoken language

Characteristics	Dutch	Turkish
Basic object naming construction	[DEMpro COP NP]	[DEMpro NP]
Number of demonstrative pronouns	4 (*die, deze, dit, dat*)	3 (*bu, şu, o*)
Number of demonstrative pronouns used in object naming construction	2 (*dit, dat*)	3 (*bu, şu, o*)
Function label-first construction	additional focus	backgrounded (demonstrative) reference to the object

4.4 Children's Turkish object naming constructions

Before turning to the study of the development of Dutch object naming constructions by the seven Turkish-Dutch bilingual children, a short overview is presented of their use of object naming constructions in Turkish. Already during the first recordings at age 2;1-2;7, the children name objects with utterances similar to the ones produced by Yunus's mother in (4). The main aim of this section is to show that the children have already acquired the main components of the Turkish object naming constructions when they start learning Dutch. All Turkish data available for each child have been used in the analyses presented below (19,815[24] utterances).

4.4.1 Demonstrative pronouns

In Table 4.8 the bilingual children's use of demonstrative pronouns in Turkish object naming utterances is presented.

[24] The total number of Turkish utterances was calculated by adding a proportion of the mixed, undecided and 'other' utterances to the number of Turkish utterances per child (see Chapter 3 for coding of language). The proportions used are the number of Turkish versus Dutch utterances in the recordings. Although this number is thus an estimation, it takes the mixed and unclear utterances into consideration as well, in order to avoid an underestimation of the number of utterances (in monolingual corpora, unclear utterances are counted as well).

Table 4.8 Bilingual children's use of demonstrative pronouns in Turkish object naming utterances

	Mehmet	Batuhan	Yunus	Şükran	Filiz	Berrin	Selma	Total
bu	30	13	33	2	39	38	4	159
şu	-	4	-	9	1	-	1	15
o	34	11	19	70	42	18	3	197

All children use both *bu* and *o* in object naming utterances, and some use *şu* as well. In contrast to the four Turkish adults, the children generally use *o* (53%) more than *bu* (43%). However, similar to the adults, individual preferences differ. Yunus (63%, Fisher exact p=.001) and Berrin (68%, p<.001) use significantly more *bu*, whereas Şükran produces significantly more *o* (97%, p<.001). Like the adults, children use *şu* only infrequently in object naming utterances (4%). Only Batuhan (14%, p=.02) and Şükran (11%, p=.001) use *şu* relatively often. Küntay & Özyürek (2006) showed that four- and six-year-old monolingual children do not use *şu* in adultlike fashion, indicating the absence of the hearer's visual attention to the referent. It is thus interesting to note that at least some children do use *şu* in object naming utterances. It is not possible here to go into the exact characteristics of this demonstrative pronoun in their speech.

4.4.2 Tense

The children use object naming constructions only in the unmarked present tense form. This is significantly different (Fisher test p<.001) from the adults, most of whom also produced some other forms, especially the evidential *-mİş* form. Although the evidential form is not completely absent in other kinds of utterances in child data, it is a known fact that especially its use as an evidentiality marker is generally not acquired before age four (Aksu-Koç, 1988).

4.4.3 Word order

All children use label-first word order in addition to the normal word order of object naming utterances, although only infrequently (7%, see Table 4.9). The bilingual children use significantly fewer label-first utterances than the adults (12%, Fisher exact p=.04).

Table 4.9 Bilingual children's use of word order in Turkish object naming utterances

	Mehmet	Batuhan	Yunus	Şükran	Filiz	Berrin	Selma	Total
Normal order	61	26	51	79	70	53	6	347
Label first	3	2	1	2	12	3	2	25

The general impression is that the use of the label-first construction by the children is targetlike. It has been observed in other studies of Turkish child speech as well that Turkish children use word order in rather targetlike fashion. As Aksu-Koç & Slobin (1985: 857) for example noted in their data: "In reading through our own transcripts of

Turkish child speech we have been struck by the extreme rarity of contextually inappropriate word orders." As it is at present not possible to do a more extensive investigation into the exact meaning of the label-first constructions produced by the children, the general impression, supported by observations such as Aksu-Koç & Slobin's will have to do.

In sum, it can be concluded that the bilingual children already produce object naming constructions in their basic forms during the first recordings at age 2;1-2;7. Like adults, they use them mostly with the demonstrative pronouns *bu* and *o*, in the unmarked present tense form and in [DEMpro NP] order. More sophisticated variations, such as the use of other tense forms or label-first word order, occur infrequently or are absent altogether. The exact meaning of the variations that do appear cannot be determined at present. In general, however, the children use object naming constructions in Turkish from very early on and in appropriate ways.

4.5 Research questions

Dutch object naming constructions pose interesting potential learning problems for children and second language learners . It should not be difficult for learners of Dutch to notice the demonstratives, as they are salient (they often bear stress), frequent, and they are also used as single-word utterances. The fact that demonstrative pronouns figure as a pivot in the schemas discussed in Section 4.1, shows that native Dutch children indeed learn to use them easily.

What may be more problematic, however, is the fact that in the Dutch object naming construction, only neuter demonstrative pronouns (*dit, dat*) are used, and non-neuter demonstrative pronouns (*die, deze*) are not. This would not necessarily be a problem, were it not for the fact that neuter demonstrative pronouns can be used in copular constructions indicating property or possession (e.g., *deze is mooi* 'this is beautiful', *die is van mij* 'that is of me (mine)'). Learners usually need a lot of input before they acquire such distributional differences between specific constructions. Since all demonstrative pronouns can be used in Turkish object naming constructions, it may be even harder for speakers of Turkish to learn the twist in the Dutch construction that some demonstrative pronouns can and others cannot occur in it.

The copula is probably also difficult to learn, as is evidenced by its absence in the early pivot schemas. Although its high frequency in the input would facilitate learning, the low salience of the copula may be an impeding factor. The copula is usually not stressed and often realised in a contracted form with the demonstrative pronoun (e.g., *da's een auto* 'tha(t)'s a car'). It is likely that the copula in object naming constructions is initially acquired as an unanalysed fixed form with the demonstrative pronoun (*dat+is* X)[25]. The bilingual children already speaking Turkish as a first language, may face additional difficulty, because their first language does not use a copula in the object naming construction at all.

Finally, the exact use of the additional focus construction with label-first order is probably difficult to learn as well, as its function is rather sophisticated. Although

[25] The +-sign instead of a space is used to indicate a fixed expression.

children have been observed to understand some functions of encoding information structure at the age of three or four, they generally do not use linguistic means to express the subtleties of information structure until age six or seven (Gürcanlı, Nakipoğlu & Özyürek, 2007; Küntay, 2002; Pan & Snow, 1999).

Figure 4.1 gives an overview of the potential learning problems presented by object naming constructions with normal word order. The object naming constructions found in the speech of two non-native speakers of Dutch in Section 4.2.5 did indeed show some of the non-targetlike features presented in Figure 4.1. As was noted before, the third element of the construction, the NP referring to the label, is not studied in the present analyses. The main reason is that the bilingual children have not yet acquired the structure of the NP, especially the use of articles (see Section 4.2.3).

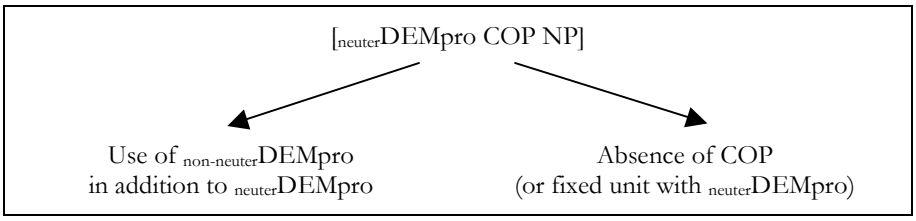


Figure 4.1 Potential non-targetlike features of object naming constructions used by children and second language learners of Dutch

In the light of the considerations presented about potential difficulties for learning the Dutch object naming construction, the following research questions are addressed in this chapter:

(1) What constructions do the children use to name objects in Dutch?
(2) How do these constructions develop over time?
(3) To what extent do these constructions differ from object naming constructions used by adults?
(4) To what extent do the object naming constructions produced by the bilingual Turkish-Dutch children differ from those used by monolingual children learning Dutch as a first language?

4.6 Method

4.6.1 Informants

In order to answer the research questions, the seven bilingual children in the Nap-Kolhoff and Van der Heijden bilingual corpora (see Chapter 2) are studied, as well as longitudinal data from three monolingual Dutch children between the age of 1;6 and 4;0: Sarah, Matthijs, and Josse. The spontaneous speech transcripts for these three normally developing monolingual Dutch children are available in CHILDES (MacWhinney, 2000).

Data for Sarah are available in the Van Kampen corpus (Van Kampen, 1994; Van Kampen & Corver, 2004). Transcripts between the ages of 1;6 and 4;0 are used in the present analyses. This dataset contains 14,219 child utterances. Sarah lives in Utrecht and is the second child in her family. Her mother is a linguist who collected and studied the data herself. For Matthijs, data are used from the Groningen corpus (Wijnen & Verrips, 1998). All the transcripts are used, covering the age range from 1;10 to 3;7 and containing 19,884 child utterances in total. Matthijs's mother works part-time as an orthopedagogical therapist and his father is a musician. Matthijs has one younger sister. From the Groningen corpus, data for Josse are also used. These data were collected between the ages of 2;0 and 3;4. This dataset contains 12,648 child utterances. Josse lives in Amsterdam and has one younger brother. Both his parents have a university education and work part-time.

It should be noted that the Dutch children whose data are used come from families with a higher socio-economical status than the bilingual children in this study. This is important, as the educational level of the parents is often positively related to the quantity and the quality of the interactions parents provide their children with (Bus, Leseman & Keultjes, 2000; Hart & Risley, 1995). As there are no data available in CHILDES for Dutch children from low educated families, this problem can at present not be solved.

4.6.2 Analyses

The analyses in this chapter are based on an inventory of object naming utterances in all transcripts. From this list, all utterances were excluded that did not express the reference to an object explicitly by means of a demonstrative pronoun[26], as well as object naming questions (e.g., *wat is dat?* 'what is that'?). Negative statements and statements of recurrence (i.e., including adverbs such as *ook* 'also' and *nog een* 'another') were included. In the remaining list of utterances, the reference to the label was replaced with the letter 'L' (label).

The second step involved establishing the possible level of schematicity of the utterances in the list. As was discussed in Chapter 1, constructions are acquired through schematisation on the basis of specific utterances in specific contexts. Schematisation occurs through the commonalities learners notice between utterances in the input and between the specific usage contexts in which those utterances are used. For example, a child who knows the words *poes* 'cat' and *hond* 'dog', can infer from the utterances *dat is een poes* 'that is a cat' and *dat is een hond* 'that is a dog' in contexts in which an adult names animals, that *dat is een* X 'that is an X' is an object naming construction. This construction can become more abstract when the child starts to notice differences with similar kinds of constructions, such as the plural *dat zijn poezen* 'those are cats' (*dat* COP X).

When looking at actual productions of children, the schematicity of the expressions has te be inferred from the variation in similar utteraces. For example, if a child spontaneously produces *dat is een poes* 'that is a cat' and *dat is een hond* 'that is a dog', it

[26] The only other words used occasionally for referring to objects expressed their general location (*hier* and *daar*). They are not included in the present analyses.

can be inferred that he (or she) is employing the schematic construction *dat is een* X. Or if no other instances of the demonstrative pronoun *dat* and/or the copula *is* are found, the unit *dat+is* can be considered fixed. Of course, it cannot be determined whether the child actually used the more abstract construction, as cognitive linguistics assumes that speakers have constructions available at several levels of abstraction. For child data, however, it can at least be concluded that the child has the available data in its productive repertoire to be able to reach a specific level of abstraction. Whether it actually uses it, is another question. Therefore, the term 'possible level of schematicity' is used. Figure 4.2 exemplifies the possible levels of schematicity for the object naming utterance *dat is een poes* 'that is a cat'. Schematicity is pictured as a continuum.

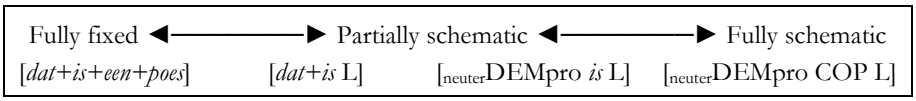


Figure 4.2 Different possible levels of schematicity for the utterance dat is een poes *'that is a cat'*

Different possible levels of schematicity for the early word combinations without a copula found in child language (see 1a-e in Section 4.1) are given in Figure 4.3.

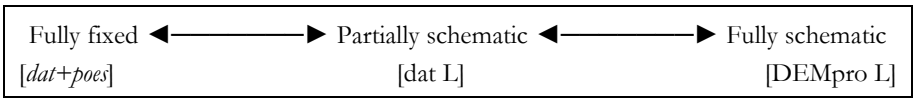


Figure 4.3 Different levels of schematicity for the utterance dat auto *'that poes: that is a cat'*

The utterance *dat poes* 'that cat: that is a cat' can be a fixed expression for a child, although it is not likely that the highest possible level of abstraction of such an object naming utterance would indeed be fixed, because it is not an adultlike expression and can thus not directly be imitated from the input. Although it is possible that the expression becomes entrenched as a fixed unit once the child starts using it over and again, it is usually the case that a child producing *dat poes* 'that cat: that is a cat', also produces similar utterances, such as *dat hond* 'that dog: that is a dog' and *dat auto* 'that car: that is a car'. The construction would then be a partially schematic pivot schema, exemplified in Figure 4.3 as [*dat* L]. An even higher level of abstraction would be found if a child also uses other demonstrative pronouns in similar utterances, leading to [DEMpro L].

The highest possible level of abstraction is thus determined on the basis of two kinds of analyses. First, the level of 'fixedness' is determined on the basis of the use of the individual words in other utterances. Only if an element is also used in other utterances, is it considered a separate element, rather than a fixed unit with another element. Second, the possible level of schematicity of the separate elements that are function words is determined on the basis of similar function words appearing in similar utterances (e.g., *is* and *zijn* vs. COP). As it is the goal of the analyses to describe developmental patterns, the set of 'other utterances' is always defined as the utterances found in the same transcript and transcripts at earlier ages. Only if it is clear that

utterances in a specific earlier transcript are exceptional compared to the general pattern, can that transcript be excluded from other analyses. An example would be a child for whom the pivot schema [*dat* L] is determined, but who uses other demonstrative pronouns during a specific recording (leading to [DEMpro L]), but then reverts to the less abstract [*dat* L] in later recordings.

The rules of thumb for establishing the level of schematicity of the object naming constructions in the child language data are summarised in (6a-b)

(6) (a) Only if a child uses all items as single-word utterances or in other constructions as well, describe the construction as containing all those items as separate units (e.g., *dat is* L). If not, consider the fixed parts to be one unit (e.g., *dat+is* L);
(b) Only if a child uses at least two forms of the copula in the construction, describe this item as COP. If not, use the specific copula (e.g., *is*);
(c) Only if a child uses all neuter or non-neuter demonstrative pronouns in a construction, describe it as having an element $_{\text{neuter}}$DEMpro or $_{\text{non-neuter}}$DEMpro respectively. If not, use the specific pronoun (e.g., *dat* L);
(d) Only if a child uses at least three demonstrative pronouns in a construction, describe it as having an element DEMpro. If not, use the specific pronoun (e.g., *dat* L).

The rules of thumb (6b-d) could be determined on the basis of the list of utterances naming objects extracted from the dataset. For (6a), additional analyses were necessary. In most cases, KWAL and COMBO commands in CLAN (see Chapter 2) could be used for finding all utterances containing specific words and their contexts.

Before turning to the results, some remarks need to be made about the fact that for some children only a few object naming constructions were found in the data. Selma and Berrin, for example, produced such utterances only nine times during the recordings. One might therefore ask whether the development sketched for those children is a valid reflection of their actual development. When the construction [*het+is deze* L] was described for Berrin as containing a fixed unit *het+is*, how can we be sure that the fixedness is not an artefact of the fact that only a few other object naming utterances are available? The answer lies in the fact that the main component of the description of object naming constructions in the child data was the level of schematicity, based on the occurrence of demonstrative pronouns and copular forms in utterances naming objects as well as in other kinds of utterances. In total, the data used for establishing the developmental picture therefore involved more utterances than only (for some children) the handful of naming objects. Demonstrative pronouns as well as copula forms tend to occur frequently in the recordings once a child starts using them. Thus, if Berrin had really already been using the copula *is* productively when she produced [*het+is deze* L], it would probably not have been completely absent from the recordings.

4.7 Bilingual children's Dutch object naming constructions

In this section, the results of the analyses for the seven bilingual Turkish-Dutch children are presented. For each child, the development of object naming construction with 'normal' word order is sketched (Section 4.7.1-4.7.7). Subsequently, the utterances with label-first order found in the child data are discussed (4.7.8). The section concludes with a summary of the findings (4.7.9).

4.7.1 Mehmet

Die is the only demonstrative pronoun Mehmet uses productively, mostly in single-word utterances, from the beginning of the period of data collection at age 2;3. At this age, he also produces an instance of his most frequent object naming construction, [*die* L]. The other demonstrative pronouns come into use between ages 3;4 and 3;6, although Mehmet uses them only infrequently. Only at age 3;6, does he use these pronouns productively in object naming constructions, i.e., [*dit* L] and [*deze* L]. After this age he relapses into the use of *die* exclusively in object naming constructions.

Object naming constructions with a copula are found for the first time at age 3;2 ([*dit+is* L] and [*dat+is* L]). At this age, the schematicity of constructions with a copula appears to be low. As a matter of fact, until age 3:3, Mehmet uses the copula *is* only in fixed expressions, such as *wat is dat?* 'what is that?' and *waar is* L? 'where is L?'. In object naming constructions, as well as in other constructions, the copula becomes productive at age 3;10. During the last two recordings Mehmet uses several instances of [*die is* L]. Although the use of the copula is targetlike, the use of the non-neuter demonstrative pronoun *die* is not. During the last recording Mehmet no longer produces object naming utterances without the copula. A summary of Mehmet's object naming constructions is given in Table 4.10.

Table 4.10 Mehmet's object naming constructions

Construction	Frequency	Age
[*die* L]	48 (80%)	2;3-3;10
[*dat+is* L] and [*dit+is* L]	4 (7%)	3;2
[DEMpro L]	2 (3%)	3;6
[*die is* L]	6 (10%)	3;10-4;0

4.7.2 Batuhan

Batuhan produces *die* for the first time during the recordings at age 3;0 and subsequently uses it frequently as a single-word utterance and in longer utterances. From this age onwards he also uses *die* in his only object naming construction during the recordings, i.e., [*die* L]. In a specific context at age 3;6, Batuhan once produces the relatively fixed expression [L *is+dat*], which is discussed in more detail in Section 4.6.8. Batuhan does not produce the copula *is* in any other utterance during the recordings. The other demonstrative pronouns are hardly ever used by Batuhan either. *Deze* he uses

a few times from age 3;7 onwards and *dit* only once at age 3;10. Table 4.11 summarises the data for Batuhan.

Table 4.11 Batuhan's object naming constructions

Construction	Frequency	Age
[*die* L]	136 (99%)	3;0-4;0

4.7.3 Yunus

Yunus, as well as the children in the Van der Heijden bilingual corpus, produces far fewer object naming utterances than Mehmet and Batuhan. Yunus produces the demonstrative pronoun *die* for the first time at age 3;0, using it as a single-word utterance. A month later, he starts using it in multi-word utterances and at age 3;2 he uses it for the first time during the recordings in an object naming construction [*die* L]. This construction remains his most frequent object naming construction during the recordings. Yunus uses *deze* a few times from the age of 3;2 onwards as a single-word question when he wanted his interlocutor to name an object. At age 3;6 he uses it in an object naming construction [*deze* L]. During later recordings, he also uses *deze* in other constructions, for instance *mag niet deze pakken* 'not allowed this take: it is not allowed to take this'. The other demonstrative pronouns (*dit, dat*) do not appear in object naming constructions, and only infrequently, although sometimes clearly productively, as a single-word utterance or in other constructions.

Yunus never uses a copula in his object naming constructions and only sporadically in other kinds of utterances. At age 3;5 he only uses the copula *is* in fixed expressions, such as *wat is die?* 'what is that', *wat is dit* 'what is this?' and *waar is* X 'where is X'. A month later Yunus also uses the copula more productively. A summary of Yunus's object naming constructions is given in Table 4.12.

Table 4.12 Yunus's object naming constructions

Construction	Frequency	Age
[*die* L]	9 (70%)	3;2-3;9
[$_{\text{non-neuter}}$DEMpro L]	4 (30%)	3;6

4.7.4 Şükran

Şükran produces only seven object naming utterances with 'normal' word order – all during a single recording at age 3;6 and all of the form [*die* L]. Earlier, at age 3;0, she had already used a few label-first object naming utterances of the form [L *dit*]. They are further discussed in Section 4.6.8. As single-word utterances, Şükran uses all four demonstrative pronouns from age 2;2 and 2;5 onwards. *Deze* and especially *die* also occur in slots of other constructions. From age 2;11 onwards, there are a few instances in the dataset of productive use of the copula *is*, although Şükran does not use it when naming objects. A summary of Şükran's rather meagre data is presented in Table 4.13.

Table 4.13 Şükran's object naming constructions

Construction	Frequency	Age
[*die* L]	7 (100%)	3;6

4.7.5 Filiz

Filiz produces object naming constructions during four recordings. During the first recording at age 2;1, she says *die bebek* 'that doll'. Filiz is the only child discussed so far who uses all demonstrative pronouns frequently as single-word utterances or in slots of other constructions from early on. Already at the age of 2;1 she uses all four demonstrative pronouns independently. Nevertheless, it takes almost a year before she produces an object naming construction again during the recordings. At age 3;0, she uses [*die* L] again, as well as [*deze* L]. During this recording she also produces constructions with other demonstrative pronouns in label-first order (see Section 4.6.7). From age 3;3 onwards, only the form [*deze* L] is used. It is interesting to notice that object naming constructions with *deze* rather than *die* are most frequent for Filiz, as this was not observed for the bilingual children discussed so far.

Filiz produces the copula *is* already during the recording at age 2;1 in the fixed question *is dat?* 'is that: what is that?'. From age 2;7 and 2;8 onwards the copula appears in other kinds of utterances, e.g. *is niet veel, hoor* 'is not much, don't you know', *pis is die* 'dirty is that', *die is van mij* 'that is of me: that is mine' and *is niet leuk* 'is not nice'. Nevertheless, Filiz produces *is* only sporadically in object naming constructions. At age 3;0 and 3;3 Filiz produces *dit is niet boek, hè?* 'this is not book, right?' and *dit is een poppetje* 'this is a doll'. Object naming utterances without a copula remain the most frequent ones, however, and the only construction used during the last recording at age 3;6. Table 4.14 summarises Filiz's object naming constructions.

Table 4.14 Filiz's object naming constructions

Construction	Frequency	Age
[*die* L]	1 (6%)	2;1
[$_{\text{non-neuter}}$DEMpro L]	4 (24%)	3;0
[*dit is* L]	2 (12%)	3;0-3;3
[*deze* L]	10 (59%)	3;3-3;6

4.7.6 Berrin

Berrin produces only a few object naming utterances. At age 2;5, she repeats *deze poes* 'this$_{\text{non-neuter}}$ cat: this is a cat' several times. The fifth time she rephrases it as *het is deze poes* 'it is this$_{\text{non-neuter}}$ cat'. Her next utterance is *deze poes* 'cat' again. From age 2;2 onwards, she had already been using the demonstrative pronouns *deze* and *die* productively. As Berrin does not use the pronoun *het* 'it' in any other utterance during the recordings and the copula *is* only productively from age 2;10 onwards, [*het+is deze* L] is considered a fixed expression. It is unlikely that *deze* in this utterance is a

demonstrative determiner, as Berrin never uses demonstrative determiners during the recordings.

At age 2;8, another instance of [*deze* L] is found. When Berrin is 3;1 years old, she produces [*die* L], although the label is given in Turkish. During the last recording, she produces another instance of [*die* L]. A summary of Berrin's object naming constructions is given in Table 4.15.

Table 4.15 Berrin's object naming constructions

Construction	Frequency	Age
[*deze* L]	8 (73%)	2;5-2;8
[*het+is deze* L]	1 (9%)	2;5
[*die* L]	2 (18%)	3;1-3;6

4.7.7 Selma

Selma is the most proficient Dutch speaker among the bilingual children. During the recordings, she produces only a few object naming constructions. The first object naming utterance is found at age 2;5 and has the targetlike form [*dit is* L] (*dit is een appel* 'this is an apple'). At age 2;7, she also produces an utterance containing the copula *is*, but in combination with the non-targetlike pronoun *die* (*die is mama* 'that is mum'). During later recordings she produces both [*dit is* L] and [*die is* L]. Between ages 2;10 and 3;3, she also produces a few object naming utterances without a copula: [*deze* L], [*dit* L], and [*die* L]. A few label-first order object naming utterances are found at age 3;1 (L *dit*) and 3;6 (L *die*), which are discussed in Section 4.6.8. A summary of Selma's normal order object naming constructions is given in Table 4.16.

Table 4.16 Selma's object naming constructions

Construction	Frequency	Age
[*dit is* L]	3 (33%)	2;5-3;1
[*die is* L]	3 (33%)	2;7-3;6
[DEMpro L]	3 (33%)	2;10-3;3

4.7.8 Label-first word order

Table 4.17 lists the object naming construction with label-first order in the speech of the seven bilingual children. It can be seen that, with the exception of Batuhan's [L *is+dat*], all label-first utterances are characterised by the absence of the copula. As in the normal word order constructions, the most frequent demonstrative pronoun in the label-first utterances is *die*, but other demonstratives are found as well (i.e., *deze* and *dit*).

Table 4.17 Bilingal children's use of label-first order

Child	Construction	Frequency	Age
Mehmet	[L *die*]	4	3;3-3;10
Batuhan	[L *die*]	9	3;1-4;0
	[L *is+dat*]	1	3;6
Yunus	[L *die*]	2	3;2-3;9
Şükran	[L *dit*]	3	3;0
Filiz	[L DEMpro]	4	3;0
Berrin	-	-	-
Selma	[L *dit*]	1	3;1
	[L *die*]	1	3;6

Batuhan's [L *is+dat*] is found during a recording at age 3;6, when he and the investigator are looking at a picture book. Shortly before producing it, Batuhan had said *lampen* 'lamps' while pointing at a picture. The investigator answered *ja, lamp, goed zo* 'yes, lamp, well done'. It is perhaps because the investigator repeats the singular form of Batuhan's earlier plural form that Batuhan wants to emphasise that he sees more than one lamp: *twee lampen is dat* 'two lamps is that'. The elements *is* and *dat* are determined as fixed (*is+dat*), because Batuhan never uses the demonstrative pronoun *dat* nor the copula in other utterances during the recordings. The fixed unit *is+dat* he probably remembered from the immediately preceding input, in which the investigator asked *wat is dat?* 'what is that?' several times.

Although it is difficult to determine the discourse related meaning of the label-first word order utterances, a closer analysis of the episodes in which they appeared shows that it is hardly ever used in adultlike fashion. Native Dutch adults use label-first order as a separate construction indicating additional focus on the label (see Section 4.2.4). The bilingual children regularly use label-first word order in situations in which that is clearly not the case. It is not clear whether label-first order constituted another kind of meaning difference for the children or not.

4.7.9 Summary

The object naming constructions produced by the seven bilingual children can be divided into three groups. First, there are constructions of the form [DEMpro L] or specific instances of the demonstrative pronoun, such as [*die* L] or [*deze* L]. All children use such constructions. What is characteristic of those constructions is the absence of a copula. If the construction contains a specific demonstrative pronoun, *die* is used by most children, although some children also use *deze*. Note that these two most frequently used demonstrative pronouns are non-neuter forms, which are not used in the target Dutch object naming construction. Several children use object naming constructions also in label-first order, e.g., [L *die*]. Although we did not examine the meaning of this label-first order in detail, it is clear that they are usually not used with functions that are similar to the function of 'additional focus' adult native Dutch speakers use them with.

A second group of constructions are those that contain a copula and are often targetlike in form, but were established as partially fixed expressions, because the children who use them have not yet acquired productive use of the copula and/or other parts of the construction. To this group of constructions belong Mehmet's [*dat+is* L] and [*dit+is* L], Batuhan's [L *is+dat*], and Berrin's [*het+is deze* L].

The third group of constructions are those that contain a copula and that are used by children who also use the copula in other constructions. Only Mehmet, Filiz, and Selma produce these constructions. In their use of the copula – for the children always *is* – those constructions are targetlike. They are not targetlike in their use of demonstrative pronouns. Adult object naming constructions require the use of the neuter demonstrative pronouns *dit* or *dat*. Selma and Mehmet mostly use the non-neuter demonstrative pronoun *die*, however. Filiz only uses *dit*, but her dataset is too small to make any claims about things absent in the data. All three children that use these most advanced constructions, also keep using the first group of constructions without a copula during the same recordings. A summary of the three groups of constructions is given in (5).

(5) Object naming construction I: without a copula
Object naming construction II: with a copula, but as fixed expression
Object naming construction IIIa: with a copula and a $_{\text{neuter}}$DEMpro (targetlike)
Object naming construction IIIb: with a copula and a $_{\text{non-neuter}}$DEMpro (not targetlike)

In sum, none of the bilingual children reaches a stage at the end of the period of data collection (age 3;6-4;0) in which they only use the targetlike object naming construction IIIa. This leaves us wondering how easily children learning Dutch as a first language acquire object naming constructions. In the following section, the developmental patterns of the bilingual children are compared to the object naming constructions used by three monolingual children learning Dutch as a first language.

4.8 A comparison with Dutch first language acquisition

In order to explore the question what object naming constructions monolingual Dutch children use over time, longitudinal data of three children between the ages of 1;6 and 4;0 are analysed and compared with the data presented for the bilingual children. Some background information about the three monolingual children was presented in Section 4.6.1. In this section, the production of the basic object naming construction is presented first (4.8.1-4.8.3), followed by the monolingual children's use of label-first order (4.8.4). It concludes with a comparison of the monolingual and the bilingual data (4.8.5).

4.8.1 Sarah

Already at age 1;6, Sarah uses *dit*, *dat*, *deze*, and *die* as single-word utterances. A month later, she starts using [*die* L], [*dat* L], and [*deze* L] for naming objects and some time later also [*dit* L]. Sarah uses object naming utterances without a copula for a year, until the age of 2;6. Already at age 2;10 Sarah starts using [*dit is* L] and [*dat is* L] additionally. At age 2;8, she also begins to use plural forms of the copula. Between the ages of 2;6 and 2;9, when she does not use object naming utterances without a copula anymore, she uses the non-target forms [$_{\text{non-neuter}}$DEMpro *is* L]. From the age of 2;10 onwards, she only uses the target forms [$_{\text{neuter}}$DEMpro COP L]. Sarah's constructions are summarised in Table 4.18.

Table 4.18 Sarah's object naming constructions

Construction	Frequency	Age
[DEMpro L]	38 (18%)	1;6-2;6
[$_{\text{neuter}}$DEMpro *is* L]	72 (34%)	1;10-2;7
[$_{\text{non-neuter}}$DEMpro *is* L]	20 (9%)	2;4-2;9
[$_{\text{neuter}}$DEMpro COP L]	81 (38%)	2;8-4;0

4.8.2 Matthijs

During the recordings at age 1;10, Matthijs uses *die* and *dat* as single-word utterances. A month later, he also uses *dit* and *deze* in such contexts. At the same age, he starts using [*die* L], and later [L *die*], for object naming. At age 2;4, Matthijs begins producing [*dit* L] and [*dat* L], and two months later also [*deze* L]. He uses object naming utterances without a copula until age 2;8. At age 2;4, Matthijs had already started using the target form [*dat is* L]. Three months later, at age 2;7, he starts using the demonstrative pronoun *dit* in similar utterances. From age 2;6 till the last recording at age 3;7, Matthijs sporadically uses the non-neuter demonstrative pronouns *die* and *deze* in object naming utterances with a copula. Table 4.19 summarises Matthijs's object naming constructions.

Table 4.19 Matthijs's object naming constructions

Construction	Frequency	Age
[DEMpro L]	28 (12%)	1;11-2;8
[*dat is* L]	19 (8%)	2;4-2;6
[$_{\text{neuter}}$DEMpro *is* L]	63 (27%)	2;7-2;8
[$_{\text{non-neuter}}$DEMpro *is* L]	9 (4%)	2;8-3;7
[$_{\text{neuter}}$DEMpro COP L]	110 (48%)	2;9-3;7

4.8.3 Josse

Josse uses *deze* as a single-word utterance during the first recordings at age 2;0 and *dit* at age 2;1. At age 2;1, he also uses *die* in a construction that is neither a fixed expression nor an object naming construction. *Dat* he only uses in fixed expressions or object naming utterances during the recordings until age 2;6. Josse's first object naming utterance is [*deze* L] at age 2;1. From age 2;2 onwards, he also uses [*dit* ə L], in which he pronounces a schwa between *dit* and the label. At age 2;6, the schwa evolves into the copula *is* in [*dit is* L]. Josse uses the copula in [*dat is* L] already at age 2;4. At age 2;5 and 2;6 he also uses [*dat* L] without a copula several times. Josse never says [*die* L].

At age 2;6, Josse starts using the plural forms of the copula in object naming utterances and from age 2;7 onwards he no longer uses any object naming utterances without a copula. At age 3;0, he once uses [*die is* L] and during the last months of data collection, between ages 3;2 and 3;4, occasionally also [*deze is* L]. Josse's object naming constructions are summarised in Table 4.20.

Table 4.20 Josse's object naming constructions

Construction	Frequency	Age
[DEMpro L]	13 (7%)	2;1-2;6
[*dat is* L]	7 (4%)	2;4-2;5
[$_{\text{neuter}}$DEMpro COP L]	149 (83%)	2;6-3;4
[*die is* L]	1 (1%)	3;0
[*deze is* L]	9 (5%)	3;2-3;4

4.8.4 Label-first word order

Table 4.21 lists the object naming utterances with label-first order in the speech of the three monolingual children. A few instances are found of label-first order in constructions without a copula (L *dat* and L *deze* for Sarah, L *die* for Matthijs). Most label-first utterance, however, contain a copula: mostly singular *is*, although Matthijs also produces the plural form *zijn*. Josse produces an instance of [L *is*+*dat*] at age 2;1, when he has not yet been using the copula in other contexts. The demonstrative pronoun in those label-first utterances with a copula is always neuter *dat*. Matthijs's non-targetlike form [L *dat is*] is remarkable. In this utterance, he put the label in first position, but the demonstrative pronoun in the second rather than the final position. In this way, the order of the pronoun and the copula in the basic object naming construction is maintained (i.e., *dat is*)[27].

[27] The unit *dat is* is not a direct imitation of an immediately preceding utterance by the interlocutor, his grandmother. She had asked *is dat de leeuw?* 'is that the lion?' and *en wat is dit dan?* 'and what is this then?'.

Table 4.21 Bilingual children's use of label-first order

Child	Construction	Frequency	Age
Sarah	[L *dat*]	1	1;10
	[L *deze*]	1	2;2
	[L *is dat*]	1	3;5
Matthijs	[L *die*]	1	2;1
	[L *is dat*]	1	2;5
	[L *dat is*]	1	2;7
	[L COP *dat*]	8	2;9-3;6
Josse	[L *is+dat*]	1	2;1
	[L *is dat*]	4	2;6-3;3

Native Dutch adults use label-first order in object naming constructions to give additional focal stress on the label, for instance when contradicting (correcting) the label a child had given, or when emphasising a word that is new for the child (see Section 4.2.4). In the cases of the earliest label-first utterances produced by the monolingual children around age two, it is often not clear whether they indicate any specific kind of meaning. The later label-first utterances, from about ages 2;6-3;0 onwards, are used in contexts in which adults would also use them.

4.8.5 Comparing bilingual and monolingual children's object naming constructions

The three groups of constructions identified in the speech of the bilingual children in (5) are also found in the data of the monolingual children. The three monolingual children all use object naming construction I (without a copula, [DEMpro L]) in their earliest object naming constructions. Whereas most of the bilingual children have more specific constructions, e.g., [*die* L], over long periods, the monolingual children use several or all demonstrative pronouns from early on.

Table 4.22 shows the use of specific pronouns in object naming construction I by monolingual and bilingual children. The differences between the bilingual children and the monolingual children are significant for all instances of *die*, *dit*, and *dat* ($p<.001$). The differences for *deze* are also significant if all bilingual and all monolingual children are taken together ($p<.001$), but the statistical significance disappears when Batuhan or Selma are excluded. The differences for *deze* can thus be attributed to the individual usage patterns for these two children, while the differences for the other demonstrative pronouns hold for the bilingual versus the monolingual groups as a whole.

The bilingual children use *die* more than the monolingual children, whereas the monolingual children use *dit* and *dat* regularly, which the bilingual children do not or only rarely. The monolingual children in Schaerlaekens' (1973) study (see Section 4.1) also produced *dat* in their two-word utterances expressing identification, which confirms the preferences of monolingual children found here. These findings are interesting, because *dit* and *dat* are the neuter demonstrative pronouns that are also used in the target Dutch object naming construction, whereas non-neuter *die* is not. This seems to indicate that the monolingual children are more sensitive to the fact that only

neuter demonstratives appear in this specific construction, despite the fact that overall, non-neuter demonstratives are more frequent in the input

Table 4.22 Use of specific demonstrative pronouns in object naming constructions without a copula

	deze	*die*	*dit*	*dat*
Bilingual				
Mehmet	1 (2%)	42 (95%)	1 (2%)	-
Batuhan	-	102 (100%)	-	-
Yunus	1 (8%)	11 (92%)	-	-
Şükran	-	5 (83%)	1 (17%)	-
Filiz	11 (73%)	3 (20%)	1 (7%)	-
Berrin	2 (50%)	2 (50%)	-	-
Selma	1 (20%)	2 (40%)	1 (20%)	1 (20%)
Monolingual				
Sarah	16 (39%)	9 (22%)	11 (27%)	5 (12%)
Matthijs	2 (7%)	13 (45%)	4 (14%)	10 (34%)
Josse	5 (38%)	-	5 (38%)	3 (23%)

Three of the bilingual children produce object naming construction II (with a copula, but as a fixed expression) during a restricted period of time, namely Mehmet ([*dat+is* L] and [*dit+is* L]), Batuhan ([L *is+dat*]), and Berrin ([*het+is deze* L]). One of the monolingual children also produces such a construction at an early stage. Josse uses [L *is+dat*] once at age 2;1. In all these cases, the fixed unit contains the copula *is*, which the children do not use at that point in their development in other contexts.

All monolingual children use object naming construction III (with a copula) as their most frequent construction during the period of observation. All of them use specific constructions at earlier ages, i.e., [*dat is* L] and [$_{\text{neuter}}$DEMpro *is* L], before reaching the highest level of schematicity with [$_{\text{neuter}}$DEMpro COP L]. None of the bilingual children reaches this abstract level, as they only use the copula *is*, and never its plural form *zijn* or past tense *was*.

Whereas the bilingual children commonly use non-neuter demonstrative pronouns (*die, deze*) in those constructions, which is not targetlike, all monolingual children predominantly use the neuter demonstrative pronouns *dit* and *dat* (construction IIIa). Nevertheless, they also use non-neuter demonstrative pronouns in those constructions (construction IIIb). Matthijs and Josse still use them in object naming constructions at the end of the period of data collection at age 3;4-3;7[28].

[28] It is also possible that non-neuter *die* and *deze* can be used in specific object naming (sub)constructions. At present, the exact possibilities are not clear to me. In a situation in which several objects are shown and named, use of *die/deze* seems to be possible: *dit is een traktor en deze is een auto* 'this$_{\text{neuter}}$ is a traktor and this$_{\text{non-neuter}}$ is a car'.

Developmental patterns

The development of monolingual children goes from object naming construction I (without copula), and sometimes occasional use of construction II (with copula, but as fixed expression), through a period in which both construction I and III (with copula) are used, to a period in which only construction III is produced. The monolingual children enter the first stage between ages 1;6 and 2;1 and the second stage three to five months later. The stage in which they use both kinds of constructions lasts six to eleven months. From ages 2;6-2;8 onwards, the monolingual children only use constructions with a copula.

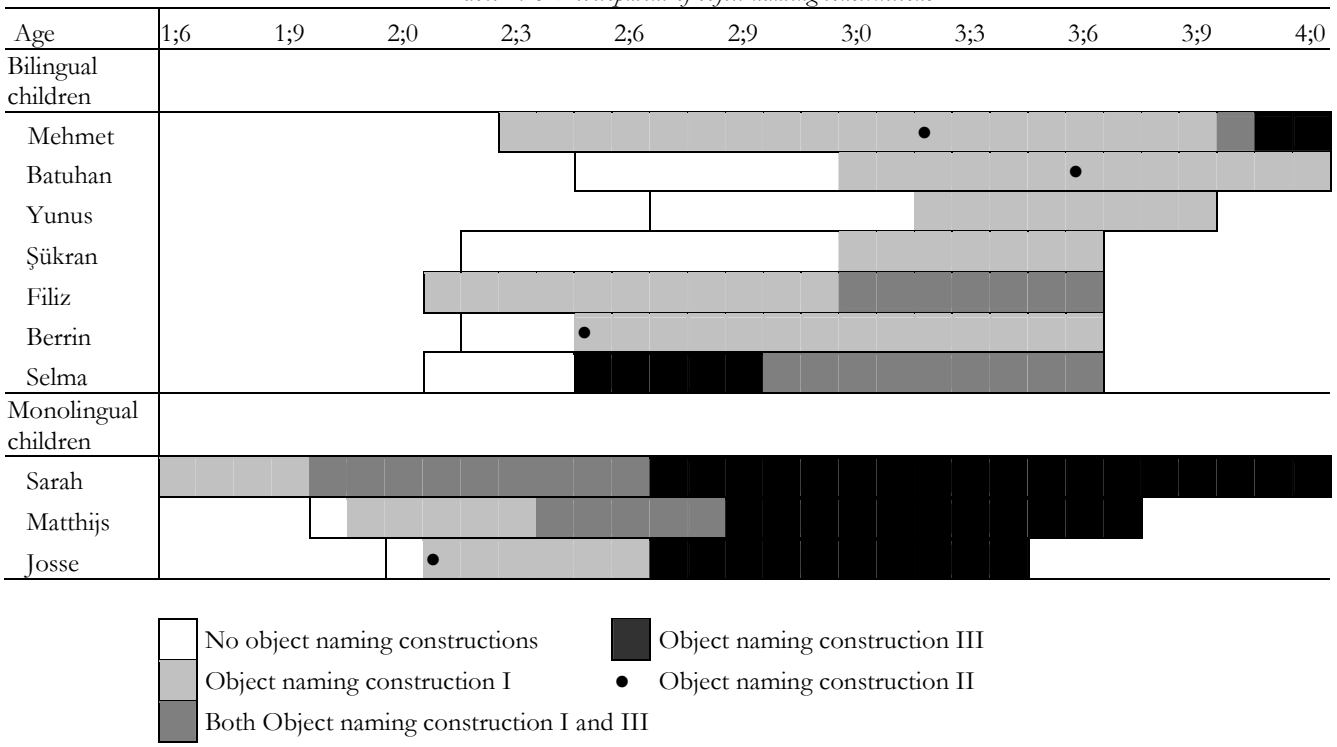
The bilingual children enter the first stage with only constructions I and II between the ages of 2;1[29] and 3;2. The only exception to this general pattern is Selma, who starts out with construction III. It is not unlikely, however, that she had been in the first stage before the data collection started. It is also possible that she was in the stage of producing both utterances with and without copulas, but that the utterances without a copula did not turn up in the rather sparse amount of data on object naming constructions. Four of the bilingual children, namely Batuhan, Yunus, Berrin, and Şükran, remain in the first stage of only using object naming constructions without a copula or with the copula only in fixed expressions, during the whole period of observation. Three children, Mehmet, Filiz, and Selma, reach the second stage in which they use both constructions with and without a copula. Only Mehmet also reaches the third stage of only using object naming construction III during the last recording at age 4;0. Table 4.23 gives an overview of the development of the bilingual and monolingual children.

Label-first constructions

All monolingual children and several bilingual children produce label-first order. The bilingual children generally use it in situations in which there is no emphasis on the label as focus of the sentence, which is how adult native speakers of Dutch use them. The monolingual children's earliest label-first constructions are often not about giving additional focus on the label either. Their later label-first constructions, however, are used in contexts in which adults would also use them, for example when contradicting or correcting a label given by someone else. The low number of label-first constructions and the limited availability of context information do not allow any specific claims about differences between the two groups of learners in this respect.

[29] Or earlier, because at 2;1 is the earliest observation.

Table 4.23 Development of object naming constructions



4.9 Discussion and conclusion

In this chapter, the development of Dutch object naming constructions produced by bilingual and monolingual children is presented. One of the reasons for choosing these constructions as a topic, is that they pose several potential learning problems for the learners. The target construction [$_{neuter}$DEMpro COP L] contains elements that are frequent in the input, but perceptually not salient (COP) and elements that are both frequent and salient ($_{neuter}$DEMpro), but possibly difficult to learn because a similar type of function word ($_{non\text{-}euter}$DEMpro) in general occurs much more frequently in the input, but not in the target construction. Both the monolingual and the bilingual children initially used object naming constructions, for example [DEMpro L], without a copular form, but the distributional characteristic that only the neuter demonstrative occurs in the construction was more difficult to learn for the bilingual children than for the monolinguals. In this section, these findings are related to some of the claims about language acquisition made in cognitive linguistics and usage-based approaches to language learning in order to find out what these differences between monolingual and bilingual children tell us about early child second language acquisition.

A first question to be answered is why monolingual children start out with object naming constructions without a copula, even though the copula is highly frequent in the input. Usage-based approaches generally predict that frequency is a major determiner of the ease with which something is acquired. However, it was observed that after using their first object naming utterance without a copula, it takes the monolingual children three to six months before they start using the copula form in these constructions. There are probably several factors that bring about this relatively slow acquisition of the copula. First, as was mentioned before, it is perceptually not very salient, as the copula is hardly ever stressed in everyday speech. It is a well-known fact that perceptual salience plays an important role in language acquisition (Ellis, 2000; 2008; Tomasello, 2003), as it influences whether or not children 'notice' something in the input. The low salience of the copula in the input thus might overrule the beneficial effect of its high frequency.

Another factor that may play a role is that it is not just the input received from others that plays a role in language acquisition, but also the input of what a child can hear himself say. If a child uses [DEMpro L] over and again, this construction becomes entrenched, in spite of the fact that it deviates from the input received from others. 'Unlearning' thus becomes more difficult the more entrenched a form is. One might now ask why the copula was absent in the early constructions in the first place. When they start talking, children usually start out with single word utterances. At about age 1;6-2;0, when they reach the stage of producing multi-word utterances, their early word combinations usually consist of two words that are relevant in a specific situation and that have roughly equivalent status (Tomasello, 2003). Early object naming utterances (e.g., *dat poesje* 'that cat; that is a cat') may be such combinations of reference to an object with a demonstrative (*dat* 'that') and the label (*poesje* 'cat'). As was discussed in Section 4.1, those early combinations may become pivot schemas, which are productive around a specific word (e.g., *dat* X). The copula is not a word that is 'relevant' enough to occur in early word combinations, which is probably why children start out with

object naming utterances without a copula. The 'irrelevance' of the copula is also evident from the fact that many languages, including Turkish, do not use a copula for basic object naming constructions. Just juxtaposing a demonstrative and the label generally transfers the intended meaning very well. In languages like English and Dutch, the copula mainly functions as a grounding element that lends a time dimension to the construction (Langacker, 2008). It is only because these languages virtually always require a grounded verb in sentences, that a copula form is needed in a situation like object naming, in which the concept of time is not very salient. Mechanisms of grounding are usually acquired at a later age by children (see also Chapter 6), although they might start using grounding elements in their speech at earlier ages, when these elements are very frequent in the input.

Like the monolingual Dutch children, the bilingual Turkish-Dutch children initially use object naming constructions without a copula. A difference, however, is the time they need before they start using the copula in (some) object naming constructions. Only three out of seven bilingual children start using the copula at all during the recordings. It takes Filiz nine and Mehmet nineteen months before they start using a copula in their object naming utterances. Only Selma, who receives relatively much Dutch language input, produces a copula in this construction early, already after five months. The other four bilingual children never use a copula form in their object naming constructions during the period of data collection. They had been using object naming constructions without a copula for as long as 8-14 months by that time.

A possible explanation for this extended period of non-use of the copula is the difference in amounts of input. If monolingual children receive 70 hours of language input per week, as Tomasello & Stahl (2004) estimate, they receive about 900-1500 hours of input between their first object naming construction without a copula and the appearance of the copula in those constructions, a period of 3-5 months. A child such as Batuhan receives Dutch language input mainly during his visits to the pre-school playgroup for about 12 hours per week. It thus takes him six times as long to receive the same amount of input, i.e., 18-30 months. He only attended the playgroup for 24 months. This suggests that amount of input may explain that many of the bilinguals do not leave the first stage during the period of data collection.[30]

An additional explanation for the fact that the bilingual children need quite some time before producing object naming constructions with a copula, is cross-linguistic influence. It is very well possible that the bilingual children transfer their Turkish constructions to Dutch. Turkish does not use a copula in object naming constructions, which might make it more difficult for Turkish speaking children to 'notice' the copula in object naming constructions in the Dutch input. What is interesting in this respect is the fact that when the bilingual children use Turkish words for the label, they always use a construction without a copula, even if they already use the copula in other object naming constructions.

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[30] These numbers are obviously only very rough indications. On the one hand, most children also receive some Dutch input outside the playgroup but on the other hand they do not receive full-time Dutch language input when they are at the playgroup. In addition, the playgroups of course have breaks for holidays, etc. The numbers are only used to sketch the differences in amounts of input. It is still an open question what amounts (and quality!) of input is needed for acquiring specific kinds of constructions (Tomasello, 2003).

A second expected and indeed observed learning problem presented by the Dutch object naming construction is the fact that only neuter demonstrative pronouns should be used, although non-neuter demonstrative pronouns are in general more frequent in the input. Both monolingual and bilingual children tend to use neuter as well as non-neuter demonstratives in their early object naming constructions without a copula. Nevertheless, it has been shown in this study that the bilingual children use the non-neuter pronoun *die* significantly more often, whereas the monolingual children use neuter *dit* and *dat* significantly more frequently. As soon as the monolingual children start using object naming constructions with a copula, they use the correct demonstratives *dit* and *dat*. Only occasionally, and usually also at a later age, do they use non-neuter demonstratives in their object naming constructions. The bilingual children, on the other hand, keep using the non-neuter demonstratives, also when they use the copula.

How can this difference between the monolingual and bilingual children be explained? The fact that this difference emerges in the earliest stages of acquisition may indicate that it relates to the main difference between the two groups when they start learning Dutch: bilingual children already know how to name objects, though in another language, whereas monolinguals are in the phase of discovering the act of object naming. Bilingual children know that there are words we call demonstrative pronouns, that can be used for object naming. As a consequence, they may search in their input for words in Dutch that fulfil that role and find what they are looking for in the demonstrative pronouns that are salient in some types of utterance, e.g., single-word utterances or stressed positions. These demonstrative pronouns appear to be *die*, and to a lesser extent also *deze*. Monolingual children, however, may be focused more on the specific utterances that adults use when they name objects. They are therefore more likely to extract *dit* and *dat* from their input. Wray (2008) calls these two types of learning 'formulaic' and 'analytic' learning.

Cross-linguistic influence from Turkish may also play a role in the bilingual children's preference especially for non-neuter *die*. In their Turkish object naming constructions, *o* is the most frequently used demonstrative, which is the closest translation of Dutch *die*. It is thus also possible that the children directly 'translate' their Turkish constructions into Dutch. A final explanation for the preference for non-neuter pronouns is that the mothers of the children also used those pronouns in their Dutch object naming constructions. Not all of the bilingual children's input is targetlike.

Summarising we can say that several factors are likely to play a role in the acquisition of Dutch object naming constructions by monolingual Dutch and bilingual Turkish-Dutch children. Both groups of learners are presumably influenced by factors such as input frequency, perceptual salience, intensity of Dutch language input, and entrenchment of non-target forms in the own speech. Differences between the monolingual and bilingual children could be due to cross-linguistic influence from Turkish, but also to a less 'holistic' (Wray, 2008) approach to the target language by the bilingual children. Although the data presented in this chapter do not provide conclusive evidence on this matter, it would be an interesting issue to pursue in other research, because this difference in approach to language learning is usually said to

appear at a much later age (around ages 8-12; Wray, 2008). It is very well possible that at a more fine-grained level, as in the case of the constructions investigated in this chapter, differences emerge at a much younger age. Especially if children receive only low amounts of input, they may feel 'forced' to search for other ways to categorise their newly learned linguistic knowledge. In addition, it is a difference that probably only emerges during the process of acquisition, as it is likely that most of the children will eventually acquire targetlike object naming constructions – just like Mehmet's mother, who was also born in the Netherlands.

5 Pronominal possessive constructions[31]

Possession is a basic concept in cognition, and possessive constructions are omnipresent in daily language use. It has been observed that children express the concept of possession in their earliest language productions (Clark, 2003) and adults learning a second language likewise express possession early on in their second language development (Broeder, 1991). In this chapter, two types of possessive constructions are investigated: attributive and predicative constructions with possessive pronouns. In Dutch, attributive expressions (e.g., *mijn fiets* 'my bike') consist of a nominal (*fiets* 'bike') and a possessive pronoun (*mijn* 'my'). The whole attributive expression can function as a nominal in larger constructions (e.g., *zij heeft mijn fiets geleend* 'she has borrowed my bike'). In predicative constructions, the possessive relation is expressed as a predicate, usually in a copular construction (e.g., *die fiets is van mij* 'that bike is of me: that bike is mine[32]').

The use of attributive and predicative possessives by the seven bilingual children has been studied longitudinally. The outcomes will be compared to possessives used by three monolingual children learning Dutch as a first language. In addition, a comparison is made with two Turkish adults learning Dutch as a second language, described in Broeder (1991). In the previous chapter, a comparison was made only between the bilingual Turkish-Dutch children and monolingual children learning Dutch. Broeder's adult data make it possible to investigate another aspect of early child second language acquisition: in what respects does it differ from or resemble adults learning Dutch as a second language?

Pronominal possessive constructions present an interesting linguistic form for a comparison of language acquisition in children and adults. First, because the concept of possession is elementary to human experience and frequently expressed in daily

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[31] This chapter is an adaptation of Nap-Kolhoff, E. & Broeder, P. (2008). 'I me mine', the acquisition of Dutch pronominal possessives by L1 children, L2 children and L2 adults. A revealing comparison. *ITL Journal of Applied Linguistics, 155*, 23-52.

[32] Note that despite the English translation the predicate in Dutch is a prepositional expression ('of me'), not a nominalisation ('mine'). Nominalisations of possessive pronouns also exist in Dutch (e.g., *mijne*), but are much less frequent in use.

language use, all language learners 'need' possessive constructions from early on in their language development. Second, because most languages, including Dutch, have several possessive constructions at their disposal, different learners may develop preferences for different forms. For example, as was reported in Chapter 3, Mehmet has been observed to use the rather remarkable expression, *van mij* X 'of me X', as an attributive possessive construction. Is this an idiosyncratic construction only used by Mehmet, is it a typically 'Turkish' phenomenon also found in the adult data, or do monolingual Dutch children also make this 'mistake'? In this chapter, such comparisons between individual learners and learner groups are made.

Before turning to the analysis of possessives in the child and adult speech data, an overview of pronominal possessive constructions in Dutch is presented in Section 5.1, followed by an overview of what earlier studies found with respect to the acquisition of these forms by different learner groups in Section 5.2. In addition, in order to determine the possible influence of Turkish as a first language on the acquisition of Dutch as a second language, an overview of Turkish possessives is presented in Section 5.3, followed by the use of these possessives by monolingual and bilingual children in Section 5.4.

5.1 Pronominal possessive constructions in Dutch as a target language

As was mentioned before, a main distinction in Dutch pronominal possessive constructions can be made between predicative and attributive constructions. In attributive constructions, the pronoun usually precedes the noun, as in *mijn auto* 'my car' or *jouw jurk* 'your dress'; in predicative constructions, the possessive is an independent predicate, as in *die auto is van mij* 'that car is of me: that car is mine' or *die jurk is van jou* 'that dress is of you: that dress is yours'. Predicative constructions with a postponed possessive also occur in combination with the preposition *van*, for example *die auto van mij* 'that car of me: that car of mine' and *die jurk van jou* 'that dress of you: that dress of yours'. In general, predicative constructions focus on the possessive meaning of the construction, while the possessive in attributive construction may have a larger range of meanings, such as reference point functions (Taylor, 1996). An overview of pronominal possessive constructions in Dutch is given in Table 5.1 (singular) and Table 5.2 (plural).

Table 5.1 Singular pronominal possessive constructions in Dutch

Construction	First person	Second person	Third person	
			Masculine	Feminine
Predicative				
van OBJ.PRO	*van mij*	*van jou*	*van hem*	*van haar*
nominalised POSS.PRO	*mijne(s)*	*jouwe(s)*	-	-
Attributive				
POSS.PRO X	*mij(n)* X	*jouw* X	*zijn* X	*haar* X
reduced POSS.PRO X	*m'(n)* X	*je* X	*z'(n)* X	*d'r* X
X *van* OBJ.PRO	X *van mij*	X *van jou*	X *van hem*	X *van haar*

Table 5.2 Plural pronominal possessive constructions in Dutch

Construction	First person	Second person	Third person
Predicative			
van OBJ.PRO	*van ons*	*van jullie*	*van hen (hun)*
nominalised POSS.PRO	*onze*	-	-
Attributive			
POSS.PRO X	*ons/onze* X	*jullie* X	*hun* X
reduced POSS.PRO X	-	-	-
X *van* OBJ.PRO	X *van ons*	X *van jullie*	X *van hen (hun)*

The most common predicative construction consists of an object pronoun (*mij* 'me', *jou* 'you', *hem* 'him', *haar* 'her', *ons* 'us'; *jullie* 'you.PL', *hen* 'them' or in spoken language also *hun* 'them', and the preposition *van,* 'of', which is also used in nominal possessive constructions (e.g., *de fiets van Guus,* 'the bike of Guus: Guus's bike'). *Van* has several other meanings in addition to being a possessive marker, including meanings which overlap with the English prepositions 'of' and 'from'. Another form that is used in predicative possessive constructions is a nominalised possessive pronoun, similar to English 'mine', 'yours', etc. The pronouns *mijnes* 'mine' and *jouwes* 'yours' are considered substandard in written language, but regularly occur in spoken language next to *mijne* and *jouwe*.

The attributive constructions typically involve the use of a possessive pronoun (*mijn* 'my', *jouw* 'your', *zijn* 'his', *haar* 'her', *ons/onze* 'our', *jullie* 'your.PL', *hun* 'their'), preceding the possessed entity (e.g., *mijn fiets* 'my bike'). Note that the second-person possessive pronouns *jouw* 'your' is different from the object pronoun *jou* 'you' in spelling, but not in pronunciation. In addition to full possessive pronouns, there are reduced possessive pronouns in Dutch for singular reference (*m'(n)* X 'my.RED X', *je* X 'your.RED X', *z'n* X 'his.RED X', and *d'r* X 'her.RED X'), which are used much more frequently than the full forms. Full pronouns are used only if the pronoun is emphasised; reduced pronouns are prosodically always unstressed and therefore perceptually less salient.

Although the presentation of possessive constructions in this section included abstract linguistic notions such as 'object pronoun' or 'possessive pronoun', this was done merely for descriptive purposes and is not meant to suggest that language users always use such abstract knowledge. It is very well possible that they have less abstract constructions in their linguistic repertoires, such as *jouw* X 'your X', *je* BODYPART 'your.RED BODYPART', or only the fixed chunk *mijn mama* 'my mum'. As a matter of fact, even if language users possess the linguistic abstraction, they may have it in their lexicon next to formulaic instantiations of that abstraction (Tomasello, 2003; Langacker, 2008). In this chapter, the data are presented at the level of a specific pronoun and a slot (e.g., *jouw* X 'your X').

Finally, the following should be kept in mind with respect to the notation of the Dutch pronominal possessive constructions in Tables 5.1 and 5.2 and the remainder of this chapter. Parentheses are used when a sound is not (always) pronounced. Thus, although there are two forms of nominalised possessive pronouns, e.g., *mijne* and *mijnes* (both 'mine'), they are not analysed separately, and are thus referred to with the single

term *mijne(s)*. Similarly, the term *m'(n)* X refers to either *m'n* X or *me* X (both 'my X'). The two forms mark no differences in meaning. The fact that *mij(n)* X 'my X' is treated in the same way needs some more explanation, because most child language studies consider *mij* X 'me X' as an instance of OBJ.PRO X and *mijn* X 'my X' as POSS.PRO X (Powers, 1995; Van de Craats, 2000; Van Kampen & Corver, 2004). Although this analysis may be correct, it is not possible to distinguish the object pronoun *mij* 'me' from the possessive pronoun *mijn* 'my' in these constructions, because *mijn* is sometimes pronounced as *mij* by adults as well (De Houwer & Gillis, 1998). The results of a search in the phonetically transcribed part of the Corpus of Spoken Dutch (Corpus Gesproken Nederlands; Taalunie, 2010) support this claim. Examples in the corpus are *mij stem* 'my voice', *mij koffer* 'my suitcase' and *mij sterke kant* 'my strong point'. All speakers in the corpus producing *mij* X also use *mijn* X, sometimes even with the same noun, which shows that it is a case of free rather than systematic variation.

To conclude this section on pronominal possessives in Dutch as a target language, an overview is presented of the pronominal possessive constructions produced by four adults in the Nap-Kolhoff and Van der Heijden bilingual corpora. The subset of native-speakers used in Chapter 3 (i.e., the teachers Alice and Nel as well as the investigators Elma and Hanneke) has been analysed here again. Table 5.3 gives an overview of the pronominal possessives (singular) the four adults produced.

Table 5.3 Adults' use of Dutch pronominal possessive constructions

Predicative		Attributive	
First person			
van mij *'of me'*	5	*m'n* X 'my.RED X'	9
mijne 'mine'	-	*mijn* X 'my X'	4
		X *van mij* 'X of me'	-
Second person			
van jou *'of you'*	15	je *X 'your.RED X'*	58
jouwe 'yours'	1	*jouw* X 'your X'	23
		X *van jou* 'X of you'	-
Third person, masculine			
van hem *'of him'*	-	*z'n X 'his.RED X'*	54
zijne 'his'	-	*zijn* X 'his X'	1
		X *van hem* 'X of him'	-
Third person, feminine			
van haar *'of her'*	-	*d'r* X 'her.RED X'	17
hare 'hers'	-	*haar* X 'her X'	2
		X *van haar* 'X of her'	-

The data show that the native speakers of Dutch predominantly use the attributive construction with reduced pronouns. Attributive constructions with the full personal pronoun occur as well. For first and second person reference, the predicative forms *van mij* 'of me' and *van jou* 'of you' are also attested. Only one nominalised possessive pronoun was found (*jouwe* 'yours'). Plural forms occur only infrequently: *ons* X 'our X'

and *jullie* X 'your.PL X' are both attested once, and *hun* X 'their X' three times. The postponed nominalised form X *van* OBJ.PRO is not attested in the data.

5.2 Acquisition of pronominal possessive constructions in Dutch

A number of studies have investigated the acquisition of possessive pronouns in Dutch. All of them are based on spontaneous or elicited production data. Bol & Kuiken (1986) studied the order of acquisition of pronouns in a cross-sectional design with 36 monolingual Dutch children (ages 1;2-3;11) and found that the first-person and second-person possessive pronouns *mijn* 'my' and *jouw* 'your' emerge at about the age of 2;4. The masculine third-person pronoun *zijn* 'his' is found in the data of one child at the age of 2;6, but otherwise only in the speech of children of at least age 3;0. Feminine *haar* 'her' and the plural pronouns *ons* 'our' and *hun* 'their' appear only incidentally in the speech of the oldest children (3;10 and 3;11). None of the children produce plural *jullie* 'you.PL'. Bol & Kuiken (1986) do not give any information on reduced pronouns or other pronominal possessive constructions.

Van Kampen & Corver (2004) investigated possessive constructions in the speech of a monolingual Dutch child, Sarah[33], between the ages of 1;6 and 5;2. Because the focus of their study was not specifically on pronominal constructions, the data they present do not give an overall picture of possessive pronouns. From age 2;3 onwards, Sarah uses first-person *mijn* 'my' and reduced *m'(n)* 'my' as well as *jouw* 'your' and reduced *je* 'your' in attributive constructions. At the same point in time, she started using *van mij* 'of me' in predicative constructions.

Powers (1995) studied first-person pronoun use in the longitudinal data (1;9-3;10) of five first language learners of Dutch. She found that *mijn* 'my', *m'n* 'my.RED', and *mijne* 'mine' were used predominantly in adult-like ways. Powers (1995) does not present a developmental picture of those findings.

Van de Craats (2000) investigated the acquisition of possessives by Turkish children learning Dutch as a second language as a background for a study on adult second language acquisition (see below). Data from the Van Helvert corpus (Van Helvert, 1985), consisting of longitudinal data for five eight and nine-year-old Turkish children starting to learn Dutch from scratch, showed that the children produced only a few targetlike attributive constructions. At the end of the period of data collection, the children had been in the Netherlands for eleven to thirteen months. Van de Craats (2000) and Van de Craats, Corver & Van Hout (2000) also analysed the speech of sixteen Turkish and sixteen Moroccan-Arabic six to nine-year-old children in the Vermeer corpus (Vermeer, 1986). These children had attended Dutch primary education for one to five years and were more proficient in Dutch than the children in the Van Helvert corpus. During a story retelling task, the second language learners used several pronominal possessive constructions, mostly for third-person reference. All but one Turkish child used the third person targetlike attributive construction with reduced pronouns as well as with full pronouns. Eight Turkish children also used the postponed X *van* OBJ.PRO construction.

[33] The same Sarah who is also studied in this chapter.

Within the framework of a project funded by the European Science Foundation (Perdue, 1993), some studies have been carried out on pronominal possessive constructions in Dutch second language acquisition by adults. These studies made use of the so-called ESF corpus, which consists of data collected longitudinally from four Turkish and four Moroccan untutored second language learners in the 1980s. Firstly, Broeder (1991, 1992) compared the way the learners referred to possession with attributive constructions in the retelling of a video fragment at three different points in time. Most learners used *mij(n)* X 'my X', *jouw* X 'your X', *zijn* X 'his X'. All Moroccan, but only one Turkish learner produced *haar* X 'her X'. One Moroccan and one Turkish learner used instances of the postponed X *van* OBJ.PRO. No instances of reduced pronouns were attested.

Van de Craats (2000) and Van de Craats, Corver & Van Hout (2000) investigated the production of attributive possessive constructions by the same learners in the same dataset of the ESF corpus, which included transcriptions of free conversations, role plays and other activities. Although their results generally confirmed those found by Broeder (1991, 1992), they also found that the two most proficient learners occasionally produced third-person attributive constructions with a reduced pronoun.

In sum, it appears that most research on the acquisition of pronominal possessives has concentrated on attributive constructions. These constructions are acquired around the ages of 2;6-3;6 by first language learners and most second language learners also learn to master them. Only the most proficient second language learners produce reduced possessive pronouns frequently. Not much is known about the acquisition of reduced pronouns by first language learners of Dutch. The postponed construction X *van* OBJ.PRO has not been studied in first language research either. Some of the more proficient child and adult second language learners do use this construction.

Non-targetlike constructions

Most of the studies investigating the production of possessive pronominal constructions also focused on the non-targetlike constructions that learners produce. Overgeneralisations attested in the first language data are **mij* 'me/my' and **mijn* 'my' in predicative constructions (Van Kampen & Corver, 2004; Powers, 1995) before the age of three. In addition, Van Kampen & Corver (2004) found **hem z'(n)* X 'him his.RED X' at about the age of four-and-a-half, which is an overgeneralisation of the nominal possessive construction *NP z'(n)* X 'NP his.RED X'. As Powers (1995) only studied first-person singular pronouns and Van Kampen & Corver (2004) focused more on nominal than on pronominal reference, it is likely that this is not the whole picture.

A non-targetlike construction found in all the second language studies is **van* POSS.PRO X 'of POSS.PRO X'. Twelve out of sixteen Turkish children in the Vermeer corpus (Van de Craats, Corver & Van Hout, 2000), who were generally rather proficient, also produced this non-targetlike construction. The Moroccan learners in the Vermeer and ESF corpora (Broeder, 1991; Van de Craats, Corver & Van Hout, 2000) also produced these constructions, although less frequently.

Another non-targetlike construction attested in all second language studies is *SUB/OBJ.PRO X. It is not clear from the analyses in Van de Craats (2000) and Van

de Craats, Corver, and Van Hout (2000) which pronouns were used in this non-targetlike construction and to what extent *mij* X 'me/my X' accounted for the productions. In addition, several non-targetlike constructions were found that occurred only among either Moroccan or Turkish learners. Some adult Moroccan learners in the ESF corpus produced *X-SUB/OBJ.PRO (e.g., **zus-ik*, 'sister-I') and *X *van hij* 'X of he'. One Turkish child in the Van Helvert corpus and one Turkish adult used *X-*mijn* (e.g., **huis-mijn,* 'house-my'). A Turkish child in the Vermeer corpus produced **onze-van broer* 'our-of brother'. Finally, three children in the Vermeer corpus made the overgeneralisation that was also attested in first language acquisition at later ages (Van Kampen & Corver, 2004), **hem z'n* X 'him his.RED X'.

In sum, it seems that first and second language learners make rather different kinds of overgeneralisations. However, not much is known about the presence, the frequency, and the development of non-targetlike pronominal possessive constructions in first language acquisition. This chapter presents a detailed overview of all overgeneralisations in the data of the three child and adult learner groups.

5.3 Turkish possessive constructions

The Turkish language has two word forms at its disposal for possessive reference. First, the genitive suffix *-İn*[34] added to the personal pronouns forms possessive pronouns: *benim*[35] 'I-GEN; my', *senin* 'you-GEN: you', *onun/bunun/şunun* 'he/she/it/this/that-GEN: his/her etc.', *bizim*[36] 'we-GEN: our', *sizin* 'you.PL-GEN: your.PL', *onların/bunların/şunların* 'he/she/it/this/that.PL-GEN: their'. These possessive pronouns are used in predicative possessive expressions, such as *bu benim* 'this (is) I-GEN: this (is) mine'. They can also be used in predicative expressions, in which possessive suffixes play a more important role, however. With the suffix *-ki-*, possessive pronouns can be nominalised (e.g., *benimki* 'mine').

The possessive suffixes *-(İ)m* '1SG: my', *-(İ)n* '2SG: your', *-(s)İ* '3SG: his/her/its', *-(İ)mİz* '1PL: our', *-(İ)nİz* '2PL: your.PL', and *-lErİ*[37] '3PL: their' can be attached to nouns (e.g., *bisiklet-im* 'bike-1SG: my bike') and be followed by case markers (e.g., *ev-im-de* 'house-1SG-LOC: in my house'). It is possible to use the possessive pronouns in addition to a possessive suffix (e.g., *ben-im araba-m* 'I-GEN car-1SG: my car'). Addition of the possessive pronoun usually indicates contrastive stress or sentence focus (Göksel & Kerslake, 2005).

In a specific possessive construction, the possessive pronoun is used *without* a possessive suffix on the noun. This construction is used with first and second person

[34] About the notation: 'İ' is realised as 'i', 'ı', 'u', or 'ü', depending on the vowel in the preceding syllable; the realisation of the sounds between brackets depends on the final sound of the preceding syllable (vowel or consonant).

[35] The genitive form of *ben* 'I' is irregular: *ben-im* , instead of *ben-in.*

[36] The genitive form of *biz* 'we' is irregular as well: *biz-im* , instead of *biz-in.*

[37] About the notation: 'E' is realised as 'e' or 'a', depending on the vowel in the preceding syllable; the realisation of the sounds between brackets depends on the final sound of the preceding syllable (vowel or consonant).

pronouns only and expresses a sense of community in the possessive relation (e.g., *biz-im köy* 'we-GEN village: our village', *sizin çocuk* 'you.PL-GEN child: your.PL child'.

An overview of the different attributive and predicative possessive constructions in Turkish is presented in Table 5.4 (singular) and Table 5.5 (plural).

Table 5.4 Singular possessive constructions in Turkish

Construction	First person	Second person	Third person
Attributive			
POSS.PRO	*benim*	*senin*	*onun*
POSS.PRO-*ki*	*benimki*	*seninki*	*onunki*
Predicative			
(POSS.PRO) X-POSS	*(benim)* X-*(İ)m*	*(senin)* X-*(İ)n*	*(onun)* X-*(s)İ*
POSS.PRO X	*benim* X	*senin* X	-

Table 5.5 Plural possessive constructions in Turkish

Construction	First person	Second person	Third person
Attributive			
POSS.PRO	*bizim*	*sizin*	*onların*
POSS.PRO-*ki*	*bizimki*	*sizinki*	*onlarınki*
Predicative			
(POSS.PRO) X-POSS	*(bizim)* X-*(İ)mİz*	*(sizin)* X-*(İ)nİz*	*(onların)* X-*lErİ*
POSS.PRO X	*bizim* X	*sizin* X	-

In Table 5.6, the frequency of occurrence of the different Turkish possessive constructions in a subsample of the adult data in the Nap-Kolhoff and Van der Heijden bilingual corpora is presented (four adults, see Chapter 3 for details on informants). In general, the attributive construction with only a possessive suffix is the most frequent (83% of all constructions, 89% of the attributive constructions). The possessive pronoun is added to the possessive suffix in 10% of the attributive expressions. The predicative expression without a possessive suffix is encountered twice. In both cases, Mehmet's mother talked about her and her husband's bedroom by saying *biz-im oda-da* 'we-GEN room-LOC: in our room'. The adults use predicative expressions much less often than attributive constructions. Nominalised forms with -*ki* are encountered only a few times.

Table 5.6 Adults' use of Turkish possessive constructions

First person		Second person		Third person	
Attributive					
Singular					
benim X-*(İ)m*	27	*senin* X-*(İ)n*	39	*onun/bunun/şunun* X-*(s)İ*	74
X-*(İ)m*	332*	X-*(İ)n*	233	X-*(s)İ*	665
benim X	-	*senin* X	-		
Plural					
bizim X-*(İ)mİz*	2	*sizin* X-*(İ)nİz*	-	*onların/bunların/şunların* X-*(lEr)İ*	4
X-*(İ)mİz*	32	X-*(İ)nİz*	17	X-*(lEr)İ*	1
bizim X	2	*sizin* X	-		
Predicative					
Singular					
benim	25	*senin*	63	*onun/bunun/şunun*	12
benimki	4	*seninki*	9	*onunki/bununki/şununki*	2
Plural					
bizim	-	*sizing*	-	*onların/bunların/şunların*	-
bizimki	-	*sizinki*	1	*onlarınki/bunlarınki/şunlarınki*	1

*Including 258 instances of *anne-m* 'mother-1SG: my mother', a pet name for Mehmet.

5.4 Children's Turkish pronominal possessive constructions

Turkish children acquire noun (as well as verb) morphology at an early age. Aksu-Koç & Slobin (1985) noted that at the age of 2;0, monolingual children master the entire set of noun inflections, including possessive suffixes. Already at the age of 1;3 overgeneralisations have been noted in the speech of Turkish children that indicate creativity in the use of noun morphology. For example, in adult Turkish, in words that have a vowel followed by a final 'k' sound, the 'k' is deleted and the vowel is lengthened (in written form, the 'k' is replaced with a 'ğ') when a suffix is attached that starts with a vowel. *Bebek* 'baby/doll' thus becomes *bebeğ-im* 'baby/doll-POSS.1SG: my baby/doll'. In early speech production, children occasionally attach a suffix without deleting the final consonant. Küntay & Slobin (1999) report such an overgeneralisation with a possessive suffix by a child aged 1;7: *emzik-im-i* 'pacifier-POSS.1SG.ACC: my pacifier', instead of *emziğ-im-i*.

Nap-Kolhoff (2006) found similar overgeneralisations in possessives in the spontaneous speech production of monolingual Turkish children (see Sofu, 1995) between the ages of 2;0 and 3;6. Children produced *bebek-im* 'baby/doll-POSS.1SG: my baby/doll' instead of *bebeğ-im*, and *köpek-im* 'dog-POSS.1SG: my dog' instead of *kopeğim*. Another type of overgeneralisation found with possessive suffixes is the application of two third-person singular suffixes. *El-i-si* 'his hand' (target form: *el-i*), *diş-i-si* 'her tooth' (*diş-i*), and *baş-ı-sı* 'his head' (*baş-ı*) were encountered in the data. It is likely that children did not analyse the first suffix as such, and therefore applied the second suffix to

indicate the intended possessive meaning. The fixedness of the nouns and the possessive suffix can be explained from the input: the body parts *diş*, *baş*, and especially *el* occur much more frequently with than without possessive suffixes. A similar explanation holds for the 'k'-deletion overgeneralisations: both *bebek* and *köpek* occur more frequently in the input with the 'k', than without it. Aksu-Koç & Slobin (1985) claim that the k-deletion overgeneralisations do not occur any more in child speech after age 2;4, but Nap-Kolhoff (2006) found instances in the monolingual data as late as age 3;6.

Nap-Kolhoff (2006) also looked at the different possessive constructions in the speech of one child, İlknur, at age 2;0-2;2 and a year later at age 3;0-3;2. As early as age 2;0-2;2, İlknur produced possessive pronouns, possessive suffixes, and possessive constructions without a suffix, POSS.PRO X. A year later, she produced more possessives, but similarly distributed over the constructions. A nominalised possessive pronoun with *-ki* was found only once at age 3;0-3;2. In order to give an impression of the bilingual children's use of Turkish possessive constructions, Table 5.7 presents an overview of their production of these constructions.

Table 5.7 Bilingual children's use of Turkish possessive constructions

First person		Second person		Third person	
Attributive					
Singular					
benim X-*(İ)m*	109	*senin* X-*(İ)n*	38	*onun/bunun/şunun* X-*(s)İ*	65
X-*(İ)m*	379	X-*(İ)n*	115	X-*(s)İ*	542
benim X	19	*senin* X	4	**onun/bunun/şunun* X	10
Plural					
bizim X-*(İ)mİz*	1	*sizin* X-*(İ)nİz*	-	*onların/bunların/şunların* X-*(lEr)İ*	-
X-*(İ)mİz*	21	X-*(İ)nİz*	1	X-*(lEr)İ*	-
bizim X	4	*sizin* X	-	**onların/bunların/şunların* X	1
Predicative					
Singular					
benim	183	*senin*	61	*onun/bunun/şunun*	30
benimki	18	*seninki*	6	*onunki/bununki/şununki*	4
Plural					
bizim	14	*sizin*	1	*onların/bunların/şunların*	-
bizimki	3	*sizinki*	-	*onlarınki/bunlarınki/şunlarınki*	-

*Not adultlike

The most frequent expression X-POSS in the input is used by all children in singular forms, and by most children also in one or more plural forms. In 16% of the attributive expressions, the possessive pronoun is used as well. A striking difference with the adult data presented in Section 5.3, is the relatively high amount of POSS.PRO X (without a possessive suffix). Whereas only 2 instances are found in the adult data (0,1% of the attributive possessives), 38 cases are encountered in the child data (3%). This difference

is significant (Fisher exact, p<.001[38]). A look at the child utterances in which these constructions occur shows that most of them are not similar to the adult meaning of 'community'. The possessives without a possessive suffix appear mostly in the earlier transcripts. It seems that children simply 'omit' the suffix, probably because it is still rather difficult for them to produce. The intended meaning is nevertheless clear for the interlocutor, as it is expressed in the possessive pronoun.

Another difference with the adult data is that children use more predicative possessive constructions (20% of all possessives, versus 8% among adults). The occurrence of nominalised possessive pronouns with the suffix *-ki* in the child data (10%) is comparable to adults' use of it (15%, difference is not significant).

As in other studies on the acquisition of possessives in monolingual Turkish (Aksu-Koç & Slobin, 1985; Küntay & Slobin, 1999; Nap-Kolhoff, 2006), several overgeneralisations were found in the data of the bilingual children (see Table 5.8). Selma produces two possessive forms in which she fails to delete the final 'k' (see above). Şükran makes a similar overgeneralisation with a word ending in 'p' as a final consonant, which becomes a 'b' in adult Turkish when a suffix starting with a vowel is added. Şükran says *kitap-ım* 'my book' instead of *kitab-ım*. In addition, several overgeneralisations with double possessive suffixes were found. In most cases, the third-person possessive was produced twice, but in one case a child produced a first-person possessive to a (probably unanalysed) third-person suffix (*baba-sı-m* 'my father' instead of *baba-m*). In general, the overgeneralisations seem to be 'slips of the tongues', as most children also produce the targetlike forms during the recordings. It is interesting to note that children for whom more than one overgeneralisation was observed in the data, produce all overgeneralisations during the same recording. This could indicate that the child is in a certain developmental stage in which for example 'k'-deletion or possessive marking are foremost in their minds. Children produce these overgeneralisations between ages 2;10 and 3;6.

Table 5.8 Overgeneralisations with possessive suffixes

Child	'k'-deletion/'p'-'b'-alternation	Double possessive
Mehmet	-	*ad-ı-sı* 'his name' (3;3), *el-i-si* 'her hand' (3;3), *öbür-ü-sü* 'its other: the other' (3;3)
Batuhan	*yatağ-sı* 'her bed' (3;5), *yatağ* 'the bed' (3;5) (bed=*yatak*)	*saat-i-si* 'her watch' (3;5)
Yunus	-	-
Şükran	*kitap-ım* 'my book' (2;10)	-
Filiz	-	*baba-sı-m* 'my father' (3;4)
Berrin	-	*üç-ü-sü* 'its three: three of them' (3;6)
Selma	*bebek-im* 'my doll' (2;10), *çocuk-um* 'my child' (2;10)	-

[38] See Appendix C for a description of Fisher's exact test.

5.5 Research questions

Dutch pronominal possessive constructions present Turkish learners as well as monolingual Dutch children with several potential learning problems. For example, the input characteristics of frequency and salience predict conflicting outcomes of the ease with which the reduced possessive pronouns will be acquired. Reduced pronouns are the most frequent forms in the input, but at the same time they are prosodically always unstressed and thus not salient in the input. Another potential learning problem is the relatively high number of possessive constructions that can be used: predicative constructions (*van* OBJ.PRO), attributive constructions with full or reduced pronouns, postponed attributive constructions (X *van* OBJ.PRO), and nominalised possessives (e.g., *mijne(s)*). Do learners pick up these different constructions in their different forms with relative ease, or do they start with specific constructions or instances and only gradually expand their productive inventory of possessives to more forms? Do they perhaps even get confused by all the forms and start producing non-targetlike forms that are a mixture of several constructions?

Another question is to what extent Turkish learners' knowledge of Turkish possessives influences their acquisition of Dutch constructions. Several potential areas of cross-linguistic influence come to mind. Perhaps speakers of Turkish are confused by the fact that Dutch has more than one possessive pronominal forms (i.e., full and reduced), because Turkish has only one form. It is also possible that they have a hard time finding out that the Dutch forms used in most predicative constructions (possessive pronouns) and attributive constructions (the preposition *van* and object pronouns) are different, as the same form (possessive pronouns) can be used in Turkish. Finally, Turkish learners of Dutch may have problems placing the possessive pronouns before the noun, because Turkish makes use of suffixes that follow the noun. Perhaps this leads to a preference for a construction that is rather infrequent in Dutch, namely X *van* OBJ.PRO, in which the possessive is also postponed.

As there are many potentially problematic elements in the acquisition of Dutch pronominal possessives, probably leading to considerable individual variation, this chapter takes an inductive approach. First, an inventory is made of the actual production of possessives by children and adults. On the basis of the observed development of targetlike and non-targetlike constructions produced by the language learners, Section 5.11 discusses the learning problems that seem to play a role in the process.

Quite a different issue is what the expected differences between the three learner groups are. In Chapter 1, some potential differences between child first and child and adult second language learners were discussed. An inductive approach is also taken with respect to this issue. When the differences and commonalities between individual learners and learner groups have been established, possible explanations and conclusions are discussed in more detail. The research questions addressed in this chapter are:

(1) What attributive and predicative pronominal constructions do children use to express possession?
(2) How do these constructions develop over time?
(3) To what extent do these constructions differ from possessive pronominal constructions used by adult native speakers of Dutch?
(4) To what extent do the pronominal possessive constructions produced by the bilingual children differ from those used by monolingual children learning Dutch as a first language?
(5) To what extent do the pronominal possessive constructions produced by the bilingual children differ from those used by Turkish adults learning Dutch as a second language?

5.6 Method

5.6.1 Informants

In order to answer the research questions, the seven bilingual children in the Nap-Kolhoff and Van der Heijden bilingual corpora (see Chapter 2) are studied, as well as three monolingual children learning Dutch as their first language (Sarah, Matthijs, and Josse; see Chapter 4). In addition, longitudinally collected speech data from two Turkish adult second language learners, Mahmut and Ergün, are included in the analyses. The data are taken from Broeder (1991). Mahmut was nineteen years old when he migrated to the Netherlands in the 1980s. When he had been in the Netherlands for ten months, data collection started within the framework of the ESF project (Perdue, 1993). Ergün was seventeen when he arrived in the Netherlands and data collections started nine months later. The data were collected longitudinally for both learners over a period of 27 months. The recording sessions involved free conversations, but also role-play sessions and film retellings. Mahmut and Ergün acquired Dutch spontaneously, without any form of formal tuition. They did not speak any other languages besides Turkish and Dutch and they did not have Dutch-speaking partners or children. The total corpus for the two speakers consists of some 64,000 Dutch word tokens.

5.6.2 Analyses

All transcripts of two bilingual children and one monolingual child were read in detail in order to determine the possessive constructions used by the learners. Subsequently, a list was made of these forms and other possible forms for encoding possession. For all learners, utterances containing forms in the list of possessives were extracted from the data. All these utterances were checked to see whether they expressed a possessive relationship. Since the data are available in CHAT format, the CLAN software could be used (MacWhinney, 2000). The analyses of the adult data were taken from Broeder (1991).

In the early stages of acquiring a language like Dutch, the verbal or copular predicate is often left out (see also Chapters 3 and 4). Therefore, it was difficult to

decide whether an utterance like *ik auto* 'I car' should be considered as equivalent to an attributive possessive construction (*mijn auto*, 'my car') or as equivalent to *ik wil/heb/etc. auto* 'I want/have/etc. car'. In the analyses presented here, attributive constructions were only counted as such when it was clear from the rest of the utterance that the pronoun and the nominal were indeed one constituent.

In order to describe developmental patterns, age of emergence was used as a benchmark. Age of emergence was established at the first spontaneous production of a form.

5.7 Bilingual children's Dutch pronominal possessive constructions

In this section, the pronominal possessive constructions produced by the bilingual children are presented. Subsequently, the data of the monolingual Dutch children are presented (Section 5.8), followed by the adult second learners of Dutch (Section 5.9). In Section 5.10 the main commonalities and differences between the learner groups are discussed.

Table 5.9 gives an overview of the possessive pronominal constructions produced by seven bilingual Turkish between the ages of 2;1 and 4;0.

Table 5.9 Dutch possessive pronominal constructions used by the bilingual children (names abbreviated)

Construction	Meh	Bat	Yun	Şük	Fil	Ber	Sel	Total
Targetlike								
First person								
van mij 'of me'	30	7	2	-	12	-	17	68
mijne(s) 'mine'	1	-	-	-	2	1	-	4
mij(n) X 'my X'	1	2	-	6	2	4	13	28
Second person								
van jou 'of you'	1	-	-	-	-	2	4	7
jouw X 'your X'	-	-	-	4	-	-	2	6
je X 'your.RED X'	-	-	-	-	†(14)	-	-	†(14)
Non-targetlike								
First person								
**mij* 'me/my'	18	1	-	11	25	47	50	152
**mijn* 'my'	-	-	-	-	5	4	2	11
**van mij(n)* X 'of me/my X'	21	2	-	-	1	-	-	24
Second person								
**jou(w)* 'you(r)'	-	-	-	4	3	-	5	12
**van jou(w)* X 'of you(r) X'	2	-	-	-	-	-	-	2

†Only in formulaic expressions

The bilingual Turkish-Dutch children produce between one and five different Dutch possessive pronominal constructions during the period of data collection. Mehmet and Yunus only use singular first-person constructions, while the other children produce both first-person and second-person singular possessives. None of the bilingual

children produces plural or third-person constructions. Another general finding is that there is no targetlike construction that all the bilingual children produce.

For first-person reference all the children use *van mij* 'of me' and/or *mij(n)* X 'my X'. Filiz, Berrin, and Mehmet also use nominalised *mijne(s)* 'mine' a few times. As second-person possessives Berrin and Mehmet use *van jou* 'of you', Şükran *jouw* X 'your X', whereas Selma uses both forms. Filiz is the only child who produces a reduced possessive pronoun, namely *je* 'your.RED'. However, a closer look at her speech shows that she uses it only in fixed expressions: *je handen wassen* 'to wash your hands' and *hou je kop!* 'keep your.RED head: shut up!'. If we dismiss these instances of Filiz, we find that none of the bilingual children produce attributive constructions with reduced forms. In addition, postponed constructions (X *van* POSS.PRO) are not attested in the data of these children either.

5.7.1 Non-targetlike constructions

Yunus is the only learner who does not use non-targetlike constructions. As a matter of fact, he produces only two pronominal possessives in total, and they appear to be the targetlike forms *van mij* 'of me'. The other bilingual children use non-targetlike constructions in 25-88% of the cases. The most frequent non-targetlike form is **mij* 'me/my' as a predicative possessive, which all children use and which with Selma, Filiz, Berrin, and Şükran is more frequent than any other form. Selma, Filiz, and Berrin also overgeneralise attributive *mijn* 'my' to predicative use (**mijn*, 'my'). Another overgeneralisation is **van mij(n)* X 'of me/my X', which is used by Filiz, Mehmet, and Batuhan. While Filiz and Batuhan use this non-targetlike construction only once or twice, Mehmet uses it as (1).

(1) Mehmet (3;6): *is van mij tas!* 'is of me bag: is my bag!'

Mehmet also extends this overgeneralisation to second-person possessives. He produces *van jou* X 'of you X' twice. This second-person form is not attested in the speech of other children.

5.7.2 Developmental patterns

The developmental patterns of the seven bilingual children are given in Table 5.10. The age at which the children start using pronominal possessive constructions differs widely among the individual children. Whereas Selma, Filiz, and Berrin already used pronominal possessives at the start of data collection at ages 2;1 and 2;2, Yunus produces his first possessive one-and-a-half years later at the age of 3;7. The other children are situated somewhere in between, with first possessives occurring at the ages of 2;5 (Şükran), 2;9 (Mehmet) and 3;2 (Batuhan).

The most remarkable finding with respect to non-targetlike possessives is their persistence over time. Ages at which non-targetlike constructions were used by the bilingual children are indicated as grey cells in Table 5.10. It appears that none of the children stop using non-targetlike forms. At the end of the period of data collection, at

the ages of 3;6-4;0, all children still use non-targetlike forms. The only exception is Yunus, but he had hardly started using pronominal possessive constructions at that time.

Table 5.10 Developmental patterns for first and second person Dutch pronominal possessive constructions by the bilingual children (names abbreviated)†

Age	Meh.	Bat.	Yun.	Şük.	Fil.	Ber.	Sel.
2;1	Ø	Ø	Ø	Ø	**mij mijne*	Ø	**mij *mijn*
2;2	Ø	Ø	Ø	-	-	**mij*	*van mij*
2;3	-	Ø	Ø	Ø	Ø	Ø	Ø
2;4	-	Ø	Ø	-	**mijn*	Ø	Ø
2;5	-	-	Ø	**mij jouw* X **jou(w)*	Ø	*mij(n)* X	*mij(n)* X
2;6	-	-	Ø	Ø	Ø	-	Ø
2;7	Ø	Ø	-	-	*van mij*	Ø	-
2;8	-	-	Ø	Ø	Ø	*mijne*	Ø
2;9	*van mij*	Ø	Ø	Ø	Ø	Ø	Ø
2;10	-	-	Ø	-	**jou(w)*	-	**jou(w)*
2;11	-	-	Ø	*mij(n)* X	Ø	Ø	Ø
3;0	-	-	-	-	*mij(n)* X	**mijn*	-
3;1	*mij(n)* X **mij*	-	-	Ø	Ø	-	-
3;2	**van mij(n)* X	*mij(n)* X	-	Ø	Ø	Ø	Ø
3;3	-	-	-	-	*(je* X)‡	-	-
3;4	-	-	-	Ø	-	-	-
3;5	-	-	-	Ø	Ø	Ø	Ø
3;6	**van jou(w)* X	*van mij*	-	-	**van mij(n)* X	*van jou*	*van jou jouw* X
3;7	Ø	**mij*	-	Ø	Ø	Ø	Ø
3;8	-	-	*van mij*	Ø	Ø	Ø	Ø
3;9	-	Ø	-	Ø	Ø	Ø	Ø
3;10	-	**van mij(n)* X	Ø	Ø	Ø	Ø	Ø
3;11		-	Ø	Ø	Ø	Ø	Ø
4;0	*van jou mijne*	-	Ø	Ø	Ø	Ø	Ø

†"Ø" marks that no data are available at this age. Grey cells indicate that non-targetlike constructions are used at this age.
‡ Only in formulaic expressions

5.8 Monolingual children's Dutch pronominal possessive constructions

Table 5.11 gives an overview of the possessive pronominal constructions produced by the four monolingual Dutch children between the ages of 1;6 and 3;7.

Table 5.11 Possessive pronominal constructions used by the monolingual children

Construction	Sarah	Matthijs	Josse	Total
Targetlike				
First person				
van mij 'of me'	21	27	18	66
mijne(s) 'mine'	2	1	1	4
mij(n) X 'my X'	90	74	44	208
m'(n) X 'my.RED X'	48	20	3	71
X *van mij* 'X of me'	1	8	5	14
van ons 'of us'	1	-	2	3
onze 'our'	-	-	1	1
ons/onze X 'our X'	2	2	3	7
X *van ons* 'X of us'	1	-	3	4
Second person				
van jou 'of you'	6	9	-	15
jouwe(s) 'yours'	1	-	-	1
jouw X 'your X'	5	6	17	28
je X 'your.RED X'	26	25	5	56
X *van jou* 'X of you'	-	2	-	2
van jullie 'of you.PL'	-	-	1	1
jullie X 'your.PL X'	-	-	3	3
Third person				
van hem 'of him'	-	1	-	1
zijn X 'his X'	1	9	-	10
z'n X 'his.RED X'	11	14	13	38
haar X 'her X'	-	-	1	1
d'r X 'her.RED X'	1	-	-	1
Non-targetlike				
First person				
**mij* 'me/my'	5	14	2	21
**mijn* 'my'	1	-	-	1
**van mij(n)* X 'of me/my X'	3	-	2	5
Second person				
**jou(w)* 'you(r)'	2	1	-	3
**jij* X 'you.SUBJ X'	2	-	-	2

All forms for first and second-person possessive reference that the Dutch target language has at its disposal are found in the children's data. Some constructions occur at a low frequency and not with all children. Several third-person constructions are found in the dataset. All the children also produce a number of non-targetlike constructions.

Sarah, Josse, and Matthijs produce between thirteen and fifteen different targetlike possessive pronominal constructions. They use all the different constructions for first-person reference: predicative *van mij* 'of me', nominalised *mijne(s)* 'mine', attributive *mij(n)* X 'my X', its reduced form *m'(n)* X 'my.RED X', as well as the postponed construction X *van mij* 'X of me'. For second-person reference, only the full and reduced attributive constructions *jouw* X 'your X' and *je* X 'your.RED X' are produced by all three children. Sarah and Josse also produce predicative *van jou* 'of you'. Nominalised X *van jou* 'X of you' and *jouwe(s)* 'yours' are used only infrequently by Josse and Sarah. The one third-person construction that all three children use is the masculine reduced construction *z'n* X 'his.RED X'. Sarah and Josse produce the full-form construction *zijn* X 'his X' as well. Josse once uses the predicative form *van hem*. Sporadically, Sarah and Matthijs refer to third-person feminine possessions using *haar* X 'her X' or *d'r* X 'her.RED X'. Plural constructions are used by all three children for first-person reference, although not very often. Only Matthijs produces a few plural second-person constructions.

5.8.1 Non-targetlike constructions

Of the monolingual children's possessive constructions, only 3-7% is not targetlike. Although the bilingual children use non-targetlike forms much more frequently, the types of non-targetlike constructions they use are similar to the ones found among the monolingual children. The most frequent non-targetlike construction used by all monolingual children is **mij* 'me/my' as a predicative possessive form. Other first person overgeneralisations are **mijn* 'my', produced by Sarah, and **van mij(n) X* 'of me/my X', produced by Sarah and Matthijs. In those two non-targetlike constructions, the possessives of an attributive construction are used predicatively, or vice versa.

There are two different second-person non-targetlike constructions that are produced by the monolingual children. Sarah and Josse use the second-person object pronoun *jou* 'you' or the possessive pronoun *jouw* 'your' in a predicative construction **jou(w)*. In addition, Sarah uses the subject pronoun *jij* in a predicative construction. This is the only instance in the monolingual data of the use of a subject pronoun in a possessive construction. What may have made the second-person subject pronoun especially attractive for overgeneralisation, is the fact that it is acoustically similar to the first-person object and possessive pronouns *mij* 'me' and *mij(n)* 'my', but not to the first-person subject pronoun *ik* 'I'. In fact, Sarah indeed used the two pronouns *mij(n)* 'my' and *jij* 'you' in possessive constructions alongside each other in the same episode (see (2) – note that sounds in parenthesis were not pronounced).

(2) Sarah (2;6): *ik wil op jij (s)choot.* 'I want (to sit) on you lap' [...]
Sarah: *jij mag op mij(n) (s)choot.* 'you are allowed on me/my lap: you can sit on my lap.'

5.8.2 Developmental patterns

The developmental patterns that emerge for the three monolingual children are given in Table 5.12. The age at which children start using pronominal possessive constructions varies for each individual child. All children produce first-person pronominal possessives before second-person, and second-person before third-person, whereas plural constructions come last. First-person constructions emerge between the ages of 1;10 (Sarah) and 2;5 (Matthijs). The first second-person constructions are attested in the data between the ages of 2;0 (Sarah) and 2;9 (Matthijs). Masculine third-person constructions do not appear before the ages of 2;8 (Sarah) and 3;1 (Matthijs), while the few feminine productions are found at an even later age (2;11 and 3;2). Plural constructions emerged between the ages of 2;11 and 3;4.

It is interesting to see that within a few months after the emergence of their first pronominal possessive all children produce several attributive and predicative constructions for first-person and second-person singular reference. Rather than sticking to the ones they acquired first, they seem to be sensitive to the various different possessive constructions in their input and start using them themselves. All three children use full as well as reduced attributive constructions in the first few months.

Several interesting observations can be made with respect to the use of non-targetlike constructions over time. The grey fields in Table 5.12 mark ages at which non-targetlike constructions were produced. Sarah, Josse, and Matthijs do not produce non-targetlike forms constantly at all ages, but especially in the period when relatively many new constructions appear. Sarah does not produce any non-targetlike constructions after the age of 3;0, for Josse this is the case after the age of 2;8 and for Matthijs after the age of 3;3.

Table 5.12 Developmental patterns for first and second-person Dutch pronominal possessive constructions by the monolingual children†

Age	Sarah	Josse	Matthijs
1;6	-	Ø	Ø
1;7	-	Ø	Ø
1;8	-	Ø	Ø
1;9	-	Ø	Ø
1;10	**mij*	Ø	-
1;11	-	Ø	-
2;0	*je* X	-	-
2;1	*m'(n)* X, *van jou*	*m'(n)* X	-
2;2	-	*mij(n)* X	-
2;3	*mij(n)* X	*van mij*	-
2;4	*jouw* X, **jou(w)*	-	-
2;5	*van mij*	-	*mij(n)* X
2;6	*mijne(s), jouwe(s), *jij* X	*mijne, van jou*	-
2;7	-	X *van mij, *mij, jouw* X, **jou(w)*	-
2;8	**van mij* X, *z'(n)* X	*je* X	-
2;9	-	*z'(n)* X, *zijn* X	*jouw* X, *je* X
2;10	-	Ø	*van mij,* X *van mij, *mij*
2;11	X *van mij, van ons, ons/onze* X, X *van ons, d'r* X	-	*van jullie*
3;0	-	X *van jou, van hem*	**van mij* X
3;1	-	-	*z'(n)* X
3;2	-	-	*m'(n)* X, *haar* X
3;3	-	*ons/onze* X	*jullie* X
3;4	-	-	*van ons, ons/onze* X, X *van ons*
3;5	Ø	Ø	*mijne, onze*
3;6	-	Ø	-
3;7	*zijn* X	Ø	Ø

†"Ø" marks that no data are available at this age. Grey cells indicate that non-targetlike constructions are used at this age.

5.9 Turkish adults' Dutch pronominal possessive constructions

Mahmut and Ergün, two Turkish adults, were followed during the first three years of their stay in the Netherlands. They were acquiring Dutch as a second language without any form of formal tuition. The possessive pronominal constructions they use are presented in Table 5.13.

It is immediately clear from Table 5.13 that the two learners behave very differently with respect to the use of pronominal possessive constructions. Mahmut produces only five different constructions during the two years of data collection, while Ergün produces eleven different forms. Mahmut only uses singular constructions, while Ergün also uses first-person plural forms. Neither of the two adults use second-person or third-person plural constructions. Nominalised forms and attributive constructions with reduced pronouns are not produced by the learners either.

Mahmut produces the first-person targetlike construction *mij(n)* X 'my X' in an overwhelming number of cases. In addition, he also uses predicative *van mij* and two constructions for second-person reference, *jouw* X 'your X' and X *van jou* 'X of you'. For third-person reference he exclusively uses *zijn* X 'his X'.

Ergün produces only one targetlike predicative construction (*van ons,* 'of us'), but all attributive constructions with full pronouns (*mij(n)* X, 'my X'; *ons/onze* X, 'our X'; *jouw* X, 'your X', *zijn* X, 'his X', and *haar* X, 'her X'). In addition, Ergün uses several instances of the postponed construction (X *van mij*, 'X of me'; X *van ons*, 'X of us'; X *van jou*, 'X of you'; X *van hem*; 'X of him').

Table 5.13 Possessive pronominal constructions used by the adult second language learners

Construction	Mahmut	Ergün	Total
Targetlike			
First person			
van mij 'of me'	2	-	2
mij(n) X 'my X'	373	240	613
X *van mij* 'X of me'	-	2	2
van ons 'of us'	-	1	1
ons/onze X 'our X'	-	12	12
X *van ons* 'X of us'	-	1	1
Second person			
jouw X 'your X'	3	4	7
X *van jou* 'X of you'	1	1	2
Third person			
zijn X 'his X'	3	2	5
X *van hem* 'X of him'	-	2	2
haar X 'her X'	-	1	1
d'r X 'her.RED X'	-	7	7
Non-targetlike			
First person			
**van mijn* 'of my'	1	11	12
**van onze* 'of our'	-	4	4
**ik(ke)* X 'I X'	35	-	35
**van mij(n)* X 'of me/my X'	7	75	82
*X *van mij* X 'X of me X'	-	1	1
*X *van mijn* 'X of my'	-	1	1
**van ons* X 'of us/our X'	-	20	20
**van onze* X 'of our X'	-	12	12
*X *onze* 'X our'	-	2	2
*X *van ons* X 'X of us X'	-	1	1
Second person			
**jij* X 'you.SUBJ X'	29	1	30
Third person			
**hij* X 'he X'	4	1	5
**hem* X 'him X'	-	1	1
**van hem* X 'of him X'	-	32	32
**van haar* X 'of her X'	-	2	2

5.9.1 Non-targetlike constructions

Mahmut uses non-targetlike constructions in 17% of the cases and Ergün in 38%. Mahmut's non-targetlike constructions are *van mijn* 'of my', *van mij(n) X* 'of me X', *ik(ke) X* 'I X', and *jij X* 'you X'. The first two constructions are similar to non-targetlike forms used by some of the monolingual and bilingual children. The latter two forms are remarkable, because the learner uses subject pronouns in possessive constructions. As example (3) shows, these possessives are real attributive constructions, embedded in larger utterances.

(3) Mahmut: *ja, ik auto groot, hè.* 'yes, I car big, right: yes, my car is big, right?' (2;7 since arrival, Broeder, 1991: 49)

In contrast, evidence for the use of *ik(ke) X* 'I X' as an attributive possessive construction is not found in the monolingual and bilingual child data. Although there were some utterances in the child data of the form *ik X* 'I X', this construction never occurred in longer sentences, which would have been evidence that it really was one constituent. It is difficult to say, therefore, whether they are pronominal possessives, or, which is more likely, utterances lacking a verb like 'have' or 'want' (see also Chapter 3). Mahmut's preferences for subject pronouns can also be noted for second-person reference. He fairly frequently uses the subject pronoun *jij* 'you' in attributive possessive constructions (*jij X*, 'you X'). As was observed before, the monolingual child Sarah also makes this overgeneralisation.

Ergün's list of non-targetlike constructions is impressive because of the large number of different non-targetlike constructions he uses, several of which are not used by any of the children. In addition to *jij X* 'you X' and *van mij X* 'of me X', he has seven non-targetlike constructions that do not appear in the data of any of the other learners. A form he uses once is *X van mijn* 'X of my', which is close to the targetlike form *X van mij* 'X of me'; a form he uses more frequently is the non-targetlike form *X van mij(n) X* 'X of my X', in which he doubles the possessor. He uses similar constructions for reference to first person in the plural form.

5.9.2 Developmental patterns

The developmental patterns that emerge for the two adults are presented in Table 5.14. The patterns are dealt with in more detail for the adults separately.

Table 5.14 Developmental patterns for Dutch pronominal possessive constructions by the adult learners†

Time after arrival	Mahmut	Ergün
0;9	-	Ø
0;10	**van mij(n)* X	Ø
0;11	**ik(ke)* X	-
1;0	*mij(n)* X	*mij(n)* X
1;1	-	**van mij(n)* X
1;2	**jij* X	-
1;3	-	-
1;4	*jouw* X	*zijn* X
1;5	-	*jouw* X
1;6	-	*ons/onze* X
1;7	-	-
1;8	*zijn* X	-
1;9	-	**X onze*
1;10	-	**hij* X
1;11	-	-
2;0	-	X *van mij,* *X *van mijn, *hem* X
2;1	**hij* X	-
2;2	*van mij*	-
2;3	-	**van onze, *van ons* X, **van onze* X
2;4	-	*van ons, haar* X, X *van hem,* X *van haar, *van hem* X, **van haar* X
2;5	-	**van mijn,* X *van ons*
2;6	-	-
2;7	-	**X van mij* X
2;8	X *van jou*	-
2;9	-	-
2;10	-	-
2;11	-	-
3;0	Ø	**X van ons* X
3;1	Ø	X *van jou*

† "Ø" marks that no data are available at this age. Grey cells indicate that non-targetlike constructions are used at this age.

Mahmut's first targetlike possessive construction is found one year after his arrival in the Netherlands. He keeps using this construction, *mij(n)* X 'my X', frequently during all the following recordings. Four months later he produces *jouw* X 'your X' for the first time and another four months later *zijn* X 'his X'. His two other targetlike constructions appear only five months later (*van mij*, 'of me' and X *van jou*, 'X of you').

Already during the second recording, two months before the first use of a targetlike construction, Mahmut uses the non-targetlike construction **van mij* X. Non-targetlike **ik(ke)* X 'I X' is produced from the third recording onwards and stays in use until the last recording two years later. A few months later **jij* X 'you.SUBJ X' appears, which Mahmut also uses regularly during the remainder of the period of data collection. **Hij* X 'he X' appears a few times, 2;1 years after his arrival. Non-targetlike constructions are used by Mahmut after the first appearance of pronominal possessive constructions and they are still there in the last recording.

Ergün's first pronominal possessive construction is the targetlike construction *mij(n)* X 'my X' during the second recording, one year after his arrival in the Netherlands. Four months later the targetlike constructions *zijn* X 'his X', *jouw* X 'your X', and *ons/onze* X 'our X' appear. A large majority of the many constructions, targetlike and non-targetlike, that appear afterwards contain the preposition *van*. The doubled constructions (*X *van mij/ons* X, 'X of me/us X' appear when Ergün has been living in the Netherlands for 2;6-3;0 years. Non-targetlike forms remain persistent in Ergün's data till the end of the period of data collection.

5.10 Comparison of the learner groups

In this section, a summary is presented of the similarities and differences observed in the use of pronominal possessive constructions by the monolingual and bilingual children, as well as the adults learning Dutch as a second language.

5.10.1 Pace of acquisition

The most obvious difference between the learner groups in the present study is the pace of acquisition. The monolingual children acquire targetlike possessive pronominal constructions relatively fast, whereas the child and adult second language learners need much more time. Table 5.15 shows the number of targetlike constructions the individual learners acquire during the observed period as well as the timespan between the first and last targetlike construction they acquire.

On average, the monolingual first language learners acquire one pronominal possessive construction per 0.8-1.6 months. The bilingual children need much more time (3.3-8.0 months) as do the adult second language learners (3.1-4.6).

Table 5.15 Average time (in months) per new targetlike construction

Learner group	Learner	Targetlike constructions	Time span (months)	Time/targetlike construction
Child L1	Sarah	12	19	1.6
	Josse	13	11	0.8
	Matthijs	9	12	1.3
Child L2	Selma	2	16	8.0
	Filiz	4	13	3.3
	Berrin	4	17	4.3
	Şükran	2	13	6.5
	Mehmet	4	15	3.8
	Batuhan	3	11	3.7
	Yunus	1	-	-
Adult L2	Mahmut	5	23	4.6
	Ergün	8	25	3.1

5.10.2 Reduced pronouns

Not much has been written about the use of reduced pronouns by monolingual Dutch children in other studies. The data presented in this chapter show that they use them frequently from early on, although not as often as adults[39]. It has been observed in earlier studies that second language learners of Dutch have difficulties acquiring reduced pronouns (Broeder, 1991; 1992, Van de Craats, 2000). In the child and adult data investigated by Van de Craats (2000) and Van de Craats, Corver, & Van Hout (2000), only the most advanced school-age children used reduced pronouns. In the present study, none of the second language learners produce reduced pronouns.

5.10.3 Third-person and plural possessives

Bol & Kuiken (1986) already observed that monolingual children start out with possessive pronouns in the first and second-person singular and that third-person and plural forms emerge about eight months later. In the present study, which looks at a wider variety of pronominal possessive constructions, this developmental path is confirmed. The first language learners start using these forms towards their third birthdays, when they have already been using several first-person and second-person singular possessives (i.e.., 5-8) for some time (6-10 months). The adult second language learners in the present study, who tend to be slower in their development than the monolingual children, produce third-person possessives at a relatively early stage. They produce third-person constructions as their second or third possessive 4-8 months after their first possessive emerges. Ergün also starts producing plural forms in this period.

[39] The children (see Table 6.11) use *mij(n)* X 'my X' significantly more often (Fisher exact, p=.002) than *m'(n)* X 'my.RED X' in comparison to adult (see Table 6.3). *Zijn* X 'his X' is also used significantly more frequenlty than *z'n* X 'his.RED X' (p=.003). The differences for *jouw* X 'your X' versus *je* X 'your.RED X' and *haar* X 'her X' versus *d'r* X 'her.RED X' are not significant.

The bilingual children on the other hand do not produce third-person or plural possessive during the period of data collection at all. They thus seem to behave more like the monolingual children, who also learn these constructions at a later stage.

5.10.4 Types of non-targetlike constructions

A variety of non-targetlike constructions appears in the data of all child and adult learners. In predicative possessive constructions, both monolingual and bilingual children use object pronouns without the preposition *van* (e.g., **mij* 'me' instead of *van mij* 'of me' and possessive pronouns, which are not used predicatively in the target language (e.g., **mijn* 'my'). Although these non-targetlike forms are rather frequent in the child data, they do not occur in the speech of the adult second language learners. The non-targetlike predicative construction they use is **van mijn* 'of my'. With respect to attributive non-targetlike forms, more similarities are found among the children and adults. In all three learner groups, the overgeneralisation **van mij(n) X* 'of my X' is found. In addition, one monolingual child (Sarah) and one adult learner (Ergün) use the subject personal pronoun to indicate possession in second-person form (**jij X* 'you X'). The other attributive non-targetlike forms that are found seem to be idiosyncratic and are only found in the second language learner data. The bilingual child Mehmet uses the second-person form *van jou(w) X* 'of you X', whereas Ergün employs a whole range of non-targetlike forms, including *ik(ke) X* 'I X' with a subject pronoun, forms with a doubled possession (e.g., *X van mij X* 'X of me X') and several others.

5.10.5 Frequency and persistence of non-targetlike constructions

A striking difference between the bilingual children and adult second language learners on the one hand and the monolingual first language learners on the other is the frequency and persistence of non-targetlike constructions in the former group. The monolingual children produce non-targetlike forms in 5% of their possessive utterances. The adult second language learners use such forms in 27% of their possessives, which is significantly more (Fisher exact, $p<.001$). The bilingual children take the biscuit with 64% of their possessives not being targetlike.

The second language learners not only use non-targetlike constructions more frequently than the monolingual children, but also much more persistently. They use non-targetlike constructions throughout the whole period of data collection, while non-targetlike use is only temporary in the monolingual children's speech. After ages 2;8-3;3 the monolingual children no longer use non-targetlike forms.

5.10.6 Postponed possessor constructions

It has been put forward in Section 5.5 that second language learners of Dutch with Turkish as a first language may develop a preference for possessive constructions with a postponed possessor, [*X van OBJ.PRO*], because Turkish postpones the possessor in its main possessive constructions. Such a preference for postponed constructions is not found in the present data. As a matter of fact, the monolingual children use postponed constructions most often, even though they gererally still do so very infrequently (3% of all pronominal possessives). The bilingual children do not use postponed constructions at all, and the adult second language learners in only 1% of their possessives. This does not differ significantly from the adult native speakers of Dutch, for whom this construction was not found either in a sample of 189 possessives (see Table 5.3). One of the reasons why no influence from Turkish is found in this respect may be that, although constructions with a possessive suffix following the possession are very frequent in Turkish, a pronoun preceding the nominal is used if a speaker wants to emphasise the possessor. This preposed position is thus also very salient in Turkish and may therefore even be a help in discovering possessive pronouns in this position in Dutch. Nevertheless, it is intriguing that several of the idiosyncratic non-targetlike constructions of the adult second language learner Ergün have the possessor in post-nominal position (e.g., *X van mijn* 'X of my', *X onze* 'X our').

5.10.7 Summary

The main differences and commonalities with respect to the acquisition of pronominal possessive constructions between the bilingual children, the monolingual children, and the adult learners of Dutch are summarised in Table 5.16.

In their pace of acquisition of possessive constructions, in the absence of reduced pronouns and in the frequency and persistence of non-targetlike constructions, the bilingual children appear to be 'like' adult second language learners. However, with respect to the late acquisition of third-person and plural constructions, as well as the type of non-targetlike constructions they produce, the bilingual children resemble monolingual children learning Dutch as a first language more. In the final section of this chapter, possible explanations for these differences and commonalities between the learner groups are discussed.

Table 5.16 Commonalities between different learner groups

	Bilingual children
Adults second language learners	Pace of acquisition of targetlike constructions No reduced pronouns High frequency of non-targetlike constructions Persistence of non-targetlike constructions
Monolingual children	Third-person constructions late Plural constructions late Type of non-targetlike constructions

5.11 Discussion and conclusion

According to usage-based approaches to language acquisition, input plays an important role. The bilingual children in the present study received Dutch language input for only about 12-30 hours per week, while native speakers are estimated to receive some 70 hours of input per week (Tomasello & Stahl, 2004). It is not clear to what extent the adult learners were in contact with the Dutch language, but it certainly was not full-time either (they were selected on not having an intimate relationship with a Dutch-speaking partner). It is not surprising then that the pace of acquisition for all the second language learners should be much slower than for the first language learners. For example, it takes the monolingual children on average 0.8 to 1.6 months to learn a new targetlike pronominal possessive form. This means that they receive about 250-500 hours of input for each construction. It appears that the second language learners take similar amounts of time if hours of input are taken as a measure rather than months of age. The only clear exception is Selma, who needs about 1,000 hours of input per construction. In general, however, the fact that second language learners keep a slower pace of acquisition is easily explained from the relatively low quantity of language input they receive.

What cannot be explained by input frequency is the fact that the second language learners do not acquire reduced pronouns during the period of observation. The monolingual children acquire reduced pronouns fairly early. A characteristic of reduced pronouns that impedes the facility with which they can be learned is their low salience in the input. Reduced pronouns are always unstressed and thus difficult to perceive. Could it be that second language learners, even if they are very young, are more dependent on salience in the input than first language learners? An alternative explanation for the absence of reduced pronouns in the second language learner's speech is cross-linguistic influence from Turkish, which does not make a difference between full and reduced pronouns. It is probable that these two factors both play a role in the absence of reduced pronouns in the speech of the second language learners. On the basis of the data available here, it is not possible to disentangle their influence any further.

Another difference between the monolingual children and the child and adult second language learners that cannot be explained by input frequency is the high frequency and persistence of non-targetlike constructions. What may explain this difference is 'internal input': according to Tomasello (2003), learners' own productions play a relatively important role in language acquisition, because they always know exactly what they intended to say and how they packaged that information in a linguistic form. A frequently used 'incorrect' construction becomes more and more entrenched and thus more difficult to 'unlearn'. In first language acquisition, non-targetlike constructions are overcome relatively easily due to the sensitivity of children to the absence of those constructions in the omni-present input. The lower amounts of input the second language learners in this study receive make 'unlearning' more difficult and the entrenchment of incorrect forms probably even stronger.

Differences between the monolingual and bilingual children on the one hand and the adult second language learners on the other are interesting, because they cannot be explained from differences in amounts of input and cross-linguistic influence. They may give us some insight into how children and adults differ in language learning styles.

One of the differences between the adults and the children is the relatively early use of third-person and plural possessive constructions by adults. In the monolingual data they appear rather late and the bilingual children do not use them at all. A possible explanation relates to differences in 'communicative need'. Children mostly talk about themselves (first-person singular), particularly when it concerns possession. Second-person possession is also relevant in their situation, as it is the opposite of reference to the self. Although there was always a third person present during the recordings, the children did not necessarily need to use third-person forms, as they usually directed their speech to this person personally and used second-person forms. Apparently, they get by on first and second-person constructions for quite some time. Adults, on the other hand, often talk about situations that are not directly related to the here-and-now and thus often involve third-person reference. In addition, they may need plural forms more, as adult conversations are more frequently about what people do together with other people (only one of the adults produced plural forms). Because of the kind of conversations they want to have, adults need to be able to express more specific functions in their second language. Searching in the input they indeed find forms that express these functions.

A final difference between the children and the adults is the types of non-targetlike constructions they produce. Typical non-targetlike constructions produced by the monolingual and bilingual children are predicative forms without the preposition *van*: **mij* 'me' instead of *van mij* 'of me' and **jou(w)* 'you(r)' instead of *van jou* 'of you'. The possessive pronoun **mijn* 'my' is also found in the data of both learner groups. In general, the adults produce much fewer predicative constructions than the children. The few non-targetlike predicative constructions they use take the form **van mijn* 'of my' (instead of *van mij* 'of my'). The children's problem is thus mainly that they 'leave out' the preposition. It has been observed in earlier comparisons of adult second language acquisition and child first language acquisition, that children generally omit function words in the early stages, whereas adults use them from very early on (e.g., Meisel, 2007). A possible explanation could be that adults are aware of the fact that languages have grammatical forms such as prepositions and that as a consequence they tend to pay more attention to them. Children, on the other hand, might not feel 'ashamed' of just putting relevant words together, as long as these convey the message. Wong Fillmore (1976) already observed that the most successful child second language learners in her study on children a few years older than the bilingual children in the present study were the ones who freely used all kinds of non-targetlike expressions just to get conversations going.

Summarising, several kinds of explanations need to be given for different commonalities and differences between the learner groups. The similarities between the child and adult second language learners mostly relate to the relatively low amounts of input they receive. Their learning process proceeds more slowly and non-targetlike

forms are more difficult to 'unlearn'. At this stage, it is undecided whether the second language learners are less sensitive to non-salient forms in the input, or whether the difficulty of learning non-salient forms stems from low amounts of input in general or from the absence of equivalents in the first language. The similarities between child second language learners and child first language learners probably relate to similarities in 'communicative need' and the lack of awareness of grammatical features in languages. Adults may actively search for them, whereas children probably ignore them until the input provides enough evidence of their importance. The explanations given are in no way exclusive with respect to each other and other possible explanations. They are suggestions of how the patterns found in this chapter can be made sense of.

6 Finite and non-finite verb constructions

This chapter deals with finite and non-finite Dutch verb use by the seven bilingual Turkish-Dutch children. In Mehmet's case study in Chapter 3, it has been observed that he predominantly uses non-finite verb forms such as infinitives, even though this is clearly not targetlike in adult Dutch. Monolingual Dutch children also show this behaviour in the early phases of language use. Quite a lot of research has been devoted to trying to describe and explain the developmental path children take to reach targetlike finite verb use in the end.

The elaborate coverage of this topic in the literature on first language acquisition is one of the reasons for choosing to investigate it in this chapter, as it makes it possible to make a comparison between the children in the present study and the literature available on the subject. Another reason for selecting verb use as a topic, is that verbs are used frequently by the bilingual children, especially in the later recording sessions, when they have become more fluent in Dutch.

In Section 6.1, an overview is presented of the findings and claims about the acquisition of finiteness in monolingual Dutch, mainly on the basis of a key study by Blom (2003). In her study, Blom takes a Chomskyan generative perspective. Since the present study explains the observations from a usage-based perspective (see Chapter 1), all Blom's observations are discussed in the light of usage-based models of language acquisition. In this way a framework is presented that fits the empirical analyses of the bilingual children's data in this chapter.

This discussion is followed by a description of verb use in Turkish (Section 6.2), the research questions in this chapter (Section 6.3), and the method (Section 6.4) and outcomes of the analyses for the bilingual children (Section 6.5). It concludes with a comparison with Blom's monolingual data (Section 6.6) and a discussion of the findings (Section 6.7).

6.1 Finite and non-finite verb forms in Dutch language acquisition

In Chomskyan generative research on first language acquisition, in particular of verb-second languages (e.g., German, Dutch, Danish, Swedish, Yiddish, Frisian, and Icelandic), the phenomenon of so-called 'root infinitives' and their development into finite verbs has been a major topic of interest (Pye, 2001; Wexler, 2003). When children acquire the knowledge that verbs require a finite morphology, several other issues promptly also fall into place, such as the fact that finite verbs come in second position in these languages (root infinitives appearing in final position) along with a sudden increase in expressing the subject (which is obligatory in those non-pro-drop languages) (Blom, 2003; Wexler, 2003). The empirical observation that these changes all appear in a relatively short period of time in the view of generative grammarians shows that an abstract grammatical operation has been acquired. It is sometimes argued that a usage-based or lexicalist explanation would be difficult to find, because such explanations usually predict gradual development.

Root infinitives are defined by Blom (2003: ii) as sentences with only a non-finite verb. Some examples from Blom's study on Dutch child language are presented in (1). Most non-finite forms are similar to adult infinitives, although participles also occur in early child speech as non-finite verb forms (see (2)).

(1) Abel (2;3): *koppie thee pakken* 'cup tea get-INF: I am going to get a cup of tea'
Daan (2;4): *jij de walvis maken* 'you the whale make-INF: you should make the whale'

(2) Abel (2;2): *jij ook (ge)*[40]*maakt* 'you also make-PART: you have made it as well'
Laura (2;5): *die ook in bad (ge)wees(t)* 'that also in bath be-PART: that one has also been in bath'

What is remarkable about children's use of infinitives (and participles) is that they do not occur as such in adult speech[41]. Infinitives and past participles do appear in adult Dutch, but always in combination with a finite verb in so called 'compound finites' (e.g., *ik ga een koppie thee pakken* 'I go a cup tea get-INF: I am going to get a cup of tea', *die is ook in bad geweest* 'that is also in bath be-PART: that one has also been in bath (taken a bath)'). Sentences with only a finite verb and no infinitive or past participle are

[40] Text in parentheses was not pronounced by the child.

[41] Non-finite infinitive sentences do appear in adult speech as well, but as specific constructions, such as in a specific kind of narrative (i) or the imperative use of the infinitive (ii):

(i) Narrative: *zat ik naar 'Het kleine huis op de prairie' te kijken…zij brullen!* 'sat I to 'The little house on the prairy' to watch … she weep-inf: I was watching the 'little house on the prairy', when she suddenly started crying.' (Blom, 2003: 217).

(ii) Infinitivus Pro Imperativo: *maar hier op het parkeerterrein blijven, hoor.* 'just here on the parking-lot stay-INF, mind-you: just stay here in the parking lot, mind you.' (Kirsner, 2003: 83).

also frequent in adult speech (e.g., *ik pak een koppie thee* 'I get a cup tea: I am getting a cup of tea'), but virtually absent in very early child speech.

Blom (2003) gives an in-depth analysis of finite and non-finite verb use by monolingual Dutch children. What is unique in her study is the longitudinal and developmental perspective. She shows that some of the controversies in the literature can be explained from the fact that researchers were looking at different developmental stages. Blom's study is taken here as a monolingual reference point for comparison with the bilingual Turkish-Dutch data. Although Blom worked from a generative approach to language acquisition, her findings – and also several of her explanations – fit well within a usage-based approach and can easily be reformulated within the framework of construction grammar. The remainder of this section discusses Blom's observations about monolingual Dutch children's finite and non-finite verb use, as her findings are a reference point for the analyses of the bilingual children's verb use presented in this chapter.

6.1.1 Stage I

In the development of finite and non-finite verb use, Blom (2003) distinguishes four separate stages. At Stage I (average MLU of 1.1), children use only non-finite verb forms, which are similar in form to infinitives in adult language. If finite verb forms are found in the data, they occur occasionally (on average 7%) rather than structurally throughout this Stage.

Blom (2003) relates her explanation for the fact that infinitives emerge as earliest verb forms to characteristics of the input. Although non-finite utterances with only infinitives are not very frequent in the input (<10% of all utterances), compound finite constructions, which also include an infinitive form, are (ca. 30%; Wijnen, Kempen & Gillis, 2001). Wijnen et al. showed that input frequency of infinitives alone cannot explain children's preference for infinitives, but that the additional influence of one or two other input characteristics can. Firstly, it is well-known that, due to prosodic effects, children pay more attention to words in the final position of utterances (Slobin, 1973). Dutch infinitives almost always appear in final position, in contrast to finite verb forms, which appear in first or second position. The prominence of non-finite forms in sentence final position may explain children's preference for infinitives. Another characteristic of Dutch infinitives in the input that Wijnen et al. mention is that they are conceptually or semantically rather transparent, often being eventive verbs. Verbs that occur most frequently in finite form are usually more abstract, stative verbs. Concrete and conceptually more transparent words are easier to learn for children.

Additional evidence for the strong influence of the final sentence position comes from a modelling study by Freudenthal, Pine, Aguado-Orea & Gobet (2007). Their computer model produced utterances on the basis of input from child-directed speech corpora. The learning mechanism the model used was biased towards the most recent elements in the input, in other words, to final sentence position. The model was successful in producing similar proportions of non-finite and finite verb forms as real children did in the corpora under investigation. Interestingly, the model was able to reflect differences between Dutch, English, German, and Spanish child language. The

results for German and Dutch in particular are remarkable as both languages have similar amounts of compound finites in the input in general (around 30%). In Dutch child- directed speech, however, more infinitives appeared in final position (87%) than in German (66%), which was reflected by differences in the amount of non-finite sentences with infinitives children produce in both languages (74% in Dutch and 61% in German).

6.1.2 Stage II

At Stage II (average MLU of 1.4), finite verb forms start to occur in the child data; although non-finite verb forms are still predominant. Blom (2003) takes a proportion of less than 30% finite verbs as defining criterion for this stage. On average, 18% of the utterances with verbs contain a finite verb form in this period. Blom characterises the finite verbs during this stage as 'lexical-finiteness markers'. This term refers to finite verbs that carry a finite morphology, have finite meanings, and are placed in their targetlike second sentence position. All these adult-like characteristics of the early finite verb forms, however, are part of the lexical content of the verb forms and not the result of more abstract grammatical operations. The verb forms are as yet unanalysed. Evidence for this 'lexical' status of early finite verbs comes from the fact that only specific verbs occur in finite forms, and that there is hardly any overlap with the verbs that are produced as infinitives (see Table 6.1).

Table 6.1 Types of verbs occurring in finite forms and overlap with verbs occurring in non-finite forms at Stages I and II (based on Blom, 2003: 253-259, Appendix 5.2).

Child	Finite verb types	Overlap with non-finite verb types
Abel	*kan* 'can', *wil* 'want(s)'	
Daan	*gaat* 'goes', *is* 'is', *kan* 'can', *moet* 'must', *wil* 'want(s)', *zie* 'see', *zing* 'sings'	*lig/liggen* 'lie/lie-INF', *zit/zitten* 'sit(s)/sit-INF'
Josse	*heet* 'am/are/is.named', *kan* 'can', *kom* 'come', *mag* 'am/are/is.allowed', *rink* (*spring*) 'jump'	
Laura	*hoor* 'hear', *hoe(f)* 'need', *kan* 'can', *moe(t)* 'must', *val* 'fall', *wil* 'want(s)'	*doe/doen* 'do/do-INF', *zit/zitten* 'sit/sit-INF'
Matthijs	*mag* 'am/are/is allowed', *pas* 'fit'	
Peter	*eet* 'eat(s)', *mag* 'am/are/is.allowed'	*zit/zitten* 'sit/sit-INF'

Table 6.1 shows that most early finite verbs are modal verbs, such as *kan* 'can', *wil* 'want(s)', *moet* 'must' and *mag* 'am/are/is allowed'. These verbs have irregular patterns of finite morphology in Dutch, all singular forms having the same form. As a result, there is not much evidence that children know the paradigm of regular finite morphology at this stage, as most verbs they produce are irregular. In addition, not many agreement errors are found in the finite verb forms in this period.

In a usage-based theory of language acquisition, early finite verb forms as described by Blom (2003) are called item-based constructions (Tomasello, 2003). Item-based

constructions have syntactic marking as an integral part of their meaning, but this syntactic marking is still verb-specific, depending on how a child has heard particular verbs being used (Tomasello, 2003: 117). Pine, Lieven & Rowland (1998) showed that for English there is a correlation between the verb form that is most frequent in the input and the form emerging earliest in child language. Wijnen et al. (2001) suggest that the correlation is not very strong for Dutch child language, probably because of the strong influence of differences in sentence position (see above). Nevertheless, the early appearance of auxiliary-like verbs in finite forms can easily be explained by the virtual absence of their non-finite forms in the input.

Verb form and sentence position

Although Blom (2003: 7) claims that the finding that children place infinitives and finite verb forms from the beginning in their correct position is "robust" for Dutch and German, no studies have quantified this observation for Dutch child language. We can, however, take a closer look at the data some researchers included in appendices to their publications. Jordens (1990) studied verbs used by the girl Jasmijn (age 1;11-2;0). An analysis of the data[42] shows that 7 of 24 the finite verbs occur in first sentence position[43], and 17 in second sentence position. Of the 18 infinitives, 11 occur in final position, but 4 in first and 3 in third position. In addition, the auxiliary in an utterance with a compound finite occurs in first position and the 9 utterances with only a participle all have the verb in final position. In sum, all of the 25 finite utterances (simple finite verbs and compound finites) occur in first or second position. This result is significantly different from a random 50-50% distribution between the adultlike first/second position and other sentence positions (Fisher exact, $p<.001$[44]). Of the 27 non-finite utterances (only infinitives or participles), only 20 (74%) occur in final position. This distribution is not significantly different from a random 50-50% distribution between final sentence position and other sentence positions.

A similar pattern is found for Tim (2;1-2;3), a child studied by De Haan (1987). He produced 34 of the 35 finite verb forms (94%) in first or second position, and 10 of the 11 non-finite verb forms (91%) in final position. The difference with a random 50-50% distribution is significant for the finite verb forms ($p<.001$), but, because of the low number of occurrences[45], not for the non-finite utterances.

R. Klein (1974) provides some data on utterances with finite verb forms. For his study, he selected utterances with a verb and a direct object. He provides an overview of all utterances with finite verb form in an appendix. For one of the two children, Basje (age 2;3), only one utterance with a finite verb is found, and this verb occurs in

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[42] In this analysis, as well as in the others reported here, only declarative utterances are included (questions and utterances with imperative verb forms were excluded) (cf. Poeppel & Wexler, 1993). Two-word utterances with the verb in second position were also excluded, because it is not possible to tell whether the verb is in second or in final position in such utterances (see also Section 6.6.2).

[43] Finite verbs in first sentence position occur regularly in Dutch child speech. They are considered to be targetlike by the researchers.

[44] See Appendix C for a description of Fisher's exact test.

[45] At least 22 utterances are needed for a distribution of 91-9% to be significantly different from a random 50-50% distribution.

final rather than first or second sentence position. The difference with a random 50-50% distribution, due to the low number of occurrences, is not significant. The other child, Esther (age 2;0), produces 16 finite verb forms, all of which occur in first or second sentence position. This pattern is significantly different from a random 50-50% distribution between correct and incorrect sentence positions (p=.002). R. Klein (1974) does not provide an overview of the non-finite utterances with infinitive verb forms and their position in the sentence, although they are rather frequent in the data.

In sum, finite verb forms are placed in adultlike first or second sentence position in almost all of the utterances (97%) presented in Jordens (1990), De Haan (1987), and R. Klein (1974). The observation that children place the verb in non-finite sentences in final position in the sentence is less well founded. Data are available for only two children, and for neither a significant difference with a random 50-50% distribution between final and other sentence positions was found. This is partly due to the fact that the samples were rather small and not enough non-finite utterances were attested in the data. The data of the two children taken together show a percentage of 82% non-finite verbs in final position. This is significantly different from a random 50-50% distribution (p=.007), but still includes a rather high proportion of non-targetlike verb placement. As it is shown that the bilingual children in this study regularly produce sentences with verb forms in incorrect sentence positions, more evidence would be welcome before the conclusion can be drawn that their verbal development deviates from that in Dutch first language acquisition.

6.1.3 Stage III

When Dutch children reach Stage III (average MLU of 2.0) they use finite and non-finite verb forms in more or less equal proportions. Blom's (2003) criterion for Stage III is 50% finite verbs and the average in the recordings she selected for this stage is 61%. New at this stage is the emergence of compound finites (called 'periphrastic verbs' by Blom) in which a finite verb form in first or second sentence position is combined with an infinitive in final sentence position. Blom notes that nearly all finite verb forms in the compound finites at this stage had already been used as simple finites at Stage II. What is new here is thus especially the combination of finite verb forms and infinitives, resulting in targetlike compound finites[46]. Stage III is also characterised by gradual increases in the number of verb types that are both used in simple finite forms and as infinitives, in the paradigmatic variation found in finite morphology, and in the number of agreement errors in finite morphology. In terms of a usage-based theory of language acquisition, this can be described as a stage at which more verbs are added to the finite verb constructions used by children, causing them to make some abstractions about finite verb constructions in general.

[46] Van Kampen (1997) notes that children at this stage regularly overuse compound finites to indicate the present tense meaning expressed by simple finites in adult Dutch. Especially the verbs *doen* 'to do' and *gaan* 'to go' are often used in these overused compound finites. For the present study it is relevant to note that the 'overuse' of compound finites with the verb *doen* is targetlike in Tilburg and other places in the South of the Netherlands.

6.1.4 Stage IV

At Stage IV (average MLU of 2.6), finite verb forms are used in at least 80% (average: 90%) of all utterances containing a verb. Blom (2003) argues that at this stage the lexical-finiteness markers have developed into grammatical-finiteness markers. The morphological and syntactic behaviour of finite verb forms is no longer based on knowledge stored for each verb separately. According to the generative theory of language Blom uses as a framework, the process of adding inflectional morphology is now a productive process that children apply each time they use a finite verb form. Inflectional morphology triggers verb movement (or 'verb raising' in a Minimalist framework) from its base position at the end of the sentence to first or second sentence position. Although the utterances still look superficially similar to the ones produced at earlier stages, the underlying representation has changed. In the utterances produced by the children, mainly gradual changes are visible: more overlap in verb types used as infinitives as well as finite verbs and more paradigmatic variation in finite morphology.

Moreover, Blom (2003) claims that a sudden change at Stage IV is an increase in the number of agreement errors found in the children's finite verb forms. When the data for all stages are taken together, children make agreement errors in 10% of their finite verb forms. However, Blom does not give a detailed analysis of the proportion of agreement errors for each stage. A reconstruction of the data for each stage is presented in Table 6.2. Blom looked at errors with thematic finite verbs, thereby excluding auxiliary-like verbs, most of which have an irregular (and simplified) inflectional paradigm. Two types of agreement[47] errors are distinguished in the analysis: bare stem errors (providing a bare stem (or first-person form) instead of a stem with an inflectional morpheme) and wrong inflection errors (overgeneralisation of second/third-person singular inflection or wrong number inflection). It can be observed from the table that it is indeed true that the amount of inflection errors is highest at Stage IV. However, this is directly related to an increase in the total number of finite utterances. The relative number of errors is rather stable across the stages, or even decreases. The difference between the proportions of errors at Stage III and Stage IV is not significant for either the bare stem errors, the wrong inflection errors, or the total number of errors. The only significant differences are the decrease in bare stem errors (Fisher exact, p=.004) and the total number of errors (p=.01) between Stage II and Stage III.

[47] Tense errors are not found in Blom's data.

Table 6.2 Agreement errors per stage
(based on Blom, 2003, Table 5.4 (p. 181) and Tables 5.13, and 5.14 (p. 195))

Stage	I	II	III	IV	Total
Simple finites (thematic)	5	25	234	822	1086*
Bare stems	2 (40%)	10 (40%)	26 (11%)	69 (8%)	107 (10%)
Wrong inflection	-	-	3 (1%)	14 (2%)	17 (2%)
Total errors	2 (40%)	10 (40%)	29 (12%)	83 (10%)	124 (11%)

*The total number of thematic simple finites in Table 5.4 (1221) is not equal to the total in Table 5.13 and 5.14 (1086). It is not clear where the difference in numbers stems from. It is assumed that the distribution over the stages is more or less correct.

From a usage-based perspective on language acquisition, Blom's (2003) generative analysis of grammatical-finiteness markers is unsatisfactory. Languages do not need to be as 'economical' as possible by deriving different syntactic structure from one basic underlying structure. 'Moving' a verb is thus not necessary. There are simply two (or more) constructions in which the verb occurs in different sentence positions and with different verb forms and different meanings. Of course, it is very well possible that children learn to abstract away from these specific constructions and have general representations about words that typically occur in both constructions, perhaps even leading to a general category of 'verb'. However, they probably also keep using representations at much lower, perhaps even item-based, levels of representation (Langacker, 2008). In the same vein, Croft (2001) argues that it is even possible that language users never come to categories as abstract as 'verb' in generative theories, which could be claimed to be a cross-linguistic, universal category.

Since a usage-based theory of language acquisition claims that children build their linguistic knowledge by gradually increasing their language repertoires and slowly making abstractions about the patterns heard and used, the developmental picture is expected to show gradual changes. This is exactly what Blom (2003) finds throughout her study. Even her research design, in which she did not use all available transcripts for each child, but only transcripts during periods of a few months and with intervals of several months, shows this fact. The proportion of finite verb forms in relation to non-finite verbs increases gradually, as do the overlap of verb types used in both constructions and the amount of paradigmatic variation found in inflectional morphology. As was shown before, the number of agreement errors even seems to be a fairly constant factor. Although some individual variation is found, the gradual patterns are in general observable for all children in Blom's study.

6.1.5 Subject drop

A possible strength of a generative approach to finite verb use is the relation they expect to find between the (productive) acquisition of finiteness marking and a decrease in subject drop. In early utterances with (especially non-finite) verbs, Dutch children

typically fail to produce subjects. In adult Dutch, subjects must occur in all[48] sentences in the form of nominals, pronouns or expletives (*het* 'it' or *er* 'there'). Generative theory (Blom, 2003 refers to Koeneman, 2000) explains this pattern from the fact that Dutch is a language with poor agreement. Languages with rich agreement, such as Italian and Turkish, indicate both the person and the number of the subject on the verb. Inflectional agreement in these languages carries enough information to be able to function as a subject ('full DP subject'). Languages with poor agreement encode neither person nor number consistently in the agreement paradigm, and thus the subject must be expressed in another way (another full DP). As (agreement) inflection and subject drop are related to each other, generative theories expect children to understand the 'rules' about subject drop as soon as they learn inflection.

Blom (2003) claims that the patterns of subject drop in her data show that a substantial change is taking place between Stages III and IV, at the same time when children acquire grammatical inflection. Initially, children drop subjects in sentences with non-finite as well as finite verb forms. The amount of subject drop decreases over time until Stage III. At Stage IV, the amount of subject drop in finite sentences still decreases, while the amount of subject drop in sentences with non-finite verbs increases again. The situation at the latter stage is what Blom expects children to do when they have acquired inflection, as subject drop is not allowed in sentences with inflection (finite verbs), but possible in sentences without inflection (non-finite verbs). She concludes that children not only know that finite sentences need explicit subjects, but that this knowledge is related to the abstract grammatical operation of agreement inflection, as they show different patterns for verbs that are not inflected. As can be seen in Table 6.3 Blom's empirical findings do indeed show that five of the six children produce more subject drop in non-finite utterances at Stage IV than they did at earlier stages. The difference between Stages III and IV is significant for three children (Fisher exact, Daan/Peter: p=.001, Matthijs: p=.03) as well as for the group as a whole (p<.001).

Table 6.3 Non-finite utterances with infinitives (Inf) and subject drop (SD) (based on Blom, 2003: 209, Table 5.18)

	Stage I		Stage II		Stage III		Stage IV	
	Inf	SD	Inf	SD	Inf	SD	Inf	SD
Abel	n.a.	n.a.	33	31 (94%)	84	73 (87%)	42	35 (83%)
Daan	5	5 (100%)	54	50 (93%)	66	37 (56%)	71	58 (82%)
Josse	n.a.	n.a.	99	94 (95%)	76	56 (74%)	64	55 (86%)
Laura	18	18 (100%)	56	36 (64%)	276	201 (73%)	65	55 (85%)
Matthijs	40	40 (100%)	127	113 (89%)	112	85 (76%)	51	46 (90%)
Peter	26	26 (100%)	114	69 (61%)	57	22 (39%)	29	22 (76%)
Total	89	89 (100%)	483	393 (81%)	671	474 (71%)	322	271 (84%)

[48] First-person object can be dropped in 'diary mode' (Blom, 2003). An example from a newspaper column by Youp van 't Hek in *NRC Handelsblad* (20 September 2008): *Begreep inmiddels uit de pers dat RTL-Boulevard de roddel over hun baas nog niet heeft uitgezonden* 'Meanwhile understood from reports in the press that RTL-Boulevard has not yet broadcast the gossip about their boss.'

Table 6.4 Finite utterances with simple finites (Fin) and subject drop (SD) (based on Blom, 2003: 211, Table 5.19).

	Stage I		Stage II		Stage III		Stage IV	
	Fin	SD	Fin	SD	Fin	SD	Fin	SD
Abel	n.a.	n.a.	10	6 (60%)	198	97 (49%)	275	85 (31%)
Daan	2	2 (100%)	47	20 (43%)	246	50 (20%)	621	92 (15%)
Josse	n.a.	n.a.	13	11 (85%)	98	62 (63%)	437	152 (35%)
Laura	4	3 (75%)	26	8 (31%)	348	103 (30%)	372	87 (23%)
Matthijs	8	8 (100%)	6	6 (100%)	85	50 (59%)	524	139 (27%)
Peter	-	-	5	4 (80%)	95	17 (18%)	627	41 (7%)
Total	14	13 (93%)	107	55 (51%)	1070	379 (35%)	2856	596 (21%)

Blom's (2003) claim that a substantial difference in subject drop in finite and non-finite sentences arises between Stages III and IV is contradicted by the fact that most children drop subjects more often in sentences with non-finite verb forms than with finite verb forms already at earlier stages (see Table 6.3 and Table 6.4). Whatever the reason may be for the difference in subject drop, it is present already at earlier stages. For the group as a whole, the difference in subject drop is significant as early as Stage II (81% subject drop in non-finite sentences, 51% in finite sentences). For all children except Josse, the differences between the sentence types are significant at Stage III (Abel/Daan/Laura: $p<.001$, Peter: $p=.007$, Matthijs: $p=.01$). Blom explains the difference in these earlier stages as resulting from the fact that subjects in finite sentences are easily 'clitised' to the verb, resulting in utterances like *kwil* '*ik wil*: I want' and *willik* '*wil ik*: want I'. This clitisation results from the fact that the subject and a finite verb often appear in adjacent positions in the input. As non-finite forms are usually put in final position and subjects often in first position, clitisation does not appear in non-finite forms. Blom is not able to give quantitative analyses of cliticised subjects in her data, as these had not been consistently transcribed in all the datasets she uses.

The empirical evidence Blom (2003) gives for her claim that an important change takes place between Stage III and Stage IV in the patterns of subject drop with finite and non-finite verbs does not seem to be very strong. Statistically significant differences are also found at earlier stages, and the sudden increase in subject drop at Stage IV is not found or significant for all individual children. In addition, the amount of subject drop with finite verb forms, with an average of 21%, is still rather high even at Stage IV. Nevertheless, the pattern of a sudden increase after a development of decrease is interesting.

How does a usage-based theory of language acquisition account for it? A first issue to address is why children start out with subjectless sentences at all, if subjects are so omnipresent in the input. An explanation is that children's very first utterances that combine two or more words or expressions in one utterance typically only explicitly mention things that are relevant to the situation at that moment (Tomasello, 2003). Subjects that would need to be expressed in the adult language are often not the most relevant thing to mention, as it is often given information. As a result, early utterances

with verbs often lack subjects and children gradually have to discover the fact that in the target language they always need to be expressed.

However, the above explanation is not totally satisfactory. A usage-based account would also need to address the question of inflection as a syntactically broader phenomenon than only the morphological marking on a verb and its position in the sentence. In construction grammar as well as in generative grammar, inflectional morphology has a function that relates to identifying the subject of the sentence. Children initially start with item-based constructions on the basis of specific words and gradually build their knowledge of the form and function of finite verbs in general. At some point, they also start to understand its relation to providing explicit subjects more and more and their utterances become more targetlike. This is clearly shown in the decrease in subject drop with finite verb forms from on average 51% at Stage II to 21% at Stage IV in Blom's (2003) data. The picture for non-finite sentences is expected to be different, first of all because they are not targetlike. Children start to use non-finite sentences on the basis of the frequency of finite verb forms in the input, but at Blom's Stage III have come to realise that the target construction also contains a finite verb form (compound finites). The 'unlearning' of non-finite sentences takes some time, but there are no indications in the input about subject use in such utterances, as adults do not use them, at least not in the same way. As children's utterances become longer, they begin to provide more subjects in their utterances in general, and subject drop in non-finite sentences decreases, as it does in finite sentences. The increase in subject drop in non-finite sentences at the last stage before having 'unlearned' them completely, seems to be related to some abstractions children have made about subject use in general. They probably have come to realise that when they use a subject, a specific verb form needs to be used, namely a finite verb form. Non-finite verb forms are therefore used less in such contexts, and only 'remain' in sentences that look like the earlier non-finite utterances: the ones without a subject. As would be expected from a usage-based perspective and confirmed by Blom's data, all these changes occur gradually.

6.1.6 Summary of Blom's (2003) four stages

In sum, according to Blom's (2003) observations, monolingual Dutch children move from Stage I, in which they only use non-finite verb forms, to Stage II when they start to use finite verb forms. At this second stage, there is no overlap between verb types that are used in finite and non-finite sentences. At Stage III, overlap between verb types starts to appear, as well as the use of compound finite constructions. At Stage IV, the last stage before children acquire adultlike use of finite utterances, non-targetlike non-finite utterances start to disappear from their speech, while overlap in verb types and the use of compound finites increases. Table 6.5 summarises these empirical changes over time.

Table 6.5 Characteristics of Blom's (2003) four stages of finiteness marking

Stage	MLU	% finite verbs (average)	overlap in verb types	compound finites
Stage I	1.1	0% (7%)	n.a.	n.a.
Stage II	1.4	<30% (18%)	little	no (incidental)
Stage III	2.0	50% (61%)	increasing	yes
Stage IV	2.6	>80% (90%)	increasing	increasing

6.1.7 Finite and non-finite verb forms in Dutch second language acquisition

Although much has been written about sentence structure and verb use in adult second language acquisition, a direct comparison of Dutch adult second language data with Blom's (2003) four stages towards finiteness has not been made. Dietrich, W. Klein & Noyau (1995), Coenen & W. Klein (1992) and Starren (2001) investigated different aspects of verb use in the speech of Mahmut and Ergün, the two adult Turkish learners of Dutch also studied in Chapter 5. It appears that both learners start out with infinitive verb forms in final sentence position, similar to what Blom describes for native Dutch children. This is not the case for the Moroccan-Arabic learners of Dutch, as their first and most frequent verb form is the stem form of the verb (Starren, 2001).

At the end of the period of data collection, when he had lived in the Netherlands for almost three years, Mahmut still uses almost exclusively verbs in infinitive form. In addition, he produces some non-finite sentences with past participles as the only verb forms (e.g., *gezien* 'seen', *gedaan* 'done'). Ergün shows similar patterns in the first months of data collection, when he has been in the Netherlands for about 1-1;6 years. After this period, however, he begins to develop his verbal system in more intricate ways, deviating more and more from the 'basic variety' of the earlier stages. For past reference, Ergün starts to use utterances with only a past participle, but later also more targetlike past participle constructions with the auxiliary forms of *zijn* 'be' and *hebben* 'have'. Compound finites also start to appear in this period. Particularly compound finites with a form of the copula and an infinitive constitute a very frequent although non-targetlike construction in Ergün's data. Some examples from Starren (2001) are given in (3).

(3) *en dan hij is teruglopen* 'and then he is back.walk-INF: and then he walks back (Starren, 2001: 184)
hij is lopen, afspraak denk ik 'he is walk-INF, appointment think I: he walks, (to) (an) appointment, I think' (Starren, 2001: 187)
omdat die man is van hem brief schrijven voor werk 'because that man is of him letter write-INF for work: because that man writes a letter for him for work' (Starren, 2001: 188)

Note that this '*is* X-INF'-construction is different from the compound finites Blom (2003) found in her monolingual data. Among monolingual children, utterances like those in (4) are likely to be reflections of the progressive '*is aan het* X-INF'-construction in the input. This construction as well as the child utterances clearly bear a meaning of

ongoing activity. Ergün's '*is* X-INF'-construction, however, is used in retelling activities in the past or for simple present meanings. The auxiliary functions more like monolingual Dutch children's dummy auxiliaries *doen* 'do' and *gaan* 'go' in compound finites at specific developmental stages (see footnote 46; Van Kampen, 1997).

(4) *nee, die (i)s boek leese papa* 'no, that is a book read-INF daddy: no, daddy is reading a book' (Laura, 2;5; Blom, 2003: 70)
is takelen 'is hoist-INF: is hoisting' (Matthijs, 2;5; Blom, 2003: 70)
kikker is aan slapen 'frog is at sleep-INF: frog is sleeping' (Peter, 2;3; Blom, 2003: 75)

It is remarkable in the adult data that they use *is* with finite as well as non-finite verb forms. Some examples from her study and from Coenen & W. Klein (1992) are given in (5).

(5) *dan is die man zo zegt*: … 'then is that man like.this say-PRES: …; then that man says like this:…' (Coenen & W. Klein, 1992: 207)
hij is komt thuis 'he is come-PRES home: he comes home' (Coenen & W. Klein, 1992: 205)
dan is die man is komt hier 'then is that man is come-PRES here: then that man comes here' (Starren, 2001: 184)

Coenen & W. Klein (1992) give two possible explanations for Ergün's *is*-construction. The first is similar to the explanation usually given for the *doen* 'do' and *gaan* 'go' compound finites in child Dutch. This explanation claims that the auxiliary is used as a finiteness marker in initial/second sentence position, while keeping the meaning carrying main verb as an infinitive in final position. In child language this is believed to be a stage between the use of infinitival sentences and targetlike finite utterances. An alternative to this explanation of the auxiliary as an 'empty' dummy auxiliary is a functional account. Ergün's *is*-construction could be interpreted as a boundary marker between two parts of an utterance: the topic and the focus components. In W. Klein & Perdue's (1992) framework of adult second language acquisition it is assumed that adults structure their early utterances in a new language mainly in such a way that the topic (given information) is mentioned first, followed by a predication about the topic (new information). They note that it is remarkable that most of Ergün's utterances with *is*-compounds start with *(en) dan is* … '(and) then is…', *(en) dan hij is* '(and) then he is…' and very similar expressions.

Coenen & W. Klein (1992) claim that Ergün's data are compatible with both the grammatical and the functional explanation. I think, however, that an explanation for the question why Ergün as a Turkish speaker uses the copula as auxiliary in the compound finites, whereas the monolingual children use *doen* 'do' or *gaan* 'go', goes in the direction of the functional explanation. Turkish does not have a copula in sentences like *bu kedi* 'this cat: this is a cat'. Characteristic of copular utterances is the juxtaposition of two nominal predicates, usually a topic and a focus. Once a learner starts to use a copula in this context, it is possible to overgeneralise its use to situations in which not only nominal but also other kinds of predicates are connected. This

explanation has the additional advantage that it makes it less troublesome to explain why Ergün sometimes uses finite rather than non-finite verb forms in his *is*-compounds, as the form of the verb is less of an issue.

Another difference between first and second language learners of Dutch has been investigated by Blom, Polišenská & Weerman (2007). They claim that in experimental settings, Turkish and Moroccan adults show less correlation between the finite or non-finite form of the verb and its sentence position than monolingual Dutch children or Turkish and Moroccan bilingual children. According to these researchers, it is difficult for the adult learners to notice the distinction between finite and non-finite verb forms as they miss out on the differences in sentence position.

In order to quantify this claim for Turkish adults only, an analysis of verb form and position similar to the one presented in Section 6.1.2 was performed on all the examples presented in Chapter 7 of Starren (2001). As only data from the later periods of data collection are included in this chapter, Ergün does not produce many non-finite sentences anymore. Of the 18 non-finite utterances presented from Mahmut's data, 16 (89%) have the non-finite verb in sentence final position. This is significantly different from a 50-50% distribution between final and other sentence positions (Fisher exact p=.02). It is not significantly different from the 81% of non-finite verbs in final position produced by the monolingual children (see Section 6.1.2). Ergün produces mostly finite verb forms. Of the 29 examples in Starren's chapter, 22 (76%) are in second position. Finite verbs in initial sentence position are not attested in his data. The proportion of 76% is not significantly different from a random 50-50% distribution between targetlike and non-targetlike utterance positions. It is significantly different from the rather high proportion of 97% targetlike sentence position reported for the monolingual children. Although Mahmut's non-finite and Ergün's finite verb forms thus generally appear in distinct sentence positions, it is especially the position of the finite verb form that differs from Dutch child language. Note, however, that in these analyses, the number of utterances is rather low and more data would be needed to substantiate the claims just presented.

In sum, two differences between first and second language acquisition of Dutch that have been reported in the literature are the use of finite verbs in non-targetlike sentence positions and the *is*-construction used by one of the adult learners. Before we turn to a comparison of the bilingual child data in the present study with the monolingual children's and adult second language learners' use of Dutch verbs, a short overview is presented of verb use in Turkish, the first language of the bilingual children.

6.2 Verbs in Turkish

Being an agglutinative language, verb inflection in Turkish consists of suffixing several types of morphemes to a verb stem. Verbs can be inflected for voice (e.g., causative, passive, reflexive), negation, tense (e.g., progressive, past tense, future), aspect (e.g., evidentiality), modality (e.g., possibility), and person. The exact form of a suffix is determined by the verb stem or preceding suffixes on the basis of vowel harmony and voicing assimilation. The past tense suffix *-Dİ*, for example, can appear as *-di* in *gel-di* 'come-PAST: (s)he came' and as *-tu* in *koş-tu* 'run-PAST: (s)he ran'. Person marking

indicates the subject of the sentence and makes explicit reference to subjects with pronouns often redundant, except in specific pragmatic situations. Non-finite verbs are nominalised forms and occur in relative and subordinate clauses. The neutral word order of Turkish sentences is subject-object-verb. Variation in word order is used for pragmatic purposes (e.g., information structure).

In the input Turkish children receive, many different forms of verbs are present. Küntay & Slobin (1999: 156) give a list of verbs with the stem *koy-* 'to put' in the speech of a mother to her child between ages 1;8 and 2;3, in order of descending frequency of occurrence (see 6).

(6) *koy* 'put (imperative)', *koyma* 'put-NEG: don't put', *koyacağım* 'put-FUT-1sg: I am going to put', *koyacağız* 'put-FUT-1pl: we are going to put', *koyacaksın* 'put-FUT-2sg: you are going to put', *koyucan*[49] 'put-FUT-2sg: you are going to put', *koymanı* 'put-NOM-2sg: your putting', *koymak* 'put-NOM: putting', *koymadan* 'put-NEG-ABL: without putting', *koydum* 'koy-PAST-1sg: I put', *koydun* 'koy-PAST-2sg: you put', *koyduk* 'koy-PAST-1pl: we put', *koyar mısın?* 'koy-AOR Q-2sg: do you put?', *koyuyoruz* 'put-PROG-1pl: we are putting', *koymuşlar* 'put-EVI-3pl: they (apparently) put', *koyayım* 'put-OPT-1sg: let me put', *koyalım mı?* 'koy-OPT-1pl Q: shall we put?' (17 types)

Children use several verb forms from very early on. Already at the two-word stage, before the age of 2;0, Turkish children have mastered much of the verbal paradigm productively (Aksu-Koç & Slobin, 1985). They make few morphological errors, apply the different morphemes always in their correct order, and have no problem applying vowel harmony and voicing assimilation in choosing the right form of a suffix. In addition, Turkish children of that age are reported to already use word order flexibly for pragmatic functions. For example, they put new information before the verb and backgrounded or given information after the verb. Nominalisation of verbs and subordination appear relatively late in Turkish language acquisition (Aksu-Koç & Slobin, 1985; Boeschoten, 1990).

To give an impression of the verb forms used by a monolingual Turkish child, example (7) gives an overview of the forms of the verb *koy-* 'to put' occurring in recordings with İlknur, a child in the Sofu monolingual Turkish corpus (Sofu, 1995), between the age of 2;0 and 2;3.

(7) *koy* 'put (imperative)', *koydum* 'put-PAST-1sg: I put', *koyak* 'koy-OPT-1pl: let us put'[50], *koyacam* 'put-FUT-1sg: I am going to put', *koyaca(ğı)z* 'put-FUT-1pl: we are going to put', *koyalım* 'put-OPT-1pl: let us put', *koyayım* 'put-OPT-1sg: let me put', *koymadım* 'put-NEG-PAST-1sg: I didn't put', *koydu* 'put-PAST: (s)he put', *koymuş* 'put-EVI: (s)he (apparently) put' (10 types)

Aksu-Koç & Slobin (1985) give several reasons why Turkish children learn to use verbs in an adultlike fashion so easily. The most important reason for this probably lies in the

[49] Contracted form of *koyacaksın*.
[50] Contracted form of *koyalım*.

extremely regular characteristics of Turkish morphology. Another reason is the fact that Turkish morphemes appear at the end of words and verbs often appear at the end of the sentence, which makes them more salient for children (see Section 6.1.1). In addition, most Turkish morphemes are stressed and consist of at least one syllable. Homonymy of morphemes, which is known to delay acquisition, is relatively rare in Turkish. These facilitating characteristics of Turkish verbs lead to early productivity of verb inflection in Turkish child language.

Cross-linguistically, Pye (2001) discerns three distinct acquisition patterns for verb morphology. In addition to languages in which children go through a stage with non-finite sentences with infinitives, there are languages in which children initially use only verb stems (e.g, Chinese) and languages in which children use adultlike verb morphology productively from the start. Turkish clearly belongs to the latter group. A phenomenon like using non-finite sentences in early child Dutch is thus not found in Turkish language acquisition.

6.3 Research questions

The remainder of this chapter aims at exploring the issue to what extent the patterns of verb use in Dutch first and second language acquisition observed in the literature are found in the Dutch speech data of the seven bilingual Turkish-Dutch children. The research questions addressed in this chapter are:

(1) To what extent are the developmental stages described for first language learners of Dutch by Blom (2003) also observed in the data of the bilingual children?
(2) To what extent does verb use by the bilingual children differ from monolingual children learning Dutch as a first language?
(3) To what extent does verb use by the bilingual children differ from Turkish adults learning Dutch as a second language?

Issues that are addressed in answering the second and third research questions are the correlation between verb form and sentence position, the amount of subject drop in finite and non-finite sentences, as well as the use of compound finites with copula forms.

6.4 Method

6.4.1 Informants

In this chapter, the speech data of the seven bilingual children in the Nap-Kolhoff and Van der Heijden bilingual corpora (see Chapter 2) are analysed. The outcomes are compared to studies on monolingual Dutch children (mainly Blom, 2003; but also De Haan, 1985; Jordens, 1990; and R. Klein, 1974). Blom's study analysed longitudinally collected productive speech data of six native Dutch children, two of whom (Josse and Matthijs) have also been investigated in Chapter 4 and Chapter 5. Blom selected transcripts at periods which were most representative of her four stages. For each child,

the sample consists of 2,300-4,600 utterances. De Haan (1985), Jordens (1990) and R. Klein (1974) observed much smaller samples of productive speech data, collected within a relatively short period of time. The comparison with Turkish adult second language learners of Dutch is made on the basis of Starren (2001) and Coenen & W. Klein (1992). A description of their informants, Mahmut and Ergün, was presented in Chapter 5.

6.4.2 Analyses

For all of the seven bilingual children, a list was made of all utterances containing a verb. A short description of its meaning in the context was supplied for each utterance. Verbs were identified as words that would be verbs in adult Dutch, even though it has been argued that verbs may have a different status in early child speech. Tomasello (1992b) analyses specific types of use of expressions like 'more', 'bye', and 'over' as verbs in very early child speech. The reason for using adult verbs as a starting point in the analyses presented here is that this makes the results comparable to Blom (2003) and other studies on first and second Dutch language acquisition.

Coding

Each utterance in the list of verbs was coded for three different characteristics, based on Blom's (2003) coding scheme. The first code relates to the subject of the utterance and thus possibly the agreement marker on the verb. This code consists of information about the person (first, second, third) and number (singular, plural) of the subject, as well as information about whether the subject is explicitly mentioned in the utterance or not. The second code indicates the verb form in the utterance: infinitive, participle, imperative, simple finite verb, or compound finite. Following Blom's selection criteria for infinitives, utterances with a plural subject are excluded, because the infinitive form (e.g., *eten* 'eat-INF: to eat') is identical to the finite verb form (e.g., *wij eten* 'we eat-1PL: we eat'). Single-word utterances with only a verb ending in *-en* are included, although it is possible that they are actually plural finite verb forms. Blom estimates that the proportion of such utterances that actually are plural finite verb forms is very small and therefore decided to avoid discarding 'valuable' data and included all single-word-utterances. Finally, a third code indicates the age of the child at which the utterance was produced.

Blom (2003) divided her data into stages on the basis of the proportion of finite versus non-finite utterances. For each child she selected transcripts at data points that came closest to her pre-set criteria. For the bilingual analyses in this chapter, it was decided to include all available data, instead of making a selection at certain time points. The reason for this decision is that the dataset would become too small if only a subsection were analysed. Moreover, it is the purpose of this chapter to present a picture of the bilingual children's development that is as complete as possible. The task then was to assign the data to Blom's stages. The proportion of finite and non-finite sentences turned out to not always be a very good criterion, as is shown in the next section. The main problem is that some bilingual children tend to use finite expressions

with a high token frequency once they have started using them, which results in high proportions of finite sentences. Non-finite verbs seem to be more productive in early stages, but are sometimes used only once or twice per verb per recording. The following criteria were used to demarcate different stages in the data (based on Blom, 2003):

(1) Stage I: no or only occasional production of finite sentences. Occasional production is defined as a minimum of five utterances. If a few more finite utterances are found, but most of them are a repetition of the same utterance, it is still defined as occasional production.
(2) Stage II: more than only occasional production of finite sentences (see Stage I). No or occasional (one or two) verb types used both as finite and infinitive verb forms. Infinitives in compound finites are not included in these overlap analyses. Overlap is calculated as accumulative over all earlier utterances.
(3) Stage III: more than only occasional overlap of verb types (see Stage II). An additional feature of this stage is the appearance of a more than occasional production of compound finites. Occasional production is defined as for finite utterances in Stage I.
(4) Stage IV: clear decrease in the production of non-finite utterances. The proportion of finite utterances is at least 80%. In addition, the accumulative number of overlapping verb types still increases, as well as the number of compound finites produced.

For some children, the boundaries between the different stages were easy to draw. For others, however, changing a boundary by one or a few months would not change the overall outcomes much. When describing individual profiles in Section 6.5 the reasons for the decisions made in these cases are clarified in more detail.

Finally, the mean length of utterance (MLU) per stage was calculated, in order to compare the bilingual children's outcomes with Blom's (2003) findings for monolingual children. Similar to Blom's analysis, the average MLU of a developmental stage is calculated as the total number of morphemes divided by the total number of utterances during that stage. Blom does not give a description of how she coded morphemes in her data and which utterances she included in the analysis. In calculating MLU for the bilingual children in the present study, Gillis & De Houwer's (2000) criteria for coding morphemes were used. In addition, Johnston's (2001) guidelines for which utterances to include were applied. Turkish utterances and mixed utterances containing Turkish words were excluded. The CLAN commands and procedures for calculating MLU are described in Appendix D.

6.5 Individual developmental profiles

In Section 6.1, Blom's (2003) categorisation of the development in monolingual Dutch child language towards adultlike finite verb use into four different stages has been described. In this section, individual profiles are sketched for the seven bilingual children in order to determine whether they follow a similar path and pace.

6.5.1 Mehmet

The data available for Mehmet between ages 2;3 and 4;0 can be divided into three periods. In the first period between ages 2;3 and 3;0, Mehmet produces verbs occasionally (1-5 utterances per recording). He produces 16 verbs in total during this period, only 2 of which are infinitives. The other verbs produced in this period are finite verb forms: *wil* 'want', *mag* 'is/am.allowed', *weet* 'know', *moet* 'must', and *is* 'is'. This period cannot be characterised as Blom's (2003) Stage I, because the main characteristic of this period is that children almost exclusively use infinitive verb forms. Mehmet's use of finite verb forms seems to be mostly in fixed expressions (e.g., *mag* only in *mag ik* X 'am.allowed I X: can I have X' and *mag niet* 'is.allowed not: is not allowed', *weet* only in *weet ik niet* 'know I not: I don't know') as was described in Chapter 3.

In the second period between ages 3;1 and 3;6, Mehmet's verb use can be described as Blom's (2003) Stage II. Finite verbs occur more than only occasionally (96 utterances), but infinitive forms are present in Mehmet's speech as well (38 utterances). The proportion of finite verb forms (72%) is still higher than Blom's criterion of a maximum of 30%. This is due to the fact that Mehmet tends to use the few finite utterances he has learned over and over again, leading to high total numbers of finite utterances. What is typical of Stage II, however, is that there is not much overlap in verb types in this period (see Table 6.6) and that Mehmet produces only one compound finite (i.e., *ik kan voetballen* 'I can football-INF' at age 3;5).

In the third period between ages 3;8 and 4;0, Mehmet produces equal amounts of finite (79 utterances) and non-finite (82 utterances) sentences. This is typical of Blom's (2003) stage III, as is the increase in overlap in verb types used in finite and non-finite utterances and the appearance of compound finites (8 utterances). In the compound finites, Mehmet mostly uses the finite forms *kan* (e.g., *ik kan slapen* 'I can sleep-INF') and *wil* (e.g., *ik wil die niet maken* 'I want that not make-INF: I don't want to make (do) that').

Table 6.6 Accumulative overlap in verb types produced by Mehmet

Age	Form	Verb
2;3-3;0	Non-finite (1)	*lezen* 'read-INF'
	Finite (5)	*wil* 'want(s)', *mag* 'is/am.allowed', *weet* 'know', *moet* 'must', *is* 'is'
	Overlap (-)	-
3;3-3;6	Non-finite (11)	*lezen* 'read-INF', *praten* 'talk-INF', *wassen* 'wash-INF', *spelen* 'play-INF', *voetballen* 'football-INF', *slapen* 'sleep-INF', *gaan* 'go-INF', *kleuren* 'colour-INF', *kopen* 'buy-INF', *trekken* 'pull-INF', *zwemmen* 'swim-INF'
	Finite (8)	*wil* 'want(s)', *mag* 'is/am.allowed', *moet* 'must', *is/ben* 'is/am' *heet* 'am/are/is.called', *komt* 'comes', *heeft* 'has', *kan* 'can'
	Overlap (2)	*kijken/kijk* 'look-INF'/'look', *weten/weet* 'know-INF/know'
3;8-4;0	Non-finite (16)	*lezen* 'read-INF', *praten* 'talk-INF', *wassen* 'wash-INF', *voetballen* 'football-INF', *kleuren* 'colour-INF', *trekken* 'pull-INF', *zwemmen* 'swim-INF', *drinken* 'drink-INF', *eten* 'eat-INF', *zitten* 'sit-INF', *pakken* 'take-INF', *blijven* 'stay-INF', *kiezen* 'choose-INF', *rijden* 'drive-INF', *vallen* 'fall-INF', *vasthouden* 'hold-INF'
	Finite (7)	*wil* 'want(s)', *mag* 'is/am.allowed', *moet* 'must', *is/ben* 'is/am' *heet* 'am/are/is.called', *heeft* 'has', *kan* 'can'
	Overlap (9)	*kijken/kijk* 'look-INF'/'look', *weten/weet* 'know-INF/know', *spelen/speel* 'play-INF/play', *slapen/slaap* 'sleep-INF/sleep', *gaan/ga/gaat* 'go-INF/go/goes', *komen/komt* 'come-INF, comes', *maken/maak/maakt* 'make-INF/make/makes', *vliegen/vlieg* 'fly-INF/fly', *kopen/koop* 'buy-INF/buy'

6.5.2 Batuhan

The data available for Batuhan between ages 2;5 and 4;0 can be divided into two periods of verb use. In the first period, between 3;0 and 3;5, Batuhan produces 16 utterances with verbs, all of which are non-finite. This is typical of Blom's (2003) stage I. In the second period between ages 3;6 and 4;0, Batuhan uses both finite (12 utterances) and non-finite (93 utterances) verb forms. The proportion of finite utterances (13%) is in accordance with Blom's criterion of a maximum of 30% for Stage II. Batuhan produces only three compound finites: *ik ga luchtballon pakken* 'I go hot-air.balloon take-INF: I am going to take the hot-air balloon' and '*ik ga naar buiten spelen*: I go to outside play-INF: I am going to play outside' at age 3;6 and *appel maak pakken* 'apple make take-INF: (he) makes (does) take (hold) an apple' at age 3;11. Although the percentage of finite utterances and the number of compound finites suggest that Batuhan is at Stage II in this period, he shows slightly more overlap in verb

types than expected. Blom's monolingual children showed a maximum of one or two overlapping verb types at Stage II, but for Batuhan three overlapping verb types are found in this period (see Table 6.7). As the amount of overlap is still a borderline case and not yet very typical of Stage III, it is concluded that Batuhan's data in the second period most closely resemble Blom's Stage II.

Table 6.7 Accumulative overlap in verb types produced by Batuhan

Age	Form	Verb
3;0-3;5	Non-finite (7)	*gaan* 'go-INF', *drinken* 'drink-INF', *eten* 'eat-INF', *maken* 'make-INF', *wassen* 'wash-INF', *pakken* 'take-INF', *slapen* 'sleep-INF'
	Finite (-)	-
	Overlap (-)	-
3;6-4;0	Non-finite (13)	*drinken* 'drink-INF', *eten* 'eat-INF', *wassen* 'wash-INF', *slapen* 'sleep-INF', *doen* 'do-INF', *kijken* 'look-INF', *kleuren* 'colour-INF', *spelen* 'play-INF', *snoepen* 'eat.sweet-INF', *zitten* 'sit-INF', *zwemmen* 'swim-INF', *sturen* 'steer-INF', *gooien* 'throw-INF'
	Finite (3)	*is/ben* 'is/am', *wil* 'want(s)', *kom/komt* 'come/comes'
	Overlap (3)	*gaan/ga* 'go-INF/go', *maken/maak* 'make-INF/make', *pakken/pakt* 'take-INF/takes'

6.5.3 Yunus

In the data available for Yunus between ages 2;7 and 3;9, only one period of verb use can be distinguished, in which no major changes take place. In this period, between ages 3;1 and 3;9, Yunus produces 53 utterances with verbs, 47 of which are finite (89%). Although the proportion of finite verb forms is much higher than in Blom's (2003) characterisation of Stage II (30% maximum), the lack of overlap between finite and non-finite verb types in particular (see Table 6.8) suggests that Yunus is nevertheless at this stage. He produces a few utterances with compound finites: *ik ook mag eten uh appel* 'I also am.allowed eat-INF er apple: I am also allowed to eat (an) er apple' and *jij mag eten* 'you are.allowed eat-INF: you are also allowed to eat' at age 3;5, *hondje is aan kijken* 'dog-DIM is to watch-INF: (the) dog is watching' at age 3;6, and *mag niet deze pakken* 'is.allowed not this take-INF: he is not allowed to take this' at age 3;8.

Table 6.8 Accumulative overlap in verb types produced by Yunus

Age	Form	Verb
3;1-3;9	Non-finite (6)	*zwemmen* 'swim-INF', *dansen* 'dance-INF', *wassen* 'wash-INF', *doen* 'do-INF', *eten* 'eat-INF', *geven* 'give-INF'
	Finite (4)	*mag* 'is/am/are.allowed', *weet* 'know', *is/bent* 'is/are', *heb* 'have'
	Overlap (-)	-

6.5.4 Şükran

The data available for Şükran between ages 2;2 and 3;6 can be divided into two periods in which verbs are produced, but it is not easy to assign these periods to any of Blom's (2003) stages. In the period between ages 2;5 and 2;7, Şükran produces 11 utterances with a verb, 5 of which are finite (45%). As Blom gives a minimum of five finite utterances during one recording as the start of Stage II – all Şükran's five finite verbs are produced during the recording at age 2;5 – this period could be characterised as Stage II. There is no overlap in verb types used as finite and non-finites forms and Şükran does not produce any compound finites. Nevertheless, the low amount of data could also be interpreted as Stage I, since she is at the borderline of exactly 5 finite verb forms.

The second period between ages 2;11 and 3;6 also seems to be a borderline case. Finite verbs become more frequent in this period. In total, Şükran produces 66 utterances with verbs in this period, 44 of which are finite (67%). Although the percentage of finite utterances falls within Blom's (2003) Stage III (circa 50%, but less than 80%), Şükran's speech seems to be on the borderline between Stages II and III with respect to the amount of overlap in verb types (see Table 6.9). Similarly, the number of three compound finites produced by Şükran puts her at the borderline between Stages II and III: *zitten moet* 'sit-INF must: (he) must sit (down)' at age 2;11 (3x), *Ç. is slaapt* 'Ç. is sleeps: Ç. is sleeping' at age 3;0 (2x), and *ja, hij is zit* 'yes, he is sit: yes, he is sitting' at age 3;3. Note that none of these compound finites are targetlike. In the first utterance, Şükran use a non-canonical word order with the infinitive preceding the finite verb. In the utterances at ages 3;0 and 3;3, Şükran uses two finite verbs rather than a finite verb and an infinitive. This type of compound finites is reminiscent of the Turkish adult learner Ergün's *is*-construction discussed in Section 6.1.7. Compound finites in the bilingual children's speech is studied in more detail in Section 6.6.4.

Table 6.9 Accumulative overlap in verb types produced by Şükran

Age	Form	Verb
2;5-2;7	Non-finite (5)	*doen* 'do-INF', *kijken* 'look-INF', *schoonmaken* 'clean-INF', *zitten* 'sit-INF', *zeggen* 'say-INF'
	Finite (3)	*moet* 'must', *mag* 'am/is.allowed', *weet* 'know'
	Overlap (-)	-
2;11-3;6	Non-finite (8)	*doen* 'do-INF', *kijken* 'look-INF', *schoonmaken* 'clean-INF', *zeggen* 'say-INF', *openen* 'open-INF', *wipwappen* 'seesaw-INF', *spelen* 'play-INF', *kopen* 'buy-INF'
	Finite (7)	*moet* 'must', *mag* 'am/is.allowed', *weet* 'know', *is* 'is', *heb* 'have', *ken* 'know', *ga* 'go'
	Overlap (3)	*zitten/zit* 'sit-INF/sit(s)', *slapen/slaap/slaapt* 'sleep-INF/sleep/sleeps', *vallen/val* 'fall-INF/fall'

6.5.5 Filiz

The data available for Filiz can be divided into two periods of verb use. In the first period, between ages 2;1 and 2;10, Filiz produces 65 verb types, 54 of which have a finite form (83%). As Filiz already uses several finite verb forms during the first recording at age 2;1, this period is established as Stage II. The high proportion of finite utterances is probably due to a phenomenon that was also observed for some other bilingual children, namely the fact that children use a finite verb or expression very frequently once they have started using it. There is no overlap in verb types in this period (see Table 6.10) and Filiz produces only one compound finite: *moet je keer kijken* 'must you (one) time look-INF: look here'.

In the recording at age 2;11 an overlap in verb types starts to appear in Filiz's speech. In total, she produces 215 utterances with a verb in this period, 157 of which are finite (73%). The amount of overlap in verb types (see Table 6.10) and a total of 32 compound finites produced in this period (e.g., *ik die ga douwen*: I that go push-INF: I am going to push that one' at age 3;0, *ik ga niet eten* 'I go not eat-INF: I am not going to eat' at age 3;3 and *ik ben deze zitten* 'I am this sit-INF: I am going to sit (on) this one' at age 3;6) indicate that Filiz is now at Stage III.

Table 6.10 Accumulative overlap in verb types produced by Filiz

Age	Form	Verb
2;1-2;10	Non-finite (7)	*kijken* 'look-INF', *pakken* 'take-INF', *zitten* 'sit-INF', *hebben* 'have-INF', *eten* 'eat-INF', *doen* 'do-INF', *wachten* 'wait-INF'
	Finite (7)	*moet* 'must', *kan* 'can', *mag* 'is/am.allowed', *is* 'is', *wil* 'want(s)', *gaat/ga* 'goes/go', *hoeft* 'needs'
	Overlap (-)	-
3;0-3;6	Non-finite (8)	*kijken* 'look-INF', *eten* 'eat-INF', *slapen* 'sleep-INF', *tekenen* 'draw-INF', *gooien* 'throw-INF', *opeten* 'eat.up-INF', *drinken* 'drink-INF', *schoonmaken* 'clean-INF'
	Finite (10)	*moet* 'must', *kan* 'can', *mag* 'is/am.allowed', *is/ben* 'is/am', *wil* 'want(s)', *gaat/ga* 'goes/go', *hoeft* 'needs', *lees* 'read', *komt/kom* 'comes/come', *blijf* 'stay'
	Overlap (7)	*pakken/pak* 'take-INF/take', *zitten/zit* 'sit-INF/sit(s)', *hebben/heeft/heb* 'have-INF/has/have', *doen/doe* 'do-INF/do', *wachten/wacht* 'wait-INF/wait(s)', *maken/maak* 'make-INF/make', *zeggen/zei* 'say-INF/said'

6.5.6 Berrin

In the data available for Berrin between ages 2;2 and 3;6 only one period of verb use can be distinguished. Although the first recording at age 2;2 with only one finite utterance could be considered separately as representative of Stage I, the fact that during this recording only three utterances with verbs are produced makes it difficult to say anything about this recording on its own. During the following recording at age 2;5,

Berrin starts to produce more finite as well as non-finite verb forms. Nevertheless, it is possible that the period before age 2;5 should be characterised as Stage I, but not enough data are available. For that reason, at present the whole interval between ages 2;2 and 3;6 is seen as one period.

Berrin produces a total of 62 utterances with verbs, 37 of which are finite (60%). There is only one verb type that is both used in finite and in non-finite form (see Table 6.11). In addition, only one compound finite is found in the data (*jij niet kan niet zitten* 'you not can not sit-INF: you cannot sit (here)' at age 3;6). In spite of the relatively high proportion of finite utterances, Berrin thus appears to be at Stage II.

Table 6.11 Accumulative overlap in verb types produced by Berrin

Age	Form	Verb
3;1-3;9	Non-finite (9)	*zitten* 'sit-INF', *kijken* 'look-INF', *maken* 'make-INF', *afblijven* 'keep.off-INF', *doen* 'do-INF', *afpakken* 'take.away-INF', *aandoen* 'put.on-INF', *aankomen* 'arrive-INF', *spelen* 'play-INF'
	Finite (6)	*is/ben* 'is/am', *wil* 'want(s)', *kan* 'can', *mag* 'is/am.allowed', *heb* 'have', *val* 'fall'
	Overlap (1)	*slapen/slaap/slaapt* 'sleep-INF/sleep/sleeps'

6.5.7 Selma

The data available for Selma between ages 2;1 and 3;6 can be divided into three periods of verb use. At age 2;1, Selma's speech can be characterised as Stage II. She produces 24 utterances with verbs during this period, 8 of which are finite (33%). There is only one verb type that is used both in finite and non-finite form (see Table 6.12). In addition, Selma produces three compound finites (*ik ga betalen* 'I go pay-INF: I am going to pay', *ik moet plassen* 'I must pee-INF: I have to pee', and *ik ga slapen* 'I go sleep-INF: I am going to sleep').

In the second period between ages 2;2 and 3;1, Selma produces 294 utterances with verbs, 204 of which are finite (71%). There is considerable overlap between verb types used in finite and in non-finite utterances (see Table 6.12). In addition, Selma produces 27 compound finites (e.g., *mag niet boekje pakken* 'are.allowed not book-DIM take-INF: you are not allowed to take (the) book' and *die is niet slapen* 'that is not sleep-INF: that one is not sleeping' at age 2;10 and *en zij doe ook dansen* 'and she do also dance-INF: and she does (is) also dance (dancing)' at age 3;3). These characteristics are all typical of Blom's (2003) Stage III.

In the third period between ages 3;3 and 3;6, the number of non-finite utterances decreases. Of the 225 utterances Selma produces, 208 are finite (92%). The proportion of finite utterances is well above the minimum of 80% for Stage IV. The number of overlapping verb types increases in this period (see Table 6.12) as well as the number of compound finites (38 in this period). It can therefore be concluded that Selma is at Stage IV in this final period.

Table 6.12 Accumulative overlap in verb types produced by Selma

Age	Form	Verb
2;1	Non-finite (6)	*afblijven* 'keep.off-INF', *eten* 'eat-INF', *huilen* 'cry-INF', *lezen* 'read-INF', *pakken* 'take-INF', *zitten* 'sit-INF'
	Finite (3)	*ga* 'go', *moet* 'must', *is* 'is'
	Overlap (1)	*slapen/slaapt* 'sleep-INF/sleeps'
2;2-3;1	Non-finite (17)	*afblijven* 'keep.off-INF', *huilen* 'cry-INF', *lezen* 'read-INF', *plassen* 'pee-INF', *opruimen* 'tidy.up-INF', *wachten* 'wait-INF', *opeten* 'eat.up-INF', *passen* 'fit-INF', *proppen* 'stuff-INF', *schommelen* 'swing-INF', *vallen* 'fall-INF', *vegen* 'sweep-INF', *zeggen* 'say-INF', *zien/zienen*† 'see-INF/see-INF-INF', *duwen* 'push-INF', *meenemen* 'take.along-INF', *spelen* 'play-INF'
	Finite (11)	*ga* 'go', *moet* 'must', *gooi* 'throw', *mag* 'is/am.allowed', *wil* 'want(s)', *heeft/heb* 'has/have', *geeft/geef* 'gives/give', *kan* 'can', *blijf* 'stay', *heet* 'is/am.called', *weet* 'know(s)'
	Overlap (10)	*slapen/slaapt/slaap* 'sleep-INF/sleeps/sleep' *zijn/is* 'be/is', *doen/doe/doet* 'do-INF/do/does', *kijken/kijk* 'look-INF/look', *maken/maak* 'make-INF/make', *zitten/zit/zat* 'sit-INF/sit(s)/sat', *pakken/pakt* 'take-INF/takes', *eten/eet* 'eat-INF/eat(s)', *komen/komt* 'come-INF/comes', *kopen/koop* 'buy-INF/buy'
3;3-3;6	Non-finite (22)	*afblijven* 'keep.off-INF', *huilen* 'cry-INF', *lezen* 'read-INF', *plassen* 'pee-INF', *opruimen* 'tidy.up-INF', *wachten* 'wait-INF', *opeten* 'eat.up-INF', *passen* 'fit-INF', *proppen* 'stuff-INF', *schommelen* 'swing-INF', *vallen* 'fall-INF', *vegen* 'sweep-INF', *zien/zienen*† 'see-INF/see-INF-INF', *duwen* 'push-INF', *meenemen* 'take.along-INF', *spelen* 'play-INF', *helpen* 'help-INF', *oppassen* 'babysit-INF', *stoppen* 'stop-INF', *wassen* 'wash-INF', *halen* 'get-INF', *uitdoen* 'put.off-INF'
	Finite (12)	*ga/gaat* 'go', *moet* 'must', *gooi* 'throw', *mag* 'is/am.allowed', *wil* 'want(s)', *heeft/heb* 'has/have', *geeft/geef* 'gives/give', *blijf* 'stay', *heet* 'is/am.called', *weet* 'know(s)', *loop* 'run', *denk* 'think'
	Overlap (12)	*slapen/slaapt/slaap* 'sleep-INF/sleeps/sleep' *zijn/is/ben* 'be/is', *doen/doe/doet* 'do-INF/do/does', *kijken/kijk* 'look-INF/look', *maken/maak* 'make-INF/make', *zitten/zit/zat* 'sit-INF/sit(s)/sat', *pakken/pakt* 'take-INF/takes', *eten/eet* 'eat-INF/eat(s)', *komen/komt/kom* 'come-INF/comes', *kopen/koop* 'buy-INF/buy', *kannen*‡*/kan* 'can-INF/can', *zeggen/zegt/zeg* 'say-INF/says/say'

†Overgeneralisation of an infinitive suffix *-en* attached to an infinitive ending in *-n*.

‡Overgeneralisation of adding the infinitive suffix *-en* to an irregular modal verb form (*kan*; the infinitive form is *kunnen*).

6.5.8 Summary

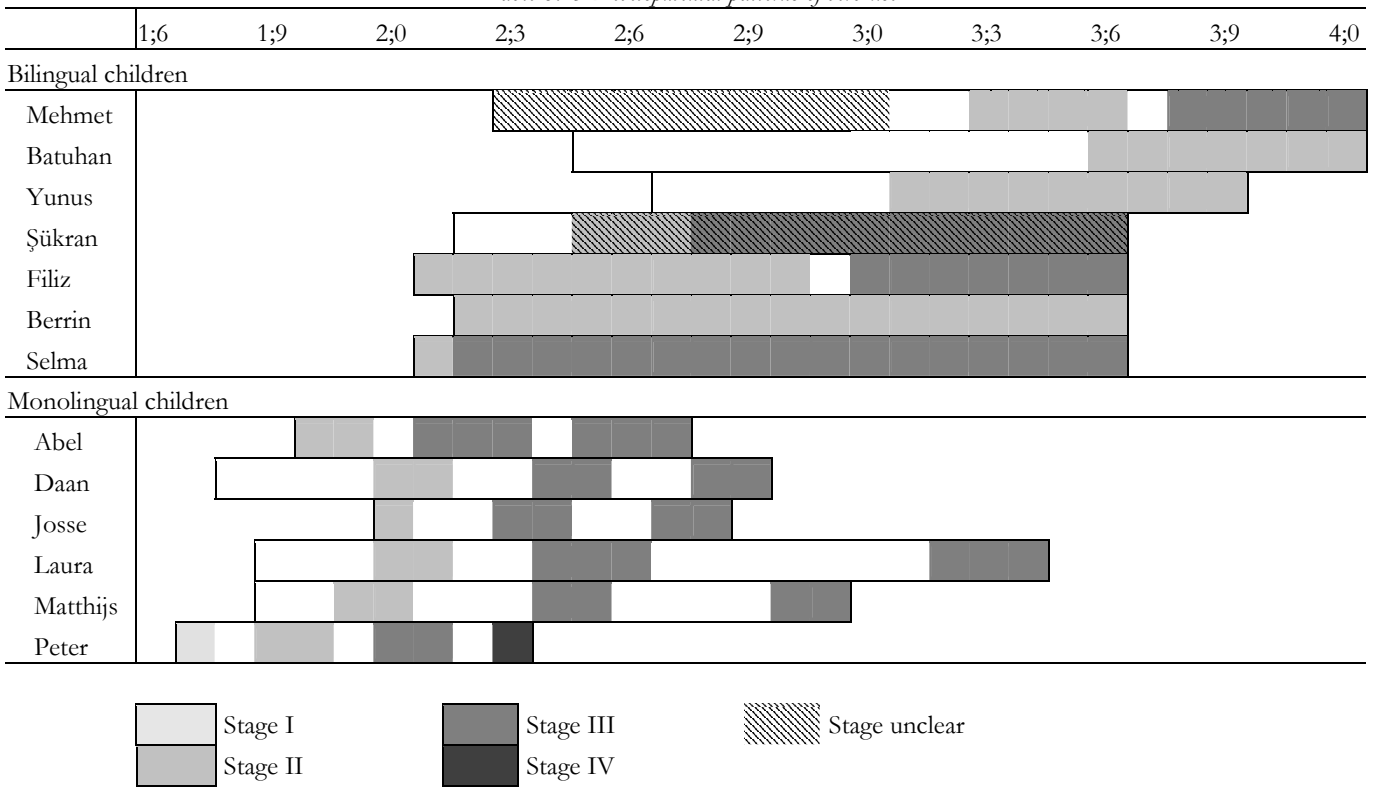
Table 6.13 presents an overview of the individual developmental patterns of the bilingual children described in the previous section. It appears that there are large differences between the children. At the age of 3;3, for example, Batuhan is at Stage I, Mehmet, Yunus, and Berrin are at Stage II, Filiz and probably also Şükran at Stage III, and Selma at Stage IV. A comparison with Blom's (2003) data for six monolingual Dutch children shows that they develop at a more equal pace and generally much faster. Selma is the only bilingual child who falls within the range of the monolingual children: her pattern is rather similar to the monolingual child Laura.

One of the differences between the monolingual and bilingual children is found with respect to Stage I. According to Blom (2003), monolingual children's first verbs at this Stage are almost exclusively non-finite infinitives. Most of the bilingual children, however, started out by using relatively high proportions of finite verb forms. Batuhan is the only bilingual child the majority of whose first verbs were infinitives. As data are available for several bilingual children during a period in which they do not produce any verbs at all, it is unlikely that Stage I has been missed because starting data collection started too late. This is the most likely explanation for the fact that for some of the monolingual children in Blom's study no Stage I is found.

Taelman, Martens & Gillis (2005) argue that Blom's (2003) Stage I is not universal among monolingual Dutch children either. Taelman et al. found in a study of eight Flemish children, that at least six of them used stem forms more frequently than infinitives in the very early stages of verb use. Taelman et al. argue that (part of) the stem forms are actually infinitives that are phonologically reduced by deletion of the last schwa-vowel to stem forms. They find evidence for this claim in the fact that many of these stem forms are produced in sentence-final position. In addition, the children appear to also delete final syllables containing a schwa in the same period in other words (e.g., *ei-k* instead of *ei-ke* 'egg-DIM', *suik* instead of *suiker* 'sugar'). This analysis does not seem to hold for most of the data of the bilingual children studied in this chapter, as the earliest verbs of the bilingual children are often parts of fixed expressions (such as *weet ik niet* 'know I not: I don't know', *ik wil* X 'I want X', *mag niet* 'is.allowed not: is not allowed') and do not typically appear in sentence final position.

All bilingual children are observed at some point in time to be at Stage II. What is typical of this stage is a rather strict division between verbs that occur in finite forms and verbs that occur as infinitives. Not all bilingual children reach Stage III, in which verbs begin to be used in both finite and non-finite verb forms. Only Selma reaches Stage IV, the stage at which non-finite utterances start to disappear from her speech.

Table 6.13 Developmental patterns of verb use



6.6 Comparison with Dutch first and second language acquisition

In the previous section, it was concluded that bilingual children in their acquisition of Dutch go through stages of verb use that are similar to monolingual Dutch children, although some differences have also been observed. In this section, the bilingual children are compared to monolingual children on four further issues: the mean length of utterance per stage (Section 6.6.1), the relation between verb form and sentence position (Section 6.6.2), the amount of subject drop (Section 6.6.3), and types of (copular) compound finites (Section 6.6.4). A comparison with Turkish adult learners of Dutch is included in the sections on verb form and sentence position and compound finites, as these are the only topics about which adult data are available.

6.6.1 MLU per stage

Mean length of utterance (MLU) is a very general measure of children's language development, as utterances tend to become longer when they become more complex. For English child language MLU is believed to be informative and to correlate with other measures of grammatical complexity until it reaches a value of about 4.0 (Brown, 1973; Rondal, Ghiotto, Bredart & Bachelet, 1987; Scarborough et al., 1991). As Blom (2003) provides MLU values for the children in her study per developmental stage, it is possible to make a comparison with the bilingual children to see if they are at similar stages of general linguistic development when they are at specific stages of verb use.

In Figure 6.1, the average MLU of each bilingual and monolingual child per stage[51] is plotted, as well as the average MLU per group. It appears that the bilingual children's MLU is higher overall than the monolingual children's. In addition, the range of MLU values between individual children within a stage is larger for the bilingual than for the monolingual children.

[51] In spite of the reservations made in Section 6.5, Mehmet's verb use at age 2;3-3;0 is considered as Stage I, Şükran's verb use at age 2;5-2;7 as Stage II, and her verb use at age 2;11-3;6 as Stage III.

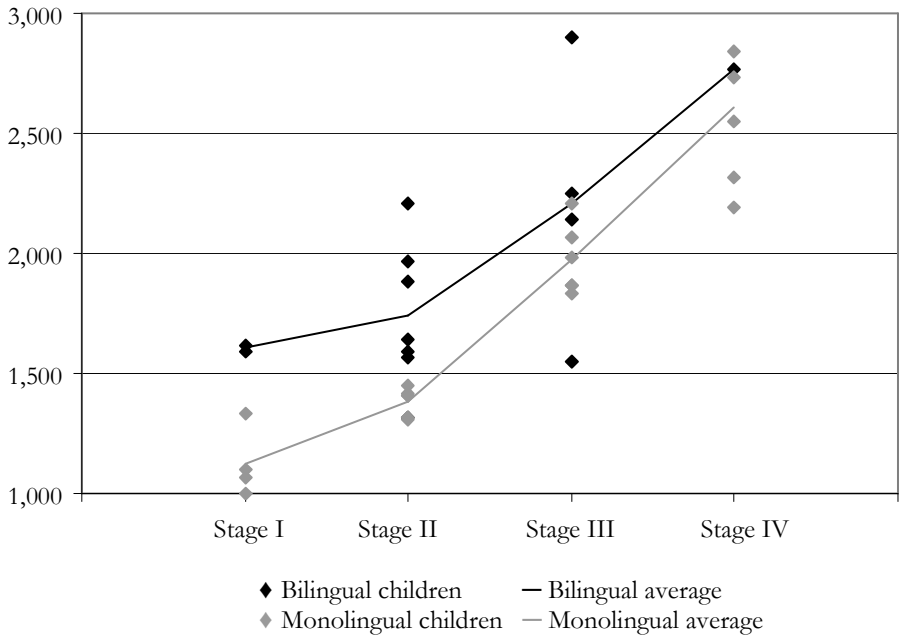


Figure 6.1 MLU per stage (monolingual data based on: Blom, 2003: 238-239, Appendix 2.2)

How can these differences be interpreted? A possible interpretation of the higher MLU values of the bilingual children is that they are in general older than the monolingual children. The bilingual children may want to talk about more complex situations, as their conceptual development is more mature. They are older in terms of cognitive development, and also draw on experience built up in their first language. As a result, even if they lack targetlike linguistic means for doing so, their utterances are longer. This explanation would also account for the larger range of MLU values among the bilingual children at each stage, as the age differences per stage are also larger. An alternative interpretation is that the bilingual children rely more on formulaic speech than monolingual children and therefore produce longer utterances.

It also possible, however, that methodological issues account for the higher MLUs of the bilingual children. First, in order to calculate the MLU for the bilingual data, only the Dutch language utterances were extracted. Relatively short utterances like those containing only a proper name or an interjection (e.g., 'huh') were coded as 'undecided' with respect to language and were thus excluded from the MLU counts. It is not clear to what extent this influenced the MLU values of the bilingual children. Second, it is unclear how Blom (2003) calculated MLU on the monolingual data and therefore difficult to see how comparable the data are in general. Third, the monolingual data includes data only at the most representative periods of a developmental stage. The bilingual data, on the other hand, include more continuous datasets. Had Blom also included more data after the onset point of a new stage, the average MLU values per

stage might have been higher. In sum, because of these comparability issues in the MLUs of the bilingual and monolingual data, it is not possible to draw any definite conclusions from the observed differences between the bilingual and monolingual children.

6.6.2 Verb form and verb position

Table 6.14 presents an overview of the finite verb forms produced by the bilingual children in different sentence positions. As in the analysis of the monolingual Dutch data presented in Section 6.1.2, questions and imperatives are excluded. As finite verbs forms are counted all those verbs that had been coded as finite verb, copula or compound finite. For establishing word position, a problem arises with verbs in the second or final position of two-word utterances, as they are identical. Therefore, those two-word-utterances are excluded from the dataset. For similar reasons, single-word utterances are excluded as well. Finally, vocatives (e.g., 'mum, …') and pragmatic markers (e.g., '…, right?') are excluded when establishing word position.

Table 6.14 Bilingual children's finite verb forms in different sentence positions, and proportions in targetlike initial or second position.

Position	Initial	Second	Final	Other	Total	%Initial/Second†
Mehmet	52	46	10	3	111	88%***
Batuhan	-	6	2	1	9	67%n.s.
Yunus	35	19	-	2	56	96%***
Sükran	9	10	2	-	21	90%**
Filiz	102	78	6	3	189	95%***
Berrin	18	14	-	1	33	97%***
Selma	164	200	10	7	381	96%***
Total	380	373	30	17	800	94%***

†Fisher exact significance levels for difference with a random 50-50% distribution of targetlike and non-targetlike sentence positions.

The data in Table 6.14 show that the bilingual children produce almost all of their finite verbs in first or second sentence position. Only for Batuhan the predominance of finite verbs in targetlike position is not significantly different from a random 50-50% distribution, but this result can be attributed to an overall low number of finite utterances[52].

On average, the bilingual children produce slightly fewer finite verbs in first or second sentence position (94%) than the monolingual Dutch children (97%, see Section 6.1.2), but this difference is not significant. The difference with the proportion of 76% finite verbs in targetlike sentence position analysed for the Turkish adult Ergün (see Section 6.1.7) is significant (Fisher exact p=.001). In this respect, the bilingual Turkish-Dutch children thus behave more like monolingual Dutch children than like the Turkish adult learner Ergün.

[52] 81 finite utterances would be needed for a 67-33% distribution to be significantly different from a 50-50% distribution. For Batuhan, only 9 finite utterances are available.

For one child, however, there is a significant difference between the distribution found in his case and that of the total monolingual group. Mehmet produces only 88% of his finite verbs in first or second sentence position (p=.03). Although he shows the expected preference for finite verbs in first or second position, this preference is not as strong as among the monolingual children. In fact, it is rather similar to the adult learner Ergün's proportion of targetlike sentence position (76%, difference not significant). Some examples of finite verbs in finite or other (third) position in Mehmet's speech are given in (8).

(8) *ik jasje moet*. 'I jacket-DIM must: I must (need) a jacket'. (age 3;3)
jij niet mag 'you not are.allowed: you are not allowed'. (age 3;3)
ik nou &ende MacDonalds friet eet. 'I now &ende[53] MacDonalds chips eat: and then I ate chips at the MacDonalds' (age 3;9)
veel mama in de ziekenhuis slaap. 'lot mum in the hospital sleep: mum sleeps (slept) a lot in the hospital' (age 3;10)
mam , auto nou huis komt „ heh? 'mum, car now house come-PRS, right: mum, the car now comes home, right?'
ik ook kan niet. 'I also can not: I cannot (do it) either' (age 4;0)
ik zo kan niet, mam. 'I like that can not, mum: I cannot (do it) like that, mum' (age 4;0)

The examples may suggest that Mehmet is copying Turkish SOV word order into his Dutch. Nevertheless, similar utterances with a finite verb in final sentence position are also found in the monolingual data (see 9).

(9) *koekje ook heb* 'biscuit-DIM also have: I also want a biscuit' (Basje, age 2;3, R. Klein, 1974: 40)
nu deur open laat 'now door open let: now (I) leave the door open' (Tim, age 2;1-2;3, De Haan, 1985: 25)

As was discussed in Section 6.5.8, Taelman et al. (2005) have suggested that the occurrence of what looks like finite verb forms in final sentence position, is actually in many cases phonological reduction of the last syllable of the infinitive. One of Taelman et al.'s reasons to argue that some of the verb stem forms are infinitives, is that the verb stems in final position hardly ever contain the explicit finite suffix *-t* for third person singular reference. Moreover, modal verbs and copular forms, which rarely occur as infinitives in the input, are not placed in final sentence position either. The examples for Mehmet in (8), however, show that several of his finite or stem forms in finite position are modal verbs or have a *-t* suffix. In total, three (*mag* 'are.allowed', *moet* 'must', and *komt* 'come-PRES: comes') of Mehmet's ten finite or stem verbs in final position cannot belong to Taelman et al.'s group of schwa-deleted infinitives. When the data of the other bilingual children are also taken into consideration, it appears that in total seven of the thirty finite or stem verb forms in finite position (23%) are inflected

[53] See Chapter 4 for a discussion of Mehmet's use of *&ende*.

with a *-t* suffix or a modal verb. This is not significantly different from the data Taelman et al. present for Maarten. This boy also produced some of the stem forms with a *-t* suffix in final position (9 out of 65 verb forms, 14%).

In sum, on the basis of the sparse amount of available data it is unclear whether Mehmet's relatively frequent use of finite verb forms in final sentence position is structurally different from what monolingual children do. Although shwa-reduction in other words has not been investigated systematically, the impression one gets while reading through Mehmet's transcripts is not that this is a widespread phenomenon. Nevertheless, it is interesting that it should appear precisely in the data of a child who tends to use more finite verb forms than infinitives (see Section 6.5.1). It is thus possible that the finite or stem forms are more entrenched in Mehmet's speech and therefore also appear in unexpected sentence positions. The use of inflected verb forms and modals in final position, may also point to cross-linguistic influence from Turkish word order. On the basis of the current evidence, however, the issue remains unsolved.

Table 6.15 presents an overview of the position of the verb in non-finite utterances produced by the bilingual children. As non-finite utterances are counted those utterances with either only an infinitive or a participle.

Table 6.15 Bilingual children's non-finite verb forms in different sentence positions, and proportions in targetlike final position.

Position	Initial	Second	Final	Other	Total	%Final†
Mehmet	4	4	42	8	58	72%*
Batuhan	-	2	19	1	22	86%*
Yunus	-	-	1	-	1	100%n.s.
Sükran	3	-	6	-	9	67%n.s.
Filiz	5	3	18	-	26	69%n.s.
Berrin	3	-	5	1	9	56%n.s.
Selma	3	1	40	1	45	89%***
Total	18	10	131	11	170	77%***

†Fisher exact significance levels for difference with a random 50-50% distribution of targetlike and non-targetlike sentence positions.

The data in Table 6.15 show that the bilingual children produce most of the verbs in non-finite sentences in final position. Although it is not as strong as the preference for finite verbs to occur in first or second position, the preference of all children taken together (77% in final position) is significantly different from a random 50-50% distribution (Fisher exact $p<.001$). At an individual level, only the differences for Mehmet ($p=.02$), Batuhan ($p=.02$) and Selma ($p<.001$) are significant. For the other children, the low numbers of non-finite utterances account for the absence of significant differences.

This pattern is rather similar to the (low amounts of) available monolingual Dutch data and the data analysed for the Turkish adult Mahmut. The proportion of non-finite verbs in finite sentences of the bilingual children taken together (77%) does not differ significantly from either the monolingual data (81%) or from Mahmut's (89%). The preferences of the individual bilingual children do not differ significantly either.

Although the bilingual children thus do not produce all of their non-finite verbs in final position, their behaviour is not different from what monolingual children do. However, as the monolingual data are very sparse (37 utterances in total), more empirical research on this topic would be helpful.

6.6.3 Subject drop

As was discussed in Section 6.1.5, the use of finite and non-finite sentences is believed to be related to subject drop, the absence of explicit reference to a subject. Although subjects are obligatory in adult Dutch, monolingual children show subject drop in about half of their utterances with finite verb forms when they start to use these forms at Stage II (Blom, 2003). Over time, the amount of subject drop decreases to about 20% at Stage IV. The pattern found for non-finite sentences is different. In non-finite sentences, subject drop is much more prominent. At Stage II, monolingual children drop subjects in all non-finite sentences, decreasing to about 70% at Stage III. At Stage IV, however, subject drop increases again to an average of 84%. Are similar patterns observed for the bilingual children?

Table 6.16 and Table 6.17 give information about subject drop in the non-finite and finite utterances of the bilingual children. In 55% of all non-finite utterances the subject is not present. This is clearly different (Fisher exact $p<.001$) from the monolingual data, in which 78% subject drop is found in non-finite utterances. For the bilingual children taken together, subject drop does not differ significantly between the four stages. The only difference found is the decrease in subject drop in Selma's data from 75% at Stage III to 40% at Stage IV (Fisher exact $p=.01$).

The data for finite utterances in Table 6.17 show a remarkable pattern: at Stage II, subject drop is 29% in total, which increases significantly to 37% at Stage III ($p=.03$), to decrease again to 17% at Selma's Stage IV ($p<.001$). At an individual level, only the decrease in subject drop for Mehmet between Stages I and II is significant ($p<.001$), as well as the decrease between Stages II and III for Filiz ($p<.001$) and between Stages III and IV for Selma ($p<.001$). In comparison to the monolingual children in Blom's (2003) study, the bilingual children produced less subject drop at Stage II (51% among monolinguals, $p<.001$), and equal amounts of subject drop at Stage III (35% among monolinguals) at Selma's Stage IV (21% among monolinguals).

For all individual children, the proportion of subject drop in non-finite utterances is higher than in finite utterances. The only exception is the difference in the total amount of subject drop at Stage I, but this difference is not significant. At Stage II ($p<.001$), Stage III ($p<.001$), and Stage IV ($p=.04$) the total proportion of subject drop is significantly higher in non-finite sentences. Significant are also the differences for Mehmet ($p=.04$), Batuhan ($p=.003$), and Yunus ($p<.001$) at Stage II, for Mehmet ($p=.002$), Filiz ($p=.04$), and Selma ($p<.001$) at Stage III, and for Selma at Stage IV ($p=.04$).

Table 6.16 Non-finite utterances with infinitives (Inf) and subject drop (SD)

	Stage I		Stage II		Stage III		Stage IV	
	Inf	SD	Inf	SD	Inf	SD	Inf	SD
Mehmet	2	2 (100%)	30	7 (23%)	81	24 (30%)	-	-
Batuhan	15	6 (40%)	86	55 (64%)	-	-	-	-
Yunus	-	-	6	5 (83%)	-	-	-	-
Şükran	-	-	6	5 (83%)	22	13 (59%)	-	-
Filiz	-	-	9	7 (78%)	57	29 (51%)	-	-
Berrin	-	-	25	17 (68%)	-	-	-	-
Selma	-	-	16	9 (56%)	83	62 (75%)	15	6 (40%)
Total	17	8 (47%)	178	105 (59%)	243	128 (53%)	15	6 (40%)

Table 6.17 Finite utterances with simple finites (Fin) and subject drop (SD)

	Stage I		Stage II		Stage III		Stage IV	
	Fin	SD	Fin	SD	Fin	SD	Fin	SD
Mehmet	14	8 (57%)	76	6 (8%)	78	8 (10%)	-	-
Batuhan	0	0 (-)	12	2 (17%)	-	-	-	-
Yunus	-	-	62	8 (13%)	-	-	-	-
Şükran	-	-	5	3 (60%)	39	14 (36%)	-	-
Filiz	-	-	54	36 (67%)	145	49 (34%)	-	-
Berrin	-	-	37	17 (46%)	-	-	-	-
Selma	-	-	8	2 (25%)	193	98 (51%)	204	35 (17%)
Total	14	8 (57%)	254	74 (29%)	455	169 (37%)	204	35 (17%)

It thus appears that the bilingual children in general produce less subject drop than the monolingual children and in that sense are more targetlike. This may seem surprising, considering that Turkish is a so-called pro-drop language, in which an explicit reference to the subject of a sentence outside the verb is usually absent. Would children not copy this characteristic of their first language in their Dutch? Cross-linguistic influence can also be argued the other way, however. Since Turkish always explicitly indicates the subject through a separate morpheme on the verb, they may also be more inclined to refer to subjects in their Dutch utterances. As Dutch only marginally marks subjects on the verb (and not on infinitives at all), they use more explicit subjects outside the verb.

Another explanation for the lower amounts of subject drop among the bilingual children may be that the acquisition of the language as well as the recordings took place in different settings. The monolingual children learnt most of their language at home, in which usually only one or a few adults were present and sometimes a single brother or sister. The bilingual children, however, learnt Dutch mostly in daycare centres, pre-school playgroups, in the neighbourhood playing with peers or in families with several (older) siblings. In such group settings, the pragmatic context is probably 'contrastive' much more often, leading to more explicit subject use. For example, a child who wants to engage in a specific activity, may ask his father or mother for it by simply naming the activity (e.g., *buiten spelen* 'outside play-INF'). In a group, however, in which a child first needs to attract attention to his own situation, he needs to include a reference to himself (e.g., *ik buiten spelen* 'I outside play-INF'). Of course it is difficult to prove the

plausibility of this explanation on the basis of the presently available data. It may be an indication, however, that at least from the bilingual data in the Nap-Kolhoff bilingual corpus the impression arises that the children often use schematic constructions like *ik* X-*en* 'I X-INF' and *die* X-*en* 'that.one X-INF' with explicit subjects.

The developmental increase in subject drop in finite sentences at Stage III among the bilingual children is not observed among monolingual children. This development may be related to the bilingual children's extended use of rather formulaic expressions with finite verb forms. In several of these expressions (e.g., *weet ik niet* 'know I not: I don't know', *ik wil* X 'I want X', *hij komt* 'he comes'), the subject is present and in some cases perhaps unanalysed as such by the children. At Stage III, when finite verb use becomes more productive, subject drop increases to the level of monolingual children.

A similarity between the bilingual and the monolingual children is the difference bilingual children make between finite and non-finite sentences when it comes to subject drop. For all children and at all stages, subject drop is higher in non-finite than in finite sentences. A generative approach to language acquisition would argue that this is due to the fact that infinitives license subject drop, whereas finite verb forms do not. In line with usage-based theories of language acquisition it can be concluded that both groups of learners are sensitive to input patterns about subject use in finite utterances, patterns that are absent in the generally non-targetlike non-finite sentences.

6.6.4 Compound finites

It has been observed in Section 6.1.7 that the Turkish adult Ergün produced compound finites with the copula *is* 'is' in his Dutch which are unlike patterns found in monolingual Dutch data. Compound finites with *is* in child Dutch have not been investigated in detail, but Blom's (2003) examples suggest that they are reflections of the target progressive *is aan het* X-*INF* 'is at it X-INF: is X-ing' construction. Monolingual children do produce compound finites with present tense meanings, like Ergün's *is*-construction, but these contain the auxiliaries *doen* 'do' or *gaan* 'go'. Unlike the monolingual children, Ergün also produces compound finites in which both verbs are finite. The data of the bilingual children display characteristics of both the monolingual child constructions and Ergün's.

Most of the compound finites produced by the bilingual children have a modal meaning and contain a modal auxiliary. In this respect, the bilingual children do not differ from the monolingual children. Several compound finites with copular forms are encountered in the data as well, an overview of which is given in (10)-(12).

(10) *hondje is aan kijken* 'dog is at look-INF: (the) dog is looking' (Yunus, 3;6)
nou hij is pakken, hoor 'now he is take-INF, y'know: now he is taking (holding) it, y'knw' (Selma, 2;10)
die is niet slapen 'that is not sleep-INF: that one is not sleeping' (Selma, 2;10)
hij is zit, hè? 'he is sit, right: he is sitting, right?' (Şükran, 3;3)
Ç. is slaapt 'Ç. is sleep-PRES: Ç is sleeping' (Sukran, 3;3)
Ç. is slaap 'Ç. is sleep: Ç is sleeping' (Sukran, 3;3)

(11) *papa is uh mij xxx huisje maken, ja?* 'dad is er me xxx house make-INF, right: dad made me a house, right' (Selma, 2;10)
W. is die die pakken 'W. is that that take-INF: W. has taken that one' (Selma, 3;3)
ik ben slapen 'I am sleep-INF: I want to sleep-INF' (Filiz, 3;6)
ik ben deze zitten 'I am this sit-INF: I want to sit (on) this (one)' (Filiz, 3;6)
ik ben niet daar zitten 'I am not there sit-INF: I do not want to sit there' (Filiz, 3;6)

(12) *die helikopter is niet uh kijken* 'that helicopter is not er look-INF: (I do not want to) look at (the book) of that helicopter' (Selma, 2;10)
die is mij slapen 'that is me sleep-INF: that is my (place to?) sleep' (meaning of *mij* 'me' unclear, Selma, 2;10)
is van mij ook wacht, ja? 'is of me also wait, right: I also want to have more when we have finished waiting (also keep some for me) (Filiz, 3;6)
ik ben ik deze wil 'I am I this want: I want this'
kijk, ik die kleine is groter maken 'look, I that small is bigger make: look, I made that small one bigger'. (Filiz, 3;6)

The utterances in (10) all appear in picture book reading contexts and can be interpreted as having a progressive meaning, although adults would often use simple present tense forms in these situations. Note that Şükran's utterances all have two finite verb forms rather than a finite verb form (the copula) and an infinitive. Only Yunus's utterance contains the preposition *aan* 'at', which is a fixed component of the adult progressive construction in Dutch. Monolingual children also regularly 'omit' the prosodically always unstressed *aan* 'at' and *te* 'to'. The utterances in (11) cannot be interpreted in their context as having a progressive meaning. They either have a perfective, a modal or a future meaning. Filiz also uses the first person singular form of the copula (*ben* 'am'). The utterances in (12) are more difficult to interpret, but it is clear that they do not have a progressive meaning either.

It can be concluded that the majority of the copular compound finites produced by Şükran, Filiz, and Selma differ from what has been observed in monolingual Dutch child language. The bilingual children's utterances sometimes deviate in form (two finite verbs) and often in meaning (not progressive). In these deviations, they resemble Ergün's copular compound finites. Coenen & W. Klein's (1992) explanation that *is* functions as a topic-focus boundary marker could also be applied to the bilingual children's data. Almost all utterances start with an explicit reference to a subject or, as in one case, an object (*helicopter* 'helicopter' in 12), or in another, a temporal adverb (*nou* 'now'). After the copula follows a predication about the topic. Although the use of

copular compound finites in monolingual child Dutch has not been investigated in detail, Blom's (2003) examples suggest a different pattern for this learner group, with the copula also appearing in sentence-initial position.

Finally, compound finites that are similar to monolingual children's *doen* 'do' or *gaan* 'go' constructions with non-modal meanings are also found in the bilingual data (see 13).

(13) *jij maken vasthouden* 'you make-INF hold-INF: you should hold it' (Mehmet, 4;0)
appel maak pakken 'apple make take-INF: (he) makes (does) take (hold) an apple' (Batuhan, 3;11)
en zij doe ook dansen 'and she do also dance-INF: and she is also dancing' (Selma, 3;3)

What is interesting is that Mehmet and Batuhan use *maken* 'make' rather than *doen* 'do' as auxiliaries in these cases. Turkish has only one activity verb (*yapmak*), and these two children appear to have taken *maken* as the general activity verb in their Dutch (see also Chapter 3). Note, however, that compound finites with *doen* and a present tense meaning are targetlike in some regions in the Netherlands and that they appear frequently in the adult data as well. As an alternative or additional explanation for the bilingual children's incidental use of *doen/maken* compound finites is cross-linguistic influence from the widely used Turkish *yapmak* 'do' construction (Backus, 1996; Doğruöz & Backus, 2009), no conclusions can be drawn about the similarity with monolingual children's use of non-targetlike *doen* compound finites.

6.6.5 Summary

In this chapter, the bilingual children's development of Dutch verb use has been compared to what has been reported in the literature about monolingual Dutch children's and to a lesser extent also on Turkish adult learners. Table 6.18 provides an overview of the observed differences and commonalities.

Like monolingual Dutch children, bilingual children go through the different stages of verb use as defined by Blom (2003), although the status of Stage I is not clear. The bilingual children seem to use more finite verbs at this stage than Blom's monolingual children, but other studies have also found deviant patterns at Stage I for monolingual children (e.g., Taelman et al., 2005). The correlation between verb form and sentence position is similar for monolingual and bilingual children. In this respect, the bilingual children differ from the adult second language learner Ergün, who regularly put finite verb forms in sentence final position. Like the monolingual children, the bilingual children systematically produce more subject drop in non-finite than in finite utterances, although the overall amount of subject drop is lower – and thus more targetlike – among the bilingual children.

The main difference observed between the bilingual and monolingual children's development of verb use is the amount of individual differences in the pace of acquisition. The individual differences found in the bilingual data are much larger, however. In addition, the bilingual children have been observed to use copular

compound finites with a non-progressive meaning and sometimes two finite verb forms. This phenomenon has not been reported for monolingual child Dutch, but is common in the speech of Turkish second language learner Ergün. Only in this respect do the bilingual children display linguistic behaviour that is closer to adult second language acquisition than monolingual first language acquisition.

Table 6.18 Commonalities and differences between monolingual Dutch children and bilingual Turkish-Dutch children in the development of Dutch verb use

Commonalities
Developmental stages II-IV
Preference for non-finite verb forms in final sentence position
Preference for finite verb forms in initial/second sentence position (≠ Turkish adult)
More subject drop in non-finite than in finite utterances
*Non-targetlike compound finites with 'dummy' auxiliaries
Differences
*More finite utterances at developmental stage I
Larger individual differences in pace of development
*Higher MLU at each stage
In general, less subject drop
Copular compound finites without progressive meaning (= Turkish adult)

*For several reasons the reliability of this observation is uncertain.

6.7 Discussion and conclusion

Monolingual Dutch and bilingual Turkish-Dutch children alike go through several stages of Dutch verb use. Initially, verbs are used in either finite or non-finite forms. These item-based constructions gradually develop into the targetlike situation in which children use simple finites and compound finites with all kinds of verb types and utterances with only non-finite verbs drop out of use. Both groups of children show a strong preference for using finite verb forms in their targetlike first or second sentence positions, whereas the early non-targetlike non-finite forms appear mostly in sentence final position. In addition, non-targetlike subject drop occurs significantly more in non-finite than in finite utterances. The biggest mystery in these developmental observations is why children produce non-targetlike non-finite sentences at all. It has been argued that this is due to patterns in the input, in which compound finites are very frequent. The non-finite infinitive in compound finites is salient for children because of its sentence final position as well as its usually concrete and substantial meaning in the utterance. The process towards targetlike use of finite verbs in addition to or instead of non-finite verbs seems mainly to be about 'unlearning' the initial non-finite patterns.

The process just described can be explained by the characteristics of Dutch verbs in the input. Finite verb forms occur in initial or second position in the sentence, are mostly used in sentences with an explicitly mentioned subject and occur with many verb forms that can also be used in non-finite forms. Both monolingual and bilingual children show these characteristics in their production of finite utterances. Their non-

finite utterances continue to display more non-targetlike characteristics, as no exemplars are heard in the input.

It can thus be concluded that similar to monolingual children, bilingual children are sensitive to characteristics of the input such as most frequent verb form, position in the sentence and subject use. Although no systematic comparison with Turkish adult data is available, one observation is that these adults seem to be less sensitive to the correlation between verb form and sentence position. This difference between child and adult language acquisition may be a reflection of Wray's (2008) suggestion that young children have a holistic approach to the input, whereas adults use more analytical strategies. Children would thus notice differences that are only visible at the level of whole utterances, such as the position of the verb and the presence of a subject. If adults focus more on lower-level characteristics of the input, they may fail to notice these points.

A major difference between the bilingual and monolingual children is found in the amount of individual variation and the pace of acquisition. In earlier chapters, such differences have been attributed to differences in the amount of input received. This explanation also holds for the present outcomes, although it is difficult to make comparisons between the two child groups as the method used in this chapter and in Blom (2003) differ slightly. An example may be the amount of input children receive between entering Stage III and Stage IV. For the monolingual children, this period in most cases lasts three or four months, but it may take as long as six months for one child or even ten for another. In a period of four months, monolingual children are estimated to receive about 1200 hours of input, in six months that would be 1800 and in ten months some 3000 hours[54]. For Selma, Stage III lasts twelve months. As she receives only about half the amount of input compared to the monolingual children, this period equals some 1800 hours of input. This is within the range of input hours received by the monolingual children. Calculated this way, Mehmet's Stage II is even relatively short. The monolingual children receive 900-1500 hours of input between the onset of Stage II and Stage III, but Mehmet with an estimated input of 20 hours per week gets only 430 hours. As was mentioned in earlier chapters it is important to note that such calculations are based on very rough estimations. They are only presented to show that taking the amount of input into consideration diminishes the differences in pace of development between monolingual and bilingual children.

What is more difficult to explain is the difference between the bilingual and monolingual children in their overall production of subject drop. The bilingual children, who produce less subject drop, appear to be more targetlike than the monolingual children in this respect, especially at earlier stages of development. It has been argued that several factors may contribute to this phenomenon, such as influence from Turkish as a first language, differences in learning and data collecting contexts, or reliance on formulaic expressions. At present it is unclear which factor contributed how much to the observed relative targetlikeness of the bilingual children.

A final difference between the bilingual and monolingual children is the use of copular compound finites. Like the Turkish adult learner Ergün, several bilingual

[54] Based on the estimated amount of 70 hours of input per week (Tomasello & Stahl, 2004).

children are observed to produce utterances with a finite copula form and an infinitive or a finite verb, such as *ik ben niet daar zitten* 'I am not there sit-INF: I do not want to sit there' and *hij is zit* 'he is sit: he sits'. Coenen & W. Klein (1992) argue that in Ergün's speech, the copular construction can be interpreted as a marker of the boundary between the topic and the focus of the utterance. Adult second language learners are believed to organise their early utterances typically with topic-focus order, often irrespective of word order patterns in their first or second language (W. Klein & Perdue, 1992). Using a copula as a boundary marker between topic and focus is in Coenen & W. Klein's study only found in Ergün's speech, however. There is some anecdotal evidence that such copular constructions are typical of Turkish learners of Dutch (e.g., Van de Craats, 2006), which would point at cross-linguistic influence. To my knowledge a more systematic investigation into this phenomenon has not yet been carried out. The presence of copular compound finites in the bilingual child data in the present study confirms that Turkish learners of Dutch – children apparently also – use such constructions. Unfortunately, the amount of evidence available at present does not allow an in-depth analysis of its use and function in their speech.

Throughout this chapter it has been observed that bold claims have been made about characteristics of the development of verb use among different types of learners in the literature, but that little actual empirical data are available. This chapter has shown the type of comparisons that would be useful to make. Besides, several commonalities and differences could be pointed out. More empirical investigation is needed, however, to come to more definite conclusions about the correlation between verb form (finite/non-finite) and sentence position in the first and second language acquisition of Dutch. In addition, more empirical data on Turkish adult second language learners would be welcome to complete the picture of differences and commonalities with child second language acquisition described in this chapter.

7 Discussion and conclusions

This study investigated the Dutch language development of seven bilingual Turkish-Dutch children between the ages of two and four. Transcripts of audio data longitudinally collected in the children's homes and/or the pre-school centres they attended were analysed. Data of three boys, Mehmet, Batuhan, and Yunus, were collected by the author in 2003-2005. In 1990-1991, in a previous research project Hanneke van der Heijden had collected data from four girls, Selma, Berrin, Filiz, and Şükran (Van der Heijden, 1999).

In this final chapter, the findings presented in the earlier chapters are evaluated and reflected upon. Conclusions will be presented in three sections, starting with a comparison of the Dutch language development of the seven Turkish children (Section 7.1). What patterns have been observed? Can differences between the children be explained by differences in the contexts in which they learnt the language? The chapter continues with a presentation of commonalities and differences that have been observed between the bilingual second language learners and monolingual children learning Dutch as their first language (Section 7.2). In some cases, comparisons with Dutch second language acquisition by Turkish adults were possible. All outcomes are discussed in the light of usage-based models of language learning and of age differences in second language acquisition presented in Chapter 1.

7.1 Dutch language development of seven bilingual Turkish children

7.1.1 Mehmet

In Chapter 3, a general description was given of the Dutch language development of Mehmet, one of the bilingual Turkish-Dutch children. Data collection with Mehmet started when he was 2;3 years old. The recordings in the first six months showed that both at home and in the pre-school playgroup he attended he predominantly spoke Turkish, even though none of the teachers in the playgroup spoke that language. Already from the beginning he used some Dutch words, and he was also able to combine them into longer sentences of juxtaposed words. He increasingly started to understand the Dutch spoken to him. In this period he produced his first possessive, *van mij* 'of me: mine' (see Chapter 5). In addition, he produced object naming constructions (see Chapter 4) of the form [*die* L] 'that L: that is L'.

At the age of three, when he had attended the playgroup for a year, he entered a silent period. In the playgroup he tried to avoid saying anything in Dutch, while his earlier habit of talking Turkish when he was not able to express himself in Dutch, also disappeared. At home, in conversations with his mother, he continued speaking Turkish, but also used Dutch occasionally. In the recordings made in the playgroup from a month later onwards, Mehmet's Dutch language development improved. He started to speak Dutch more frequently, while his utterances became increasingly complex. Most of his longer utterances were either fixed expressions or pivot schemas, partially fixed expressions. In this period, he started to produce several different forms to express possession, some of them targetlike, but also some non-target like ones. He also produced a few targetlike object naming constructions, such as [*dit+is* L] 'this is L'. These forms were formulaic expressions, however, as Mehmet produced neither *dit* 'this' nor *is* 'is' in other utterances. He also kept using [*die* L]. Finally, Mehmet used verbs (see Chapter 6) only incidentally in this period, and often in formulaic expressions, such as *mag niet* 'is not allowed' and *weet ik niet* 'I don't know'.

In the period between ages 3;4 and 3;9, various types of overgeneralisations or 'errors' occurred in Mehmet's speech, which betrayed the fact that he was re-analysing the input and fixed expressions already in his repertoire. In his possessive repertoire, second- person reference now also appeared (*van jou* 'of you: yours'). In his object naming constructions, he started to use also other demonstrative pronouns than only *die* 'that', resulting in the (still non-targetlike) construction [DEMpro L]. At age 3;3, Mehmet's verb use increased and reached Blom's (2003) Stage II, in which both finite and non-finite forms occur, but most verbs are used in only one of the two forms.

During the last two recordings at ages 3;10 and 4;0, Mehmet's utterances became longer and in general more comprehensible. His object naming constructions were now more targetlike, as they included the copula *is*. Nevertheless, he always produced them with the demonstrative *die*, which is not targetlike. He still used a variety of target- and non-targetlike possessive forms for first and second-person singular reference. His verb use had already reached Blom's stage III at age 3;8, in which still both finite and non-finite verb forms are used, but with an increasing number of verbs that appear in both forms. At the end of the period of data collection, when Mehmet had attended the pre-

school playgroup for two years and was about to enter kindergarten, he had become fairly fluent in Dutch, although his proficiency was still far from targetlike.

7.1.2 The other six bilingual children

Batuhan attended the same pre-school playgroup as Mehmet, but his Dutch language proficiency reached a lower level. At the end of the period of data collection at age 4;0, his object naming constructions were still without a copula, as they had been from the beginning. He used his first possessive in the data at age 3;2. He produced only first-person singular possessives during the recordings, both targetlike and non-targetlike forms. His first verbs were produced at age 3;0. Until age 3;4 he could be categorised as being at Blom's (2003) stage I, with only infinitive forms. From age 3;5 onwards he produced both finite and non-finite verb forms, but most verbs occurred in only one of the two forms (Stage II).

Yunus went to another pre-school playgroup with an early childhood educational programme in the same town. For Yunus, data were collected until age 3;9. At that age, his Dutch language development had reached a level similar to Batuhan's. His object naming constructions were still without copula forms. From age 3;1 onwards, his verb use was at Stage III, in which both finite and non-finite verb forms are used, with an increasing number of verbs occurring in both forms. Yunus hardly produced any possessives during the recordings and therefore no conclusions can be drawn about his use of these forms.

Şükran did not attend any pre-school facility. She learned Dutch mainly from intensive contact with native Dutch children in her neighbourhood. The level of her Dutch language development at the end of the period of data collection at age 3;6 was slightly higher than that of the three boys discussed before at that age. Her object naming constructions at age 3;6 were of the non-target form [*die* L], without a copula. Possessives were already produced at age 2;5, both in first- and second-person reference. She produced both target- and non-targetlike forms. Her verb use was at Blom's (2003) Stage II from age 2;5 onwards. From age 2;8 on, her verb use balanced on the border between Stages II and III: both finite and non-finite verb use, but not yet much overlap between verbs.

Berrin visited a daycare centre in the town where she lived, with special facilities for Turkish children. Her level of Dutch proficiency at the age of 3;6 was comparable to the children discussed before, although it was higher at the start of data collection at age 2;2. At the end of this period, at age 3;6, Berrin's object naming constructions were still of a form without a copula. Possessives were produced already at the start of data collection at the age of 2;2. Berrin used target- and non-targetlike forms for first person singular reference. At age 3;6 an instance of second person reference was produced. Her verb use was at Stage II during the whole period of data collection: she produced finite and non-finite verb forms, without much overlap between the two forms for individual verbs.

Filiz, like Şükran, lived in a neighbourhood with relatively few Turkish immigrants, where she had a lot of contact with native Dutch children and families. She did not attend a pre-school facility until the age of 3;4, when she started attending a pre-school

playgroup for two days a week, 2-3 hours per day. Her level of Dutch language development at the age of 3;6 was higher than that of the children discussed before. From age 3;0 onwards, she produced object naming constructions with a copula, although she also kept using constructions without a copula. Possessives were found in her speech already at the beginning of data collection at age 2;1. From age 2;10 onwards she also produced second-person forms. Like the other children, she used both target- and non-targetlike forms till the end of the period of data collection. Her verb use was at Stage II from age 2;1 until age 2;10. From age 3;0 onwards her verb use could be defined as Stage III.

Selma, like Berrin, attended a daycare centre with special facilities for Turkish children. Selma is clearly the quickest learner of Dutch among the seven bilingual children. Already at age 2;5, she used object naming constructions with a copula form, although she also produced object naming constructions without it at age 3;6. First-person possessives were present in her speech from the beginning of data collection at age 2;1 onwards. Second-person possessives were first attested at age 2;10. Like the other children, she used target- and non-targetlike forms until the end of the period of data collection at age 3;6. Her verb use was at Blom's (2003) Stage II at 2;1 and entered Stage III at age 2;3. From age 3;2 onwards, her verb use could be defined as Stage IV, in which she used predominantly targetlike finite verb forms and not many non-targetlike non-finite forms anymore. None of the other children in the investigated dataset reached that Stage.

In sum, the seven bilingual Turkish-Dutch children show differences as well as commonalities in their Dutch language development. The level of Dutch language proficiency they reached between the ages of 3;6 and 4;0 varies widely. Batuhan and Yunus reach the lowest levels, followed by slightly higher levels for Berrin, Mehmet, and Sukran. Filiz and Selma reach the highest levels of Dutch language development.

7.1.3 Contact with the Dutch language

According to usage-based theories, an important factor in language acquisition is the amount of input received. Can this factor explain the observed differences between the seven children? To some extent, it can. In Chapter 2, the Dutch language input to the children was described. Selma is indeed the child who had most contact with the Dutch language. She attended a daycare centre for five days a week, from the age of three months. This daycare centre provided special facilities for children who did not speak Dutch at home, particularly for Turkish children. These children were free to speak their home language with each other and with the Turkish-speaking staff members. In Selma's group, however, she was often the only Turkish- speaking child, and because of her high proficiency in Dutch language proficiency even the Turkish staff members mostly spoke Dutch to her. She thus received considerable Dutch language input, which explains why the acquisition of Dutch is relatively vigorous in her case.

The situation was quite different for Mehmet, Batuhan, and Yunus. Their contact with Dutch started much later, at the age of two, although it was not completely absent during the two first years of their lives. When two years old, they started attending a pre-school playgroup for four days a week, 2-3 hours per day. They thus received much

lower amounts of Dutch language input than Selma, and their Dutch language did indeed develop much more slowly. When he had learned some Dutch, Mehmet's parents tried to speak more Dutch with him at home as well. He reached the highest level of Dutch language development of these three boys.

It is difficult to estimate the amount of contact Şükran and Filiz had with the Dutch language. In their homes they mostly heard and spoke Turkish, their parents being first-generation immigrants to the Netherlands. They did not attend a daycare centre or pre-school playgroup in their early years, but they did have a lot of contact with native Dutch children in their neighbourhood. There is no exact information about the amount of time they spent with these friends. But if it is true that the pace of language acquisition is mainly determined by the amount of input children receive, especially Filiz must have had more contact with Dutch than the boys who attended a pre-school playgroup for 11-12 hours per week. Alternatively (or in addition), it is possible that the type of contact with Dutch that Şükran and Filiz had with their friends provided them with better opportunities for learning Dutch. It probably included much more one-to-one contact with Dutch speakers, whereas the teachers in the pre-school playgroups had to divide their attention between children in a group. Contact with friends in the neighbourhood may have provided Şükran and Filiz with more intensive Dutch language input.

Finally, Berrin's is a case that seems to contradict the argument that it is the amount of contact that mainly determines the acquisition of a language. Like Selma, she attended a daycare centre rather intensively, i.e., five days a week until her second birthday and three days a week after that age. As a day in the daycare centre was much longer than a day in a pre-school playgroup, the amount of (waking) time she spent there was still about twice as much as the time Mehmet, Batuhan, and Yunus spent in their pre-school playgroups. Nevertheless, Berrin's Dutch language development did not reach very high levels, being comparable to Mehmet's.

There are two observations made by the researcher who collected the data about the language input Berrin received (Van der Heijden, 1999; see Chapter 2) that may explain the slow pace of her Dutch language development. First, like Selma's daycare centre, the daycare centre Berrin attended provided special facilities for Turkish children. There was always one staff member present who spoke Turkish with the Turkish children when no native Dutch children were directly involved. The Turkish children were also free to speak Turkish with each other in such situations. As a matter of fact, the Turkish children constituted a relatively large proportion of Berrin's group. It is thus possible that Turkish was used quite frequently at the daycare centre. This could have had two consequences for Berrin's acquisition of Dutch: less Dutch language input and less of a need to learn Dutch, as she could get most of what she needed by speaking Turkish. The amount of Turkish spoken in the daycare centre might account for some of the differences found between Berrin and Selma

Second, according to the researcher who collected the data, the caretakers in Berrin's daycare centre in general did not stimulate verbal interaction very much. Children were not often asked to tell stories, it was not very often that songs were sung, and books were read only occasionally. Such an environment offers less stimulating contexts for learning Dutch.

Summarising the above it can be said that the amount of contact roughly explains the differences in Dutch language acquisition patterns between the seven bilingual children. Other factors, especially the quality of the interactions for the learning of Dutch, may also have played a role. The present data and its analyses do not offer enough insight into the exact effects of the quality of the interactions.

General well-being

After studying seven children in the present study, the impression is that another factor also played a role. It is a factor that is perhaps especially important for children. It concerns the children's general well-being. Children seem to need to feel at ease to undertake the 'daring' task of learning a new language. There are three observations that support this impression.

First, the 'immersion' in the pre-school playgroup shortly after their second birthdays was quite a shock for the three bilingual boys. As it is for all children who enter such a group, in the beginning the whole environment was strange to them: a large group of children and adults they do not know, with new toys and rules and conventions they have yet to acquire. For the Turkish children, however, the Dutch language was an additional shock. The means of communication they had become fluent in at home, suddenly did not suffice anymore as none of the adults (and not many of the children) understood what they were saying in their own language. The impression is that the children needed quite some time to accommodate to this new situation, before they could really start learning Dutch. Of course, learning to understand Dutch was also part of this process of accommodation. It took all three children almost a year to get used to the new situation, to begin to understand the Dutch spoken to them and to learn some first words and expressions that were frequently used in the pre-school playgroup. Only then did their active use of the Dutch language actually start: they began to say more and their utterances became more complex.

A second observation that illustrates the impression that general well-being plays a role in second language acquisition by children comes from Batuhan's home situation. When Batuhan was about 3;9 years old, his father became unemployed. His mother had to take a job, but also remained responsible for the children and the household. It was a situation that distressed the family a lot. The teachers in the pre-school playgroup noticed that Batuhan was not feeling very well emotionally. They also noticed that Batuhan's Dutch language development seemed to stagnate during these months, which was confirmed by the recordings.

Finally, Berrin's situation provides a further indication that well-being appears to play an important role. Berrin was not a very healthy child. At home, she did not eat well, but at the daycare centre she had fewer problems eating. It was for this reason that her parents sent her to the daycare centre almost fulltime. From the present study it appears that Berrin was a relatively slow learner of Dutch. If it is true that general well-being plays a role in this process, her poor health may well have hampered her Dutch language development.

General well-being thus includes aspects of physical health, stress in the family situation, and the transition from home to a pre-school playgroup. As it is difficult to influence a child's health and the family situation, it could be a worthwhile enterprise to examine ways of easing the transition from home to a pre-school playgroup. Such research should incorporate psychological insights about the importance of safe environments for children's development and stress reduction. One of the questions that could be addressed is whether the age of two is an appropriate age for the stressful immersion into a pre-school playgroup. Would it be easier to make the transition at an earlier age, or would a later age be more conducive?

7.2 Comparison with monolingual Dutch children and Turkish adults

7.2.1 Comparison with monolingual first-language acquisition of Dutch

One of the purposes of this study was to investigate to what extent the Dutch language development of the Turkish-Dutch bilingual children was like the development of monolingual Dutch children. The motivation was not to show how 'deficient' the bilingual children were compared to their monolingual Dutch peers, but to gain insight into the process of language acquisition, and to identify areas in which differences and commonalities occur. In the analyses of object naming constructions, possessive pronouns, and finite and non-finite verb use, the development of the bilingual children was therefore compared to existing corpora of longitudinally collected data for monolingual Dutch children. In Table 7.1, the main findings are summarised.

It has been argued in Chapter 1 that usage-based theories of language acquisition assume that there are no fundamental differences between the acquisition of a language by monolinguals as a first language and the acquisition of that language at a later age by bilinguals. Languages are acquired by cognitive learning mechanisms that are also used for learning other skills in life. If differences are observed between monolingual first language acquisition and second language acquisition, they should be attributed to differences in these general cognitive learning mechanisms. Suggestions for such differences are decreased efficiency of these cognitive learning mechanisms for older learners, who need more time to recall something newly learned and who are less able to remember details. In addition, the more entrenched first language patterns are, the more 'bias' resulting from these patterns may occur in second language performance ('learned attention'). Moreover, younger learners tend to be more 'holistic' learners, who focus on relatively large chunks in the input, whereas older learners are often more 'analytic' learners, who focus on the function of small parts of the language, thereby potentially failing to notice distributional characteristics of the relations between these smaller parts. As the general cognitive learning mechanisms need 'input' to work on, characteristics of the input also influence the learning process. Younger learners often engage in less varied socio-interactional situations than older learners, which results in different learning contexts.

To what extent can the differences between the monolingual and bilingual children learning Dutch be attributed to these different factors? The explanations for the

commonalities and differences listed in Table 7.1 will be discussed in terms of timing, pattern finding skills, 'unlearning', and influence from the first language.

Table 7.1 Commonalities and differences between monolingual and bilingual children in the development of object naming constructions (Chapter 4), pronominal possessive constructions (Chapter 5), and finite and non-finite verb use (Chapter 6)

Commonalities	Differences
Object naming constructions	
Both start with object naming constructions without a copula.	For the child second language learners it is more difficult to learn that only the demonstrative pronouns *dit/dat* are used, but not *die/deze*. It takes the child second language learners longer before they start to use the copula.
Pronominal possessive constructions	
Both start with first- and second-person constructions; third-person constructions appear later. Both start with singular reference; plural constructions appear later. Both use similar types of non-target constructions.	The child second language learners do not use reduced pronouns. The child second language learners use a higher proportion of non-targetlike constructions. It takes the child second language learners longer to learn targetlike constructions.
Finite and non-finite verb constructions	
Both go through similar developmental stages of finite verb use. Both have a preference for non-finite verb forms in final sentence position. Both have a preference for finite verb forms in initial/second sentence position. Both use more subject drop in non-finite than in finite utterances.	There are more individual differences among the child second language learners. The child second language learners in general use less subject drop. The child second language learners use compound finites with finite rather than progressive meaning.

There are several observations that indicate that the bilingual children's Dutch language development is slower than the monolingual children's: it takes them longer before they start to use the copula in object naming constructions and also to learn target pronominal possessive constructions. In the respective chapters, it has been argued that these differences can be explained by the amounts of input children receive. The bilingual children receive less Dutch language input than the monolingual children, and therefore their Dutch language skills develop more slowly. Differences in timing are not only found between the monolingual and bilingual learners, but also within the bilingual group. There are considerable differences in the amount of input the bilingual children receive, resulting in different paces of learning.

However, not all differences can be explained by differences in the amounts of input. For example, in the acquisition of object naming constructions, the bilingual children have much more difficulty discovering the distributional differences between the non-neuter demonstratives *die/deze*, which are not used in the construction, and neuter *dat/dit*, which are. The monolingual children also use all four demonstrative pronouns in their early object naming constructions, but by the time they start to use the copula in the construction, they hardly ever use a non-neuter demonstrative. The bilingual children keep using non-neuter demonstratives, however, also when they have started using the copula. The bilingual children thus seem to be less sensitive to such fine-tuned distributional characteristics of constructions. Another example is the reduced possessive pronouns, which none of the bilingual children use productively, although they are very frequent in the input and the monolingual children acquire them quite early. The acoustically opaque reduced form of the pronoun is more difficult to notice for the bilingual than for the monolingual children.

There are, however, also some commonalities in how the children deal with distributional characteristics in the input and with non-salient forms. In their verb use, both the monolingual and bilingual children show a preference for non-finite verb forms in final sentence position and for finite verbs in initial or second sentence position. Even though both groups use non-finite verbs in non-targetlike ways, the positioning of the verbs in the sentence coincides with the patterns in the input. Both groups also experience difficulty learning copula forms in the object naming construction, an element of the construction that is usually neither salient in the input, nor a carrier of much conceptual meaning.

In particular in the use of pronominal possessive constructions, it was observed that the bilingual children find it hard to 'unlearn' non-targetlike forms they have come to use. Non-targetlike forms are much more frequent among the bilinguals than among the monolinguals, and these forms are also more persistent among the bilinguals. In Chapter 5, the problem of 'unlearning' was explained with reference to Tomasello's (2003) concept of 'internal input': what a child produces himself is also input for his learning process. The more a non-targetlike pattern is used, the more it becomes entrenched, and the more difficult it is to notice the targetlike pattern and to change the system. The factors 'input' and 'pattern finding skills' may also play a role in this phenomenon. If the supply of Dutch language input a child receives is low and sometimes occurs at intervals of several days, it will sooner relapse to entrenched patterns, also if these are non-targetlike. It is also possible that the monolingual children's pattern-finding skills are more sensitive to a mismatch between their own (non-targetlike) production and the input, and that these children therefore unlearn non-target forms much more quickly. On the basis of the present study, this issue cannot be resolved.

Influence from the first language is not easy to pin-point, particularly if only bilingual children with the same mother tongue are studied. Two aspects of the finite verb use of the bilingual children, however, seem to be influenced by their first language, Turkish.

First, they generally used less subject drop than the monolingual children. In adult Dutch, subjects are obligatory in virtually all sentences. In early child speech, however,

they are absent in many utterances. Subject drop (not using a subject) is thus a non-targetlike aspect of child speech. Interestingly, subject drop occurs less often in the data of the bilingual children than in the monolingual children's speech at the same stage. In this respect, the bilingual children behave more targetlike than the monolinguals. One of the explanations suggested in Chapter 6 is that the targetlikeness of the bilinguals stems from the influence of their first language. Since Turkish always explicitly mentions the subject, using a morpheme attached to the verb, the bilingual children may also have been more inclined to refer to subjects in their Dutch utterances. As Dutch only marginally marks subjects on the verb (and not at all on infinitives), they used more explicit subjects outside the verb.

Second, the bilingual children used a particular construction, in which two verb forms are used: a finite form of the copula, and an infinitive or a finite verb. An example is *hij is zit* 'he is sit: he sits'. The monolingual children never used this construction, although they did use other types of compound verbs. It is also a typical construction in the Dutch language use of Turkish adult learners. Some of the bilingual children also produce this 'typically Turkish' construction in Dutch.

In sum, there are no indications that the general cognitive learning mechanisms of the bilingual children have already become less efficient than those of the younger first language learners. That the bilingual children are slower learners can be attributed to much lower amounts of Dutch language input. It was observed that the bilingual children are sometimes less sensitive to distributional characteristics of the input. This may be explained by lower amounts of input that can provide the evidence for these distributional characteristics, by the cumulative effects of their own productions also being linguistic input, and by 'learned attention' effects from patterns in the first language.

7.2.2 Comparison with adult second language acquisition of Dutch

In order to shed more light on the effect of age on language learning, a comparison was made with adult second language learners of Dutch with the same mother tongue as the bilingual children, i.e., Turkish. Only in the study on pronominal possessive constructions (Chapter 5) was the comparison with the adult learners as elaborate as with the monolingual Dutch children. Adult data were taken from Broeder (1991; 1992), who analysed longitudinally collected data from two Turkish adults, who learned Dutch in naturalistic settings. In Chapter 4 and Chapter 6, comparisons were made with some of the mothers' utterances in the data of the bilingual children and with observations of Turkish adults made in the literature.

The comparison between the child and adult second language learners in their use of pronominal possessives was discussed in Chapter 5. One of the findings was that some of the differences between the children and the adults were related to 'communicative need'. The children, both the bilingual and the monolingual children, initially only used first- ('my') and second- ('your') person possessives. Only later did they start to use third-person ('his', 'her') and plural ('our', 'their') reference. The adult learners, on the other hand, used third-person possessives, as well as plural reference, from early on in their Dutch language production. In the everyday lives of children,

especially in daycare and playgroup settings, first- and second-person single reference is most relevant. Adults, on the other hand, often talk about situations that are not directly related to the here-and-now and thus often involve third-person reference. Because of the kinds of conversations they want to have, adults are more in need of expressing third person and plural possessive reference in their second language, leading to earlier production of these forms.

Another difference between the children and the adults is the type of non-target constructions they produce. In possessive construction, the children typically 'leave out' the preposition *van* 'of' when it should have been used. The adult learners, however, especially one of them, appear to be very creative in their pronominal possessive constructions, freely using *van* as a possessive marker. An explanation put forward in the discussion of these findings in Chapter 5, is that the adult learners are more aware of the fact that languages use function words, such as prepositions, and try to incorporate them actively in their second language productions. Their focus as 'analytic learners' is on finding equivalents of structures in their first language in the second language, whereas the 'holistic' learning style of the child learners is more concerned with conveying a message, regardless of its linguistic structure.

The features that distinguish characteristics the bilingual children's pronominal possessives from those of the monolingual learners are also found in the adults' speech. The adults also needed a great deal of time to learn the target constructions, they also produced many of non-target constructions, and they also failed to produce reduced pronominal possessives. Not much is known about the actual amounts of Dutch language input the adults received. None of them had a Dutch-speaking partner or children, and they thus had to get their Dutch input in the work place and in their social lives. It is therefore difficult to say to what extent the amount of input accounts for the relatively slow pace of development and the high number and persistence of non-target forms. It is possible that the adults received rather high amounts of Dutch language input, but that their general cognitive learning mechanism had become less efficient at their (young) adult age. This issue cannot be resolved at present. The fact that the adult learners also had trouble learning the reduced pronominal possessive forms, which were omnipresent in the input, indicates that 'learned attention' from patterns in the first language also played a role here.

In the chapter on object naming constructions (Chapter 4), a comparison was made with some of the mothers of the bilingual children. The less proficient Dutch language speakers among them produced non-targetlike forms similar to the bilingual children's. The mother who was highly fluent in Dutch was also fully targetlike in her object naming constructions. It can thus be expected that her son (and the other children) will reach that level in due time as well.

The study on finite and non-finite verb use (Chapter 6) compared the bilingual children with reports on Turkish adults' productions in other studies. A remarkable finding was that, although all learner groups used non-finite verb forms with a finite meaning, only the adult learners also put this verb form in the right sentence position for finite verb forms, i.e., initial or second position. The monolingual and bilingual children, on the other hand, put the non-finite verb forms in sentence final position, where it would be expected in the target language, even if that would imply a different

meaning, which shows that adults are less sensitive to distributional characteristics of patterns in the input.

7.2.3 Analytic versus holistic learning styles

Wray (2002; 2008a; 2008b) put forward the distinction between analytic and holistic learning styles in her model of first language learning and second language learning at different ages. Her model is based on the usage-based assumption of redundancy: linguistic structures are not necessarily represented as either a rule or a fixed expression, but often as both. Children learning a first language are initially 'holistic' learners. They adhere as much as possible to rather large expressions they hear in the input and only analyse the smaller parts of those expressions when the input gives clear evidence of their existence. Adult second language learners, on the other hand, have an 'analytic' learning style. They analyse the input into smaller units and then require additional rules to combine them. As these additional rules are not always easily extracted from the input, this often leads to non-targetlike linguistic patterns.

According to Wray (2002; 2008a; 2008b), young second language learners have a holistic learning style, similar to first language learners. The transition from holistic to analytic learning is believed to start at around age five or six. It coincides with, and is strengthened by, the acquisition of literacy with its focus on words as a basic unit of language. Wray's model provides an explanatory framework for some of the findings in this study. At the same time, some findings suggest modifications of the model.

Some differences found between the adult second language learners and the child learners are explained by viewing the adults as more analytic learners. In his use of pronominal possessives, at least one of them was very creative in the production of non-targetlike forms, which were not found in any of the children's data. This adult could well have analysed the target language in small units, taking trouble to put them together when he needed to express a longer proposition. In addition, the adults' difficulty with the distributional relation between finite or non-finite verb forms and their position in the sentence could be explained from an analytic learning style. When the focus is too much on the smaller units of language, the distributional characteristics of the relation between these units is easily overlooked.

Some of the findings for the young child learners, however, also showed characteristics of an analytic learning style. They had trouble discovering the fact that only two of the available demonstrative pronouns in the Dutch language appear in object naming constructions. Also, like the adult second language learners, they did not incorporate the reduced pronouns, which were omnipresent in the input (but never stressed), in their repertoire of pronominal possessive constructions. In both cases, it seems that the children had found certain 'tools' for expressing a communicative intent, without noticing that these did not match the input. The children had thus been too 'analytic' in these respects, even though their second language development also showed signs of holistic learning in other cases.

This finding shows that analytic learning is possible at rather young ages, in this case the age of two or three, which is earlier than Wray (2002; 2008a; 2008b) proposed. It can thus not only be the acquisition of literacy that explains the difference between

analytic and holistic learning, as the children in the present study were all still illiterate. The highly limited amount of second language input some of the children received might perhaps explain their analytic learning style. Those children had to extract from the input whatever they could and combine these acquired units into meaningful utterances with their own creativity, but without enough evidence from the input about conventional regularities in the target language. Indeed, as this explanation would predict, individual variation is larger among bilingual children than among monolingual children.

As Wray's (2002; 2008a; 2008b) model is a usage-based one, it is not problematic to modify the model in this respect. Usage-based models state that all language users, irrespective of age, usually represent linguistic knowledge at different levels at the same time. They may employ abstract linguistic rules, but also store expressions as wholes. Language users can access these different levels if needed. Young children might thus well be inclined to pay more attention to larger units, having a holistic learning style, but circumstances can lead them to use an analytic learning style as well.

7.2.4 Simultaneous and successive acquisition of bilingualism

What do the findings of this study tell us about the difference between simultaneous and successive bilingual acquisition? It was claimed in Chapter 1 that from a usage-based perspective, the distinction between the two should be seen as a continuum. The children in the present study can be located somewhere in the middle of that continuum. A child such as Selma, who started learning Dutch already in the first months of her life, and who was immersed in a mainly Dutch-speaking setting for almost half of her waking time, acquired her two languages in a rather simultaneous fashion. Indeed, it was sometimes observed that she acquired constructions at the same pace or even more quickly than some monolingual Dutch children.

The other children were still young when they started learning Dutch, at about the age of two, but they had already acquired quite stable levels of communicative skills in their first language[55]. They already knew how to communicate in a first language, and needed to build up the virtually absent ability to do so in a new language. And they clearly suffered from the fact that they could not employ the communicative routines, strategies, and creativity they had acquired in the social contexts they had lived in so far. From a usage-based perspective on language it is not problematic to call this type of language learning what it looks like: second language learning. It results in bilingualism that is successively – but also somewhat simultaneously – acquired.

7.2.5 Data-driven research methods

The present study took a data-driven approach. First, the data were collected in such a way that it should provide a general impression of the language development of seven carefully selected Turkish-Dutch bilingual children. It was only later that the exact

[55] The present study did not look into the first language development of the bilingual children, but see Van der Heijden & Verhoeven, 1994; Van der Heijden, 1997; Nap-Kolhoff, 2008; Nap-Kolhoff, under review; Yağmur & Nap-Kolhoff, 2010.

research questions and domains of analysis were formulated. The advantage of this approach is that the data were left to 'speak for themselves'. The three topics investigated in this study, i.e., object naming constructions, pronominal possessive constructions, and finite and non-finite verb use, emerged as interesting issues from the data, and were therefore chosen for close analysis.

A data-driven method also has its drawbacks, however. In the chapter describing the Dutch language development of one child, Mehmet, many interesting patterns could be pinpointed, but most of them had to be accompanied by disclaimers indicating that for actual evidence of the pattern, not enough data was available. The status of the claims could thus not be much more than that of 'impressions', or 'tendencies'. Another disadvantage is that what is frequently present in the data of one child, may be rare in the speech of others. For example, Yunus produced hardly any utterances expressing possession during the recordings, so his data did not contribute much to the analysis of pronominal possessive constructions in Chapter 5. A third example is the calculation of the number of verbs used in both finite and non-finite forms, and those used only in either form, in Chapter 6. Such an analysis depends on the absence of certain patterns in children's speech. But it is very well possible that children actually used a particular verb form at other moments, but did not produce it during the recordings.

What counts as evidence in naturalistically collected speech data? Given a reliable method of data collection and data transcription, that which is produced by a child is taken as evidence of his language skills. For usage-based approaches to language, this is not as problematic as it is for Chomskyan generative approaches, which assume an almost insurmountable difference between 'performance' as observed in actual language use and the underlying linguistic 'competence' (Chomsky, 1965).

Although usage-based theories of language take children's speech at 'face value', they also stress the importance of understanding such speech in a wider context. Did a child produce a specific utterance for the first time, or had it been using it, however infrequently, for a long time already? Was the child perhaps pressed by the circumstances to come up with a new structure not used before, or was the utterance part of a repertoire regularly used in a specific context? Such questions require evidence, not only of what is present during a recording, but also what is present *and* absent at other times.

Of course it is not feasible to record all of a child's speech, although that would constitute the perfect dataset. A recent tendency, particularly in usage-based studies on language acquisition, however, is to estimate beforehand the amount of data that would be needed to have enough evidence for certain analyses. Tomasello & Stahl (2004) calculated that a dataset with speech recorded for five hours per week, rather than one hour per week or per month, yields much more reliable results on, for instance, the production of overgeneralised past-tense forms in English or the acquisition of passive constructions in German. A few studies have implemented these principles and collected so-called 'dense corpora' (Behrens, 2006; Brandt, Diessel & Tomasello, 2008; Lieven, Behrens, Speares & Tomasello, 2003; Maslen, Lieven, Theakston & Tomasello, 2004).

Of course, a disadvantage of collecting dense data is the labour intensity it requires and the heavy intrusion in the (family) life of the child. The findings of studies working with dense corpora, however, provided many new insights into the process of first language acquisition. Lieven et al. (2003), for example, showed how closely the speech of a two-year-old English speaking child was related to what the child had said before; few of her productions were truly creative. Brandt et al. (2008) were able to describe the small steps a German speaking boy made in the acquisition of relative clauses, with simple non-embedded sentences gradually evolving into complex relative clause sentences.

For the present study it was not feasible to collect such a dense corpus. More importantly, however, the purpose of the present study was different from the ones using such corpora. Not much was yet known about the Dutch language development of bilingual Turkish-Dutch children at the ages of two to four. The present study had an explorative design, and collecting data showing general patterns in more than one child had priority. The disadvantages of such a data-driven design thus had to be taken for granted.

7.2.6 The influence of socio-economic background

The Dutch language development of the seven bilingual Turkish-Dutch children has been compared to that of some monolingual Dutch children. The purpose of this comparison was not to show that the bilingual children were in any respect 'deficient', but to investigate typical characteristics of their Dutch language development. The monolingual children appeared to acquire the Dutch language at a quicker pace, to produce less non-targetlike constructions, and to be sensitive to more subtle patterns in the target language. Note they also received more Dutch language input.

Given the wide differences between the bilingual and monolingual children in the conditions under which they learned the Dutch language, such a comparison should preferably be made *ceteris paribus*. In the comparisons presented in the present study, however, there was another important difference between the two learner groups: the educational level of their parents. All the monolingual children grew up in families in which both parents had completed higher education, whereas the highest level of education of the parents of the bilingual children was (upper-level) secondary school. Some parents had only finished primary school.

Is it likely that the differences in educational level of the parents have influenced the results? In studies on the effects of the socio-economic status of a person, the educational level of the parents is considered an important indicator (Sirin, 2005). Socio-economic status refers to the 'social class' of a family, and is usually operationalised as a combination of parental income, parental education, and parental occupation (Duncan, Featherman & Duncan, 1972). The socio-economic status tends to correlate with his or her own academic achievement in education and position on the labour market, persons with lower socio-economic backgrounds generally achieving lower positions (Sirin, 2005).

There are quite a few indications that socio-economic background also influences language acquisition. For example, it has been shown that American children who grow

up in families with higher 'professional' socio-economic status receive much more language input than families living on 'welfare' (Hart & Risley, 1995; see Chapter 1). Moreover, studies investigating interactions of parents with their children found that the interactional 'richness' on average is much higher in families with higher socio-economic backgrounds (Hoff-Ginsberg, 1991; 1998).

Few studies have investigated the actual relation between socio-economic background and language acquisition patterns (but see Hoff-Ginsberg, 1998). Nap-Kolhoff (2008) made an analysis of the productivity of derivational morphology in Turkish by the seven bilingual children in the present study and four monolingual children growing up in Turkey. Two of the four monolingual children were from higher socio-economic backgrounds, whereas the other two came from backgrounds comparable to the families of the bilingual children. The study showed that in their use of two derivational morphemes the monolingual children with a high socio-economic status were significantly more productive than the children with a lower socio-economic status.

It can thus be concluded that socio-economic background correlates with the quantity and quality of language input children receive, as well as with some elements of language acquisition. A thorough investigation of this issue has not been made, however, and the exact nature of the relationship remains unclear. It is thus also difficult to say to what extent the difference in socio-economic background of the children in the present study influenced their acquisition of Dutch.

7.3 Conclusion

The present study investigated bilingual children starting to learn a second language around their second birthdays and receiving relatively low amounts of input in this language. Not much empirical research had been conducted on such second language learners before, most studies focussing on children who were bilingual 'from birth', on children who started learning their second language at school age, or on children receiving higher amounts of second language input. This study presented an exploration of the relation between input patterns, age, and second language acquisition from a usage-based perspective.

The results showed that, in comparison to monolingual Dutch children, the Turkish-Dutch bilingual children had a relatively slow pace of Dutch language acquisition. The much lower amounts of language input the bilingual children received – for some children only about 15-20% of their total language input – explained most of the differences in pace of acquisition. The quality of the input, and other factors such as 'general well-being' also played a role.

Differences between monolingual and bilingual children were not only found in the pace of acquisition, but also in sensitivity to distributional characteristics of the input. This difference may be explained by the lower amounts of input, which provide less evidence for these distributional characteristics, by the cumulative effects of their own productions also being linguistic input, and by 'learned attention' effects from patterns in the first language. There were also several commonalities between the monolingual and bilingual children, which shows that the age differences between the two learners

groups did not have much of an effect. This finding was supported by comparisons with adult second learners of Dutch who had Turkish as a first language,. They appeared to use more analytic learning styles.

Within the field of usage-based linguistics, not much empirical research has been done into bilingualism and second language acquisition. Nevertheless, usage-based approaches to language provide fertile models for studying second language acquisition at all ages, and differ in several respects from Chomskyan generative linguistics. The present study showed that the study of childhood bilingualism and early second language acquisition provides usage-based theories of language acquisition insight into issues such as the amount of input needed for language learning, sensitivity to distributional characteristics of the input, and the social component of language learning.

This study explored issues in second language acquisition in early childhood on the basis of a multiple case-study. In order to investigate issues such as the effects of age or the amount of input more closely, other research designs could provide additional contributions. On the one hand, collecting a dense data corpus for one bilingual child (or several bilingual children) would reveal much about the subtleties of the process of second language acquisition, as much more would be known about for example the link between the actual input a child receives and the linguistic productions of that child in different contexts. On the other hand, research with larger numbers of informants makes it possible to generalise more. Naturalistic speech sampling would not be feasible for such studies and therefore the careful construction of other data collection methods would be necessary, such as language tests, developmental check lists or specific experimental tasks. In addition, in order to investigate the effect of the amount of input, an instrument would be needed that provides detailed information about input patterns. The present study suggests that it is not enough to document formal attendance of a pre-school centre, the intensity of contacts with other children who speak the target language, for example in the neighbourhood, should also be measured carefully.

The bilingual children in the present study were two years old or younger when they started learning their second language. Further research should also explore the relation between input and second language development at older ages. Such research would not only contribute to theories of second language acquisition in childhood, but would also be useful for policymakers, especially in the area of early childhood education. Three of the Turkish-Dutch children in the present study attended an early childhood educational programme in a pre-school playgroup. As they spoke mostly Turkish at home, their acquisition of Dutch depended largely on the input they received there. This study showed that it took the children about a year to start acquiring some productive skills in Dutch.

Given the fact that the intensity of the programmes cannot be raised much, it is legitimate to ask whether children of three or four years of age might not be better suited to the task of learning a language with relatively low amounts of input. They are cognitively more mature, have established a higher level of proficiency in their first language, engage more in social interactions, and they are psychologically perhaps better able to 'endure' the difficult transition period between not knowing a language and

acquiring some productive skills. Since the answer to this question is as yet unknown; empirical research is needed. It is often claimed that the younger children are, the easier they learn, and the more naturally they go about learning additional languages. With limited amounts of input, however, learning a second language is a difficult process, also for young children.

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Samenvatting in het Nederlands

Tweede-taalverwerving in de vroege kinderjaren: een longitudinale meervoudige case-study van Turks-Nederlandse peuters

Onderhavig onderzoek gaat over de tweede-taalverwerving van het Nederlands door zeven Turks-Nederlandse kinderen. De ouders van deze kinderen zijn eerste en/of tweede generatie immigranten in Nederland. Thuis wordt voornamelijk Turks gesproken, maar ook Nederlands. Sommige ouders zijn zelf vloeiend tweetalig in het Nederlands en het Turks, terwijl anderen het Nederlands slechts op een basaal niveau beheersen. Alle kinderen in het onderzoek komen buitenshuis geregeld in contact met de Nederlandse taal. Drie kinderen bezoeken van hun tweede verjaardag een peuterspeelzaal die voor- en vroegschoolse educatie (VVE) aanbiedt. Een ander kind bezoekt een peuterspeelzaal zonder VVE, twee andere kinderen gaan naar een kinderdagverblijf, en een laatste kind speelt veel met Nederlandse vriendjes in vriendinnetjes in de buurt.

Er is nog weinig onderzoek gedaan naar tweetaligheid en tweede-taalverwerving in een context als deze. Eerder onderzoek ging vooral over tweetaligheid bij kinderen die vanaf hun geboorte tweetalig opgroeien, bijvoorbeeld omdat beide ouders een verschillende moedertaal spreken. Studies over tweede-taalverwerving door kinderen die een eerste taal al beheersen concentreert zich met name op oudere kinderen vanaf de schoolleeftijd. Ten slotte bestuderen andere onderzoeken over het algemeen kinderen die intensief contact hebben met beide talen. Dat is echter bij de zeven Turks-Nederlandse kinderen in dit onderzoek niet het geval. De kinderen die bijvoorbeeld vier dagdelen per week een peuterspeelzaal bezoeken, krijgen ongeveer twaalf uur Nederlands taalaanbod per week. Dat is niet meer dan 10-15% van het totale taalanbod dat zij krijgen.

Dit onderzoek kijkt op een taaltheoretische manier naar de Nederlandse taalverwerving van de zeven kinderen. Steeds worden er vergelijkingen gemaakt met eentalige Nederlandse kinderen die Nederlands als moedertaal leren. Dit is niet om aan te tonen dat de Turkse kinderen 'achterlopen', maar om te bekijken wat voor soort cognitieve mechanismen een rol spelen in tweede-taalverwerving op jonge leeftijd en

met relatief weinig taalaanbod. Daarnaast wordt de Nederlandse taalverwerving van de Turks-Nederlandse kinderen ook vergeleken met die van jonge Turkse volwassenen die in een informele context (dus niet in de klas) Nederlands leren. Deze vergelijking geeft inzicht in verschillen tussen tweede-taalverwerving op jonge en latere leeftijd.

Methode

Voor het onderzoek zijn voor drie Turks-Nederlandse peuters over een periode van anderhalf tot twee jaar spontane taaldata verzameld. De drie jongens, Mehmet, Batuhan en Yunus[56] zijn tussen april 2003 en januari 2005 iedere maand opgezocht in de peuterspeelzaal die zij bezochten en bij hen thuis. Bij ieder bezoek werd een geluidsopname gemaakt van interacties van het kind met een peuterspeelzaalleidster of de eigen moeder. In alle gevallen werd aan de leidsters en moeders gevraagd te taal te spreken die het meest natuurlijk aanvoelde. Voor de leidsters was dat het Nederlands en voor de moeders vaak het Turks, maar soms ook het Nederlands, en vaak een combinatie van beide. De geluidsopnamen zijn uitgeschreven via een transcriptie-systeem dat data-analyse met bepaalde software mogelijk maakt.
Spontane taaldata voor vier andere kinderen zijn ruim tien jaar eerder al verzameld in het kader van een vergelijkbaar onderzoeksproject. Deze dataverzameling vond plaats tussen februari 1990 en oktober 1991. Twee meisjes, Selma en Berrin bezochten vanaf kort na hun geboorte kinderdagverblijven met speciale aandacht voor Turkse kinderen. Er werd voornamelijk Nederlands gesproken, maar er was ook altijd een Turkse leidster aanwezig, die soms Turks sprak met de kinderen die dat verstonden. Voor deze twee kinderen vond dataverzameling plaats in het kinderdagverblijf. Een derde meisje, Filiz, bezocht vanaf dat zij ruim drie jaar oud was een reguliere peuterspeelzaal bij haar in de buurt voor twee dagdelen in de week. Daarnaast had zij veel contact met Nederlandse kinderen in de buurt. Dat laatste geldt ook voor Şükran, die verder geen peuterspeelzaal of kinderdagverblijf bezocht.

Mehmet

In hoofdstuk 3 van dit proefschrift wordt de Nederlandse taalverwerving van een van de kinderen, Mehmet, in detail beschreven. In het eerste jaar dat hij de peuterspeelzaal bezoekt, tussen zijn tweede en derde verjaardag, spreekt Mehmet weinig Nederlands. Hij leert het wel steeds beter verstaan. In dit onderzoek is echter vooral gekeken naar wat hij zelf zegt. In dit eerste jaar produceert hij in de peuterspeelzaal af en toe Nederlandse woorden (bv. 'opruimen', 'boekje', 'papa') en vaste zinnetjes (bv. 'mag niet'). Hij spreekt echter ook vaak Turks tegen de peuterspeelzaalleidsters, die dit niet verstaan, maar zo toch begrijpen dat hij iets van hen wil. Als hij twee jaar en negen maanden oud is ontdekt hij dat het een leuk spelletje is om te imiteren wat een leidster zegt. Op die manier kan hij hele gesprekken voeren en leert hij ook meer woordjes. Thuis spreekt Mehmet overigens in deze periode meer Nederlands dan in de peuterspeelzaal. Waarschijnlijk is het voor hem gemakkelijker om Nederlands te

[56] De namen die hier gebruikt worden zijn niet de echte namen van de kinderen, maar pseudoniemen.

spreken als hij weet dat hij ook altijd terug kan vallen op het Turks. Zijn moeder spreekt vloeiend Nederlands en net als zij gebruikt Mehmet ook vaak Nederlandse woorden (bv. 'okee', 'ja') in zijn Turks. Thuis maakt hij ook regelmatig nieuwe zinnen door woorden met elkaar te combineren.

Rond zijn derde verjaardag raakt Mehmet in de peuterspeelzaal in een zogenaamde 'stille periode'. Hij spreekt geen Turks meer met de leidsters, maar voelt zich ook nog niet vaardig genoeg in het Nederlands. Een dergelijke periode komt vaker voor in tweede-taalverwerving. Het kind stagneert dan niet, maar heeft deze tijd nodig om veel te luisteren en te verwerken. Thuis spreekt hij nog wel wat Nederlands, maar ook niet veel. Na deze stille periode, die een maand of twee duurt, is Mehmet's Nederlands opeens sterk vooruit gegaan. Hij spreekt ook in de peuterspeelzaal veel meer Nederlands en zijn uitingen worden steeds complexer. Aan het eind van de periode van dataverzameling, als Mehmet vier jaar wordt en naar de basisschool gaat, is zijn Nederlands goed verstaanbaar geworden. Zijn Nederlands is nog niet zo vloeiend als dat van kinderen voor wie het Nederlands de moedertaal is op die leeftijd, maar hij kan vrijwel alles duidelijk maken wat hij wil.

'Dat is een auto'

In de volgende drie hoofdstukken van het proefschrift worden drie onderwerpen nader bekeken, maar dan bij alle zeven Turks-Nederlandse kinderen. Hoofdstuk vier behandelt 'object naming constructions'. Het gaat daarbij om zinnen als 'dat is een auto' of 'dit is een vork'. Deze grammaticale constructie voor het benoemen van voorwerpen (ook mensen of dieren) in het Nederlandse bestaat uit een aanwijzend voornaamwoord ('dit' of 'dat'), het koppelwerkwoord 'zijn' en een verwijzing naar het voorwerp dat benoemd wordt. Een opmerkelijk kenmerk van deze constructie is dat altijd de aanwijzende voornaamwoorden dit' of 'dat' gebruikt worden, maar nooit 'die' of 'deze'. Mehmet gebruikte uitdrukkingen als 'die auto' regelmatig om 'dat is een auto' te zeggen. Het blijkt dat dit een uitdrukking is die meerdere Turks-Nederlandse kinderen gebruiken. In het hoofdstuk wordt ook een vergelijking gemaakt met drie Nederlandse kinderen. Deze kinderen blijken in hun vroege taalverwerving ook vergelijkbare uitdrukkingen te gebruiken. In dit opzicht verschillen de Turks-Nederlandse kinderen dus niet van Nederlandse moedertaalleerders. Er zijn ook enkele verschillen tussen de twee groepen kinderen gevonden. De Turks-Nederlandse kinderen hebben er bijvoorbeeld meer moeite mee om te ontdekken dat 'dit' en 'dat' wel, maar 'die' en 'deze' niet gebruikt worden in de Nederlandse constructie. Ook doen zij er langer over de correcte constructie te verwerven. De meeste Turks-Nederlandse kinderen bereiken dat punt niet tijdens de periode van dataverzameling. Dit laatste kan echter goed verklaard worden door de lage hoeveelheid taalaanbod dat deze kinderen krijgen. De taaltheoretische benadering die in dit proefschrift wordt gekozen, de zogenaamde 'usage-based' benadering, gaat ervan uit dat de hoeveelheid taalaanbod (naast ook de kwaliteit daarvan) een grote rol speelt in het taalverwervingsproces. Wanneer kinderen minder intens taalaanbod krijgen is het begrijpelijk dat zij meer tijd nodig hebben om grammaticale constructies te leren.

'Die auto is van mij'

Hoofdstuk vijf gaat over bezittelijke voornaamwoorden. In het dagelijks leven bestaat regelmatig de behoefte om bezitsrelaties uit te drukken en het is dus iets dat kinderen al vroeg doen. In het Nederlands zijn er allerlei grammaticale constructies om bezit uit te drukken, zoals 'mijn X', 'X van mij', 'mijne', etc. In dit hoofstuk wordt gekeken naar de constructies die de Turks-Nederlandse kinderen gebruiken om bezit aan te geven. Daarbij worden vergelijkingen gemaakt met drie Nederlandse moedertaalleerders, maar ook met een tweetal Turkse volwassenen die Nederlands aan het leren zijn.

De Nederlandse taalontwikkeling van de Turks-Nederlandse kinderen lijkt op die van de Nederlandse eerste-taalverwervers, maar er zijn ook overeenkomsten met de Turkse volwassenen. Een overeenkomsten met de Nederlandse kinderen is het feit dat de kinderen beginnen met bezitsvormen voor de eerste en later tweede persoon enkelvoud (bv. 'mijn' en 'jouw'). De volwassenen daarentegen gebruiken al vroeg vormen voor de derde persoon (bv. 'zijn') en meervoudsvormen (bv. 'ons'). Dit verschil is waarschijnlijk terug te voeren op verschillen in waar kinderen en volwassenen over praten. Volwassenen praten vaak over dingen die niet in het hier en nu aanwezig zijn. Daarvoor zijn vormen in de derde persoon nodig. Kinderen beperken zich meestal tot het hier en nu en spreken over zichzelf (eerste persoon) of hun directe gesprekspartners (tweede persoon).

Een andere belangrijke overeenkomst tussen de Turks-Nederlandse en Nederlandse kinderen is het feit dat beide groepen hetzelfde soort 'fouten' maken. In beide groepen kinderen is bijvoorbeeld gehoord dat een kind 'mij' zei als het 'van mij' bedoelde of 'van mij X' in plaats van 'mijn X'. Een verschil tussen de groepen is echter, en hierin lijken de Turks-Nederlandse kinderen meer op de Turkse volwassenen die Nederlands leren, dat de Turks-Nederlandse kinderen veel meer fouten maken en ook veel consequenter. Bij de Nederlandse kinderen zijn het echt 'foutjes' die gauw weer overgaan, maar de Turks-Nederlandse kinderen gebruiken ze structureler als onderdeel van 'hun versie' van het Nederlands op dat moment.

Een derde belangrijke overeenkomst tussen de Turks-Nederlandse kinderen en de Turkse volwassenen is de afwezigheid gereduceerde vormen van het bezittelijk voornaamwoord in hun taalproductie. In het Nederlands wordt naast de volle vorm 'mijn' vaker de gereduceerde vorm 'me' gebruikt. De volle vormen geven extra nadruk op het bezittelijk voornaamwoord, terwijl de gereduceerde vormen ('me', 'je', 'z'n', 'd'r') in neutrale contexten gebruikt worden. Het is interessant voor onderzoekers van taalverwerving om te zien hoe leerders hier mee omgaan. Enerzijds zijn de gereduceerde vormen heel frequent in het taalaanbod, zodat het niet moeilijk zou moeten zijn om ze te leren. Anderzijds krijgen ze nooit de klemtoon in een zin en zijn ze dus moeilijk op te pikken. En als een leerder een volle vorm verworven heeft, kan hij in principe alles uitdrukken wat hij wil. Het blijkt de Nederlandse kinderen de gereduceerde vormen snel oppikken vanaf het begin gebruiken naast de volle vormen. De Turks-Nederlandse kinderen en volwassen taalleerders van het Nederlands hebben hier beduidend meer moeite mee.

'Ik auto spelen'

In hoofdstuk 6 wordt ten slotte gekeken naar de werkwoordsvormen die de kinderen gebruiken. Nederlandse moedertaalleerders gaan typisch door fasen waarin ze zinnen als 'ik auto spelen' zeggen om 'ik wil met de auto spelen' of 'ik speel met de auto' uit te drukken. Ze gebruiken dan geen vervoegde werkwoorden ('speel' of 'wil… spelen'), maar het werkwoord in de infinitiefvorm. Dit werkwoord staat bovendien vaak aan het eind van de zin, terwijl vervoegde woorden in het Nederlands op de eerste of tweede plaats in de zin komen.

Voor de eerste taalverwerving van het Nederlands (en ook andere talen waarin dit voorkomt) is dit fenomeen uitgebreid bestudeerd (o.a. Blom, 2003). Nederlandse kinderen blijken door verschillende fasen heen te gaan voordat ze 'correcte' vormen van het Nederlandse werkwoord gaan gebruiken. In de eerste fase gebruiken kinderen vooral werkwoorden in de infinitiefvorm en aan het einde van de zin (hoewel dit niet voor alle kinderen geldt). In de tweede fase gaan kinderen ook vervoegde werkwoordsvormen gebruiken, maar dit zijn over het algemeen niet dezelfde werkwoorden. De vervoegde werkwoorden staan over het algemeen direct op de 'correcte' plaats in de zin, namelijk de eerste of tweede positie. In de derde fase gaan kinderen meer en meer werkwoorden in beide vormen gebruiken. Ook komen er samengestelde werkwoorden in hun taalproductie, zoals '… wil … spelen'. In de laatste fase gebruiken kinderen voornamelijk werkwoorden in vervoegde vorm en samengestelde werkwoorden..

De taalontwikkelingspatronen van de Turks-Nederlandse kinderen zijn vrij goed naast deze fasen te leggen. Er blijken grote verschillen tussen de kinderen te zijn. Op drieëneenhalfjarige leeftijd bijvoorbeeld bevinden Mehmet, Batuhan, Yunus en Berrin zich in fase twee, Filiz en Şükran in fase drie en Selma in fase vier. De ontwikkeling van Selma valt binnen het patroon dat voor sommige Nederlandse kinderen is geobserveerd, terwijl de andere kinderen aanzienlijk langzamer ontwikkelen. Dit is wederom goed te verklaren door de lage hoeveelheid taalaanbod die zij krijgen.

In het hoofdstuk wordt ook een vergelijking gemaakt met wat in de literatuur is geschreven over Turkse volwassenen die Nederlands als tweede taal leren. Ook deze volwassenen gaan door een fase waarin ze infitiefvormen gebruiken. Een belangrijk verschil tussen deze volwassenen en de kinderen die Nederlands als eerste of tweede taal leren is dat er bij hen een minder sterke relatie is tussen de vorm van het werkwoord en de plaats in de zin. De infinitiefvorm staat weliswaar meestal aan het eind van de zin, maar vervoegde werkwoorden aanzienlijk minder vaak dan bij de kinderen op de eerste of tweede plaats in de zin.

Volgens Wray (2002) gebruiken volwassen een andere strategie bij het leren van taal dan kinderen. Volwassenen hebben de neiging om het taalaanbod dat zij krijgen te analyseren in kleine stukjes, die ze vervolgens, als ze zelf iets willen zeggen, weer aan elkaar moeten 'rijgen'. Kinderen verwerken hun taalaanbod vaak op een holistische wijze en onthouden soms zelfs hele zinnen. Zij zijn terughoudender in het opbreken van het taalaanbod in kleinere delen. Dit verschil zou een verklaring kunnen zijn voor het feit dat de Turkse volwassenen de relatie tussen de vorm van het werkwoord en de plaats in de zin minder snel oppikken. Wanneer zij sterk hun aandacht richten op de woorden zelf, missen ze mogelijkerwijs de relaties tussen deze woorden.

Conclusie

In het laatste hoofdstuk van dit proefschrift wordt uitgebreid ingegaan op wat de uitkomsten van het onderzoek zeggen over de verschillen tussen eerste taalverwerving, tweede taalverwerving op jonge leeftijd en tweede taalverwerving op volwassen leeftijd. Hierbij wordt onder andere ingegaan op de genoemde verschillen tussen analytische en holistische leerstrategieen (de jonge tweede taalverwervers blijken soms ook analytisch te werk te gaan), op verschillen in de hoeveelheid en kwaliteit van het taalaanbod en de mogelijke invloed van het Turks als eerste taal bij de tweede taalleerders.

De taalsituatie van de meeste Turks-Nederlandse kinderen in dit onderzoek – en zij zijn niet atypisch in dit opzicht – is er een van relatief weinig taalaanbod in het Nederlands. Een begrijpelijk gevolg hiervan is dat de Nederlandse taalontwikkeling van deze kinderen relatief traag verloopt. Hoewel vaak wordt aangenomen dat kinderen sneller en in zekere zin 'pijnloos' een taal leren als zij jonger zijn, roept dit onderzoek de vraag op of dat waar is. De overgang van thuis naar een peuterspeelzaal waar zij de taal niet spreken is voor alle kinderen zwaar. Met het geringe taalaanbod dat zij krijgen duurt het bovendien lang (in het geval van Mehmet een jaar) voordat zij zelf meer dan sporadisch Nederlands gaan spreken. Nu is een van de mogelijke oplossingen om kinderen nog eerder naar peuterspeelzalen of kinderdagverblijven te sturen, gedurende meer uren per week. Dit is echter niet altijd mogelijk en wenselijk. Een tot nu toe onbeantwoorde (en ook weinig gestelde) vraag is of het voor oudere kinderen wellicht gemakkelijker is om een tweede taal te leren met relatief weinig taalaanbod. Voor een vierjarig kind is de psychologische stress van de overgang naar een anderstalige omgeving misschien wel minder groot. Bovendien zijn zij over het algemeen meer gericht op sociale omgang, wat voor het leren van een taal erg belangrijk is.

Zoals gezegd, het antwoord op deze vragen is nog onbekend. Op basis van dit onderzoek kan ik elk geval gesteld worden dat het voor twee- en driejarige peuters een moeizaam proces is om met relatief weinig taalaanbod een tweede taal te verwerven.

Appendix A CHAT codes

Header tiers

Header tiers provide information about the whole transcripts, or large parts of a transcript and are marked with the @-sign. Obligatory header tiers used in the transcripts:

@Begin
@Languages:
@Participants:
@ID:
@End

@Begin and @End are necessary for the CLAN software to identify the beginning and the end of the transcript. The language spoken during the recording sessions is specified at @Languages. The @Participants-tier lists all the persons appearing in the transcript. A three letter identification code (e.g., CHI for child, MOT for mother, TEA for teacher and INV for investigator) is followed by the name of the participant and his or her role (e.g., target_child, mother, etc.). An ID-tier is made for the most important participants, and facilitates the retrieval of statistics from the transcripts. In addition, for any other kind of comments in the header, or comments in the transcript that apply to a more than one utterance, the header tier used is:

@Comment:

Main tiers

The utterances of the participants are transcribed on main tiers. Main tiers start with an asterisk and the three letter acronym of the speaker as indicated in '@Participants:'. Many codes are available in CHAT for indicating details of utterances. In the present study, the following codes are used:

xxx	Unclear word or (part of an) utterance.
www	Untranscribed material (mostly used when an adult is talking to a person other than the informant).
&	Designates a sound (fragment). Used to indicate what an unintelligible word sounds like. CLAN ignores the sounds indicated with this sign and does not count them as words.
#	Indicates a pause between words.
„	Precedes a tag question.

The following codes on the main tier are scoped codes, which means that the part of the utterance they refer to ('scope') can be marked with < at the beginning and > at the end. The code immediately follows the scope. However, scope is not always indicated in the transcripts, as the information is not always important (enough).

[/]	Repetition without correction.
[//]	Repetition with correction.
[?]	Transcription unclear ('best guess').
[:]	Replacement (mostly used in combination with '&', to indicate what word the child meant to say, e.g., &fisi [: fietsje]). For analysis, CLAN looks at the transcription in the code, not its scope.
[=? ...]	Alternative transcription (e.g., fietsje [=? visje]). For analysis, CLAN disregards the information in the code.
[=! ...]	Paralinguistics, prosodics (e.g., [=! laughs]).
[>] and [<]	Indication of overlap with another participant's speech. [>] marks that the overlap follows in the following main tier, whereas [<] marks that the overlap precedes in the preceding utterance. Both codes are used together to indicate the overlap.

Dependent tiers

Dependent tiers provide information on the preceding main tier and are marked with the %-sign. The dependent tiers used in the transcripts:

%com:	Any comment on the preceding main tier.
%add:	Indicates the addressee of an utterance (mostly used when an adult addresses someone who is not the informant, or when the addressee would otherwise be unclear).

Dependent tiers are also used for several kinds of coding systems for specific analyses. These codes are explained in the relevant chapters.

Appendix B Codes of books and toys used for data collection

Nap-Kolhoff bilingual corpus

Toys

N-T1	Finger dolls (animals)
N-T2	Drawing book and colouring pencils
N-T3	Soft ball

Picture books (without text)

N-B1	Reuzenprentenboek van de boerderij [Giant picture book of a farm] (ill. Suess, A. – Schwager & Steinlein, Cologne, 2002)
N-B2	Het reuzegrote plaatjesboek [The giant-size picture book]. (ill. Suess, A. – Schwager & Steinlein, Cologne, 2002)
N-B3	My garage. Pop-up and play garage (ill. Bull, P. – Tony Potter, Haywards Heath, 2003)
N-B4	Samen ontdekken: de supermarkt [Discovering together: the supermarket] (ill. Capdevila, R. – Clasterman, Doornik, 1996)
N-B5	Samen ontdekken: ons huis [Discovering together: our house] (ill. Capdevila, R. – Clasterman, Doornik, 1996)
N-B6	In en om de boerderij [In and around the farm] (ill. Chochola, F. – Christofoor, Zeist, 1987)
N-B7	Truck (ill. Crews, D. – Greenwillow Books, New York, 1980)
N-B8	Huis op z'n kop [House upside down] (ill. Goede, I. – Averroès, Amsterdam, 1997)
N-B9	Dieren [Animals] (ill. Grillis, C. – Christofoor, Zeist, 1988)
N-B10	Ik kan al helpen [I can help] (ill. Grillis, C. – Christofoor, Zeist, 1991)
N-B11	Een nieuwe dag [A new day] (ill. Heuninck, R. – Christofoor, Zeist, 1987)
N-B12	Buiten spelen [Playing outside] (ill. Heuninck, R. – Christofoor, Zeist, 1989)

N-B13 Lekker spelen [Having fun playing] (ill. Heuninck, R. – Christofoor, Zeist, 1991)
N-B14 Welke dieren zijn dit? [What animals are these?] (ill. Marin, L. – Kluitman, Heerhugowaard, 1985)
N-B15 Welkom op boerderij de Wilg. Pop-up en speelboek! [Welcome to the farm. Pop-up and play farm!] (ill. Mortimer, S. – Elmar, Rijswijk, 2004)
N-B16 Aan zee [On the beach] (ill. Oxenbury, H. – Gottmer, Haarlem, 1982)
N-B17 Beesten [Animals] (ill. Oxenbury, H. – Gottmer, Haarlem, 1982)
N-B18 Helpen [Helping] (ill. Oxenbury, H. – Gottmer, Haarlem, 1982)
N-B19 Slaap lekker [Sweet dreams] (ill. Oxenbury, H. – Gottmer, Haarlem, 1982)
N-B20 De wind, de wind [The wind, the wind] (ill. Velthuijs, M. – Zwijsen, Tilburg, 2000)

Van der Heijden bilingual corpus

Children's books

H-B1 Nijntje gaat logeren [Miffy's staying at a friend's] (Bruna, D. – Van Goor, Amsterdam, 1988)
H-B2 Onverwacht bezoek [Unexpected visitors] (Brandenberg, F. – De Vries-Brouwers, Amsterdam, 1984)
H-B3 Waar is Dribbel [Where is Dribbel]? (Hill, E. – M & P, Weert, 1985)
H-B4 Klein in de grote wereld [Small in a big world] (Svend Otto, S. – Thieme, Zutphen, 1987)
H-B5 Dikkie Dik. Het tweede grote boek vol avonturen [Dikkie Dik. The second big book full of adventures] (Boeke, J. – Gottmer, Haarlem, 1987)
H-B6 Dikkie Dik. Een boek vol avonturen [Dikkie Dik. A book full of adventures] (Boeke, J. – Gottmer, Haarlem, 1985)
H-B7 De pan [The pan] (Ormerod, J. – De Vries-Brouwers, Amsterdam, 1988)
H-B8 Een nieuw vriendje [A new friend] (Ormerod, J. – De Vries-Brouwers, Amsterdam, 1987)
H-B9 Tom en Pippo gaan wandelen [Tom and Pippo go for a walk] (Oxenbury, H. – Gottmer, Haarlem, 1988)
H-B10 Vriendje maan [Our friend the moon] (Dahan, A. – De Vries-Brouwers, Amsterdam, 1987)
H-B11 Kattenprentenboek [Cats picture book] (Imoto, Y. – De Vries-Brouwers, Amsterdam, 1986)
H-B12 Met tien in bed [Ten in a bed] (Dale, P. – Clavis, Hasselt, 1987)
H-B13 Het schoteltje melk & Verstoppertje. Dikkie Dik omdraaiboekje nr. 11 [A saucer of milk & Hide-and-seek. Dikkie Dik turn-around double book nr 11] (Boeke, J. – Gottmer, Bloemendaal, 1986)
H-B14 Erik kleedt zich aan [Erik dresses himself] (Campbell, R. – De Eekhoorn, Amersfoort, 1988)

H-B15	Wandeling in het park [A walk in the park] (Hughes, S. – De Vries-Brouwers, Amsterdam, 1985)
H-B16	Eerste woordenboek [First dictionary] (Scarry, R. – Deltas, Aartselaar/Harderwijk, 1982)
H-B17	Mijn eerste kijkboek [My first look-look book] (Scarry, R. – Deltas, Aartselaar/Harderwijk, 1984)
H-B18	Muisje in huis [Little mouse in the house] (ill. Spanner, H. – Otto Maier, Ravensburg, 1982)
H-B19	De waslijn & Meeuwen. Dikkie Dik omdraaiboekje nr. 6 [Clothes line & The gulls. Dikkie Dik turn-around double book nr 11] (Boeke, J. – Gottmer, Bloemendaal, 1990)
H-B20	Klusjes [Houshold chores] (Oxenbury, H. – Gottmer, Haarlem, 1981)
H-B21	Van groot en klein en laag en hoog. Uitschuifboek [About big and small and low and high. Pull-out book] (Snow, A. – Van Goor, Amsterdam)
H-B22	Dat rijmt [That rhymes] (De Wijs, I., ill. Van Heusden, A. – Bert Bakker, Amsterdam, 1990)

Toys

H-T1	Toy telephone, dog
H-T2	Toy telephone, elephant
H-T3	Dolls: Bert and Ernie
H-T4	Bottle of milk
H-T5	Bricks
H-T6	Cookery set
H-T7	Black and white doll
H-T8	Sock doll
H-T9	Tea set
H-T10	Medical centre
H-T11	Kitchen

Appendix C Statistical analyses: Fisher's exact test

It is not common practice in language acquisition studies based on spontaneous speech corpora to perform statistical tests on their data (Blom, 2003, being a notable exception). Nevertheless, when quantitative analyses are presented, it is desirable to give insight into the statistical significance of the patterns reported. Can the observed differences be due to chance, or is the pattern strong enough (and are the numbers large enough) to be able to speak of significant differences?

A problem of most statistical tests is that they start from assumptions about the data that do not apply in the case of natural language data (Stefanowitsch & Gries, 2003). These assumptions include normal distribution of the data, homogeneity of variances, and a certain minimum size of the sample. A statistical test that does not assume such characteristics of the data is Fisher's exact test (Fisher, 1922; Stefanowitsch & Gries, 2003). This test is used in the present study.

Fisher's exact test is applied to two-by-two tables. An example is Table C.1, in which the number of finite Dutch verbs in targetlike first or second sentence position is compared to the number of such verbs in other (non-targetlike) sentence positions. A comparison of the distribution between first/second and other sentence positions is made for monolingual Dutch and bilingual Turkish-Dutch children (see Chapter 6).

Table C.1 Number of finite Dutch verb forms used in first/second or other sentence positions by monolingual Dutch and bilingual Turkish-Dutch children.

Sentence position	Monolingual children	Bilingual children
First or second	74 (97%)	753 (94%)
Other	2	47

The table shows that 76 utterances with finite verbs are found in the monolingual data, of which 74 (97%) have the finite verb in targetlike first/second sentence position. Much more data are available for the bilingual children: 800 utterances. If the distribution between targetlike and non-targetlike utterances were the same for both learner groups, the bilingual data would show 776 utterances with a finite verb in first/second position, and 24 with such a verb in other sentence positions. In fact, the observed distribution found is 753:47 (94% targetlike). Is there a significant difference between the observed distributions?

The Fisher exact test is a permutation test, which means that it shuffles the observed data to determine how unusual the observed outcome is. It finds all possible combinations of the data in the cells of the table (in which the total number of observations stays the same) and determines which ones are equal to or more extreme than the observed distribution. The p-value of a specific distribution is calculated with the formula in (1), in which a, b, c, and d refer to the cells of a two-by-two table as in Table C.2. In the example of Table C.1, the probability of the distribution is .12 ((827!*49!*76!*800!)/(876!*74!*753!*2!*47!))

(1) p= ((a+b)!*(c+d)!*(a+c)!*(b+d)!)/((a+b+c+d)!*a!*b!*c!*d!))

Table C.2 The cells in a two-by-two table

	Column 1	Column 2
Row 1	a	b
Row 2	c	d

Fisher's exact test is not only interested in the probability of a specific distribution, but also in the ones that are more extreme. In the case of Table C.1, several more extreme distributions are possible, such as the one given in Table C.3 (p=(827!*49!*76!*800!)/(876!*75!*752!*1!*48!)=.051). Table C.4 presents the most extreme distribution, which has a probability of $1.260*10^{-111}$ ((76!*800!*76!*800!)/(876!*76!*0!*0!*800!)). The p-value in Fisher's exact test is calculated by summing the probabilities of the observed distribution and all the more extreme ones.

Table C.3 A more extreme hypothetical distribution of the data in Table C.1

Sentence position	Monolingual children	Bilingual children
First or second	75 (99%)	753 (94%)
Other	1	47

Table C.4 The most extreme hypothetical distribution of the data in Table C.1

Sentence position	Monolingual children	Bilingual children
First or second	76 (100%)	0 (0%)
Other	0	800

In the present study, the open source statistical software ´R´[57] is used for executing Fisher's exact test. The syntax used for Fisher's exact test is given in (2), in which a, b, c, and d in italics again refer to the cells of the table as presented in Table C.2

(2) *If a:c is greater (more extreme) than b:d:*
fisher.test(matrix(c(*a*,*c*,*b*,*d*), 2, byrow = TRUE), alternative ="g")
If a:c is less (less extreme) than b:d:
fisher.test(matrix(c(*a*,*c*,*b*,*d*), 2, byrow = TRUE), alternative ="l")

In the example of Table C.1, the p-value of Fisher's exact test is .1825[58]. The difference between the bilingual and monolingual children is thus not significant at a significance level of .05.

The test used in the present study makes use of one-tailed testing, since there are usually clear expectations with respect to the direction of the differences. Fisher's exact test is always applied to tables with numbers of actual observations in this study, even if percentages are reported to inform the reader about the distribution of the observations. Percentages are never used in performing Fisher's exact test.

Finally, it should be made clear that Fisher's exact test only gives information about how usual or unusual the observed differences in distributions are. It does not say anything about causal relations, nor does it give explanations. Outcomes thus always need to be interpreted by the researcher and to take into consideration the context of the observations.

[57] See http://www.r-project.org/. An alternative is the online Fisher exact calculator Exactoid (http://www.exactoid.com/fisher/).
[58] Syntax in R: fisher.test(matrix(c(74,2,753,47), 2, byrow = TRUE), alternative="g").

Appendix D CLAN procedures for calculating MLU

(1) Code all utterances of the target child for language on the dependent tier %lan. Codes:

$dutch	All words in the utterance are Dutch
$turkish	All words in the utterance are Turkish
$mixed	The utterance contains both Dutch and Turkish words
$undecided	The language of the words in the utterance could not be determined, for instance it consisted of only 'uh', or a proper name.
$other	All words in the utterance are another language, such as English (e.g., 'Happy birthday').

(2) Additionally code on the dependent tier %lan utterances to be excluded from MLU analyses. Code:

$dutch:nomlu	Dutch utterances that are imitations or repetitions of a preceding utterance, (partially) unclear utterances, and answers to yes/no-questions.

(3) Demarcate morphemes in the Dutch utterances to be included in the MLU analysis with '~' between the stem and the first morpheme, and '-' for other morphemes in the same word. See Gillis & De Houwer (2000) for criteria which Dutch morphemes to code. Examples: *poes~je* 'cat-DIM', *poes~je-s* 'cat-DIM-PL', *drink~en* 'drink-INF', *eet~en* 'eat-INF', *geef~ven* 'give-INF'

(4) Save transcript with codes under the name *filename.cod.cha* (i.e., *mehp01.cod.cha* etc.).

(5) Extract all Dutch utterances to be included for calculating MLU to new files. CLAN command:
kwal +d +s$dutch +t%lan +o@Begin +o@End +o@ID +o@Languages +o@Participants filename.cod.cha > filename.dutch.cha
Repeat this command for all files.

(6) Extract a frequency list of all words in the transcripts with Dutch utterances (*filename.dutch.cha*). CLAN command:
*freq +d1 *.dutch.cha +u > exclude.cut*
Make a list of all words to exclude from MLU analysis (e.g., 'uh', 'ah', 'mmhm'), i.e. delete all other words in *exclude.cut*.
Save the resulting *exclude.cut* file in the lib-folder in the CLAN directory.

(7) Calculate MLU on a set of transcripts representing a specific developmental stage. Select the relevant files via 'file in'. CLAN command:
mlu -t%mor -s@exclude.cut +b~ +b- +u @

Curriculum vitae

Elma Nap-Kolhoff achieved a propedeutic in Turkish languages and cultures at Utrecht University in 1997 (*cum laude*). Continuing her Master's studies at Tilburg University she graduated *cum laude* in Linguistics, with the specialisation 'Turkish in Europe', in 2001. In 2002, she commenced her Ph.D-research at the Department of Language and Culture Studies at the same university. For a joint paper with Roel van Steensel she received the award 'Best Post-Graduate Paper presented at the Pre-Conference of the European Conference for Educational Research 2004'. In 2007-2008, she participated in an NWO/BOPO funded research project at Tilburg University, evaluating early childhood educational programmes in the Netherlands. Since 2009, Elma Nap-Kolhoff is a post-doc researcher at Maastricht University, coordinating a project on dialect use in early childhood education in South-Limburg.

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