Proof print version of:
Hulk, Aafke & Leonie Cornips. 2006. Between 2L1 - and child L2 acquisition: An Experimental study of bilingual Dutch. *Interfaces in Multilingualism: Acquisition, representation and processing*. Hamburg Studies in Multilingualism Volume 4. Amsterdam: John Benjamins. Conxita Lleo (ed).

Full title: Between 2L1- and child L2 acquisition: An experimental study of bilingual Dutch*

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subject index: bilingual children from ethnic communities, delay, quantity of the input, quality of the input, cross-linguistic influence, word order, grammatical gender of the definite determiner, interface phenomenon, sentence completion test, default feature, DO-support, vulnerability, quantitative difference, qualitative difference, fossilization

Abstract

In the following we examine the acquisition of (i) the position of the finite verb in subordinate clauses and (ii) the grammatical gender of the definite determiner in Dutch by means of bilingual children from ethnic minority communities. The experimental results reveal that these children show a delay; they (ultimately) reach the target grammar for word order, whereas this is not so clear with respect to grammatical gender. These differences are explained by showing that these bilingual children are more like L2 than 2L1 acquirers, particularly with respect to the quantity and the quality of the Dutch input they are exposed to.

1. Introduction: differences and similarities between mono- and bilingual acquisition

Children acquiring two languages from birth have always fascinated linguists. From the beginning of the 20th century, diary studies were made presenting descriptive analyses of

language data produced by bilingual children (Leopold 1949 [1970]). Volterra and Taeschner (1978) were the first to argue that these children follow a specific developmental path, that is: the first phase involves "the mixing of" both lexicon and syntax and the subsequent phase involves separating the two lexicons first and the two grammars at a later stage. Research within the last twenty years (Meisel 1989, Paradis and Genesee 1995, De Houwer 1994), however, has convincingly shown that children being brought up bilingually from birth (2L1) are perfectly capable of separating their two grammars from very early on and pass through the same developmental stages as their monolingual peers with respect to both their grammars. Whereas some have claimed (Meisel 1989) that the two grammars of such children develop autonomously, i.e. completely independent of each other, others (Gawlitzek-Maiwald & Tracy 1996, Muysken 2000) have nevertheless shown that cross-linguistic influence not only occurs in the lexicon but also in the syntactic components of the grammars. Hulk and Müller (2000) and Müller and Hulk (2001) argued that cross-linguistic influence is to be expected only under certain specific conditions. In particular, the phenomenon has to belong to the interface between syntax and pragmatics and the languages concerned should (appear to) present some overlap. Precisely under those conditions, one of the grammars of the bilingual child might show a delay (or an acceleration) in the development of the specific phenomenon, under the influence of the other language, making the child remain in the so-called default stage for a longer (or shorter) period of time. Thus, the emerging grammar of the bilingual child might show quantitative differences in comparison to the emerging grammar of the monolingual child. Recently, Sorace (2005) has broadened the discussion by considering the role of the input, both quantitatively and qualitatively, in relation to the vulnerability of interface phenomena in a variety of bilingual situations. She hypothesized that an input that is quantitatively different from the one monolinguals receive may cause a delay in the development of bilingual grammars, whereas qualitative differences in the input may

lead to representation problems. Certainly, all bilinguals receive quantitatively less input than their monolingual peers. Traditionally, in generative grammar, this is not regarded as being important in relation to the acquisition of syntax ; it could be the case, however, that this is different with regard to the acquisition of interface phenomena.[1]

The aim of this paper is to examine the acquisition of two different phenomena in bilingual child Dutch: 1) word order and 2) grammatical gender of the definite determiner. The data regarding the two phenomena are elicited in one and the same experiment and are produced by the same bilingual children and monolingual controls (see Hulk & Cornips in press a). On the basis of the hypotheses of Hulk & Müller and Sorace mentioned above, we expect to find a difference in vulnerability and in sensitivity to cross-linguistic influence between the two phenomena.

The development of word order is not expected to reveal cross-linguistic influence, i.e. there should be no indices for a delay (or an acceleration) in the bilingual grammar, compared to the monolingual one, as it is restricted to the syntax module proper. But, in contrast, the acquisition of grammatical gender involves the interface between syntax, morphology and the lexicon, and hence we might expect to find quantitative differences between the bilingual and monolingual grammars in this context. Moreover, according to Sorace, the role of the input may play a role here: quantitative differences in the input may cause a delay or acceleration, i.e. bilinguals may use certain constructions more or less often and/or for a longer or shorter period of time than monolinguals, whereas qualitative differences in the input may lead to differences in grammar in the sense that bilinguals use different types of constructions compared to monolinguals and/or do not use certain constructions that are produced by monolinguals.

This article is organized as follows: in section 2, we will present the subjects and the methodology of the elicitation experiment, in our case a sentence completion test. We will

discuss the experimental results of the acquisition of a syntactic phenomenon in section 3, in particular, the position of the finite verb in Dutch (cf. Hulk & Cornips in press a). In section 4, we will discuss the results of the acquisition of an interface phenomenon, e.g. the gender of the definite determiner in Dutch. Finally, we will discuss possible factors that may play a role in explaining the differences between the acquisition of word order and the acquisition of grammatical gender.

2. Methodology and subjects

We replicated an experiment used by Zuckerman (2001) to elicit production data reflecting the morpho-syntax of inflected verbs.[2] However, these production data will be analyzed in this paper not only with regard to (i) the development in the acquisition of the position of the finite verb in subordinate clauses but also to (ii) the gender of the definite determiner in Dutch. The aim of the paper is to examine the acquisition of these two different phenomena more precisely. It is expected that word order as a purely syntactic phenomenon will not show a delay (or acceleration) in the bilingual grammar, whereas the acquisition of grammatical gender as an interface phenomenon is likely to show quantitative differences between the bilingual and monolingual grammar.

The experiment is based on a sentence completion test involving 40 picture pairs and 3 further picture pairs as pilot sentences.[3] Two pictures were simultaneously presented to the children. The experimenter first presented the pictures while producing a fully co-ordinated structure. Then, the experimenter presented the pictures again by means of a co-ordination structure in which the first conjunct was fully produced by the experimenter and the second conjunct was

truncated. The children were asked to complete the sentence and to produce a finite verb and an object. The expected answer involved either a root or a non-root sentence consisting of a finite verb and a definite direct object, as illustrated in the following examples:

Experimenter:

(1) Dit is de man die het brood snijdt en dit is de man die de tomaat snijdt.

a. **Root** Dus deze man snijdt het brood en deze man ...

'This is the man who cuts the bread and this is the man who cuts the tomato.

So, this man cuts the bread and this man …'

expected answer:	*snijdt*	*de*	*tomaat*
	cuts	the	tomato'
	Vfin	**DP**	

Experimenter:

Deze man snijdt het brood en deze man snijdt de tomaat.

b. **Non-root** Dus dit is de man die het brood snijdt en dit is de man ....

'This man cuts the bread and this man cuts the tomato.

So, this is the man who cuts the bread and this is the man ...'

expected answer:	die	*de*	*tomaat snijdt*
	who	the	tomato cuts
	rel.	**DP**	**Vfin**

Our experiments are based on 20 children who we divided in three age groups. The youngest and the middle age-groups are distinguished in a way similar to Zuckerman's study in order to achieve an optimal comparison of the results:[4]

@@ Insert Table 1 here

The group of 20 children was made up of (i) 13 bilinguals who were born and raised in ethnic minority communities in the Netherlands, (ii) 1 French-Dutch bilingual child in a one-parent one-language setting and (iii) 6 monolingual Dutch children as controls. The youngest and middle bilingual children attend three different (pre)schools in Amsterdam and the oldest ones attend a school in Utrecht. All schools are located in ethnic minority neighborhoods. All bilingual children were born in the Netherlands although we don't exactly know whether they were raised bilingually from birth or whether they acquired Dutch at a somewhat later age and should therefore be considered as very early child L2 acquirers (we will come back to this issue later). However, the teachers/caretakers (at pre-school) selected these children to participate in the experiment on the basis of their proficiency in Dutch. Moreover, the 8 youngest bilingual children are under the age of 4, which is generally considered to be the lower age boundary of child L2 acquisition (the upper one being around the age of 8) (cf. Schwartz 2004). Thus, we assume that these children were exposed to a Dutch input from birth onwards.

3. The acquisition of a syntactic phenomenon: the position of the finite verb

3.1. Monolingual acquisition

Traditionally, Dutch is analyzed as a SOV-language with V2. More specifically, in Dutch root clauses, as exemplified in (2), the non finite verb *gegeten* ‘eaten’ occurs in the VP-final base position whereas the finite verb *heb* 'have' has undergone movement to the second position in the left periphery of the sentence (the so-called V2 movement). In that position, it immediately follows either the subject *ik* 'I' in (2a) or the adverb *toen* ‘then’ in (2b):

(2)	a.	Ik	*heb*	een	appel	*gegeten*.	
		I	have	an	apple	eaten	
	b.	Toen	*heb*	ik	een	appel	*gegeten*.
		then	have	I	an	apple	eaten

In contrast, non-root clauses do not trigger the (V2) movement of the lexical finite verb to the second position. Here the finite verb is located in clause final position, as illustrated in (3):

(3)	Zij	zegt	dat	ik	een	appel	*gegeten*	*heb*.
	She	says	that	I	an	apple	eaten	have

Dutch monolingual children aged two to four pass through a well-attested stage where they simultaneously use either the finite form of the lexical verb in second position of the root clause or a so-called *DO*-support construction. The latter type of construction shows the finite auxiliary *gaan* 'go' or *doen* 'do' in second position and an infinitival lexical verb in clause final position, as illustrated in (4a) and (4b), respectively:

(4)	a.	We	*gaan*	allemaal	*ete* (3;1)	(Jordens 1990: 1433-34)

we go all eat$_{inf}$

'We are all eating'

b. Ik *doe* ook *praten* (3;5.2)

(Van Kampen 1997: 46)

I do also talk$_{inf}$

'I am talking too'

In spontaneous child production data, DO-support only appears in root, i.e. never in non-root clauses, and disappears once the V2 rule is clearly established (cf. Van Kampen 1997). These findings are confirmed in experimental work carried out by Zuckerman (2001). Although there is no general agreement on the theoretical analysis of DO-support in child Dutch, most authors assume that DO-support and V2-movement are related, and therefore predict an asymmetry in root and non-root clauses for both phenomena.

3.2. Bilingual acquisition

In Hulk & Cornips (in press a), we raised the following questions: 1) whether the bilingual children go through a DO-support stage equivalent to their monolingual peers in acquiring the position of the finite verb in Dutch root sentences, and 2) whether the bilingual children show the same root/non-root asymmetry as their monolingual peers. With respect to the first question, the results were not identical for all bilingual children, indeed the answer is only affirmative for one young French/Dutch bilingual child, Nicole, who uses DO-support very frequently. The answer is predominantly negative for all the other bilingual children: they either hardly use DO-support or even not at all (see table 2). Instead, they use the lexical finite verb in the correct, 2nd, position of the clause.

With respect to the second question, i.e. whether bilingual children show the same root/non-root asymmetry as their monolingual peers, the answer is both negative for the bilingual children who use DO-support very rarely and also for Nicole who uses it frequently. They all use the lexical finite verb, however they do not seem to place it in the correct position: in 20% of their non-root clauses, the bilingual children in the young and the middle age groups (up to the age of 5;2) use an incorrect, SVO, word order. This is illustrated in table 2 and by the examples in (5) below. The table reveals that both the younger and middle-aged bilingual children (2nd and 3rd column) use a non-Dutch word order to the same extent (20%):[5]

@@ Insert Table 2 here

Experimenter:

(5)	a.	Dus	dit	is	de	man +...	
		so	this	is	the	man	

Stefano:

	b.	++	die	*strijk*	*de*	*broek*	S Vfin O
			who	irons	the	trousers	

However, it is important to point out that the clause produced in the answer (5b) with the word order S-Vfin-O is ambiguous; that is, (5b) can be analyzed in two different ways:

(i) as a subordinate clause with an overt relative pronoun *die* 'that', introducing a non-root relative clause and revealing an incorrect word order (SVO instead of SOV),

or

(ii) as a main clause with a correct (SVO) word order, involving a demonstrative pronoun *die* ‘that one’, that anaphorically refers to the DP *de man* 'the man' in the preceding sentence uttered by the experimenter in (5a) - we will call this a resumptive pronoun strategy.

Patterns such as (5b) can not be disambiguated syntactically. Since we wanted to exactly replicate Zuckerman’s experiment in order to conduct a maximal comparison of the results, we were not able to avoid a possible resumptive pronoun strategy used by the children. Thus, it is crucial to emphasize that 20% of the answers in the young and middle age group, as illustrated in table 2, may in fact constitute a main clause with a correct SVO word order. It is only in the production data of the oldest age group of the bilingual children (aged 9;3 to 10;5) that the expected Dutch SOV word order is produced without exception, whereas the monolingual children already apply the correct word order in the youngest age group, at a stage in which they are between 3;0 and 3;10 years old.

3.3. Discussion

The question which then occurs relates to why the bilingual children use a resumptive strategy to a much larger extent than the monolingual children, since both have an equal chance to do so.[6] One of the reasons for producing SVO word order may be their other language, e.g. Sranan, Moroccan-Arabic, Berber, Turkish, Russian and French (see table 1). These languages all have a Vfin in a mid-clausal position both in root and non-root clauses. Thus, a possible interference of the other language could cause these bilingual children to predominantly produce clauses with SVO order in their Dutch. On the one hand, this interference could be “direct”, similar to transfer in L2 acquisition, leading the children to

produce Dutch non-root clauses with the (wrong) SVO word order in utterances such as (5b). On the other hand, this interference could also be "indirect", in the sense that it makes them avoid producing non-roots in Dutch, and leads to them producing roots with the familiar SVO word order instead, as in utterances such as (5b) from the perspective of the alternative, resumptive pronoun analysis. In both scenarios, the children have to become aware of the distinction between roots and non-roots for the position of the finite verb in Dutch, contrary to what is the case in connection with their other language. The results of our experiment show that this procedure takes quite a long time, since we only find the correct word order in all non-roots in the oldest age group. Apparently then, in order to acquire the correct word order in roots and non-roots in Dutch, monolingual and bilingual children take different routes: the monolinguals struggle with the word order in roots, passing through a (short) DO-support stage, whereas the bilinguals mainly struggle with the word order in non-roots, running through an extended stage in which they produce utterances which we could class differently to the ones found in utterances by monolingual children. As mentioned above this is either because they produce non-roots with the wrong word order (scenario i), or because they produce roots (scenario ii), whereas the monolinguals produce correct non-roots in these cases. Eventually though, they all produce non-roots with the correct word order.

Although the production data do not enable us to decide which of the two scenarios is actually followed by the bilingual children, the theoretical hypotheses about the possible influence in bilingual acquisition make predictions which are not verified by both scenarios in the same way. Therefore the hypotheses may allow us to establish which scenario is the most plausible. First, Hulk & Müller 's hypothesis about possible manifestations of vulnerability in the two emerging grammars of children raised bilingually from birth explicitly holds for interface phenomena. It is implicitly suggested that these predictions do not hold for the bilingual acquisition of purely syntactic phenomena such as word order. Hence, assuming that

our subjects are raised bilingually from birth, we do not expect to find 'direct' cross-linguistic influence in the word order of their utterances. From this perspective, scenario (ii) with the resumptive pronoun strategy appears the most plausible one. Nevertheless, it takes the bilingual children a long time to detach from this strategy and they clearly differ from monolingual children in this respect at least quantitively, whereas following Hulk & Müller 's hypothesis, we would not expect there to be any difference –neither delay nor acceleration - between mono- and bilingual children. The delay in the acquisition of the position of the finite verb in the subordinate clause derived from the production data of our bilingual children arises rather unexpected. Such a difference compared to their monolingual peers is more similar to what has been found for (child) L2 acquisition (see Schwartz (2004) and references cited there). In that respect, our results, particularly under consideration of scenario (i), could suggest that the language development of our bilingual children is closer to (early) child L2 acquirers than to true 2L1 bilinguals from birth. Schwartz (2004) has proposed the hypothesis that child L2 acquisition differs from L1 acquisition in the domain of syntax, yet not in the domain of morphology. If our bilingual children indeed take scenario (i) in acquiring the word order of non-root clauses in the Dutch under the influence of their other language, this would not come as unexpected if they are seen to be more like child L2 acquirers.

An argument in favor of the hypothesis that these children are more like child L2 than 2L1 acquirers, although they are exposed to a Dutch input from birth onwards, could be found in the quantity and the quality of the Dutch input that is different for bilingual children in ethnic minority communities compared to monolingual children. As discussed above, reasonable evidence is given that Dutch is one of the home languages of the bilingual children. However, their parents and older members of their family have acquired Dutch as L2-learners in adulthood in a non-instructed context which results in this kind of Dutch being one of the ingredients of the input the locally born children are exposed to. Previous research

in the Netherlands shows that e.g. only advanced adult Moroccan and Turkish learners of Dutch occasionally use subordinate clauses with an overt complementizer and in the few cases in which they actually do, the tensed verb has an equal chance of being positioned either in the verb final position or in mid clausal position (Jansen et. al. 1981). Further research is necessary to examine what role the quantity and the quality of the input plays in the acquisition of this type of bilingual children.

In the next section, we have a closer look at the acquisition of grammatical gender of definite determiners in Dutch that involves the interface between lexicon, syntax and morphology. We expect to find differences between the bilingual and monolingual grammar, regardless of the question whether these children are closer to 2L1- or child L2 acquirers.

4. The acquisition of an interface phenomenon: the gender of the definite determiner in Dutch

In this section, we will take a closer look at the acquisition of the production of the gender morphology of the definite determiner in Dutch, a phenomenon which involves more than just syntax. We used the same production data of the sentence completion test by the same children (see table 1) as described above. Although this experiment was originally designed in order to test the acquisition of word order, the data are analyzed with regard to the production of grammatical gender of the definite determiners in this section. Since the children have to repeat nouns with definite determiners, these data come for free so to speak. The example below, just as in the example in (1b), shows that the children are expected to answer by repeating the DP that is provided in the test sentence by the experimenter:

***Experimenter**:*

full co-ordinating structure

(6) Dit is het meisje dat het huis tekent en dit is het meisje dat **de bloem** tekent.
this is the girl who the house draws and this is the girl who the flower draws
'This is the girl who draws the house and this is the girl who draws the flower'

truncated co-ordinating structure (**root**)

a.	Dus	dit	meisje	tekent	het	huis	en	dit	meisje ...
	so	this	girl	draws	the	house	and	this	girl.....

Child:

b.	.....	tekent	**de**	**bloem**
		Vfin	DP	
	.....	draws	the	flower

In Dutch, definite determiners are obligatory under certain semantic and pragmatic conditions, which we will not further discuss here. In the present experiment the conditions are such that the definite determiner is always obligatory. Furthermore the morphology of the definite determiner varies according to number and gender of the noun, as illustrated below:

@@ Insert Table 3 here

There is no gender distinction connected to the indefinite article in Dutch, which is *een* for both neuter and non-neuter nouns, such as *boek* 'book' and *tafel* 'table', respectively (see

(7a)). Moreover, there are hardly any indicators for the gender of nouns in Dutch: the only salient morphological cues being the diminutive suffix *–(t)je* which always makes the noun neuter, as shown in example (7b), and the plural suffix *–en* and *–s* which always require the determiner *de*, as illustrated in (7c):

(7)	a.	*een*	tafel	*een*	boek
		a (NON-NEUTER)	table	a (NEUTER)	book
	b.	*het*	tafel*tje*	*het*	boek*je*
		the (NEUTER)	table+DIM	the (NEUTER)	book+DIM
	c.	*de*	tafel(*tje*)*s*	*de*	boek*en*
		the	table(DIM)+PLUR	the (PLUR)	book+PLUR

4.1 Acquiring the definite determiner as monolingual child

From a developmental point of view, one can distinguish between four different stages with respect to the L1 acquisition of determiners in Dutch:

Stage I: only bare nouns (also for other languages, see Chierchia et al. 2001)

Stage II: schwa-element + noun which can be interpreted as the indefinite article *een* 'a(n)' (before the age of 2, see Bol & Kuiken 1988)[7]

Stage III:
- definite article + noun and demonstrative determiner + noun from the age of 2 onwards
- overgeneralization of the non-neuter definite determiner *de* instead of the neuter *het* (see Van Zonneveld 1992)

Stage IV: target grammar (not before the age of 6, see Van der Velde 2003 & 2004)

We now turn to the discussion of the results of the sentence completion test with respect to the grammatical gender of the definite determiner.

4.2 Acquiring the definite determiner as a bilingual child

The results of the determiner production in those cases in which the children have to repeat non-neuter nouns with the definite article *de* (see also (6a) and (6b) above) are: [8]

@@ Insert Table 4 here

The following comparisons within and between groups are statistically significant:[9]

(i) within the group of monolingual children, the *youngest* and *middle* age groups differ significantly (Fisher Exact Test, p<.0001) with respect to the correct use of *de* (59% versus 90%, respectively). We interpret this significant difference as an indicator for a development in the acquisition of the correct production of *de* between these two age groups;

(ii) within the group of bilingual children, the *youngest* and *middle* age groups differ significantly (Fisher Exact Test, p<.0001) with regard to the correct use of *de* (26% versus 46%, respectively). The *middle* and *oldest* age groups also show a significant difference (Fisher Exact Test, p<.0001) in the correct use of *de* (46% versus 76%, respectively). We interpret this as indicating a development in the acquisition of the correct production of *de* from the youngest through to the oldest age group;

(iii) *Monolingual* children of the youngest (3;0-3;9) and middle age (5;0-5;2) groups differ significantly from their bilingual peers (Fisher Exact Test, p<.0001) in the correct use of *de* (59% versus 26% and 90% versus 46% correct *de*, respectively)

In other words, both the monolingual and the bilingual children show a clear development in the acquisition of the correct use of *de*. However, the bilingual children show a delay compared to the monolingual children since they still pass a developmental stage between the middle and oldest age group. In other words, there is a 'quantitative' difference between the two emerging grammars; that is, these bilingual children remain in a stage in which they don't use *de* target-like. Such a delay or quantitative difference is not unexpected in bilingual acquisition (cf Hulk & Müller 2000).

We will now evaluate the results of the production of the neuter definite article *het* by means of the same children. In this context, the experimenter provides the neuter noun in the test sentence with the definite article *het* and the child has to repeat it when completing the test sentence that follows (see (6a) and (6b), above).

@@ Insert table 5 here

In contrast to what we found out) in connection with the development of the acquisition of the non-neuter determiner *de,* the development of the acquisition of the neuter determiner *het* is significantly different both for monolingual and bilingual children:[10]

(i) Within the group of *monolingual* children, the *youngest* and *middle* age groups differ significantly in the correct use of *het* (Fisher Exact Test, p < .0001; 7% versus 77%,

respectively), indicating that a development takes place between these two groups in the acquisition of the correct use of *het*;

(ii) Within the group of *bilingual* children, however, we find no significant differences between the age groups young and middle (7% versus 15%, respectively) and middle and old (15% versus 32%, respectively (Fisher Exact Test, $p < .01$). There is a significant difference (Fisher Exact Test, $p<.0003$, 7% versus 32%, respectively) between the youngest and the oldest age group indicating that some development can be seen;

(iii) *Monolingual* and *bilingual* children of the middle (5;0-5;2) and oldest age (9;3-10;5) groups differ significantly (Fisher Exact Test, $p<.0001$ and $p< .0044$, respectively) in the correct use of *'het'* (77% versus 15% and 90% versus 32%, respectively).

An interesting difference between the monolingual and the bilingual children emerges from the statistics given above with respect to the development in the acquisition of the correct use of *het*. The data of the monolingual children show a clear development in the acquisition of the correct use of *het,* whereas the data of the bilingual children show hardly any development at all. It seems that the bilingual children are unable to fully acquire the correct use of *het*. Consequently, they somehow seem to be 'fossilized' in a developmental stage in which they overgeneralize the non-neuter definite article *de*. The monolingual children also go through such a stage in which they overgeneralize *de*, but, in contrast to the bilingual children, they eventually leave this stage. Taken together, the oldest age group of bilingual children (aged 9;3 to 10;5) do not show a target-like acquisition with regard to the correct use of *het* and they do not show a developmental pattern between the subsequent age groups, but only between the youngest and oldest age group. Thus, the bilingual children certainly reveal a delay in the acquisition of the correct use of *het*. In addition, the results even seem to indicate that the

monolingual and bilingual children show some sort of qualitative difference between their emerging grammars in the sense that they do not reach the same end state, at least not before the end of the oldest age group considered here (age 9;3-10;5). The bilingual children do not appear to acquire the neuter gender of the definite determiner (less than one third are target-like). However, as an anonymous reviewer pointed out to us, we cannot decide without doubt on the basis of these cross-sectional data alone whether the difference between the monolingual and bilingual children can be regarded as qualitative: we would require a longitudinal investigation up to a more advanced age at which target-like rates of *het* may or may not be produced.

4.3 Discussion

We expected the acquisition of an interface phenomenon such as gender of the definite determiner in Dutch to be 'vulnerable', both in the sense of Hulk & Müller , who predict that, it is possible for cross-linguistic influence in bilingual acquisition to appear in vulnerable domains if certain conditions are met, and in the sense of Sorace, who more generally claims that interface phenomena are sensitive to the quantity and quality of the input. Our results clearly show that there is a difference between monolingual and bilingual children with respect to the gender acquisition of Dutch definite determiners, this difference appearing to be both quantitative and qualitative.

The first question to be asked is whether this difference results from cross-linguistic influence from the other language of the bilingual children. However, these other languages widely vary in the way they express definite determiners and mostly these systems do not overlap with the Dutch determiner system. Hence, it can not be said for sure whether all the conditions of Hulk & Müller 's hypothesis are satisfied here and, consequently, whether we can expect any influence at all.

Moreover, Hulk & Müller 's hypothesis was only meant as a prediction for the emerging grammars of children growing up bilingually from birth. As mentioned above, given their word order productions, it could be the case that our children are in fact closer to child L2 acquirers. It is claimed in the literature, that in the case of (child) L2 acquisition no structural overlap between the languages involved is necessary for transfer from the other language to appear. Although in (child) L2 acquisition it is not so clear if transfer actually occurs in domains other than syntax, and here we are dealing with an interface phenomenon. Seen as a detailed study of the determiner systems of the other languages concerned is outside the scope of this article, we divided the languages into two groups, a group in which 'gender' plays a role and a second in which it does not. Thus, we obtained a Gender group (French and Moroccan Arabic/Berber) and a Non-gender group including Turkish, Akan, Ewe and Sranan. We then saw that taken together, our results do not unanimously support the hypothesis that children whose second languages do not involve gender distinction in the nominal domain do significantly worse than the ones with languages in which such a distinction does play a role. The results do not support the reverse hypothesis either, i.e. the children with another language in which gender distinction plays a role in the nominal domain do not achieve better results in the oldest age group than the children without gender distinctions in their other language. Therefore, we cannot assume that the problems of our bilingual children with respect to the acquisition of the neuter gender feature are due to direct cross-linguistic influence. Note that this holds regardless of the question of whether these children are more like 2L1- or rather like child L2 acquirers.

The next point worth considering is whether the quantity and quality of the input may have played a role in the differing development of our bilingual children, in line with the hypothesis of Sorace which she claims to be applicable both for children raised bilingually from birth and for (child) L2 acquirers. Let us first turn to the issue of the quantity of the input

of *het* as definite determiner. In the case of both monolingual and bilingual Dutch children, the gender of the Dutch nouns is not equally distributed. To be more specific, 75% of Dutch nouns are non-neuter and only 25% neuter. Moreover, if we move away from agreeing pronouns and adjectives, the neuter gender is only morphologically visible in the singular definite determiner *het* (see table 3). Furthermore, the plural definite determiner does not only not vary in gender, but it also adopts the form *de* and is therefore homophonous with the singular non-neuter definite determiner (see table 2). Consequently, there is an overwhelming amount of evidence for the non-neuter/default gender in the form of the definite determiner *de* in the input for Dutch children, and only a tiny amount of evidence for the neuter noun gender in the form of the rare definite determiner *het.* More evidence for the assumption that a default gender exists is provided by the fact that in Dutch all children acquire a so-called schwa-element before they acquire the actual definite determiner (see stage 2 in §4.1). This schwa-element is morphologically invariable according to the two genders of the noun (see however note 7). Hence, all children first acquire an article that has only one form and therefore provides no positive evidence towards gender features being specified on the noun. Consequently, it is hardly surprising that monolingual children initially overgeneralize *de*, using it as a default/unspecified option for the value of the gender feature of the definite determiner. Gradually, most likely on the basis of frequency and of morphological cues such as the diminutive suffix, they acquire the neuter gender feature as a specified value in combination with certain nouns and increasingly produce the neuter definite determiner *het* when required. However, we must recall that even the monolingual children are very late in fully acquiring of *het* (not before the age of 6 according to the literature, see §4.1).

Without doubt, the acquisition of *het* is even more complicated for bilingual children since the (standard) Dutch input is much more restricted than the input that monolingual children receive. Therefore, the least we would expect a serious delay in the acquisition of the

correct production of *het*. This prediction is borne out since the experimental data (see §4.2) reveal that the bilingual children do not show any significant statistical differences) between the subsequent different age groups with respect to the acquisition of the correct use of *het*. Further, even in the oldest age group (age 9;3 through to 10;5), bilingual children produce *het* in only 32% of the cases where it is actually required. In 33% of the cases where a neuter noun is explicitly present in the input, *de* is produced and in a further 30% of the cases other elements (for instance demonstrative and possessive pronouns) are used instead of the target definite determiner *het.* In other words, it seems as if there is more at stake than just a delay: in this stage the children know that a definite determiner is required, but with respect to neuter nouns they produce a definite determiner with the wrong morphological form in a vast majority of the cases.

What can we say about the quality of the input that our bilingual children are most likely exposed to? We already noted that these children are raised bilingually in families that are encapsulated within their own bilingual community, i.e. in ethnic minority families and communities where neither the language at home nor within their neighborhood is standard Dutch. The older family members, e.g. (grand-)parents, learned Dutch at an advanced age in a non-guided context. Studies of adult Moroccan and Turkish L2 Dutch learners show that they often leave out articles and/or use them in an incorrect manner, e.g. they often use *de* instead of *het* (Muysken 1984, Snow et. al. 1981). Moreover, nowadays, adolescent speakers within such communities who were born in the Netherlands and, hence, are regarded as 2L1- and/or child L2 acquirers of Dutch, overgeneralize the determiner *de* and as a consequence hardly produce the determiner *het*, as illustrated by the following spontaneous speech examples (Cornips 2002, Cornips & de Rooij 2003):

(8) a. zitten we in *de* laatste jaar

are we in the final year

[*the* (NEUTER) *year*, Cengiz, Turkish ethnicity, youngster, Utrecht]

b. *de* meest serieuze type

the most straight type

[*the* (NEUTER) *type*, Abdelkhalek, Moroccan ethnicity, Berber, youngster, Utrecht]

c. de man met *de* boek

the man with the book

[*the* (NEUTER) *book*, Anouar, Moroccan ethnicity, Arabic, youngster, Utrecht]

d. Hij had *de* juiste merk aan

he wore the right brand

[*the* (NEUTER) *brand*, Ronald, Surinamese ethnicity, youngster, Rotterdam]

Therefore, it seems plausible to assume that the 'ethnic' Dutch input presented to our bilingual children by adult L2 learners, i.e. former child L2 acquirers qualitatively differs from the standard Dutch input that monolingual children are exposed to with respect to the grammatical gender of the definite determiner. We cannot go into the sociolinguistic aspects in detail here, and leave it for future research.

Taking all these details into consideration, in contrast to what we observed for the acquisition of a purely syntactic phenomenon in the first part of this article, the acquisition of an interface phenomenon displayed not only a quantitative difference between the development of the monolingual and the bilingual children, but also a qualitative difference, in the sense that even at the oldest age, the bilingual children still largely overgeneralized the

non-neuter definite determiner producing the required neuter definite determiner in only one third of the cases, whereas the monolingual children nearly all performed target-like at that age. We argued that these differences are probably not due to cross-linguistic influence, and suggested that both the quantity and the quality of the input could have played a role here[11].

5. Conclusion

In this article, we have discussed and compared the acquisition of: (i) the position of the finite verb in subordinate clauses and (ii) grammatical gender of the definite determiner, on the basis of experimental data taken from Hulk & Cornips in press a. With respect to the position of the finite verb in subordinate clauses, we found that in order to acquire the right word order in roots and non-roots in Dutch, our monolingual and bilingual children follow different routes: the monolinguals struggle with the word order in roots, passing through a (short) DO-support stage, whereas these bilinguals struggle with the word order in non-roots, running through an extended stage in which they produce a word order which we could qualify as different from the correct one found in monolingual children. Eventually though, they all manage to produce the correct word order. We argued that the different routes and the delay arise unexpected taking the hypothesis of Hulk & Müller into consideration which is claimed to hold only for interface phenomena and not for a purely syntactic phenomenon such as word order. We then suggested that these results could be explained by assuming that the bilingual children in our experiment, although they are exposed to a Dutch input from birth onwards, are more like early child L2 than 2L1 acquirers; the aspect of 'transfer' is predicted to occur particularly in the domain of syntax for L2 acquisition.

As for the acquisition of gender in the nominal domain, on the basis of Hulk & Müller 's hypothesis, we expected a quantitative difference between the bilingual and the monolingual children to be possible if all necessary conditions were met, since this phenomenon involves an interface domain. The results for the bilingual children indeed showed a delay with respect to the acquisition of the non-neuter definite determiner *de.* However, as for the acquisition of the neuter definite determiner *het,* we also found a difference which could be characterized as being qualitative. A closer look at the determiner systems of the other languages of our bilingual children revealed the following two things: on the one hand, most of the systems did not overlap with the Dutch determiner system, making the hypothesis of Hulk & Müller inapplicable since not all the conditions were fulfilled; on the other hand, the presence of a gender distinction in the determiner system did not appear to have any influence on the (in-) successful production of the right gender of the Dutch definite determiner. Taking these considerations into account, we suggested that cross-linguistic influence was not the reason for the differences between the monolingual and the bilingual children, regardless of the question whether they are more like 2L1 or like child L2 acquirers. We then turned to Sorace's hypothesis and investigated the role of the input, both quantitatively and qualitatively. The bilingual children in our experiment were raised in families and ethnic minority communities in which the older generations ((grand-)parents) learned Dutch as adult L2-learners in a non-instructed context. We suggested that the quantitative and qualitative lack of evidence for the neuter definite determiner *het* in the input presented to our children could quite possibly be below the certain threshold necessary to fully acquire the phenomenon in question.

This different sociolinguistic learning situation may be crucial in explaining why these bilingual children who are exposed to a Dutch input from birth onwards show a development which looks to be closer to child L2 acquisition than to 2L1 acquisition, both with respect to a

purely syntactic phenomenon, such as word order, and to an interface phenomenon, such as the grammatical gender of the definite determiner. However, further research is necessary, particularly in order to obtain a more detailed insight into the role of the input. Moreover, a more elaborated study of the acquisition of the different phenomena is necessary to determine in which sense how far bilingual children such as ours really represent a "missing link" between 2L1 and child L2 acquirers.

Endnotes

[*] We would like to thank the audience of the Hamburg colloquium and the two anonymous reviewers for their valuable comments.

[1] Paradis & Genesee (1995:9): "It seems reasonable to conjecture that bilingual children have their input space divided, so their frequency of exposure to each language at any given time is smaller that that of monolinguals acquiring each language. Therefore, if bilingual children demonstrate the same rate of syntactic development as monolinguals, this could argue for a process of development through selection or triggering, as opposed to learning".

[2] The experiment was designed by Bastiaanse and Van Zonneveld (1998).

[3] We added four test sentences to the original test conducted by Zuckerman (see Hulk & Cornips in press a).

[4] The answers of two bilingual young children i.e. Soraya and Jehiel do not contain verb forms (neither finite nor non-finite) but only bare nouns or nouns preceded by a determiner. Therefore, the data of these two bilingual children can only be analyzed with respect to the gender of the definite determiner.

[5] Nicole, the French/Dutch bilingual child shows 7 out of 8 possible S-Vfin-O order (88%). Since her sociolinguistic background is different from those of the other children, we didn't include her results in table 2 and don't include her in the main discussion in this article.

[6] Lalleman (1986:113) reports that the Turkish children aged 6;4 on average in her experiment are alike monolinguals in that they only use a resumptive strategy very marginally. Moreover, the monolinguals in our experiment utter one token of Aux+O+Vinf order and one token of Vfin+O in a subordinate clause. The data of

Zuckerman also reveal three tokens of the latter (labeled V2 (VO) 2001: 126) that are produced by monolingual children.

[7] As pointed out to us by an anonymous reviewer, this filler vowel could also correspond to the definite determiner *de*. This is not crucial for what we have to say here about the acquisition of determiners by bilingual children, but needs to be investigated in future research.

[8] In this table (and the next) we left out all the other elements they produced in place of a definite determiner (such as bare nouns, demonstrative determiners etc). See Hulk & Cornips in press b for more details.

[9] All comparisons between and within groups are calculated, non-significant results are not reported on.

[10] Nicole, the French-Dutch bilingual child does not vary widely from the other bilingual children of her age group regarding the correct use of *de* and *het* in contrast to the position of the finite verb (see §3.):

	response (completion and repetition)				
	input = **de** (non-neuter)			input = **het** (neuter)	
Nicole	**de**	**12**	**18%**	4	20%
3;6	**het**	0		**0**	
	Ø	18	27%	6	30%
	een	8	12%	3	15%
	other	29	43%	7	35%
	total	67		20	

[11] In Hulk & Cornips in press b., we also take into account the gender of both the demonstrative determiner and the relative pronoun and consider other possible explanations for the low production of neuter gender.

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Table 1: *The subjects' age and language background*

young	**2L1/L2**, n = 8		**L1** Dutch, n=2	
	name	*age 'other language'*	*name*	*age*
	Youssra	3;0 Moroccan – Arabic/Berber	Patrick	3;5
	Joseph	3;2 Moroccan – Arabic/Berber	Joyce	3;9
	Romy	3;2 Sranan		
	Soraya	3;3 Moroccan – Arabic/Berber		
	Anthony	3;5 Sranan		
	Nicole	3;6 French		
	Jehiel	3;9 Akan/Ewe		
	Stefano	3;10 Sranan		
middle	**2L1/L2**, n=3		**L1** Dutch, n=3	
	Daphne	4;11 Akan/Ewe	Ravian	5;2
	Serwa	5;0 Akan/Ewe	Thom	5;2
	Damien	5;2 Russian – Sranan	Jesse	5;2
old	**2L1/L2**, n=3		**L1** Dutch, n=1	
	Dilek	9;3 Turkish	Serge	9;6
	Samir	10;2 Moroccan – Arabic/Berber		
	Nabil	10;5 Moroccan – Arabic/Berber		

Table 2: *The distribution of the tokens of S-Vfin-O order (without DO-support) in non-root clauses (numerator) and all possible occurrences (O-Vfin/Vfin-O) (denominator) split into three age groups*

S-Vfin-O in subordinate	2L1/L2 n = 5	2L1/L2 n = 3	2L1/L2 n = 3
Age	*3:0 – 3;10*	*4;11 - 5;2*	*9;3 - 10;5*
Non-root	11/54 20%	7/34 21%	0/56 0%

Table 3: *The morphology of the definite determiner in Dutch*

def. det.	singular	plural
neuter noun		
boek 'book	*het*	de
non-neuter noun		
tafel 'table'	de	de

Table 4: The determiner production when the input contained a non-neuter noun with the definite article *de*

		MONOLINGUALS		BILINGUALS	
young	**de**	**90**	**59%**	**165**	**26%**
3;0-3;10	het	2	1%	5	.8%
	total	152		625	
middle	**de**	**94**	**90%**	**55**	**46%**
5;0-5;2	het	2	2%	0	0%
	total	104		119	
old	**de**	**24**	**92%**	**109**	**76%**
9;3-10;5	het	0		0	0
	total	26		143	

Table 5: The determiner production when the input contained a neuter noun with the definite article *het*

			MONOLINGUALS		BILINGUALS	
	young	**het**	2	**7%**	**10**	**7%**
	3;0-3;10	de	19	70%	32	24%
		total	27		136	
	middle	**het**	27	**77%**	**7**	**15%**
	5;0-5;2	de	5	14%	15	33%
		total	35		46	
	old	**het**	9	**90%**	**13**	**32%**
	9;3-10;5	de	1		17	41%
		total	10		41	