First language acquisition in a bilingual child:
Focusing on the acquisition of noun phrases

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1. INTRODUCTION

It is generally believed that bilingual first language acquisition is not significantly different from monolingual first language acquisition (Taeschner (1983), Meisel (1989), Paradis and Genesee (1996)). Bilingual children seem to follow essentially the same developmental paths as monolinguals, and few major delays have been reported. It is also widely assumed that bilingual children separate their two language systems at a very early age (De Houwer (1990), Genesee et al. (1995)). However, when looking at data from children acquiring two languages simultaneously, we find that they still mix their two languages to some extent. This paper focuses on what bilingual children mix and why.

Data from a bilingual girl, Emma, who is acquiring English and Norwegian simultaneously, indicate some problems with the acquisition of the Norwegian noun phrase. The specific area of problems is noun phrases involving what is traditionally called double definiteness. During the first period of data collection, Emma frequently produced utterances such as (1), with only the prenominal article in Norwegian. In such utterances, adult Norwegian requires both a prenominal article and a definite suffix, as in (2):

(1) den dør er åpen 2;7.10
that door is open
(2) den døra er åpen
that door-the is open
“that door is open”

I will argue that (1) is the result of transfer from English.

This study will test two hypotheses. First, when bilingual children are faced with two competing structures, they will be likely to transfer the simpler

1I would like to thank Marit Richardsen Westergaard for her assistance and useful comments on previous versions of this article.

2I will avoid this term because, as we will see in the next section, I do not analyse this as double definiteness.
structure into the language with the more complex structure. My second hypothesis predicts that when the correct complex structure is acquired, the transfer will cease.

2. THE STRUCTURE OF ENGLISH AND NORWEGIAN NOUN PHRASES

I claimed in the introduction that utterances such as (1) are the result of transfer from English. I suggest that the transfer occurs because the structure of Norwegian noun phrases is more complex than the structure of the English equivalents. Let us take a closer look at the relevant phrases, viz. definite noun phrases with and without a modifying adjective (3 - 4), and demonstrative noun phrases (5):

(3)a. the horse  
(4)a. the big horse  
(5)a. that horse

Along with Abney (1987), I will assume that noun phrases are headed by a functional category D, which takes an NP as its complement. Note here that the term noun phrase refers to the whole DP, whereas the complement of D will be referred to as NP.

In English, definiteness is expressed by the prenominal definite article the as in (3a). This article is base-generated in D, whereas the noun is in N. D is also the site for the demonstrative article that in English. (6) shows the structure I assume for (3a) and (5a):

(6)

When the noun is modified by an adjective, the AP is adjoined to N', yielding the structure in (7):
In Norwegian on the other hand, definiteness is expressed by a definite suffix (-en, -a, -et) attached to the noun. I will assume along with Svenonius (1993), among others, that this suffix is base-generated together with the head noun in N. The D in Norwegian noun phrases can be specified for either a indefinite or an definite NP. In the case of the latter, the definite suffix is realised down in N. However, as the functional head D has strong features in Norwegian, these features need to be checked, and the noun with the attached suffix moves from N to D:

In phrases like (4b), where an adjective modifies the noun, this intervening AP blocks the noun with the suffix from moving from N to D. Hence, it stays behind in N. But since D has strong features, this position needs to be lexicalized to get its features checked, and the prenominal article *den* or *det* (masculine and feminine, and neuter, respectively) is inserted here:

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3Norwegian has three grammatical genders, and the three definite suffixes -en, -a, -et, correspond to masculine, feminine, and neuter, respectively.
In demonstrative noun phrases, movement from N to D is also disallowed, but for another reason. Along with Santelmann (1993), I will assume that as the suffix cannot receive emphatic stress, the demonstrative article is inserted in D. This article receives stress and the noun with the suffix remains in N:

As this overview shows, the Norwegian noun phrase structure is relatively more complex than that of the English equivalents. The Norwegian definite noun phrase involves definiteness features from D to be realised in N, movement from N to D as in (8), or insertion of a prenominal article in D in cases like (9) and (10).

In addition to definiteness, other elements of the Norwegian noun phrase appear to make it quite complicated. One such element is the three-way gender system, requiring agreement in gender between the head noun and e.g. prenominal articles, suffixes, adjectives, and possessive pronouns. English has no such gender agreement system. Another complex area is the possessive noun phrase, where the possessive pronoun either can precede or follow the noun. In the former case, the noun is indefinite, (11a), whereas in the latter case the
noun is definite, (11b). In English, the possessive pronoun always precedes the noun (11c):

\[(11)a. \text{ min bil} \]
\[b. \text{ bilen min} \]
\[\text{car-the my} \]
\[c. \text{ my car} \]

Although I will not go into the analysis of neither the gender agreement system nor possessive pronouns here, I take these facts to support the claim that the structure of Norwegian noun phrases is relatively more complex than that of the English equivalents.

3. METHOD

The subject for this study is an English/Norwegian bilingual girl, Emma. She lives in Norway with her American mother and Norwegian father. Their home language is English. Both her parents always address her and each other in this language, and they never code-switch between Norwegian and English when interacting with Emma\(^4\). On those few occasions when they have attempted to speak Norwegian with her, she has responded with a surprised look. Both her parents speak Norwegian with friends and other family, so Emma is aware that they know both English and Norwegian. Still, she never attempts to address them in Norwegian. Emma has lived Norway all her life and has been in a kindergarten (where Norwegian is the only language) on a daily basis since she was about one year old.

The data from Emma were collected weekly over a period of three months, from she was 2;7.10 to 2;10.9. Every second week her parents tape recorded her for one hour in daily family situations (during meals, playing, etc.). Every other week I visited the family and played with her for an hour. Our language together was Norwegian. In fact, during the first six recordings she was under the assumption that I did not know English.\(^5\) Hence, she always addressed me in Norwegian (also after the seventh recording). All the data are based on spontaneous speech. Only Emma’s utterances were transcribed.

\(^4\)Except for using the Norwegian word \textit{sånn} for which there is no English equivalent. It means something like \textit{there you go} or \textit{alright}. The family also consistently uses some Norwegian words for Norwegian concepts, like \textit{barnehage} (kindergarten), \textit{matpakke} (packed lunch), etc.

\(^5\)At 2;8.20 (the seventh recording) she heard me speaking English to her American grandparents and with surprise commented to her mum: “They’re speaking English!”
4. THE DATA

My data show that Emma certainly keeps her two languages separate. She clearly associates a specific language with a specific person. This is evident in situations where she interacts with both her parents and me. She easily code-switches between Norwegian and English according to whom she is addressing. My data also show that, in general, Emma does not mix her two languages much within one and the same utterance. Occasional lexical borrowings are attested in both languages, but I found substantially more borrowings from Norwegian into English than the other way round. I assume these borrowings to occur when she either does not know the word in the appropriate language, or when she simply has forgotten it.

More interestingly, she also to some extent mixes structures and certain expressions or language specific ways of saying things:

(12) I gonna take those here pizzas on those here plates 2;9.2
    “Jeg skal ta de her pizzaene på de her fatene”6
    (Eng. “I’m gonna take/put these pizzas on these plates”)

(13) Have du thinking to eat some of that? 2;9.23
    “Har du tenkt å spise noe av det?”
    (Eng. “Are you going to eat some of that?”)

(14) Det ser som et egg 2;10.9
    “It looks like an egg”
    (Norw. “Det ser ut som et egg”)

Again, in general, the mixing of these kinds of expressions occurs more frequently from Norwegian into English as in (12) - (13) than the other way round (14).

Based on these findings, I will assume that although Emma is a fairly balanced bilingual, Norwegian seems to be her stronger language. However, despite this slight dominance of Norwegian over English, the most striking mixing pattern in the data was from English into Norwegian. We saw in section 2 that Norwegian noun phrases are somewhat special in the sense that they require both a definite suffix and a prenominal article in certain constructions. My informal collection of data from a monolingual Norwegian child7 (in addition to my observations of several other monolingual Norwegian children),

6These kinds of noun phrases are frequent in at least the Northern Norwegian dialect Emma is exposed to. The standard Norwegian equivalent would be “Jeg skal ta disse pizzaene på disse fatene”.
7The data collection is informal in the sense that it consists of irregular tape recordings in addition to sporadic diary notes.
indicates that these phrases are not an area of problems for monolingual children. As soon as they use definite noun phrases with adjectives, or demonstrative noun phrases, they correctly include both the suffix as well as the prenominal article in these constructions:

(15) æ hiv oppå den fatet
    I throw on that plate-the
    “I’m throwing (something) on that plate.”

Looking at the data from Emma on the other hand, we see that these noun phrases seem to constitute some problems. She correctly uses the suffixed definite article in bare definite noun phrases from the first recording on:

(16) den går opp i lufta
    it goes up in air-the
    “It goes up in the air.”

But in addition to this, she frequently uses phrases such as (17) during the first four Norwegian recordings:

(17) den tog har æ fått mi mamma
    that train have I got my mum
    “My mum has given me that train.”

This kind of construction is not commonly found in monolingual Norwegian children⁸.

Noun phrases involving the so-called double definiteness, on the other hand, were more or less absent (see Table 1). During the first three recordings she only produced one instance of such a phrase:

(18) se den sangen!
    see that song-the
    “Look at that song!”

However, as is shown in Table 1, the frequency of these phrases increased throughout the recordings. At the same time, the frequency of phrases such as (17), with only the prenominal article, decreased significantly.

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⁸Again, this statement is based on a very limited set of collected data from one child, and my own observations. However, I believe most Norwegian parents would agree with me!
Table 1: Emma’s production of Norwegian definite singular noun phrases:

<table>
<thead>
<tr>
<th>Rec. no</th>
<th>Rec. 1</th>
<th>Rec. 3</th>
<th>Rec. 5</th>
<th>Rec. 7</th>
<th>Rec. 9</th>
<th>Rec. 11</th>
<th>Rec. 13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>2;7.10</td>
<td>2;7.21</td>
<td>2;8.7</td>
<td>2;8.20</td>
<td>2;9.11</td>
<td>2;9.25</td>
<td>2;10.9</td>
</tr>
<tr>
<td>N + Def</td>
<td>10</td>
<td>12</td>
<td>5</td>
<td>13</td>
<td>25</td>
<td>34</td>
<td>34</td>
</tr>
<tr>
<td>Art + N</td>
<td>12</td>
<td>25</td>
<td>14</td>
<td>27</td>
<td>1</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Art + N + Def</td>
<td>1</td>
<td>19</td>
<td>12</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the following discussion, I will not include definite noun phrases modified by an adjective as Emma only uses three such phrases throughout the recording period (in recording 1, 11 and 13). It is worth noting, however, that these three phrases follow the same pattern of definiteness marking as her demonstrative noun phrases, i.e. the phrase in the first recording only had the prenominal article (19), whereas the one in the last recording had both the article and the definiteness suffix (20):

(19) den stor ball var fort
    the big ball was fast
(20) og den store grisen må sove
    and the big pig-the must sleep
    “and the big pig must sleep”

Although the data here are scarce, I will assume that the following analysis of Emma’s development of demonstrative noun phrases also can account for her development of definite noun phrases with a modifying adjective.

5. DISCUSSION

It has been suggested by among others Petersen (1988) and Lanza (1992) that transfer of grammatical morphemes is uni-directional, from the dominant to the non-dominant language only. Lanza (1992) studied bilingual Norwegian/English children with Norwegian as their stronger language. She found that whereas the children used Norwegian grammatical morphemes with both English and Norwegian lexical morphemes, they would never use English grammatical morphemes with Norwegian lexical morphemes. As I argued in the previous section, Emma’s Norwegian seems to be slightly dominant over her English. Still, we see that the direction of mixing within the noun phrases is from English into Norwegian, hence from the non-dominant into the

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9 There were three possible occurrences of Art + N + Def in addition to this one. (It was difficult to hear because of the quality of the recording.)

10 Here too there was three possible Art + N + Def constructions in addition to the twelve clear ones.
dominant language. Thus an analysis based on the notion of language dominance cannot account for my data.

Gawlitzek-Maiwald and Tracy (1996) studied language transfer in a bilingual German/English girl. From 2;4 to 2;8 she often produced utterances such as (21) and (22), but none as in (23) (Gawlitzek-Maiwald and Tracy 1996:913 - 915):

(21) Jetzt kannst du hause gehn.
(22) Ich hab gemade you much better.
(23) *The man can weggehen.

From examples like these Gawlitzek-Maiwald and Tracy assume that the girl at this stage has developed both a VP and an IP in German. This assumption is also based on the fact that she uses German modals and auxiliaries, both of which are assumed to be generated in I. The absence of both examples like (23) as well as English morphological or lexical realisations of the IP, led them to conclude that she had only developed a VP in English. She used neither third person -s nor any kinds of English auxiliaries. In examples like (22), Gawlitzek-Maiwald and Tracy claim that the girl projects a German IP on top of an otherwise English VP. They argue that she draws on her knowledge of the German IP and transfers this structure into English. At the age of 2;9 the girl starts producing English modals and auxiliaries as well as third person -s, and at the same time, transfer between the two languages decreases. Gawlitzek-Maiwald and Tracy explain this by suggesting that the girl now has acquired the English IP too, and no longer needs to transfer structure from German.

I will analyse my data in a similar way. As mentioned, the structure of Norwegian noun phrases is considerably more complex than that of English noun phrases. Hence, my subject, Emma, has two different structures available in the input, one of which is simpler than the other. I suggest that at the time of the transfer, Emma has not yet acquired the appropriate feature specifications for the Norwegian DPs. At this stage she transfers the feature specifications for D from English into Norwegian, and thus analyses definiteness as base-generated in D in Norwegian just as it is in English. Bare nouns move to D to get the definite suffix attached there, as in (24a), whereas in demonstrative noun phrases (24b), the prenominal article expresses the definiteness:
This is a kind of *relief strategy*, or as Gawlitze-Maiwald and Tracy (1996) call it, *Bilingual bootstrapping*. Bilingual children may transfer a structure from their language A into their language B at a certain stage to “bridge the gap” if they have not yet acquired the relevant structure in language B. As Emma obviously has problems with the Norwegian demonstrative noun phrases in the early recordings, she transfers the structure from English definite noun phrases into Norwegian.\(^{11}\)

Around 2;9, she starts producing Norwegian demonstrative noun phrases correctly. At this stage she is beginning to realise that the suffix, rather than the prenominal article, expresses definiteness in Norwegian. As predicted, the number of phrases with only the prenominal article decreases radically as she starts producing phrases with the correct definiteness marking (see Table 1). She obviously no longer needs bootstrapping as a relief strategy.

6. CONCLUSION

My study has shown how transfer is used as a relief strategy in bilingual children. When Emma is faced with two competing structures and one of them (the English noun phrase) is less complex than the other one (the Norwegian noun phrase), she transfers the simpler structure into the language with the more complex structure. This is what Gawlitze-Maiwald and Tracy (1996) term *Bilingual bootstrapping*. I also predicted that when the correct structure is acquired, the transfer will decrease as the child no longer needs to bootstrap. The data in Table 1 show that this is exactly what happens.

\(^{11}\)It might be interesting to note here that the result of this transfer yields a perfectly possible language. In fact, this is how Delsing (1993) accounts for definite noun phrases in Danish.
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