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# L1 and L2 Acquisition of Dutch Adjectival Inflection\*

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*In this paper results are presented from experiments involving L1 acquisition as well as child and adult L2 acquisition of Dutch adjectival inflection. First of all these results support a morphological theory of the inflectional system in which forms that are similar at the surface (namely, bare adjectives) receive a rather different analysis. In addition the results suggest that acquisition of inflection is age dependent. While children acquire the inflectional system very easily, this is not the case for adults. It is shown that L1 and child L2 learners make errors in a similar direction and show a rather homogenous development, while adult L2 learners behave rather differently in these respects. The parallel between the L1 learners and the child L2 learners does not imply, however, that they reach the same end state. This is also interpreted as an effect of age dependency. It is argued that the results are in line with a commonly held assumption on language contact, namely that different forms of L2 acquisition may eventually corrupt the inflectional system and may lead to deflection.*

## 1 Introduction

It is claimed that one of the conspicuous differences between L1 and L2 acquisition is the development of inflection. This idea is one of the corner stones in

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\* This paper circulated since 2001 in a prefinal version and functioned as the pilot for the NWO research programme Variation in Inflection. Although this programme will lead to results and publications that include the present paper, we decided that a separate publication of the pilot is useful. We would like to thank all subjects who participated in the experiments. We also thank the audiences of several workshops and conferences where some earlier version of this paper was presented and where we received many valuable suggestions. The present version of this paper owes much to our colleagues of ACLC, and in particular to the reviewers of the ACLC Working Papers.

theories of language contact (Thomason and Kaufman 1988, Van Coetsem 1988). Put briefly, the assumption is that L2 learners may indirectly corrupt the inflectional system of a language due to their inability to acquire this system as easily as L1 learners do. If the output of the L2 learners spreads over the population and if it is the input for new generations of L1 learners loss of inflection will be the result.

There is quite some initial support for this hypothesis, based on pidginization and creolization, but also based on diachronic developments within the Germanic languages. Although loss of inflection (deflection) is a general tendency in these languages, this process went further in languages where considerable language contact took place (as is the case for English), than in languages that could develop much more in isolation. A language like Icelandic, for instance, has the richest inflection in the Germanic family, and is well-known for its relatively isolated history.

In spite of the initial support, the hypothesis has not been tested in detail. This is hardly a surprise if one realizes the evidence needed to do so. Not only would we need several types of historical evidence, we would also need detailed knowledge of the acquisition of inflection. Clearly, such an enterprise exceeds the scope of a single paper. Although we will present some ingredients for this enterprise, our goal is much more modest in this paper. We will discuss a relatively simple aspect of inflection, namely the system of Modern Dutch adjectives. Our aim is twofold. First, we want to show how data from acquisition contribute to the synchronic theory of inflection. Second, we want to investigate to what extent L1 and L2 acquisition of inflection really differ along the lines suggested in work on language contact.

In fact, as we will show, the L1 and L2 acquisition of Dutch adjectival inflection are quite in accordance with the above hypothesis. L1 learners are able to make correct distinctions at a very early age. This does not imply that children do not make ‘mistakes’. In fact, they overgeneralize what we will call ‘the default’ until around age 6. Whereas L1 learners show a rather uniform development with a perfect result, the pattern of L2 learners varies. Both the end results as well as the route learners seem to take differ in significant ways.

At first sight, one may think that this is due to the fact that the L2 learners have already acquired another inflectional system, namely that of their L1. We will show, however, that it is more likely that age of acquisition is the crucial factor. We included a group of L2 learners that acquired Dutch during childhood and their results differ from both adult L2 learners as well as (monolingual) L1 acquirers in an interesting way.

The contrasts between the three groups of learners cannot be attributed to transfer, but it is also not very plausible to link them directly to the accessibility or inaccessibility of UG, since the task of learning a language specific paradigm is not a matter of parameter setting. One option is that these contrasts are due to a strategy that is part of the learning module that allows learners to find out what is

the default. Apparently, this strategy is not, or less readily, available for adult learners. This, in turn, may have consequences for the way in which learners can exploit UG and postulate functional positions – that is, under the (rather standard) assumption that functional positions are related to inflection.

This paper is organized as follows. We will start out with a description of the Dutch system of adjectival inflection (that is, the standard variant as spoken in the Netherlands) in section 2, where we will also consider two possible analyses of this system. In section 3, we discuss the design of our experiment. In sections 4 and 5, the results for the L1 and the L2 subjects will be presented, and in the latter group we will make a distinction between adult and child L2 learners. Next, we will try to account for the differences between the three groups of learners in section 6. In the concluding remarks of section 7 we will briefly return to the consequences for theories of language contact and acquisition.

## 2 Dutch Adjectival Inflection

In Dutch, as in the other West Germanic languages, a distinction has to be made between so-called predicative and attributive adjectives. Predicative adjectives do not have an (overt) suffix. As far as we know, this generalization holds for all variants of Dutch, both diachronically and synchronically, and indeed for the West Germanic languages in general. Consequently, the uninflected form of the adjective *groen* ‘green’ is grammatical in (1), whereas the inflected form *groene* is not, although the latter form is possible in attributive positions, as we will see later on.

- (1) a. De deur is groen/\*groene.  
the door is green/green-SUFFIX
- b. Zij vinden de deur groen/\*groene.  
they find the door green/green-SUFFIX
- c. Hij verft de deur groen/\*groene.  
he paints the door green/green-SUFFIX

In all sentences in (1) there is a predicational relation between a DP and an adjective, namely *the door* and *green*. In (1a) the adjective is combined with a copular verb. In (1b) it is, at least under some analyses, the head of a small clause and in (1c) it is part of resultative construction. In all these cases there can be no affix in Modern Dutch, nor in earlier stages of Dutch, even though the inflectional system of adjectives in the earlier stages was quite rich.

Note that if the adjective is used as an adverb in Dutch, as in (2), no affix will appear either. In this respect Dutch differs from English, where the suffix *-ly* must be added to the adjective in the equivalents of (2).

- (2) a. Hij gedraagt zich vreemd/\*vreemde.  
 he behaves REFL strange/strange-SUFFIX  
 ‘He behaves strangely.’
- b. Wij zongen enthousiast/\*enthousiaste.  
 we sang enthusiastic/enthusiastic-SUFFIX  
 ‘We sang enthusiastically.’

In contrast to (1) and (2), a suffix *-e* (a schwa) has to be adjoined to an adjective if it is used attributively, that is, if it is part of a DP, as the examples in (3) show.<sup>1</sup>

- (3) a. (Hij ziet) de groene/\*groen deur.  
 (he sees) the green-SUFFIX/the green door
- b. (Hij ziet) de groene/\*groen deuren.  
 (he sees) the green-SUFFIX/green doors

Both in the singular and in the plural the suffix is required. Note in passing that the adjective precedes the noun, just as in English (and in the other Germanic languages).

Interestingly, the suffix *-e* does not appear in all attributive positions. In the examples in (4) the adjective is similar in form to the one used predicatively.

- (4) a. (Hij ziet) een groen/\*groene veld.  
 (he sees) a green/green-SUFFIX field
- b. (Hij ziet) een groen/\*groene huis.  
 (he sees) a green/green-SUFFIX house

A first hinge that the indefiniteness in (4) is responsible for this is wrong, since the suffix *-e* has to be present if the examples of (3) are used indefinitely, as shown in (5). Similarly, (6) shows that the suffix *-e* appears also if the indefinite DPs of (4) are pluralized. Apparently, neither indefiniteness nor singularity alone trigger the absence of the schwa suffix.

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<sup>1</sup> The observations illustrated in (1) and (2) hold for all variants of Dutch. As for the inflection on attributive adjectives there is some dialectal variation. See, for instance, Taeldeman (1980) and Nijen Twilhaar (1990). For some discussion see also Aalberse (2001). Recall that we are describing here the standard as spoken in The Netherlands. Needless to say that this standard is also the target language of the learners in our experiment.

- (5) a. (Hij ziet) een groene/\*groen deur.  
(he sees) a green-SUFFIX/green door
- b. (Hij ziet) groene/\*groen deuren.  
(he sees) green-SUFFIX/green doors
- (6) a. (Hij ziet) groene/\*groen velden.  
(he sees) a green-SUFFIX/green field
- b. (Hij ziet) groene/\*groen huizen.  
(he sees) green-SUFFIX/green houses

This is not to say that indefiniteness and number do not play a role. In fact, they do, but only in combination with another feature. The adjectival inflection turns out to be absent if the DP can be characterized as indefinite, singular and neutral. The first two characteristics can be observed directly, since no definite article is used and since no plural suffix is added to *veld* ‘field’ and *huis* ‘house’ in (4). That the two nouns are neutral, however, can only be observed if they are combined with a definite determiner. In Dutch the definite article is either *de* ‘the’, as in (3), or *het*. Both *veld* and *huis* take *het*, as (7) shows. These words are classified as ‘neutral’, whereas the nouns in (3) are of ‘common gender’. In earlier stages of Dutch this category was split into feminine and masculine. This still holds for southern and eastern dialects. The standard variety, however, has a two-gender system.

- (7) a. Het/\*de veld.  
‘The field.’
- b. Het/\*de huis.  
‘The house.’

The examples in (8) show that also neutrality as such is not responsible for the absence of the overt adjectival inflection (as is the case for indefiniteness and singularity). If the definite article is used the adjective always takes the suffix *-e*, even if the noun is neutral:

- (8) a. Het groene/\*groen veld.  
the green-SUFFIX/green field
- b. Het groene/\*groen huis.  
the green-SUFFIX/green house

So, it is only the combination of the features neutrality, indefiniteness and singularity in (4) that triggers absence of *-e*.<sup>2</sup>

Straightforward as the opposition between presence or absence of the schwa might seem at first sight, the observations just presented show that the system governing the adjectival inflection in Dutch is rather complex. They immediately confront us with the important question how adjectival inflection is organized. There are basically two possibilities. The first one is to argue that the absence of inflection in Dutch predicative adjectives is comparable to the absence of inflection in a subclass of the attributive adjectives. Schematically, this would boil down to something like (9).

(9) Analysis 1: Inflection on Dutch Adjectives

If attributive, and not indefinite and singular and neutral	Otherwise
-e	-

Under this view, the suffix *-e* is to be considered as the special case, whereas the absence of inflection is the default. Absence of inflection on predicative adjectives is equivalent to absence of inflection on attributive ones.

Alternatively, we could argue that the two types of adjectives with no overt inflection, predicatives and the subset of attributives should be kept apart. This would give rise to something along the lines of (10).

(10) Analysis 2: Inflection on Dutch Adjectives

Attributive		Predicative
If indefinite and singular and neutral	Otherwise	-
-	-e	

In (10), a basic distinction is made between attributive and predicative adjectives. Predicatives do not take inflection, whereas a suffix *-e* is the default for the

<sup>2</sup> There are, in fact, other more or less exceptional situations in which the suffix is absent. For various reasons this is the case in examples like *de houten kist* ‘a wooden box’, *het stoffelijk overschot* ‘the mortal remains’, *de maatschappelijk werker* ‘the social worker’, *een groot zanger* ‘a great singer’ (the Dutch word for singer has common gender). For an overview of these situations see Broekhuis (1999). They play no role in this paper.

attributives. Absence of inflection is the special case for attributive adjectives in (10).

It is not easy to make a choice between the two analyses. At first sight, (9) looks simpler where it generalizes over the absence of inflection. However, it does so by making use of a rather complicated description of the special case. In (10), on the other hand, the overall structure of the paradigm is more complicated since there is a so-called ‘accidental syncretism’: the two types of adjectives without a suffix have a different status. The description of the special case, however, is more straightforward in (10). In the literature one can find analyses in both directions (although not in the terminology of (9) and (10)). Blom (1994) and Kester (1996), for instance, suggest an account along the lines of (9). Kester’s analysis is the most explicit. She argues that it is not a coincidence that the combination of indefiniteness, singularity and neutrality leads to the absence of inflection. According to her these features precisely define the default, and the default is the form without inflection. Van Marle (1995) and Broekhuis (1999), on the other hand, follow (10). Van Marle suggests that in attributives it is the inflected form that is the default; the absence of inflection is a special case for attributives.

Interestingly, both analyses make rather different predictions for acquisition. A learner has to discover the exceptional patterns and these are totally different in both analyses. In an analysis along the lines of (9), learners are expected to overgeneralize absence of inflection in attributives if they find out that absence of inflection is the default and before the special case is discovered. At this stage they will not only leave out the suffix in predicative positions, but also in the ‘wrong’ attributive positions. In (10), on the other hand, the suffix is the default in attributive positions and the exceptional case is the situation where inflection is absent. Therefore learners are expected to overgeneralize the schwa ending in attributives. This means that data from acquisition are of direct relevance for the synchronic theory of adjectival inflection. Let us see how we can test what actually happens.

### 3 Testing Knowledge of Adjectival Inflection

Although corpora of both L1 and L2 learners are available, it is not difficult to see that these will not give us enough evidence. They can show whether or not learners add a suffix to predicative adjectives, and they will most likely also contain examples of attributive adjectives. However, the fine-grained information we need in order to test how learners deal with features like <±definite> and <±neutral> on attributive adjectives will almost certainly be absent. For instance, if we find that learners say something like *een groene huis* ‘a green-SUFFIX house’, this does not necessarily imply that they overgeneralize



the schwa. If learners consider *huis* ‘house’ as <-neutral> an adjective should indeed have a schwa ending if it is used in combination with an indefinite article. Obviously, the classification of *huis* as <-neutral> is wrong compared to standard Dutch, but this mistake is of a different kind. If learners classify *huis* as <+neutral> but still add a suffix when the noun is used in an indefinite context, we have an indication that the rules governing the adjectival inflection have not been acquired.

In order to get the necessary evidence we therefore developed an elicited production task. The test contained three parts. In the first part, which contained 38 items, adjectives played no role. Our aim was to find out how subjects deal with the features <±definite> and <±neutral> independently from adjectival inflection. The question was whether they know that Dutch has an indefinite determiner *een* ‘a’ and two definite determiners, <-neutral> *de* and <+neutral> *het*. Subjects were shown a drawing, of a monkey for instance, and were asked to complete a sentence like (11a); and the expected answer was (11b), with the indefinite article (R = researcher, S = Subject).

- (11) a. R: Dit is ....  
          ‘This is ....’
- b. S: Een aap.  
          ‘A monkey.’

In a similar way definite articles were tested. For instance, subjects were shown a picture of a box containing a letter, while the instructor introduced the situation by explaining that the box contained his letter. The first sentence of this dialogue was as in (12a). In answering a question like (12b), the subject's correct answer would have been (12c), where a <-neutral> determiner is used.

- (12) a. R: Dit is een doos.  
          ‘This is a box.’
- b.            Waar is mijn brief?  
          ‘Where is my letter?’
- c. S: In de doos.  
          ‘In the box.’

Another example, testing a <+neutral> article, is given in (13), where the subject was shown a picture of a boy in a house. In a correct answer a subject would have used the neutral (definite) article *het*. Note that the gender distinction was also visible if a subject used a demonstrative instead of an article. In this case subjects

said *dat huis* ‘that house’ or *dit huis* ‘this house’ in a situation like (13) or *die doos* ‘that box’ or *deze doos* ‘this box’ in (12).

- (13) a. R: Dit is een huis.  
‘This is a house.’
- b. Waar is de jongen?  
‘Where is the boy.’
- c. S: In het huis.  
‘In the house.’

The goal of the first part of the test was twofold. First of all we wanted to know if the subjects are able to use indefinite determiners and the two definite ones. In addition, the test allowed us to observe how the subjects classify the gender of the nouns we use in the test. This is essential for the second part of the test where we determined what type of overgeneralizations are made.

This second part concerned with combinations of nouns with attributive adjectives. There were five nominal categories, as illustrated in (14).

(14) Nouns tested

Features	Example
+definite, +singular, –neutral	de bloem ‘the flower’
+definite, +singular, +neutral	het huis ‘the house’
+definite, –singular, –neutral	de dozen ‘the boxes’
–definite, +singular, –neutral	een auto ‘a car’
–definite, +singular, +neutral	een raam ‘a window’

Recall that only the last group of nouns (–definite, +singular, +neutral) allow an attributive adjective without a schwa ending. In order to keep the chances for the two types of overgeneralization (–*e* and – $\emptyset$ ) about equal the first four groups were represented in the test by nearly as many items (namely 12) as the last group (namely 13).

In order to elicit attributive adjectives, subjects were shown pictures of red, yellow, green, big or small exemplars of the objects the nouns refer to and they were asked to choose for one of these. So, for instance, the instructor introduces a situation where Ernie sees several flowers and is walking to a red flower. Then question (15a) was asked. The correct answer is (15b).

- (15) a. R: Waar gaat Ernie naartoe?  
 where goes Ernie to  
 ‘Where is Ernie going to?’
- b. S: Naar de rode bloem.  
 to the red-SUFFIX flower

Similarly, a situation was introduced where Ernie is standing near a chimney with a small clock and a big one. A model dialogue is given in (16), where the subject has to complete a sentence. The correct answer is as in (16d).

- (16) a. R: Er zijn twee klokken.  
 there are two clocks
- b. Wat is het verschil?  
 what is the difference
- c. Dit is ....  
 this is ...
- d. S: Een grote klok.  
 a big-SUFFIX clock

Suppose a subject utters *de rood bloem* instead of *de rode bloem* in (15b). We will count this as an overgeneralization of  $-\emptyset$ . In case of *een groot klok* instead of *een grote klok* in (16d) the situation is less straightforward, though. If the subject used *de klok* in the first part of the test, we conclude that *klok* is considered to be  $\langle -\text{neutral} \rangle$ , and hence we will count *een groot klok* as an overgeneralization of  $-\emptyset$ . If, however, the subject used *het klok* in the first part of the test, we may infer that *klok* is assumed to be  $\langle +\text{neutral} \rangle$  and consequently *groot* in *een groot klok* is the correct form and should not be counted as an overgeneralization of  $-\emptyset$ . In a similar vein (and as already indicated above), using *een grote huis* instead of the correct Dutch form *een groot huis* can only be considered as an overgeneralization of  $-e$  if the subject believes that *huis* is indeed  $\langle +\text{neutral} \rangle$ , i.e. if the subject uses *het huis* instead of *de huis*. In other words, in combination with the first test, the second test allows us to observe what overgeneralizations (if any) are made in attributives.

The third part of the test was concerned with predicative adjectives. Recall that Dutch shows no suffix on adjectives in predicative position. The predicative adjectives were elicited as follows. Subjects were shown several pictures, for instance one of a yellow box containing a letter and one of a green box which is empty. The subject had to complete the sentence as illustrated in the dialogue in (17).

- (17) a. R: Waar is de brief?  
where is the letter
- b. De doos met de brief is ....  
the box with the letter is ...
- c. S: Geel.  
yellow

In this example there is a relation between *de doos* ‘the box’ and the adjective. If subjects think that this relation is expressed morphologically, they might say *gele* instead of *geel* as in (17c). After all, in attributive position the schwa ending has to be present (*de gele doos*/\**de geel doos*). If the schwa is used, we could consider this as an overgeneralization. Note, however, that this is correct only if the learner really knows that *gele* is the inflected form of *geel*. If *gele* is (wrongly) analysed as an underived adjective, using *gele* in (17c) does not imply that the learner inflects the predicative adjective. So here we needed part two of the test, since the results in this part told us whether *geel* is used as well.

In fact, part two of the test is also dependent on part three. If learners use *gele* invariably in attributive adjectives, this does not necessarily imply that they overgeneralize the schwa ending, since *gele* could be considered an underived adjective. However, if *geel* is used in predicative position, we have an indication that indeed the schwa ending has an inflectional character.

In order to find out what features play a role if subjects overgeneralize the schwa in predicative adjectives, nouns of each of the categories of table 14 were included in the test. The total number of items in this part is 18.

As indicated, the three parts together should give us information on the type of overgeneralizations learners make and in this way we might find support for one of the two analyses sketched in section 2. We will now first turn to the results of the L1 learners.

#### 4 L1 Acquisition of Adjectival Inflection

We tested 20 monolingual Dutch children between 3 and 7 years old; in each age group there were 4 children. Although earlier stages of acquisition may of course be relevant as well, we found that our test was not suited for children younger than age 3. We will turn to some additional material for still younger learners in section 6. We did not test children older than age 7 for the reason that a pilot study suggested that children more or less know the adjectival inflection at that age. As will become clear, this is confirmed by the present results.

We found that the subjects were able to make the proper distinctions between definite and indefinite determiners and predicative and attributive adjectives. An overview of all the overgeneralizations the L1 learners made is

presented in (18). As can be seen, the subjects produced a total of 520 contexts in which *no* suffix may appear on the attributive adjective according to the standard language. In 37% of these cases the L1 learners nevertheless used a schwa. The reverse, overgeneralization of  $-\emptyset$  in attributives, does not happen often (5%). Interestingly, this cannot be due to some general tendency that L1 learners simply prefer a schwa on adjectives, since they hardly ever use a schwa in predicative position (0,3%).

(18) L1 overgeneralizations, overview

Obligatory contexts attr. -e	Overgeneralizations of $-\emptyset$	Obligatory contexts attr. $-\emptyset$	Overgeneralizations of -e	Obligatory contexts pred. $-\emptyset$	Overgeneralizations of -e
300	5%	520	37%	360	0,3%

At first sight, the results in (18) are in line with (10) rather than (9). Clearly, overgeneralization of *-e* in attributive position seems to be the general tendency. The absence of an ending in attributive position is relatively difficult whereas it is easy in predicative position – exactly as (10) predicts. In order to find out in more detail what is going on, however, we have to correlate these results with the results of the other parts of the test. After all, (18) does not tell us whether the overgeneralizations of *-e* are caused by the system of adjectival inflection the children are acquiring or, alternatively, by the fact that they tend to classify words as <–neutral>, i.e. as taking the determiner *de*. Since attributive adjectives have a schwa ending if the noun is <–neutral> this could be the cause of the abundant usage of *-e* as well. In addition, the results in (18) do not tell us anything about a possible development in the pattern of overgeneralizations.

Let us therefore turn to table (19), where both types of information are included. In this table we keep track of the gender the children assigned to the nouns in the test as follows. The percentage on the right of a slash (/) tells us how many overgeneralizations children make if we take into account their (wrong) gender classification. If children do not make mistakes in gender classification, or if this does not have any effect in the number of overgeneralizations only one percentage is given. So, children at age 3 overgeneralize a schwa ending in attributives in 61% of the test items (as indicated on the left hand side of the slash). In 24% of the test items (the right hand side of the slash) they classified the relevant noun as <+neutral>. This subset of the overgeneralizations seems to be caused by the fact that the learners had not acquired the standard Dutch inflectional rules for adjectives yet.

In other words, we can see in (19) that there are two different factors behind the schwa overgeneralizations. First, children tend to classify words as <–neutral>. They might say *de huis* ‘the house’ instead of *het huis*. This tendency, which

suggests that <-neutral> is the default in Dutch, has been observed before, for instance by Don et al. 1994. As noted above, classification as <-neutral> implies that a schwa ending has to be added to an attributive adjective.

The second factor, however, is that children tend to add a suffix to the adjective, saying things like *een grote huis* ‘a big-SUFFIX house’, even if they classify a word correctly as <+neutral>. We can see that both factors are at work between age 3 and age 5. The older children have more or less acquired the standard Dutch gender classification and system of adjectival inflection.

(19) L1 overgeneralizations per age (not corrected/corrected for wrong gender classifications)

	Overgeneralizations of -Ø in attributives (60 items per group)	Overgeneralizations of -e in attributives (104 items per group)	Overgeneralizations of -e in predicatives (72 items per group)
age 3	10% / 7%	61% / 24%	1%
age 4	5% / 3%	71% / 30%	0%
age 5	5%	45% / 26%	0%
age 6	5%	4%	0%
age 7	2%	3%	0%

The table in (20) gives an impression of the relative weight of the two factors mentioned. For instance, at age 3 in 38 cases of the 104 items the <+neutral> gender of the nouns in the test was classified as <-neutral>. Of the 66 items that had already been acquired as <+neutral> children nevertheless used a schwa on the adjective in 25 cases (if, of course, the DP is indefinite). On the whole, we may conclude that it takes quite some time and trouble to acquire the Dutch rule of -Ø endings in attributive adjectives with indefinite neutral singular nouns.

(20) Overgeneralizations of schwa in L1 acquisition

	Caused by gender	Caused by inflection
age 3	37% (38 of 104)	38% (25 of 66)
age 4	41% (43 of 104)	50% (31 of 61)
age 5	19% (20 of 104)	32% (27 of 84)
age 6	0	4% (4 of 104)
age 7	0	3% (3 of 104)

Let us consider in more detail how the rule for  $-\emptyset$  endings is acquired. As already noted above, children hardly make mistakes in predicative positions. In attributive adjectives, however, we find some overgeneralizations. It should be noted that we hardly found individual variation here: it is *not* the case that only a subset of the children are responsible for the schwa overgeneralizations while another subset overgeneralizes  $-\emptyset$  endings. On the contrary *all* children overgeneralize schwa and in all cases there is only a small minority of overgeneralized  $-\emptyset$  endings on attributive adjectives. In (18) we found a total of 5%. The table in (21), which is corrected for (wrong) gender classifications by the children, shows how the overgeneralizations are distributed.

(21) L1 overgeneralizations of  $\emptyset$  in attributives

Features	$\emptyset$ overgeneralizations	Number of contexts
singular, definite & $-\text{neutral}$	2%	120
singular, definite & $+\text{neutral}$	2%	60
singular, indefinite & $-\text{neutral}$	8%	120

If indeed (10) applies, a child has to discover that the combination of singularity, indefiniteness and neutrality triggers the  $-\emptyset$  ending in standard Dutch. As can be seen in (21), DPs containing a definite marker are not problematic. In these cases the adjective is inflected and the  $-\emptyset$  ending is rarely overgeneralized. Overgeneralizations of  $-\emptyset$  happen in case of indefinite DPs. A child might occasionally say *een geel auto* ‘a yellow car’ instead of *een gele auto* even if they know that *auto* is  $\langle -\text{neutral} \rangle$ . Apparently, presence of indefiniteness is considered here as sufficient. What makes the Dutch rule of  $-\emptyset$  endings difficult is that it applies to  $\langle +\text{neutral} \rangle$  nouns where gender is not overtly visible on the determiner. In these cases the overt determiner is indefinite. The results in (21) are, then, in accordance with our finding that in attributive adjectives the schwa ending is the default, whereas the  $-\emptyset$  ending is a special case.

To sum up, the children we tested use indefinite and definite determiners adequately. In predicative position they use an uninflected adjective and hardly ever an adjective with a schwa. In contrast, the  $-e$  ending is overgeneralized in attributive position, where the  $-\emptyset$  ending is the special case. Partly the  $-e$  overgeneralizations in attributive positions result from the fact that learners assume  $\langle +\text{neutral} \rangle$  to be  $\langle -\text{neutral} \rangle$ . However, the system underlying adjectival inflection seems to be a strong factor behind the overgeneralizations as well.

Around age 6 the rule of  $-\emptyset$  endings on attributive positions has more or less been acquired completely.

## 5 L2 Acquisition of Adjectival Inflection

We tested 20 L2 learners of Dutch. All subjects live in the Netherlands; they all received explicit training in Dutch, but their language background, the length of their stay, the duration of their language training, and their overall proficiency varied from person to person. An overview of some relevant information is presented in the appendices. Just like the L1 subjects, all L2 subjects were able to make the proper distinctions between definite and indefinite determiners. Of the 20 subjects, 14 started to learn Dutch well after childhood (cf. appendix I). We will call them adult L2 learners and discuss their results first. In the second part of this section we will turn to the six child L2 learners (cf. appendix II).

The table in (22) gives an overview of the type of overgeneralizations made by the adult L2 learners.

(22) Adult L2 overgeneralizations, overview

Obligatory contexts attr. -e	Overgeneralizations of $-\emptyset$	Obligatory contexts attr. $-\emptyset$	Overgeneralizations of -e	Obligatory contexts pred. $-\emptyset$	Overgeneralizations of -e
210	36%	364	67%	252	2%

If we compare these results with the overview of L1 overgeneralizations in (18) there is one striking similarity. Just like the L1 learners, the adult L2 learners do not have a lot of problems with the predicative adjectives. They know that the adjective does not have a suffix in this context and the number of overgeneralizations of *-e* is negligible. The most striking difference with the L1 learners, however, is that the adult L2 learners overgeneralize the  $-\emptyset$  ending substantially in attributive position. They do so in 36% of the contexts that require a suffix, where the children scored no more than 5%. This does not imply, however, that they do not overgeneralize *-e* as well. Like the children, they abundantly use *-e* in attributive position.

The fact that L2 learners do not (or hardly) overgeneralize a schwa in predicative position is clear enough. However, as for the overgeneralizations in two directions in attributive position, it is possible that the table in (22) is misleading. After all, it might be the case that different L2 learners take different routes, and therefore we should be cautious not to generalize over these results too easily. For instance, some learners might prefer the schwa consistently, whereas others might overgeneralize the  $-\emptyset$  ending. In addition, we have to take into account that (some) overgeneralizations are caused by wrong gender classifications, as was the case for the L1 learners.



In (23) we, therefore, present the results for all 14 subjects individually. Where necessary, the results have been corrected for mistakes in gender classifications, as in (19): on the left-hand side of a slash the total percentage of overgeneralizations is given, on the right-hand side the percentage corrected for (wrong) gender classifications. As can be seen in (23), there are indeed remarkable differences between learners in patterns of overgeneralizations. Corrected for gender mistakes, subject A, for example, overgeneralizes consistently  $-\emptyset$ , while H prefers  $-e$ . Others (like C, G, J) overgeneralize both possibilities more or less equally. L1 background, length of stay in the Netherlands, length of training in Dutch do not seem to be decisive factors in this respect. Take for instance H, I, J, who are comparable in several ways (cf. appendix I): they nearly have the same age, they have the same L1, and a similar training in Dutch. Nevertheless, they each have a rather different pattern of overgeneralizations.

(23) Adult L2 overgeneralizations per subject (not corrected/corrected for gender mistakes)

Subject	Overgeneralizations of $-\emptyset$ in attributives (15 items per subject)	Overgeneralizations of $-e$ in attributives (26 items per subject)	Overgeneralizations of $-e$ in predicatives (18 items per subject)
A	73%	8% / 0%	0%
B	13%	85% / 23%	0%
C	20%	89% / 27%	11%
D	33%	92% / 15%	0%
E	40%	73% / 27%	6%
F	80%	15% / 8%	0%
G	60%	73% / 73%	0%
H	6%	92% / 92%	0%
I	20%	92% / 92%	0%
J	20%	38% / 23%	0%
K	20%	96% / 50%	0%
L	13%	46% / 23%	11%
M	46% / 33%	96% / 23%	0%
N	60%	46% / 15%	0%

We may also conclude from (23) (comparing the second and the third column) that there is again a tendency to classify <+neutral> nouns as <-neutral>. The table in (24) gives an impression of the relative strength of the two factors involved in schwa overgeneralizations. The wrong gender classification plays a substantial role, but the system of adjectival inflection does so even more. In about half of the cases where gender was assigned correctly (namely as <+neutral>), the schwa ending was added in indefinite contexts.

(24) Overgeneralizations of schwa endings in adult L2 acquisition

Caused by gender	Caused by inflection
32% (117 out of 364)	51% (128 out of 247)

As for the  $\emptyset$  overgeneralizations in L1 acquisition, recall that we could reduce this to one particular factor: children have some difficulty with the combination of <-definite>, <+singular> and <-neutral>. The first two features can be observed directly, but the latter only indirectly, since gender is not visible on indefinite articles in Dutch. Children may (sometimes) assume that the DP being indefinite and singular is sufficient for application of the  $-\emptyset$  ending in attributives, whereas the correct generalization is that <-definite> and <+singular> have to be combined with neutrality. Interpreted in this way, the overgeneralizations show that the  $-\emptyset$  ending is a special case and that the schwa ending is indeed the default in attributives in L1 acquisition. As can be seen in (25), the  $-\emptyset$  overgeneralizations in L2 acquisition show a completely different pattern. There is no indication here that the L2 learners are somehow discovering the special rule of  $-\emptyset$  endings in Dutch attributives.

(25) Adult L2 overgeneralizations of  $-\emptyset$  in attributives

Features	$-\emptyset$ overgeneralizations	Number of contexts
Definite & -neutral	42%	84
Definite & +neutral	42%	42
Indefinite & -neutral	26%	84

In other words, the pattern found confirms that there are two types of substantial overgeneralizations in adult L2 acquisition. In all attributive positions one may find  $-\emptyset$  endings as well as *-e* endings. This is in contrast to the predicative position, where adult L2 acquirers in general do not make use of an overt affix on adjectives. So, where we observe a contrast between L1 and adult L2 acquisition of attributive inflection, learners behave rather similarly in predicative adjectives.

The question is what explains the contrast between the L1 and adult L2 learners. One option is that transfer plays a role in the acquisition process of the adult L2 learners. However, we saw that adult L2 learners with a similar background may overgeneralize rather differently. If transfer is the crucial factor it is at best rather indirectly so. Another option is that acquisition of inflection is age dependent. If this is indeed the case, we expect that child L2 acquisition will yield results that differ from the ones presented so far in this section. In order to check this, we also tested 6 subjects for whom Dutch is a second language, but who started acquisition during childhood, that is around age 4, when they started school. Information per subject is given in appendix II. The table in (26) gives an overview of the types of overgeneralizations these L2 learners make.

(26) Overgeneralizations child L2 acquisition (corrected/not corrected for gender mistakes)

Obligatory contexts attr. -e	Overgeneralizations of -Ø	Obligatory contexts attr. -Ø	Overgeneralizations of -e	Obligatory contexts pred. -Ø	Overgeneralizations of -e
90	2%	156	76% / 31%	108	0%

Like the adult L2 learners and the L1 acquirers, the child L2 learners do not have problems with the adjective in predicative positions. They know that this adjective is not inflected overtly. Clearly, they do not have problems with the inflected adjective in attributive position either, since they do not overgeneralize -Ø in this position. In this respect, the child L2 learners differ drastically from the adult ones. A result of 2% -Ø overgeneralization is comparable to that of the final stage in a process of L1 acquisition. It is similar to the children aged 7 in table (19). So, we do see a striking difference between child and adult acquisition. Interestingly, however, the child L2 learners are not comparable to the L1 acquirers in all respects. Their results for -Ø overgeneralizations may be similar to the final stage in the L1 process; this is certainly not true for the -e overgeneralizations. Although the child L2 learners have spoken Dutch for over 10 years, they still overgeneralize the schwa in attributive position. As before, this is partly due to the tendency to classify <+neutral> words as <-neutral>. If we keep this into account still over one-fourth of the test items are inflected incorrectly. The table in (27) gives an impression of the relative strength of the two factors.

(27) Overgeneralizations of schwa endings in child L2 acquisition

Caused by gender	Caused by inflection
46% (71 out of 156)	56% (48 out of 85)

As in L1 acquisition, we may conclude that classifying a word as taking the determiner *de* ‘the’ is the default. Independently of this, however, schwa endings are the default in attributive adjectives.

To sum up, child L2 learners show a pattern that is comparable to L1 learners in that they overgeneralize the schwa ending. Adult L2 learners, however, overgeneralize in two directions. Let us now try to interpret these results in some more detail.

## 6 Interpreting the results

For ease of reference, we summarize the most important findings in table (28). We split the group of L1 learners in two subgroups, where we assume that the learners of age 6 and 7 represent the final stage.

(28) Overview of overgeneralizations (not corrected/corrected for gender mistakes)

	Overgeneralizations of -Ø in attributives	Overgeneralizations -e in attributives	Overgeneralizations of -e in predicatives
L1 learners 6-7	3%	3% / 3%	0
L1 learners 3-5	7%	59% / 26%	0
Adult L2 learners	36% / 35%	67% / 35%	2%
Child L2 learners	2%	76% / 31%	0

In addition, table (29) summarizes how gender and adjectival inflection are relevant for the overgeneralizations of schwa endings in attributive adjectives.

(29) Overgeneralizations of schwa endings

	Caused by gender	Caused by inflection
L1 learners 6-7	0%	3%
L1 learners 3-5	32%	39%
Adult L2 learners	32%	51%
Child L2 learners	46%	56%

In line with (28) and (29), the results of our experiments can be summarized as in (30). We will discuss each of these results respectively.

## (30) Results of experiments

- a. All learners tend to classify <+neutral> words as <-neutral>.
- b. Learners have no problems with predicative adjectives.
- c. L1 learners overgeneralize *-e* in attributive adjectives in the first stages.
- d. Adult L2 learners overgeneralize both  $-\emptyset$  and *-e* in attributive adjectives.
- e. Child L2 learners overgeneralize *-e* in attributives, sometimes persistently.

In two respects L1 and L2 acquisition are comparable. All learners tend to classify <+neutral> words as <-neutral> and all learners use the Dutch predicative adjectives correctly. As for (30a), it is true that most Dutch words are <-neutral>. According to Haeseryn et al. 1997 about 25% of the Dutch roots are <+neutral>. If this percentage is representative for the input the learners had, and if learners are indeed sensitive to frequency effects of this type, this tendency can be explained. For L1 learners in particular it is not impossible, though, that the input contains a higher number of <+neutral> words. Words with a diminutive suffix, for instance, are always <+neutral> in Dutch and they are probably quite frequent in child directed speech. Obviously, it was not possible to take this into account in our experiment. We will leave this for further research. The fact that both L1 and L2 learners have no problems with predicative adjectives (cf. (30b)), can be interpreted as a preference of learners not to assume inflection unless they are forced to do so by the facts. Dutch predicative adjectives are not inflected, and therefore no inflection is assumed. This is in accordance with Pinker (1984), who argues that paradigmatic distinctions can only be acquired on the basis of formal differences between variants of the same word. In the absence of positive evidence, inflectional distinctions cannot be learned. Apparently, the learner does not confuse the attributive adjectives with the predicative ones. Rather, priority is given to the syntactic context. The adjectives in DPs are considered to be of a different type than those which are (somehow) part of the VP.

At first sight, one might suppose that this result is due to the fact that in our experiments we were not able to observe the earliest stages of acquisition. After all, we could not test children younger than age 3. For L1 acquisition we therefore followed the development as observable in some CHILDES corpora (MacWhinney 1995). More in particular we used the corpora of Hein and Thomas (Elbers and Wijnen 1992) and Laura and Sarah (Van Kampen 1997), focussing on the earliest stages. We could not find any evidence that children overgeneralize an overtly inflected adjective in predicative position. There is no evidence for a stage in which children learning Dutch say something like (31).

- (31) \*Het huis is groene.  
 the house is green-SUFFIX  
 ‘The house is green.’

Predicative adjectives are uninflected right from the start and children do not confuse them with attributive adjectives.

This reminds us of the way in which children acquire the verbal paradigm in a V2 language like Dutch. As has been argued extensively in the literature (see, for instance, Wijnen 1997), children acquiring Dutch at no observed stage confuse finite with infinitival verbs. From the beginning infinitival verbs typically appear in OV position, whereas finite verbs take the V2 position. We can observe this quite easily since infinitival verbs have a different morphological shape. The two following sets of sentences from Dutch child language illustrate how both form and position of finite and infinitival verb differ (from Wijnen 1997: 185) (the verbs are italicised by us):

- (32) a. Die helemaal kapot *maken*. (Niek 3;1.16)  
 that-one entirely broken make  
 b. Ook ə paard *stappen*. (Peter 1;9.20)  
 also ə horse walk
- (33) a. *Komt* ə nog meer. (Niek 2;11.10)  
 comes ə still more  
 b. *Zit* ə vuilniswagen in. (Peter 2;0.7)  
 sit ə dustbin lorry in

Of course, this is not to say that children immediately know all important inflectional properties of Dutch verbs. Within the group of finite verbs, for instance, several types of mistakes are made that need further study, but the category of infinitival verb is as unproblematic as the category of predicative adjectives.

Interestingly, there is evidence that the first verbal form children use is in fact the infinitival form. As Wijnen 1997 shows, constructions like in (32) are used earlier than those in (33), and for some time constructions with an infinitival function as a kind of default alongside constructions with a finite verb (the so-called ‘optional infinitive stage’). And, in fact, also for adult speakers of Dutch, it can be argued that the infinitival functions as a default, in the sense that it is the citation form, as shown in (34). It is also the infinitival form that shows up if the finite form is absent as in (35), which is possible in certain situations.

(34) Hij praat over het werkwoord ‘geven’.  
he talks about the verb give-SUFFIX

(35) Hij een huis kopen? Kom nou.  
he a house buy-SUFFIX? come now  
‘He buy a house? Are you kidding?’

Apparently, as in the case of adjectives, children acquire the default extremely early, and here, too, we see that this form appears in particular syntactic contexts.

There is also a remarkable difference between adjectives and verbs. As we have seen, the default is the form without inflection in the case of Dutch adjectives. This is not the case for Dutch verbs. Regular infinitives have a suffix *-en*. If we replace the infinitivals in (34) and (35b) by a verbal root the result is ungrammatical:

- (36) a. \*Hij praat over het werkwoord ‘geef’.  
he talks about the verb give
- b. \*Hij een huis koop?  
he a house buy

We thus have to make a distinction between the default and the form without inflection. They may go together, but not necessarily, as will also become clear in the case of the Dutch attributive adjectives.

As noted in (30c), children have more problems with attributive adjectives than with predicative adjectives. They tend to overgeneralize the suffix in the first stages. That is, they are able to make a distinction between predicative adjectives (no inflection) and attributive adjectives (with a suffix *-e*), but still some fine-tuning is required for the attributive inflection. Again, this reminds us of the Dutch verbal paradigm, where in the earliest stages the distinction between finite and infinitival verbs is not problematic, and where the paradigm for finite verbs still has to be completed.

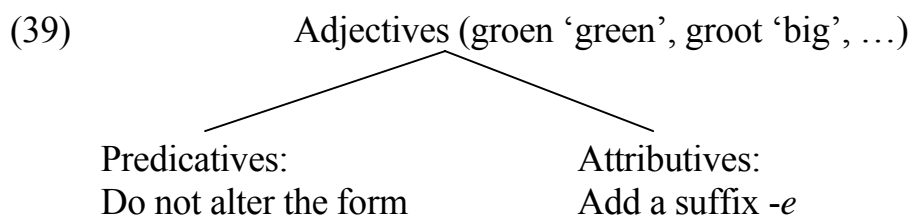
Put differently, children are quite good at finding out what the default is *within* the category of attributive adjectives. Being a default here, does not mean having no inflection – just as is the case for the Dutch infinitival verbs. In fact, it looks as if children consider the fact that Dutch attributive adjectives have inflection as a characteristic that sets them apart from predicative adjectives. They still have to find out that there is a special situation in which inflection is not overt on attributive adjectives, namely when the DP has the peculiar set of features <+singular>, <-definite>, <+neutral>.

Notice that this state of affairs is much more in line with analysis 2 in (10) than with analysis 1 in (9). In the latter all forms without overt inflection are considered as essentially the same. However, acquisition now shows that they

have quite different properties. Facts like those in (37) are relatively easy, while those in (38) are not.

- (37) a. Het huis is groen.  
the house is green
- b. Het boek is groot.  
the book is big
- (38) a. Een groen huis.  
a green house
- b. Een groot boek  
a big book

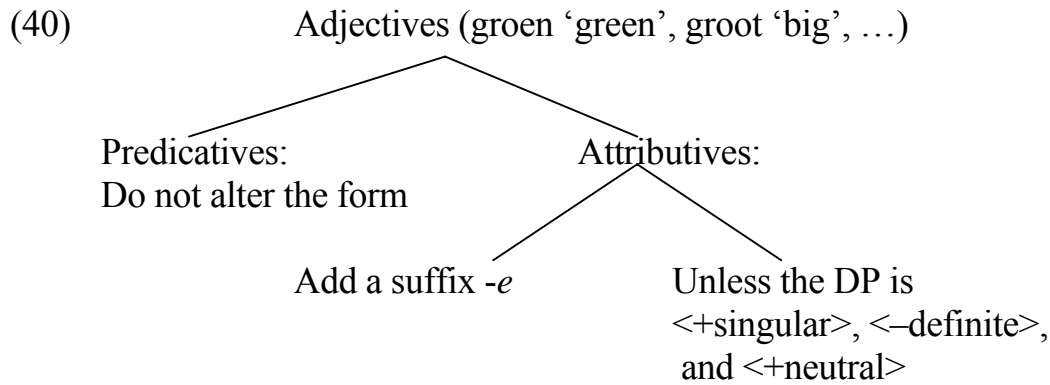
Here acquisition data contribute to the theory of inflection. In accordance with analysis 2, we suggest that children find out very early that the predicative adjective is the form without inflection. In this sense it is the default with respect to attributive adjectives, which are analysed as having a suffix *-e*. This is expressed in (39).



The procedure in (39) gives a correct output in many cases, but it also generates the overgeneralizations that we found out to be characteristic for L1 acquisition: in examples as in (38), the adjective will become *groene* and *grote* if we apply (39). After having discovered (39), learners have to find out that in a subset of cases, namely if the DP is <+singular>, <-definite> and <+neutral>, inflection is not overt. Put differently, in the paradigm of attributive adjectives the schwa ending is the default and there is a special group that behaves differently. The analysis in (39) has to be expanded as in (40).<sup>3</sup>

<sup>3</sup> Alternative formulations can be considered. Formalizing the distinction between the two types of adjectives that have no overt ending, we could say, for instance, that in the final stage attributive adjectives share the property that they have a suffix: the suffix *-e* is the default and a null affix (*-∅*) is the special case; predicatives have *no* suffix. For the time being we consider this a notional variant of (40).





Although children do make mistakes, notice that even the youngest children in our experiment have some idea of the special case in (40). In the relevant situations they more often produced an adult-like construction than a construction with an overgeneralized *-e* on the attributive adjective. As has been observed by others (cf. Wexler 1998), children are extremely good at learning inflection.

In fact, children are good at nearly all aspects of grammar. What makes their ability to master inflection so early surprising is that this aspect is completely language specific. Children have acquired the OV order of Dutch even before they productively use constructions containing verbs. The same is the case for the system of stress rules. Word order and stress, however, can be reduced to parameters that are not language specific. Successful and early acquisition of these aspects is therefore predicted by the theory of principles and parameters, where children are assumed to set universally given parameters based on positive evidence in the language specific input. It is highly unlikely, however, that the inflectional properties of Dutch verbs and adjectives can be straightforwardly reduced to some setting of a universal parameter. The number of parameters would have to increase dramatically if we were to allow this, making the theory of parameters vacuous, we believe.

We would like to suggest, therefore, that some other strategy is responsible for children's early and successful acquisition of inflection. What we have in mind is a learning strategy that allows the child to make oppositions between marked and unmarked (i.e. default) forms, which the child may apply iteratively: within the group of marked forms an opposition is made again between a default and marked form, etc. The procedure is applied until all forms are analysed. The procedure is therefore data driven: if there are no form differences, no formal distinctions will be made. It follows that the form without inflection is the default: inflection will only be postulated if there is evidence for it. Of course, if there is consistent positive evidence for a default in the form of a suffix this will be chosen.

Turning now to (30d), our finding that adult L2 learners overgeneralize both  $-\emptyset$  and *-e* in attributive adjectives suggests that these learners do not successfully apply the strategy just proposed. The L1 learners all follow a

similar development. The results of the children in each of the groups we tested are remarkably similar. In contrast, the adult learners confront us with rather diverse patterns. As noted in section 5, we are not able to relate this to transfer, although we do not want to claim that transfer does not play any role in the acquisition of inflection. If it plays a role, however, it is not strong enough to explain the conspicuous differences between the two types of learners we are facing here. What we would like to propose, therefore, is that adult L2 learners cannot make use of the learning strategy for inflection just introduced as easily as L1 learners. That L2 learners are generally quite successful in finding out that predicative adjectives do not have inflection does not contradict this, but rather supports our idea. If learners have no idea how the inflectional system works, they may be tempted to simply not use inflection altogether. This might explain both the results for predicative adjectives as well as the overgeneralizations of  $-\emptyset$  in attributive adjectives.

Recall that we could not find a system behind the  $-\emptyset$  overgeneralizations of the adult L2 learners. The L1 learners not only overgeneralize  $-\emptyset$  less often, we have shown that their overgeneralizations can be interpreted as an attempt to find out what the special case is. The children assume that the features  $\langle +\text{singular} \rangle$  and  $\langle -\text{definite} \rangle$  are sufficient. No such interpretation is possible for the L2 learners. We therefore conclude that the explanation for their  $-\emptyset$  overgeneralizations should indeed be different.

If the learning strategy is somehow age dependent, we predict that child L2 learners show a pattern that differs crucially from the adult L2 learners – and this is precisely what we found. As summarized in (30e), we observed that child L2 learners overgeneralize  $-e$  in attributives. They do not show the type of  $-\emptyset$  overgeneralizations that adult L2 learners show, but rather behave as L1 learners. Interestingly, however, the results of the child L2 learners are not similar to those of the L1 learners in all respects. While the L1 learners all reach a final stage in which the attributive adjectives in DPs characterized as  $\langle +\text{singular} \rangle$ ,  $\langle -\text{definite} \rangle$  and  $\langle +\text{neutral} \rangle$  do not have inflection, this does not turn out to be the case for the child L2 learners. While the L1 learners reach (40), the child L2 learners may not come further than (39).

Why would this be the case? A first possible explanation is that the child L2 learners are not confronted with enough positive evidence. It is obvious that learners need rather robust evidence before they can detect all the details of the special case. However, as can be seen in appendix II, the child L2 learners have lived in the Netherlands for well over 10 years. Nearly all of them were born there and went to a Dutch school. This does not make it very likely that they did not get as much evidence as the L1 learners at age 5. Another explanation therefore seems to us more probable, namely one that fits in to the idea that application of the learning strategy with respect to inflection is age dependent. We interpret the result of the child L2 learners as follows: when they started to

learn Dutch they could still make use of the learning strategy in the same way as L1 learners of Dutch. However, before they could settle all details of Dutch adjectival inflection, they no longer had access to this strategy. The system they acquired fossilized and therefore the overgeneralizations of the *-e* endings persist.

To summarize, the differences and similarities between the three groups of learners can be explained rather straightforwardly if we assume that they can each exploit a strategy to acquire inflection in different ways. The adult L2 learners have no access to this strategy and therefore they tend to leave out inflection altogether. For predicative adjectives this is in fact a good decision, but it leads to  $-\emptyset$  overgeneralizations in attributive adjectives. L1 learners have full access to the strategy and they are therefore remarkably early on the right track, even with respect to the special case in attributive adjectives. Child L2 learners, however, do not always make this last step and we attribute this to their relatively late start: they do not have access to the learning strategy anymore before they completed the acquisition of the adjectival paradigm.

## **7 Concluding Remarks**

Our findings have several implications for linguistic theories. In this final section we briefly address the most important ones.

First of all, the results support the idea that in language contact L2 acquisition may be a source for deflection (cf. Thomason and Kaufman 1988, Van Coetsem 1988). We saw that adult L2 learners tend to leave out inflectional endings when acquiring Dutch adjectives. Suppose that these learners indeed do not reach the target of the standard language and that the output of these learners spreads over the population. For two reasons we think that loss of inflection will be the consequence. First, there is an obvious direct relation in that forms without inflection may be taken over by others. We believe that there is also a more indirect relation. We saw that there was remarkable variation in the results of the adult L2 learners. Some learners consistently overgeneralize  $-\emptyset$ , while others prefer *-e*, or make use of both options more or less equally. Even if the output of one adult L2 speaker is more or less systematic, it will probably not be possible to detect a system in the input learners have. Given the learning strategy for inflection proposed in section 6, new learners confronted with this type of input will not hypothesize a inflectional system and will therefore assume the default, i.e. no inflection.

Obviously we cannot discuss the merits of this view here in detail, but it will help to illustrate our point if we consider one example. A language related to Dutch where the scenario just sketched may have been applicable is Negerhollands ‘Negro Dutch’, a language that came into existence at the Virgin Islands in the Caribbean in the seventeenth century. Slaves from Africa were confronted with

Dutch. In this process (incomplete) L2 acquisition plays an important role, as argued by Van Rossem and Van der Voort 1996. If indeed adult L2 acquisition of Dutch is relevant here, we predict that adjectival inflection is not present anymore in Negerhollands. This turns out to be true. Attributive adjectives as well as predicative adjectives do not have an overt suffix, as the examples in (41) illustrate (all taken from Van Rossem and Van der Voort 1996: 232-241). Notice that the lexical elements in (41) are all directly related to Dutch; in the Dutch equivalents of (41b-d) a suffix *-e* is required.

- (41) a. Jij sa wees blii.  
you will be glad
- b. Di ander dack.  
the other day
- c. En niu kerrek.  
a new church
- d. Blau diffie.  
blue pigeon

Interestingly, the results of our experiments also imply that we have to be more precise if we claim that L2 acquisition plays a role in deflection. We saw that adult L2 acquisition leads to results that are different from child L2 acquisition. In acquisition of Dutch adjectival inflection a characteristic of the latter is that learners overgeneralize *-e* in attributives persistently, as if they are not able to acquire the special case any longer. One might wonder whether there are cases of language contact where the role of child L2 acquisition can be checked. In fact, we do think that these exist, although, as before, we cannot go into much detail here.

One case in point is Surinamese Dutch. Creole speakers in Paramaribo, for instance, acquire Sranan as a L1. Alongside Sranan, however, Surinamese Dutch is acquired by this group as a second language at a fairly young age. Van Marle 1995 and De Kleine 1999 observe that indeed overgeneralizations of schwa occur in Surinamese Dutch. The following examples are taken from De Kleine (1999: 192-193). Note that the schwa has to be absent in the adjectives of the standard Dutch equivalents.

- (42) a. Een grote probleem.  
a big problem
- b. Een normale salaries.  
a normal salary

- c. Een korte artikel.  
a short article

Similar evidence comes from Iowa Dutch, a variant of Dutch spoken by a group of orthodox Dutch Protestants that emigrated to Iowa in the nineteenth century. The development of their language has been described and discussed in Smits 1996. The status of this language changed from generation to generation. At first it was the dominant L1 that had to compete with English, which gradually took over the position of Dutch. In the terminology of this paper this is a situation in which Iowa Dutch is acquired by children as an L2. At this stage we can observe, as in Surinamese Dutch, that the *-e* is overgeneralized and that learners do not adequately acquire the special case, where adjectives have no overt ending in a <+singular>, <-definite>, <+neutral> DP.

To summarize, our findings do not only support ideas on the role of L2 acquisition in deflection, they also make it possible to formulate these ideas more precisely in that a distinction has to be made between adult and child L2 learners.

Our findings are also relevant for the discussion on the accessibility of UG in L2 acquisition. Some linguists claim that parameters can be reset in L2 acquisition, while others defend that parameters are not accessible any more after the critical period (see for instance White, 2000 and Meisel, 2000 respectively). It is not our intention to review this debate, but note that our findings add another perspective to the discussion. We argued that acquisition of inflection should not be formulated in terms of parameter setting, since this would make the theory of parameters vacuous. Nevertheless, our results do support the idea that acquisition of inflection is age dependent. Children are particularly good at it, while inflection causes many problems for adult learners. Other studies support this conclusion (see, for instance, Lardiere 1998a, 1998b, 2000, Parodi, Schwarz and Clahsen 1997, Prévost and White 2000). We suggested that only young learners can make use of a particular learning strategy to analyse inflection. The strategy allows the learners to make binary distinctions between default and marked forms and can be used iteratively. Note, by the way, that it does not follow from our case study whether it is the strategy to make distinctions between default and marked elements or rather the application of this procedure to inflection that is age dependent. In both cases the result will be the same: inflection causes serious problems for adult L2 learners.

The fact that acquisition of inflection is difficult for adult learners might have consequences beyond morphology, even if we assume that parameters are available in adult L2 acquisition. After all, if the setting of a syntactic parameter is dependent on the presence of inflection – a position that is not uncommon since parameters are in many recent proposals related or even restricted to functional positions – we may wonder how an adult learner will be able to arrive

at a proper resetting. In other words, the present study might also lead to a reconsideration of the interface between syntax and morphology.

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## Appendix I

## Information adult L2 learners (as given by them)

Subject	Age	L1	in NL (in months)	Dutch training (in months)
A	30	French	18	9
B	25	Kurdisch	24	12
C	36	Kurdisch	24	12
D	61	Hindi	24	13
E	29	Berber	24	14
F	27	Thai	27	18
G	28	Chinese	32	18
H	17	Dari	32	18
I	17	Dari	32	18
J	17	Dari	32	27
K	18	Berber	32	32
L	27	Danish	6	5
M	29	Chinese	144	24
N	34	Turkish	216	12



## Appendix II

Information child L2 learners (as given by them)

Subject	Age	L1	in NL (in years)
A	16	Berber	15
B	18	Berber	11*
C	16	Italian	16
D	16	Turkish	16
E	17	Chinese	16
F	16	Maroccan-Arabic	16

\* Not from Age 9 to Age 16

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