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Effects of age on the acquisition of agreement inflection

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Abstract   Grammaticality judgement tasks show that second language learners who started during childhood are significantly more accurate on judging inflection than learners who started after puberty [Johnson, J., & Newport, E. (1989). *Cognitive Psychology, 21*, 60–99; Johnson, J., & Newport, E. (1991). *Cognition, 39*, 215–258; McDonald, J. (2000). *Applied Psycholinguistics, 21*, 395–423]. Production data confirm that inflection is a bottleneck in adult language acquisition, and that they differ from child learners in this respect [Lardiere, D. (1998). *Second Language Research, 14*, 359–375; Prévost, P. (2003). *Studies in Second Language Acquisition, 25*, 65–97; Prévost, P., & White, L. (2000). *Second Language Research, 16*(2), 103–133]. Although the observations suggest that the acquisition of inflection is influenced by age, there is no study that focuses on this particular issue nor is there an articulated explanation available for the observed age-related difference. In this contribution, we compare child L2 learners of Dutch to child L1 and adult L2 learners of Dutch in order to investigate effects of age on the acquisition of verbal and adjectival inflection. We hypothesize that adult agreement paradigms differ from child agreement paradigms, the reason being that adult learners cannot rely on syntactic cues, whereas children make reliable use of syntax in building paradigms. By effect, adult learners end up with non-targetlike small paradigms that contain underspecified suffixes. We focus on the types of errors in the three learner groups (child L1, child L2 and adult L2).

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Our empirical basis consists of results obtained in a series of production experiments.

1 Introduction

It is often claimed that one of the conspicuous differences between child L1 and adult L2 acquisition is to be found in the domain of inflection. In fact, this idea is a corner stone in 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 seem to 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.

This argumentation nicely shows the interaction of several linguistic (sub) disciplines. Accordingly, support for effects of age on the acquisition of inflection may come from studies on differences between pidginization and creolization, but also from dialect variation and language change. In this paper, however, we will focus on the issue of age effects directly, by comparing adult and child learners in the acquisition of Dutch agreement inflection. Vice versa, our paper may indirectly contribute to insights in language contact, variation and change, although we will not be concerned with these consequences here in detail.

A comparison between adult and child learners can be made in several ways. Age effects may show up in the type of errors the learners make, in that children may make different mistakes than adults do. We may also see differences in the developmental paths of the learners or in the ultimate attainment. L2 learners may go through different stages and may finally reach a level that is quite different from L1 learners. Clearly these three aspects (type of errors, development and ultimate attainment) are related and they are all relevant for the present discussion. Due to the experimental set up we will focus here on the type of errors the learners make.

Of course, differences between child L1 and adult L2 learners do not point directly to age effects. For one thing, the language of the L2 learners might be influenced by their L1. In order not to confuse age effects with effects from transfer, we will compare monolingual L1 learners not only with adult L2 learners, but also with child L2 learners with the same language background as the adults—the so-called "child L2 rationale" (Schwartz 1992, 2003, 2004; Unsworth 2005) . If the claims made in contact studies are correct—that is, if there are indeed age effects in the acquisition on inflection—we expect to see differences between L1 and child L2 acquisition on the one hand and adult L2 acquisition on the other. We will show that such differences indeed exist.

In principle, several explanations can be given for this state of affairs. It might, for instance, be due to a difference in the input or to the way in which learners do or do not receive explicit instructions. We will argue, however, that the distinctions we find reflect differences in adult and child representations of inflection, more specifically, the occurrence of underspecified suffixes in the adult paradigm that are not underspecified in the child paradigm. It will be hypothesized that the observed differences in inflection between children and adults are the effect of a learner's ability to make use of syntactic cues: children are highly sensitive to positional evidence and use this for building paradigms, whereas adults fail to use this information.

The structure of this paper is as follows. Section 2 introduces the hypothesis, Sect. 3 describes how we put this hypothesis to the test and spells out predictions. In Sect. 4 we present some general information on the participants of the experiments. In Sects. 5 and 6, the results of experiments on, respectively verbal and adjectival inflection will be discussed. Section 7 contains the concluding remarks.

2 Age effects: the case of inflection

There are indications that inflection is vulnerable in late L2 acquisition (e.g., English: Johnson and Newport 1989, 1991; McDonald 2000; French: Myles 2004; Prévost and White 2000; German: Prévost and White 2000; Spanish: McCarthy 2007). The influential study of Johnson and Newport (1989, 1991) shows that late learners of English fail to judge correct use of 3rd person singular –s. McDonald (2000), in partial replication of Johnson and Newport's work, reports a similar result. Analyses of naturalistic production data confirm the observation that agreement inflection is influenced by the age at which first systematic exposure to a language starts (Lardiere 1998; Prévost and White 2000). Is this vulnerability limited to agreement inflection, or does it apply to inflection in general? A comparison of different types of inflection—tense, aspect, nominal—indicates that the problems of adult learners go beyond the particular case of agreement inflection (Johnson and Newport 1989; McDonald 2000; Lardiere 1998, 2000).

The obvious question that follows is: why are children good at learning inflection, and why is inflection difficult for adults? In the literature, only few explicit attempts can be found to explain this difference between children and adults in the acquisition of inflection. Goldowsky and Newport (1993) propose the Less-is-More hypothesis, attributing children's benefits to their small working memory (see also Elman 1993). McDonald (2000) relates non-native accuracy of (child and adult) L2 learners to problems with phonological decoding, which may be more likely to affect inflectional morphology than syntax proper. Both Goldowsky and Newport and McDonald explain the observed linguistic differences in terms of memory size and processing capacity, and hence, propose a non-linguistic explanation. That processing constraints are responsible for the development of inflectional morphology in L2 acquisition is also defended by Pienemann (1998) and Pieneman et al.

(2005). Franceschina and Hawkins (2004) and Tsimpli (2003), take a different lead and argue that access to uninterpretable grammatical features (read: UG) is maturationally constrained. In other words, they argue that it is the a priori knowledge of language that draws the line between children and adults.

The most explicit proposal on errors with inflection and age-related differences therein can be found in studies defending the Missing Surface Inflection Hypothesis or MSIH (Haznedar and Schwartz 1997; Lardiere 1998, 2000; Prévost and White 2000; Prévost 2003). Prévost and White formulate the basic idea of the MSIH as follows (Prévost and White 2000, p. 103): "L2 learners have unconscious knowledge of functional projections and features including tense and agreement, but have problems with realization of the correct surface morphology." Building on the framework of Distributed Morphology (Halle and Marantz 1993; Harley and Noyer 1999) and the idea that morphology is separated from syntax (and semantics) (Beard 1982, 1995), MSIH studies claim that learners insert underspecified suffixes in fully specified syntactic structures. In this way, overuse of bare verbs has been analysed as insertion of an underspecified form (Haznedar and Schwartz 1997; Lardiere 1998; Prévost and White 2000; Prévost 2003). As for the reason behind insertion of underspecified vocabulary items, opinions differ: it has been suggested that processing demands play a role (Lardiere 1998), or influence of L1 prosody (Goad et al. 2003).

The MSIH studies have focussed primarily on omission of (finite) inflection, but Prévost and White (2000) and Prévost (2003) also discuss incorrect inflection, and differences between child and adult learners in this respect. Prévost and White explain the overuse of the suffix –en in finite position by adult L2 learners of German; their reasoning is as follows: children specify infinitival –en as [−finite] and the suffixes in finite position as [+finite] (plus some additional phi features); adult L2 learners have the same syntax as the children, but differ crucially in that they underspecify the infinitival suffix –en as [αfinite]. In the spirit of this work, we hypothesize that both children and adults make use of underspecified inflectional suffixes. However, children and adults have different underspecified suffixes, causing different types of errors in the two learner groups.

Unlike Prévost and White, we argue that the inflectional errors of adults go hand-in-hand with syntactic shortcomings. In the literature, it has been argued that adult knowledge and/or processing of L2 syntax differs from native knowledge/processing. This difference may be due to effects of transfer of L1 syntax (Schwartz and Sprouse 1996), effects of L1 prosody in processing L2 syntax (Steinhauer et al. 1999) or because non-native adult comprehenders *underuse* syntactic information in L2 processing (Felser et al. 2003; Marinis et al. 2005). Our claim is that the adult L2 learners underuse syntactic information as compared to child learners because they lack the knowledge to do so. For instance, in order to learn Dutch finite verbal inflection, good knowledge of verb placement is a clear advantage, especially for differentiating between finite verbs and non-finite verbs because these verb forms are syntactically dissociated in Dutch. In previous work we have shown that L1 as

well as L2 children can reliably use this knowledge, that is, they show a strong contingency between form and position of the verb. The adults do not show this pattern, however, and show a strong tendency to place the verb in second position, irrespective its morphological form (Blom and Polišenská 2006; Blom, submitted).[1] To give an impression of the difference between L2 children and L2 adults with respect to verb placement, it is illustrative to compare the accuracy rates of the two groups in the main (subject–verb–object) and embedded clause condition (subject–object–verb). Dutch L2 children show accuracy rates of 93.5% and 85.5% in respectively main and embedded clauses, averaging over Turkish and Moroccan children. The average accuracy rates of the adult groups are, respectively 88% and 42% (Blom, submitted).

Our hypothesis is that the observed difficulties in the domain of syntax have repercussions for learning inflectional paradigms. Whereas for children syntax is a reliable cue for specifying inflectional suffixes, syntax does not have this function for adults. For instance, if the same inflectional suffix appears in different positions, children's use of positional information may result in two different suffixes, whereas the adult's ignorance of positional—what we may call ''local''—cues leads to one underspecified suffix. Speculating on the effects of this difference in learning strategy, we may hypothesize that ''local'' versus ''global'' processing of the input has an effect on frequency. Suppose that the hypothetical suffix –io occurs in different positions; for adult learners the frequency of –io would be the sum of all occurrences of –io, irrespective of position. For children, being very sensitive to syntactic information, frequency of –io is not simply the sum of all occurrences of –io, because they evaluate –io relative to its syntactic position.

3 Operationalization and predictions

Our focus is on verbal and adjectival inflection: we will investigate agreement between subject and verb (IP) and agreement between determiner, adjective and noun (DP). Before we turn to the specific predictions, we describe the properties of verbal and adjectival inflection in Dutch.

Dutch finite verbs encode person and number. The present tense indicative paradigm distinguishes stems with three different suffixes: –ø is used for first person singular; –t for the second and the third person singular and –en for plural forms irrespective of person.[2] There are in Dutch only few verbs with an irregular inflectional paradigm (mainly modals). Note that in Dutch declarative main clauses the finite verb moves to second position where it

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[1] These are group results. There are, however, indications that analyses of individual data within the adult sample confirm that higher accuracy in the verb placement test goes hand in hand with higher accuracy in the verbal inflection tests.

[2] If the finite verb follows the subject (inversion), second person singular is syncretic with first person singular and has no overt inflection (*Nu loop jij weg* ''now walk you away''). We have tested verbal inflection in inversion contexts as well, but we have excluded these results from the data presented here.

precedes the object, negation, particles, etc. In contrast, the Dutch infinitive remains in final base position. The infinitival verb is morphologically similar to finite plural verbs and is marked with the suffix –*en*. The finite verbal paradigm is illustrated in Table 1; example (1) gives a declarative sentence with a finite main verb, (2) illustrates a declarative sentence with a periphrastic verb consisting of a finite modal auxiliary and an infinitival main verb.

(1)   *Wij*   **lopen**   *langs*   de   *Lijnbaan*
      we   walk-1SG-PL   over   the   Lijnbaan

(2)   *Wij*   *moeten*   *langs*   de   *Lijnbaan*   **lopen**
      we   must   over   the   Lijnbaan   walk-INF

With respect to adjectival inflection, Dutch makes a syntactic distinction between predicative and attributive adjectives. Predicative adjectives are not overtly marked by a suffix. As a consequence a predicative adjective stays uninflected and always occurs without schwa as illustrated in (3). (4) shows that in attributive position, the adjective is inflected with a schwa.

(3)   *De*   *bloem*   *ruikt*   **lekker/*lekkere**
      The   flower   smells   nice

(4)   *de*   ***lekker/lekkere**   *bloem*
      The   nice   *flower*

In contrast to predicatives, Dutch attributive adjectives are overtly inflected. The rule is: always add a schwa –*e* to an adjective except if the noun is singular and neuter and the determiner is indefinite. Absence of inflection is a special case, in which the bare adjective –*ø* must be used. Table 2 gives an overview of attributive adjectival inflection system in Dutch.

    Tables 1 and 2 give a description of the contrasts found in the finite verbal paradigm and the attributive adjectival paradigm in Dutch. Following the assumptions of Distributed Morphology, we assume that the suffixes in Tables 1 and 2 are represented in the vocabulary as a list of vocabulary items i.e., combinations of a phonological string (left hand side of the arrow) and morpho-syntactic information about the position of this string (right hand side

Table 1 Dutch finite verbal paradigm for regular verbs in present indicative

Person and number	Inflection	Example *(lopen* "to walk")	
1SG	Stem + ∅	*Ik loop*	"I walk"
2SG	Stem + t	*Jij loopt*	"You walk"
3SG	Stem + t	*Hij loopt*	"He walks"
1-3PL	Stem + en	*Wij/jullie/zij lopen*	"We/you/they walk"

Table 2 Attributive adjectival inflection in Dutch

Context	Suffix	Example	
DEF, NEUT, SG	–e	*Het mooie huis*	"The nice house"
INDEF, NEUT, SG	–∅	*Een mooi huis*	"A nice house"
DEF, COM, SG	–e	*De mooie auto*	"The nice car"
INDEF, COM, SG	–e	*Een mooie auto*	"A nice car"
DEF, NEUT, PL	–e	*De mooie huizen*	"The nice houses"
INDEF, NEUT, PL	–e	*Mooie huizen*	"Nice houses"
DEF, COM, PL	–e	*De mooie autos*	"The nice cars"
INDEF, COM, PL	–e	*Mooie autos*	"Nice cars"

of the arrow). The systems of verbal and adjectival inflection can now be accounted for by the lists of vocabulary items in (5); "fin" stands for "finiteness", "sp" for "speaker", "plur" for "plural", "neut" for "neutrum", "def" for "definiteness" and "attr" for "attributive". Whether or not /∅/ is considered as a covert suffix or as simply "no spell out" is irrelevant for present purposes. We will also not take a stand here on the issue whether or not negative features are in fact unspecified and should or should not be reformulated or left out.

(5)   **a. Target paradigm verbs**   **b. Target paradigm adjectives**

/t/	↔	[+fin, −sp]	/∅/	↔	[+attr, −def, +neut, −plur]
/en/	↔	[+fin, +plur]	/e/	↔	[+attr]
/∅/	↔	[+fin]	/∅/	↔	[−attr]
/en/	↔	[−fin]			

Insertion of vocabulary items is post-syntactic and is the result of the interplay between the Subset Principle ("the features of the inserted vocabulary item must be equal to or a subset of the features in the syntactic slot"; Halle 1997) and the Elsewhere Principle (Kiparsky 1973, 1982), which gives precedence of a more specific rule over a more general one. Amongst other things, interaction of the Subset Principle and the Elsewhere Principle prevents insertion of the bare verbal stem if the subject is a non-speaker, or insertion of the schwa suffix if the noun is singular and neuter and the determiner indefinite. Conversely, the result of these principles will be that the underspecified verbal form (the bare stem) will appear if the subject is 1st person singular, whereas the underspecified form for attributive adjectives (the adjective with a schwa) will be inserted in any attributive context but the one that combines the features indefinite, neuter and singular.

Of course, the analysis of the Dutch verbal and adjectival paradigm in (5) is dependent on the specific features chosen by us, for which independent evidence should (and can) be given. Instead of doing that, we would like to focus here on those generalizations expressed in (5) which play a role in this paper and which, as far as we know, are hardly controversial. The first one is

that the homophony of bare attributive and predicative adjectives in Dutch is accidental. This is in fact the position defended by any standard grammar of Dutch (see for instance Broekhuis 1999). In (5b) it is expressed by the fact that they are different vocabulary items. A similar claim holds for the homophony of the Dutch infinitive and the plural. In (5a) they are separate items, in accordance with the standard assumption (cf. Haeseryn et al. 1997).

Note furthermore that both the adjectival and the verbal paradigm in (5) are considered to have a form that is less specific or a default— or in terms of the current framework: a form that is underspecified—with respect to one or more other forms. In the Dutch adjectival paradigm this is the attributive adjective with an overt ending (the schwa), which is considered to be more general than the bare form that only appears in very specific circumstances. Although the way this is formulated in (5b) is framework-specific, the idea behind this claim is uncontroversial (cf. Broekhuis 1999).

Within the verbal paradigm it is no surprise to see that the plural form is not considered to be the default, since across languages plural is marked with respect to the singular. This makes sense from a cognitive point of view, but is also visible in the morphology: very often singular versus plural runs parallel to absence or presence of an affix. In Dutch verbal inflection this can be observed in the past tense, where the suffix –en follows the past tense marking in the plural, whereas there is only past tense marking in the singular.

Admittedly, it is less obvious that from the two remaining verb forms within the finite group the bare one is considered to be unspecified. A feature system in which the suffix –t for 2nd and 3rd comes out as the unspecified form can easily be imagined. For reasons of space we cannot go into details, but there are basically two reasons why we believe the bare form is indeed the unspecified one. First of all there is the plain observation that no overt ending is less than an overt ending. Second, it turns out that the bare form pops up in special positions in the target system, even if the subject is not 1st person. This holds, for instance, for the inversion context mentioned in footnote 2, which can easily be accounted for on the assumption that indeed the bare form is the default.

During the acquisition process, underspecified vocabulary items may occur in non-target contexts. Under the assumption that acquisition proceeds through an incremental specification metric, according to which only one feature is added at a time (Pinker 1986; Blom and Don 2005; Adger 2005), underspecified vocabulary items will be acquired before specified vocabulary items. Underspecified vocabulary items will be temporarily overused, i.e. inserted in non-targetlike syntactic positions, namely as long as specified vocabulary items are not acquired. For instance, if the specific vocabulary items for the verbal –t suffix and the bare attributive adjective have not been acquired yet, we expect overuse of the default forms: the bare verbal form and the schwa suffix on the attributive adjective, respectively.

It may also be the case that there are stages in which learners have a paradigm that is not only shorter than the paradigms in (5) but is also deviant, i.e. quali-tatively different: learners may have assigned morpho-syntactic features to a phonological string that differ from the feature specification in the target system.

In line with Prévost and White (2000) and Prévost (2003), we hypothesize that this is the case for adult learners. Adults may pick up a phonological string, but fail to pick up the morpho-syntactic information belonging to this string.[3] This leads, in turn, to storage of underspecified vocabulary items. Children, in contrast, are particularly good at using positional information and deducing the morpho-syntactic feature specifications of a vocabulary item.

This scenario makes particular predictions with regard to errors. In both the domain of verbal and adjectival inflection in (5) positional information plays a crucial role. In the verbal domain the positional distinction between finite and infinitive verbs is relevant, in the adjectival domain the positional distinction between attributive and predicative adjectives. This positional information is the locus of potential candidates for differences between child and adult acquisition. In the verbal paradigm, finite plural –en, which only appears in finite positions in the target language, is homophonous with the verb in the infinitive position. In the adjectival paradigm, the bare adjective appears both in attributive positions in contexts that are indefinite, neuter and singular and in predicative position. The prediction thus is that both suffixes (verbal –en and adjectival –ø) may be represented in the adult L2 vocabulary as underspecified items, whereas they are specified in the child vocabulary in accordance with their different syntactic positions. Whereas child vocabulary is therefore expected to be in principle targetlike in this respect—although the most specific vocabulary items of the lists in (5a) and (5b) may in the early stages not yet be acquired — we expect that the adult representations are deviant. Focussing on verbal –en and adjectival –ø, they may give two types of overuses as in (6) below. Children, on the other hand, are expected to show at most the highest type in (6):

(6) **a. Overuse in adult L2 verbs   b. Overuse in adult L2 adjectives**
     /ø/   ↔   [+fin]   /e/   ↔   [+attr]
     /en/ ↔   [αfin]   /ø/   ↔   [αattr]

What does this predict? Following the child L2 rationale, we compare child L1, child L2 and adult L2 learners of Dutch, holding the L1 of the L2 learners constant. If there is L1 transfer, it should be found in child L2 and adult L2 groups. We select L2 participants from two different L1 backgrounds for more information on possible effects of transfer. In case of transfer, we may also expect differences between the L2 learners that differ in L1. Turning to effects of age, we expect that the child L2 learners behave like the child L1 learners and unlike the adult L2 learners. More specifically, we expect that the adult L2 learners (i) erroneously use –en in contexts that require a verb ending on –t or a bare form (i.e. finite singular contexts), and (ii) insert the bare form in contexts that require an adjective ending on a schwa (i.e. all definite contexts, plural contexts and contexts with a non-neuter noun). In contrast, we do not

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[3] This does not imply that we assume that adult L2 learners have no problems with L2 phonology. Our focus is, however, not on phonology but on the role of morpho-syntax.

expect such errors in both the child groups. In order to investigate this claim, we compare the learner groups on the basis of types of errors.

As noted in the introduction, a comparison can also be made in terms of development and ultimate attainment. Although the present approach is relevant in these respects as well, they will not be our concern due to the experimental set up. Having said this, note that our proposal does *not* imply that adults will not be able to acquire more specific vocabulary items at all. In fact, our hypothesis may yield the prediction that adults with sophisticated syntactic knowledge, that is, comparable to the children's level, are likely to reach high accuracy with respect to inflectional paradigms (which implies that they will also acquire specific vocabulary items). Rather, the crucial prediction here is that adults will make particular type of mistakes; to what extent they will keep doing so is a different matter, to which we will shortly return in Sect. 7.

4 Participants

The (cross-sectional) L1 data are taken from Polišenská (2005), who tested monolinguals between 3 and 6 with an experimental design that is highly similar to the design described in Sects. 5.1. and 6.1. Polišenská's subjects were attending regular elementary schools or day-care, in predominantly Dutch monolingual surroundings and were reported by their teachers to be developing language normally. L2 participants are selected from the two largest immigrant populations in the Netherlands: Turks and Moroccans (mainly Berbers that speak Tarifit). The adults received no Dutch input before puberty. The children were born in the Netherlands, but had hardly any Dutch input before the age of four i.e., when they start to attend elementary school. At this age, i.e., when systematic exposure to Dutch starts, it can be assumed that the children master the basic properties of their L1 grammar (i.e., Turkish and Moroccan Arabic/Tarifit).[4] Table 3 gives an overview.

All participants get instructions on Dutch, either at elementary school (children) or at specific courses (adults). To test the level of Dutch proficiency, each subject participated in a sentence-repetition task that is part of the Taaltoets Allochtone Kinderen i.e., a standardized measure for Dutch proficiency in Turkish and Moroccan children (Verhoeven et al. 1986, 2002). The sentence-repetition test is specifically designed to test a learner's proficiency in the domain of grammar, and provides, therefore, an adequate measure for our

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[4] Inquiries have been made with the teacher(s), who, in turn, consulted the parents of the children in case of uncertainty. For the inquiries we used a questionnaire. The criterion for inclusion is that the parents did/do not speak Dutch to the child, so that the home-situation is clearly pre-dominant monolingual Turkish or Moroccan Arabic/Tarifit. If the children heard Dutch at home, this was via siblings and/or television. In our task, we did not find any significant differences between oldest children and children with older siblings (and who may have heard Dutch at home from their siblings). Moroccan Arabic and Tarifit have been collapsed because often the parents speak both languages, and with respect to the linguistic variables in our study, the two languages do not differ.

Table 3 Participant overview and proficiency scores

Sample	Proficiency level (range)	Age of arrival	Starting age	Testing age	Instructed learning	N
Child L1 (n = 31)	Not tested[a]	0	0	3–6	Not relevant	31
Child L2 (n = 31)	Low (0–15)	0	4	5	12 mos	2
	Moderate (16–25)	0	4	5–7	24–36 mos	15
	High (26–40)	0	4	5–8	24–36 mos	14
Adult (n = 18)	Low (0–15)	21–39	>15	22–58	12–36 mos	9
	Moderate (16–25)	23–31	>15	24–35	12–24 mos	7
	High (26–40)	16–24	>15	25–32	12–36 mos	2

[a]Obviously, the L1 children are not all on the same level. Where this is relevant for the present study, we will make a distinction

study. Since the test does not focus on the variables included in our study, it can be considered an independent measurement.[5] We collapsed the results from different levels, because there are too little data to compare participants at all levels (low, moderate and high). If age of onset and level of proficiency lead to a confounding effect, we will control for level of proficiency by zooming in on the results from the child and adult L2 learners with a moderate level of proficiency (Sect. 5.3).[6] All samples contain Turks and Moroccans, except for adult L2 learners with a high level of Dutch proficiency; this sample is restricted to Turkish participants.

5 Finite verbal inflection

5.1 Method

All participants have been tested with a sentence-completion task and a description task. The sentence completion task provided data on 3SG and 3PL contexts in declarative main clauses. In this task subjects had to describe a contrast between two pictures that represent (a) character(s) that perform(s) an activity (see example (7)). In order to distinguish between finite and non-finite verbs, combinations of object and verb have been elicited. The experimenter

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[5] In this test, each sentence that has to be repeated contains a certain word order property of Dutch and a function word. Only if both word order and function word in a sentence were repeated correctly, two points were assigned for that particular sentence. If only one of the two was repeated correctly, one point was assigned and if both were repeated incorrectly no point was assigned. The test contained 20 items, resulting in a maximum score of 40.

[6] Overall, the children represent a higher proficiency level than the adults. Consequently, for the present study qualitative analyses of errors may be more telling than comparisons of the amounts of errors. Also, as a result of the lower proficiency level effects of L1 transfer may be more present in the adult sample than in the child sample.

triggered the sentence by pronouncing the underlined words and the task of the subject was to complete the sentence (the correct subject responses are in bold).

(7) <u>Deze man</u> **leest een boek**   <u>en die man</u>   **leest een krant**

  This man   read-fin a book   and that man   read-fin a newspaper

  "This man is reading a book and that man is reading a newspaper"

To obtain responses on 1SG, 2SG and 1PL we designed a task in a form of a game in which the experimenter as well as the subject had to pick up a card (from a strictly ordered pile) and turn it around. The card depicted an ongoing action. After seeing the action, both had to perform the action with the help of various attributes. The task of the subject was to describe the situation. There were two options: it could either be that both performed the same action (1PL), or that both performed a different action (1SG vs. 2SG). For the youngest children this task was adjusted to their cognitive and processing abilities; a puppet was used as help to elicit a response. We targeted on verbs denoting the actions of *calling, cleaning, drinking, painting, playing, pulling, reading* and *stirring*.[7] To control for lexical storage of unanalysed finite verbs (Peters 1983; Pinker 1984)—which is relevant in case participants make very few errors—we included the non-sense verbs *pieren, zippen* and *kluken*. In addition to verbal inflection in main clauses, embedded clause and subject–verb inversion conditions tested further knowledge of Dutch verb placement. Verbal inflection and verb placement items were presented in random order. Items of the adjectival inflection test (see Sect. 6.1.) have been included as filler items. Each condition was introduced by trial item.

5.2 Results

Apart from unintelligible responses, we excluded two types of responses. The first excluded category consists of non-finite clauses, so called root infinitives, as illustrated in (8):

(8) *koppie   thee   pakken*   Abel 2;03.02

  cup-dim   tea   get-inf

In the L1 and child L2 literature on Dutch and German, it has convincingly been argued that declarative main clauses like (8), in which a verb ending on –*en* occurs in final position, are non-finite and should therefore not be confused with instances of incorrect finite inflection and counted as such (a.o. Jordens 1990; Poeppel and Wexler 1993; Prévost 2003). For this reason, we only included responses in the main clause condition and left out those

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[7] In order to make sure that our subjects were familiar with the existing verbs, the verbs were selected from the standardized vocabulary list for Dutch children under the age of 3 (N-CDI, Zink and Lejaegere 2002).

responses in this condition in which a verb ending on –*en* followed the object, or in which a response was ambiguous between a finite sentence and a root infinitive (if there is no object expressed). Secondly, so called dummy auxiliaries, i.e., periphrastic verbs that consisted of auxiliary + infinitive to denote ongoing actions, have been excluded (Jordens 1990; Hollebrandse and Roeper 1996; Van Kampen 1997; Zuckerman 2001). The counts have been restricted to lexical main verbs, because finite auxiliaries are highly frequent verbs and may as such be stored as unanalysed vocabulary items.

Table 4 gives the overall accuracy, i.e. percentage of correct responses, for each experimental group.

Both child groups show high accuracy and perform at or above the 90% criterion for correct use in obligatory contexts (Brown 1973).[8] High accuracy in the child groups reflects productivity of rules: nonsense verbs are correctly inflected in respectively child L1: 93% ($n = 256$), child L2T: 78% ($n = 67$) and child L2M: 82% ($n = 127$) of the cases. The difference between the child L2 and adult L2 sample is statistically significant (χ^2 (1) = 27.06; $p < 0.001$).

Recall that we predicted that the adults substitute –*en* in finite position, and that this is an error that child learners do not make. Table 5 gives the probability that either –ϕ, –*t* or –*en* is used as a substitute:

Given the Dutch paradigm, a learner can substitute the suffix –ϕ in 2SG, 3SG, 1PL and 3PL contexts, substitute the suffix –*t* in 1SG, 1PL and 3PL contexts and/ or substitute the suffix –*en* in 1SG, 2SG and 3SG contexts. In the experiment, the conditions in which –ϕ, –*t* and –*en* can be substituted are not equally distributed. To compare the three suffixes, we calculated the number of conditions in which this suffix is substituted as a proportion of the number of conditions in which this suffix can be substituted. A comparison of the obtained proportions tells us which suffix(es) is (are) most frequently used as substitute(s). Table 5 shows that the adults, unlike the children, use –*en* as a finite substitute.[9]

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[8] The child L2 learners may perform slightly below the L1 learners because they have been exposed to Dutch for a shorter period of time (in months). This is confirmed by an analysis of only the child L2 learners with the longest period of exposure to Dutch, that is, the oldest child L2 learners (7–8 years old): the accuracy rate of the 7- to 8-year-old Turkish children ($n = 5$) increases to 96% (7/172) and the accuracy rate of the 7- to 8-year-old Moroccan children ($n = 9$) goes up to 93% (13/193).

[9] The assumption underlying the results in Table 5 is that all learners make the same *syntactic* distinction between finite and non-finite verbs, and hence, that –*en* in finite (i.e., V2) position is a finite substitute whereas –*en* in non-finite (i.e., final) position is a root infinitive. This assumption may be critical for the adult sample because they do not master Dutch verb placement rules (see Sect. 2). By implication, the adult –*en* substitutions in Table 5 might include root infinitives. If we, however, consider all –*en* substitutions, irrespective of position, we observe, first of all, in all groups an increase of –*en* substitutions, showing that root infinitives occur in all learner groups. It is not the case, however, that inclusion of root infinitives makes the difference between child and adult learners less significant. If we count the –*en* substitutions irrespective of position, we find that L1 children use –*en* as a substitute in 5% ($n = 275$) of the contexts, Turkish and Moroccan L2 children use –*en* as a substitute in respectively 17% ($n = 211$) and 11% ($n = 396$) of the possible substitution contexts, Turkish L2 adults do this in 57% ($n = 305$) of the contexts and, finally, Moroccan L2 adults in 40% ($n = 405$) of the contexts. It is thus unlikely that children use –*en* as a substitute (they rather use –$\emptyset$ or –*t*). Adult learners, on the other hand, do use –*en* in this way.

Table 4 Accuracy verbal inflection (existing verbs)

Group	N	% correct
Child L1	281	100
Child L2 Turkish	222	92
Child L2 Moroccan	416	90
Adult L2 Turkish	166	57
Adult L2 Moroccan	396	57

Table 5 Probabilities of substitution of suffixes –*en*, –*t* and –*ø* (excl. root infinitives)

Substitute	–*ø*		–*t*		–*en*	
Context	2/3 SG, PL		1SG, PL		SG	
Child L1[a]	2%	$n = 239$	3.5%	$n = 175$	0%	$n = 262$
Child L2 Turkish	6%	$n = 194$	4%	$n = 116$	0%	$n = 134$
Child L2 Moroccan	5%	$n = 368$	9%	$n = 192$	2%	$n = 272$
Adult L2 Turkish	32%	$n = 136$	8%	$n = 831$	9%	$n = 113$
Adult L2 Moroccan	24%	$n = 335$	8%	$n = 1882$	8%	$n = 275$

[a] The scores of child L1 are only from the 3–5 years old population. The 6-year-old group reached ceiling levels for verbal inflection and was therefore not included in the error-analysis

5.3 Interpretation of results

In earlier work, we have shown that the adult learners in our sample have rather poor knowledge of the Dutch verb placement system, in contrast to the child learners (Blom and Polišenská 2006; Blom submitted). We hypothesized that difficulties in the domain of syntax cause the acquisition of non-targetlike underspecified inflection by adult learners. More specifically, for the adults, and not for the children, –*en* is an underspecified vocabulary item. Children distinguish between finite –*en* and non-finite –*en*. If this is the case, it is expected that overuse of –*en* in finite contexts is restricted to the adult samples. This prediction is borne out: incorrect use of –*en* in the child sample is restricted to non-finite position, whilst adults substitute –*en* in finite position.

The fact that adults hardly overgeneralize the –*t* suffix is also in accordance with our hypothesis. Since it is a more specified vocabulary item, we do not expect it to be used in more general situations. The relatively low overuse of –*t* illustrates that the adults do have some idea of more specific vocabulary items, although apparently they are overruled rather easily by the less specific ones. We will come back to this issue in the final section.

To what extent does transfer influence our results? First of all, there are no similarities between child and adult L2 learners with the same L1: the Turkish child L2 learners pattern like the L1 learners, and not like the Turkish adult L2 learners. The same holds for the Moroccan child and adult learners. From this, we conclude that effects of L1 transfer in the domain of inflectional morphology—if they are present at all—must be restricted to the adult sample. We cannot conclude that there is no L1 transfer stage in child L2 acquisition of inflection, since it may be that our sample represents a developmental stage in which there is no transfer *anymore*.[10] Crucially, however, L1 transfer does not account for the difference between child and adult acquisition of inflection in our sample, which suggests that the age of start of systematic exposure to Dutch plays a crucial role.

One could argue against this conclusion by pointing out that the adults in our collapsed sample have in general a lower level of proficiency than the children, and hence, that the adults represent an earlier developmental stage. Does the lower level of proficiency of the adults explain observed differences between children and adults? There are two reasons for us to believe that this is not the case. First, our results are not influenced if we apply our proficiency measure (see Sect. 4) and keep level of proficiency constant. If we single out the adults with a moderate level of proficiency and compare these to the "moderate" children, it turns out that the difference in substitution pattern remains. The Turkish and Moroccan adults substitute –en in respectively 27% ($n = 37$) and 16% ($n = 141$) of the contexts in which they can substitute –en— in all singular contexts—whereas the Turkish and Moroccan children do so in, respectively 0% ($n = 49$) and 3% ($n = 115$) of the cases.

Although both groups of adults show overuse of –en, in contrast to the children, it is worth noting that the adult Moroccans seem to overuse the bare form slightly more often than the Turks, and overuse the –en form less often. Given that the verbal –en ending in Dutch is pronounced as a schwa, especially in the (Western) regional variants of Dutch spoken in those parts of The Netherlands in which the participants are living, this asymmetry between Turkish and Moroccan adults may point to transfer of L1 phonology, more specifically to the markedness of having a final unstressed vowel in the Moroccan's L1. This difference does not lead to a different view on the distinction between children and adults, however.[11]

Suppose that for some reason our proficiency measure does not work and that the adult responses correlate to a child developmental stage that we have

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[10] There is, to our knowledge, hardly anything known about the effects of L1 transfer in child L2 acquisition of inflection, which makes it hard to tell whether or not the children in our sample are already beyond the L1 transfer stage. There are indications that L1 transfer is more present in child L2 acquisition of syntax than in child L2 acquisition of inflection, however (Schwartz 2004). With respect to L1 transfer in the domain of syntax, Haznedar (1997) found in a Turkish–English (sequential) bilingual child L1 transfer only in the first 3 months of L2 acquisition. Haberzettl (2005; referred to in Pieneman et al. (2005)) found Turkish L2 children, in comparison to Russian L2 children, benefit from their L1 with respect to their learning of German verb placement rules.

[11] More on the (non) role of transfer in a similar situation can be found in Pienemann et al. (2005).

missed, i.e., an early child stage. The question then is: is there a child devel-
opmental stage that is characterized by –en substitutions? Analyses of natu-
ralistic data in L1 Dutch, that go as early as the two-word-stage, indicate that
there is no L1 stage in which children use –en as a finite default (De Haan
1996; Blom 2003; Blom and Polišenská 2006).

In sum, two alternative hypotheses to explain the observed difference
between children and adults, i.e., differences in the effect of L1 transfer and
differences in level of proficiency, do not account for the observation that
adults, unlike the children, substitute –en in finite position. Instead, the
hypothesis that children and adults have different morpho-syntactic specifi-
cation of –en, does explain this observation.

6 Attributive adjectival inflection

We hypothesized that adult learners underspecify the bare adjective, which is
expected to cause substitutions of this form in attributive position. Children, in
contrast, distinguish between predicative adjectives and attributive adjectives.
For them, occurrence of the bare adjective in predicative and attributive
position is accidental homophony; the two similar phonological strings cor-
respond to respectively the feature matrices [−attr] and [+attr, −def, +neut,
−plur]. As a consequence, we do not expect bare adjectives in attributive
position in the child sample.

6.1 Method

The experimental set-up has been restricted to the testing of attributive
adjectival inflection. Weerman et al. (2006) conducted a comparative pilot
study, which investigates the Dutch adjectival inflection in child L1, child L2
and adult L2 learners, including use of predicative adjectives. Results from
this study show a confident conclusion: all groups of learners successfully
realize the uninflected adjectival form in the predicative position: child L1:
100% ($n = 350$), child L2: 100% ($n = 90$) and adult L2: 98% ($n = 256$),
respectively.

For the present study adjectival inflection responses have been elicited
via a sentence completion task. The task contained 16 non-derived singular
nouns, that are likely to be known by child L1, child L2 and adult L2
participants: eight neuter and eight common gender nouns. Each noun is
tested in definite and indefinite conditions as exemplified in (9) and (10) for
the neuter noun *paard* "horse". Number is kept constant to singular. The
experimenter triggered the sentence by pronouncing the underlined words
and the task of the subject was to complete the sentence (the correct
subject responses are in bold). Previous work on L1 and L2 Dutch indi-
cates that gender is problematic (Van der Velde 2005; Snow and
Hoefnagel-Höhle 1978; Sabourin 2003) and involves a tedious learning
process (Deutch and Wijnen 1985). Therefore, we included a control test

for gender attribution to the nouns in the adjectival inflection test. In this control test, we elicited for each noun a gender-marked definite determiner (example (11)). The nouns in Standard Dutch are distributed across two grammatical genders. Nouns that take the definite determiner ''het'' are neuter, whereas nouns that take the definite determiner ''de'' are non-neuter (''common gender'').

(9)   <u>Dit is</u>   ***een bruin paard***   <u>en dit is</u>   ***een zwart paard***
        This is   a brown horse   and this is   a black horse

(10)   <u>Mijn poppetje zit op</u>   ***het zwarte paard***
        My doll sits on   the black horse

(11)   <u>Dit is een boek. Waar is mijn kopje? Mijn kopje staat op</u>   ***het boek***
        This is a book. Where is my cup? My cup stands on   the book

Gender attribution has been tested at the beginning of each session and the same test, with differently ordered items, was repeated at the end of the session. Each condition was introduced by trial item.

6.2 Results

One possibility would be that a participant completes the sentence started by the experimenter with *een mooie paard* (''a beautiful horse''). Obviously, the form of the adjective in this response is incorrect because *paard* (''horse'') is a neuter noun in Dutch and neuter singular nouns appear with the bare adjective. However, it is certainly not excluded that the same participant does not know that *paard* (''horse'') is neuter, and assumes that it is a common gender noun. In this case, *een mooie paard* (''a beautiful horse'') would be correct. Therefore, Table 6 gives the substitutions without corrections for a learner's own (and possibly non-target like) gender attribution and with this correction. ''Not corrected for gender'' means that only responses from adjectival inflection test are taken into account. ''Corrected for gender'' implies that responses from the adjectival inflection test have been related to responses from the gender attribution test. Corrected responses are restricted to nouns with stable gender. To determine if a noun's gender is stable, we excluded nouns for which we collected less than two overt gender markings. Since we collected maximally three responses per subject per noun where a definite determiner is used (twice in the gender attribution test and once in the adjectival inflection test), stable gender marking comprises four possibilities: *de/de* or *de/de/de* (= common gender is used in all occasions) and *het/h*et or *het/het/het* (= neuter gender is used in all occasions). Instable gender marking comprises *de/het*, *de/de/het* and *het/het/de*.

Table 6 shows that the children hardly ever substitute –ø. By implication, they are highly accurate with respect to the realization of –e in the contexts where this suffix required. The adults do substitute –ø. Schwa-substitutions

Table 6 Substitutions (%) in adjectival inflection test

	Not corrected for gender		Corrected for gender	
Substitute	–e	–ø	–e	–ø
Context	[−def, + neut]	[+ def,−neut], [−def,−neut], [+ def, + neut]	[−def, + neut]	[+ def,−neut], [−def,-neut] [+ def, + neut]
Child L1	77% 102/152	4% 15/368	27% 10/37	7% 26/367
Child L2 Turk	84% 111/132	7% 20/287	*	6% 13/224
Child L2 Moroc	89% 233/263	3% 17/585	*	3% 11/371
Adult L2 Turk	54% 44/82	30% 58/191	*	39% 31/80
Adult L2 Moroc	32% 37/117	67% 189/283	*	72% 73/101

show a different picture. An asterisk (*) indicates the absence of responses, due to absence of a sufficient number of stable neuter nouns, which is, in turn, an effect of the overuse of the common gender definite determiner *de*.[12] This overuse happens in all groups. Only the (older) child L1 learners use a fair number of stable neuter nouns. If the child L1 learners use stable neuter nouns, they also use most often the correct adjectival suffix in the special case (–ø). The high percentage of schwa substitutions (77%) in Table 6 drops after corrections to 27%: this is the effect of neuter nouns that are common according to the child. For the adults, corrections do not lead to any improvement. Adult responses in all conditions show substitutions in both directions. The Turks tend to substitute –e whereas the Moroccans substitute –ø most frequently.

6.3 Interpretation of results

Children's errors with adjectival inflection turn out to be errors in gender attribution caused by overattribution of common gender. For adjectival inflection this results in –e substitutions. Adult errors can only be partially related to incorrect gender attribution. Unlike the children, they substitute –ø, as was predicted by the hypothesis that the adults underspecify the bare form.

The adults also overattribute common gender, but this has no effect on the application of adjectival rules. Adults say for example *de paard* (''the horse'') in combination with *een groot paard* (''a big horse''). L1 transfer can only partially explain substitution of bare forms. As noted before, the Moroccan's

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[12] For the Turkish L2 children, Moroccan L2 children, Turkish L2 adults and Moroccan L2 adults there were respectively 0, 9, 0 and 6 stable neuter nouns.

tendency to avoid having a final unstressed vowel in their L1 might be responsible for the higher number of this type of substitutions.[13] However, the Turkish adults make the error as well, even though their L1 does not have this phonological property. Hence, transfer does not provide a sufficient explanation for the use of substitutions of bare adjectives by adult learners. The comparison between the Turkish adults and Turkish children indicates that age is a significant factor as well: adult learners make an error that the children do not make. The types of errors in the adult sample fit (6b): (6b) predicts that overuse of –e in predicative position does not occur in adult L2 Dutch, which is confirmed by the results reported by Weerman et al. (2006), but that overuse of –ø in attributive position does happen.

7 Concluding remarks

In this article, we hypothesized that child and adult learners learn inflectional contrasts differently. Children are sensitive to syntactic cues and positional information, whereas adults use, what we called, a more global strategy. To put it strongly, adults ignore syntactic cues for specifying inflection. Use of the global strategy is caused by the adult's difficulties in the domain of syntax. Earlier reported low accuracy on verb placement tests confirms that the adult learners investigated here are not able to make reliable use of verb placement as a cue for learning targetlike inflectional paradigms. The difference between children and adults in the ability to make use of syntax leads to different inflectional paradigms, more specifically, to different inflectional defaults (in terms of Distributed Morphology: different underspecified vocabulary items). Obviously, the child strategy works better, since syntactic information is crucial for specifying agreement paradigms. In this article we did not concentrate on quantitative differences between child and adult learners—although there are significant differences between the two groups in this respect—but we focused on qualitative differences. Our prediction was that children and adults make different types of errors, more specifically, that adult learners underspecify –en in the domain of verbal inflection and the bare form in the domain of adjectival inflection, resulting in respectively –en and bare substitutions. We did not predict these errors in the child data. The experimental results confirmed our predictions in both learner groups.

The results as well as our hypothesis raise various new questions. First of all, the results on verbal inflection show that the adults do not only substitute –en, but they also use a significant number of substitutions of bare forms. Is this observation compatible with the claim that adult learners underspecify –en? We hypothesized in (5a) and (6a) that –ø is specified as [+fin]. This implies that the bare form, being underspecified for phi features, can appear in both

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[13] Although the L1 of the Moroccans marks gender, and Turkish does not, the Moroccans do not profit from their L1 (contra Franceschina and Hawkins 2004); this may be because their masculine–feminine system does not map unto the Dutch common–neuter gender system.

the child and the adult group as a finite substitute (as has been proposed for child and adult L2 German by Prévost 2003). Since the bare form is more specified compared to the –*en* suffix, the Elsewhere Principle predicts that the bare form is inserted in finite positions if both vocabulary items in (6a) are part of the same grammar—contrary to fact. The question, however, is whether this notion of ''same grammar'' applies in this situation. In reality we believe that the two vocabulary items are in competition in the process of acquisition, resulting in optionality and variability. Assuming that insertion of an underspecified vocabulary item is cheap, processing limitations predict insertion of underspecified vocabulary items (Avrutin 2005). Thus, processing limitations predict insertion of the least specified vocabulary item, i.e., –*en*, while grammar (instantiated by the Elsewhere Principle) predicts insertion of the most specified suffix (that obeys the Subset Principle). This interaction is expected to lead to optionality and variability (between as well as within subjects), which is indeed confirmed by analyses of individual data (Blom 2007; see also Sorace (2005) on the issue of optionality in L2 grammars).

Analyses of individual data are also necessary in order to investigate to what extent and in what stage adults overcome the overuse of –*en* in the verbal system and the bare form in the adjectival one. If indeed processing limitations trigger the cheapest alternative available, it is plausible that these overuses will appear under pressure even if the system acquired seems relatively targetlike in less difficult situations.

Secondly, with regard to adjectival inflection we have found that both the bilingual children and monolingual children under the age of six hardly ever produced consistently classified neuter nouns: the child L1 data in the special case condition—indefinite, neuter—come from the oldest age group, i.e., the 6-year-olds. This lack of consistently classified neuter nouns disabled us to interpret the findings of the special case condition. Assuming that specific rules are acquired late, late acquisition of the—very specific—rule that attributive adjectives that modify a neuter singular noun in indefinite DPs is, however, expected. In this respect, the outcome of Laloi et al. (2005) study is telling. Laloi et al. tested seven Moroccan adolescents (16–17 yrs) with a similar age of first systematic exposure to Dutch as the child L2 learners who participated in our experiments. It was found that the older child L2 learners performed significantly worse than the monolingual control group and still showed massive overuse of –*e* in the special case condition. Moreover, unlike the younger child L2 learners (in our sample) overuse of –*e* does not correlate with gender attribution: even though the older child L2 learners attribute in 64% ($n = 56$) of the cases correct gender to neuter nouns, they hardly ever produce the correct inflectional suffix in the special case condition 9% ($n = 111$). These results indicate dissociation between gender attribution to nouns and the acquisition of adjectival inflection system, more specifically, it indicates that children who can be classified as late starters (and have less exposure to Dutch because they start later and they mainly hear Dutch outside their

home-situation), do not learn the specific rule anymore. On the basis of this result, we can conclude that the younger child L2 learners in Table 6 do not know the topmost rule of (5b).

This observation leads us to the beginning of this article. Although much more research is needed, a first impression is that our results confirm the idea that L2 acquisition of inflection is a significant factor in loss of inflectional contrast. We have shown that the patterns in adult L2 Dutch can be accounted for by non-targetlike inflectional paradigms that are relatively small and contain underspecified inflectional suffixes. A comparison between our findings and Afrikaans, a language related to Dutch, but heavily deflected, presumably as a result of language contact (see, amongst others, Den Besten 1989), is suggestive as well. Recall that in acquisition the distinction between attributive and predicative adjectives is rather stable, but that the special case is less stable in both child and adult L2. This is line with the facts for Afrikaans, which still makes a distinction between predicative and attributive adjectives along the lines of Dutch, but does not have the special case anymore. In the verbal paradigm of Afrikaans only one form remained. For the regular verbs this is the form that is superficially similar to the 1ˢᵗ person singular in Dutch (Afrikaans: *ons werk* ''we work''), which is precisely the form that we identified as being underspecified in both child (L1 and L2) and adult L2 Dutch.

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