Unraveling inflection in child L2 development

Bonnie D. Schwartz
UNRAVELING INFLECTION
IN CHILD L2 DEVELOPMENT

Bonnie D. SCHWARTZ

ABSTRACT
Taking a comparative, developmental perspective, this paper focuses on child nonnative language (L2) acquisition, an understudied area despite its (virtually untapped) potential to inform our understanding of developmental linguistics more generally. Is child L2 acquisition more like native language (L1) acquisition or adult L2 acquisition (or neither)? Attempts at answering this question come from two recent models of child L2 acquisition, i.e. Weerman (2002) and Schwartz (2004a); the purpose of this paper is to evaluate each against developmental data from two recent studies on the child L2 acquisition of verbal inflection (and syntax). Each test-case study investigates the development of subject-verb agreement by groups of L1 English-speaking children whose exposure to the Target Language (German, Spanish) began around age 5. Comparisons are made between the child L2 data and data from both L1 children and L2 adults as well as between the principal (nonconvergent) findings of these two test cases.

Keywords: language development, L2 acquisition, child L2, verbal inflection, subject-verb agreement, verb second, German, Spanish
1. Introduction

Researchers approach the study of nonnative language (L2) acquisition from two basic perspectives: from the perspective of development and from the perspective of the endstate. The developmental perspective tells us about the shape of Interlanguage over time, i.e. about the route of Interlanguage development or about the shape of Interlanguage at particular points along that route, and the endstate perspective tells us about the shape of Interlanguage at the point development stops. The reason for the endstate perspective is, quite simply, because the language of L2 acquirers (L2ers) is so frequently found to differ from the language of natives, that is, where the grammar of the Interlanguage does not converge on the grammar of the Target Language (TL), even after many years of TL exposure. The endstate perspective does not arise in the study of native language (L1) acquisition (at least in the study of normal L1 acquisition) — or to put it differently, studying L1 acquisition from the perspective of the endstate is the purview not of acquisitionists but of linguists.

Nevertheless, despite the fact that in a certain sense the field of language acquisition is, by definition, developmental linguistics, the perspective of development in L2 acquisition is well represented only when it comes to adult L2 acquisition. When it comes to child L2 acquisition, the developmental perspective has been given short shrift (with a few notable exceptions). There is very little research studying child L2 acquisition for the sake of finding out more about child L2 acquisition, whether on its own or whether in comparison to child L1 acquisition or to adult L2 acquisition (cf. the state of research on simultaneous bilingual language (2L1) acquisition, where the focus is on bilingual development itself). It is rather the endstate of child L2 acquisition that has gotten the most research attention; more precisely: In the comparison of adult L2 acquisition with child L2 acquisition, the bulk of research has focused on (purported1) endstates, with the purpose of determining the extent to which targetlike language (at endstate) is a function of age of initial exposure.

1. ‘Purported’ because the inclusion criteria are usually not the most stringent, e.g. five years of TL exposure, three consecutive years of residence in a TL-speaking country, etc. Note that since all participants are tested as adults, those whose L2 acquisition started in (early) childhood will have had much more than such a minimum of, e.g., five years’ TL exposure, three consecutive years’ residence in a TL-speaking country, etc. This also typically means, in absolute terms, that participants who started at a younger age (L2 children) will have had many more years of TL exposure than those who started at an older age (L2 adults).
Labeled ‘Critical Period’ studies or ‘Age Effect’ studies, this class of research is in principle disinterested in development as it unfolds over time; it seeks to test whether, in the words of David Birdsong (1999: 1), « there is a limited developmental period during which it is possible to acquire a language, be it L1 or L2, to normal, nativelike levels. »

I do not believe that L2 researchers conducting Critical Period//Age Effect studies view their empirical results as an end unto themselves. That is, the point is not simply to find, say, whether there is or isn’t an inverse correlation between age of onset of L2 acquisition and extent of nativelike attainment, or whether there is or isn’t a cut-off for age of L2 onset after which nativelike L2 attainment is impossible. For many, such L2 endstate studies are a means to investigate a fundamental theoretical issue, namely the nature of L2 knowledge.

Is L2 knowledge of the same (epistemological) type as mature L1 knowledge? The answer is ‘yes’ on the logic of this approach only when the L2er’s performance on language tasks is the same as — i.e. identical to — that of the mature native speaker. Where age effects are found (e.g. DeKeyser 2000; Johnson & Newport 1989, 1991; Long 1990; McDonald 2000), the results show, typically, that the language of L2ers falls within native-speaker range (only) when initial TL exposure was in early childhood, more specifically, at age 7 or younger (but cf. Hyltenstam & Abrahamsson 2003). By the logic of this approach, then, the theoretical conclusion is that L2 knowledge is of the same (epistemological) type as mature L1 knowledge for L2ers whose initial TL exposure is at age 7 or younger, but not for L2ers whose initial TL exposure is at age 8 or older.

While there are, I believe, several reasons to question this line of thinking, principally due to the criterion of ‘identity’ assumed (see Schwartz 1990, 1994, 1998, 1999), the point I wish to underscore here is the basic comparative set-up. Data from the endstates of adult and child L2 acquisition are being compared against the (benchmark) data from the endstate of L1 acquisition. The L2 child endstate data are telling us something about adult L2 acquisition, namely, that it cannot be knowledge of an L1 per se that precludes nativelike attainment in L2 acquisition, and so there must be something about being an L2 adult (or at least an L2er whose onset is over the age of 7) that is (generally) to blame. Nevertheless, irrelevant to such L2 endstate research is the developmental perspective, i.e. what routes the natives and the L2ers took to get to their (purported) endstates. There are (at least) four logical possibilities in these comparisons: (a) same route and same endstate; (b) same route but different endstates; (c) different routes but same endstate; and (d) different routes and different endstates. So, when the endstate of child L2 acquisition matches that of child L1 acquisition,
did the L2 children get to that endstate via the same route as in L1 acquisition? And in the case of child L2ers whose endstates differ from the endstate of L1 acquisition, did they follow a distinct route, or did they follow that same route but stop prematurely? And the same goes for adult L2ers: same or different route as in L1 acquisition, as in child L2 acquisition with nativelike endstate, or as in child L2 acquisition with nonnativelike endstates — or do they just have different routes, perhaps even from each other? These research questions motivate the current study.

In sum: The L2 endstate research makes use of child L2 data to tell us something about adult L2 acquisition. My own work, too, argues that the study of child L2 acquisition has considerable potential to inform theories of both L1 acquisition and adult L2 acquisition (Schwartz 1992, 2003a, 2003b, 2004a, 2004b — see also Unsworth 2005), but I have stressed the developmental perspective (see, e.g., fn. 6 below). The bone I’m thus picking here is that taking the endstate perspective on child L2 acquisition is insufficient, because it is not really telling us much about child L2 acquisition. But taking the developmental perspective will. We need it to discover to what extent language development over time in the L2 child resembles that of the L1 child, the L2 adult, or neither. Comparing child L1 development with child L2 development and comparing child L2 development with adult L2 development will afford us a much greater understanding of all three types of language acquisition.2

This paper, then, focuses on child L2 acquisition. Two opposing positions on the status of child L2 acquisition in relation to L1 acquisition and adult L2 acquisition — the only two models of which I’m aware — have recently been proposed. Both ask the research question: Is child L2 acquisition more like child L1 acquisition or more like adult L2 acquisition — or like neither? The purpose of this exploratory essay is to see how the two models fare in relation

2. One might argue that rather than L1 acquisition, the better comparison is to 2L1 acquisition — since two languages are then involved in all three cases — and only this three-way comparison can tease apart the issues of ‘age of onset’ and ‘two languages.’ The first argument against this is that despite manifesting a certain amount of cross-linguistic influence (in rate if not route), 2L1 development in the main follows the same path as the L1 acquisition of each language (e.g. Meisel 2001; but cf., e.g., Repetto & Müller submitted). More importantly, 2L1 acquisition suffers from the possibility of exposure imbalances (from one week, month, summer, etc. to the next), such that divergences between 2L1 acquisition and L1 acquisition are potentially idiosyncratic. In any event, arguably, the benchmark for 2L1 acquisition is ultimately L1 acquisition.
to different sets of child L2 data on the acquisition of morphological inflection and syntax. It is those two models that we now first review.

2. Background: Two models of child L2 acquisition


According to Weerman (2002), child language acquisition, be it L1 or L2, follows but a single developmental route, and this route contrasts with the route taken in adult L2 acquisition; however, as for endstate, child L2 acquisition is, in certain domains, different both from L1 acquisition and from adult L2 acquisition. In other words, Weerman’s position — which I’m calling ‘Model W’ — says, as in (1), that child L2 acquisition is like L1 acquisition in terms of development, but that L1 acquisition, child L2 acquisition and adult L2 acquisition are all distinct in terms of ultimate attainment (again in certain domains).

(1) **Model W** (Weerman 2002):

- **course of development:** child L2 acquisition is like child L1 acquisition and both are distinct from adult L2 acquisition
- **ultimate attainment:** there are differences (in at least some domains) between the L1 child and the L2 child (and the L2 adult)

Evidence for Model W comes from a three-way comparison of the acquisition of Dutch adjectival inflection by L1 children, L2 children and L2 adults (Bisschop 1998; Punt 1998). Here I briefly summarize the early findings that originally motivated Model W (for related work, including actual child L2 developmental data, see Blom, Polisenská & Weerman 2006/2007 as well as Blom 2006).

Table 1 sets out the distribution of inflection on adjectives in (standard) Dutch, which has two noun classes: common gender and neuter gender. With all singular and plural nouns except singular indefinite neuter-gender Ns, attributive

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3. As defined by age of initial exposure — *i.e.* they were adults when tested; see footnote 1 (and below).
adjectives are inflected with a schwa suffix (e.g. een kleine klok ‘a small clock. common’). The adjective has no schwa under two conditions: when used predicatively, and when used attributively with singular indefinite neuter-gender Ns (e.g. een lange verhaal ‘a long story.neuter’).

<table>
<thead>
<tr>
<th>With schwa suffix</th>
<th>Without schwa suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attributive</strong></td>
<td><strong>Predicative</strong></td>
</tr>
<tr>
<td>All common-gender Ns</td>
<td>All Ns</td>
</tr>
<tr>
<td>Singular definite and plural neuter-gender Ns</td>
<td></td>
</tr>
<tr>
<td><strong>Attributive</strong></td>
<td></td>
</tr>
<tr>
<td>Singular indefinite neuter-gender Ns</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Distribution of inflectional schwa suffix for Dutch adjectives

Their three-way comparison of the data suggests two main points. First, L1 and L2 children make the same type of overgeneralization error of producing a schwa when there shouldn’t be one, as in (2a), whereas L2 adults’ errors as a group are much more variable and random, with errors of not only type (2a) but also type (2b), that is, no schwa suffix when it should appear.

(2) Inflectional error types with attributive adjectives

a. *een lange verhaal (target: lang\(\tilde{e}\)\(g\))
   a long story
   *(child L1, child L2, adult L2)*

b. *een klein klok (target: klein)
   a small clock
   *(adult L2)*

The second point is that unlike the L1ers who (at around age 6) overcome the type-(2a) error, the child L2ers at endstate — *i.e.* after some 12 to 14 years of living in The Netherlands — continue to produce it.\(^4\)

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4. As for L2 adults at endstate, no data for comparison exist (as far as I know), *i.e.* no study has yet investigated Dutch adjectival inflection for adult L2ers with comparable (or even better, more) years of exposure to Dutch. (For the L2 adults in this study, the length of exposure to Dutch ranged from 6 months to 18 years — with 12 out of 14 at 32 months or less.)
2.2. DAM (Schwartz 2003a, 2004a)

The second model we consider is my own, called the Domain by Age Model (DAM, Schwartz 2003a, 2004a). According to DAM, child L2 acquisition developmentally splits between being like L1 acquisition and being like adult L2 acquisition: Child L2 development follows the same route of L1 development in the domain of (inflectional) morphology, but follows the same route of adult L2 development in the domain of syntax. The rationale behind this split is that there is accumulating evidence for initial L1 transfer not only in adult L2 acquisition but also in child L2 acquisition (e.g. Haznedar 1997a, 1997b; Song & Schwartz in press; Unsworth 2002, 2005; Whong-Barr & Schwartz 2002), at least in the domain of syntax. Tying this together with the empirical lesson learned from the Dutch adjectival inflection data from child L2ers (discussed above), we get DAM, as depicted in (3). Note that with respect to endstate, DAM is agnostic on child L2 acquisition, although there are differences in ultimate attainment (in certain domains) between L1 acquisition and adult L2 acquisition.  

(3) **Domain by Age Model** (DAM, Schwartz 2003a, 2004a):

a. **course of development**:  
   i. child L2 acquisition is like adult L2 acquisition in the domain of syntax, ...  
   ii. child L2 acquisition is like L1 acquisition in the domain of inflectional morphology, ...

b. **ultimate attainment**:  

   there are differences between the L1 child and (at least) the L2 adult

5. My thanks to Nina Hyams for suggesting this name.

6. Also left open here is the significance of different endstates between (at least) adult L2 acquisition and L1 acquisition, but elsewhere I have argued that a unitary path for adult and child L2 (syntactic) development (as predicted by DAM) should be taken to reflect the same knowledge states along the way, and hence the same type of knowledge states as in the development of native language (see Schwartz 1992, 2003b, 2004a, 2004b).
The example originally used to motivate uniform syntactic development in the L2 child and the L2 adult was Unsworth’s (2002) preliminary study on the L2 acquisition of Dutch by native English-speaking children and adults. In this first step of what is now a much-expanded PhD dissertation (Unsworth 2005), she focused on scrambling of definite DP objects (DOs) as exemplified in (4), using the work by Schaeffer (2000) on the L1 acquisition of scrambling in Dutch as a basis of comparison.\footnote{Unsworth (2005) tested more L2ers as well as her own L1 participants, and the phenomena are not only definite DOs but also indefinite DOs. In addition, following the lead of Krämer (2000) on the L1 acquisition of Dutch, she examined the acquisition of not only the syntax of scrambled definite and indefinite DOs but also the interpretation of these DOs in scrambled position and \textit{in situ}, looking at the interface of syntax and discourse/semantics.}

\begin{enumerate}
\item[a.] Base order (Dutch is SOV)
\begin{itemize}
\item Nijntje gaat \textit{nieuw de bloem} plukken.
\item Miffy goes \textit{the new flower} pick
\end{itemize}
\item[b.] Scrambling of (definite) DO: DO Neg V
\begin{itemize}
\item Nijntje gaat \textit{de bloem niet} plukken.
\item Miffy goes \textit{the flower not} pick
\end{itemize}
\end{enumerate}

\begin{center}\begin{minipage}{.9\textwidth}
\vspace{0.5em}
\textbf{Example (4)}
\vspace{0.5em}
\begin{enumerate}
\item[a.] Base order (Dutch is SOV)
\begin{itemize}
\item Nijntje gaat \textit{nieuw de bloem} plukken.
\item Miffy goes \textit{the new flower} pick
\end{itemize}
\item[b.] Scrambling of (definite) DO: DO Neg V
\begin{itemize}
\item Nijntje gaat \textit{de bloem niet} plukken.
\item Miffy goes \textit{the flower not} pick
\end{itemize}
\end{enumerate}
\end{minipage}\end{center}

What Unsworth’s (cross-sectional) elicited-production results reveal, in brief, is that with respect to the scrambling of definite DP objects over negation, the L2 children and the L2 adults evince the same developmental sequence, different from the L1 Dutch developmental sequence, which is itself, nevertheless, subsumed within the L2 sequence \textit{(i.e. the last three stages)}.
As (5a) and (5b) indicate, only the English speakers, whose L1 is VO and lacks scrambling, start off by positing VO as the base order of Dutch. Two additional findings are also important: First, these first two stages with VO word order are not restricted to L2 adults, and second, the final stage where scrambling has become obligatory is not restricted to L2 children (see Unsworth 2002, 2005).

In sum: The comparison of the acquisition of scrambling in Dutch by L1 children and by L2 children and adults whose L1 is English demonstrates, in line with the syntactic part of DAM, that adult and child L2ers pass through the same developmental sequence — one that differs from that of the L1 child, due to L1 influence from English.

3. New test cases

With Model W and DAM as our background, we now turn to a couple of more recent child L2 developmental studies.

3.1 Tran (2005a, 2005b)

The first of our two new test cases comes from work by Jennie Tran. Tran’s (2005a, 2005b) study looks at the L2 acquisition of German by L1 English-speaking children. One of her goals was to see whether the robustly documented early L1 German contingency between verb form and verb position (e.g. Jordens 1990; Poeppel & Wexler 1993; Verrips & Weissenborn 1992) is replicated in early child L2 German. This contingency — exemplified in, respectively, (6a) and (6b) — is, first, that finite verbs appear in verb-second (V2) position but, second, that nonfinite verbs appear in sentence-final position, even when the utterance has no overt finite verb (and is therefore ungrammatical in mature German).

(6) a. V2 (OVS)
   Ein vase haben ich. (Poeppel & Wexler 1993: 14, (13b))
   A vase **have** I

b. V-final (SOV)
   Thorsten Caesar haben. (Poeppel & Wexler 1993: 11, (11))
   Thorsten C. (=doll) **to have**

Only very rarely in the child L1 German data do nonfinite verb forms appear in V2 position. Table 2, taken from Poeppel & Wexler (1993: 7, Table 2), illustrates the contingency in the breakdown of spontaneous production data from Andreas, a monolingual German acquirer, at age 2;1.
Table 2. Andreas (L1 German, 2;1): Finiteness and verb position, three or more constituents (from Poeppel & Wexler 1993: 7, Table 2)

<table>
<thead>
<tr>
<th>Verb in second (not final) position (V2)</th>
<th>+finite</th>
<th>–finite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verb in final (not V2) position</td>
<td>11</td>
<td>37</td>
</tr>
<tr>
<td>Verb in second (not final) position</td>
<td>197</td>
<td>6</td>
</tr>
</tbody>
</table>

The participants in Tran’s study were native English-speaking children at the Waldorf School in Honolulu. The Waldorf School first exposes its students to German via songs and nursery rhymes in kindergarten, i.e. when they are around 5 years old. Exposure to German outside of school is (unsurprisingly!) nonexistent. As children progress through the grades, emphasis shifts from words to grammar, but in such a way as to promote inductive learning, both through reading stories and from class lessons where the teacher, a native German speaker, almost always uses German as the language of instruction. German classes meet 3 times a week for 40 minutes. Children are first (intentionally) exposed to V2, the object of investigation in Tran’s study, in grade 5. Tran collected data from 14 participants who, at the time of testing, were in grades 3 to 7, aged approximately 8 to 12 (see Table 3, below, for the distribution of participants across grade levels).

For various reasons, including the fact that matrix SVO order is possible in both English and German, Tran wanted to elicit nonsubject-initial utterances to test for knowledge of V2, and so she therefore devised two elicited-production tasks where nonsubject-initial V2 clauses were quite natural. The first, the «Weekday Activity Task,» targeted sentence-initial (temporal) PPs, and the second, the «Stuffed Animal Task,» targeted sentence-initial objects (Os). Both tasks perfectly fulfilled their aim; every single elicited utterance started with the targeted constituent. (These two tasks as well as the picture-description task used to assess proficiency — see below — were administered to each child individually.)

In the Weekday Activity Task, the children were presented with a colorful calendar of the week with the days written in German and asked (in German) to name two activities they did on each day. Each child produced from 10 to 14 PP-topicalized utterances, such as those given in (7).

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8. Of course, the children receive V2 input well before this, since the teacher almost always speaks German to them.
(7) a. Am Donnerstag mache ich Hausaufgaben. (PPVSO)
On Thursday do-1sg I homework (DY, grade 7)
b. Am Dienstag tauchen ich. (PPVS)
On Tuesday dive-INF I (VI, grade 6)
c. Am Samstag ich Frühstück essen. (PPSOV)
On Saturday I breakfast eat-INF (HAY, grade 5)
d. Am Sonntag Vaters Auto waschen. (PPOV)
On Sunday father’s car wash-INF (VI, grade 6)
e. Am Montag ich spiele Basketball. (PPSVO)
On Tuesday I play-1sg basketball (KE, grade 6)
f. Am Sonntag ich schlafen . (PPSY)
On Sunday I sleep-INF (MI, grade 4)
g. Am Montag gehen in ein Auto. (PPV(PP))
On Monday go-INF in a car (MA, grade 4)

In the Stuffed Animal Task, the children were given a bag of stuffed animals, each with its name written on a name tag, and told to pretend that these were their own toys but that they had been sitting around a long time, and so their mother wanted them to decide what to do with them. As each child emptied the bag, a Santa Claus puppet popped up to help the child decide whether to keep, give away, or throw away each stuffed animal (Santa’s helpfulGerman spiel also provided the children with the three verbs, viz. «Welche wirst du behalten?» ‘Which will you keep?’; «Welche wirst du weggeben?» ‘Which will you away-give?’; «Und welche wirst du denn wegschmeißen?» ‘And which will you then away-throw?’). For this task, each child produced from 10 to 12 instances of O-focalized utterances, exemplified in (8):

(8) a. Susi behalte ich. (OVS)
Susi keep-1sg I
b. Lusie ich behalte. (OSV)
Lusie I keep-1sg
c. Susi behalten. (OV)
Susi keep-INF

Finally, the children also each completed a picture-description task where two sets of a series of pictures were presented to the child to narrate. The purpose of this task was to measure, independently of grade level, relative German proficiency (based on a composite score of, following Whong-Barr & Schwartz 2002, complexity (as determined by MLU) and accuracy (as determined by rate of error-free utterances); for details, see Tran 2005a, 2005b). The proficiency
results (as well as the grade-level breakdown) of participants are provided in Table 3, in order of descending score:

<table>
<thead>
<tr>
<th>Participant</th>
<th>Grade</th>
<th>Proficiency</th>
<th>Participant</th>
<th>Grade</th>
<th>Proficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE</td>
<td>7</td>
<td>30.68 (high)</td>
<td>HAY</td>
<td>5</td>
<td>22.40 (mid)</td>
</tr>
<tr>
<td>DY</td>
<td>7</td>
<td>25.93 (high)</td>
<td>MAT</td>
<td>7</td>
<td>19.93 (low)</td>
</tr>
<tr>
<td>DA</td>
<td>7</td>
<td>24.55 (high)</td>
<td>MI</td>
<td>4</td>
<td>19.40 (low)</td>
</tr>
<tr>
<td>JE</td>
<td>7</td>
<td>24.10 (high)</td>
<td>MA</td>
<td>4</td>
<td>17.96 (low)</td>
</tr>
<tr>
<td>VI</td>
<td>6</td>
<td>23.82 (mid)</td>
<td>KE</td>
<td>6</td>
<td>17.13 (low)</td>
</tr>
<tr>
<td>HAR</td>
<td>5</td>
<td>23.67 (mid)</td>
<td>NI</td>
<td>5</td>
<td>16.50 (low)</td>
</tr>
<tr>
<td>SI</td>
<td>5</td>
<td>22.95 (mid)</td>
<td>KA</td>
<td>3</td>
<td>16.46 (low)</td>
</tr>
</tbody>
</table>

Table 3. Child L2ers’ proficiency scores

In order to compare the L1 German data to the child L2 German data, Tran extracted from her results only those utterances that are unambiguously V2, as in (7a), (7b) and (8a), and those that are unambiguously verb-final, as in (7c) and (7d). She collapsed the Mid and Low groups because with respect to verb position and verb form, they pattern alike but differently from the High group, as we shall now see. Note also that for ease of exposition, here we examine the combined results from the two tasks (see Tran 2005b for results by individual on each task).

The first set of results, in Table 4, concerns the form of the verb in unambiguously verb-final utterances:

9. My thanks to Jennie Tran for this recalculation (11 August 2005), based on Tran (2005b: 13, Table 3).
10. The other orders were excluded from this analysis for the following reasons: (7e), PPSVO, is neither V2 nor verb-final; (7f), PPSV, is ambiguous in its derivation, either from SVPP or from SPPV; (7g), PPV(PP), lacks a subject, without which one cannot tell whether it is V2 or ‘verb third’, and the same is true for (8c), OV; and (8b), OSV, is also derivationally ambiguous, from either SVO or SOV. We return to the issue of word order below.
Starting with the High group, we see in Table 4 that there is but a single verb-final utterance, and the form of the verb is an infinitive. By contrast, children in the (combined) Mid & Low group produce many more verb-final utterances: Eight (i.e. 6+2) of these have finite forms, 6 of which are correctly inflected, and 26 have nonfinite forms, all of which are in the form of infinitives (not stems). The L2 child verb-final data thus parallel the verb-final data of developing L1 German (compare with Table 2).

We turn now to the verb form results in the unambiguously V2 utterances, given in Table 5.

### Table 4. Child L2ers’ verb form in V-final position
(from Tran 2005b: 19, Table 8)

<table>
<thead>
<tr>
<th></th>
<th>+finite V-final</th>
<th>–finite V-final</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Correct inflection</td>
<td>Incorrect inflection</td>
</tr>
<tr>
<td>High (n=4)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mid &amp; Low (n=10)</td>
<td>6</td>
<td>2</td>
</tr>
</tbody>
</table>

### Table 5. Child L2ers’ verb form in V2 position
(from Tran 2005b: 18, Table 7)

<table>
<thead>
<tr>
<th></th>
<th>+finite in V2 position</th>
<th>–finite in V2 position</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Correct inflection</td>
<td>Incorrect inflection</td>
</tr>
<tr>
<td>High (n=4)</td>
<td>78</td>
<td>0</td>
</tr>
<tr>
<td>Mid &amp; Low (n=10)</td>
<td>37</td>
<td>1</td>
</tr>
</tbody>
</table>

Again considering the High group first, we see in Table 5 that of the 80 verbs in V2 position, 78 (97.5%) are correctly inflected, and only 2 have the form of infinitives. As for the (combined) Mid & Low group, 38 (i.e. 37+1) out of 89 (i.e. 37+1+51) verbs in V2 position are finite, and all but one of these 38 are correctly inflected; the remaining 51 verbs in V2 position, however, are in the infinitival form.
Table 6 makes the comparison between child L1 German and child L2 German explicit. Note, first, that the High child L2ers are targetlike: only one V-final utterance (with an infinitival verb form), and 97.5% of (80) V2 utterances with correctly inflected finite verbs.

<table>
<thead>
<tr>
<th></th>
<th>Mid &amp; Low child L2ers (n=10)</th>
<th>Andreas L1 German</th>
<th>High child L2ers (n=4)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>+finite −finite</td>
<td>+finite −finite</td>
<td>+finite −finite</td>
</tr>
<tr>
<td>V2</td>
<td>38/89 (42.7%) 51/89 (57.3%)</td>
<td>197/203 (97%)</td>
<td>6/203 (3%)</td>
</tr>
<tr>
<td>V-final</td>
<td>8/34 (23.5%) 26/34 (76.5%)</td>
<td>11/48 (22.9%)</td>
<td>0 (0%)</td>
</tr>
</tbody>
</table>

Table 6. Child L1 and child L2 finiteness and verb position in German

The difference shows up in the comparison between Andreas and the Mid & Low child L2 group. While there is a single pattern for V-final utterances, with both at about 77% nonfinite verbs, for V2 utterances there is a striking contrast: a mere 3% of Andreas’ 203 V2 utterances have nonfinite verb forms but a full 57.3% of the Mid & Low child L2 group’s 89 V2 utterances have infinitival verb forms. These data show, then, that the verb form–verb position contingency in early L1 German does not hold in early child L2 German. The L2 children alone frequently place the infinitival form of verbs in V2 position; only for the L2 children, then, is there a developmental dissociation between syntax and inflection in the acquisition of V2. The upshot of these findings is that child L2 development does not follow the same route as L1 development in the domain of inflectional morphology, contrary to both Model W and DAM.

There are a few additional observations to highlight. First, the verbal inflection that the L2 children use is generally correct; like L1 German acquirers, they virtually never make errors of commission, nor do they use stem forms. To repeat, when they do not produce agreeing inflected verbs, they use infinitive forms.

Second, the fact that four child L2ers do look targetlike, and that these are the four with the highest German proficiency scores, suggests that what we have here may be a case of «different routes but same endstate» for child L2 acquisition vis-à-vis child L1 acquisition (in this domain). To confirm this, more participants tested on a fuller verbal paradigm are needed.
Third, although I know of no directly comparable data from English-speaking adult L2ers of German, there are documented cases of adult L2 German where the most common error of verb form is infinitival form in finite position; this has been shown, for instance, in the work by Prévost & White (2000) on the L2 acquisition of German by adult Romance speakers (see also Vainikka & Young-Scholten 1994, where similar errors are documented for Korean and Turkish adult L2ers of German). Should it turn out that English-speaking adult L2ers of German likewise have this very same pattern (and not make, in addition, agreement errors of commission with inflected verbs — see fn. 11), in particular in the nonsubject-initial V2 context, then this, again, would be counter to both Model W and DAM, since both predict that development of inflectional morphology will follow distinct paths in adult L2 vs. child L2 acquisition.

Finally, let’s take a quick look at (the development of) syntax. Data from the Weekday Activity Task offer evidence that some of the child L2ers still use SVO from their L1 as the base order, fronting PP to derive PPSVO and PPSV — call this ‘V3’ — as exemplified in (9):

(9) a. Am Montag ich spiele Basketball.  
    On Tuesday I play-1SG basketball  
    (KE, grade 6)

b. Am Sonntag ich schlafen.  
    On Sunday I sleep-INF  
    (MI, grade 4)

Table 7 is the breakdown of the word-order patterns produced in the Weekday Activity Task:

<table>
<thead>
<tr>
<th>Order Pattern</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPVS(O)</td>
<td>52</td>
<td>(33.3%)</td>
</tr>
<tr>
<td>PP(S)OV</td>
<td>35</td>
<td>(22.4%)</td>
</tr>
<tr>
<td>PPSV(O)</td>
<td>49</td>
<td>(31.4%)</td>
</tr>
<tr>
<td>PPV(PP)</td>
<td>10</td>
<td>(6.4%)</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
<td>(6.4%)</td>
</tr>
<tr>
<td>Total</td>
<td>156</td>
<td>(99.9%)</td>
</tr>
</tbody>
</table>

Table 7. Distribution of word order in the Weekday Activity Task
(adapted from Tran 2005b: 26, Table A1)

11. This type of error (infinitive form in finite position) is in addition to errors in verb form that, while finite, do not agree with the subject (e.g. Clahsen, Meisel & Pienemann 1983; Vainikka & Young-Scholten 1994).

12. Note that the only relevant data come from the Weekday Activity Task (targeting topicalized PPs), since the data from the Stuffed Animal Task (targeting focalized Os) all conformed to one of the patterns in (8) — viz. OVS, OSV, OV — all three of which are derivationally ambiguous with respect to SVO vs. SOV base order.
We see from Table 7 that of the total 156 elicited responses in this task, 49 (31.4%) are ‘V3’. While ‘V3’ orders are well documented in the literature on the adult L2 acquisition of German (and Dutch) (e.g. Clahsen, Meisel & Pienemann 1983; duPlessis, Solin, Travis & White 1987; Jansen, Lalleman & Muysken 1981; Meisel, Clahsen & Pienemann 1981; Schwartz & Sprouse 1994), they are virtually nonexistent in child L1 German (and Dutch, e.g. Jordens 1990). These findings from word order, then, run counter to Model W but, given the indications of syntactic transfer, are in line with DAM. (A fuller developmental analysis of the word-order patterns is in progress.)

Nevertheless, so far the child L2 inflectional data are not behaving well with respect to our two models. Our next case study, too, looks at verbal inflection, this time in the L2 acquisition of Spanish by child native speakers of English.

3.2. Herschensohn, Stevenson & Waltmunson (2005)

Like the Tran study, the Herschensohn, Stevenson & Waltmunson (2005) study takes place in a foreign language setting in the US, not a second language setting. However, in this case the children are in an immersion context, with each school day split half-half between English, their L1, and Spanish. The part of the day that’s in English is for the social science-humanities curriculum, whereas the part of the day that’s in Spanish is for the math and science curriculum. The latter is taught by a native Spanish speaker who, following the philosophy of immersion, uses Spanish exclusively. The 26 L2 children who took part had all begun their immersion schooling («in a medium-sized city with a relatively small Hispanic population» p. 201) in kindergarten (age 5); the testing took place in their second year (first grade), after approximately a year and half worth’s immersion. (This estimate is based on the assumption that the school year starts in the fall.) In addition, five of their L1 Spanish-speaking classmates served as controls.

Herschensohn et al. set out to investigate the L2 children’s knowledge of number in third person subject-verb agreement. They administered their production task twice, two months apart (in April and then in June). The elicitation

13. A forced-choice comprehension task was also conducted (two months earlier). In response to orally presented subjectless sentences containing either a 3sg or 3pl verb, the children had to pick between two photographs, one with a single protagonist (singular condition), the other with more than one (plural condition). Given that chance is 50%, it is not surprising that the child L2ers were more accurate (at
procedure was as follows: Seated in front of a computer screen, each child is individually shown a photograph; the child is then asked in Spanish what the protagonist or protagonists are doing, as in (10):

(10) a. ¿Qué hace Juan?  
   ‘What is Juan doing?’

b. ¿Qué hacen Juan y Pedro?  
   ‘What are Juan and Pedro doing?’

This was done for a total of 11 pictures, each targeting a different verb (the results from two pictures, intended for the verbs vestir ‘dress’ and dar ‘give’, were later excluded). Only when children could not remember the verb were they provided with a root (not in infinitive) prompt.

Despite the fact that the targeted subject-verb agreement was provided in the eliciting questions (as, for example, in (10)), the L2 children’s production of verbal inflection is predominantly inaccurate.

Accuracy results are given in Table 8, both in absolute terms, which includes correctness of the morphological stem, and in terms of number agreement only, which ignores stem-vowel errors. (From here on out, I give raw numbers (alongside percentages) whenever available in the original sources consulted.)

<table>
<thead>
<tr>
<th></th>
<th>Production task 1</th>
<th>Production task 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute accuracy</td>
<td>28%</td>
<td>40%</td>
</tr>
<tr>
<td>Number-only accuracy</td>
<td>38%</td>
<td>56%</td>
</tr>
</tbody>
</table>

Table 8. Child L2ers’ overall 3rd person subject-verb agreement accuracy

As shown in Table 8, the child L2ers — even by the more lenient criteria — produce target verbal inflection only 38% of the time on the first testing occasion and 56% of the time on the second. (By both analyses, the difference in accuracy between the testing times is statistically significant.) In what ways are the children’s verb forms faulty? By the absolute accuracy analysis, about 13% are marked as nonfinite, 30% comprise errors of person, stem vowel, tense or a rate of 78%) on this comprehension task than on the production tasks. For this reason, I focus on the results from the production tasks.

14. My thanks to Julia Herschensohn for combing the data and then discussing them extensively with me.
mood, and 57% are errors in number. Interestingly, this number error is not one of overgeneralization or the overuse of a default. According to the authors,

the substitution of singular for plural and plural for singular was about half and half, with each pupil showing both kinds of error. All of the children produced both of these options within a single set of clauses, and no child used one default form throughout. (Herschensohn, Stevenson & Waltmunson 2005: 207)

It is also interesting to note the qualitative difference between this L2 Spanish study and Tran’s L2 German study in terms of error type (and recall that English is the children’s L1 in both studies). When the verb was not correctly inflected in Tran’s study, it was an infinitive form; in the Herschensohn et al. study, when the verb was not correctly inflected, it was very unlikely to be an infinitive form but rather some other inflected form.

The next question we ask is: How does verbal inflection develop in L1 Spanish? According to Montrul’s (2004: 105-106; 111-113; 120) synthesis, the consensus from a number of studies on subject-verb agreement in L1 Spanish is that children’s verb forms distinguish person from the earliest ages studied, 1;7–1;8. Bel (2001) and Clahsen, Aveledo & Roca (2002) found that, during around that same period, children also produce utterances containing only an infinitive when a finite form is required — although relative to other child languages we know to have Root Infinitives, this stage in Spanish is very short-lived, going from a high at this age of 20%, in Bel’s study, and of 47% (20/42), in Clahsen et al.’s study, to below 5% by around age 2. As for subject-verb agreement errors, Montrul cites work by Bel (2001), Durán (2000) and Torrens (2002) indicating very low error rates; in Torrens’ study, for instance, such errors occur at a rate of less than 5%. Clahsen et al. cite a study by Radford & Ploennig-Pacheco (1995) in which 20% of 3sg forms used by a Mexican child appeared in 1st and 2nd contexts, whereas 1st and 2nd person forms themselves were always used correctly. On this basis, Radford & Ploennig-Pacheco suggest that the 3sg present-tense form may be the default in child Spanish. Clahsen et al.’s own longitudinal tracking of a Spanish-acquiring child, however, found minimal evidence of a 3sg default: only six such substitutions from age 1;7 to 2;8. In general, then, the incidence of subject-verb agreement errors in child L1 Spanish is quite low.

The development of verbal inflection in L1 Spanish, in sum, looks qualitatively different from what the Herschensohn et al. study found for child L2 Spanish. L2 children have a very high proportion of errors; L1 children, even at the very earliest stages, do not. With respect to 3rd person, L2 children
substitute singular inflection for plural, and plural inflection for singular; L1 children do not. These results thus point to quite different developmental routes in the child L1 and child L2 acquisition of Spanish, again contra both Model W and DAM.

Turning now to adult English speakers’ L2 acquisition of Spanish, here I rely on a study by Mezzano (2003), whose original data I reanalyzed.15 Mezzano collected data, using a variety of elicited-production tasks, from four adults in an L2 tutored context on two occasions, the first after 28 hours of Spanish instruction — from which the data in full are available and so will be our focus — and the second after 88 hours. The results from the first session show that of the 395 verb forms used, 379 (96%) were finite (of which only nine should have been infinitival), with the rate only slightly lower in the second session. Infinitives (16/395) are thus initially rare. The breakdown of agreement errors (from the first recording) is given in Table 9:

<table>
<thead>
<tr>
<th>Participant</th>
<th>Total finite verbs</th>
<th>Total errors</th>
<th>Errors of number</th>
<th>Errors of person</th>
<th>Errors of number + person</th>
<th>Other errors</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>67</td>
<td>14/67 (20.9%)</td>
<td>10/14 (71.4%)</td>
<td>3/14 (21.4%)</td>
<td>0/14 (0%)</td>
<td>1/14 (7.1%)</td>
</tr>
<tr>
<td>P2</td>
<td>62</td>
<td>11/62 (17.7%)</td>
<td>6/11 (54.6%)</td>
<td>2/11 (18.2%)</td>
<td>0/11 (0%)</td>
<td>3/11 (27.3%)</td>
</tr>
<tr>
<td>P3</td>
<td>107</td>
<td>28/107 (26.2%)</td>
<td>9/28 (32.1%)</td>
<td>14/28 (50.0%)</td>
<td>4/28 (14.3%)</td>
<td>1/28 (3.6%)</td>
</tr>
<tr>
<td>P4</td>
<td>143</td>
<td>39/143 (27.3%)</td>
<td>13/39 (33.3%)</td>
<td>9/39 (23.1%)</td>
<td>9/39 (23.1%)</td>
<td>8/39 (20.5%)</td>
</tr>
<tr>
<td>Total</td>
<td>379</td>
<td>92/379 (24.3%)</td>
<td>38/92 (41.3%)</td>
<td>28/92 (30.4%)</td>
<td>13/92 (14.1%)</td>
<td>13/92 (14.1%)</td>
</tr>
</tbody>
</table>

Table 9. Adult L2 subject-verb agreement errors:
Number, person, number + person

Table 9 shows that these adult L2ers correctly inflect verbs on average 75.7% of the time, with error rates ranging from P2’s 17.7% to P4’s 27.3%. P1 and P2 make more errors of number than person, as does P4 whose error distribution

15. My thanks to Silvina Montrul for making available both Mezzano (2003) and the raw data from that study.
is more even across the three main types; and P3 makes more errors of person than number. (In the second recording, of the 71 subject-verb agreement errors, 31 (44%) were number and 40 (56%) person.) The data also reveal that P1, P2 and P3 substitute singular for plural (exclusively), whereas P4’s tendency is the opposite. Mezzano notes, first, that «third person singular is not necessarily the default form» (p. 14), and second, that the verbs ser ‘be’ and gustar ‘be pleased by’ «account for the majority of the errors of number agreement» (p. 16), exemplified in (11) (my glossing):16

(11) a. ¿Qué hora es las clases? (target: son) (P1)
   ‘What time do classes start?’

   b. No me gusta las clases. (target: gusta) (P2)
   ‘I do not like the classes.’

(16) Of course the problem for the L2ers here may be that the subject, i.e. the plural las clases ‘the classes’, is linearly post-verbal in both (11a) and (11b).

The general picture we end up with is that subject-verb agreement is largely correct, that error rates are higher for number than for person for three of four adult L2ers, and that number errors for three of four L2 adults are exclusively singular-for-plural substitutions. So, although a direct comparison between the child L2 study and the adult L2 study is difficult if not tenuous for a variety of reasons (different amounts of exposure, different language contexts, no independent measure of proficiency, different tasks, different targets of inquiry, etc., etc.), two rather clear differences between the two sets of L2ers still emerge. First, the L2 child error rate on (3rd person) subject-verb agreement is much, much higher (62%) than that of the L2 adults (24.3%); and second, child L2ers’ number trouble goes both ways, i.e. they do not simply overgeneralize from 3sg to 3pl, whereas each of the L2 adults’ problem with number is, in the main, unidirectional. In short: The L2 adult results differ qualitatively from the L2 child results.

4. Some (not so) final remarks

The prediction of Model W, adopted by DAM, regarding the development of morphological inflection was not upheld in either of the child L2 investigations reviewed here: In neither did the L2 child developmental path mirror the L1 developmental path. The results of Tran’s (2005a, 2005b) study
of L1 English-speaking children acquiring German revealed two differences vis-à-vis German L1 acquisition: First, the child L2ers evince a developmental dissociation between verbal inflection and verb placement (in nonsubject-initial V2), and second, their considerable verbal inflection errors always took the shape of the infinitive, suggestive of a default.\textsuperscript{17} The Herschensohn \textit{et al.} (2005) study likewise showed that the L2 acquisition of Spanish by child L1 English speakers differed in two ways from the L1 acquisition of Spanish: First, child L2 error rates for (3rd person) subject-verb agreement are very high, the largest proportion being due to number, and second, number substitutions are bidirectional across the group. The child L2 Spanish data suggest developmental differences from adult L2 Spanish, too, but the child L2 German data may suggest a developmental parallel with adult L2 German, where the infinitive form also seems to serve as the default.\textsuperscript{18}

That the substitutions take different shapes in the two child L2 studies — infinitive\textsuperscript{19} for finite in child L2 German, but finite for finite in child L2 Spanish — is also worthy of note. So far, a unifying analysis for these two sets of child L2 inflectional data remains elusive. The fact that the children’s L1 in both studies is English implies that the cause of these two types of substitution errors cannot be the native language, at least not on its own. Whether the substitution split is due to the particularities of the verbal inflectional system in each of the

\textsuperscript{17} There is also one positive conclusion coming out of Tran’s study, namely that, as in adult L2 acquisition, there is syntactic transfer in child L2 acquisition, in line with the syntactic component of DAM (see (3)).

\textsuperscript{18} Recall that the test cases examined here were both in the context of foreign language acquisition in which the TL was the language of instruction, although the two learning environments were not equivalent in terms of amount and consistency of TL exposure: The L2 children in Tran’s study had approximately two hours per week in German, whereas the L2 children in the Herschensohn \textit{et al.} study had half their school week in Spanish. Of course quantity (as well as quality) of input matters; still, it is unknown whether stretching out TL exposure affects the route (as well as the rate) of language development. In this regard, it is interesting that Rothweiler (2006) found that in a second language immersion context in Germany, three L1 Turkish children whose initial German exposure ranged between 2;10 and 4;05 patterned like L1 German children in their acquisition of verb inflection and verb placement.

\textsuperscript{19} Hans Bennis suggests that this may not in fact be an infinitive, but rather a default of (plural) number. To test this, one would like to have a (near) minimal-pair case: \textit{i.e.} the same set-up as in the Tran study but where the (SOV, V2) Target Language distinguishes between the infinitive and (simple present) plural forms of the verb.
target languages alone or whether it is due to the particular pairings, *i.e.* the
(L1) English verbal inflectional system with the (TL) German verbal inflectional
system vs. the (L1) English verbal inflectional system with the (TL) Spanish
verbal inflectional (or whether it is due to something else, say, differences in
amount and consistency of TL exposure (see fn. 18), or that L2 acquisition (of
verbal inflection) at age 5 is too old to be considered «child L2 acquisition»),
awaits appropriate comparative child L2 research. Unraveling the mysteries of
child L2 development of (verbal) inflection has only just commenced.

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**Résumé**

Cet article applique une démarche comparative à l’étude de l’acquisition d’une L2 par l’enfant, un domaine encore peu exploré malgré le potentiel qu’il offre pour mieux comprendre la linguistique développementale. L’acquisition enfantine d’une L2 ressemblerait-elle à l’acquisition de la même langue en tant que L1 par l’enfant ou bien en tant que L2 par l’adulte? Ou encore à aucun des deux cas? Deux modèles récents, Weerman (2002) et Schwartz (2004a), tentent de fournir des éléments de réponse à cette question; le but de cet article est d’en évaluer la validité à travers la prise en compte de nouvelles données sur l’acquisition de la flexion (et syntaxe) verbale par l’enfant L2. Les études de cas discutées concernent l’acquisition de l’accord sujet-verbe par des groupes d’enfants ayant l’anglais comme L1 et dont l’exposition à la langue cible (allemand, espagnol) a commencé à l’âge de 5 ans. Des comparaisons sont effectuées entre les données chez l’enfant L2 et celles des enfants L1 d’un côté et des adultes L2 de l’autre, ainsi qu’entre les résultats principaux (non convergents) des études de cas abordées.