The second language instinct*

Bonnie D. Schwartz*

Department of Linguistics and English Language, University of Durham, Elvet Riverside II, New Elvet, Durham DH1 3JT, UK

Abstract

This paper proposes that the notion 'language instinct' appropriately characterizes nonnative language (L2) acquisition in two distinct ways. I argue that like native language (L1) development, L2 development, even by adults, relies on language instincts – despite L1-L2 differences at intermediate stages and in ultimate attainment – and that a primary source of L1-L2 differences is differences in their respective initial states. A variety of acquisition data, from the L2 child, the L2 adolescent and the L2 adult, are used to illustrate and assess three models that adopt this general characterization of L2 acquisition: Minimal Trees (Vainikka and Young-Scholten, 1994), Weak Transfer (Eubank, 1993/94) and Full Transfer/Full Access (Schwartz and Sprouse, 1996). These proposals differ on the extent of L1 influence, i.e., on the representation of the L2 initial state, and I show that the L2 data support Full Transfer/Full Access.

Keywords: Second language acquisition; L2 initial state; transfer; Universal Grammar

1. Introduction

Most language acquisition researchers would agree that there is something akin to a language instinct for native language (L1). But can the same be said of nonnative language (L2) acquisition and especially L2 acquisition by adults? In this paper I try
to make the case that the notion ‘language instinct’ applies equally well in the character-ization of L2 acquisition, with one crucial difference to L1 acquisition.

Consider first how Steven Pinker conceives of ‘the language instinct’ in his 1994 book of the same title:

“[Language] is a distinct piece of the biological makeup of our brains. Language is a complex, specialized skill, which develops in the child spontaneously, without conscious effort or formal instruction, is deployed without awareness of its underlying logic, is qualitatively the same in every individual, and is distinct from more general abilities to process information or behave intelligently. For these reasons some cognitive scientists have described language as a psychological faculty, a mental organ, a neural system, and a computational module. But I prefer the admittedly quaint term ‘instinct’” (Pinker, 1994: 18)

His remarks on adult L2 acquisition are rather different:

“Everyone knows that it is much more difficult to learn a second language in adulthood than a first language in childhood. Most adults never master a foreign language, especially the phonology – hence the ubiquitous foreign accent. Their development often ‘fossilizes’ into permanent error patterns that no teaching or correction can undo. [...] Many explanations have been advanced for children’s superiority: they exploit Motherese, make errors unself-consciously, are more motivated to communicate, like to conform, are not xenophobic or set in their ways, and have no first language to interfere. [...] Holding every other factor constant, a key factor stands out: sheer age. [...] In sum, acquisition of normal language is guaranteed for children up to the age of six, is steadily compromised from then until shortly after puberty, and is rare thereafter.” (Pinker, 1994: 290, 293)

My purpose here is not to argue that Pinker’s observations are wrong or unfounded: adult L2 acquisition does seem more ‘difficult’; accents and ‘errors’ and fossilization are the rule rather than the exception; and explicit instruction and corrective feedback are often futile. My purpose here is also certainly not to suggest that L2 acquisition is merely the replication of normal L1 acquisition (the position held by Epstein et al., 1996) – a position which is empirically untenable, as we shall see. Rather, what I propose to do is challenge Pinker’s conclusion, namely, that the key factor is age and hence that over time the language instinct as conceived for L1 acquisition comes to be, in Pinker’s metaphor, “dismantled” (Pinker, 1994: 294).

I will argue that nonnative language acquisition – in adults and in children – depends on three components: the L2 initial state, Universal Grammar (UG) and exposure to Target Language (TL) input.

(1) L2 initial state + UG + TL input ⇒ development of L2 knowledge

The key position in my argument is that ‘second language instinct’ can be conceived of in two different ways. First, it can be bracketed as in (2), i.e. there is an instinct for L2 acquirers to transfer knowledge of their L1 grammar:

(2) [second language] instinct = transfer = the L2 initial state

Unlike in the familiar (often ad hoc) discussions of transfer in the L2 acquisition literature, I use ‘transfer’ here in a very explicit yet overarching way: what is trans-
ferred from the L1 defines the L2 initial state, that is, it is the starting point of L2 acquisition (e.g. Hoekstra & Schwartz, 1994; Schwartz & Eubank, 1996).

The second way to bracket ‘second language instinct’ is as in (3), which is intended to convey the idea of relying on the language instinct a second time: in the course of L2 development, the intermediate systems – or grammars – of Interlanguage are constrained by Universal Grammar.

(3) second [language instinct] = Universal Grammar

The idea of combining transfer and UG is not new to the field of generative L2 acquisition, dating back to Lydia White’s work of the 1980s. What is innovative is using transfer to define the L2 initial state. Various explicit proposals on the extent of L1 influence in the L2 initial state have recently appeared (e.g. Eubank, 1993/94; Vainikka and Young-Scholten, 1994; Schwartz and Sprouse, 1996), all adopting the schema of (1). These will be presented and evaluated in what follows, by way of a range of L2 data from child, adolescent and adult acquirers.

The overall goal of this paper, then, is three-pronged: (i) to argue that L2 development does depend on the language instinct, despite obvious differences at intermediate stages and in ultimate attainment between normal L1 acquisition and typical (adult) L2 acquisition; (ii) to argue that ‘a key factor’ for these differences rests in large part on the L2 initial state; and (iii) to present relevant L2 data. In the course of so doing, I review three recent L2 acquisition models and, ultimately, argue for one conception of the L2 initial state in particular.


The first point to establish is that transfer is not something that distinguishes adult L2 acquisition from child L2 acquisition. Haznedar (1995, 1997a, 1997b) provides a longitudinal study of naturalistic child L2 acquisition. Her young subject, Erdem, is a 4-year-old Turkish-speaking boy acquiring English. This combination of languages is especially conducive to testing for the role of L1 in L2 development, given the many syntactic differences between the two languages – principal among them, the surface word order of verb and object: English is VO, whereas Turkish is OV, as shown in (4) where the object kitup (‘book’) precedes the verb al (‘buy’).

(4) (Ben) kitup al -ma -yacağ -üm
   (I) book buy -neg -future -1sg
   ‘I will not buy books’ (Haznedar, 1995: 5, (7))

To make a case for L1 transfer, one needs to find a significant difference between English L1 development and Erdem’s L2 development, where this difference plausibly derives from the structure of the L1. To preview, this is indeed what Haznedar found.
Erdem arrived in the U.K. at age 3; 11; for two months he was mostly at home with his parents, both native speakers of Turkish. Erdem’s initial encounter with English began (at age 4; 1) when he started nursery school, giving him exposure to English for 2.5 hours a day, five days a week. There was no special English instruction at school nor were there any other Turkish speakers in the class. Haznedar began collecting the data – all spontaneous production – from Erdem after only a month and a half at the nursery school, at a point which marks the onset of his English speech (at age 4; 3). At the earliest interviews, Erdem produced only isolated words, usually nouns. These interview sessions took place on average three times per month. While Haznedar collected nearly three years of data, here we look at data from the earliest periods.¹

One of the phenomena Haznedar (1995, 1997a,b) reports on concerns the position of the verb in relation to other VP-material, i.e. objects or adverbials. Erdem’s early utterances containing a verb are consistently verb-final, like Turkish. In the first 8 samples, the object or adverbial precedes the verb (i.e. the order XV) in 21 out of 23 cases – a rate of 91.3%. Examples are given in (5) and (6) (where ‘S’ stands for ‘sample number’):

(5) a. Investigator: Shall we play with your toys?  
Erdem: yes, toys play (Haznedar, 1995: 8, (11a): S3, 23 Mar 94)

b. Investigator: Where are we going now?  

c. [context: on swing at the playground]  
fast push (Haznedar, 1995: 8, (11c): S5, 11 Apr 94)

d. would you like to outside ball playing? (Haznedar, 1995: 6, (9a): S7, 6 May 94)


b. television watching (Haznedar, 1995: 6, (9c): S8, 20 May 94)

c. this cartoon # this cartoon television looking  
‘I watched this cartoon on television’ (Haznedar, 1995: 8, (12c): S8, 20 May 94)

This contrasts with L1 English developmental data, which are (S)VO. Thus, the initial and consistent production of the XV order in Erdem’s very early English is evidence, as Haznedar (1995, 1997a,b) argues, minimally for the transfer of VP from Turkish, i.e. evidence for the [second language] instinct.

Not surprisingly, Erdem is not forever stuck with an OV English. As can be seen in Haznedar’s Table 1, given in (7), Sample 9 (5 June 1994) marks an abrupt change in the position of the verb.

¹ I am indebted to Belma Haznedar for her generous help, especially for providing a copy of the table. Note that Haznedar (1997a,b) somewhat reworks Haznedar (1995), but these differences are not pertinent to the discussion here.
(7) Table 1  
Number and percentage of XV vs. VX utterances

<table>
<thead>
<tr>
<th>Sample</th>
<th>Recording date</th>
<th>XV</th>
<th>% XV</th>
<th>VX</th>
<th>% VX</th>
<th>Total</th>
</tr>
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<tr>
<td>S1</td>
<td>9 Mar 1994</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>S2</td>
<td>17 Mar 1994</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>S3</td>
<td>23 Mar 1994</td>
<td>2</td>
<td>100%</td>
<td>0</td>
<td>0%</td>
<td>2</td>
</tr>
<tr>
<td>S4</td>
<td>4 Apr 1994</td>
<td>1</td>
<td>100%</td>
<td>0</td>
<td>0%</td>
<td>1</td>
</tr>
<tr>
<td>S5</td>
<td>11 Apr 1994</td>
<td>7</td>
<td>100%</td>
<td>0</td>
<td>0%</td>
<td>7</td>
</tr>
<tr>
<td>S6</td>
<td>22 Apr 1994</td>
<td>2</td>
<td>66.67%</td>
<td>1</td>
<td>33.33%</td>
<td>3</td>
</tr>
<tr>
<td>S7</td>
<td>6 May 1994</td>
<td>3</td>
<td>100%</td>
<td>0</td>
<td>0%</td>
<td>3</td>
</tr>
<tr>
<td>S8</td>
<td>20 May 1994</td>
<td>6</td>
<td>85.71%</td>
<td>1</td>
<td>14.29%</td>
<td>7</td>
</tr>
<tr>
<td>S9</td>
<td>5 Jun 1994</td>
<td>0</td>
<td>0%</td>
<td>21</td>
<td>100%</td>
<td>21</td>
</tr>
<tr>
<td>S10</td>
<td>13 Jun 1994</td>
<td>4</td>
<td>9.52%</td>
<td>38</td>
<td>90.48%</td>
<td>42</td>
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<tr>
<td>S11</td>
<td>17 Jun 1994</td>
<td>5</td>
<td>16.67%</td>
<td>25</td>
<td>83.33%</td>
<td>30</td>
</tr>
<tr>
<td>S12</td>
<td>9 Aug 1994</td>
<td>0</td>
<td>0%</td>
<td>20</td>
<td>100%</td>
<td>20</td>
</tr>
<tr>
<td>S13</td>
<td>23 Aug 1994</td>
<td>0</td>
<td>0%</td>
<td>57</td>
<td>100%</td>
<td>57</td>
</tr>
<tr>
<td>S14</td>
<td>30 Aug 1994</td>
<td>1</td>
<td>6.67%</td>
<td>14</td>
<td>93.33%</td>
<td>15</td>
</tr>
<tr>
<td>S15</td>
<td>16 Sep 1994</td>
<td>1</td>
<td>1.78%</td>
<td>55</td>
<td>98.20%</td>
<td>56</td>
</tr>
<tr>
<td>S16</td>
<td>4 Oct 1994</td>
<td>1</td>
<td>1.20%</td>
<td>82</td>
<td>98.80%</td>
<td>83</td>
</tr>
<tr>
<td>S17</td>
<td>12 Oct 1994</td>
<td>1</td>
<td>1.06%</td>
<td>93</td>
<td>99.94%</td>
<td>94</td>
</tr>
<tr>
<td>S18</td>
<td>20 Oct 1994</td>
<td>1</td>
<td>1.06%</td>
<td>93</td>
<td>99.94%</td>
<td>94</td>
</tr>
<tr>
<td>S19</td>
<td>1 Nov 1994</td>
<td>0</td>
<td>0%</td>
<td>69</td>
<td>100%</td>
<td>69</td>
</tr>
<tr>
<td>S20</td>
<td>8 Nov 1994</td>
<td>0</td>
<td>0%</td>
<td>132</td>
<td>100%</td>
<td>132</td>
</tr>
<tr>
<td>S21</td>
<td>15 Nov 1994</td>
<td>0</td>
<td>0%</td>
<td>79</td>
<td>100%</td>
<td>79</td>
</tr>
<tr>
<td>S22</td>
<td>22 Nov 1994</td>
<td>0</td>
<td>0%</td>
<td>83</td>
<td>100%</td>
<td>83</td>
</tr>
</tbody>
</table>

From this point on, Erdem's utterances consistently display the order VX. Some early VX utterances are provided in (8):

(8) a. I am watching the television (Haznedar, 1995: 9, (14c): S8, 20 May 94)
     b. you eating apple (Haznedar, 1995: 8, (13a): S9, 5 June 94)
     c. my daddy always playing me (Haznedar, 1995: 8, (13b): S9, 5 June 94)
     d. I am talking very very fast (Haznedar, 1995: 8, (13c): S9, 5 June 94)
     e. big man is playing toys (Haznedar, 1995: 8, (13d): S9, 5 June 94)
     f. I'm drink the milk (Haznedar, 1995: 9, (14d): S9, 5 June 94)
     g. going this way (Haznedar, 1995: 9, (14a): S10, 13 June 94)
     h. my mum is go to the shopping (Haznedar, 1995: 9, (14b): S10, 13 June 94)
     i. this teddy bear is looking that (Haznedar, 1995: 9, (14e): S10, 13 June 94)

Under Haznedar's analysis, between Samples 8 and 9 the headedness of VP has switched from the Turkish head-final (SOV) to the English head-medial (SVO). Erdem's data thus support both ways of bracketing 'second language instinct': first there is transfer, and then the language instinct is engaged a second time, resetting the headedness parameter on the basis of TL input. (For another possible analysis of the change from surface OV order to surface VO order, see Schwartz, in press.)
2.1. Model 1: Minimal Trees

Haznedar's developmental data on verb placement repeat a pattern which is becoming increasingly familiar in the L2 acquisition literature (e.g. Jansen et al., 1981; Jagtman and Bongaerts, 1994), namely, that constituent order in lexical projections transfers, later to be replaced by TL constituent order.

Such a view of transfer is consistent with the Minimal Trees hypothesis of Vainikka and Young-Scholten (1994, 1996a,b). They capitalize on the distinction between lexical and functional categories and claim that whereas lexical projections and their linear order transfer into the L2 initial state, functional projections do not. 'Growth' of an Interlanguage grammar stems from the addition of functional categories, based on Lexical Learning; in fact, under their view, L2 development consists of the progressive addition of functional structure, going up the tree – i.e. IP before CP. The Minimal Trees hypothesis is thus very similar (though not identical) to the Weak Continuity hypothesis (e.g. Vainikka, 1993/94; Clahsen et al., 1994) proposed for L1 acquisition.

The original empirical motivation for the Minimal Trees hypothesis was as follows. Vainikka and Young-Scholten compare L2 German data from adults whose L1 is either (i) Korean or Turkish (Vainikka and Young-Scholten, 1994), both OV, or (ii) Italian, Portuguese or Spanish (e.g. Meisel et al., 1981; Clahsen and Muysken, 1986; Vainikka and Young-Scholten, 1996a), which are VO. As is well known, the surface syntax of German in embedded clauses is OV; in main clauses German respects the verb-second constraint. As for the Interlanguage German, the least proficient Koreans and Turks produce main clauses that are (S)OV, whereas the Romance subjects start off (S)VO. In these early data, there is little evidence of (correct) verbal inflection or of auxiliary and modal verbs. From this Vainikka and Young-Scholten conclude that functional projections are absent; hence, the L2 initial state, at the sentential level, consists of VP, head-medial (SVO) for the Romance speakers and right-headed (SOV) for the Koreans and Turks. Subsequently, the Koreans and Turks produce VO orders; this leads Vainikka and Young-Scholten to conclude that a functional head must now be present, to serve as a landing site for verb raising out of the VP, which has remained head-final. Since the morphological form of the (raised) verb is mostly incorrect, and since auxiliary and modal verbs are still rare, Vainikka and Young-Scholten hypothesize that this landing site heads an underspecified functional projection, FP (for Finite Phrase). FP becomes specified as a full-fledged AgrP only later, once auxiliaries and modals occur with some regularity and the appropriate inflectional morphology on the (raised) verb is found.

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2 Verbal inflection does not agree with the subject or, more often, the verb is realized as an infinitival or stem form. These L2 data are thus strikingly different from those in German L1 acquisition, where virtually all raised verbs show targetlike agreement with the subject, that is, virtually no raised verbs realize either non-agreeing or infinitival/stem forms. See, e.g., Jordens (1990) and Poeppel and Wexler (1993).
2.1. Evidence for more transfer than posited in Minimal Trees

This first view of transfer – that L1 lexical projections alone constitute the L2 initial state – is the most restrictive of the three conceptions of transfer we will consider. In principle, there are three kinds of evidence that could undermine such a position.

The first type is evidence that functional structure as instantiated in the L1 does characterize the earliest phases of L2 development. Such evidence might appear to be the most obvious type to look for; however, it is also often the most elusive and ambiguous. This is because functional heads are typically associated with morphological affixes or elements such as complementizers. When the regular use of (correctly) inflected verbs and of complementizers has been found – as in the study by Grondin and White (1996) on child L2 acquisition of French – a proponent of Minimal Trees can simply counter that the data do not reflect an early enough stage (as Vainikka and Young-Scholten, 1996b: 126 indeed argue).

L2 data that unambiguously suggest early L1 functional structure do, nevertheless, exist. Consider, for instance, Erdem’s early negative placement. His first negated utterances (both verbal and nominal) are consistently neg-final (e.g. finish no, Sample 1), in line with the patterning of negation in Turkish (see, e.g., (4)) – and completely unlike what is found in early L1 English. As Haznedar (1995, 1997a,b) argues, under the assumptions that Neg is a functional head, the neg-final order is evidence against the very narrow conception of transfer defended by proponents of Minimal Trees.

The second type of counterevidence to transfer as conceived in Minimal Trees is evidence for Interlanguage phenomena necessarily invoking functional structure at some intermediate stage that, on the one hand, could not have arisen from TL input interacting with UG, but, on the other, are present in the L1 grammar. And the third type involves a comparison of L2 development and L1 development: since Minimal Trees predicts L1-L2 similarities in progressively building the tree (that is, once the TL constituent order in lexical projections is acquired), it follows that substantial L1-L2 developmental divergences which implicate functional structure constitute a challenge to this conception of transfer. These two types of counterevidence are considered next, this time using data from adolescent L2 acquisition.


In a series of studies, White (1990/91, 1991, 1992) investigated the position of adverbs in the L2 English of 11- and 12-year-old francophone Canadians, whose exposure to English was in a school setting. A variety of data collection tasks – acceptability-judgment, preference and elicited-production – all show that these speakers experience considerable difficulty with English frequency (e.g. often) and manner (e.g. quickly) adverbs in sentence-internal position.

The facts on adverb placement in the two languages are well known: in French the finite thematic verb must precede the adverb ((9)), whereas English shows the
opposite pattern ((10)). The French SVAdvO order is ungrammatical in English, and likewise the English SAdvVO order is ungrammatical in French.

(9) French
   a. SVAdvO  Marie *prend *souvent le métro
   b. *SAdvVO  *Marie souvent *prend le métro

(10) English
   a. *SVAdvO  *Marie *takes *often the metro
   b. SAdvVO  Marie often *takes the metro

The L2 adolescents in White’s studies readily accept and produce sentences in English with the ungrammatical SVAdvO order, as in (10a). Our concern is the source of this error.

Recall that according to Minimal Trees, only lexical projections and their linear orientation transfer. Under a standard analysis of French, VP-adverbs are base-generated at the left periphery of VP (Emonds, 1978); so under Minimal Trees, the L2 acquirers’ (L2ers’) initial state will generate a phrase marker as in (11), with the adverb left-adjoined to VP (Pollock, 1989):

(11)

![Diagram](image)

In (11) the adverb precedes the verb; this is the sole position for the verb, since, by hypothesis, there are no functional projections in the L2 initial state – which means there is no position for the verb to move to. If (11) is the L2 adolescents’ representation, how then can their SVAdvO error result? Note that when they get English input containing a sentence-medial adverb and a finite transitive verb, as in (10a), it will exhibit the SAdvVO order.

With (11) as their initial representation and (10b) as the input type, francophone acquirers of English should not allow the finite thematic verb to precede the adverb. Yet, not only is the order SVAdvO frequently produced and accepted by the young adolescents in White’s studies, but anecdotal evidence suggests that it also persists into advanced levels of Interlanguage English.

Let us therefore assume that in addition to lexical architecture, more of the L1 grammar transfers, specifically, the functional projection immediately dominating VP (call it FP):
If one also assumes transfer of French verb movement (Pollock, 1989), V to F in (12), the Interlanguage English VAdvO order is then derivable. Indeed, this is precisely the analysis that White (1990/91, 1991, 1992) assigns to these data. This presupposes, of course, that the L2 initial state must be characterized as more than the bare VP of Minimal Trees.

The final type of counterevidence to Minimal Trees is evidence for L1-L2 developmental differences that implicate functional structure. For the sake of argument, let us suppose, as Vainikka and Young-Scholten do, that functional projections 'grow' in L1 acquisition as well (e.g. Vainikka, 1993/94; Clahsen et al., 1994). This means that (11) is also the state of L1 English before the addition of functional structure. Again, the relevant type of input English L1 acquirers get is like (10b). And just as one would expect, children acquiring English as their native language never pass through a stage in which they allow the order SVAdvO, i.e. L1 English-speaking children do not incorrectly raise thematic verbs past the adverb; instead, they produce SAdvVO. In sum, transfer as conceived under Minimal Trees predicts that once the VP constituent order is targetlike, the progressive building of functional architecture will be the same in L1 and L2 development. But as the data show, the L1 and L2 developmental patterns are quite distinct. (For fuller arguments and counterarguments regarding these adverb placement data, see Vainikka and Young-Scholten, 1996b; Schwartz and Sprouse, 1996.)

The above arguments illustrate two types of counterevidence to the Minimal Trees conception of transfer: (i) the error that is observed is not derivable solely from the L1 VP plus TL input, and (ii) it is not found in L1 development. Transfer of more of the L1 grammar is apparently required to explain the data, specifically, at least the head (and specifier – see fn. 3) of the functional projection dominating VP (as illustrated in (12)).

3 To get the subject in front of the verb (SVAdvO), raising the subject leftward out of VP must also be assumed, another property attributable to transfer from French.
3.1. Model 2: Weak Transfer/Valueless Features

How much more of the L1 defines the L2 initial state? Eubank’s (1993/94, 1996) ‘Weak Transfer’ hypothesis – also called the ‘Valueless Features’ hypothesis – offers one possible answer to this question.

In Eubank’s (1993/94) model, both lexical and functional projections from the L1 transfer; however, morphologically-driven syntactic information, i.e. ‘strength’ of inflection, does not. Eubank adopts the view that certain syntactic phenomena such as verb raising depend on the values of inflectional features (Pollock, 1989; Chomsky, 1993; *inter alia*), and that these feature-values are in turn determined by morphological paradigms (e.g. Rohrbacher, 1994). English has a meager verbal paradigm and hence its feature-value for inflection is [weak] (or [−strong]), whereas in French the verbal paradigm is fuller and inflection is assigned the value [strong]. This difference in feature-values correlates with differences in verb placement: finite verbs in French raise (overtly); finite main verbs in English do not.

Some of the original empirical motivation behind Eubank’s model came from verb placement in French-English Interlanguage. He points out that the data from White’s studies indicate that an adverb may either follow or precede the finite thematic verb, i.e. the L2ers allow both SVAdvO and SAdvVO. Eubank takes these data as evidence for the optionality of (‘short’) verb movement. This optionality arises, according to Eubank, from there being no way to specify the feature-value of the head of the functional projection (IP) dominating VP. This is because inflectional information necessary to the determination of the feature-value does not transfer (and has not yet been acquired). As the feature of INFL is initially ‘valueless’ – in Eubank’s terms, <inert> – this ‘results’ in optional verb raising, capturing the permissive patterning of AdvVO and VAdvO.5 Development under the Weak Transfer model is dependent on acquiring morphology, specifically morphological paradigms: for example, once verbal inflection in English is acquired, the value of INFL is specified as [−strong], which in turn results in no verb raising.6

3.2. Evidence for more transfer than posited in Weak Transfer

Eubank’s view of transfer – and hence of the L2 initial state – is broader than that of Minimal Trees: both lexical and functional categories transfer but strength of feature-values does not. Again there are at least three ways to put this second conception of transfer to the empirical test.

The first type of counterevidence would be evidence that feature-values (i.e. [±strong]) as instantiated in the L1 do in fact characterize the earliest L2 stage; for

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* In Eubank (1993/94), this is actually TP; for the illustrative purposes here, IP will do.
* Why an <inert> value of a feature should give rise to optionality of movement has never been addressed; one could just as easily imagine that an <inert> value results in, say, no movement.
* For the full set of data considered by Eubank in regard to verb raising in French-English Interlanguage, see his 1993/94 article, and for further developments, see Eubank (1996); for a critique of his approach and counteranalyses, see Schwartz and Sprouse (1996, 1997a).
instance, movement that is obligatory in the L1 being initially obligatory in the Inter-
language (or the opposite, i.e. obligatory non-movement operations in the L1 also
realized in the initial Interlanguage as obligatory non-movement). The second type
of evidence just requires that non-optionality of movement be in evidence at the
earliest stage. Both these types of evidence are hard to find, principally because
they both demand evidence from the ever-elusive ‘earliest’ stage of L2 development.

The third type of counterevidence is in principle more readily available, precisely
because it does not need data from the earliest phases. Rather, it merely requires
comparing the L2 acquisition of a given language (L) by several L2ers or groups of
L2ers whose L1s differ in regard to some feature regulating movement. The Weak
Transfer hypothesis predicts that regardless of L1 strength specification, all L2ers
acquiring L should pattern the same in regard to movement, specifically, permit
optional movement. If L2 data on movement from L2ers with distinct L1s instead
exhibit L1-correlated patterns, then such data would argue against this second con-
ception of transfer. The argument should become clear as we go through the next set
of data – this time from L2 adults.

4. Adult L2 development: Parodi et al. (1997)

Parodi et al. (1997) studied the acquisition of German nominals by native speak-
ers of Korean, Turkish, Italian and Spanish. One of the phenomena they examined
was the relative order of noun and adjective. The languages involved differ in this
regard. Consider first the data in (13) for German, Korean and Turkish:

(13) a. German: jene drei interessanten Bücher
   those three interesting.pl books    (Parodi et al., 1997: (7b))

b. Korean: ku se -kwon -uy caemiissnun chaek -tul
   that three -class -gen interesting book -pl
   ‘those three interesting (volumes of) books’    (Parodi et al.,
                                           1997: (11c))

c. Turkish: ben -im pekçok ilginç kitab -im
   1sg -gen many interesting book -1sg
   ‘my many interesting books’    (Parodi et al., 1997: (13b))

In these three languages, the adjective must precede the noun. For Korean and Turk-
ish speakers, then, the adjective-noun order matches that of German, the Target Lan-
guage. The situation is different, however, for speakers of Italian and Spanish, illus-
trated in (14):

Note that in regard to falsifying Weak Transfer, evidence could consist of any type of non-option-
ality of movement at the earliest phase. This could be either in conformity with the L1 or irrespective of
the L1; the latter case would not constitute evidence of transfer, of course, but it would still be coun-
terevidence to Weak Transfer.
(14) a. Italian: quei tre libri interessanti
Spanish: esos tres libros interesantes
those three books interesting.pl
‘those three interesting books’ (Parodi et al., 1997: (18a))

b. Italian: un uomo povero
Spanish: un hombre pobre
a man poor
‘a poor man’ (Parodi et al., 1997: (18f))

c. Italian: un pover’ uomo
Spanish: un pobre hombre
a poor man
‘a pitiable man’ (Parodi et al., 1997: (18g))

d. Italian: quei tre interessanti libri (cf. (14a))
Spanish: esos tres interesantes libros (cf. (14a))
those three interesting.pl books
‘those three INTERESTING books’ (Parodi et al., 1997: (18h))

In Italian and Spanish (henceforth ‘Romance’), the typical position of adjectives is
after the noun, as in (14a). Some attributive adjectives may occur both post-nominal-
ly and pre-nominally, but with a change in meaning (compare (14b) and (14c)).
An attributive adjective whose position is typically post-nominal, as in (14a), can
often occur pre-nominally, for emphasis, as in (14d).

The question arises as to how to derive the relative orders between noun and
adjective. It is assumed that the minimal structural configuration these languages
share is as in (15):

(15) FP
     /\                    /\
    F'  F     NP
     /\  /\    /\  /\
    F  AdjP NP  NP  Adj  N

The adjective is generated in an adjoined position, similar to the base order of
adverbs in relation to verbs. The surface order adjective-noun – in German, Korean
and Turkish – reflects this base order. As for Romance, much comparative research
(e.g. Bernstein, 1991, 1992; Picallo, 1991; Cinque, 1994) has come to the consensus
that the noun-adjective order results from raising the noun to some functional head,
call it F, higher than the adjective. This is shown in (16):

(16) ... [F N_i [NP AdjP [NP [N \ t_i ]]]]
In sum, the order Adj-N, found in all four languages at hand, reflects the order in which these elements are base generated. The reverse order, N-Adj, permitted only in Romance, is derived via nominal head movement to a higher functional head.

The L2 German data come from three groups of untutored adult acquirers: (i) cross-sectional data from 8 Korean speakers, an elementary level (n=2) and a more advanced level (n=6), whose spontaneous speech was collected in the LEXLERN Project (see Clahsen et al., 1990); (ii) longitudinal and cross-sectional data from 3 Turkish speakers, the longitudinal data (n=2) from the ESF Project (see Klein and Perdue, 1992) and the cross-sectional data from von Stutterheim (1986); and (iii) longitudinal data from 4 Romance (3 Italian, 1 Spanish) speakers in the ZISA Project (Meisel et al., 1981), whose spontaneous speech was recorded at regular intervals, starting at about 1.5 to 5 months after arrival in Germany.  

Recall that the question of interest is whether the three L1 groups pattern the same, since only in Romance are post-nominal adjectives permitted. The table in (17) gives a breakdown of the incidence of post-nominal adjectives among the L2 subjects:

(17) Raw numbers and percentages of N-Adj order

<table>
<thead>
<tr>
<th>Language</th>
<th>Subject</th>
<th>Adjectives</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Koreans</td>
<td></td>
<td>1/102</td>
<td>(1.0%)</td>
</tr>
<tr>
<td>Turks</td>
<td></td>
<td>0/103</td>
<td>(0%)</td>
</tr>
<tr>
<td>Italian:</td>
<td>Bongiovanni I</td>
<td>3/8</td>
<td>(37.5%)</td>
</tr>
<tr>
<td></td>
<td>Bongiovanni II</td>
<td>1/5</td>
<td>(20.0%)</td>
</tr>
<tr>
<td>Italian:</td>
<td>Lina I</td>
<td>3/23</td>
<td>(13.0%)</td>
</tr>
<tr>
<td></td>
<td>Lina II</td>
<td>0/8</td>
<td>(0%)</td>
</tr>
<tr>
<td></td>
<td>Lina III</td>
<td>1/11</td>
<td>(9.1%)</td>
</tr>
<tr>
<td>Italian:</td>
<td>Bruno I</td>
<td>9/32</td>
<td>(28.1%)</td>
</tr>
<tr>
<td></td>
<td>Bruno II</td>
<td>17/64</td>
<td>(26.6%)</td>
</tr>
<tr>
<td></td>
<td>Bruno III</td>
<td>0/12</td>
<td>(0%)</td>
</tr>
<tr>
<td>Spanish:</td>
<td>Ana I</td>
<td>7/28</td>
<td>(25.0%)</td>
</tr>
<tr>
<td></td>
<td>Ana II</td>
<td>0/10</td>
<td>(0%)</td>
</tr>
</tbody>
</table>

(from Parodi et al., 1997: Table 2)

As the table shows, the noun-adjective order is differentiated by L1 group. In the data from the Korean and Turkish speakers, there was a total of 205 adnominal adjectives, 102 from the Koreans and 103 from the Turks. All except one (produced by Gabho, a level I Korean) appeared in pre-nominal position. Two example utterances are given in (18):

(18) a. das arme Fisch  
the poor fish  
correct form: der arme Fisch  
(Gabho, Korean, level I)

(Parodi et al., 1997: (25a))

---

8 Different data-collection periods for the Turkish and Romance speakers are indicated below – for example, ‘Bongiovanni (cycle) II’ is later than ‘Bongiovanni (cycle) I’.
b. schöne Wald  
  nice forest  
  correct form: der schöne Wald  
  (Ilhami, Turkish, cycle I)  
  (Parodi et al., 1997: (25b))

In contrast, both pre- and post-nominal adjectives were attested in the data from all the Romance subjects. Consider the utterances in (19) as illustration:

(19) a. neue Auto  
  new car  
  correct form: neues Auto  
  (Bongiovanni, Italian, cycle I)

b. eine Schlüssel normal  
  a key normal  
  correct form: ein normaler Schlüssel  
  a normal key  
  (Bongiovanni, Italian, cycle I)

c. schöne Wetter  
  nice weather  
  correct form: schönes Wetter  
  (Parodi et al., 1997: (26b))

d. von meine Schwester verheirat  
  from my sister married  
  correct form: von meiner verheirateten Schwester  
  from my married sister  
  (Bongiovanni, Italian, cycle II)

These L1-differentiated results thus constitute evidence against Eubank’s proposal on transfer. No matter what the exact content of the feature that drives overt noun movement in Romance – Number is often suggested – in order to derive the N-Adj order, this feature in F must have a [strong] value. Recall that under Weak Transfer, feature-values do not transfer; this means that all the L2 adults, including the Koreans and Turks, should start off without the value of F specified, i.e. F should initially be <inert>. This predicts that they should all allow both Adj-N and N-Adj, the latter resulting from (optional) noun movement. But as the data show, the adjective placement of the L2 adults is differentiated, dividing along lines of L1, which suggests that the source of the division is in fact the L1 grammar.

The German-Interlanguages of the Koreans and Turks do not generate the N-Adj order because this is not generable in their L1 and because no German input would steer them otherwise. By contrast, in spite of this same German input, which gives no evidence of the N-Adj order, the Romance speakers do produce post-nominal adjectives because their L1 grammar generates this order via noun movement. So one is led to the general hypothesis that where there is no movement in the L1, there is no evidence of movement in the initial Interlanguage, but where there is movement in the L1 (despite no evidence of it in the TL), this movement is seen in the initial stages of the Interlanguage – and beyond.

The above hypothesis does not imply that L2ers cannot acquire movement. If the Target Language has overt movement with respect to phenomenon P, then TL input containing P can provide evidence for movement to L2ers whose L1 lacks movement for P, and so it is predicted that movement (for P) will characterize their Interlan-
language at some point subsequent to the L2 initial state. An example of just such a scenario can be found in the study by Hawkins et al. (1993) on the (tutored) acquisition of French by English speakers. While the absence of thematic verb raising characterizes their L1, they do come to know that in French all finite verbs raise past adverbs. Another example comes from the study by Bley-Vroman et al. (1988) on the acquisition of English by Korean speakers, but this time in regard to phrasal movement. Whereas Korean lacks overt wh-movement, these L2 adults do come to know that in English, overt wh-movement (in questions) is obligatory. Results such as these, then, are additional instances of the second way to bracket 'second language instinct', i.e. relying on UG again in the course of constructing the Interlanguage.

What about the opposite case, where the L1 has movement but the TL does not? Such a scenario exemplifies delearning, one which for a variety of reasons might prove more troublesome to L2 acquirers (for discussion, see White, 1989; Schwartz and Sprouse, 1994). This situation is in fact what the Romance speakers face in acquiring German nominals; they have to delearn noun raising. The longitudinal data in Parodi et al. speak to this issue. (17) shows that for all the Romance speakers, the percentage of N-Adj order in nominals declines over time, dropping all the way to zero for two of them, Bruno III (0/12) and Ana II (0/10). Only experimental evidence showing that Romance speakers (eventually) prohibit the N-Adj order in their German Interlanguage would definitively indicate that noun raising has been delearned – but these results are suggestive nonetheless.

4.1. Model 3: Full Transfer/Full Access

So far we have seen evidence of transfer in the L2 child, the L2 adolescent and the L2 adult. Although the Weak Transfer model posits more influence from the L1 than the Minimal Trees model, it was still found to be insufficient. In the Full Transfer/Full Access model that Rex Sprouse and I have been developing (Schwartz, 1998, in press; Schwartz and Sprouse, 1994, 1996, 1997a,b; Sprouse and Schwartz, 1998), the most extreme of the three conceptions of transfer is adopted, a kind of ‘no holds barred’ view of L1 influence: in brief, the final state of L1 acquisition defines the initial state of L2 acquisition. We see Full Transfer/Full Access (FT/FA) as pushing many ideas in Lydia White’s work (e.g. 1985, 1989, 1990/91) to their logical limit, contending that Interlanguage development is constrained both by the L1 grammar and by UG.

According to the ‘Full Transfer’ part of FT/FA, the entirety of the L1 grammar (excluding the phonetic matrices of lexical/morphological items) is the L2 initial state; in other words, all of the abstract syntactic properties of the L1 transfer. This means that the L1 grammar is the first ‘way station’ for TL input, imposing analyses on this input and potentially deriving analyses quite distinct from those of the native speaker. Input that cannot be so accommodated at any point can cause the system to restructure; hence, syntactic development is ‘failure-driven’. In some cases, this revision may occur rapidly; in others, much more time may be needed. All such revision is hypothesized to fall within the hypothesis space of UG, the same hypothesis space of L1 acquisition (hence the ‘Full Access’ part of FT/FA).
Embedded in this approach to L2 development are two auxiliary points. First, following Bley-Vroman (1983), Interlanguage should not be analyzed from the perspective of the Target Language grammar, but rather in terms of its own internal coherence (for discussion, see Schwartz, 1997). Second, convergence on the TL grammar is not guaranteed; this is because unlike in L1 acquisition, the L2 starting point is not simply open or set to 'defaults', and so the data needed to force L2 restructuring could be either nonexistent or obscure. Under FT/FA, the starting points of L1 and L2 acquisition differ, and the endpoints of L1 and L2 acquisition are likely to differ; however, this does not imply that the cognitive processes underlying L1 and L2 acquisition differ. Indeed, we maintain that precisely because (i) UG and learnability principles (Pinker’s language instinct) are constant across L1 and L2 acquisition of \( L \) but (ii) their initial states are distinct, the ‘final states’ of L2 acquisition of \( L \) do not systematically replicate the final state of L1 acquisition of \( L \).


Perhaps the clearest L2 acquisition study that single-handedly exemplifies the essence of FT/FA, in relation to initial L1 influence as well as subsequent development, is Hulk (1991). Hulk investigated the development of verb syntax in Dutch acquirers of French. In this regard, Dutch and French differ in two important respects, illustrated in (20) (with non-pertinent details omitted):

(20) a. Dutch: SOV and, in matrix clauses, V2  
    \[
    \text{[CP AdvP [CP \( \text{V} \)\{\( \text{fin} \}\} [IP S [VP \text{V} [IP \text{S \{VP NP V\}]]]]]]}
    \]

b. French: (XP)SVO in matrix and embedded clauses  
    \[
    \text{[IP AdvP [IP S [VP \text{V} [CP [\( \text{S} \) que] [IP S \{VP V NP\}]]]]]]}
    \]

Dutch is SOV in surface syntax, whereas French is SVO; Dutch is verb-second (V2) in matrix clauses, while French is not, although French does allow topicalization (of e.g. Adverbs) to pre-subject position – call it adjunction to IP. These differences are exemplified in (21) and (22):

(21) Dutch

a. \( \text{SAuxOV} \)  
   Jan \underline{heeft} de aardbeien \underline{gegeten}  
   Jan \underline{has} the strawberries \underline{eaten}

b. \( \text{AdvAuxSOV} \)  
   Gisteren \underline{heeft} Jan de aardbeien \underline{gegeten}  
   Yesterday \underline{has} Jan the strawberries \underline{eaten}

c. \( \text{AdvVSO} \)  
   Gisteren \underline{at} Jan de aardbeien  
   Yesterday \underline{ate} Jan the strawberries

d. \( \ldots \) COMP SOV  
   (Ik geloof) dat Jan de aardbeien \underline{at}  
   (I believe) that Jan the strawberries \underline{ate}

e. \( \ldots \) COMP SOVAux  
   (Ik geloof) dat Jan de aardbeien \underline{gegeten} \underline{heeft}  
   (I believe) that Jan the strawberries \underline{eaten} has

f. \( \text{*SAuxVO} \)  
   *Jan \underline{heeft} \underline{gegeten} de aardbeien

g. \( \text{*AdvSV0} \)  
   *Gisteren Jan \underline{at} de aardbeien
Notice that in Dutch, (21a–e) are grammatical, but the corresponding French versions, in (22a–e), are ungrammatical: for (21) and (22), the (a–c) main-clause examples are (topicalization with) V2, and in (a) and (b) as well as in the embedded clauses of (d) and (e), the object precedes the (thematic) verb. The exact contrary holds of the (f–i) set, these being grammatical in French but ungrammatical in Dutch: in (f–i) the object follows the (thematic) verb, and in (g) and (h) there is topicalization but no V2. Finally, the orders in (j) and (k) are impossible in both languages: (j), because it is OV like Dutch, but, like French, not V2; and (k), because it is VO like French, but V2, like Dutch.

Based on these differences between Dutch and French, Hulk devised a French acceptability judgment task consisting of 40 (written) items, the majority of which instantiated the variations on word order in (22).9 The vocabulary was kept as simple as possible in order to not unduly tax the students, the Beginners in particular.

A total of 131 Dutch students of French were tested, divided into four groups: (i) 26 beginners, in first-level, high-school French (who had “just started learning French” (Hulk, 1991: 21)); (ii) 64 students at the second level of high-school French, which I will call the ‘Low-intermediate’ group;10 (iii) 25 in high school at
the third level; and (iv) 16 French majors in their first year at the Free University of Amsterdam.

In what follows the focus will primarily be on the results of the first two groups of students, the Beginners and the Low-intermediates.

The first set of data to consider concerns the order between verb and complement. All three L2 acquisition models presented above predict that the Dutch OV system will initially be extended to French, and this is what is found, as shown in (23) and (24):

\[(23)\] Acceptance of OV (from Hulk, 1991: 22-23): √ in Dutch; * in French

<table>
<thead>
<tr>
<th>Sentence type</th>
<th>Beginners</th>
<th>Low-intermediates</th>
<th>Intermediates</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. SAuxOV (cf. (22a))</td>
<td>73%</td>
<td>40%</td>
<td>2%</td>
</tr>
<tr>
<td>b. ⋯ COMP SOY (cf. (22d))</td>
<td>89%</td>
<td>31%</td>
<td>8%</td>
</tr>
<tr>
<td>c. ⋯ COMP SOYAux (cf. (22e))</td>
<td>65%</td>
<td>26%</td>
<td>0%</td>
</tr>
</tbody>
</table>

\[(24)\] Acceptance of VO (from Hulk, 1991: 22-23): * in Dutch; √ in French

<table>
<thead>
<tr>
<th>Sentence type</th>
<th>Beginners</th>
<th>Low-intermediates</th>
<th>Intermediates</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. SAuxVO (cf. (22f))</td>
<td>42%</td>
<td>86%</td>
<td>100%</td>
</tr>
<tr>
<td>b. ⋯ COMP SAuxVO (cf. (22i))</td>
<td>27%</td>
<td>87%</td>
<td>100%</td>
</tr>
</tbody>
</table>

The Dutch speakers clearly approach French from the vantage point of their OV L1. Results of the Beginners show that sentences instantiating the unambiguously OV orders of (23) are overwhelmingly accepted at rates between 65% and 89%; the unambiguously VO orders of (24) are accepted by the Beginners at much lower rates, 27% to 42%. Students at the second level, the Low-intermediates, exhibit the expected development, as shown especially in (24) by their high acceptance (86%–87%) of grammatical VO sentences. Nevertheless, the Low-intermediates’ behavior, in (23), on OV sentences still shows remnants of the Dutch OV system, with acceptance rates from 26% to 40%. We will come back to this.

The next set of data concerns V2 vs. non-V2 orders. Recall that of the three models, only FT/FA predicts transfer of V2 from Dutch: Minimal Trees allows transfer of only lexical architecture; Weak Transfer allows transfer of both lexical and functional structure but not the strength of feature-values determining movement (in this case, verb raising to C – see below). Consider the tables in (25) and (26):

\[(25)\] Acceptance of V2 (from Hulk, 1991: 24): √ in Dutch; * in French

<table>
<thead>
<tr>
<th>Sentence type</th>
<th>Beginners</th>
<th>Low-intermediates</th>
<th>Intermediates</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. AdvYSO (cf. (22c))</td>
<td>92%</td>
<td>50%</td>
<td>32%</td>
</tr>
<tr>
<td>b. AdvAuxYSO (cf. (22b))</td>
<td>92%</td>
<td>38%</td>
<td>0%</td>
</tr>
</tbody>
</table>

\[(26)\] Acceptance of ‘V3’ (from Hulk, 1991: 24): * in Dutch; √ in French

<table>
<thead>
<tr>
<th>Sentence type</th>
<th>Beginners</th>
<th>Low-intermediates</th>
<th>Intermediates</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. AdvYSVO (cf. (22g))</td>
<td>38%</td>
<td>80%</td>
<td>100%</td>
</tr>
<tr>
<td>b. AdvSAuxYSO (cf. (22h))</td>
<td>19%</td>
<td>85%</td>
<td>100%</td>
</tr>
</tbody>
</table>
In (25), the Beginners' 92% acceptance rate of Dutch-like V2 orders is in striking contrast to their low rates, in (26), of French-like non-V2 (henceforth 'V3') – 19% to 38%. Transfer from the L1 is an obvious explanation for both sets of facts. Notice that the word order of (25b) is V2 and (unambiguously) OV; hence sentences of this type could also be included in (23), raising the upper limit of the OV-acceptance range to 92%, a fact we will also come back to. As for development, again one can see that the Low-intermediates are moving closer to French: in (26), they accept French-like V3 orders at much higher rates than the Beginners (80%–85% versus 19%–38%); still, the fact that, in (25), the Low-intermediates accept the Dutch-like V2 orders 38% to 50% of the time testifies again to the continued influence of their L1 syntax.

Nevertheless, the data of the Low-intermediates, and, arguably, of the Beginners as well, do exhibit what looks to be optionality: the extent to which non-V2 orders are accepted (see (26)) is not matched by the extent to which V2 orders are rejected (see (25)). Since both V2 and V3 are being accepted, might such data then count as support for Eubank's Weak Transfer model? Recall that optionality of movement – in this case, V to (I to) C (see (20a)) – is the key observation Weak Transfer is designed to explain; feature-values regulating movement are said to be <inert> initially (in this case, some feature in C), and the consequence of an <inert> value is optional movement (but see fn. 5).

Notice, however, that if this were the explanation for the Dutch students' acceptance of both V2 and V3, one would expect V2 and V3 main-clause declaratives to typify an early phase in all L2 acquisition of French, for instance, the L2 French of English speakers. In all the studies on English-French Interlanguage – and there have been many – there has been no mention of ever finding V2 existing side by side with V3 in main-clause declaratives – in fact, no mention of finding anything remotely like declarative V2 at all.11

FT/FA accounts for the V2-V3 alternation as follows: (i) the existence of V2 in the early Dutch-French Interlanguage is an instance pure and simple of massive L1 influence: transfer of the whole Dutch clause with L1 feature-values, which includes the operations necessary for deriving V2 (i.e. [second language] instinct); (ii) the 'blooming' of V3 is the development that occurs – via UG kicking in a second time (i.e. second [language instinct]) – in response to French input (e.g. types (22g) and (22h)). We will return to this as well.

Continuing with the data from Hulk's study, we now examine the L2ers' results on the two remaining orders, given in (27), each of which is neither Dutch-like nor French-like. Here the focus will be on what is happening from level to level.

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11 By contrast, similar findings of V2 and V3 coexisting in Interlanguage have been robustly documented in the L1 TL situation reversing the (L1=V2; TL=non-V2) design of Hulk (1991): the L2 acquisition of V2 Germanic by speakers of non-V2 languages such as Romance/English (e.g. duPlessis, et al., 1987) and Turkish (Schwartz and Sprouse, 1994).
(27) Acceptance of non-Dutch, non-French orders (from Hulk, 1991: 24): * in Dutch; * in French

<table>
<thead>
<tr>
<th>Sentence type</th>
<th>Beginners</th>
<th>Low-intermediates</th>
<th>Intermediates</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. AdvSAuxOV</td>
<td>30%</td>
<td>38%</td>
<td>0%</td>
</tr>
<tr>
<td>b. AdvAuxSVO</td>
<td>38%</td>
<td>64%</td>
<td>8%</td>
</tr>
</tbody>
</table>

In (27a), the order is AdvSAuxOV, which is the combination of non-V2 (i.e. V3) plus OV. This order is not one that any of the groups like much, as the acceptance rate never rises above 38%. Why should this be? What we have seen so far actually tells us the answer. Consider, first, the table in (28) which compiles, for ease of comparison, the Beginners’ relevant results laid out previously in (23), (25) and (26):

(28) Beginners’ low acceptance of *AdvSAuxOV ((27a)/(28g)): OV and ‘V3’ comparisons

<table>
<thead>
<tr>
<th>Sentence number</th>
<th>Sentence type</th>
<th>Beginners</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. (23a): OV</td>
<td>SAuxOV</td>
<td>73%</td>
</tr>
<tr>
<td>b. (23b): OV</td>
<td>... COMP SOV</td>
<td>89%</td>
</tr>
<tr>
<td>c. (23c): OV</td>
<td>... COMP SOV_Aux</td>
<td>65%</td>
</tr>
<tr>
<td>d. (25b): OV</td>
<td>AdvAuxSOV</td>
<td>92%</td>
</tr>
<tr>
<td>e. (26a): ‘V3’</td>
<td>AdvSOV</td>
<td>38%</td>
</tr>
<tr>
<td>f. (26b): ‘V3’</td>
<td>AdvSAuxV_O</td>
<td>19%</td>
</tr>
<tr>
<td>g. (27a): OV &amp; ‘V3’</td>
<td>AdvSAuxOV</td>
<td>30%</td>
</tr>
</tbody>
</table>

(28a) through (28d) (formerly (23a–c) and (25b)) have already shown that the Beginners overwhelmingly accept OV (65%-92%). So OV cannot be the reason for their distaste for (27a)/(28g). However, they do not yet like V3 – compare (28e) and (28f) with (28g): in (28c) and (28f), these Beginners accept V3 at low rates of 38% and 19%; similarly, in (28g) they accept V3 at a rate of only 30%. Hence, the reason the Beginners do not like (27a)/(28g), AdvSAuxOV, is because it is V3.

As for the Low-intermediates, they do not like (27a) for the other reason, namely that it is OV. This is shown in (29), where the relevant Low-intermediates’ acceptance rates are compared:

(29) Low-intermediates’ low acceptance of *AdvSAuxOV ((27a)/(29g)): ‘V3’ and OV comparisons

<table>
<thead>
<tr>
<th>Sentence number</th>
<th>Sentence type</th>
<th>Low-intermediates</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. (26a): ‘V3’</td>
<td>AdvSOV</td>
<td>80%</td>
</tr>
<tr>
<td>b. (26b): ‘V3’</td>
<td>AdvSAuxYO</td>
<td>85%</td>
</tr>
<tr>
<td>c. (23a): OV</td>
<td>SAuxOV</td>
<td>40%</td>
</tr>
<tr>
<td>d. (26b): OV</td>
<td>... COMP SOV</td>
<td>31%</td>
</tr>
<tr>
<td>e. (23c): OV</td>
<td>... COMP SOV_Aux</td>
<td>26%</td>
</tr>
<tr>
<td>f. (25b): OV</td>
<td>AdvAuxSOV</td>
<td>38%</td>
</tr>
<tr>
<td>g. (27a): ‘V3’ &amp; OV</td>
<td>AdvSAuxOV</td>
<td>38%</td>
</tr>
</tbody>
</table>

First compare the Low-intermediates’ 38% acceptance for AdvSAuxOV in (27a)/(29g) – which, recall, is V3 plus OV – with the V3-plus-VO orders in (29a)
Unlike the Beginners, the Low-intermediates accept V3 plus VO at very high rates, 80% to 85%. So, V3 cannot be the reason for their relative rejection of (29g). Rather, dislike of OV is the issue, as shown in (29c) through (29f) (spanning both matrix and embedded OV orders): for all these OV types, the Low-intermediates’ acceptance of OV is comparably depressed, with rates of 26% to 40%.

Drawing this all together, what’s been deduced is in (30):

(30) *AdvSAuxOV ((27a)): rejected by Beginners and Low-intermediates for distinct reasons

(i) Beginners ((28)): because it is not V2, i.e. [second language] instinct
(ii) Low-intermediates ((29)): because it is not VO, i.e. second [language instinct]

AdvSAuxOV, (27a), is disliked by the Beginners because of V3 but by the Low-intermediates because of OV. Or in other words, in keeping with my themes, AdvSAuxOV is disliked by the Beginners because of something they have not yet acquired – because they are still primarily relying on [second language] instinct, i.e. transfer of V2 – and by the Low-intermediates because of something (else) they have acquired – i.e. because of second [language instinct], i.e. UG accommodating VO input.

The last order to be examined is AdvAuxSVO, (27b), which instantiates the combination of V2 and VO. The first thing to note is that the pattern across the three levels is unlike anything seen so far: despite the fact that AdvAuxSVO is ungrammatical in French, the Low-intermediates accept it at a rate higher than the Beginners (64% compared to 38%) – whereas the Intermediates correctly reject it. Why do the Low-intermediates perform less like native speakers than the Beginners on this (and only this) particular word order? The answer, I believe, lies in a comparison of (31) and (32), where again the relevant acceptance rates presented earlier have been combined:

(31) Beginners’ ‘lower’ acceptance of *AdvAuxSVO ((27b)/(31e)): V2 and VO comparisons

<table>
<thead>
<tr>
<th>Sentence number</th>
<th>Sentence type</th>
<th>Beginners</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. (25a): V2</td>
<td>AdvVSO</td>
<td>92%</td>
</tr>
<tr>
<td>b. (25b): V2</td>
<td>AdvAuxSOV</td>
<td>92%</td>
</tr>
<tr>
<td>c. (24a): VO</td>
<td>SAuxVO</td>
<td>42%</td>
</tr>
<tr>
<td>d. (24b): VO</td>
<td>... COMP SAuxVO</td>
<td>27%</td>
</tr>
<tr>
<td>e. (27b): V2 &amp; VO</td>
<td>AdvAuxSVo</td>
<td>38%</td>
</tr>
</tbody>
</table>

Clearly, the reason for the Beginners’ lukewarm acceptance of AdvAuxSVO cannot be because it is V2, since the V2 orders of (31a) and (31b) are accepted at a very high rate, 92%. On the other hand, the lukewarm acceptance rates of (31c) and (31d), from 27% to 42%, suggest VO is what is responsible for the Beginners’ results on (27b)/(31e). They tend to reject VO because it is not an L1-based order.

Consider next the results of the Low-intermediates, where we saw a rise in the acceptance rate for (27b) in comparison to the Beginners, even though (27b) is ungrammatical in French.
(32) Low-intermediates' 'higher' acceptance of *AdvAuxSVO ((27b)/(32e)): VO & V2 comparisons

<table>
<thead>
<tr>
<th>Sentence number</th>
<th>Sentence type</th>
<th>Low-intermediates</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. (24a): VO</td>
<td>SAuxVO</td>
<td>86%</td>
</tr>
<tr>
<td>b. (24b): VO</td>
<td>... COMP SAuxVO</td>
<td>87%</td>
</tr>
<tr>
<td>c. (25a): V2</td>
<td>AdvVSO</td>
<td>50%</td>
</tr>
<tr>
<td>d. (25b): V2</td>
<td>AdvAuxSOV</td>
<td>38%</td>
</tr>
<tr>
<td>e. (27b): VO &amp; V2</td>
<td>AdvAuxSVO</td>
<td>64%</td>
</tr>
</tbody>
</table>

I would like to suggest, as in (33), that the reason the Low-intermediates accept the ungrammatical AdvAuxSVO order ((27b)/(32e)) at a higher rate than the Beginners is because the Low-intermediates have essentially adopted VO (see (32a) and (32b)), but they have not yet completely abandoned V2. Compare, for instance, the results on (32e) and (32d): (32e), accepted at a rate of 64%, is the combination of VO and V2, whereas (32d), accepted at a rate of 38%, is the combination of (unambiguously) OV and V2.¹²

(33) *AdvAuxSVO ((27b)): Low-intermediates perform less like native speakers than Beginners

(i) Beginners ((31)): because it is not OV, i.e. [second language] instinct
(ii) Low-intermediates ((32)): because it is VO, i.e. second [language instinct]

The Beginners are still primarily relying on the OV order of their L1 and so they reject the order in (27b), AdvAuxSVO, because it is VO. And it is because it is VO that the Low-intermediates, by contrast, accept it at a higher rate – that is, in response to French input they have engaged the language instinct again, flipping the headedness of VP from OV to VO. So, in sum, the fact that the Low-intermediates' performance on AdvAuxSVO looks 'worse' is precisely because their French Interlanguage syntax is getting closer to that of the Target Language.

All in all, the Interlanguage of the Beginners exhibits extensive L1 influence, in line with the Full Transfer part of FT/FA: it is OV, V2, and not quite yet V3. On the other hand, the Interlanguage of the Low-intermediates, while still showing some effects from L1 Dutch, is clearly moving towards VO, is wavering about V2, and has V3. Thus, as mentioned earlier for the Low-intermediates (and the Intermediates – see (25a) and (26)), Adverb preposing can be associated with either V2 or V3. Of course, this state of affairs holds of neither the L1 nor the Target Language. Is this 'optionality' then a problem for the idea that UG constrains the development of adult Interlanguage? Why doesn't what is superficially V3 (from their French input) 'kick out' the V2 (from their L1 grammar) more immediately? The reason this does not happen is because the analyses of V2 and French-type topicalization need not be taken to be in complementary distribution – for example, V2 as movements to the

¹² The AdvVSO order in (32c) is derivationally ambiguous, from either a VO base order or an OV base order.
CP-level and topicalization as adjunction to IP (Schwartz and Tomaselli, 1990), as in (34).

(34) a. $[\text{CP AdvP} [\text{C-V}\_\text{t}\_\text{ant}]] \text{IP} S \ldots$

b. $[\text{IP AdvP} [\text{IP} S \ldots$

Indeed, as Hulk (1991: 28) points out, such a V2-V3 co-existence is distinctly reminiscent of Middle French, as documented, for example, by Vance (1989). Idealizing slightly, then, the SVO, V2, ‘V3’ Interlanguage syntax of the Low-Intermediates, while no longer the syntax of Dutch and not yet the syntax of French, does seem to represent a natural language grammar.

The Low-intermediates’ acceptance of AdvAuxSVO (at a rate of 64%) takes on an added significance in light of the resemblance between Middle French and the Low-Intermediates’ Dutch-French Interlanguage; specifically, it constitutes a clear argument for UG constraining (adult) L2 development, in line with the Full Access part of FT/FA: As we have seen, AdvAuxSVO falls out from the combination of V2 (from Dutch) and VO (from the input). But this combination itself is not a pattern that occurs in their French input (or in their L1 Dutch) — that is, AdvAuxSVO does not constitute part of their primary linguistic data — and yet the Low-intermediates accept it nonetheless. Thus, the acceptance of AdvAuxSVO represents a poverty of the stimulus effect, the strongest argument for the existence of UG there is.

6. Conclusion

Throughout this paper I have argued that the L1 grammar and UG (in light of TL input) together drive L2 acquisition. Earlier conceptions of L2 acquisition pitted one against the other (e.g. Dulay, Burt et al., 1982); these as well as recent proposals (Epstein et al., 1996; Platzack, 1996) are asking, quite simply, the wrong question: in discounting influence from the L1 in their attempts to make a case for UG, they end up with no story to tell for the kind of L2 data covered above.

Yet, even if the accounts I have offered are on the right track, they are not complete. In particular, my foci have been the L2 initial state and intermediate Interlanguages; what I have not broached is the topic of endstates. Recall from Section 1, however, that it was Pinker’s (1994) remarks about adult L2 acquisition that instigated this essay, and there the concern seems to be exclusively with endstates.

Among the differences between adult L2 acquisition and L1 acquisition (see Bley-Vroman, 1990), endstates figure prominently. Serious projects exploring the characteristics of L2 endstates have been launched in recent years — for example the work of Sorace (e.g. 1993) and Borer (1995). Sorace (1993) has shown that even for near-native L2 speakers, endstates can be qualitatively different, dependent on properties of the L1. A related L1-L2 difference is fossilization, on which there is very little empirical research. Work by Lardiere (e.g. 1998, to appear) constitutes, to my knowledge, the sole documentation of fossilization, specifically, the total absence of development by an adult nonnative speaker in an input-rich environment. Her case
study shows, interestingly, that what resists change is inflectional morphology. Indeed, inflectional morphology, even something seemingly simple like English present and past tense suffixation, is notoriously problematic for (adult) L2 acquirers, and so this is another observational difference between L1 and L2 acquisition. Finally, the last difference I list, touched on earlier, is ‘optionality’: L2 systems, throughout development, seem to allow a lot more optionality or variation than seen in L1 development. Recent attempts to shed light on the nature of the system underlying such variation include work by Eubank (1996), Sorace (1996), Prévost (1997) and White and Prévost (in press).

I bring up these observations to acknowledge that there are definite, nontrivial differences between normal L1 acquisition and typical adult L2 acquisition. What significance should one attach to them – especially the difference in endstates, which Pinker (in following Newport, 1990) appears to take as the primary point of comparison? Pinker, like Newport, seems to employ the criterion of ‘identity in endstate’ to assess UG’s role in adult L2 acquisition (see also Bley-Vroman, 1990): in the acquisition of L, only if the L2 adult arrives at an endstate identical to the L1 endstate can one conclude that UG constrains adult L2 acquisition, and if instead non-identity is the result, then UG is not involved in adult L2 acquisition. While ‘identity in endstate’ is a straightforward criterion, it is not necessarily a valid criterion. As argued in Schwartz (1990, 1994), the mere existence of differences between L1 and L2 endstates does not imply that the two necessarily instantiate fundamentally different, viz. epistemologically non-equivalent, knowledge types. In L1 acquisition, the child’s resulting grammar is not necessarily identical to that of the input providers’, and indeed the child’s re-creation of grammar is often cited as one locus of language change (e.g. Andersen, 1973). That grammars may differ from generation to generation – or for that matter more broadly in the evolution of language (e.g. Old English, Middle English, Modern English) – does not lead to the conclusion that these grammars are epistemologically not equivalent. They can differ, but they are of the same type of knowledge. Thus, on the basis of endstate difference alone, one cannot deduce epistemological non-equivalence. Similarly for the comparison of L1 and L2 endstates: they may differ, perhaps even in significant ways, and they could be epistemologically equivalent (or non-equivalent); but simply because they are distinct does not entail epistemological non-equivalence. In short, non-identity between L1 and (adult) L2 endstates in and of itself does not tell us much about what is happening in (adult) nonnative language acquisition. (For related discussion, see also White, 1996.)

Instead of comparing differences between L1-L2 endstates, one can focus on the systems L2 acquirers build in the course of acquisition. At issue is the representation of L2 knowledge, and for this one should try to determine whether the independently motivated mechanisms of UG constrain Interlanguage syntax (duPlessis et al., 1987) – or even better, whether nonnative speakers end up with knowledge of relatively obscure properties of the TL that are poverty of the stimulus problems (e.g. Dekydtspotter et al., in press). Such tacks have the potential of revealing a great deal about what is happening in the development of nonnative systems. The empirical studies reviewed in this paper indicate that the L2 child and the L2 adolescent as well as the
L2 adult rely on the L1 grammar and show UG-constrained development. And if one finds UG to be constraining Interlanguages developmentally, then non-identity in L1-L2 endstates becomes an independent issue – one, of course, that needs to be explained. So, despite the fact that L2 acquisition does not mirror L1 acquisition – initially, developmentally or even ultimately (Schwartz, 1992) – the data indicate that second language instincts are in operation: initially, TL input is filtered via at least parts of the L1 grammar (Schwartz, 1987), irrepressibly, reflexively – instinctively, if you will. And developmentally, change is effected via the re-engagement of Universal Grammar – the other, original, language instinct.

References


B.D. Schwartz / Lingua 106 (1998) 133–160


