Vainikka A, Young-Scholten M. *All acquisition begins with the projection of a bare verb phase*. *Applied Psycholinguistics* 2010, **31** 2 332-339.

Further information on publisher website:

[http://journals.cambridge.org/action/displayJournal?jid=APS](http://journals.cambridge.org/action/displayJournal?jid=APS)

Publishers copyright statement:

© Cambridge University Press. This paper is published by Cambridge University Press, and is available with access permissions, from the DOI below:

[http://dx.doi.org/10.1017/S0142716409990518](http://dx.doi.org/10.1017/S0142716409990518)

Always use the definitive version when citing.

Use Policy:

The full-text may be used and/or reproduced and given to third parties in any format or medium, without prior permission or charge, for personal research or study, educational, or not for profit purposes provided that:

- A full bibliographic reference is made to the original source
- A link is made to the metadata record in Newcastle E-prints
- The full text is not changed in any way.

The full-text must not be sold in any format or medium without the formal permission of the copyright holders.
One of the main conclusions that we (Vainikka & Young-Scholten, 1994) make in regard to the second language (L2) German development of uninstructed Korean and Turkish adults was the resemblance of their morphosyntactic development to that of the German children under study at the time by Harald Clahsen and colleagues (see, e.g., Clahsen, Eisenbeiss, & Vainikka, 1994; Clahsen & Penke, 1992). Data from these L2 learners also indicated initial transfer of the headedness of their native language verb phrases (VPs), a claim then strengthened by research on L2 learners whose first language (L1) headedness differed from German, namely, Italian and Spanish (Vainikka & Young-Scholten, 1996). L2 learners’ initial grammars were argued to consist of just a “bare” VP, based on comprehensive lack of
inflectional morphology and complex syntax, and similar to children acquiring L1 German, these L2 learners’ nonfinite verb forms were typically in final position, either early on (for head-final Korean and Turkish speakers) or a bit later, once headedness shifted to the German value from head-initial (for Italian and Spanish speakers). Similar to child L1 learners, the L2 morphosyntactic data pointed to subsequent projection of a head-initial underspecified functional projection and, with sufficient input, projection of higher functional projections. Apart from some details, the claim was that for children and adults learning German, acquisition is defined by the emergence of syntactic projections and the morphology associated with them.

There has since been much discussion regarding the extent and nature of L1 influence on the L2 acquisition of morphosyntax by both adults and children, and although the majority currently favors an approach under which the L1 exerts influence from the initial state onward (Schwartz & Sprouse 1996), a transfer-driven account has failed to truly address stages of acquisition. Yet for children with specific language impairment (SLI), a priority for parents, teachers, and therapists is tracking children’s progress, which is an undertaking that would be difficult if one had no idea what step should come next (for early work along these lines on English, see Crystal, Fletcher, & Garman, 1976). Paradis’ Keynote Article, which covers both SLI and L2 acquisition (by children), contains a number of important insights that strengthen the case for stages based on some sort of structure building in all types of acquisition.

REDUCED STRUCTURES AND OPTIONAL INFINITIVES

One of the main points covered in Paradis’ Keynote involves comparing children of similar ages (or mean length of utterances) who are acquiring an L2 with children who are acquiring an L1 under SLI. Paradis shows that in many ways the two types of language acquisition are very similar, which can be seen in her figure 1a and 1b. In interpreting her data, rather than adopting Radford’s (1990) early idea that functional projections mature altogether or Rizzi’s (1993/1994) proposal that the optionality allowing projection of root infinitives ceases with maturation, Paradis follows Rice, Wexler, and Cleave’s (1995) and Rice’s (2004) model of an extended optional infinitive (EOI) stage, prompted by their work on SLI children.

Paradis has no choice but to follow Rice et al., because their account allows the possibility of not invoking maturation. We would like to suggest that she does not go far enough. This is perhaps because, for most acquisitionists, the operation of universal grammar entails a strong continuity approach (see, among others, Hyams, 1992) under which languages share a single universal syntactic tree with all possible projections in any language. This tree also represents the L1 learner’s initial state; however, explaining the reduced structures observed (e.g., root infinitives) has proven to be problematic, particularly when these reduced structures persist during development, as they do in SLI. Challenging strong continuity means relaxation of one of the three uniformity assumptions discussed in Culicover and Jackendoff (2005), derivational uniformity, allowing one to entertain


Table 1. *First language acquisition in exceptional circumstances*

<table>
<thead>
<tr>
<th>Situation</th>
<th>Representative Study</th>
<th>Age During Relevant Period</th>
<th>Morphology and Syntax Mentioned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of input or easily usable input</td>
<td>Genie from Curtiss (1977) and Fromkin et al. (1982)</td>
<td>14–15</td>
<td>No tense; invariant SVO order, no movement; complementizers, question words, passive absent</td>
</tr>
<tr>
<td></td>
<td>Oral language of deaf individuals from McGuckian and Henry (2003)</td>
<td>2;11–3;6</td>
<td>Few function words, pronouns; rigid SVO order no passives, few conjunctions</td>
</tr>
<tr>
<td>Impairment</td>
<td>Down syndrome from Thordardottir et al. (2002)</td>
<td>Childhood; adolescence</td>
<td>Functional elements missing; nonfinite verbs</td>
</tr>
<tr>
<td></td>
<td>Hemispherectomy from Curtiss and Schaeffer (1997) and Curtiss and de Bode (2001)</td>
<td>Childhood</td>
<td>Nonfinite verbs</td>
</tr>
<tr>
<td></td>
<td>SLI from Wexler et al. (1998), Hamann et al. (1998), Leonard (2000), Letts (1993), and Lindner (2002)</td>
<td>4–7</td>
<td>Subject omission; nonnominative subjects no agreement or tense; SOV (German); wh-questions, passives, and complementizers absent</td>
</tr>
</tbody>
</table>

*Note:* Age is in years;months; SVO, subject–verb–object; SLI, specific language impairment.

Various situations in which the projection of minimal syntax is natural, including during acquisition (see Vainikka & Young-Scholten, 2007a).²

In recent work, we take to its logical conclusion the idea that all acquisition commences with the learner’s projection of a bare VP (Vainikka & Young-Scholten, 2010a) by looking at a range of exceptional and unexceptional (L1A and child and adult L2A) language acquisition situations. If the learner projects only a VP in his/her earliest grammar, this explains the lack of tense or finiteness and the other aspects of the EOI phenomenon. Regardless of the details surrounding the exceptional circumstances presented in Table 1, researchers observations comprise a unified set regarding what is missing and what is nonadult-like in the grammars of the individuals affected.
FURTHER SYNTACTIC STAGES AND ORGANIC GRAMMAR

Ten pages into her manuscript, Paradis wonders whether the parallels between child L2A and SLI extend beyond the initial stages, and she tentatively proposes that they do, at least in terms of the acquisition of finiteness and tense. This fits our proposal, which we now refer to as organic grammar, that functional projections develop one by one, both in (typical) L1 acquisition and in child and adult L2 acquisition (see Vainikka & Young-Scholten, 2010b, on the L1 and L2 acquisition of German, including the stages involving the acquisition of finiteness, agreement, and subordinate clauses). Organic grammar is superior to the EOI proposal in that the latter is an analysis of just the earliest stage of acquisition, whereas organic grammar covers all subsequent stages of the development of phrase structure.

MATURATION VERSUS ORGANIC GRAMMAR

In addition to the overall similarity between child L2A and SLI/L1A, Paradis discusses specific differences between the two types of acquisition. As she implies, comparing these data types is critical for evaluating a maturational model of language acquisition, in particular Rice’s (2004) maturational EOI model, to determine exactly where the differences lie. Rice’s model predicts that there are differences between L2A and SLI, because typically developing children acquiring an L2 have already matured to a certain point (in particular, those children that have already acquired tense/finiteness in their L1). In contrast, SLI children are expected to be maturationally delayed and, for Paradis, this explains the differences between the two groups of children of the same age. Organic grammar points to a stronger conclusion than Paradis’ concerning maturation, namely, that Rice’s model actually cuts up the data in an unexpected fashion. It seems that Rice predicts that because delayed maturation is the cause of SLI, acquisition under SLI should look different from both L1A and L2A (where there are no maturational delays). L2A (child, according to Paradis, and adult, according to us) patterns one way, whereas SLI and L1A (whether simultaneous bilingual or monolingual) pattern differently from L2A.

Paradis reviews two types of differences:

1. L2 children made more “commission” errors than SLI children (i.e., producing the wrong morpheme instead of omitting it).
2. Forms of the free morpheme BE are acquired earlier by children acquiring L2 English than other tense or finiteness morphemes, whereas in L1A/SLI forms of BE pattern with the other tense/finiteness morphemes.

As pointed out in Note 1, the production of functional morphology has been an ongoing topic of discussion among child and adult L2 acquisition researchers, and Paradis’ analysis is an extremely useful addition to the debate. She concludes that the pattern of differences may be a challenge for a maturational model such as Rice’s (2004), because the relative maturity of an L2 child does not in any obvious way explain the differences in Points 1 and 2 above. The picture that emerges here is the following: both children and adults (see Vainikka & Young-Scholten, 1998) in L2A acquire free morphemes more readily than bound morphemes, and
there may also be a difference in how inflectional morphology is used while it is being acquired. We believe that the overall similarities in the two types of acquisition that Paradis discusses are best captured by adopting a similar syntactic structure across acquisition situations (but varying, depending on how advanced a stage the learner occupies). In 1998 we assumed that the difference between L1A and L2A in terms of free versus bound morphemes was most likely connected with maturation; however, the very young L2 learners discussed by Paradis who display a similar pattern to the adult L2 acquirers prompt us to reconsider what we took to involve maturation in the phonological (prosodic) domain as the explanation. We are left with something along the lines of Paradis’ discussion in terms of “creativity” or communicative pressure in the classroom. With respect to instructional settings, one might consider the nature of input the L2 children Paradis studied likely received in English as an L2 class. First, utterances in a language classroom might actually include the supposedly rare “one-word sentences separated by pauses” (from Paradis’ quotation of Leonard, 1998). Second, unlike children acquiring their L1, school-age L2 children will be exposed to print, where free morphemes are relatively more salient than bound morphemes because of the spaces that surround words. That alphabetic literacy alters how one processes aural input is suggested by Tarone and colleagues’ (Tarone, Bigelow, & Hansen 2007; see also Vainikka & Young-Scholten, 2007b) work with adult immigrants who learn to read for the very first time during their acquisition of an L2. The situation with respect to print exposure is hardly clearcut. Differences in rate of acquisition of tense and agreement suffixes were found to relate to processing speed differences for two Farsi-speaking children learning L2 English in Mobaraki’s (2007) longitudinal study; the faster processer (a boy) read considerably more in both Farsi and English than did his sister. His faster rate of acquisition of these bound morphemes may have been the result of overall increased frequency of exposure, and the result of exposure in an additional (visual) mode. These factors have received very little attention from acquisitionists thus far.

ANOTHER CASE OF EXCEPTIONAL L1A

Where Paradis proposes that bilingualism may be therapeutic in SLI, data from a case not discussed elsewhere suggests this line of thinking may be on the right track. The case concerns a boy, Andrew, who is cognitively normal, performing at age level on the relevant academic tests for school readiness. Since birth he has suffered from a craniofacial syndrome, leading to multiple surgeries to correct, among other things, the misformation of his upper jaw and nasal area, and to a tracheostomy inserted at 0 years, 8 months (0;8) and removed at 4;11. Minor misformation of his fingers and toes has not required surgery but may have contributed to delays in development of motor skills. A hearing aid was fitted when he was 0;7. Most likely because of surgeries and early failure to thrive connected with feeding problems, at 4;10 he was 1.5 to 2 years behind socially and physically on gross-motor skills (from physical therapy assessment) and fine-motor skills (from occupational therapy assessment). His productive and receptive language was delayed, which was attributable to the above complications. To address anticipated problems, from 0;8 onward until the present (age 5;9) Andrew has
received regular physical therapy and speech therapy, with the therapists involved being comparable in skill level. What is of interest here is that he is being raised in a trilingual environment where the maternal and paternal language each differ from the language of the wider community, which is also that of the speech and physical therapists (English). When Andrew was tested by a speech therapist at 4;3, prior to surgery at 4;5 to correct his upper jaw and midface area, this revealed a 6-month delay in English, which at the time was just becoming his strongest language, given its dominance in the wider environment. Andrew was at age level with his maternal language by this age (4;3), and he also exhibited some knowledge of his paternal language to which exposure was more limited. Understandably, given his physical problems up until 4;5, articulation of specific sounds (e.g., dentals) is at present (5;9) still delayed.

Although there are no comparison cases with children suffering from the same or a similar syndrome, it appears that Andrew’s trilingual exposure has been therapeutic. His hearing and his articulators have been severely affected since birth; however, his language acquisition in the two languages to which he has received the most exposure has been and still is either typical, or delayed only in terms of the aforementioned problems with some consonants, relative to his gross and fine motor skills and social development, a situation that appears to be attributable to his trilingual environment. However, the languages to which Andrew is being exposed belong to three distinct language families and thus Paradis’ proposal that the therapeutic effect is because of facilitation of morphosyntactic acquisition through transfer across languages would likely not apply in Andrew’s case. Paradis raises an important issue that is worth pursuing in future research, which is to the eventual benefit of parents and teachers who, given folk beliefs about problems arising from bilingual exposure, would argue against the presumed overburdening of children in exceptional circumstances.

NOTES
1. This is not to say these are trivial details; from Haznedar and Schwartz (1997) and Lardiere (1998) to the present, much has been made of differences in the marking of inflectional morphology across the populations of L1 children, L2 children, and L2 adults (see also Vainikka & Young-Scholten, 1998, 2007b).
2. There are also approaches that involve the reduction of functional clause structure in learners’ early syntax, but not to VP, for example, the minimal default grammar in work on L1A in Hamann, Penner, and Lindner (1998) and Roeper (1996). See Bhatt and Hancin-Bhatt (2002) for an L2A version of this idea.

REFERENCES


Tarone, E., Bigelow, M., & Hansen, K. (2007). The impact of alphabetic print literacy level on oral second language acquisition. In N. Faux (Ed.), Low-educated second language and literacy...
We can no longer afford a monolingual norm

In her Keynote Article, Johanne Paradis does a service for the research and the clinical communities with this comprehensive review of the literature encompassing bilingualism and specific language impairment (SLI). Her work and the work of her colleagues for more than a decade have been persistent in bringing these two threads together: using bilingual (BL) data to speak to theoretical issues and using research findings to inform clinical practice. I am not alone in my appreciation (and admiration) of her many contributions, which are nicely pulled together here and placed in better perspective than in the several articles that have presented much of the work in isolation.

My Commentary focuses on the clinical implications section of the Keynote, which I find both enlightening and disturbing. Theories of SLI, Paradis notes, were developed based on observations of monolingual (ML) children. To assess their generality, we must ask how consistent those perspectives are with data from BLs. Paradis’ starting point for her Keynote is the similarity of test scores and acquisition patterns between typically developing BL (TD-BL) and ML children with SLI.