The mystery of children’s embedded V2

By Jeannette Schaeffer
Reviewing Manuela Schoenenberger’s Embedded V-to-C in child grammar. The acquisition of verb placement in Swiss German

Manuela Schoenenberger’s book *Embedded V-to-C in child grammar. The acquisition of verb placement in Swiss German* is a brave and thorough attempt to describe and explain a mysterious phenomenon in child language: V-to-C (or V2) in embedded clauses in child Lucernese, a (V2) Swiss German dialect. Whereas learners of other V2 languages such as German and Dutch correctly leave the finite verb in final position from very early on, children acquiring Lucernese (incorrectly) move it to a V2-like frontal position in subordinate clauses. The adult grammars of all these languages allow V2 only in root clauses.

This phenomenon, which has surprised many child language experts, has been a central issue in Schoenenberger’s work of the past seven years, and received various analyses. The one proposed in this book is by far the most elegant and attractive. Making use of Rizzi’s (1997) “Split CP Hypothesis” Schoenenberger manages to quite successfully account for the child Lucernese facts, and for the transition into the target grammar. Nevertheless, there are several shortcomings, which I will elaborate on below.

The book is well written, with many intermediate summaries and reminders of previously discussed issues to the reader. This makes the relatively complex material easy to follow. In the rest of this review I will summarize and comment on the book chapter by chapter.

Chapter 1 contains an overview of general properties of Swiss German, relevant for the child language findings presented later. The topics discussed include verb placement in Swiss German both in root and embedded clauses, subject omission, and various analyses of verb placement.

Schoenenberger shows that generally, Lucernese embedded clauses do not allow V-to-C, except for the complements of bridge verbs, certain embedded wh-questions, certain relative clauses, and subordinate clauses introduced by the subordinator will ‘because’. Bridge verbs license V2 only if there is no complementizer, as is illustrated in (1):

(1) **BRIDGE VERB COMPLEMENT – V2**

Si meint [de Rochus haet de
she thinks the Rochus has the
Schluessel vegasse]
key forgotten
‘She believes Rochus has forgotten the key’

In the other cases, the subordinate clauses receive a different interpretation from the ones without V-to-C. For example, embedded wh-questions allow V-to-C only if they are pseudo-questions, as is exemplified in (2):

(2) a. **REAL QUESTION – V FINAL**

Si hei nid gewuesst [wi gfaeaerlich dass
they did not know how dangerous that
di Droogen isch]
this drug is
‘They did not know how dangerous this drug is’

b. **PSEUDO QUESTION – V2**

Weisch [wenn haet de Samir
know-2SG2SG shen has the Samir
Geburtstag] – am 1. Januar
birthday – on-the 1 January
‘Do you know when Samir’s birthday is – on
the 1st of January’

Thus, verb movement in wh-complements is discourse dependent. Relative clauses are usually introduced by the relative complementizer wo ‘who, which, that’ and do not show verb movement. Exceptionally, a relative clause can be introduced by dae, die, das ‘the-MASC’, ‘the-FEM’, ‘the-NEUT’ and in this case always displays verb movement. Such V2 relative clauses contain an existential presupposition. An example is given in (3):

(3) **RELATIVE CLAUSE WITH EXISTENTIAL PRESUPPOSITION – V2**

I sueche Luet [die redet fluessend Latin]
I look-for people who speak fluently Latin
‘I’m looking for people who speak Latin fluently’

Along the same lines, so-called will clauses allow V-to-C if they are interpreted as diagnostic, rather than causal. This is illustrated in (4):

(4) **WILL CLAUSE – V2**

I sueche Luet [die redet fluessend Latin]
I look-for people who speak fluently Latin
‘I’m looking for people who speak Latin fluently’


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(4) a. WIL CLAUSE WITH CAUSAL INTERPRETATION – VFINAL
De Max isch im Bett blibe [wil-er the Max is in-the bed stayed because-he wider Fieber gha haet] again fever had has ‘Max stayed in bed because he had a fever again’
b. WIL CLAUSE WITH DIAGNOSTIC INTERPRETATION – V2
De Moritz mue Gaelsucht gha ha [wil er haet ganz gaeli Auge] because he has very yellow eyes ‘Moritz must have had jaundice because his eyes are very yellow’

Thus, embedded V2 patterns are not neutral and indicate a special link to the discourse.

In anticipation of her final account, Schoenenberger frames her analysis in Rizzi’s (1997) Split CP Hypothesis, however, with caution. Without proposing a full analysis of C-domain phenomena (among which V2) in adult Swiss German, she adopts two of Rizzi’s C-projections, namely ForceP and FinP, rendering a tree structure such as in (5), relevant to embedded clauses in child Lucernese:

![Diagram](attachment:forcep_finp_tree.png)

In addition, she presents the claims in (6) regarding the adult grammar:

(6) ADULT SWISS GERMAN
(i) The canonical subject position of Swiss German is SpecIP;
(ii) The Wackernagel position, which functions as a host for atonic pronouns is SpecFinP (see Roberts, 1995, 1996);
(iii) Complementizers are base-generated in Fin and move to Force;
(iv) The wh-criterion and the relative criterion (see Rizzi, 1996, 1997) apply at the level of ForceP.

In chapter 2 Schoenenberger examines the natural production data of two Swiss-German children who are acquiring the Lucernese variant of Swiss German, namely Moira, from age 3;10-6;01, and Eliza, during the same age period. Eliza’s data are considerably less in number than Moira’s, but they resemble them. One striking feature of these acquisition data is that both Moira and Eliza consistently move the finite verb in any type of embedded clause before age 5;0, and that they very rarely use the verb-final pattern. A large proportion of the sentences displaying verb movement are non-target-consistent. As noted above, such behavior has not been noted in the acquisition literature for either German or Swiss German, nor for any other V2 language. In order to make sure that this surprising phenomenon was not specific to the two girls mentioned above, Schoenenberger collected some data from other children in Moira and Eliza’s kindergarten class, and found similar results. A summary of the findings regarding each type of embedded clause is provided in the next few paragraphs.

First of all, the Lucernese children produce embedded V1 without a complementizer. This is possible in the adult grammar, but only in highly restricted contexts, such as conditionals/hypotheticals, under emotive-factive predicates, and in embedded yes/no questions. However, the children initially use V1 instead of V-final in contexts where the embedded clause must be introduced by a complementizer. In other words, they omit the complementizer and move the finite verb to the first position. This leads to an acceptable output in the absence of the subordinating conjunction oeb ‘whether, if’, because oeb is selected by bridge verbs, which allow V1 in their complements if there is no complementizer. In the rest of the cases it is ungrammatical.

Clauses introduced by a subordinating conjunction such as wenn ‘when, if’, dass ‘that’, oeb ‘whether, if’, wil ‘because’, wie ‘as’, bis ‘until’, bevor ‘before’, and ohni dass ‘without’ almost always show the verb-final pattern in the adult grammar. The only notable exception concerns wil clauses with a diagnostic interpretation (see (4b) above). In all these types of subordinated clauses the children consistently move the verb to the left before age 5;0, giving rise to the word orders in (7):

![Verb Orders](attachment:verb_orders.png)

After their fifth birthdays, the children rapidly decrease verb movement to the left, and their word order in embedded clauses starts to become target-like, as in (8):

(8) complementizer … Vfinite (verb-final)

Relative clauses introduced by the relative complementizer wo show verb movement to the left as well, rendering the order in (9):

(9) wo – Vfinite …
The order wo – Z – Vfinite ..., in which an element would occur between the relative complementizer and the finite verb was rarely attested. After age 5;0 the children switched to the verb-final order, as in (8).

In wh-complements, the unmarked adult verb-placement pattern is verb-final. However, as noted above, if the complement has a special link to the discourse, i.e. if it expresses a pseudo-question (or an exclamative), V2 is allowed (see (2b) above). Before the age of 5 the children predominantly use the V2 pattern in any type of wh-complement, independent of whether or not the wh-complement can be linked to the discourse. This is schematized in (10):

(10) Wh – Vfinite ...

Again, around age 5 the children gradually switch to the verb-final pattern (as in (8)).

The verb-placement error most often attested after age 5;0 is that in (7ib), rather than in (7ia). Around age 5;06 this pattern virtually disappears in this context. Verb movement in restrictive relative clauses continues to give rise to the pattern in (9). Although verb-placement errors become less frequent, the children still produce them even at the end of the recordings at age 6;01 in any type of embedded environment.

In order to supplement the natural production data, Schoenenberger asked Moira’s mother a few weeks before the children’s 5th birthdays to elicit embedded clauses (chapter 3). She was particularly interested in clauses introduced by wil ‘because’, including both causal and diagnostic use of wil (see (4a–b) above) and clauses with a doubly filled COMP. This was done by asking questions about pictures, or through sentence-repetition tasks. Furthermore, a small experiment performed at Moira’s kindergarten was carried out to insure that the findings were not the two girls’ specific problem.

Although both girls used the subordinating conjunction wil correctly in both contexts (causal or diagnostic), they did not encode the two interpretations by means of the verb-placement pattern in the wil-clause. The sentence-repetition tasks showed that both children had problems reproducing embedded clauses with the verb-final pattern. Sentences containing doubly-filled COMPs and relative clauses induced most of the verb-placement errors. As the children grew older, they gradually improved at repeating the sentences. Finally, the experiment at Moira’s kindergarten showed that Moira and Eliza were indeed not alone in their difficulties with verb placement in embedded clauses.

Chapter 4 describes Moira’s linguistic skills in matrix clauses. Despite her many verb-placement errors in embedded clauses, Moira’s matrix clauses are diverse, linguistically refined, and target-consistent. There are virtually no word order errors (except for a few in sentences with the discourse particle naemlich), and topic-drop is used in an adultlike manner. Target-consistent instances of pro-drop of the non-contrastive 2sg pronoun du ‘you’ are found in her matrix clauses as well.

The analysis of the child Lucernese embedded verb-placement errors is presented in chapter 5. After dismissing some earlier accounts, Schoenenberger proposes that verb movement in the Lucernese acquisition data targets different head-positions in the C-domain, depending on the type of clause involved. Furthermore, she claims that superficially similar word orders (such as (7ib) and (7ii)) do not necessarily employ the same syntactic structures, and that structures that resemble adult structures are not necessarily target-like as far as their syntax is concerned. To account for the differences in verb movement in embedded clauses between the Lucernese child and adult the following proposal is made:

(11) Child Lucernese

(i) Atonic subject pronouns optionally undergo movement to SpecFinP in the child grammar, but obligatorily do so in the adult grammar;
(ii) Complementizers are initially base-generated in Force rather than Fin in the child grammar, allowing verb movement to Fin.
(iii) The relevant feature for the application of the wh-criterion is not the wh-feature, but another feature, e.g. the Q-feature. The child initially treats the wh-feature like the Q-feature;
(iv) The child misanalyses the relative complementizer as the relative operator itself.

Since Schoenenberger does not walk the reader through a detailed analysis of each particular type verb-placement error (see (7), (9) and (10) above), I tried to do this for myself, and will present the corresponding syntactic trees in the next paragraphs. In addition, I will attempt to provide the adult syntactic trees, in order to see which transition the child needs to go through to reach the target grammar. I will discuss the child structures in the following order: (i) embedded clauses introduced by subordinating conjunctions such as wenn ‘when’, if, dass ‘that’, oeb ‘whether’, if, wie ‘as’, bis ‘until’, bevor ‘before’, and ohni dass ‘without’; (ii) relative clauses introduced by wo; (iii) embedded wh-complements; (iv) embedded clauses introduced by the subordinating conjunction wil ‘because’.

As was displayed in (7), the verb-placement errors in embedded clauses introduced by subordinating conjunctions gave rise to two different (incorrect) word-orders, namely complementizer-Vfinite... or complementizer-subject pronoun-Vfinite... (before age 5). Assuming with Schoenenberger that children base-generate complementizers in the Force head, move atonic subject pronouns optionally from SpecIP to SpecFinP, move finite verbs to the Fin head, and that IPs are head-initial, the tree structure for such constructions should look like the one in (12).

In order to explain the child’s different structure, Schoenenberger first makes some assumptions
regarding the adult grammar. Complementizers contain information about the clause-type, which is associated with Force, and about finiteness, which is associated with Fin. For example, the complementizer *dass* ‘that’ marks the embedded clause as declarative and only occurs in finite clauses. Therefore, complementizers are base-generated in Fin where they check finiteness, and then undergo movement to Force, to check the clause type (or \*[FORCE\*]) feature. In the child grammar the complementizer is correctly identified as a head, but is only linked to Force. It is suggested that Fin itself bears the default value \*[+FINITENESS], because all the children’s embedded clauses introduced by a complementizer are finite. The children have not yet acquired a complementizer introducing non-finite clauses. In other words, in their grammar the complementizer is still underspecified for the feature \*[FINITENESS]. Therefore only in the child grammar does verb movement to Fin occur, presumably in order to check the finiteness features located in Fin.

Furthermore, the optionality of the movement of atonic subject pronouns to SpecFinP is accounted for by the ambiguous behavior of object pronouns in adult Lucernese. Object pronouns can move to SpecFinP, or they can stay in a lower position. The child might therefore assume that pronominal subjects behave just like pronominal objects.

After age 5 the subjects intervening between the complementizer and the finite verb more often take the form of a full DP. Yet, there is material following the finite verb, indicating that the construction is not verb-final (as illustrated by the child sentence *Weisch du dass t’Rahel haet drue Chind?* – ‘Do you know that Rahel has three children?’). For these structures, Schoenenberger proposes that the finite verb still moves up, but to a head position lower than Fin, namely a head-initial I. This is illustrated in (13):

However, the question arises as to why the child should always raise the finite verb to Fin before age 5. If the (pronominal) subject only raises optionally, the order complementizer-subject pronoun-Vfinite... is also consistent with a tree structure as in (13). This post-verbal subject position is further reinforced by the fact that non-subject-initial matrix clauses (which are target-consistent in the children’s data) also employ this position for the subject. It is not clear to me what empirical evidence there is in favor of a structure as in (12) over a structure as in (13) for embedded clauses before age 5. Moreover, the movement to a head-initial I is left unmotivated too: there seems to be no particular feature that triggers this verb raising. From a developmental point of view, Schoenenberger’s proposal makes more sense: The idea is that children move the finite verb gradually less high up: first to Fin, then to a head-initial I, and then to the target position (which Schoenenberger does not identify). Nonetheless, the trigger for the transition from head-initial I to head-final I is not discussed, and thus remains an unsolved problem.

Assuming that the target position for the finite verb is a head-final I, and for the pronominal subject and the full DP subject spec FinP and spec IP, respectively, the adult tree for an embedded clause introduced by a subordinate conjunction would look like the one in (14):
Thus, the order complementizer-Vfinite... should be excluded in adult Lucernese, while the linear string complementizer-subject-Vfinite... is permitted, however, with a different underlying syntactic structure than the child’s, namely the one in (14), which allows material to intervene between the subject and the finite verb.

One issue that is not clear to me concerns the obligatory movement of atonic subject pronouns to the Fin head in the adult grammar. If the complementizer moves from Fin to Force, it presumably leaves a trace in Fin, making it inaccessible as a landing site for the subject pronoun. Schoenenberger does not discuss this matter.

The transition to adult grammar is suggested to be triggered by doubly-filled COMPS. Doubly-filled COMPS can indicate to the child that *dass* can check finiteness features, because (i) the finite verb and *dass* can superficially occupy the same position, and (ii) doubly-filled COMPS are only possible in finite but not non-finite *wh*-complements.

Schoenenberger further notes that there is an initial preference for the complementizer-Vfinite... order, and that the order complementizer-Z-Vfinite... only appears several months later, around age 4;05. She claims that this time-lag is due to the child’s discovery that atonic subject pronouns are special in that they can move higher than DP subjects. Initially they do not distinguish between the two and treat them simply as subjects, which move into SpecIP. Thus for several months non-pronominal as well as pronominal subjects follow the finite verb, which has moved to Fin. Only around age 4;05 does the child discover that atonic subject pronouns can move to a higher position, giving rise to the complementizer-Z-Vfinite... order.

Nevertheless, there is the question as to why and how the Lucernese child finds out that movement of atonic subject pronouns to SpecFinP is obligatory. As far as I can tell, Schoenenberger does not provide a solution to this learnability problem.

Let us now move on to relative clauses and *wh*-complements. Child Lucernese displays the order schematized in (9): wo-Vfinite..., which is ungrammatical in the adult language. The child misanalyses the relative complementizer as the relative operator itself, which moves into SpecForceP. Furthermore, she moves the finite verb all the way up to Force. This is indicated by the fact that nothing, not even a pronominal subject, can occur between the relative complementizer and the finite verb. *Wh*-complements in child Lucernese have a similar structure: the *wh*-phrase moves to SpecForceP, and the finite verb to Force. According to Schoenenberger’s analysis, the tree structure for such constructions should be as in (15):

In relative clauses and *wh*-complements the checking of finiteness features in Fin cannot be responsible for verb movement in the child grammar because the verb moves past Fin up to Force. Therefore, Schoenenberger proposes that verb movement in these contexts is triggered by the relative criterion and the *wh*-criterion, respectively (Rizzi, 1997). These criteria state that a specifier must be in a spec-head agreement configuration with a head sharing the relevant features. The question is what these relevant features are exactly.

As for relative clauses, in the adult grammar the non-overt relative operator (with the feature [rel]) moves from an IP-internal position into SpecForceP and enters a spec-head agreement configuration with the relative complementizer *wo*. In discourse-marked relative clauses such as the ones in (3) one would have to assume that the relative complementizer occupies the SpecForceP position, and that the matrix predicate assigns an extra feature, such as [DR] (discourse related), triggering verb movement to the Force head. In analogy to this, Schoenenberger
proposes that in the child grammar, \( \omega \) itself moves from an IP-internal position into spec Force\( P \) and that the finite verb raises to Force to carry the feature \([rel]\), which is located on some lower functional head up to Force, to render the desired spec-head configuration. As Schoenenberger admits herself, it is not clear on which head the relative feature is located. Furthermore, she does not provide an explanation for the status change (and therefore of the position change) of \( \omega \) from relative operator to relative complementizer.

Similar to relative clauses, adult \( wh \)-complements also allow verb movement in special contexts, namely when they are interpreted as pseudo-questions or exclamatives (see (2b)). In this case the matrix predicate assigns the features \([+wh, -Q]\) to the embedded Force head. Thus, the \([-Q]\) feature fulfills some sort of a discourse function, triggering V movement. Given that Moira uses verb movement in any \( wh \)-complement, independent of its interpretation, Schoenenberger suggests that she erroneously assumes that the \( wh \)-feature itself triggers verb movement, which can be regarded as another case of feature underspecification: Q is not specified. Unfortunately, Schoenenberger does not suggest any reasons as to why the \([wh]\) feature should take over the function of Q in child grammar.

Similarly to the development in verb movement in the other subordinate clauses, around age 5 the finite verb no longer moves to Fin, but to a head-initial I. As noted above, the question as to what triggers this verb movement remains unanswered. Although Schoenenberger is not explicit about the new position of the relative complementizer \( \omega \) in this intermediate stage, it is probably now treated as a complementizer in SpecForce. Whether this relative complementizer moves to Force from Fin, similar to other complementizers, Schoenenberger does not make clear. The \( wh \)-phrase presumably stays in SpecForce. The structures for relative clauses and \( wh \)-complements after age 5 are illustrated in (16):

Analogous to the development of the other complementizer clauses, the last step towards the adult grammar presumably consists of a change in verb position: the verb no longer moves to I, but stays in a lower position, creating a verb final pattern similar to the structure in (14).

The question is what prohibits the finite verb from moving into Fin during the stages after age 5. Schoenenberger proposes that the reason for this lies in the pragmatic component of language. As illustrated in (2) and (3), in contrast to clauses introduced by a complementizer, verb movement in relative clauses and \( wh \)-complements is possible in the target grammar, but is discourse-dependent. The child has not acquired the pragmatics which accompany verb movement in these constructions, and therefore generalizes verb movement to all relative clauses and \( wh \)-complements. Unfortunately, Schoenenberger does not say anything else about this developmental issue. She remains vague about the pragmatic concepts involved in verb movement in relative and \( wh \)-complements in adult language, and leaves the nature of the acquisition of these concepts undefined. Thus, it is not clear from Schoenenberger’s story what triggers verb movement to Fin.

The remaining, and in my opinion, very interesting subordinate construction in which Lucernese children apply illegitimate verb movement consists of embedded clauses introduced by the subordinate conjunction \( wil \) ‘because’. Surprisingly, and unfortunately, Schoenenberger does not pay much attention to this construction in her final analysis. She merely uses the findings regarding \( wil \)-clauses to emphasize her claim that despite the similarity in word order between complementizer-\( Z \)-\( Vf in \)… and \( wil-Z-Vf in \)…, the nature of \( Z \) is in fact very different, indicating that they have distinct underlying syntactic constructions. This is further supported by the finding that alongside the complementizer-\( Z \)-\( Vf in \)… constructions Lucernese children younger than 5 also produce complementizer-\( Vf in \)… constructions, while \( wil \)-clauses only appear in the \( wil-Z-Vf in \)… form. In the following I will apply Schoenenberger’s account to the \( wil \) constructions and show that this is not unproblematic.

As noted in (7) above, the \( Z \) constituent intervening between the \( wil \) complementizer and the finite verb can be a pronominal subject, a full DP subject, a non-subject, or a topic. All of these occur in this position already during the first stage, i.e. before age 5. According to Schoenenberger’s analysis for “regular” complementizer clauses in this stage, the finite verb should always move to Fin. If \( Z \) is a pronominal subject, this renders a tree structure similar to the one in (12b), here adapted for \( wil \) in (17):
So far so good. The problems start when one asks oneself how wil-clauses with non-pronominal subjects and non-subjects should be analyzed during this initial stage. Let us first consider the non-pronominal subjects. As Schoenenberger claims herself, SpecFinP is reserved for atonic subject pronouns, and full DP subjects occupy the spec IP position. This would imply that the finite verb cannot have moved to Fin, but remains in a lower position, possibly (head-initial) I, as Schoenenberger proposes for regular complementizer clauses in the second stage, after age 5. However, if this is true, the question arises as to why verb movement to Fin during stage I is obligatory in all other subordinate clauses, but not in wil-clauses. Moreover, a structure as in (17) has no obvious landing sites for non-subjects or topics, irrespective of whether the finite verb is in Fin, or in I (SpecFin being the designated position for atonic subject pronouns, and spec IP the designated position for other subjects). For reasons that are not clear to me, Schoenenberger does not address these problems and it weakens her overall analysis of the child data.

An interesting aspect of Schoenenberger’s discussion of wil-clauses is their relation with the discourse. Wil-clauses share the property with wh-complements and relative clauses that verb movement is allowed under special discourse conditions, such as a diagnostic interpretation in the case of wil-clauses. Although intriguing, this idea is left imprecise, and does not receive any elaboration. The idea that children do not yet master the subtle details of the pragmatic factors involved here is attractive, but deserves much more attention and investigation. Furthermore, it is not clear to me why the lack of these pragmatic distinctions results in generalized verb movement, rather than the opposite, i.e. no movement at all, irrespective of the discourse function of the relevant subordinate clause.

Finally, the results of the present study provoke thoughts and questions concerning language acquisition hypotheses, such as Continuity and Maturation, which, again surprisingly, are not discussed by Schoenenberger. If the phenomenon of embedded V-to-C as described in this book turns out to be typical for child language and is ungrammatical in adult Lucernese or any other adult grammar, this would constitute a piece of counter-evidence against the Continuity Hypothesis, which states that all child grammars are constrained by UG. Investigations into other adult grammars and the pragmatic system could shed light on this issue. A promising suggestion seems to be that embedded V-to-C is a syntactic option within the constraints of UG, but that pragmatic considerations determine when this syntactic mechanism applies. The difference between child and adult grammar could then possibly be reduced to differences between the pragmatic systems of the child and the adult.

Concluding, despite several loose ends and unanswered questions in the analysis – especially where it concerns learnability issues – Schoenenberger’s book is a detailed description of a fascinating and previously unreported phenomenon in child language, providing at least a partial solution to its mystery.

Reference