SSLA, **25**, 65–97. Printed in the United States of America.
DOI: 10.1017.S0272263103000032

TRUNCATION AND MISSING INFLECTION IN INITIAL CHILD L2 GERMAN

Philippe Prévost
Université Laval

This paper examines the nature of finite and nonfinite main declarative sentences produced by L2 child learners. It claims that two of the main proposals on the root infinitive (RI) phenomenon, the Truncation Hypothesis (TH) and the Missing Surface Inflection Hypothesis (MSIH), are not mutually exclusive in child SLA because they are hypotheses on completely different issues. According to the TH, different roots are involved: RIs are VPs underlyingly, whereas finite clauses are IPs or CPs. The MSIH claims that L2 learners have difficulties using the exact inflectional morphology, which leads them to produce verbs with an infinitival marker or no inflection at all. These so-called default forms are finite. In principle, then, an L2 learner could project truncated structure and produce default finite forms at the same time. This possibility is investigated in longitudinal data from an English-speaking child learning German. Two complementary sets of data can be accounted for by the hypotheses. Verbs bearing a nonfinite marker are restricted to nonfinite positions, which is consistent with the TH. Bare (uninflected) forms occur in the same (finite) positions as verbs inflected for person and number, which suggests that they are finite. This finding is consistent with the MSIH.

I would like to thank Howard Nicholas for making his data available to me. This research was supported by a grant from *Fonds pour la formation de chercheurs et l'aide à la recherche* (FCAR, No. 00-NC-1992), to which I am grateful. I also thank Céline Rostiaux and Joanna Górak for their help with the data. Thanks also to Lydia White, Laurent Dekydtspotter, and Dawn McLaughlin for fruitful discussions. Previous versions of this paper were presented at the Conference on Generative Approaches to Second Language Acquisition V (Massachusetts Institute of Technology, March 30–April 1, 2000), the Second Language Research Forum 2000 (University of Wisconsin–Madison, September 7–10, 2000), and the 25th Boston University Conference on Language Development (November 3–5, 2000). I thank the audiences for useful suggestions. Finally, many thanks to the anonymous *SSLA* reviewers for their insightful comments on previous versions of this paper.

Address correspondence to: Philippe Prévost, Université Laval, Département de langues, linguistique, et traduction, Sainte-Foy, PQ, G1K 7P4, Canada; e-mail: philippe.prevost@lli.ulaval.ca.

© 2003 Cambridge University Press 0272-2631/03 $12.00

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

Variability in the production of inflectional morphology by language learners has been the subject of intense research in the last 10 years. Of particular interest is the fact that language learners often produce nonfinite verb forms in contexts where finite forms are required in the target language (the so-called root infinitive phenomenon). What is at stake for scholars working within the generative grammar framework is the characterization of learners' underlying grammars—in particular, the status of functional categories and their features in these systems. Because functional categories are involved in the representation of morphosyntactic phenomena, such as agreement, tense, and Case, the question arises as to what extent the use of deviant morphology reflects deficiencies with respect to functional categories and the representation of finiteness in underlying grammars. In first language (L1) acquisition, researchers seem to agree that although children produce nonfinite root declaratives, they have abstract knowledge of finiteness. Indeed, the occurrence of nonfinite forms is confined to nonfinite positions (e.g., they appear after—not before—negative adverbs), and when verbal morphology is used, it is largely correct (Poeppel & Wexler, 1993). This suggests that children have knowledge of functional categories although specific aspects of the target grammar may be un(der)specified initially, such as tense (Wexler, 1994), number (Hoekstra & Hyams, 1996), or the Root Principle (Rizzi, 1993–1994), to mention but a few proposals.

In SLA, researchers still disagree on the exact nature of root infinitives (RIs) and on the underlying position of nonfinite main verbs. According to the Truncation Hypothesis (TH), nonfinite verbs produced by second language (L2) learners are indeed nonfinite and appear under V (Prévost, 1997; Prévost & White, 1999). In contrast, the Missing Surface Inflection Hypothesis (MSIH) holds that, whereas nonfinite main verbs may appear nonfinite on the surface, they are in fact finite and occupy finite positions (Haznedar, 1997; Haznedar & Schwartz, 1997; Prévost & White, 2000; Schwartz & Sprouse, 2000).[1] A third account holds that features underlying finiteness are impaired in interlanguage (IL) grammars (Beck, 1998; Eubank, Bischof, Huffstutler, Leek, & West, 1997). Meisel (1997) offered a strong version of this approach, claiming that there is no relationship between finiteness and verb placement in early IL grammars, which suggests that functional categories are altogether absent from IL grammars. The so-called (local) Impairment Hypothesis stands in sharp contrast to the TH and the MSIH, which both hold that functional categories are present in early IL systems. There is also disagreement concerning the nature of RIs with respect to the age at which acquisition begins. Some proponents of the TH have suggested that it best accounts for child—and not adult—SLA (Prévost & White, 2000), whereas the MSIH has been proposed to apply to both child L2 acquisition (Haznedar & Schwartz) and adult L2 acquisition (Lardiere, 1998a, 1998b). It is important to point out that evidence for the TH and the MSIH in child SLA comes from acquisition data of different languages. For the TH it mainly comes from L2 French and L2 German, whereas support for the MSIH has been found in L2 English. These lan-

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

guages exhibit different inflectional paradigm patterns. In general, French and German have richer inflectional morphology than English, which only has one agreement marker in the present tense (i.e., third-person *-s*), all other forms being uninflected. Moreover, English lacks overt infinitival markers (except *to*), which means that most present-tense forms are superficially indistinguishable from the infinitival form (in contrast, French and German have distinctive infinitival morphology). Research on morphological variability conducted on English is therefore difficult to interpret.

In this paper, I contribute to the debate on functional categories in child SLA by investigating the TH and the MSIH in a large database of child L2 German collected by Howard Nicholas (1984). I suggest that it is a mistake to oppose the TH and the MSIH because they are hypotheses about two completely different issues. According to the TH, Rizzi's (1994) Root Principle, whereby root clauses are CPs, is inoperative in early L2 grammars, which means that root IPs and root VPs are licensed. According to the MSIH, learners have difficulties mapping syntax and morphology, which leads them to produce verb forms with an infinitival marker or no inflection at all—namely, default finite forms. In principle, then, nothing prevents L2 learners from projecting root IPs and root VPs and having mapping difficulties at the same time. This idea was alluded to by Prévost and White (2000) in early L2 acquisition by adults but was not fully investigated. The main objective of this paper is to explore such a possibility in child SLA. Note that, although the TH and the MSIH make claims on different issues, they both assume that early IL systems contain functional categories and that L2 learners have knowledge of finiteness in the early stages of acquisition. This means that finite forms are restricted to finite positions (i.e., they should appear under a functional category), and nonfinite forms are confined to nonfinite positions (i.e., they should appear under a lexical position). This stands in sharp contrast to the Impairment Hypothesis previously described, which predicts greater variability in the positioning of verb forms. Given that the Impairment Hypothesis assumes no relationship between finiteness and verb placement, finite and nonfinite verbs could occur in either finite or nonfinite positions (see Prévost & White).

My objective is to arrive at a more precise description of the very first IL grammars developed by children, an area of SLA that seems to have received little attention compared to the large amount of research devoted to the initial state in adult SLA (e.g., Eubank, 1994; Schwartz & Sprouse, 1994, 1996; Vainikka & Young-Scholten, 1994, 1996). Child L2 acquisition has often been taken for granted by researchers in theoretical SLA who seem to think that children's success at acquiring a foreign language can readily be explained by a direct access to Universal Grammar (UG). Yet relatively little research has been done on this issue (see Hilles, 1991; Lakshmanan, 1993–1994; Pienemann, 1981; Schwartz, 1992), and we have little understanding of the mechanisms underlying L2 acquisition by children or of the exact contents of their developing grammars. Further investigation in child SLA is therefore necessary. The results of such research would give us a baseline to which adult L2 acquisition

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

could be compared and would tell us to what extent child L2 acquisition is similar to (and different from) L1 acquisition (see also Haznedar & Schwartz, 1997; Schwartz & Sprouse, 2000; White, 1996).

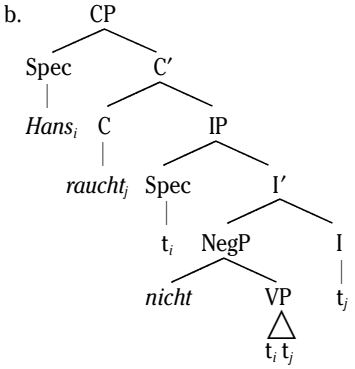
KNOWLEDGE OF FUNCTIONAL CATEGORIES

The Nature of Functional Categories

According to current linguistic theory, functional categories, such as I(nflection), C(omplementizer), and D(eterminer), underlie morphosyntactic properties like agreement, tense, and Case. They usually encompass so-called closed-class lexical elements (e.g., articles, complementizers, and auxiliaries), in contrast to lexical categories that represent open-class elements (e.g., nouns, verbs, and adjectives). Functional categories also play a crucial role in the derivation of word order as they are implicated in the movement of various elements such as the verb. In a German matrix clause, for instance, I adopt the traditional account whereby the verb moves out of its base-generated position within VP into the functional categories I and C; under this account V and I are head final (see den Besten, 1983; Holmberg & Platzack, 1995; Vikner, 1995).[2] This is illustrated in (1a) and (1b); irrelevant structure has been removed.

(1) a. *Hans raucht nicht.*
Hans smoke-3SG *not*
"Hans doesn't smoke."

b.



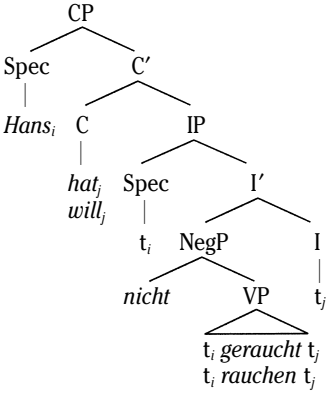
The verb is assumed to be equipped with agreement, tense, and finiteness features that must be checked against the relevant functional categories. Agreement and tense features must be checked within I, whereas checking of finiteness features involves C (in German; see Holmberg & Platzack, 1995; Vikner, 1995).[3] Additionally, features may vary according to their strength. If a feature is strong, it must be checked via overt movement. If it is weak, movement will not occur overtly, and checking will take place covertly—that is, at the stage of Logical Form (LF). In German, agreement, tense, and finiteness features are considered strong, which means that the verb must move out the

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

VP overtly. Indication of movement is usually provided by the position of the verb with respect to negative adverbs, such as *nicht* in German. Because negation is represented just above VP, the verb will land in a higher position than NegP if movement is involved (i.e., it will appear to the left of the negator, as in [1a] and [1b]). On the other hand, if movement does not occur, as with nonfinite verbs such as infinitives and past participles, it will follow the negator, as illustrated in (2). Note that V-movement to C results in the well-known V2 effect, which obtains when SpecCP is either occupied by the subject, as in (1) and (2), or a nonsubject element, as in (3). In the latter case, the verb is located above the subject, which in turn can be used as a diagnostic for verb-raising.

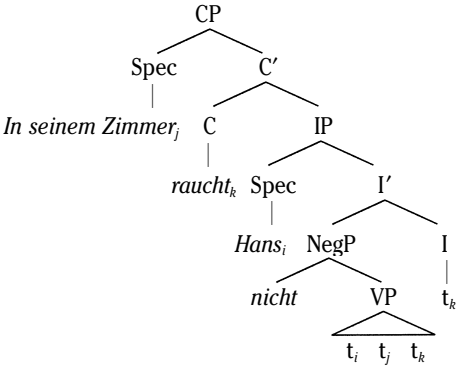
(2) a. *Hans hat nicht geraucht.*
Hans have-3SG *not* PP-*smoke*
"Hans didn't smoke."
b. *Hans will nicht rauchen.*
Hans want-3SG *not smoke*-INF
"Hans does not want to smoke."

c.



(3) a. *In seinem Zimmer raucht Hans nicht.*
in his-DAT *room smoke*-3SG *Hans not*
"Hans doesn't smoke in his room."

b.



https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

Table 1. German inflectional paradigm (present tense)

Verb forms	Lexical verbs *lernen* "learn"	Modal verbs *können* "kann"	Copula *sein* "be"
Infinitival form	*lernen*	*können*	*sein*
Past participle	*ge-lern-t*	*ge-konnt*	*ge-wesen*
Present tense: 1/2/3 Sing	*lern-(e)/-st/-t*	*kann-ø/-st/-ø*	*bin/bist/ist*
Present tense: 1/2/3 Plural	*lern-en/-t/-en*	*könn -en/-t/-en*	*sind/seid/sind*

Investigating Knowledge of Functional Categories

Although it is easy to relate inflectional markers and functional categories (productive usage of agreement morphemes may indeed suggest the presence of Agr in the underlying grammar), investigating the status of functional categories in IL systems should look beyond knowledge of the L2 inflectional paradigm. Knowledge of their syntactic reflexes should also be taken into account. This relates to the contexts in which verbal forms are found and to their placement with respect to elements such as negative adverbs. Another reason why knowledge of functional categories should be tested beyond knowledge of inflectional morphology is that there is no one-to-one relationship between the richness of morphology and the properties of underlying functional categories. Although languages displaying rich inflectional paradigms usually possess strong finite features, the reverse is not necessarily true. Some languages, such as Kronoby Swedish, have strong finite features despite poor verbal morphology, which means that the verb, though uninflected, moves out of VP (Bobaljik, 2001; Sprouse, 1998; Vikner, 1994). Thus, if learners do not display knowledge of the target morphology, this cannot be conclusive as to the exact functional contents of their underlying grammar. In particular, it does not necessarily mean that finite features should be considered weak or that functional categories are altogether lacking (contra Clahsen, Eisenbeiss, & Penke, 1996).

Additionally, any rigorous investigation of functional categories in IL grammars should examine the distribution and properties of all verb forms produced by L2 learners, including inflected, infinitival, and bare (uninflected) verbs. As previously mentioned, German possesses an infinitival marker (*-en*) and a rich inflectional paradigm with phonetically different endings (see Table 1). These inflectional markers are also obligatory, except for the first-person-singular *-e*, which may be omitted in spoken German. In such cases, a bare stem is produced. Examples of inflected, bare, and infinitival verbs are given in (4) and (5), which illustrate that both inflected and bare verbs are finite forms in mature German because they can precede either the negator *nicht* or the subject.

(4) a. *Hans raucht nicht.*
Hans smoke-3SG *not*
"Hans doesn't smoke."

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

b. *In seinem Zimmer hat er geraucht.*
in his-DAT *room have*-3SG *he* PP-*smoke*
"He smoked in his room."

(5) a. *Ich rauch nicht.*
I smoke-Ø *not*
"I don't smoke."
b. *In meinem Zimmer hab ich geraucht.*
in my-DAT *room have*-Ø *I* PP-*smoke*
"I smoked in my room."

The sentences in (6) illustrate the fact that infinitival verbs occur in nonfinite positions (e.g., after negation) and that German modal verbs do not exhibit any agreement ending in the first- and third-person singular. Note that most modal verbs have an ablaut pattern in the singular (e.g., contrast *ich darf* "I am allowed" with *wir dürfen* "we are allowed").

(6) a. *Ich will nicht rauch-en.*
I want-Ø *not smoke*-INF
"I don't want to smoke."
b. *In seinem Zimmer darf er nicht rauch-en.*
in his-DAT *room may*-Ø *he not smoke*-INF
"He's not allowed to smoke in his room."

If L2 learners of German produce inflected, bare, and infinitival main verbs, the question arises as to whether these forms appear in similar contexts or are in complementary distribution. We may also wonder whether there is a developmental stage at which one verb type is more frequent than any other. In this paper, I devote particular attention to the occurrence of bare stems whose incidence and nature have not been systematically investigated in the literature. Do these forms pattern more like infinitival verbs or inflected ones? Are they produced at all stages of acquisition or are they restricted to the very first phases?

German is a language that suits this kind of research well. Obviously, the distinctive inflectional markers will have to be learned and may therefore run the risk of being omitted in spontaneous speech, which should yield the production of bare forms (see Meisel, 1997). This differs from English, on which several recent studies of functional categories in early IL grammars are based (e.g., Haznedar & Schwartz, 1997). English has a poor inflectional system, which means that bare forms are ambiguously finite or nonfinite. It is therefore virtually impossible to decide on the exact nature of the bare forms found in the data investigated.

Functional Categories in Child SLA

As previously mentioned, the TH and the MSIH both hold that functional categories and their features are present in initial child IL grammars (either via transfer from the L1 grammar or via direct access to the categorial inventory

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

of UG). According to the TH, functional categories need not be systematically projected, which yields the projection of truncated structures (Prévost, 1997; Prévost & White, 1999; Rizzi, 1993–1994). This truncation is assumed to stem from the early inoperation of Rizzi's (1994) Root Principle, according to which root declaratives are CPs. If the Root Principle is not active in the initial stages, the root of the underlying representation of sentences may vary: It could be CP, IP, or VP. When VP is the root, there is no functional category able to host the verb, so it will appear in the nonfinite form either as an infinitival verb or a past participle. When CP or IP is the root, functional categories are projected, which yields the production of inflected (finite) verb forms.

According to the MSIH, the problem encountered by L2 learners is not representational; rather, it lies in the provision of the appropriate inflectional markers, which have to be learned (Epstein, Flynn, & Martohardjono, 1996; Haznedar & Schwartz, 1997; Schwartz & Sprouse, 2000). Regardless of their form—inflected, infinitival, or bare—verbs can appear in finite positions (i.e., positions usually hosting finite elements, such as I). Recently, it has been proposed that L2 learners' errors in inflectional morphology are due to mapping problems between the syntactic and morphological domains (Lardiere, 1998a, 1998b, 2000; Prévost & White, 2000). L2 learners may use default finite forms, which they may call on when in doubt or under some sort of communication pressure. Comparing the incidence of nonfinite verb forms in child and adult L2 French, Prévost and White reported that children, unlike adults, do not use infinitival verbs as default finite forms. In this paper, I hypothesize that this also holds true in child L2 German. I further assume that the only default finite verbs that children use are bare forms, based on findings in child L2 English reported by Gavruseva and Lardiere (1996) and Haznedar and Schwartz.

PREDICTIONS

The main hypothesis of this paper is that the TH and the MSIH are not mutually exclusive in child SLA. I assume that infinitival verbs used in RIs have nonfinite properties, in accordance with the TH, and that they are not used as default finite forms. I further hypothesize that children use bare verbs as default finite forms, in accordance with the MSIH; these verbs should only be found in finite positions. This does not contradict the tenets of the TH because bare forms should only occur when functional categories are projected and not when VP is the root. Importantly, bare stems are not hypothesized to result from missing infinitival inflection; they should therefore pattern differently from infinitival verbs.

Verb Form and Clause Type

According to the TH, VP roots are nonfinite, whereas clauses involving functional categories (IPs and CPs) are finite. Thus, nonfinite (infinitival) main verbs should be found in root declaratives only and not in CPs, such as ques-

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

tions and embedded clauses. Moreover, if bare forms are really finite, they are expected to occur in CPs. Lack of infinitival verbs in CPs is also expected under the MSIH if indeed they are not used as default finite forms.

Verb Form and Verb Placement with Respect to Negators and the Subject

Verb movement above a negative adverb or the subject implies the projection of a host functional category. The TH predicts that if the category in question is indeed projected, the verb will appear in a finite form (i.e., it could be inflected or not). An infinitival verb or a past participle cannot precede the negator or the subject, given that under the TH these forms are truly nonfinite. If NegP is the root, there is no functional category to which the verb can move. It will therefore appear in the infinitival form and will follow the negator. What is not expected, under either the TH or the MSIH, is the presence of a finite or a bare main verb following the negator in a root clause because such forms, which are held to be finite, should always appear in finite positions.[4]

Form of Auxiliaries, Modals, and the Copula

Following Parodi (2000) and based on ideas developed by Pollock (1989) and Chomsky (1995), I assume that auxiliaries, modals, and the copula are light verbs—that is, verbs whose semantic content is empty or underspecified. For instance, modals cannot stand on their own, unlike lexical verbs; they need to be related to another verb to exhibit a modal reading. If this is correct, then these verbs can be said to lack semantically related features and are therefore not visible to LF rules. Thus, if they do not move out of V overtly, they will not be able to raise at LF and the derivation will crash. This means that under the TH, these elements should never be found in RIs. If VP is the root, there is simply no position that could accommodate them. They should only be found as inflected or bare forms, assuming that bare verbs are finite. The MSIH does not predict that auxiliaries, modals, and the copula will appear as infinitivals if indeed infinitival morphology is systematically associated with the [–finite] feature.

Verb Form and Null Subjects

According to Rizzi (1994), a special kind of null subject, called a null constant, can be found in languages that are not *pro*-drop languages, such as French and English, especially in the context of personal diaries (see Haegeman, 1990). Null constants must occupy the specifier of the root to be identified via discourse. Hence, subjectless root declaratives can be produced if the root of the underlying structure is IP but not if a full-fledged CP is projected. Under the

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

TH, Rizzi's analysis predicts that null constants should be found in IP and VP roots. In other words, L2 learners should produce subjectless finite and nonfinite root declaratives. Furthermore, null constants should be found to a larger extent in VP roots than in IP roots. This prediction stems from the following reasoning: If IP is projected, nominative Case can be assigned to the subject in SpecIP, which cannot hold true in root VPs because the appropriate functional layer is missing. Therefore, a wide range of subjects, including a high number of lexical Determiner Phrases (DPs), is to be expected in finite root declaratives (exhibiting either inflected or bare verbs), which should lower the occurrence of null constants in such contexts. This should not apply to VP roots: Given that the incidence of lexical subjects is severely constrained in RIs, the incidence of null constants should be quite high there. The MSIH does not make any strong prediction concerning the incidence of null subjects in L2 production. If null subjects are found, they should appear to a roughly similar extent with inflected and bare verbs given that these verbal forms are considered to be equally finite.[5] The MSIH does not have much to say about the incidence of null subjects with infinitival forms per se if these forms are [–finite].

Form of Particle Verbs

In German, some verbs have particles attached to them, such as *machen* "make," which takes *auf* "on" and *zu* "off," yielding the forms *aufmachen* "open" and *zumachen* "close." When the verb is nonfinite, the particle remains attached to it, as in (7a). In contrast, finite verbs appear detached from particles, as in (7b). In the latter case, the discontinuity between the verb and its particle indicates that the verb has moved out of the VP into a functional category, leaving the particle behind.

(7) a. *Ich will die Tür aufmachen.*
I want the door on-make-INF
"I want to open the door."
b. *Ich mache die Tür auf.*
I make-1SG *the door on*
"I'm opening the door."

The TH predicts that RIs may contain particles attached to infinitival main verbs because the underlying representation of such clauses is assumed not to include any functional category. If IP or CP is the root, the verb should be inflected, and it should be detached from its particle due to verb movement. Under the MSIH, bare forms are assumed to be finite, so they should appear separated from their particles.[6] This should not obtain with infinitival forms if they are held to always be nonfinite.

Verb Form and Nonfinite Positions

In mature grammars, verbs following prepositions or other verbs (such as auxiliaries and modals) are nonfinite. Hence, they normally appear in the infin-

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

itival form or as a past participle. Both the TH and MSIH make similar predictions with respect to verb forms in such positions in early child IL grammars: The verb should always be nonfinite. Given that children are assumed to be able to distinguish between finite and nonfinite forms, one should not expect inflected or bare forms in these positions.

A FEW WORDS ON TRANSFER

The possibility of transfer is irrelevant to the basic tenets of the two hypotheses investigated in this study. Their respective claims apply over whatever structure and movement are being assumed by the learners. What might be affected is the detail of some of the predictions discussed in the previous section. For example, according to the traditional analysis of German adopted in this paper, VP and IP are head final in that language. In main clauses, the nonfinite verb follows all VP material and occurs in final position, as in (8); see also (7a).

(8) *Hans hat deine Pfeife geraucht.*
Hans have-3SG *your pipe* PP-*smoke*
"Hans smoked your pipe."

It has been suggested that L2 learners initially transfer headedness properties from their mother tongue into the IL grammar (Schwartz & Sprouse, 1994). If IP and VP are left-headed in the L1, and if transfer of headedness properties indeed occurs, the verb—regardless of its form—should not be found to follow any VP element under either the TH or the MSIH. Alternatively, if the right-headedness of German IP and VP is acquired early on, the TH predicts that finite and infinitival verbs should be observed clause finally.

PREVIOUS RESEARCH

Studies on morphological variability in child SLA have given contradictory results. Prévost (1997) and Prévost and White (1999) reported a period of RIs and truncated structures in the speech of two English-speaking children learning L2 French and two Italian-speaking children learning L2 German. The two children learning French (Kenny and Greg) were 5;4 and 5;8, respectively, when data collection began. Kenny had been exposed to French for 2 months and Greg for 5 months. The two children learning German (Luigina and Concetta) were 8 years old at the time of the first interview and had arrived in Germany 3 weeks earlier. The incidence of finite and nonfinite forms reported in these two studies is summarized in Table 2. The findings are more compelling in the L2 French corpus because of the amount of data involved. In the 24 months covered by the data examined, the two children were found to produce RIs for the first 18 months. As shown in Table 3, various significant contingencies were identified, including verb form and verb placement with

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

Table 2. Distribution of finite and nonfinite root declaratives

Root declaratives	L2 French		L2 German	
	Kenny	Greg	Concetta	Luigina
Finite	428	591	150	42
Nonfinite	76 (15.1%)	58 (8.9%)	23 (13.3%)	8 (16%)

Table 3. Incidence of nonfinite verbs in finite contexts (from Prévost, 1997)

Context	L2 French		L2 German	
	Kenny	Greg	Concetta	Luigina
Nonfinite forms in V-Neg	4/90 (4.4%)	2/120 (1.7%)	1/7 (14.23%)	0
Nonfinite aux/modals/copula	0/99	0/177	0/26	0/6
CPs with nonfinite verbs	9/147 (6.1%)	6/160 (3.8%)	3/19 (15.8%)	2/27 (7.4%)

respect to negation (main infinitival verbs were never found above negation) and finiteness and verb type (auxiliaries, modals, and the copula never appeared in the infinitival form). Moreover, comparing Tables 2 and 3 reveals that main infinitival forms were more likely to appear in root clauses than in CPs. These findings suggest that finite and nonfinite root declaratives have different structures and that the children did not use infinitival endings as substitutes for finite markers. In these two studies, Prévost and White argued that these results are best explained in terms of truncation. Schwartz and Sprouse (2000) contested the truncation analysis, arguing that the L2 German data fail to support the TH. They claimed that in Concetta's data the incidence of nonfinite forms in CPs and nonfinite verbs above negation is well above what the TH would predict and far exceeds the L2 French percentages. Moreover, Luigina's data are frequently inconclusive, as is the case with negation. Prévost pointed out that the German data on which the study was based are quite limited, especially when compared with the large L2 French corpus. It is precisely in response to that problem that the present study was undertaken.

Evidence against the TH mainly comes from L2 English. Reinterpreting data from an 8-year-old Russian child (named Dasha) learning English (Gavruseva & Lardiere, 1996), Schwartz and Sprouse (2000) argued that nonfinite forms, including bare stems, are as likely to appear in CPs (30/68 = 44.1%) as in root declaratives (220/416 = 52.29%). According to Schwartz and Sprouse, this finding is only compatible with the MSIH. It is clear that the TH predicts that infinitival main verbs should not occur in CPs. However, it does not predict a lack of bare (finite) verbs in this context. For the TH, *uninflected* does not necessarily equate with *nonfinite*. A well-known problem with English is that bare forms

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

are ambiguously finite or nonfinite. If these verbs are indeed nonfinite in Dasha's CPs, then we have evidence against the TH; if they are considered finite, however, then the results are not inconsistent with that approach. What needs to be investigated is the acquisition of a language with overt finite markers and an overt infinitival suffix, such as German.

Further arguments against the TH are presented by Haznedar's (1997) analysis of spontaneous production data from a Turkish child (3;8 years old) learning English (see also Haznedar & Schwartz, 1997). In particular, no contingency was found between the incidence of null subjects and finiteness. Null subjects were very rare with finite verbs (29/1193 = 2.4%) and nonfinite forms (0/875), including bare stems, which is argued to support the MSIH. Here again the question of the nature of the bare forms arises: Are they finite or nonfinite? It might be the case that some of the bare forms produced initially are nonfinite, whereas the ones found in the later recordings are finite (see the "Discussion" section for further analysis).

THE DATA

The data examined in this study were obtained from an English-speaking child named Cindy, who was learning German (Nicholas, 1984). She was born in Africa and was raised speaking English. Her father, who was German, and her mother, who was from Africa, spoke near-native English. While in Africa, the father did not speak German to his daughter. At the time of the first recording session he reported having stopped using German 19 years earlier. When the family arrived in Germany, Cindy was 3;2 years old. She started attending kindergarten practically upon arrival. The first recording session took place 2 weeks later. During those 2 weeks, the teacher had mostly used English with her. Recording sessions covered a total period of about 28 weeks and took place on average twice a week, either at school or at Cindy's house. In all, 42 samples were examined.

Cindy had full command of English when she started learning German. As Nicholas (1984) pointed out, "when heard speaking English in a monolingual context, she exhibited full fluency and a wide range of linguistic forms in appropriate contexts" (p. 310). To further evaluate her proficiency, I closely looked at the English utterances she produced in the first 20 samples. Inflectional morphology, such as third-person-singular *-s* and *-ing*, were used appropriately as early as samples 1 and 2. She also showed early knowledge (as of sample 1) of auxiliaries (e.g., *be*, *do*, or *does*), as she systematically produced questions and negative utterances with an auxiliary. Additionally, all questions displayed subject-modal or subject-auxiliary inversion. In short, there is virtually no error to be reported on the usage of inflectional morphology, auxiliaries, and the formation of questions and negatives in the first 20 samples. I am therefore confident that Cindy was a true L2 learner of German.

Only German utterances containing a verb and at least one other element were retained for analysis. Obvious repetitions of what the interviewer had

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

said were discarded as well as what appeared to be formulaic expressions used by the child, such as *das ist* "this is" and *wo ist* "where is." In German, as previously noted, inflectional markers are phonetically distinctive in almost all persons as far as lexical verbs are concerned (see Table 1). Modal verbs do not carry any marker in the first- and third-person singular. As for the copula *sein*, its inflectional paradigm contains suppletive forms that are almost all distinct (except the first- and third-person-plural *sind*). The German infinitival marker is *-en*, which is similar to some of the plural forms. To decide between the finite and infinitival *-en* forms, a method similar to the one utilized in Prévost (1997) and Prévost and White (1999) was adopted: Verbs ending in *-en* were considered nonfinite unless there was evidence to the contrary—namely, the presence of a first- or third-person-plural subject.

RESULTS

Verb Forms in Root Declaratives

Verbs start to appear after the first 3 weeks of recording (in sample 7). From then on, inflected, bare, and infinitival forms, as well as past participles, are used as main verbs and are found in almost all recordings; see (9)–(11).[7] Crucially, it is not the case that verbs first appear in the infinitival or bare form and are then inflected.[8]

(9) a. *die macht da* (sample 7, day 21)
she make-3SG *there*
b. *Heidi kommt* (sample 8, day 26)
Heidi come-3SG
c. *das göt* (= *gehört*) *yur* (sample 9, day 30)
this belong-3SG *you*

(10) a. *ich fang* (sample 11, day 35)
I start-Ø
b. *schlafen muß das* (sample 10, day 33)
sleep-INF *must*-Ø *this*
c. *mein Bruder heiß Marc* (sample 18, day 77)
my brother call-Ø (= *is called*) *Mark*

(11) a. *kaputt machen* (sample 3, day 7)
broken make-INF
b. *sitzen da* (sample 10, day 33)
sit-INF *there*
c. *nich kemach* (= *gemacht*) (sample 9, day 30)
not PP-*do* (= *done*)

The incidence of RIs is greater during the first 120 days of acquisition (roughly equivalent to 17 weeks) until sample 29 (see Appendix A for details). During that period, the ratio of RIs is 9.3%, peaking at around 40% during the second month, whereas it is only 4.5% thereafter (see Table 4). The difference

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

Table 4. Verb forms in root declaratives

Samples	Inflected	Infinitival	Bare ungram.	Bare gram.
Up to sample 29	570 (51.9%)	102 (9.3%)*	63 (5.7%)	363 (33.1%)
After sample 29	1060 (54.6%)	87 (4.5%)	104 (5.3%)	690 (35.5%)

Note. Raw scores are followed by the percentage they represent with respect to the total number of verb forms.
*$p < .0001$.

is statistically significant, $\chi^2 = 27.789$, $p < .0001$, and comparable to what was reported for Greg (one of the two children learning French) by Prévost (1997) and Prévost and White (1999). However, if the first 17 weeks are to be identified with an RI period, it must be acknowledged that it is much shorter than the 18-month-long RI period reported in child L2 French acquisition. I come back to this point in the "Discussion" section. Table 4 also reports the incidence of two types of bare verbal forms in root declaratives: those that are grammatical (such as first-person-singular verbs and first- and third-person-singular modals), as in (10a) and (10b), and those that are ungrammatical in the target language (such as third-person-singular verbs), as in (10c). In both cases, the ratio of bare verbs observed before and after sample 29 is similar. This stands in sharp contrast to what was found for the incidence of infinitival forms. Crucially, bare ungrammatical forms are as likely to appear during the first 17 weeks as they are afterward. No statistically significant difference between the two periods are found in either the incidence of grammatical ($\chi^2 = 1.918$, $p = .17$) or ungrammatical bare forms ($\chi^2 = 0.195$, $p = .66$), which greatly differs from the incidence of main infinitival verbs that were found to occur significantly more often during the first 17 weeks. This suggests that infinitival forms and bare stems are not of the same nature, which is predicted by the MSIH if only bare verbs are used as default finite forms by children.[9] This first result is also compatible with the TH, which correctly predicts the existence of a period during which VP roots are projected and RIs are produced. Note that the findings reported in the rest of this study concentrate on the first 17 weeks of acquisition.

Verb Forms in CPs

Questions and embedded clauses, which are represented by CP, occur sporadically before sample 18 (day 77) and are found in all subsequent recordings (see Appendix B). It is important to note that they appear in sessions where RIs are also produced (in samples 18–29). According to the TH, infinitival main verbs should not be found in CPs because these contexts require the projection of functional categories. Bare forms, however, should be observed in CPs because they are held to be finite. As shown in Table 5, there is a dichotomy between infinitival and bare verbs. With regard to infinitivals, there is a significant contingency between verb form and clause type in that infiniti-

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

Table 5. Verb forms in root declaratives and CPs

Clause type	Inflected	Infinitival	Bare ungram.	Bare gram.
CPs	167 (87.4%)	3 (1.6%)*	5 (2.6%)	16 (8.4%)**
Main declaratives	570 (51.9%)	102 (9.3%)	63 (5.7%)	363 (33.1%)

Note. Raw scores are followed by the percentage they represent with respect to the total number of verb forms.
*$p < .001$. **$p < .0001$.

val main verbs almost never appear in CPs, $\chi^2 = 12.956$, $p < .001$. This finding is compatible with the TH. Examples of finite forms used in CPs are given in (12).

(12) a. *hast du drei?* (sample 8, day 26)
have-2SG *you three*
b. *wenn ich bin gut* (sample 18, day 77)
when (*if*) *I am good*
c. *wo gehst du?* (sample 22, day 91)
where go-2SG *you*

Consider now the incidence of ungrammatical bare verbs in CPs and root declaratives. As Table 5 shows, it remains quite low in both contexts. Crucially, no significant contingency is found between the incidence of such forms and the clause type in which they appear, $\chi^2 = 3.169$, $p = .075$. This means that, despite the fact that few bare verbs are observed, when they are produced, they are as likely to appear in either one of the two contexts. Again, this points to a difference between the nature of infinitival verbs and that of bare verbs. Note that the same difference between infinitival and ungrammatical bare forms obtains when one considers only the period during which CPs are productively used—namely, from samples 18 to 29. If we now direct our attention to grammatical bare verbs, we see a strong contingency between verb form and clause type. Like infinitival forms, the incidence of grammatical bare verbs is significantly restricted to main declaratives, $\chi^2 = 47.35$, $p < .0001$. Despite this similarity, the two verb forms do not share the same properties, as will become obvious later on. We already saw that they differ in that grammatical bare verbs appear to the same (high) extent throughout the corpus, whereas infinitival main forms drop out at sample 29. The low incidence of CPs containing a grammatical bare verb can be explained by the fact that there were relatively few questions including a first-person-singular verb in the data; Cindy was simply not asking questions about herself. Examples of infinitival forms and ungrammatical bare verbs used as main verbs in CPs are given in (13).

(13) a. *das gesehen?* (sample 20, day 84)
this PP-*see* (= *seen*)
b. *siek* (= *sieh*) *du das?* (sample 25, day 105)
see-Ø *you this*

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

Table 6. Verb placement with respect to negation

Verb placement	Inflected	Infinitival	Bare ungram.	Bare gram.
V-Neg	91	2	6	61
Neg-V	0	40	0	0

Negation

Negative utterances start appearing at sample 9 in the data and are used productively as of sample 18 (day 77).[10] They are then found in all subsequent recordings. Again, a difference between infinitival forms and bare verbs arises when considering verb placement with respect to negation (see Table 6). Infinitival main verbs appear almost exclusively after the negator (i.e., in a nonfinite position), as illustrated in (14). This confirms the predictions made by the TH. The distribution of bare forms—be they grammatical or not—is exactly the opposite of infinitival ones: They are restricted to a prenegation position, which suggests that they are finite. Indeed their occurrence matches that of inflected verbs, as can be seen in the second column of Table 6; examples are given in (15) and (16). Once again, this calls for a different treatment of infinitival and bare forms.

(14) a. *der hier ni schlafen* (sample 10, day 33)
this here not sleep-INF
b. *du ga nik spechen* (sample 19, day 80)
you absolutely not speak-INF

(15) a. *ich mach gar nichts* (sample 17, day 76)
I do-Ø *absolutely nothing*
b. *das geh nikt* (sample 18, day 77)
this go-Ø *not*

(16) a. *papa is nit da* (sample 9, day 30)
daddy is not here
b. *kanns nich aufmachen* (sample 14, day 61)
can-2SG *not open*-INF

(X)VS Orders

When a verb appears before the subject, this suggests that it has moved from V to a functional category. It is therefore in a finite position. Two types of clauses were considered here: main declaratives and questions. Developmentally, (X)VS orders start being used productively as of sample 18. As can be seen in Table 7, most verbs found in such sequences are inflected. This is illustrated in (17). Only two infinitival forms are found before the subject, which is expected on a truncation account. Consider now the incidence of bare verb forms before the subject, as shown in (18).

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

Table 7. Verb forms in (X)VS sequences

Context	Inflected	Infinitival	Bare ungram.	Bare gram.
Main declaratives	148	2	7	77
Questions	95	0	1	8
Total	243 (71.9%)	2 (<1%)	8 (2.3%)	85 (25.1%)

Note. Raw scores are followed by the percentage they represent with respect to the total number of verb forms.

(17) a. *jetz trinks du nik deine Kaffee* (sample 19, day 80)
now drink-2SG you not your coffee
b. *denn tus du ga: nik weh* (sample 20, day 84)
then make-2SG you absolutely not harm

(18) a. *jetz hab ich das* (sample 17, day 76)
now have-Ø I this
b. *ein Tag geh eine kleine Kind* (sample 24, day 103)
one day go-Ø a small child

If they are finite, they should occur in this position to a much greater extent than infinitival forms. This is indeed the case as far as bare grammatical forms are concerned. They represent one-quarter of all verb forms occurring in front of the subject. However, ungrammatical bare verbs pattern more like infinitival forms in that they are quite seldomly found in a presubject position, which at first sight contradicts the tenets of the TH. How can we explain such a distribution? It is in fact quite possible that among the bare grammatical verbs produced by Cindy some of them are the result of a mapping problem between morphology and syntax, rather than the simple usage of a targetlike bare form that has been correctly learned. Of course, it is impossible to tease apart the two types because what is produced is acceptable in German. Yet, if we accept that at least some of the grammatical bare verbs should be treated on a par with their ungrammatical counterparts, then the incidence of ungrammatical bare verbs in (X)VS orders would rise to a much higher level than the incidence of infinitival forms. (Obviously, this tentative explanation applies to all cases of bare forms, not just those found in a presubject position; see the "Discussion" section for further analysis.)

Auxiliaries, Modals, and the Copula

According to the TH, elements that must raise overtly, such as auxiliaries, modals, and the copula *sein*, should never be used in the infinitival form in main declaratives. The copula *sein* is found in the earliest recordings, especially in the phrase *das ist* "this is," which was excluded from statistical analyses. Auxiliaries, modals, and *sein* (other than *das ist*) appear in sample 8 and are used productively as of sample 18 (day 77). The incidence of such verbs is reported in Table 8, and examples are presented in (19). Because *sein* forms are suppletive, they are presented in a separate line in Table 8.

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

Table 8. Finiteness in auxiliaries, modals, and the copula (root declaratives)

Verb type	Inflected	Infinitival	Bare ungram.	Bare gram.
Auxiliary *haben* "have"	60	0	0	46
Modals	99	0	24	123
Subtotal: *haben* and modals	159 (45%)	0	24 (6.7%)	169 (48%)
Copula and auxiliary *sein*	202	0	0	0

Note. Raw scores are followed by the percentage they represent with respect to the total number of verb forms.

Table 9. Incidence of null and overt subjects with respect to different verb forms

Subject	Inflected	Infinitival	Bare ungram.	Bare gram.
Null	49/570 (8.6%)	63/102 (61.8%)	8/63 (12.7%)	8/363 (2.2%)
Overt	521/570 (91.4%)	39/102 (38.2%)	55/63 (87.3%)	355/363 (97.8%)

Note. Raw scores are followed by the percentage they represent with respect to the total number of verb forms.

(19) a. *da hast gemacht* (sample 8, day 26)
there/this have-2SG PP-*do* (= *done*)
b. *kanns(t) nicht aufmachen* (sample 14, day 61)
can-2SG *not open*-INF
c. *du bis de Hund* (sample 19, day 80)
you are-2SG *the dog*

The auxiliary *haben* "have" and modals are grouped together because they follow a regular process of affixation and may thus be produced as bare forms. As can be seen, no auxiliaries, modals, and instances of the copula *sein* appear in the infinitival form in Cindy's root declaratives, which supports the TH; the only occurrence of infinitival *sein* used as a copula occurs in an embedded clause and is presented in (20). In contrast, over half of *have* forms and modals occur without any inflectional marker. In particular, close to 7% are ungrammatical bare verbs. Although the ratio seems low, it still differs from the findings on infinitival auxiliaries and modals. This again calls for a difference in status between infinitival and bare verbs.

(20) *daß da nicht ruhig sein* (sample 27, day 112)
that there not quiet be-INF

Null Subjects

Null subjects are found with the first verbs (in sample 7) and occur in almost all recordings thereafter. Table 9 reports the incidence of null subjects with all verb forms. The highest ratio of null subjects is found in infinitival con-

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

Table 10. The form of particle verbs in the first 17 weeks

Verb placement	Inflected	Infinitival	Bare ungram.	Bare gram.
Part-V	0	15	0	0
V-Part	15	1	2	11

texts: Over 60% of infinitival verbs are used without a subject (see [21]). This conforms to the predictions made by the TH, given that the possibilities of overt subjects are reduced in VP roots, mainly due to Case. The findings on infinitival forms differ greatly from the low incidence of null subjects with any other verb form, including bare verbs (see [22]). Again, the results suggest that bare forms are finite, whereas infinitival ones are nonfinite.

(21) a. *kaputt machen* (sample 3, day 7)
broken make-INF

b. *da essen* (sample 18, day 77)
there eat-INF

c. *so ein Haus bauen* (sample 29, day 119)
this-way a house build-INF

(22) a. *da hast gemacht* (sample 8, day 26)
there have-2SG PP-*do* (= *done*)

b. (*ich*) *hab keine gelp* (sample 21, day 89)
(*I*) *have*-Ø *no yellow*

c. (*du*) *muß heim gehen* (sample 21, day 89)
(*you*) *must*-Ø *home go*-INF

When comparing the incidence of null subjects with inflected verbs and bare forms, a significant difference is found, $\chi^2 = 9.364$, $p < .05$, which indicates that null subjects are more likely to occur with inflected verbs. This is not necessarily expected by the MSIH. However, this approach does not make any strong prediction on the incidence of null subjects with finite forms. Additionally, the contingency is not particularly high because it fails to meet the .001 criterion of significance. Finally, there is no significant contingency in the incidence of null subjects between inflected verbs and bare ungrammatical forms, $\chi^2 = 1.165$, $p = .2804$.

Form of Particle Verbs

According to the TH, main verbs attached to their particles should bear the infinitival marker. If they are detached from their particles, it means that they have moved under a functional projection and should therefore be inflected. The MSIH further predicts that, in the latter case, the verb may either be inflected or bare, given that the problem faced by L2 learners has to do with supplying the exact morphology. Particle verbs are not very frequent in Cindy's data, as can be seen in Table 10. Still, interesting results emerge. First, some verbs were found detached from their particles. In practically all of

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

Table 11. Verb forms in nonfinite contexts

Context	Infinitival	Bare	Inflected
Prep + V	3	0	0
Aux/Mod/V + V	271	1	9
Total	274 (96.5%)	1	9

these cases, they are either inflected or bare, as illustrated in (23). Crucially, they almost never bear an infinitival ending, which confirms the predictions. Second, some main particle verbs are found attached to their particles. In all these cases, the verb is infinitival, or it is a past participle, which is compatible with the TH (see [24]). It could be the case that Cindy did not know that these verbs contained a particle and that she misanalyzed them as a whole. Hence, it could be argued that these verbs really appeared in a finite position. If this were true, however, it would remain to be explained why no such verbs are inflected or bare.

(23) a. *ein Fester fällt runter* (sample 14, day 61)
*a window fall-*3SG *down*
b. *jezt geh ich weg* (sample 22, day 91)
now go-Ø I away

(24) a. *mein Finger eingeschwickt* (sample 19, day 80)
my finger PART-PP-*pinch+squeeze in*
b. *nik* (= *nicht*) *meine Geld wegnehmen* (sample 20, day 84)
*not my money away-take-*INF

Nonfinite Contexts

To verify the status of the different verb forms examined in this study, let us consider their incidence in typical nonfinite contexts—namely, following a preposition or another verb (such as an auxiliary or a modal). Few tokens of preposition+verb orders were found in the first 29 samples of the data. As for the other sequences, they appear productively as of sample 19 (day 80). To a large extent, verbs found in the nonfinite positions are infinitival (see Table 11). Examples are given in (25). Very few bare and inflected verbs were encountered; see (26). This confirms that infinitival forms should be considered nonfinite and that all other verb forms are finite, including ungrammatical bare verbs.

(25) a. *zu kaufen* (sample 22, day 91)
*to buy-*INF
b. *ich hab die größe genommen* (sample 19, day 80)
I have-Ø the big PP-*take*
c. *ich will es ga nikt essen* (sample 19, day 80)
*I want-Ø it absolutely not eat-*INF

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

(26) a. *kanns es nik mehr sieht* (sample19, day 80)
can-2SG *it not more see*-3SG
b. *kanns du domino spiel?* (sample 29, day 119)
can-2SG *you domino play*-Ø

DISCUSSION

In the L2 German corpus analyzed in this study, main verbs appear in various forms: infinitival, bare, and inflected. These forms do not seem to share the same status. Infinitival verbs have nonfinite properties: They are restricted to nonfinite positions, such as following negation, prepositions, and other verbs. They almost never appear in finite contexts like CPs or before the subject and negative adverbs. In contrast, bare and inflected forms seem to pattern together and share finite characteristics. They appear in the (finite) contexts from which infinitival forms are excluded. Moreover, infinitival forms are used productively as main verbs of root declaratives during a certain period of time (the first 4 months), whereas bare and inflected forms appear in such clauses in almost all the recordings investigated.

Theoretical Implications

The distributional properties of infinitival forms are consistent with the TH. Infinitival verbs are not used as substitutes to finite verb forms; rather, they are truly nonfinite. In contrast to infinitival verbs, bare forms, including ungrammatical ones, have finite properties. Additionally, there is nothing in the data indicating that bare forms are ever considered nonfinite, even in the earliest recording sessions. The findings on bare forms are consistent with the MSIH and with the findings reported on the acquisition of L2 child English (i.e., they appear in finite contexts). This suggests that when children have difficulties with inflectional morphology (presumably due to a mapping problem between syntax and morphology), they use bare stems as default (finite) forms. This contradicts Meisel's (1997) assumption that bare stems are nonfinite in (adult) L2 German.[11] The findings on the distributional properties of bare verbs also suggest that only finite morphology may be omitted and not infinitival markers. If it were not the case, substantially more bare forms would have been found in nonfinite positions. Based on these findings, the MSIH should perhaps be renamed the Missing Surface *Finite* Inflection Hypothesis, so as to lift any ambiguity on the type of inflectional markers that may be left out by L2 learners.

The complementary distribution of infinitival forms and bare stems suggests that the TH and the MSIH are not necessarily mutually exclusive in child L2 acquisition; instead, they may complement each other. The TH could handle the occurrence of infinitival forms: When functional categories are not projected, RIs—and not clauses with bare verbs—are produced. On the other hand, the MSIH would account for the production of bare forms: When L2 learners have difficulties mapping syntax and morphology, they produce bare

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

forms but not infinitival ones. In fact, the results obtained in this study do not really come as a surprise, given that the two approaches make hypotheses on different aspects of SLA: the kind of structures that may be projected (the TH) and the kind of problems that learners may have relating syntax and morphology (the MSIH). Another example of the complementary relationship between the two accounts can be found in early child L2 English. In the child L2 English corpus investigated by Haznedar (1997), no contingency was reported between the incidence of null subjects and finiteness (see the "Previous Research" section). A closer analysis of Haznedar's data reveals that up to sample 13 the incidence of null subjects was significantly higher with bare forms than with inflected ones. As suggested by Prévost (1997), it is therefore possible that truncation was allowed in the child's grammar until then and not later on. As of sample 13, it is plausible to assume that the child struggled with the exact surface morphology of the past tense and the third-person singular. Under this account, then, bare forms produced before sample 13 are truly nonfinite, whereas verbs in later recordings lacking *-ed* and *-s* are finite.

The clear distribution of infinitival verbs and bare stems suggests that children have knowledge of finiteness and thus that finiteness is represented at an abstract level. This means that the functional categories (and their features) underlying finiteness are not impaired in child SLA, contrary to what would be predicted if the Impairment Hypothesis proposed by Beck (1998) and Eubank and Beck (1998) applied to child SLA. Under this approach, finite features are inert, which means that all types of verb forms may be found in either finite or nonfinite positions. However, the findings reported here are quite far from confirming the expected variability in the placement of verb forms: The distribution of infinitival main verbs and bare stems is rather unidirectional, and very few finite forms appear in nonfinite contexts. Similar findings are reported in child L2 acquisition of French (Prévost, 2001b) and in adult L2 acquisition of French and German (Prévost & White, 2000).

Differences between Child and Adult L2 Learners

The results of this study differ from what is reported in adult SLA where evidence for the finite status of infinitival forms was found (Prévost, 1997; Prévost & White, 1999). In particular, the incidence of infinitival main verbs in finite contexts (such as CPs) is quite high in adult L2 German (much higher than what is reported here). In contrast with children, older learners seem to use infinitival markers as default finite forms. This does not mean, however, that adults never project truncated structures. As suggested by Prévost and White (2000), a nonnegligible number of infinitival verbs occurred in nonfinite positions in the adult corpora (e.g., after the negation). Therefore, there might exist two types of infinitival verbs in the data they examined: those produced as a result of mapping problems between syntax and morphology, and those resulting from truncation. As for the properties of bare stems in L2 adult German, they were not fully examined by Prévost and by Prévost and White

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

(2000), which makes it impossible to compare them to those in child SLA. Other studies on L2 German offer contradictory analyses of bare stems used by adult learners: They are either considered finite (Clahsen, 1988) or nonfinite (Meisel, 1997). Further research is therefore needed to settle the issue.

Nevertheless, the fact that children use bare forms as substitutes for fully inflected verbs suggests that, just like adults, they may use default (finite) forms in L2 acquisition. Prévost and White (2000) noted that adult learners may resort to various default forms depending on the language being learned. Adult learners of L2 German were found to use *-e* and *-en* markers as default finite endings, whereas adult learners of L2 French only used infinitival markers as substitutes for finite morphology. Prévost and White related the occurrence of default forms to Distributed Morphology (Halle & Marantz, 1993). Under this account, default forms are unspecified with particular features (finite features or person features, in the case at hand), which allows them to be inserted in particular positions without creating a mismatch with the feature requirements of the host position. A similar argument can be made for bare forms: They are unspecified for person features but specified as [+finite], which would explain why they only occur in finite positions.

Comparison with L1 Acquisition of German

In general, the findings on infinitival verbs reported in this study are similar to what is reported in L1 acquisition of German. Indeed, infinitival verbs produced by children acquiring L1 German are largely restricted to nonfinite contexts (Boser, Lust, Santelmann, & Whitman, 1992; Poeppel & Wexler, 1993). Boser et al. proposed that RIs involve a null (finite) auxiliary in the head of the highest functional projection. This auxiliary is licensed by discourse and identified by the (overt) subject in the specifier position. As for the infinitival verb, it occupies V. Could this hypothesis, nicknamed the Null Auxiliary Hypothesis (NAH), account for Cindy's data? Recall that Cindy was found to produce a number of RIs whose main verb is a past participle (see [24]). These may appear to be prime candidates for a missing auxiliary account. Moreover, the NAH correctly predicts that infinitival main verbs do not occur in CPs: Given that the null auxiliary needs to be identified by discourse in the highest functional node, it cannot appear in embedded clauses. Additionally, it needs to be identified by the subject in the specifier position, which explains why it does not appear in nonsubject *wh*-questions. In such questions, the null auxiliary would ultimately move to C, whereas a *wh*-word would appear in SpecCP. If the *wh*-word is an object, the auxiliary fails to be identified.

However, despite its appeal, some outright facts appear to cast serious doubt on the capacity of the NAH to handle the data examined in the present study. First of all, following on the topic of *wh*-questions, if the *wh*-word is the subject, identification of the null auxiliary could take place. Hence, infinitival forms could be found in subject questions. This is not the case in Cindy's data, however. Another problem for the NAH is that it does not necessarily

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

predict the observed difference between finite and nonfinite root declaratives as far as the incidence of null subjects is concerned. First, it is not clear how null subjects could appear in RIs at all if the null auxiliary needs to be identified by the overt subject in the specifier position of the root. Yet, over 60% of Cindy's RIs were subjectless. Second, if indeed an empty auxiliary is involved in RIs, this means that both overtly finite and (apparently) nonfinite declaratives are finite. Hence the same types of subjects should be expected to appear in these clauses. In particular, to the extent that null subjects are found, they should be observed to a roughly similar degree in both contexts. In other words, a highly significant contingency between verb forms and the incidence of null subjects is not expected, contrary to facts. Finally, in a study investigating the incidence of null auxiliaries and modals in child L2 French, Prévost (2001a) reported further predictions made by the NAH that are disconfirmed in the data examined. The data look similar to that of Cindy in that nonfinite verbs have nonfinite properties (Prévost, 1997; Prévost & White, 1999). As previously mentioned, the NAH predicts that similar types of subjects should be found in finite declaratives and RIs. In particular, subject DPs should occur in both contexts; in contrast, so-called strong pronouns (such as *moi* "me") should be banned from these declaratives because they bear (nonnominative) default case. However, results show that subject DPs are confined to finite declaratives and that the incidence of strong pronoun subjects is quite high and restricted to RIs. Note that such predictions are impossible to verify in L2 German because default case is nominative in that language. Therefore, if a subject DP appears with an infinitival verb, there will be no way to tell whether the sentence is finite (involving nominal structural Case) or nonfinite (involving nominal default case). Although more investigation of the NAH in L2 German should be carried out, it appears that the NAH shows tremendous weaknesses as a potential explanation for child SLA.

On the Nature of Truncation

The complementarity of the MSIH and the TH reflects a difference in the domains over which these approaches apply. The MSIH calls on mapping problems between syntax and morphology to account for the occurrence of deviant morphological forms in SLA. It may be assumed that the mapping operation takes some time to become automatic, which would explain why bare stems occur much longer than infinitival main verbs in child SLA. Mapping would even be more difficult to establish when the morphological system is impoverished. This would account for why the production of bare forms prevails for a while in the acquisition of L2 English (see Haznedar, 1997). The TH, on the other hand, is related to the inoperation of the Root Principle in the early stages of L2 acquisition. It may be the case that the Root Principle is initially underspecified in child IL grammars, much like along the lines of what Rizzi (1993–1994) proposed for early L1 acquisition. If we accept this idea, then the question arises as to how the Root Principle will eventually emerge.

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

In L1 acquisition, there is always the possibility of emergence via maturation, as Rizzi suggested; see also Borer and Wexler (1987) for a more general discussion of maturation. However, the recourse to maturation as an explanation is impossible in SLA: Once a linguistic property has matured, it cannot mature a second time. Additionally, all the child L2 learners investigated so far already had command of their L1, which means that the Root Principle was fully operational at the time L2 acquisition began. Alternatively, the emergence of the Root Principle could be a case of lexical learning—that is, it emerges once a particular amount of data has been acquired or once a particular lexical element has been learned. At this point, however, the nature of such potential triggering data is unclear.

The problem with the underspecification approach is that it predicts that all children learning an L2 will project truncated structures in the early phases of acquisition. However, this does not seem to be the case. In another study of child L2 French, Belletti and Hamann (2000) found almost no RIs in a corpus of longitudinal spontaneous production data from two learners. The difference between the results reported by Prévost (1997) on child L2 French and those of Belletti and Hamann may be imputable to the children's L1s: The two children investigated by Prévost were English speakers, whereas in Belletti and Hamann's study, one child's L1 was Italian and the other child's L1 was German. However, the nature of L1 influence over the incidence of RIs is unclear. In the case of the Italian speaker, an explanation in terms of transfer of feature strength may be proposed. Italian has strong [–finite] features, which means that infinitival verbs need to raise overtly to a functional category. If transfer of feature strength occurs in the initial state (as argued by Schwartz & Sprouse, 1996), then VP roots should not be projected by the children: The strong [–finite] features of the verb would fail to be checked, which would yield a violation of Full Interpretation (according to which uninterpretable features such as [–finite] must be checked by LF). This is reminiscent of the low incidence of RIs in the L1 acquisition of Italian (Rizzi, 1993–1994). However, the initial transfer of features and feature strength would fail to account for why RIs are found in the corpus of two Italian-speaking children learning L2 German investigated by Prévost as well as Prévost and White (1999). Also, if this account was correct, one would predict that if the L1 has weak [–finite] features, RIs could be produced in the L2. This is indeed the case in the present study and in Prévost's study of child L2 French (where the L1 is English). However, Belletti and Hamann reported no RIs in the corpus of the German-speaking child they investigated. Thus, initial transfer of features and feature strength does not seem to be involved in the production of RIs. One should be quick to add that, given the small number of studies on the knowledge of finiteness in child SLA, the issue of L1 influence needs to be pursued in further research. This said, insofar as truncation is the result of the underspecification of the Root Principle, it goes against the idea of total L1 influence whereby the L1 grammar is fully transferred to the IL initially (Schwartz & Sprouse, 1994, 1996). Given that the principle in question is active in the L1 grammar and that L2 learners start their

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

acquisition process with a mature L1 grammar, it follows that the inoperation of that principle cannot be accounted for by so-called Full Transfer.

The fact that CP roots are not systematically projected may also be imputable to processing problems, as suggested by Prévost (1997). It is plausible that the more projections that appear in the representation, the heavier the processing load will be (see Boster, 1996, for a similar account in L1 acquisition). In particular, the projection of functional categories entails the computation of a myriad of operations, such as feature checking and movement. Moreover, lexical selection and morphological derivation add to the processing load. When lexical access or the planning of sentence structure involves a high processing load, there might be few processing resources for the projection of some or all functional categories, which will result in the projection of minimal structures. Once processing demand decreases, the projection of CP roots will become systematic, and the production of RIs will stop. The processing load account may also explain the cross-learner differences observed in the acquisition of L2 German and L2 French by children: The processing load involved in systematically projecting full-fledged structures in the early stages of acquisition may be more difficult to handle by some children than by others. One way to test the processing-load account would be to design an experiment where production of main declaratives would be preceded by the repetition of priming sentences. The prediction is that the priming structure would decrease processing load and result in the production of targetlike main declaratives (see Leonard et al., 2000).[12]

Finally, there is the possibility that children initially have a limited control of the pragmatic contexts in which truncation can take place (see Prévost & White, 1999). They would start off by applying truncation widely, only to learn later on that it is restricted to specific contexts in the target language. As is well known, adult speakers also produce RIs, such as interrogatives (*What to do?*), counterfactual exclamatives (*Me leave? Never!*), and jussives (*Nicht rauchen!* "No smoking").[13] RIs are also quite numerous in personal diaries (Haegeman, 1990). However, such utterances occur in restricted pragmatic contexts, which children need to learn. Because such restrictive properties are unknown to them at first, they tend to overuse RIs in inappropriate contexts. Lasser (1997) proposed such an account for L1 acquisition, arguing that although the RIs produced by children and adults share syntactic and semantic properties, they differ in their pragmatic use: Child RIs tend to express desires and intentions more often than adult nonfinite utterances do. A careful study of the semantic and pragmatic interpretations of RIs produced by child L2 learners should reveal whether such an account could also apply to child L2 acquisition.

CONCLUSION

This study investigated the distribution and properties of infinitival verbs and bare stems in the early stages of L2 German acquisition by an English-speak-

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

ing child. These forms were found to occur in complementary distribution: Infinitival main verbs occurred almost exclusively in nonfinite positions, whereas bare verbs patterned together with inflected forms in that they were restricted to finite contexts. This suggests that the TH and the MSIH are not mutually exclusive in child SLA; rather, they deal with different issues and can each account for complementary sets of data. Naturally, other L2 data should be investigated to confirm the conclusions reached in this study. In particular, it would be interesting to study the acquisition of a language with a phonetically overt infinitival morpheme, a rich inflectional paradigm, and obligatory provision of the inflectional morphemes (unlike *-e* in German, which can be omitted). Additional interest for such research would lie in the fact that in the L1 acquisition of such languages (e.g., Italian), the incidence of RIs is quite limited. Furthermore, data from older children should be collected and analyzed to investigate whether the properties of verb forms used by these children are similar to those found in early child SLA. This would contribute to the debate over the onset of true L2 acquisition versus the development of a second L1 (although Cindy's L1 grammar was clearly developed when she started learning German). In all, such investigations would allow us to have a better understanding of the nature of bare stems and infinitival main verbs in child SLA.

(*Received 4 April 2002*)

NOTES

1. This approach was first called the Missing Inflection Hypothesis by Haznedar and Schwartz (1997). It was renamed the Missing Surface Inflection Hypothesis by Prévost and White (2000) to capture the fact that under this approach the problems encountered by L2 learners concern the level of superficial representation of morphemes (see section 2.3). In this paper, I adopt Prévost and White's terminology.

2. See Travis (1984) and Zwart (1993) for a different approach.

3. In Holmberg and Platzack's (1995) account, C is equipped with a [+F(initeness)] feature. They define finiteness as the indication that there exists a predication at the time of the utterance. For them, finiteness is a prerequisite for the expression of tense and mood (p. 23).

4. This could obtain if learners posit weak finite features in the language they are learning. In this case, all verb forms should be found following negative adverbs and should not appear preceding the subject (as in mature English).

5. Note that, according to the MSIH, the omission of subjects is not concomitant to a particular analysis of null subjects; in contrast, the TH relies heavily on the null constant account. Under the MSIH, null subjects could be *pro* or null constants; the main point here is that there should be no contingency between null subjects and (finite) verb forms.

6. L2 learners may misanalyze particle verbs as single forms. In such cases, we might find inflected and bare verbs attached to their particles in finite positions.

7. Throughout this paper I collapse infinitival forms and past participles as nonfinite forms that may occur in RIs. Some researchers have proposed that such declaratives involve a (null) modal or an auxiliary (Boser et al., 1992). I explore this possibility in the "Discussion" section. Note that in this paper I am concerned with the finiteness status of verbal forms, not with their modal interpretation. For research on the modal properties of RIs in child SLA, see Gavruseva (2000) and Prévost (2001b).

8. This is similar to what was reported in child L2 French (Prévost, 1997; Prévost & White, 1999). Thus, there is no evidence for an uninflected-nonfinite stage, contrary to what is expected under the assumption that only lexical categories are projected in early SLA (Vainikka & Young-Scholten, 1994, 1996).

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

9. In German, some verbs change their stem in the singular, such as *nehm-en* "take," which becomes *nimm-st*/*-t* "take-2.sg/-3.sg." This suggests that the bare stem *nimm* in (i) is finite, which further suggests that bare forms are finite in L2 child German (H. Clahsen, personal communication, 3 November 2001). Note, however, that such irregular stems represent less than 10% of the ungrammatical bare forms observed in the first 29 samples (5 of 63).

(i) *nimm du das one* (sample 9, day 30)
take-Ø you this one

10. In my analysis, a form is used productively when it starts appearing in the child's speech to a far greater extent than in the preceding recording sessions and when that level of usage is maintained, or even increases, in the next sessions. In the case of negation, a maximum of three negative root declaratives are produced per sample until sample 18, which is quite low. Sample 18 includes 12 instances of negative roots. In the next four samples, the instances of negative roots are 23, 17, 13, and 15, respectively.

11. This said, it might be the case that some of the bare verb forms used by adult L2 German learners have nonfinite properties. This would need to be verified empirically.

12. Another possibility, suggested by an anonymous *SSLA* reviewer, is that RIs are used as a performance strategy. This is indeed plausible and, much like the processing approach, it would account for cross-learner variability. However, I believe that further research is needed to strongly establish whether RIs are grammatically licensed in IL grammars.

13. An anonymous *SSLA* reviewer rightfully pointed out that UG does not rule out the occurrence of root clauses with a nonfinite verb and in a broader range of contexts than those mentioned here. See the Russian example given in (i), from Avrutin (1999, p. 139).

(i) *Carevna xoxotat'.*
princess to-laugh
"The princess started to laugh." (straight after something funny happened)

However, the fact remains that in several languages, such as German, the incidence of RIs is severely constrained.

REFERENCES

Avrutin, S. (1999). *Development of the syntax-discourse interface*. Dordrecht: Kluwer.

Beck, M.-L. (1998). L2 acquisition and obligatory head movement: English-speaking learners of German and the Local Impairment Hypothesis. *Studies in Second Language Acquisition*, *20*, 311–348.

Belletti, A., & Hamann, C. (2000). *Ça on fait pas!* On the L2 acquisition of French by two young children with different source languages. In S. C. Howell, S. A. Fish, & T. Keith-Lucas (Eds.), *Proceedings of the 24th annual Boston University Conference on Language Development* (pp. 116–127). Somerville, MA: Cascadilla Press.

Bobaljik, J. (2001). The implication of rich agreement: Why morphology does not drive syntax. In K. Megerdoomian & L. A. Bar-el (Eds.), *Proceedings of the 20th West Coast Conference on Formal Linguistics* (pp. 82–95). Somerville, MA: Cascadilla Press.

Borer, H., & Wexler, K. (1987). The maturation of syntax. In T. Roeper & E. Williams (Eds.), *Parameter setting* (pp. 123–172). Dordrecht: Reidel.

Boser, K., Lust, B., Santelmann, L., & Whitman, J. (1992). The syntax of CP and V2 in early child German (ECG): The Strong Continuity Hypothesis. In K. Broderick (Ed.), *Proceedings of the North East Linguistic Society 10* (pp. 51–65). Amherst, MA: GLSA Publications.

Boster, C. (1996). Limited sentence generation: Accounts for early subject omissions. In A. Stringfellow, D. Cahana-Amitay, E. Hughes, & A. Zukowski (Eds.), *Proceedings of the 20th annual Boston University Conference on Language Development* (pp. 63–75). Somerville, MA: Cascadilla Press.

Chomsky, N. (1995). *The Minimalist Program*. Cambridge, MA: MIT Press.

Clahsen, H. (1988). Parameterized grammatical theory and language acquisition: A study of the acquisition of verb placement and inflection by children and adults. In S. Flynn & W. O'Neil (Eds.), *Linguistic theory in second language acquisition* (pp. 47–75). Dordrecht: Kluwer.

Clahsen, H., Eisenbeiss S., & Penke, M. (1996). Lexical learning and early syntactical development. In H. Clahsen (Ed.), *Generative approaches to first and second language acquisition* (pp. 129–159). Amsterdam: Benjamins.

den Besten, H. (1983). On the interaction of root transformations and lexical deletive rules. In W. Abraham (Ed.), *On the formal syntax of the West Germania* (pp. 47–131). Amsterdam: Benjamins.

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

Epstein, S., Flynn, S., & Martohardjono, G. (1996). Second language acquisition: Theoretical and experimental issues in contemporary research. *Behavorial and Brain Sciences*, *19*, 677–714.
Eubank, L. (1994). Optionality and the initial state in L2 development. In T. Hoekstra & B. Schwartz (Eds.), *Language acquisition studies in generative grammar* (pp. 369–388). Amsterdam: Benjamins.
Eubank, L., & Beck, M.-L. (1998). Ol-like effects in adult L2 acquisition. In A. Greenhill, A. Hughes, M. Littlefield, & H. Walsh (Eds.), *Proceedings of the 22nd annual Boston University Conference on Language Development* (pp. 189–206). Somerville, MA: Cascadilla Press.
Eubank, L., Bischof, J., Huffstutler, A., Leek, P., & West, C. (1997). "Tom eats slowly cooked eggs": Thematic-verb raising in L2 knowledge. *Language Acquisition*, *6*, 171–199.
Gavruseva, E. (2000). Aspect parameter in the guise of optional infinitives in child L2 acquisition. In S. C. Howell, S. A. Fish, & T. Keith-Lucas (Eds.), *Proceedings of the 24th annual Boston University Conference on Language Development* (pp. 319–330). Somerville, MA: Cascadilla Press.
Gavruseva, L., & Lardiere, D. (1996). The emergence of extended phrase structure in child L2 acquisition. In A. Stringfellow, D. Cahana-Amitay, E. Hughes, & A. Zukowski (Eds.), *Proceedings of the 20th annual Boston University Conference on Language Development* (pp. 225–236). Somerville, MA: Cascadilla Press.
Haegeman, L. (1990). Understood subjects in English diaries. *Multilingua*, *9*, 157–199.
Halle, M., & Marantz, A. (1993). Distributed morphology and the pieces of inflection. In K. Hale & S. J. Keyser (Eds.), *The view from Building 20: Essays in linguistics in honor of Sylvain Bromberger* (pp. 111–176). Cambridge, MA: MIT Press.
Haznedar, B. (1997). *Child second language acquisition of English: A longitudinal case study of a Turkish-speaking child*. Unpublished doctoral dissertation, University of Durham, England.
Haznedar, B., & Schwartz, B. (1997). Are there optional infinitives in child L2 acquisition? In E. Hughes, M. Hughes, & A. Greenhill (Eds.), *Proceedings of the 21st annual Boston University Conference on Language Development* (pp. 257–268). Somerville, MA: Cascadilla Press.
Hilles, S. (1991). Access to Universal Grammar in second language acquisition. In L. Eubank (Ed.), *Point counterpoint: Universal Grammar in the second language* (pp. 305–338). Amsterdam: Benjamins.
Hoekstra, T., & Hyams, N. (1996). Missing heads in child language. In C. Koster & F. Wijnen (Eds.), *Proceedings of the Groningen Assembly on Language Acquisition 1995* (pp. 251–260). Groningen, The Netherlands: University of Groningen, Centre for Language and Cognition.
Holmberg, A., & Platzack, C. (1995). *The role of inflection in Scandinavian syntax*. Oxford: Oxford University Press.
Lakshmanan, U. (1993–1994). The boy for the cookie: Some evidence for the non-violation of the Case filter in child SLA. *Language Acquisition*, *3*, 11–36.
Lardiere, D. (1998a). Case and tense in the "fossilized" steady state. *Second Language Research*, *14*, 1–26.
Lardiere, D. (1998b). Dissociating syntax from morphology in a divergent L2 end-state grammar. *Second Language Research*, *14*, 359–375.
Lardiere, D. (2000). Mapping syntactic features to forms in second language acquisition. In J. Archibald (Ed.), *Second language acquisition and linguistic theory* (pp. 102–129). Oxford: Blackwell.
Lasser, I. (1997). *Finiteness in adult and child German*. Unpublished doctoral dissertation, City University of New York.
Leonard, L., Miller, C., Grela, B., Holland, A., Gerber, E., & Petucci, M. (2000). Production operations contribute to the grammatical morpheme limitations of children with Specific Language Impairment. *Journal of Memory and Language*, *43*, 362–378.
Meisel, J. (1997). The acquisition of the syntax of negation in French and German: Contrasting first and second language development. *Second Language Research*, *13*, 227–263.
Nicholas, H. (1984). "To be" or not "To be": Is that really the question? Developmental sequences and the role of the copula in the acquisition of German as a second language. In R. Andersen (Ed.), *Second languages: A cross-linguistic perspective* (pp. 299–317). Rowley, MA: Newbury House.
Parodi, T. (2000). Finiteness and verb placement in second language acquisition. *Second Language Research*, *16*, 355–381.
Pienemann, M. (1981). *Der Zweitspracherwerb ausländischer Arbeiterkinder* [Second language acquisition by children of immigrant workers]. Bonn: Bouvier.
Poeppel, D., & Wexler, K. (1993). The Full Competence Hypothesis of clause structure in early German. *Language*, *69*, 1–33.
Pollock, J.-Y. (1989). Verb movement, Universal Grammar, and the structure of IP. *Linguistic Inquiry*, *20*, 365–424.

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

Prévost, P. (1997). *Truncation in second language acquisition*. Unpublished doctoral dissertation, McGill University, Montreal.
Prévost, P. (2001a). *The semantic and aspectual properties of child L2 root infinitives*. Unpublished manuscript, Université Laval, Sainte Foy, Canada.
Prévost, P. (2001b). La variabilité morphologique en français langue seconde [Morphological variability in L2 French]. *Langue et Linguistique*, *27*, 95–124.
Prévost, P., & White, L. (1999). Accounting for morphological variability in second language acquisition: Truncation or missing inflection? In M.-A. Friedemann & L. Rizzi (Eds.), *The acquisition of syntax* (pp. 202–235). London: Longman.
Prévost, P., & White, L. (2000). Missing surface inflection or impairment in second language acquisition? Evidence from tense and agreement. *Second Language Research*, *16*, 103–134.
Rizzi, L. (1993–1994). Some notes on linguistic theory and language development: The case of root infinitives. *Language Acquisition*, *3*, 371–393.
Rizzi, L. (1994). Early null subjects and root null subjects. In T. Hoekstra & B. Schwartz (Eds.), *Language acquisition studies in generative grammar* (pp. 151–176). Amsterdam: Benjamins.
Schwartz, B. (1992). Testing between UG-based and problem-solving models in L2 acquisition: Developmental sequence data. *Language Acquisition*, *2*, 1–19.
Schwartz, B., & Sprouse, R. (1994). Word order and nominative case in non-native language acquisition: A longitudinal study of (L1 Turkish) German interlanguage. In T. Hoekstra & B. Schwartz (Eds.), *Language acquisition studies in generative grammar* (pp. 317–368). Amsterdam: Benjamins.
Schwartz, B., & Sprouse, R. (1996). L2 cognitive states and the Full Transfer/Full Access model. *Second Language Research*, *12*, 40–72.
Schwartz, B., & Sprouse, R. (2000, January). *Parallels across L1 acquisition and child L2 acquisition: Truncation does not suffice*. Paper presented at the 74th annual meeting of the Linguistic Society of America, Chicago, IL.
Sprouse, R. (1998). Some notes on the relationship between inflectional morphology and parameter setting in first and second language acquisition. In M.-L. Beck (Ed.), *Morphology and the interfaces in second language knowledge* (pp. 41–67). Amsterdam: Benjamins.
Travis, L. (1984). *Parameters and effects of word order variation*. Unpublished doctoral dissertation, Massachusetts Institute of Technology, Cambridge.
Vainikka, A., & Young-Scholten, M. (1994). Direct access to X′-theory: Evidence from Korean and Turkish adults learning German. In T. Hoekstra & B. Schwartz (Eds.), *Language acquisition studies in generative grammar* (pp. 256–316). Amsterdam: Benjamins.
Vainikka, A., & Young-Scholten, M. (1996). Gradual development of L2 phrase structure. *Second Language Research*, *12*, 7–39.
Vikner, S. (1994). Scandinavian object shift and West Germanic scrambling. In N. Corver & H. van Riemsdijk (Eds.), *Studies in scrambling: Movement and non-movement approaches to free word order phenomena* (pp. 487–517). Berlin: Mouton de Gruyter.
Vikner, S. (1995). *Verb movement and expletive subjects in the Germanic languages*. Oxford: Oxford University Press.
Wexler, K. (1994). Optional infinitives, head-movement, and the economy of derivations. In D. Lightfoot & N. Hornstein (Eds.), *Verb movement* (pp. 305–350). New York: Cambridge University Press.
White, L. (1996). Universal Grammar and second language acquisition: Current trends and new directions. In W. C. Ritchie & T. K. Bhatia (Eds.), *Handbook of second language acquisition* (pp. 85–120). San Diego, CA: Academic Press.
Zwart, C. J.-W. (1993). *Dutch syntax: A minimalist approach*. Unpublished doctoral dissertation, University of Groningen, The Netherlands.

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

APPENDIX A

Table A1. Verb forms in root declaratives

Samples	Days	Inflected	Bare gram.	Bare ungram.	Infinitival	Total	% Infinitiv.
1	1	0	0	0	0	0	0
2	5	0	0	0	0	0	0
3	7	0	0	0	1	1	100
4	12	0	0	0	0	0	0
5	14	0	0	0	0	0	0
6	19	0	0	0	0	0	0
7	21	3	0	0	0	3	0
8	26	4	0	0	0	4	0
9	30	13	0	1	1	15	6.7
10	33	14	1	0	4	19	21
11	35	11	1	1	8	21	38.1
12	40	23	7	0	7	37	18.9
13	44	4	6	2	1	13	7.7
14	61	7	3	0	0	10	0
15	63	0	0	0	0	0	0
16	75	2	1	0	0	3	0
17	76	12	10	0	1	23	4.3
18	77	47	20	13	5	85	5.9
19	80	52	39	11	10	112	8.9
20	84	43	34	3	10	90	11.1
21	89	39	20	4	7	70	10
22	91	64	51	5	11	131	8.4
24	103	60	57	9	6	132	4.5
25	105	37	23	7	6	73	8.2
26	110	29	6	0	4	39	10.3
27	112	37	26	4	7	74	9.5
28	117	30	21	2	6	59	10.2
29	119	39	37	1	7	84	8.3
30	124	97	54	4	8	163	4.9
31	126	53	40	3	4	100	4
32	159	77	49	9	6	141	3.6
33	161	86	44	9	6	145	4.1
34	166	124	55	20	11	210	5.2
35	168	96	60	7	9	172	5.2
36	171	99	61	7	7	174	4
37	173	53	69	4	7	133	5.3
38	180	81	69	9	8	167	4.8
39	187	75	53	11	4	143	2.8
40	189	48	34	8	7	97	7.2
41	194	96	53	9	3	161	1.8
42	195	75	49	4	7	135	5.3
Totals		1630	1053	167	189	3039	6.2
Up to day 119		570	363	63	102	1098	9.3
After day 119		1060	690	104	87	1941	4.5

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

APPENDIX B

Table B1. Verb forms in CPs

Samples	Days	Inflected	Bare gram.	Bare ungram.	Infinitival	Total	% Infinitiv.
1	1	0	0	0	0	0	0
2	5	0	0	0	0	0	0
3	7	0	0	0	0	0	0
4	12	0	0	0	0	0	0
5	14	0	0	0	0	0	0
6	19	0	0	0	0	0	0
7	21	0	0	0	0	0	0
8	26	3	0	0	0	3	0
9	30	3	0	0	0	3	0
10	33	0	1	0	0	1	0
11	35	0	0	0	0	0	0
12	40	0	0	0	0	0	0
13	44	1	0	0	0	1	0
14	61	2	0	0	0	2	0
15	63	0	0	0	0	0	0
16	75	2	0	0	0	2	0
17	76	1	0	0	1	2	50
18	77	6	1	0	1	8	12.5
19	80	9	3	0	0	12	0
20	84	1	0	0	0	1	0
21	89	14	0	2	0	16	0
22	91	18	4	0	0	22	0
24	103	22	0	0	0	22	0
25	105	22	1	1	0	24	0
26	110	19	0	0	0	19	0
27	112	16	0	1	1	18	5.6
28	117	9	4	1	0	14	0
29	119	19	2	0	0	21	0
30	124	31	3	0	3	37	8.1
31	126	17	4	0	0	21	0
32	159	39	2	0	2	43	4.7
33	161	32	0	0	1	33	3
34	166	61	10	3	2	76	2.6
35	168	45	13	3	0	61	0
36	171	18	8	0	2	28	7.1
37	173	22	5	2	2	31	6.4
38	180	42	6	4	3	55	5.4
39	187	39	5	2	0	46	0
40	189	23	2	0	1	26	3.8
41	194	43	13	2	0	58	0
42	195	45	10	1	2	58	3.4
Totals		624	97	22	21	764	2.7
Up to day 119		167	16	5	3	191	1.6
After day 119		457	81	17	18	573	3.1

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press

https://doi.org/10.1017/S0272263103000032 Published online by Cambridge University Press