Truncation in Second Language Acquisition

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in partial fulfillment of the requirements
of the degree of Doctor of Philosophy

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Abstract

In this thesis, I argue that early child second language (L2) grammars allow truncation, on a par with proposals by Rizzi (1993/1994) and Haegeman (1995) for first language (L1) acquisition. This account (the Truncation Hypothesis) holds that Rizzi's (1994) Root Principle, according to which root declaratives are CPs, is initially underspecified in L2 systems (for processing reasons). This means that the root of main declaratives will not systematically be CP. Instead, different types of roots should be projected, such as CP, IP or VP, with VP underlying root infinitives. If one further assumes that functional categories are present in early grammars, the possibility of truncation can thus account for optionality of verb-movement and finiteness in early SLA, and more generally for why such categories seem to be optionally projected initially (Vainikka & Young-Scholten, 1994; 1996; Eubank, 1992; 1993/1994; 1996).

Predictions based on the Truncation Hypothesis were tested against longitudinal spontaneous production data from child and adult L2 learners. There were two child and two adult learners of L2 French (whose L1s were English and Arabic) and two child and two adult learners of L2 German (native speakers of Romance *pro*-drop languages). The findings suggest that the distribution of finite and nonfinite verbs is structurally determined in L2 child grammar, i.e. tenseless verbs only appear when VP is the root, while finite verbs are found when functional categories are projected. This in turn means that children project truncated structures in early L2 acquisition. I argue that no other theory of the nature of early L2 grammars is able to account for the full range of properties of the child L2 data.

The adult data are less conclusive concerning the possibility of truncation in adult L2 grammars. In particular, the learners seem to use infinitival markers as substitutes for finite inflections, which means that nonfinite verbs are found in contexts which are not predicted by the Truncation Hypothesis. The difference between the child and adult learners is attributed to problems that adults may have in mapping the syntactic and morphological systems (Lardiere, 1996), and not to a discrepancy in syntactic knowledge.

Résumé

Dans cette thèse, je montre que les grammaires des enfants apprenant une langue seconde (L2) autorisent la troncation, comme Rizzi (1993/1994) et Haegeman (1995) le proposent en acquisition de la première langue. Cette Hypothèse de la Troncation soutient que le Principe Racine de Rizzi (1994), selon lequel les déclaratives racines sont des CPs, est sous-spécifié dans les systèmes initiaux de la L2 (pour des raisons de capacité de traitement). En clair, la racine des déclaratives principales n'est pas systématiquement CP, mais peut varier, comme CP, IP ou VP, où VP génère des infinitives racines. En admettant également que les catégories fonctionnelles font partie des grammaires initiales, la troncation peut ainsi expliquer pourquoi le mouvement du verbe et le caractère tensé des phrases sont optionnels dans les premières phases de l'apprentissage, et plus généralement pourquoi la projection des catégories fonctionnelles est facultative (Vainikka & Young-Scholten, 1994; 1996; Eubank, 1992; 1993/1994; 1996).

Les prédictions de l'Hypothèse de la Troncation sont testées sur des données longitudinales de production spontannée en langue seconde. Celles-ci proviennent de deux enfants et adultes apprenant le français (respectivement de langue maternelle anglaise et arabe) et deux enfants et adultes apprenant l'allemand (de langues maternelles romanes à sujets nuls). Les résultats suggèrent que la distribution des verbes tensés et non-tensés est déterminée structurellement dans les grammaires enfantines de la L2: les verbes non tensés sont produits quand la racine est VP, tandis que les verbes tensés apparaissent quand une catégorie fonctionelle est projetée. Ceci suggère que les enfants projettent des structures tronquées dans les premières phases de l'acquisition. Aucune autre théorie de la grammaire initiale de la L2 ne peut rendre compte de l'ensemble des propriétés des données enfantines.

Les données sont moins conclusives quand à la possibilité de troncation dans les grammaires adultes de la L2. Les apprenants adultes semblent substituer les marqueurs non tensés aux inflections tensées, de telle sorte que les verbes non tensés se retrouvent dans des contextes non prévus par l'Hypothèse de la Troncation. La différence entre les adultes et les enfants est attribuée aux difficultés qu'ont les adultes à faire le lien entre les systèmes syntaxiques et morphologiques (Lardiere, 1996), et non à des différences de connaissance syntaxique.

Acknowledgments

I had been looking forward to the time I could finally pay tribute to the people who, for different reasons, have made this thesis possible. One does not always walk to a thesis supervisor or a fellow student and say 'thank you' for their continuous help and support. Other people may not know how large a difference they made at one point or another during the genesis of this work or the writing process itself. It is therefore with great pleasure that I now take the opportunity to thank all of those who have been helping me over the years.

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I also wish to thank Nigel Duffield and Julie Auger for their valuable advise and support. Nigel's knowledge of syntax and first language acquisition has helped me clarify important points pertaining to these domains. Discussions on first language acquisition have also been helpful to sort out problems in the interpretation of SLA issues. In this respect, his participation in Lydia's project has brought a new perspective in the way we address SLA research questions and has been very beneficial to the whole group. As for Julie, I particularly appreciated our discussions on standard French and Quebec French, and the nature of pronouns. She has also made me think of ways to write about language acquisition in clear and simple terms.

Other professors of the Department of Linguistics deserve my gratitude: Michel Paradis, Lisa Travis, Heather Goad, Glynn Piggott, Myrna Gopnik, Mark Baker and Brendan Gillon. Although I have not taken courses from all of them, they have given me very useful feedback on my work and helped me in various aspects of academic life. Their availability and constant support have contributed to make my stay at the Department of Linguistics a rewarding and intellectually challenging one. Thank you also to the student members of Lydia's project: Cindy Brown, Joyce Bruhn de Gavarito, DongDong Chen, Makiko Hirakawa, Shunji Inagaki, Alan Juffs, Cecile leRoux, Martyna McGregor, Silvina

My way into linguistics and second language acquisition has been determined by four key individuals. Everything started with a teacher of English from highschool, John Hughes, who happened to be anglophone (a rare fact in the French education system). John gave me a passion for English and language in general and proved to me with his perfect command of French that native-like proficiency can be reached in SLA. Due to John's influence, I went on to study English at the university of Franche-Comté in Besançon, France. There, I worked with Jean Tournier, a specialist in lexicology, who led me to discover linguistics and the fun you can have by playing with words. The person who introduced me to syntax and the GB theory was Carol Georgopoulos from the University of Utah. The good relationship that we built over the years has been key in my decision to pursue my studies in this domain. Carol, I cannot thank you enough for the encouragements you gave me. Finally, I wish to thank Luigi Rizzi with whom I had the wonderful opportunity to work at the University of Geneva, Switzerland. Luigi helped me

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Chapter 1

Functional Categories and Truncation

1. Introduction

1.1. Functional categories and continuity

Current linguistic theory (Chomsky, 1981, 1986, 1995) distinguishes between lexical categories such as verb, noun, adjective and preposition, and functional categories such as complementiser, agreement, tense, negation, and determiner. Even though all functional categories may not be instantiated in every language, they are assumed to be universally available and present in adult grammars. In recent years, there has been a lively debate on whether functional categories are also part of the initial grammars posited by first language (L1) and second language (L2) learners. The question is justified since in the early stages of acquisition language learners have been shown to make mistakes with elements or features associated with functional categories (see, among others, Radford (1990a)). In particular, children learning their first language have been reported to produce matrix declarative sentences whose main verbs are nonfinite, i.e. lacking marking of tense and agreement. In many instances, the main verb carries an infinitival marker or a past participle marker. I will refer to such sentences as root infinitives (RIs), following Rizzi's (1993/1994) terminology. Such utterances are ruled out in adult speech which requires that

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all root declaratives be finite. Examples of RIs in early L1 German and French are given in (1).

(1) a. ich der Fos   hab'n   (Andreas, 2;1; Wexler, 1994)
         I the frog have-INF
         'I have the frog'
     b. dormir   bébé   (Nathalie, 2;0;1; Pierce, 1992)
         sleep-INF baby
         '(the) baby is sleeping'

The question then arises as to whether the functional category associated with finiteness (say Infl, for the time being) is fully available in initial grammars.

The status of functional categories in early child systems is a key issue in the question of continuity between initial and target grammars. No/weak continuity models of language acquisition assume a categorial deficit in initial grammars: either all or some functional categories are considered absent from these systems. The question, then, is how learners abandon their initial hypotheses and acquire the target grammar (and thus how functional categories are acquired). In contrast, a strong continuity approach holds that functional categories are present in initial grammars. The advantage of this model is that it does not need to explain the transition between the two grammatical systems. However, it must account for why such categories are not systematically projected, as in (1). As an alternative to these approaches, recent proposals suggest that some parts of child grammars are underspecified in the early stages of acquisition (Rizzi, 1993/1994; Sano & Hyams, 1994; Wexler, 1994; Haegeman, 1995). In this thesis, I particularly focus on Rizzi's (1994) proposal that the Root Principle, according to which all root declaratives are CPs, is underspecified initially.

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1.2. Underspecification of the Root Principle and the Truncation Hypothesis

If the Root Principle is initially underspecified, children are not constrained to systematically project CP as the root category of their declarative sentences; rather, structures may be truncated at any point below CP. Learners may thus project any kinds of roots, such as IP and VP, as well as CP. If VP is the root, no functional category is projected, which means that the verb will stay in V and appear with a nonfinite marker, hence root infinitives. In contrast, if IP or CP is the root, finite forms should be produced. In sum, finiteness is assumed to be structurally determined. For Rizzi, then, problems related to functional categories do not stem from their initial unavailability, but from the underspecification of the Root Principle in early grammars.

In this thesis, I investigate whether truncation (as defined by Rizzi) is also a property of early L2 grammars (I call this approach the Truncation Hypothesis). Research on the initial availability of functional categories in second language acquisition (SLA) has lead some scholars to argue that these categories are absent from initial L2 grammars and that they gradually emerge via positive evidence from the input (Vainikka & Young-Scholten, 1994, 1996a, 1996b). Others believe that functional categories are readily available at the onset of L2 acquisition (Schwartz & Sprouse, 1994, 1996; Epstein, Flynn & Martohardjono, 1996; Grondin & White, 1996). What I would like to suggest here is that both these positions are too strong. By positing the presence or absence of functional categories in initial L2 grammars, these theories have difficulties accounting for the variability that second language (L2) learners exhibit in using inflectional morphology and implementing verb-movement in the early stages of acquisition. If functional categories are initially unavailable, finiteness and verb-movement should not be observed in early declaratives. If, on the other hand, functional categories are available, all utterances should be finite and verb-movement should always take place.

My explanation for optionality in the early stages of L2 acquisition is as follows. Following Rizzi's (1993/1994) analysis of early L1 acquisition, I propose that the Root

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Principle is also initially underspecified in SLA. By underspecification, I mean that the principle in question is present in the grammar but is dormant or non-operational for processing reasons.[1] I assume that the processing load involved with the Root Principle is too heavy for initial grammars to handle. Once the grammatical system has reached a level of complexity that allows it to handle that processing load, the Root Principle will emerge. If the Root Principle is not operational in early acquisition, I expect L2 grammars to allow truncation, which in turn means that finiteness should be determined by structure. In particular, I predict that VP roots are projected, which should yield the production of root infinitives. The predictions based on the Truncation Hypothesis are investigated in early production data from children and adults learning L2 French and German whose mother tongues were Arabic, English, Italian, Portuguese, and Spanish.

1.3. Organisation of the thesis

The organisation of the thesis is as follows. In Chapter 1, I lay out the theoretical and syntactic background of my research. I discuss the properties of functional categories and introduce Rizzi's Root Principle. I propose that this principle follows from the syntactic representation of Tense in matrix declaratives. Predictions based on its underspecification in initial grammars are also discussed. In Chapter 2, I show that these predictions are borne out in early L1 acquisition, which suggests that truncation is permitted in initial child grammars. I then discuss alternative approaches to the early stages of L1 acquisition and show their shortcomings in comparison to the truncation model. These approaches pertain to no/weak continuity (Radford, 1990a; Clahsen, Penke & Parodi, 1993/1994), strong continuity (Hyams, 1992; Wexler & Poeppel, 1993) and the phenomenon of root infinitives, such as underspecification of Tense (Wexler, 1994) and underspecification of Number (Sano & Hyams, 1994). A similar logic is adopted in the

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[1] Here, I diverge from the analysis by Rizzi who attributes the emergence of the Root Principle to maturation in L1 acquisition. I come back to the question of emergence in Chapter 5, section 4.5.

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discussion of the early stages of L2 acquisition in Chapter 3. I first show how the no/weak and strong continuity views fail to account for the early stages of SLA. After discarding Eubank's (1996) Weak Transfer Hypothesis as an alternative model, I provide theoretical and empirical arguments in favour of the Truncation Hypothesis for L2 acquisition. The French and German L2 data are presented in Chapter 4 and discussed in Chapter 5.

2. Functional categories

Lexical categories project from elements that participate in the theta-marking domain, i.e. the verb and its arguments. Functional categories correspond to elements such as auxiliaries, modals, inflectional markers and phi-features (such as person, number and gender), which are represented by Infl, complementisers (C), negative markers (Neg), and determiners (D). Functional categories are assumed to dominate lexical ones, as illustrated by the clausal representation in (2). This structure is the one assumed for English and Romance languages. Note that I adopt the VP-Internal Hypothesis (Kuroda, 1988; Sportiche, 1988; Koopman & Sportiche, 1991) and the split INFL hypothesis, according to which tense and agreement should be represented by two different projections, T and Agr (Pollock, 1989).[2] I also assume that AgrP dominates TP in the languages in question and that negative elements appear in NegP located between AgrP and TP (Belletti, 1990).

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[2] Throughout the thesis, I use Infl for ease of exposition when the difference between Agr and T is not crucial.

(2)

```
        CP
       /  \
    spec   C'
          /  \
         C    AgrP
             /   \
          spec    Agr'
                 /   \
               Agr    NegP
                     /   \
                  spec    Neg'
                         /   \
                       Neg    TP
                             /  \
                          spec   T'
                                /  \
                               T    VP
                                   /  \
                                spec   V'
                                 |    /  \
                              Subject V   NP
```
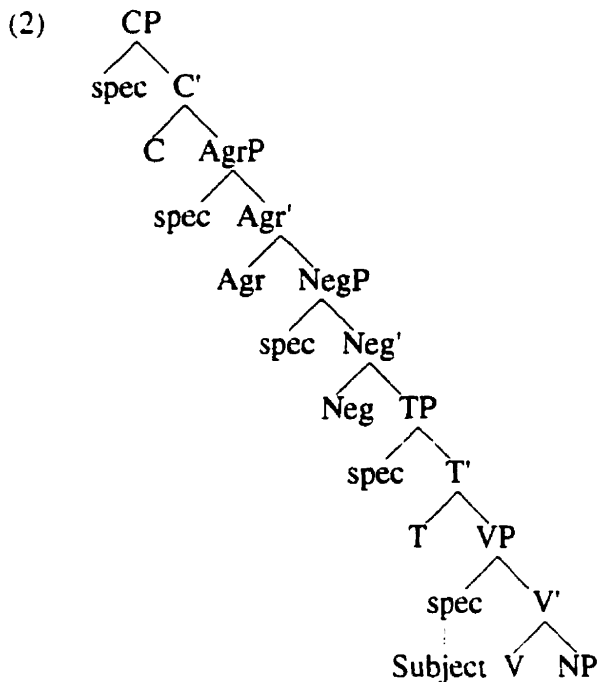
In the nominal domain, D(eterminer)P dominates NP. As an example, the structure of the nominal phrase *the boy* is given in (3), where the determiner *the* appears under D.

(3)

```
        DP
       /  \
    spec   D'
          /  \
         D    NP
         |    /\
        the  boy
```
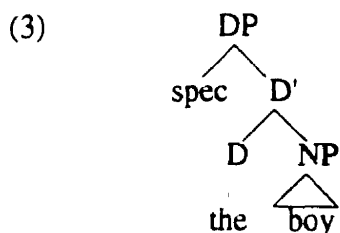
Functional categories are also involved in Case-assignment and movement. As such, they participate heavily in the derivation of word order. In this section, I review properties of functional categories pertaining to head-movement, XP-movement, and subject types. In so doing, I establish some of the properties of the languages involved in the L2 acquisition study discussed in Chapter 4.

2.1. Head-movement

A crucial property of functional categories is that they provide landing sites for head-movement. Two types of head-movement are considered here: verb-movement to T and Agr, and verb-movement to C.

2.1.1. Verb-movement to T and Agr

Agr and T act as landing sites for the verb in need of being associated with tense and agreement. Following Baker's (1988) Mirror Principle I assume that the order of inflectional morphology on the verb reflects syntactic structure. In Romance languages, the agreement markers appear outside tense markers, as in (4), which suggests that T is below Agr (see (2)).

(4)   a. ils arriv   -er   -ont
           they arrive -FUT -3P
           'they will arrive'
        b. io para   -v   -o
           I speak -PAST -1S
           'I spoke'

Thus, verb-movement is first to T and then to Agr. The properties of T and Agr further determine at which level of representation verb-movement takes place.[3] In languages such as French and Italian, verb-movement is overt, whereas it is delayed until LF in English (Pollock, 1989). The contrast between the two types of languages accounts for differences in word orders. In English, the verb follows VP adverbs such as *often* and negative adverbials such as *not*, as in (5) and (6), while the verb precede these elements in French and Italian, as in (7) and (8). Note that in the examples below the subject moves from its base-generated position. I come back to the this point in section 2.2.

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[3] This work is neutral as to the exact nature of movement in general. Movement may be triggered by properties of the host (Chomsky, 1986), or by the need of the moving elements to check particular features (Chomsky, 1995).

(5) a. [AgrP Peterj [TP [VP often [VP tj talked to Mary]]]]
   b. * Peter talked often to Mary

(6) a. [AgrP Peterj did [NegP not [TP [VP tj talk to Mary]]]]
   b. * Peter talked not to Mary

(7) a. [AgrP Pierrej parlaiti [TP t'i [VP souvent [VP tj ti à Marie]]]]
         Peter   talked   often   to Mary
      'Peter often talked to Mary'
   a' * Pierre souvent parlait à Marie
   b. [AgrP Pedroj parlavai [TP t'i [VP spesso [VP tj ti con Maria]]]]
         Peter   talked   often   with Mary
      'Peter often talked to Mary'
   b' * Pedro spesso parlava con Maria

(8) a. [AgrP Pierrej ne parlaiti [NegP pas [TP t'i [VP tj ti à Marie]]]]
         Peter NEG talked   not   to Mary
      'Peter didn't talk to Mary'
   a'. * Pierre ne pas parlait à Marie
   b. [AgrP Pedroj non parlavai [NegP piú   [TP t'i [VP tj ti con Maria]]]]
         Peter NEG talked   anymore   with Mary
      'Peter didn't talk to Mary anymore'
   b' * Peter non piú parlava con Maria

In standard Arabic TP is assumed to dominate AgrP (Ouhalla, 1994). This stems
from the observation that the tense morpheme appears outside of the agreement inflection,
as in (9a); a different order is ungrammatical, as in (9b). The idea then is that the verb
moves first to Agr and then to T.

(9) a. sa- ya- zuuru l- ?awlaad-u   xaal -a -hum
       will-3S-visit the-boys -NOM uncle-ACC-their
       'The boys will visit their uncle'

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b. * ya -sa -zuuru l- ?awlaad-u   xaal -a   -hum
   3S-will-visit the-boys   -NOM uncle-ACC-their

2.1.2. Verb-movement to C

In so-called V2 languages such as German the verb is assumed to move to C (via T

and Agr) in matrix clauses (den Besten, 1983; Holmberg, 1986). Assuming that VP, AgrP,

NegP and TP are right-headed and that CP is left-headed in these languages, the

representation of a German clause is as in (10).[4]

(10)   CP
         /\
      spec C'
           /\
          C AgrP
             /\
          spec Agr'
               /\
              TP Agr
             /\
          spec T'
               /\
             NegP T
            /\
         spec Neg'
              /\
             VP Neg
            /\
         spec V'
              /\
             NP V
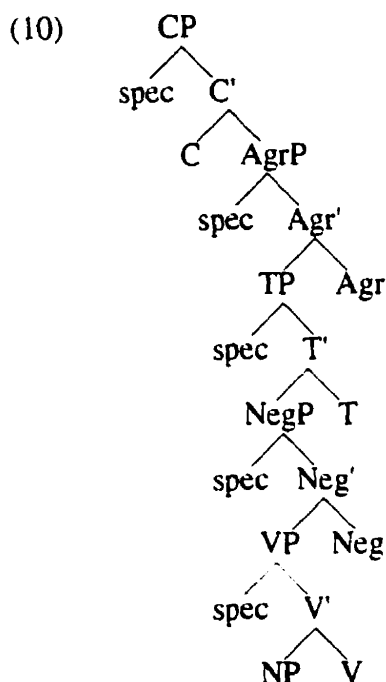
The V2 constraint requires that the verb occupy the second position of the clause. Hence,

only one constituent may precede the verb in the specifier of CP; this may be the subject

(raised from specVP), as in (11a), or a non-subject XP, as in (11b).[5] Failure to observe the

V2 constraint results in ungrammaticality, as in (11c).

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[4] But see Zwart (1993) who argues that all categories are left-headed in German.

[5] For Travis (1984), IP is left-headed in German, and the subject only moves to specIP, not specCP.

(11) a. [CP Michaelj fährti   [AgrP t"j [TP t'j [VP tj nach Berlin ti] t'i] t"i]]
         Michael drive-3S   to Berlin
         'Michael is driving to Berlin'

     b. [CP Am Montag fährti [AgrP Michaelj [TP t'j [VP tj nach Berlin ti] t'i] t"i]]
            on Monday drive-3S   Michael   to Berlin
         'Michael is driving to Berlin on Monday'

     c. * Am Montag Michael fährt nach Berlin

Nonfinite verbal elements do not raise to C but remain under V, i.e. in clause-final
position. For example, separable particles are left behind when the verb raises to C, as in
(12). When a modal or an auxiliary is involved, it occupies the V2 position and the main
(nonfinite) verb must appear clause-finally in V, as in (13).

(12) a. [CP Michaelj rufti   [AgrP t"j [TP t'j [VP tj seine Mutter an   ti] t'i] t"i]]
         Michael call-3S   his   mother PART
         'Michael is calling his mother'

     b. * Michael anruft seine Mutter

(13) a. [CP Michaelj ist [AgrP t"j [TP t'j [VP tj nach Berlin gefahren]]]]
         Michael is   to Berlin driven
         'Michael drove to Berlin'

     b. * Michael ist gefahren nach Berlin

Finally, in contrast to matrix clauses, the finite verb cannot move to C in subordinate
clauses, since the position is occupied by the complementiser. Hence, the verb appears in
final position in Infl, as shown in (14).

(14) a. [CP daß [AgrP Michaelj [TP t'j [VP tj nach Berlin ti] t'i] fährti]]
            that   Michael   to Berlin   drive-3S
         'that Michael is driving to Berlin'

     b. * daß Michael fährt nach Berlin

For Platzack & Holmberg (1989), verb-movement to C is triggered by the presence of a finiteness marker [±F(inite)] in that position. They further suggest that the finiteness marker be located in Infl in non-V2 languages, e.g. English and Romance languages, in order to account for the lack of V2 effect. Therefore, the verb is assumed to raise up to Infl but not to C in main declaratives of these languages. The difference regarding verb-movement to C between V2 and non-V2 languages can be observed when a non-subject XP is preposed. In V2 languages preposing a non-subject XP results in subject/verb inversion: the preposed XP and the verb are in CP while the subject appears in specIP, as in (11b), repeated below as (15a). In non-V2 languages, subject/verb inversion does not obtain in preposed contexts. Rather, the subject is in specIP and the verb either occupies Infl (in Romance languages), as in (15b), or remains in V (English), as in (15c), thus yielding the order XP-Subject-Verb.

(15) a. [$_{CP}$ Am Montag fährt$_i$ [$_{AgrP}$ Michael$_j$ [$_{TP}$ t'$_j$ [$_{VP}$ t$_j$ nach Berlin t$_i$] t'$_i$] t''$_i$]]
          on Monday drive-3S   Michael   to Berlin
        'Michael is driving to Berlin on Monday'
      b. [$_{IP}$ lundi [$_{IP}$ Michel$_j$ va$_i$ [$_{VP}$ t$_j$ t$_i$ à Berlin]]
          Monday Michael go-3S   to Berlin
        'Michael is going to Berlin on Monday'
      c. [$_{IP}$ on Monday [$_{IP}$ Michael$_j$ [$_{VP}$ t$_j$ goes to Berlin]]

2.2. XP-movement

Functional phrase structure is also involved in XP-raising, where movement is to the specifier position of a functional projection. We saw that XP-movement to specCP is required in V2 languages so as to satisfy the V2 constraint. Another reason for XP-movement involves Case. Following Chomsky (1995), I assume that nominative case is assigned within AgrP. Assuming further that all nominals must have Case (Chomsky, 1981) and that Case assignment requires a specifier/head configuration, the subject must

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move from its base generated position within VP to the specifier of AgrP, as in all the (grammatical) sentences in (5) through (15).

XP-movement is also required so as to establish agreement relations in terms of phi-features, such as the agreement between the subject and the verb. Such a morphological dependency typically involves a spec/head configuration between the subject and the verb in Agr. It thus forces the subject to move into the specifier position of AgrP. In Romance and German, agreement occurs before LF since the verb overtly moves to Agr. In English, the verb does not raise to Agr until LF. Thus, agreement takes place at that level. As for Arabic, two types of agreement are found depending on the word order. When the subject precedes the verb, as in (16a), there is subject/verb agreement. In VSO orders, the subject and the verb do not agree, as in (16b); instead, the verb bears a default third person singular marker.

(16)   a. l- tullaab -u   wasal -uu
            the students -NOM arrived-3P
            'The students have arrived'
        b. wasal -a   l- tullaab -u
            arrived-3S the students-NOM

Assuming that the verb moves to T in both sentences, Ouhalla (1994) proposes that the subject raises to specTP in (16a), yielding SV(O) and full agreement with the verb under spec/head configuration, whereas it only raises as far as Agr in (16b), yielding VS(O) order and default agreement marking.[6]

Finally, XP-movement is involved in the formation of questions. Question formation, which typically involves the CP layer, requires that Rizzi's (1991) Wh-Criterion be satisfied:

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[6] In this case, we might assume that the subject raises to specTP at LF and that full agreement takes place at that level.

(17) The Wh-Criterion:

a. a wh-operator must be in spec/head configuration with an X^0 with the feature [+wh]

b. an X^0 with the feature [+wh] must be in spec/head configuration with a wh-operator

Assuming that the [+wh] feature is generated in C, the element in Infl moves to C in order to satisfy the Wh-Criterion, as in the English example in (18a).[7] In yes/no questions there is also I-C movement, with a covert question marker Q occupying specCP, as in (18b). Note that since there is no overt verb-movement in English, thematic verbs never raise to C in questions, as in (19). Only non-thematic verbs such as auxiliaries and modals may appear in that position.

(18) a. [$_{CP}$ where$_k$ did$_i$ [$_{AgrP}$ he$_j$ t'$_i$ [$_{TP}$ t$_i$ [$_{VP}$ t$_j$ buy it t$_k$?]]]]

b. [$_{CP}$ Q did$_i$ [$_{AgrP}$ he$_j$ t'$_i$ [$_{TP}$ t$_i$ [$_{VP}$ t$_j$ buy it in London?]]]]

(19) a. * [$_{CP}$ where$_k$ bought$_i$ [$_{AgrP}$ he$_j$ t''$_i$ [$_{TP}$ t'$_i$ [$_{VP}$ t$_j$ t$_i$ it t$_k$?]]]]

b. * [$_{CP}$ Q bought$_i$ [$_{AgrP}$ he$_j$ t''$_i$ [$_{TP}$ t'$_i$ [$_{VP}$ t$_j$ t$_i$ it in London?]]]]

In contrast to English, both thematic and non-thematic verbs raise to C in German questions since there is overt verb-movement in that language. This is illustrated in (20) and (21).

(20) a. [$_{CP}$ wo$_k$ hat$_i$ [$_{AgrP}$ er$_j$ t'$_i$ [$_{TP}$ t$_i$ [$_{VP}$ t$_j$ es t$_k$ gekauft?]]]]
          where has   he   it   bought
          'where did he buy it?'

b. [$_{CP}$ Q hat$_i$ [$_{AgrP}$ er$_j$ t'$_i$ [$_{TP}$ t$_i$ [$_{VP}$ t$_j$ es in London gekauft?]]]]
          has   he   it in London bought
          'did he buy it in London?'

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[7] I follow Guasti (1993) in assuming that auxiliaries and modals are base-generated in T.

(21) a. [CP woₖ kauftetᵢ [AgrP erⱼ t"ᵢ [TP t'ᵢ [VP tⱼ es tₖ tᵢ ?]]]]
          where bought   he   it
          'where did he buy it?'

      b. [CP Q kauftetᵢ [AgrP erⱼ t'ᵢ [TP tᵢ [VP tⱼ es in London tᵢ ?]]]]
              bought   he   it in London
          'did he buy it in London?'

The satisfaction of the Wh-Criterion may also take place at LF, in which case wh-movement does not occur overtly. Rather, the wh-word remains in-situ, as in the French example in (22). In the yes/no question in (23), there is no subject/aux inversion; the auxiliary in Infl moves to C at LF.

(22) il l'a acheté où?
      he it has bought where
      'where did he buy it?'

(23) il l' a acheté à Londres?
      he it has bought in London
      'did he buy it in London?'

2.3. Subjects

Functional projections also play a crucial role in the appearance of subjects across languages. We saw above that Agr is involved in Case assignment, thus forcing the subject DP to move to specAgrP. Agr is also assumed to be involved in the appearance of subject clitics and in the licensing and interpretation of *pro*. Clitics are pronominal elements that need to be adjoined (or attached) to some functional head. The exact nature of clitics (XP, head or morphological affix) and the location of their base-generated position is subject to a vivid debate in the literature.[8] I will not argue in favour of any particular position in this

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[8] Some researchers consider French clitics Agr markers in spoken French (Lambrecht, 1981; Pierce, 1992) and in Quebec French (Auger, 1994). Others believe that clitics are DPs that move from their argument position to a position adjoined to the verb (e.g. Kayne, 1975). Opposite to the movement account is the

thesis. Suffice it to say that clitics appear to the left of Agr which contains the finite verb, thus deriving the order clitic-verb (Kayne, 1991). The French examples below show that the clitic and the verb form a morphological unit which cannot be broken down by any element, be it an adverb (in (24a)) or a modifier (25a). Furthermore, clitics cannot be conjoined (26a) and cannot receive contrastive stress (27a). These properties can be used as diagnostics for clitic status as they contrast with the distribution of lexical nominals and strong pronouns (in English and Romance), as in (26c-d) through (29c-d) (see Kayne, 1975).

(24) a. * Il, souvent, fait   la cuisine
            he often   do-3S the cooking
      b. Jean, souvent, fait   la cuisine
         John   often   do-3S the cooking
         'John often cooks'
      c. He often does the cooking
      d. Lui spesso fa   da mangiare
         he often   do-3S of eat-INF
         'he often does the cooking'

(25) a. * Ils tous font   la cuisine
            they all do-3P the cooking
      b. Patrick, Paul et René tous font la cuisine
         Patrick Paul and René all   do the cooking
         'Patrick, Paul and René all cook'
      c. They all do the cooking
      d. tutti loro cucinano
         all   they cook-3P

(26) a. * Marie et il font   la cuisine

Mary and he do-3P the cooking

b. Jean et Marie font   la cuisine

John and Mary do-3P the cooking

'John and Mary cook'

c. He and Mary do the cooking

d. Lui e   Maria fanno da mangiare

he and Maria do-3P of eat-INF

'he and Mary do the cooking'

(27) a. * IL fait   la cuisine

he do-3S the cooking

b. JEAN fait   la cuisine

John do-3S the cooking

'JOHN cooks'

c. HE cooks

d. LUI cucina

he cook-3S

'HE cooks'

Turning now to *pro*, it must conform to licensing and identification requirements pertaining to all null elements (Rizzi, 1986). In *pro*-drop languages such as Italian and Arabic, Agr is assumed to be strong enough to license *pro* in specAgrP via head-government and to identify its content, as illustrated in (28).[9,10] By contrast, in languages where Agr is weak, subjects must be overt, as in the examples from English, French and German in (29).[11]

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[9] The nature of the stength of agreement is controversial (see Jaeggli & Hyams, 1988; Rizzi, 1994).

[10] Assuming that T dominates Agr in Arabic and that there is verb-movement to T, *pro* occurs after the verb in (28c-d) (Plunkett, 1985).

[11] The status of French regarding the possibility of null subjects is controversial. For some people, subject clitics are agreement markers that are strong enough to identify *pro* (Auger, 1994). Nevertheless, all analyses agree that a sentence that lacks a subject clitic, such as (31b), is ungrammatical in French.

(28) a. *pro* parli   italiano

        speak-2S Italian

      'you speak Italan'

b. *pro* giochiamo a pallone

        play-1P at ball

      'we play soccer'

c. kun-tu *pro* laa ?a-ktubu

    was-1S   not 1S-writing

    'I was not writing'

d. ya-dxul-uuna   *pro* al bayt -a

    enter -3MASC:P   the house-ACC

    'they are entering the house'

(29) a. * *pro* /you speak English

b. *pro /tu   parles   le français

        you speak-2S the French

        'you speak French'

c. * pro/du sprichst Deutsch

        you speak-2S German

        'you're learning German'

2.4. Summary

Functional categories play an important role in the structural representation of sentences and in the determination of word order. Their properties capture cross-linguistic differences in terms of movement, such as verb-raising. First, they specify the target position of movement. According to Platzack & Holmberg (1989), the [+F] feature is located in C in German (hence, V-C movement takes place), whereas it is in Infl in Romance and English (hence, the verb only raises to Infl). Second, properties of functional categories determine the level of representation at which movement applies (overtly or at LF). Under the Minimalist program, this difference is accounted for in terms of the strength of features associated with functional categories: overt movement is forced by strong

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features, while LF movement obtains when weak features are involved. Functional categories also participate in XP-movement, e.g. wh-movement to specCP and NP-movement to specCP in German so as to satisfy the V2 constraint. Moreover, morphological dependencies such as Case and agreement involve the category Agr (and a specifier/head configuration within AgrP). Finally, functional categories are relevant to the occurrence of subject types such as clitics and *pro*.

3. The Root Principle (Rizzi, 1994)

In this section, I discuss Rizzi's (1994) Root Principle according to which all declaratives are CPs. I show that it is an inherent part of the grammar, presenting arguments pertaining to null subjects in non-*pro*-drop languages, the formal representation of tense, and discourse anchoring. I then show that the consequence of the Root Principle is that all declaratives are finite.

3.1. Null subjects in non-pro-drop languages

In non-*pro*-drop languages such as English, French and German, Infl is too weak to identify *pro* in specIP, as seen in (29). Therefore, the subject should always be overtly realized. However, in these languages subjectless main declaratives are found in specific contexts such as diary registers and colloquial speech (Haegeman, 1990b), as shown in (30).

(30)   a. __ went to church
       b. __ suis allé   à l'   église
             am gone to the church
       c. __ bin zu Kirche gegangen
             am to church gone

In clauses where CP is obligatorily projected, such as wh-questions and embedded clauses, a referential subject cannot be null. This is illustrated in (31) and (32). Since Infl is otherwise unable to license an empty category in English, French and German, a null referential subject in such constructions always results in ungrammaticality, regardless of the register.[12]

(31) a. * when __ went to church?
       b. * quand __ suis allé à l' église?
          when   am gone to the church
       c. * wann bin __ zu Kirche gegangen?
          when am   to church gone

(32) a. * you think that __ went to church
       b. * tu penses que __ suis allé à l' église
          you think that   am gone to the church
       c. * du glaubst, daß __ bin zu Kirche gegangen
          you think that   am to church gone

Let us first consider the English and French sentences in (30), (31), and (32). Suppose that the root category is IP in (30a) and (30b). If we compare the grammaticality of these sentences with the ungrammaticality of (31a-b) and (32a-b), we are led to conclude that in English and French a null subject can only be found in the specifier of the root. For Rizzi, this null subject is not *pro* but rather a null constant (*nc*) occupying an A-position. It is assumed to be a non-variable R-expression with the characteristics <-anaphor>, <-pronominal>, and <-variable>. As a null element, the null constant must be identified. In general, covert items must satisfy the ECP under which identification takes place clause-internally via a c-commanding element. As there is no element that c-commands the

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[12] Note that null expletives are allowed in German (Cardinalletti, 1990):
(i)   ... daß *pro* getanzt wurde
          that   danced would
          'that people danced'

specifier of the root, the null subject occupying that position cannot be identified clause-internally. Rizzi thus proposes an extension of the ECP whereby identification may be done via discourse.[13] Discourse-identification can only take place if the null element occupies the specifier of the root, as illustrated in (33a). If CP is projected, the null constant is not in the specifier position of the root category, as in (33b), and thus fails to be discourse-identified. As to why IP should be the root in sentences (30a-b), Rizzi claims that the Root Principle can be turned off in diary registers and colloquial speech. In other registers, CP is the root, which rules out the appearance of null subjects.

(33) a.

IP
├── nc
└── I'
    ├── I
    │   └── went$_i$
    └── VP
        └── t$_i$ to church

b. *

CP
└── C'
    ├── C
    └── IP
        ├── nc
        └── I'
            ├── I
            │   └── went$_i$
            └── VP
                └── t$_i$ to church
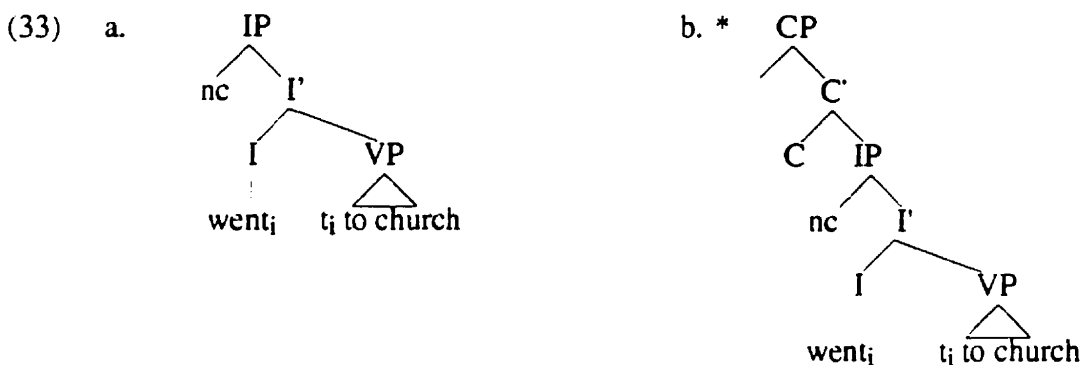
Turning now to the case of German, we saw in section 2.1.2. that the verb in C may be preceded by the subject in specCP in matrix clauses. An analysis of sentence (30c) in terms of a null constant would mean that the null constant is in specCP.[14] As it is specifier of the root, it can be identified by discourse.[15] In contexts where the null constant

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[13] For Rizzi (1994), nonpronominal empty elements must be chain-connected to an antecedent, if they can.

[14] I do not mean to suggest that null constants occur in IP roots in some languages and in CP roots in others. The important point here is that null subjects are found in the specifier of the root. It so happens that the root is always CP is German, while it may be IP in specific registers of English and French.

[15] The concept of null constant should be distinguished from that of Topic Drop, where a null operator in specCP binds a variable in subject or object position (Huang, 1984). The operator is in turn assumed to be bound by discourse. This is illustrated in the German sentences in (ia) and (ib).
(i)   a. [cp OP habe [ip t es gestern gekauft]
                    have-1S it yesterday bought
              '(I) bought it yesterday'
            b. [cp OP habe [ip ich t gestern gekauft]
                    have-1S I   yesterday bought
              'I bought (it) yesterday'
Cardinaletti (1990) points out an important asymmetry between object and subject regarding the characteristics of the dropped element. If it is a subject, the element may bear any person marker, whereas if

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is not in specCP, as in wh-questions and embedded clauses, discourse-identification cannot take place, as illustrated by the ungrammaticality of (31c) and (32c).[16] Note that such an ungrammaticality further extends to cases of topicalisation of a non-subject XP. In these constructions the non-subject XP occupies specCP, as in (34), which prevents the subject in specIP from being identified by discourse.

(34)   * [cp zu Kirchej bini [ip *nc* [vp tj gegangen] ti]
          to church am   gone

In *pro*-drop languages such as Italian, *pro* can be licensed by a strong Infl. As such, the null subject does not need to be in the specifier position of the root category in order to be licensed. Consequently, null subjects may appear in wh-questions and embedded clauses, as in (35).

(35)   a. __ andai in chiesa
              go-2S in church
           'you went to church'

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it is an object, it can only involve the 3rd person singular. In (iia) below, the German 2nd person subject *du* may be dropped while the 2nd person object *dich* must be overtly realised in sentence-initial position (ib).
(ii)   a. (du)   hast   es gestern   gesehen
             you-NOM have-2S it yesterday seen
             '(you) saw it yesterday'
         b. * (Dich)   habe ich gestern gesehen
             you-ACC have I   yesterday seen
             'I saw (you) yesterday'
This suggests that the processes involved in subject and object drop are different in nature. As pointed out by Rizzi (1994), operators inherently involve a third person marking, which suggests an account of object drop in terms of an empty operator, along the lines of (ib). In the case of subject drop, such an analysis cannot be maintained. Rather, interpreting the null subject as a null constant captures the lack of restrictions concerning the type of person marking that the subject can involve.

[16] Rizzi's analysis predicts that IP can be the root of German matrix declaratives in diary registers and colloquial speech. Assuming that IP is right-headed in this language, we should expect to find the finite verb in clause-final position. This, however, is not reported by Haegeman. It might be the case that the Root Principle can be turned off in some languages (e.g. English and French) and not in others (e.g. German). However, this would remain extremely stipulative. Alternatively, assuming that IP is left-headed in German, as argued by Travis (1984) and Zwart (1993), would give us the right results. Subject-Verb word orders would be derived by movement of the subject to specIP and verb-raising to I. In standard German, the CP layer is projected, in accordance with the Root Principle, which rules out null constants (just as in English in French). In diary registers and colloquial speech, the CP layer may be omitted, which leaves open the possibility of discourse identification for null constants in specIP.

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b. dove __ andai?
   where   go-2S
   'where did you go?'

c. tu pensi che __ sono andato in chiesa
   you think that   am   gone in church
   'you think that I went to church'

The difference between (35a) and the sentences in (30) is that in Italian the sentence is grammatical in all registers and is underlyingly CP, as shown in (36), with *pro* rather than a null constant in specIP. As such, it sharply contrasts with the structure in (33b).

(36)
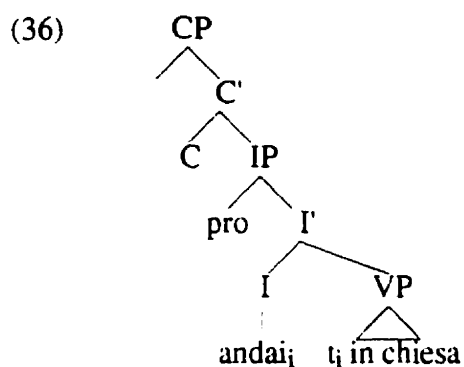
In conclusion, by holding the root category constant across languages, one can explain differences in the occurrence of subjectless declaratives. If the 'nguage is pro-drop, a null subject can survive in a CP structure; if the language is non-*pro*-drop, null subjects are ruled out in CPs. In the latter languages, null subjects are found in only certain contexts where IP may be the root. There, the null subject is analysed as a null constant in the specifier of the root.

3.2. The role of Comp in the representation of tense

A root declarative typically refers to an event in relation to the time of the utterance (or speech time). The event time (E) may be anterior, simultaneous, or posterior to the

speech time (S). The relationship between E and S is the quintessential expression of Tense in matrix clauses according to Reichenbach (1947). In order to capture this relationship in the syntax, Enç (1987) proposes that the matrix C be associated with a temporal index denoting speech time. She further suggests that Tense be interpreted by comparing the time of the event, in T, to the speech time in C. The intuition behind this idea is that past and present are inherently relational notions: the temporal intervals that they denote must be related to another interval. In other words, if past and present are taken as tense primitives under T, there must be another temporal entity in the sentence which sets the temporal interval used for comparison purposes.

Drawing on Enç's idea, Guéron & Hoekstra (1989) propose that a deictic operator occupies specCP which ranges over the discourse world and determines the value of a reference time in C. The time of the event is then interpreted relative to that reference time. In the unmarked case the tense operator is assumed to set the reference time as the interval denoted by the discourse, i.e. the 'current' interval or speech time. The interpretation of tense can thus be formally captured by a tense-chain relating C and T/V. In the examples below, the index for the speech time in C is "0" while "i" is the index for Tense. In a present tense sentence, "0" is equal to "i" ($0 = i$) since both temporal intervals coincide, as shown in (37). In a past sentence "0" is disjoint from "i" ($0 \neq i$) since the interval denoted by Tense should precede the speech time denoted by Comp, as in (38).

(37) a. John is working
      b. [$_{CP}$ Comp$_0$ [$_{IP}$ NP Present$_0$ VP]]

(38) a. John worked
      b. [$_{CP}$ Comp$_0$ [$_{IP}$ NP Past$_i$ VP]]

What is the nature of the mechanisms used for 'comparing' the temporal properties of C and T and for obtaining the relevant indexing? Since past and present are relational

notions, Enç proposes that these tense primitives should be considered referential elements, on a par with pronouns (see Partee, 1973). Like pronouns, tenses can have antecedents in the discourse, as in (39a), or have sentence-internal antecedents, as in (39b).

(39)   a. We went to the party. John got drunk.
        b. John arrived at three.

In (39a), the time of John getting drunk is set in the first sentence. The tense of that sentence thus functions as the antecedent of the tense in the second one. In (39b), the time of arrival (*three*) is taken to determine the tense of the sentence. Based on these ideas, Guéron & Hoekstra (1989) propose that tense interpretation relies on binding theory principles (Chomsky, 1986). These principles account for the distribution of anaphors, pronouns and referential expressions, as in (40) and (41).

(40)   a. Principle A: an anaphor must be bound in its governing category
        b. Principle B: a pronoun must be free in its governing category
        c. Principle C: an R-expression must be free everywhere

(41)   Governing Category: the minimal domain containing the pronoun, its governor, and an accessible subject/SUBJECT

According to Guéron & Hoekstra, the [present] value of tense is an anaphor, hence subject to Principle A, while the [past] value is viewed as a pronoun, i.e. subject to Principle B. Consequently, the [present] value must refer to a temporal interval identical to (or at least included within) the interval denoted by the speech time in C; hence, C and [present] bear the same index, as in (37b). In contrast, the temporal interval denoted by the

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[past] value must be disjoint from the speech time, which results in C and [past] having different indexes, as in (38b).[17]

Independent support for the temporal properties of C comes from V2 languages. As we have seen, verb-movement to C in matrix clauses is assumed to be triggered by the presence of a finiteness marker [±F(inite)] in that position (Platzack & Holmberg, 1989). Suppose that this feature is inherently associated with C crosslinguistically. Differences between V2 and non V2 languages can be captured in terms of feature strength (Chomsky, 1995). If we assume that finiteness features are strong in V2 languages, verb-movement to Comp must occur by Spell-Out in these languages so that feature checking can take place. By contrast, the features can be considered weak in non-V2 languages, which means that checking will not take place before LF. As a result, verb-movement to C does not occur in the syntax. This analysis allows a unified account as to the location of the finiteness marker across languages and maintains an intrinsic relationship between Tense and C. Some researchers actually consider Comp the canonical location of tense (Rizzi, 1982; Stowell, 1982, 1983; den Besten, 1983; Haegeman, 1990a; Tomasselli, 1990). Such an account also renders verb-movement to C systematic in all languages, which conforms to the hypothesis that languages are invariant at LF, i.e. that elements eventually come to occupy similar positions crosslinguistically (Huang, 1982; Stowell, 1983; Chomsky, 1991).

3.3. Comp as an anchor to discourse

Apart from its temporal characteristics, C also has properties related to discourse. In other words, elements within CP are prime candidates for discourse identification, e.g. the deictic operator proposed by Guéron and Hoekstra. For Haegeman (1996), "C is the point at which a clause is connected to the context" (Haegeman, 1996: 275). The inherent relation

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[17] Future tense is interpreted as an R-expression which is not related to any temporal interval in discourse. Just like a nominal, future tense is referential in nature without being identified in the discourse. For comparison's sake, past tense denotes a temporal interval which is presupposed in the discourse; this is akin to a pronoun whose referent is presupposed in the discourse. Therefore, a tense which denotes neither the speech time nor an interval identified in discourse is assumed to be a future tense.

between CP and discourse is demonstrated by the fact that the CP node typically hosts discourse-related elements. As pointed out by Haegeman, the illocutionary force of a sentence is encoded at the CP level. This is illustrated by the formation of questions which typically involve movement into C (and into specCP in the case of wh-questions). Such movements occur in the syntax or at LF. By the same token, we can think of imperative sentences as involving movement of the verb into C (Belletti, 1990; Rivero, 1994). This is shown, for example, by the fact that an object clitic precedes the finite verb in French declarative sentences, as in (42a), but that it must follow the verb in imperative contexts, as in (42b) and (42c).

(42)   a. Pierre le fait
           Peter it do-3S
           'Peter does it'
        b. Fais-le!
           do-2S it
           'do it!'
        c. * le fais!

In non-imperative sentences object clitics are assumed to attach to the finite verb in Infl (see section 4). In imperative contexts, that the order clitic-verb is reversed is taken as evid that the verb has moved past Infl, presumably to C (see also Kayne, 1991, 1994). For Belletti (1996), this movement takes place for feature checking purposes. Imperative verbs are assumed to carry some modal features that must be checked in C. As we can see, then, both question formation and imperatives (eventually) involve the CP node.

Another argument showing the relationship between CP and discourse comes from Rizzi's (1997) muli-layered representation of CP. According to him, CP can be split into different projections providing specific positions for topics and focus elements. As mentioned by Haegeman, topics and foci are inherently discourse-related, "topic being

what is 'given' in the context, focus what is 'contrasted' with the context" (Haegeman, 1996: 275).

3.4. Root declaratives and finiteness

Generally speaking, one cannot speak of an event without somehow locating it in time. This temporal location is realised via tense, which can be defined as 'the grammaticalised expression of location in time' (Comrie, 1985). Tense primarily specifies whether the event denoted by the verb is related to the present, past, or future. We have seen above that C and T must enter in a binding relationship in order to yield a tense interpretation. There is another relationship which participates in the specification of tense: that between T and V. For Guéron & Hoekstra (1989), VP denotes an event or a state called E which is predicated by T (see Higginbotham, 1985). In other words, an event E is said to take place at a time t (which is then put in relation with the speech time via a tense-chain). We can slightly rephrase this idea and say that T hosts a tense variable that needs to be fixed, which is essentially what Rizzi (1993/1994) proposes. In finite contexts, such fixation can be done via the tense morphology on the verb, presumably as a result of verb-movement to T.[18] When there is no tense morphology the tense variable cannot be identified, which yields ungrammaticality, as in the nonfinite root declaratives of English, French, Spanish, and German given in (43). These sentences also show that temporal adverbs alone cannot have the capacity to locate the event in time, i.e. they cannot identify the tense variable.

(43)   a. * to buy a new car (tomorrow)
       b. * acheter   une nouvelle voiture (demain)
          buy-INF a   new   car   tomorrow

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[18] Rizzi's idea draws on Pollock's (1989) proposal that T hosts a tense operator [± Past] which must bind a variable. According to Pollock, verb-movement to T occurs so that the operator can bind the verb trace as its variable. This variable is defined as the syntactic counterpart of Davidson's (1966) 'event variable' where the lexical content of the verb specifies its range of variation.

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c. * comprare una nuova macchina (domani)
   buy-INF a   new car   tomorrow

d. * (Morgen) ein neues Auto kaufen
   tomorrow a   new car buy-INF

Assuming Grimshaw's (1994) Extended Projection Principle whereby the projection of a node entails the projection of all the nodes below it, the Root Principle guarantees that root declaratives are always finite. When CP is projected, AgrP and TP will be as well. Crucially, if T is projected, the tense variable is posited. As this variable requires identification, the result can only be a finite declarative.

Despite these claims, it is possible to find grammatical root infinitives in the adult language.[19] These include ellipses as short answers to questions (Haegeman, 1995). Examples from French and German are given in (44) and (45).

(44)   Q: Qu'est-ce que tu vas faire ce soir?
         'what are you going to do tonight?'
       A: finir   mon travail
          finish-INF my work
          'finish my work'

(45)   Q: Was machst du heute Abend?
         'what are you doing tonight?'
       A: meine Arbeit beenden
          my work   finish-INF
          'finish my work'

---

[19] Infinitival embedded clauses may also be found, as shown in (i).
(i)   a. John hopes [to buy a new car]
         b. Jean espère [acheter une nouvelle voiture]
         c. Gianni spera [di comprare una macchina nuova]
         d. Hans denkt daran [ein neues Auto zu kaufen]
The grammaticality of the sentences in (i) shows that embedded infinitives can have a temporal interpretation. This means that the lower T is identified and is somehow related to the speech time. Clearly, the identification of T cannot be done via the tense morphology on the lower verb since the verb is non-finite. In those contexts I assume that the temporal interpretation of the lower T depends on the higher T (Enç, 1987; Rizzi, 1993/1994; Haegeman, 1995; Shaer, 1997).

According to Haegeman (1995), the reference time of the elliptical answer may be discourse-identified. Assuming that such an elliptical sentence is a CP, she claims that a discourse operator in specCP copies the Tense features of the preceding question, as in (46). Tense in Comp is thus anchored, which in turn allows T to be anchored and be interpreted.

(46)   [IP ... T$_i$ ... [CP Comp$_i$ [IP finish$_i$ my work]]]

It is worth mentioning that infinitival clauses such as the ones in (44) and (45) should not be considered root declaratives. In other words, such sentences cannot be uttered on their own by anyone who wishes to state his or her intention of finishing some work. Instead, they can only occur as answers to questions or to some kind of discourse context providing tense identification.

Finally, grammatical root infinitives include interrogatives (47), sentences with jussive reading (48), and counterfactual exclamatives (49).

(47)   a. what to do?
       b. comment   finir mon travail?
          how   to finish my work
          'How can I finish my work?'
       c. was   tun?
          what do-INF
          'what should I do?'

(48)   a. ne   pas fumer
          NEG not smoke-INF
          'No smoking'

b. nicht rauchen

   not smoke-INF

   'No smoking'

(49)   a. moi partir? Jamais!

     me to leave never

     'Me, leave? Never'

     b. ich mit dir leben? Niemals!

       I with you live-INF never

       'Me, live with you? Never!'

For these types of infinitives, T is somehow bound to a special operator in CP, e.g. a negative, imperative or modal operator (Rizzi, 1993/1994). The presence of an operator in specCP provides C with a reference time which yields the identification of T. I should point out that the analysis of sentences (47) through (49) remains sketchy. The exact nature of the operators in specCP and the mechanisms allowing identification of the reference time is not entirely clear. Nevertheless, if we are on the right track in assuming that operators are eventually responsible for the identification of T in these sentences, it must be the case that such an identification does not take place in plain declaratives. Haegeman (1996) argues that nonfinite root declaratives lack Guéron and Hoekstra's (1989) deictic temporal operator. She notes that root infinitives such as (43) do not involve any modal or imperative reading, which would have been encoded by an operator in specCP. The absence of such an operator means that the reference time in C is left unspecified. Consequently, T is left with no possibility of being identified at all, which yields a violation of the principle of Full Interpretation. As a result, descriptive root infinitives are ungrammatical in the adult language.

3.5. Summary

The Root Principle requires that all declaratives be CPs. We have seen that the motivation for this principle mainly lies in the tense and discourse-related properties of C. Its tense specifications denote the speech time against which the value of tense in T is evaluated (via binding principles). Other properties of C allow the utterance to be anchored into discourse. In current theory, the illocutionary force of an utterance is specified in CP, e.g. questions and imperatives. In addition, the projection of CP roots can account for the lack of subjectless sentences in the standard register of non *pro*-drop languages. It is precisely where the Root Principle can be relaxed, i.e. in diary registers and colloquial speech, that null subjects can be found. In conclusion, the specific properties of CP require its projection as the root of declarative sentences. The systematic projection of CP guarantees that root declaratives are always finite. In particular, a CP root entails the projection of TP and the positing of the tense variable.

4. The Truncation Hypothesis

Under the Truncation Hypothesis, functional categories are present in initial L1, while the Root Principle is underspecified (see Rizzi, 1993/1994; Haegeman, 1995). I extend this claim to L2 acquisition. Although early grammars possess the same set of syntactic categories as the target systems there is no constraint concerning the root of matrix declaratives. As a result, learners project truncated structures at the onset of acquisition, yielding different types of roots. Examples of truncated structures below CP and TP are given in (50a-b). In (50a) the root is AgrP, whereas in (50b) it is VP. (Projections that are not part of the representations are underlined.)

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(50)   a. Truncation below CP   b. Truncation below TP

```
        CP                                        CP
       /  \                                      /  \
    spec   C'                                 spec   C'
          /  \                                      /  \
         C   AgrP                                  C   AgrP
            /  \                                      /  \
         spec   Agr'                               spec   Agr'
               /  \                                      /  \
             Agr   NegP                                Agr   NegP
                  /  \                                      /  \
               spec   Neg'                               spec   Neg'
                     /  \                                      /  \
                   Neg   TP                                  Neg   TP
                        /  \                                      /  \
                     spec   T'                                 spec   T'
                           /  \                                      /  \
                          T    VP                                   T    VP
                              /  \                                      /  \
                           spec   V'                                 spec   V'
                                 /  \                                      /  \
                                V   ..                                    V   ..
```
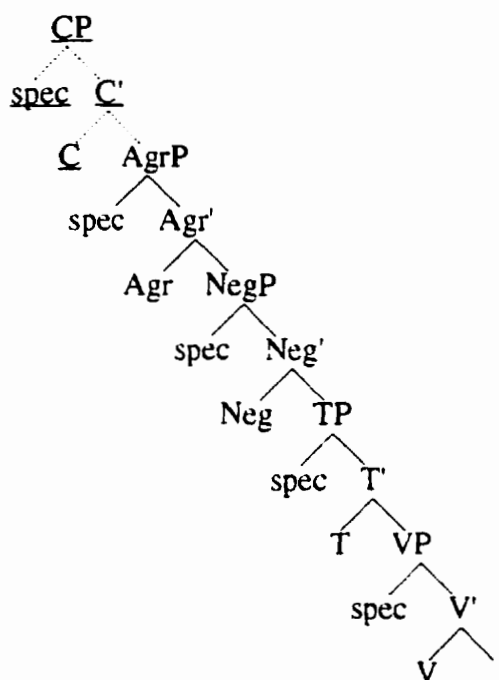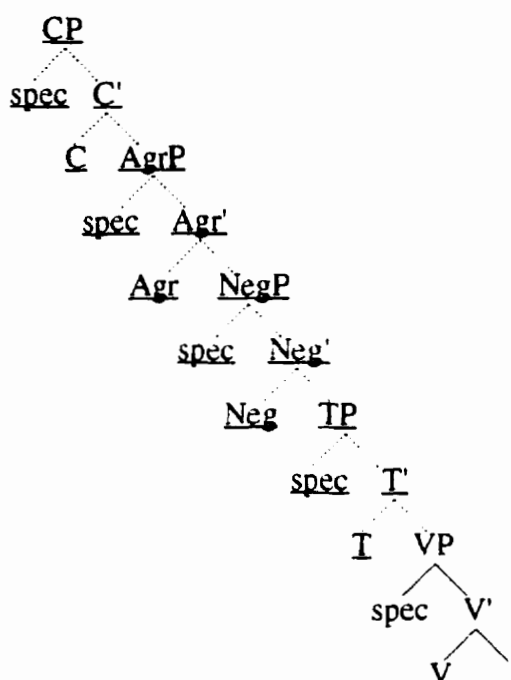
Truncation at any particular point implies that all categories below that point are included in the representation, following Grimshaw (1994), while the categories above it are excluded. Therefore, if CP or AgrP is the root category, as in (50a), or if truncation occurs above TP, the resulting structure contains TP, which means that the tense variable is posited and must be identified.[20] Verb-movement will thus occur, yielding the producti of finite sentences. If the structure is truncated below TP, so that only VP is projected, as in (50b), there are no functional categories for the verb to raise to and there is no tense variable to be identified. Since AgrP is not projected, verbs cannot be inflected. Nonfinite verbs are thus expected to be found as main verbs of matrix declaratives. Nonfinite markers should appear on main verbs, including infinitival affixes (such as *-er* in French or *-en* in German) and past participal markers (such as *-é* and *-i* in French or *ge-* in German).

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[20] The prediction that TP roots will be found can not be verified in languages which have the same morphemes encoding both tense and agreement. In languages with separate tense and agreement markers the projection of a TP root should yield verbs bearing tense affixes, but no agreement affixes. Although this is a possibility, it is not sure whether the two morphemes can ever be separated.

As can be seen, functional categories are expected to be optionally projected under the Truncation Hypothesis. This model does not postulate that there should be a period during which only VPs are projected in early acquisition; rather, it predicts that both finite and nonfinite declaratives should be produced until the Root Principle emerges. In addition, the distribution of finite and nonfinite forms is expected to be structurally determined. The intuition behind this idea is that nonfinite markers should not be used as substitutes for finite affixes. The point in the structure below which truncation occurs yields specific predictions concerning the characteristics of early speech. These predictions are presented below for the acquisition of French and German. After discussing these predictions, I review some methodological issues in determining finiteness.

4.1. Verb-placement

The position of the verb is determined by the headedness properties of the phrase that contains it. Consider VP roots first. If VP is left-headed, as in French, the verb should precede any VP-material, as shown in (51a). If VP is right-headed, as in German and Dutch, the verb should appear in the last position of the sentence, as in (51b). Finally, verb particles should remain on the verb in German since there is no verb-movement, as in (51c). Note that the examples below all lack a subject; I come back to that point in section 4.2.

(51)   a. [vp apprendre le français]
            learn-INF the French
    b. [vp Deutsch lernen]
            German learn-INF
    c. [vp Mutti an rufen]
            mummy PART-call-INF

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We now turn to finite declaratives. It is first important to point out that the languages involved here do not systematically distinguish between tense and agreement morphology, which makes the predictions concerning AgrP and TP roots almost impossible to formulate. Thus, I will refer to AgrP and TP roots as IP roots. In V2 languages, CP is left-headed, which means that the finite verb should precede all VP-material when CP is the root, as in (52a). In contrast, since IP is right-headed, the finite verb is expected to follow all VP-material in IP roots, as in (52b).

(52) a. [CP Peter lernt   Deutsch]
         Peter learn-3S German
     b. [IP Peter Deutsch lernt]
         Peter German learn-3S

The projection of an IP root should also yield matrix sentences displaying verb clusters where the finite verb (in Infl) follows the nonfinite verb (in V), as in (53).

(53) [IP Peter$_i$ [VP t$_i$ Deutsch lernen]   will]
         Peter   German learn-INF want-3S
         'Peter wants to learn German'

Finally, if CP is the root, verb particles and verbs should be separated since the verb moves to C, as in (54).

(54) [CP Peter$_i$ ruft$_j$ [VP t$_i$ Mutti   an t$_j$] t'$_j$]
         Peter call-3S   mummy PART
         'Peter is calling mummy'

In languages where both CP and IP have the same headedness characteristics, word order cannot be used as a test to decide between a CP and IP root. Such is the case of French, where CP and IP are left-headed. This is illustrated in (55).

(55) [CP/IP Pierre apprend le français]
         P.   learn-3S the French

4.2. Null subjects

Assuming that null constants may be licensed in the specifier of the root, they should be found in both finite and nonfinite root declaratives. If either VP or IP is the root, a null constant may appear in its specifier position and be licensed via discourse-identification (Rizzi, 1994), as in (56) and (57). The production of subjectless finite declaratives is thus expected, even in the acquisition of non *pro*-drop languages, such as French and German.

(56) a. [VP *nc* apprendre le français]
              learn-INF the French
      b. [VP *nc* Deutsch lernen]
              German learn-INF

(57) a. [IP *nc* apprend   le français]
              learn-3S the French
      b. [IP *nc* Deutsch lernt]
              German learn-3S

In contrast, null constants are predicted not to appear in clauses obligatorily involving CP, such as wh-questions, yes/no questions, embedded clauses and topicalisation of non-subject XPs (in German). Since the category of the root is CP in all these cases, a null constant in specIP would fail to be identified. Thus, CPs of non pro-drop languages should always exhibit a lexical subject.

(58) a. [CP pourquoi [IP *nc/il apprend le français?]]
              why   he learn-3S the French

b. [CP warum lernt   [IP *nc/er Deutsch?]]
   why learn-3S   he German

(59)   a. [CP [IP *nc/il apprend le français?]]
             he learn-3S the French
       b. [CP lernt   [IP *nc/er Deutsch?]]
          learn-3S   he German

(60)   a. [CP que [IP *nc/il apprend le français]]
          that   he learn-3S the French
       b. [CP daß [IP*nc/er Deutsch lernt]]
          that   he German learn-3S

(61)   [CP Deutsch lernt [IP *nc/er]]
       German learn-3S   he

Note that topicalisation of the subject in German may yield a subjectless utterance since a null constant would then be able to be identified by discourse in specCP. This is illustrated in (62), which should be contrasted to (61).

(62)   [CP nc/er lernt   Deutsch]
       he learn-3S German

The impossibility of subjectless CPs makes the further prediction that null subjects should disappear from finite root declaratives in French once the Root Principle emerges, i.e. when all declaratives are CPs. In other words, subjectless finite declaratives and root infinitives should disappear at the same time.

4.3. Auxiliaries and modals

It has been proposed that auxiliaries and modals are intimately related to the T position and that they may be base-generated there (Guasti, 1993). If this is indeed the case, then no auxiliary or modal infinitives should be found in root declaratives, as in (63); a VP root would lack the proper hosting position for these elements. In contrast, auxiliaries and modals should appear when at least IP is projected, i.e. when the sentence is finite, as in (64).

(63) a. * [VP avoir   appris le français]
             have-INF learnt the French

      b. * [VP vouloir   apprendre le français]
             want-INF learn-INF the French

      c. * [VP Deutsch gelernt haben]
             German learnt have-INF

      d. * [VP Deutsch lernen wollen]
             German learnt want-INF

(64) a. [CP/IP il a   appris le français]
             he has learnt the French

      b. [CP/IP il veut   apprendre le français]
             he want-3S learn-INF the French

      c. [CP er hat Deutsch gelernt]
             he has German learnt

      d. [CP er will   Deutsch lernen]
             he want-3S German learnt

      e. [IP er Deutsch gelernt hat]
             he German learnt has

      f. [IP er Deutsch lernen will]
             he German learnt want-3S

4.4. Subject clitics

French has subject clitics, as listed in Table 1.

Table 1: French subject clitics

		Clitics	
Singular	1 pers	je	
	2 pers	tu	
	3 pers	il	(masc)
		elle	(fem)
		on	(neuter)
Plural	1 pers	nous	
	2 pers	vous	
	3 pers	ils	(masc)
		elles	(fem)

Subject clitics attach to the finite verb under Infl. As there would be no position for them in a VP root, they should not appear in root infinitives, as in the French example (65a). Instead, all subject clitics should be observed when (at least) IP is projected, as in (65b).

(65)   a. * [vP j'apprendre le français]
                I learn-INF the French
       b. [CP/IP j'apprends le français]
                I learn-1S the French

4.5. Case

According to the Case Filter, all overt DPs must receive Case. Case is generally assigned structurally within IP. If VP is the root, it follows that structural case cannot be assigned to the subject. Thus, the elements that may appear as subjects of root infinitives are elements that do not receive structural Case, such as bare NPs, as in (66) (see Clahsen et al., 1993/1994; Friedemann, 1993/1994; Clahsen, Eisenbeiss & Penke, 1996). In turn, bare NPs are expected not to appear in any structural positions. Therefore, we should not find them as subjects of finite main declaratives (CPs or IPs), as in (67). Note that overt subjects should remain in the specifier position of VP when VP is the root. Thus, their

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placement vis à vis the nonfinite verb should depend on the branching direction of the VP. If the VP is right-branching, the subject should follow the verb, as in the French example in (66a) (Giorgi & Longobardi, 1991; Roberts, 1993; Friedemann, 1993/1994); if the VP is left branching, the subject should precede the verb, as in the German example in (66b).

(66) a. [vp apprendre le français soeur]
    learn-INF the French sister

  b. [vp Schwester Deutsch lernen]
    sister German learn-INF

(67) a. * [CP/IP soeur apprend le français]
     sister learn-3S the French

  b. * [IP Schwester Deutsch lernt]
     sister German learn-3S

  c. * [CP Schwester lernt Deutsch]
     sister learn-3S German

Other types of overt subjects that may be found in root VPs are elements that bear default case. Default case is the case borne by nominals when there is no structural case assigner. In French, default case is objective, while it is nominative in German. A list of French and German default pronominal cases is given in Table 2. Note that in German, determiners bearing nominal case, such as *der* (the:MASC:S), *die* (the:FEM:S), *das* (the:NEU:S) and *die* (the:P), can also be used as pronouns and appear as subjects of finite clauses (e.g. *der hat drei Autos* = 'he has three car'). These 'Pro-determiners' are also predicted to be found as subjects of RIs.[21]

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[21] I borrowed the term 'Pro-determiners' from Duffield (1997).

Table 2: Default case pronouns in French and German

		French	German
Singular	1 pers	moi	ich
	2 pers	toi	du
	3 pers	lui (masc)	er (masc)
		elle (fem)	sie (fem)
			es (neuter)
Plural	1 pers	nous	wir
	2 pers	vous	ihr
	3 pers	eux (masc)	sie
		elles (fem)	

Examples of root VPs displaying a pronoun subject with default case in French and German are given in (68).

(68) a. [vp apprendre le français moi]
          learn-INF the French me

      b. [vp ich Deutsch lernen]
          I German learn-INF

      c. [vp der Deutsch lernen]
          he German learn-INF

In French, strong pronouns are banned from subject positions in finite clauses since they do not bear nominative Case. Thus, they should not occur in IP and CP roots, as in (69a).[22] In contrast, since nominative case is ambiguous between default and structural

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[22] The French third person pronouns *lui* ('him'), *elle* ('her'), *eux* ('them:MASC') and *elles* ('them:FEM) may be found as subject of finite declaratives when they bear contrastive stress, as in (ia) and (ib). This, however, is not possible with other strong pronouns, as in (ic) and (id).
(i)   a. LUI/ELLE est venu(e)
            him/her   is come
            'HE/SHE came'
         b. EUX/ELLES sont venu(e)s
            them:MASC/them:FEM are come
            'THEY came'
         c. *MOI suis venu
            me am come
            'I came'

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case in German, nominative pronouns and Pro-determiners may also appear in those structures (69b-e).

(69) a. * [CP/IP moi apprends le français]
                    me   learn-1S the French

      b. [IP ich Deutsch lerne]
               I German learn-1S

      c. [IP der Deutsch lernt]
              he German learn-3S

      d. [CP ich lerne   Deutsch]
              I learn-1S German

      e. [CP der lernt   Deutsch]
              he learn-3S German

Finally, subject DPs, which need Case should be absent from root VPs, as in (70). They are only expected in finite declaratives, as in (71).

(70) a. * [VP apprend le français ma soeur]
                    learn   the French my sister

      b. * [VP meine Schwester Deutsch lernen]
                    my   sister   German learn-INF

(71) a. [CP/IP ma soeur apprend le français]
                       my sister learn-3S the French

      b. [IP meine Schwester Deutsch lernt]
              my   sister   German learn-3S

      c. [CP meine Schwester learnt   Deutsch]
                 my   sister   learn-3S German

---

d. *TOI es venu
       you are come
       'YOU came'

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4.5. CPs

Some constructions unambiguously involve the projection of CP, namely questions, embedded clauses and topicalisation of non-subject XPs (in German). If VP is the root, there is no position available for wh-words, Q-markers, complementisers and topicalised elements. Furthermore, questions cannot be interpreted as such. Therefore, wh-questions, yes/no questions, embedded clauses and topicalisation are predicted to show characteristics of CPs, and not VPs, i.e. they should include finite verbs rather than nonfinite ones. This is illustrated in (72) though (79).

(72) a. * [VP pourquoi toi apprendre le français?]
          why   you learn-INF the French
      b. * [VP warum lernen   du Deutsch?]
          why   learn-INF you German

(73) a. * [VP toi apprendre le français?]
          you learn-INF the French
      b. *[VP lernen   du Deutsch?]
          learn-INF you German

(74) a. * [VP que toi   apprendre le français]
          that you learn-INF the French
      b. * [VP daß du Deutsch lernen]
          that you German learn-INF

(75) * [VP Deutsch lernen   du]
         German learn-INF you

(76) a. [CP pourquoi tu   apprends le français?]
          why   you learn-2S the French
      b. [CP warum lernst   du Deutsch?]
          why   learn-2S you German

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(77)   a. [CP tu   apprends le   français?]
           you learn-2S the French

        b. [CP lernst   du Deutsch?]
           learn-2S you German

(78)   a. [CP que tu   apprends le français]
           that you learn-2S the French

        b. [CP daß du Deutsch lernst]
           that you German learn-2S

(79)   [CP Deutsch lernst   du]
         German learn-2S you

4.6. Negation

In the representations in (50), NegP is located in between AgrP and TP (Belletti, 1990). It follows that a NegP root would include TP. This means that in the case of truncation below AgrP the resulting negative sentences should be finite, as in (80). Put differently, negative nonfinite roots should not be observed in early speech, as in (81). Negative adverbials should follow the verb in French (CP or IP roots), as in (81a) and in German CP roots (81b). If IP is the root in the latter language, the verb is expected to follow the negator (81c).

(80)   a. [CP/IP il n'   apprend pas le français]
           he NEG learn-3S not the French

        b. [CP er lernt   nicht Deutsch]
           he learn-3S not   German

        c. [IP er nicht Deutsch lernt]
           he not German learn-3S

(81)   a. * [NegP pas apprendre le français]
           not learn-INF the French

b. * [_{NegP} nicht Deutsch lernen]

    not   German learn-INF

However, the location of NegP is assumed to vary across languages: it may be higher than TP in some languages or lower than TP in others (Rizzi, 1993/1994). In those languages where NegP is lower than TP, an NegP root does not entail the projection of TP, which should in principle permit negative nonfinite roots. In these sentences, the negative adverbial should precede the verb, since NegP dominates VP.

4.7. Methodological issues in determining finiteness

Potential problems arise concerning the exact status of nonfinite markers in French and German as they are homophonous with some finite markers. Tables 3 and 4 display the markers for the infinitival form, past participles and present tense in the two languages.

Table 3: French inflectional paradigm (present tense)

		1st group *chanter* ('sing')	2nd group *finir* ('finish')	3rd group *boire* ('drink')
Infinitival form		chant-er ([e])	fin-ir	boi-re
Past participle		chant-é ([e])	fin-i ([i])	bu
Imperative	1st sing	chant-e	fin-is ([i])	bois
	1st plur	chant-ons	fin-issons	buvons
	2nd plur	chant-ez ([e])	fin-issez	buvez
Present tense	1st sing	chant-e	fin-is ([i])	boi-s
	2nd sing	chant-es	fin-is ([i])	boi-s
	3rd sing	chant-e	fin-it ([i])	boi-t
	1st plur	chant-ons	fin-issons	buvons
	2nd plur	chant-ez ([e])	fin-issez	buvez
	3rd plur	chant-ent	fin-issent	boi-vent

French verbs are traditionally divided into three groups: the first group includes verbs ending in -er in the infinitival form; verbs of the second group end in -ir and display the finite regular markers -issons, -issez and -issent in the plural; the third group comprises all the other verbs, including irregular verbs in -ir and -re. As can be seen from Table 4, the infinitival markers of the second and third groups are unambiguous, e.g.-ir such as in *finir* (*to finish*), or -re as in *boire* (*to drink*) and *prendre* (*to take*). In contrast, an ending in [e] in the first group could correspond to one of three types of markers: the infinitival marker itself, the past participle -é, or the second person plural suffix -ez of the imperative and present tense. Potential problems also arise with verbs of the second group and the ending [i]. This ending could either be the first person singular imperative marker, a singular present marker (for first, second and third person), or the past participle marker.

Table 4: German inflectional paradigm (present tense)

		lernen ('learn')
Infinitival form		lern-en
Past participle		ge-lern-t
Imperative	1st sing	lerne
	1st plur	lernen wir
	2nd plur	lern-t
	3rd plur (formal)	lernen Sie
Present tense	1st sing	lern-e
	2nd sing	lern-st
	3rd sing	lern-t
	1st plur	lern-en
	2nd plur	lern-t
	3rd plur	lern-en

The infinitival marker is -en in German. This form is also used in the imperative (as the first person plural marker and the third person plural (formal) marker), and in the indicative (as the first and third person plural marker).

One way around the problem involving inflectional markers is to consider an ambiguous ending such as [e] and [i] in French, and -en in German as being nonfinite unless there is evidence of the contrary. For example, an [e] ending in French should not be considered an infinitival marker if used along with a 2P pronoun; a similar remark applies to the German -en and 1P and 3P subjects. Another solution is to check every instance of nonfinite markers against the audio tapes of the interviews in order to distinguish between imperative and non-imperative readings.

4.8. Summary

By holding that functional categories are initially available and that truncated structures are projected in early acquisition, the Truncation Hypothesis makes a number of predictions pertaining to finiteness, word order, subject types, auxiliaries, modals, and negation. It appears that this model has the potential to account for a wide range of data. Central to all the predictions is Grimshaw's (1994) Extended Projection Principle. As mentioned in section 3.4, this principle holds that the projection of a node entails the projection of all the nodes below it. Thus, if CP is projected, AgrP and TP will also be, and the result is a finite declarative. If on the other hand only VP is the root, TP, AgrP and CP are not projected, and the result is a root infinitive. In other words, the distribution of finite and nonfinite forms is assumed to be strictly structurally determined. It is furthermore predicted that (1) VP roots should not include clitic and DP subjects, auxiliaries, and modals; (2) nonfinite verbs should not be used in CPs such as questions, embedded clauses and German cases of topicalisation; (3) null subjects should be found in finite and nonfinite root declaratives, but not in CPs (in the acquisition of non-pro-drop languages).

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5. Conclusion

In this chapter, I have suggested that Rizzi's (1994) Root Principle is an inherent part of the adult grammar. C being the formal anchor of sentences to time and discourse, it must be included in the representation of root declaratives. In other words, all declaratives are CPs. A corollary of the Root Principle is that matrix declarative sentences must be finite. The representation of Tense adopted here relies on the existence of a tense variable that must be identified by the tense morphology. When CP is projected, so is TP (Grimshaw, 1994), which means that the tense variable is posited. Infinitives are thus ruled out from matrix contexts (except in specific cases). In the early stages of L2 acquisition, I hypothesize that the Root Principle is underspecified, just as Rizzi proposes for L1 acquisition, which means that truncated structures are allowed. Verbal forms are assumed to be determined structurally: VP roots yield root infinitives, while CP or IP roots involve finite verbs. Crucially, the Truncation Hypothesis does not hold that root infinitives, or any error pertaining to functional categories, stem from a categorial deficit in initial grammars. Rather, all functional categories are assumed to be initially available. In the next chapters, I investigate the predictions based on the Truncation model against production data from L1 and L2 acquisition.

Chapter 2

Functional Categories and Early Grammars in First Language Acquisition

1. Introduction

In this chapter, I discuss the nature of initial grammars in L1 acquisition, with special focus on functional categories. I show that the Truncation Hypothesis best accounts for the characteristics of early child speech reported in the literature. In section 2, I show that most predictions discussed in the previous chapter are borne out in early spontaneous production data of several languages. In sections 3 and 4, I discuss two trends of hypotheses which have been traditionally opposed: the No/Weak Continuity Hypotheses which hold that children's and adults' systems are fundamentally different with respect to functional categories, and the Strong Continuity Hypothesis (or the Full Competence Hypothesis) according to which children possess an adult-like system of representation, including functional categories. I show that none of these hypotheses is able to fully account for early production data: by focusing on the status of functional categories, they make predictions that appear to be too strong when checked against early speech. In the last few years, new theories have emerged that precisely try to account for the variability of projections observed in early production. The two most prominent of these theories are discussed in section 5, i.e. the Underspecification of Tense Hypothesis (Wexler, 1994), and the Underspecification of Number Hypothesis (Sano & Hyams, 1994; Hoekstra &

Hyams, 1995a, 1995b; Hyams, 1996). I argue that neither provides an account of early child language as satisfactory as the Truncation Hypothesis.

2. Evidence for the Truncation Hypothesis

The Truncation Hypothesis holds that functional categories are present in early grammars and that the Root Principle (all declaratives are CPs) is initially underspecified. In consequence, children project root VPs and IPs, as well as CPs. The predictions based on this model were discussed in Chapter 1. In this section, I investigate them against the properties of early child speech (I must point out that some predictions could not be evaluated due to lack of evidence in the literature).

2.1. Finite declaratives and root infinitives

The Truncation Hypothesis predicts the projection of different types of roots, yielding the production of both finite (CP, IP) and nonfinite (VP) declaratives. Finite and nonfinite utterances have been reported in longitudinal studies of spontaneous production data from different languages, such as English, French, German, Dutch, Swedish, Hebrew, Russian, Greek, Danish and Faroese (Clark, 1985; Pierce, 1989; Weverink, 1989; Platzack, 1990; Platzack, 1992; Poeppel & Wexler, 1993; Wijnen & Bol, 1993; Wexler, 1994; Haegeman, 1995; Haegeman, 1996; Jonas, 1996; Rhee & Wexler, 1996). In French, the proportion of RIs in early speech of two children is 76% for Daniel (1;8.1-1;9.3) and 60% Nathalie (1;9.3-2;0) (Pierce, 1992).[1,2] In the acquisition of L1 Swedish, Platzack (1990) reports a proportion of RIs at around 60% for two children, Embla (1;8 - 1;10) and Tor (1;11 - 2;2). Investigating production data from a child learning L1 Dutch (Hein, 2;4-3;1), Haegeman (1995) found that between ages 2;4 and 2;11, RIs represent

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[1] The data come from Lightbown (1977) and are available on CHILDES (MacWhinney & Snow, 1985).
[2] The figures come from Haegeman (1995).

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between 12% and 33% of all root declaratives. Finally, Poeppel & Wexler (1993) report that out of 282 utterances produced by a 2;1 year old child learning German (Andreas), 51 are root infinitives (18.1%).[3]

At the same time, there appears to be no stage at which children produce only nonfinite declaratives. Both finite and nonfinite utterances are found to co-occur during the early stages of acquisition. In some cases, the same verb is produced in both forms at the same stage (compare (1b) to (1d) and (2a) to (2c)). This indicates that the distinction between finite and nonfinite verbal forms is in place quite early in L1 acquisition, as argued by Déprez & Pierce (1993). The following examples are from the acquisition of French (Pierce, 1992), in (1), German (Wexler, 1994), in (2), and Dutch (Weverink, 1989), in (3). In each case, sentences in (a) and (b) are finite and the ones in (c) and (d) are nonfinite.[4]

(1) a. pleure bébé   (Nathalie, 1;11;2)
     cry-3S baby
     '(the) baby is crying'
    b. elle la vois l' auto   (Nathalie, 2;2;2)
     she it see-3S the car
     'she see it the car'
    c. manger la poupée   (Nathalie, 1;9;3)
     eat-INF the doll
     'the doll is eating'
    d. voir   l' auto papa   (Nathalie, 2;2;2)
     see-INF the car daddy
     'to see daddy's car'

(2) a. Mein Hubsaube had Tiere din   (Andreas, 2;1)
     my helicopter have-3S animals in it
     'there are animals in my helicopter'

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[3] The data were collected by Wagner (1985) and are available on CHILDES (MacWhinney & Snow, 1985).
[4] The gloss for the French utterances is mine.

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b. Caesar tied (=kriegt) e nich

   C.   get-3S   he not

   'he is not getting Caesar"

c. ich der Fos hab'n

   I the frog have-INF

   'I have the frog'

d. Zahne pussen

    teeth brush-INF

    'to brush the teeth'

(3)   a. ik pak 't op   (Dutch children, about 2)[5]

        I pack it up

    b. baaby slaapt

       baby sleep-3S

       'the baby is sleeping'

    c. Pappa nieuwe scooter kopen

       daddy new   scooter buy-INF

       'Daddy bought/is buying a new scooter'

    d. pappa schoenen wassen

       daddy shoes   wash-INF

       'daddy is washing the shoes'

Another interesting finding is that the percentage of RIs is found to decrease with time. In Haegeman's (1995) study of early Dutch, her subject, Hein, produced 23% of RIs at age 2;4, down to 6% at age 3;1.[6] In a cross-sectional study of 26 children between ages 1;6 and 3;0 learning Dutch, 6 children aged 1;6 - 2;0 produced 55.9% of root infinitives; for the children aged 2;0 to 2;6, the percentage of RIs is 26.4%, for those older than 2;6 the rate drops to 6.4% (Bol & Kuiken, 1988). The decline of RIs suggests a restructuring in the children's internal grammar. In essence, the system switches from a grammar which allows RIs to one that disallows them.

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[5] Data from Weverink (1989).
[6] Data sets available on CHILDES (MacWhinney & Snow, 1985).

Despite the widely reported phenomenon of root infinitives in early acquisition, no root infinitives are produced by children learning *pro*-drop languages (Rizzi, 1993/1994; Wexler, 1994). Guasti (1993/1994) investigates the early speech of three children learning Italian as their L1, Martina (age 1;8 - 2;7), Diana (age 1;10 - 2;6) and Guglielmo (age 2;2 - 2;7).[7] She reports that the children almost never produced any RIs. The proportion of RIs is 5% for Martina, 2% for Diana, and 3% for Guglielmo. For Rizzi (1993/1994), the lack of RIs in early child Italian is attributed to the strength of agreement features of tenseless forms. It is well-known that infinitival verbs undergo long verb-movement to Agr in Italian (Belletti, 1990). In (4), the infinitival verb *parlare* ('to speak') has passed the negative *più* in specNegP. According to Rizzi, this movement is triggered by strong agreement features that need to be checked by Spell-Out. In contrast, tenseless verbs in French are assumed to have weak agreement features, which is why verb-movement to Agr is delayed until LF, as shown by the ungrammaticality of (5b).[8] Instead, infinitival verbs may only move as far as Inf, a position between T and V (Kayne, 1991). This is shown in (5a) where the infinitival verb follows the negator *pas* and precedes the VP-adverbial *souvent*.

(4)   [$_{AgrP}$ non parlare$_i$ [$_{NegP}$ più [$_{TP}$ [$_{VP}$ t$_i$]]]]]

(5)   a. [$_{AgrP}$ ... ne ... [$_{NegP}$ pas [$_{TP}$ [$_{InfP}$ parler$_i$ [$_{VP}$ souvent [$_{VP}$ t$_i$]]]]]] est frustrant
          NEG   not   speak-INF   often   is frustrating
          'not to speak often is frustrating'

       b. * [$_{AgrP}$ ne parler$_i$ [$_{NegP}$ pas [$_{TP}$ [$_{InfP}$ t'$_i$ [$_{VP}$ souvent [$_{VP}$ t$_i$]]]]]] est frustrant

In Italian, positive input is assumed to trigger the acquisition of the strong agreement feature of tenseless forms very early. As a result, nonfinite verbs cannot raise to Agr if VP

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[7] Data presented in Cipriani, Chilosi, Bottari & Pfanner (1993) and available on CHILDES (MacWhinney & Snow, 1985).

[8] Non-finite auxiliaries may undergo long-movement to Agr in French (Belletti, 1990).

is the root, which constitutes a violation of the checking theory. This makes the projection of VP-roots impossible in early child Italian and explains why so few RIs are observed.

2.2. Verb-placement

The position of the verb in root declaratives depends on the headedness characteristics of VP and IP. As far as root infinitives are concerned, the verb precedes all VP-material in French, whereas the reverse order is obtained in German and Dutch, as can be seen in the examples in (1) to (3) above. In finite declaratives, it is predicted that the verb should appear in final position if IP is a root in early child German. Such sentences are reported by Meisel & Müller (1992), Déprez & Pierce (1993), and Clahsen et al. (1996), although their frequency is relatively low. Investigating verb-placement with respect to finiteness in the production data of four children learning German, Clahsen et al. (1996) found that about 10% of finite verbs appears clause-finally, as in (6).

(6)   a. da   ni fährt   (Annelie, 2;4)
         there not drive-3S

        b. mäuschen   da reinklettert   (Hannah, 2;4)
         little-mouse there in-climb-3S

The projection of IP roots in early child German should also yield matrix sentences displaying verb clusters where the finite verb (in Infl) follows the nonfinite verb (in V). However, such sentences are not reported in the literature. Clahsen et al. (1996) found that all instances of verb clusters display the correct verb order, i.e. the finite auxiliary or modal preceding the tenseless verb. This suggests that auxiliaries and modals must systematically appear in C in early child German. One way to account for this fact is to say that auxiliaries and modals must be associated to the [+F] feature (see Clahsen et al., 1993/1994). If Poeppel & Wexler (1993) are right in assuming that children acquiring German correctly

locate [+F] in C in the earliest stages, then an IP root cannot accommodate auxiliaries and modals. Hence, these items do not appear in structures truncated right below CP.

2.3. Subjects of main declaratives

2.3.1. Null subjects

If VP or IP is the root, a null constant may appear in the specifier position and be licensed via discourse-identification (Rizzi, 1994). Therefore, subjectless root infinitives and subjectless finite declaratives should be produced in early acquisition, even in non-*pro*-drop languages. Both types of sentences are reported in early child Dutch (Krämer, 1993; Haegeman, 1995), Flemish (Krämer, 1993), French (Pierce, 1992), and German (Poeppel & Wexler, 1993). The examples below are from early child French (Pierce, 1992).

(7)   a. va   chercher   l'auto   (Nathalie, 2;2;2)
           go-3S look+for-INF the car
        b. boit   (Daniel, 1;9;3)
           drink-3S

(8)   a. lancer   la balle   (Philippe, 2;1;3)[9]
           throw-INF the ball
        b. dormir   tout nu   (Daniel, 1;9;3)
           sleep-INF all naked

It is generally observed that null subjects are proportionally more frequent in root infinitives than in finite declaratives (Krämer, 1993; Hyams, 1996; Phillips, 1996). In the studies mentioned above, at least 85% of the root infinitives produced by each child lack a subject. By contrast, the percentage of subjectless finite declaratives in early French is 35.2% for Philippe, 52.5% for Grégoire,[10] 35.7% for Nathalie, and 70.4% for Daniel

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[9] Data from Suppes et al (1973) and available on CHILDES.
[10] Data from Champaud (1988) and available on CHILDES.

(Pierce, 1992). In Dutch, Haegeman (1995) reports 32% of null subjects in Hein's finite declaratives. This discrepancy can be explained by the fact that more (overt) subject possibilities are available in finite contexts than in nonfinite ones, including clitics and DPs, because of the projection of functional categories and the possibility of nominative case assignment.

Importantly, Hamann & Plunkett (1997) show that the pattern of development of subjectless finite declaratives is very similar to that of root infinitives in early Dutch. In particular, root infinitives and null subjects in finite utterances were found to disappear at the same time. Hamann & Plunkett investigated spontaneous utterances from two children, Anne (1;01;1-5;10;22) and Jens (1;00;2-6;1;2).[11] Anne was found to produce root infinitives between months 18 and 30. During that period, 20% of her finite declaratives were subjectless. Crucially, null subjects dropped out at month 30 in both contexts. As for Jens, he started producing root infinitives at month 24, at which point null subjects started to appear in his finite declaratives. Both root infinitives and null subjects were found to decline sharply at month 34. These facts suggest that the same phenomenon is responsible for the drop of root infinitives and null subjects in finite roots, presumably the emergence of the Root Principle.

2.3.2. Overt subjects

2.3.2.1. Subject clitics

Subject clitics attach to the finite verb in Agr (Auger, 1994). Therefore, they should not appear in root infinitives, as there would be no position for them in a VP root. By contrast, subject clitics can be expected when (at least) AgrP is projected. The absence of subject clitics in root infinitives is confirmed in early Dutch (Haegeman, 1995) and French (Crisma, 1992; Pierce, 1992, 1994). Moreover, subject clitics with finite verbs occur early

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[11] The data were collected under the "Barnesprog" project, University of Aarhus (Plunkett, 1985) and are partly available on CHILDES.

in the data investigated.[12] Strong evidence that clitics are treated as such in early French is that they are never found in post-verbal positions, as in (9), contrary to other lexical subjects such as NPs and strong pronouns like *moi* (*me*), as in (10). Note that NPs and strong pronouns were also found as subjects of nonfinite declaratives, as in (11), which distinguishes them from clitics even further.

(9)   a. il est pas là   (Nathalie, 2;2;2)
         he is not there

         b. et je veux   (Nathalie, 2;2;2)
         and I want

(10)   a. pleure bébé   (Nathalie, 1;11;2)
         cry-3S baby

         b. tombe Victor   (Grégoire, 2;01;1)
         fall-3S Victor

         c. bois   peu moi   (Daniel, 1;8;1)
         drink-1S little me

         d. va   voir   papa moi   (Philippe, 2;2;0)
         go-3S see-INF daddy me

(11)   a. manger salade Adrien   (Nathalie, 1;9;3)
         eat-INF salad Adrien

         b. moi pousser   (Daniel, 1;9;3)
         me push-INF

         c. moi dessiner   la mer   (Daniel, 1;10;2)
         me draw-INF the see

2.3.2.2. Case

Subject nominals bearing nominative case are predicted to be absent from root infinitives. Instead, overt subjects should consist of bare NPs and nominals bearing default

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[12] The early emergence of subject clitics in French is also reported by Kaiser (1994) and Hamann, Rizzi & Frauenfelder (1996).

case. The early production of subject nominals bearing default case has been reported in various studies (Rizzi, 1993/1994; Wexler, 1994; Haegeman, 1995). French strong pronouns bear default objective case and are the only pronouns used as subjects of root infinitives, as illustrated in (10b-c) above. In early child English, utterances with an uninflected verb very often include an oblique or genitive pronoun instead of a nominative one (Radford, 1990a, 1990b, 1996; Vainikka, 1993/1994).

(12) a. me talk   (Stephen, 1;7)
      b. me do it   (Bethan, 1;8)
      c. my close it   (Nina, 1;11)
      d. Get it. My get my car (Nina, 2;0)

The prediction that bare NPs may appear as subjects of RIs is borne out in child English, German and French. Investigating Adam's early English (2;3-3;7), Hoekstra, Hyams & Becker (1997) found that out of 41 overt NP subjects of uninflected verbs 39 (95.1%) lacked a determiner. In contrast, 53 out of 57 (93%) subject nominals used with an inflected verb included a determiner. In early German, Hoekstra et al. (1997) report that the rate of determinerless NPs is 11/13 (84.6%) in root infinitives versus 1/10 (10%) in finite declaratives. Finally, a number of determinerless NPs are reported in early French (Pierce, 1992; Friedemann, 1993/1994), as in (13). Note that many of these subjects are proper names, which can be assimilated to the category N.

(13) a. voiture partir   (Grégoire, 1;11)
         car   leave-INF
      b. dormir   petit bébé   (Daniel, 1; 11;1)
         sleep-INF little baby
      c. fumer   Philippe   (Philippe, 2;2)
         smoke-INF Philippe

Another prediction concerning subject nominals has to do with their position in root infinitives. As the root is assumed to be VP, the placement of subjects vis à vis the nonfinite verb should depend on the branching direction of that phrase. This prediction is borne out in English (where VP is left- branching) and French (where VP is right-branching). Pierce (1992) found that in child English, 'there is no "true" postverbal subject' (Pierce, 1992: 29). This observation includes subjects of uninflected verbs. As for French, Friedemann (1993/1994) reports that in Philippe's root infinitives 81.8% of subjects are postverbal, the percentage being 85.8% for Grégoire.[13] Some examples from French are given in (14); see also (13c) above.

(14) a. monter   les volets Christian   (Grégoire, 2;0)
         raise-INF the shutters C.
      b. ranger   tout seul Grégoire   (Grégoire, 2;1)
         tidy-INF all   alone G.

2.4. Auxiliaries and modals

Since auxiliaries and modals are assumed to appear in the T position, it is predicted that they should not occur as root infinitives. Rizzi (1994) points out that it is generally reported in the acquisition literature that root infinitives only involve lexical verbs, i.e. infinitival auxiliaries are not found. Such findings are confirmed by Wexler (1994) and Haegeman (1995). Clahsen et al. (1993/1994) report that all the auxiliaries and modals produced by the children that they studied appeared in the finite form (see section 3.2.3.). All these studies also show that the absence of nonfinite auxiliaries and modals in nonfinite declaratives is not due to a lack of knowledge of these elements.

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[13] The remaining pre-verbal subjects are assumed to occupy a topic position (on topicalisation in child French, see Gruber, 1967). For Rizzi (1993/1994), preverbal subject NPs of root infinitives appear in an A-bar position and receive the case usually assigned to topicalised or dislocated elements, i.e. default case.

2.5. CPs

2.5.1. Finiteness

Under the Truncation Hypothesis, constructions clearly involving a CP, such as wh-questions and topicalisation (in V2 languages), should not include nonfinite main verbs in early child language. This is indeed borne out in the literature. No infinitival verb is reported in the wh-questions of early Dutch (Haegeman, 1995), French (Crisma, 1992), and German (Kursawe, 1994). Examples form early Dutch and French are given below.

(15)   a. en wat doen ze daar   (Hein, 2;06)
            and what do-3P they there
        b. wie staat daar?
            who stand-3S there

(16)   a. où il est le fil?   (Philippe, 01)
            where it is the thread
        a. où elle va maman?   (Philippe, 13)
            where she go-3S mummy

As for topicalisation in V2 languages, Poeppel & Wexler (1993) found 204 verb-second utterances involving at least three constituents in Andreas' early German corpus (age 2;1). The vast majority of these sentences are finite (197/203= 97.1%). The element in first position is primarily the subject, as in (17a). Crucially, none of the 50 sentences involving a topicalised non-subject XP (an object or an adverb) display a nonfinite main verb in second position, as in (17b-c).

(17)   a. ich hab tein Bürse
          I have-1S (a) small brush
        b. eine Fase hab ich
          a vase have-1S I
        c. Da bin ich
          there am I

Problematic for the Truncation Hypothesis, however, is that nonfinite questions are found in early child English (Guasti & Rizzi, 1996), as shown in (18).[14]

(18) a. hey what you doing?   (Sarah, 2;10;20)
      b. what that train doing?   (Adam 2;4;30)

In order to account for these data, Guasti & Rizzi (1996) propose that there is a null (finite) auxiliary in C° which is discourse-identified. They assume that CP is multi-layered, whereby a Force P(rojection), which specifies the clausal type, dominates a Focus P which accommodates wh-movement. When children truncate the structure below ForceP, the root category is FocusP, which then allows a null auxiliary in Foc° to be identified by discourse. This proposal is akin to the idea of null constants in subjectless declaratives. In the adult language wh-questions involving a null auxiliary are not found. This is because the full-fledged tree is assumed to be systematically projected, which prevents a null auxiliary from being discourse-identified.[15] Guasti & Rizzi's analysis receives support from subject questions in early production. Subject questions involve the projection of CP but do not involve I-to-C movement. Therefore, an auxiliary cannot occupy the C position (*who did come?). This in turn means that in child English no null auxiliary should be posited in subject wh-questions. In other words, no question such as who singing? should be observed in early production, which is indeed what Guasti & Rizzi found.

2.5.2. Null subjects

Null constants were predicted not to appear in CPs in the acquisition of non pro-drop languages. Such a prediction is borne out in early child French by Crisma (1992). She

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[14] Data available in CHILDES (MacWhinney & Snow, 1985).

[15] This proposal differs from Boser, Lust, Santelmann, & Whitman's (1992) Null Auxiliary Hypothesis since for Guasti and Rizzi a null auxiliary can occur only if it is discourse-identified. For Boser et al., a null auxiliary is licensed under spec/head agreement with the subject.

found that out of a total of 313 wh-questions produced by Philippe between ages 2;1.19 and 2;17.18, only 2 involved a null subject. Weissenborn (1991) and Penner (1991) also found no null subjects in early child German wh-questions.

However, different findings are reported on early child English by Bromberg & Wexler (1996). Investigating utterances from four children, they found a number of subjectless questions such as *where go?*. It is worth pointing out, however, that the vast majority of wh-questions reported by Bromberg and Wexler involve uninflected verbs. What I would like to suggest is that in these sentences, PRO is the subject (see also Guasti & Rizzi, 1996). PRO is [+anaphoric] and [+pronominal] and can only appear in ungoverned positions. As such, it can only appear as subject of nonfinite verbs. I assume that the representation of *where go?* is as in (22), where PRO is ungoverned by the wh-word in specCP.

(19)   [CP where ø [IP PRO [VP go]]

Finally, Hamann (1992) argues for the use of postverbal null subjects in early child German, i.e. X-V-null subject orders. These orders are unexpected on a null constant approach since the null subject does not occupy the specifier of the root category. Hamann (1992) examined spontaneous production from two children over three years old, Elena (3;1;5-3;4;13) and Christian (3;3;28-3;7;6). However, if we compare the frequency of null subjects in pre and postverbal position, the difference is highly significant: 73 of the 620 SVX declaratives are subjectless (11.8%) compared to 10 of 220 XVS declaratives (4.5%) ($X^2=9.529$, p=.002). Such a discrepancy is perfectly compatible with the null constant analysis. The other child, Elena, was exposed to Freiburg German where the second person singular pronoun may be null. It is therefore possible that she overgeneralised such a possibility to other persons, especially in the first recordings. Under this account, then, postverbal null subjects are pro and not null constants.

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2.6. Negation

The predictions concerning negation depends on the exact location of NegP. Rizzi (1993/1994) assumes that NegP is in between AgrP and TP in French. The prediction is thus that no negative root infinitives should be found in early child French. Early production data involving negative RIs, however, do not consistently confirm this prediction. Pierce (1992) found that two children (Philippe and Grégoire) produced almost no negative RIs, while two others (Nathalie and Daniel) did produce such sentences. Nathalie actually produced more negative RIs than negative finite declaratives. Rizzi (1993/1994) fails to give a convincing explanation for these facts. Rather, he points out the difficulty of dealing with negation data.

If we assume instead that NegP is lower than TP in French (Zanuttini, 1991), the occurrence of negative RIs in Nathalie's and Daniel's corpus is explained. The fact that Philippe and Grégoire did not produce many negative RIs may just be an accident due to individual variation. Besides, we do not know the rate of finite negatives in Philippe's speech. So, we cannot tell whether his reluctance in using negative RIs is structurally related or whether it is due to a low usage of negation in general. Dutch is another language where NegP is below TP, according to Haegeman (1995). She reports an important discrepancy between the usage of negation in finite declaratives and root infinitives in Hein's early Dutch (age 2;4 - 3;1): 16% of finite declaratives are negative, versus 5% of RIs. It would be useful to obtain statistics on the distribution of negation from other children learning Dutch. It might turn out that the lack of negative markers in Hein's RIs is not related to any syntactical phenomenon, on a par with what is proposed for Philippe and Grégoire.

Despite variations in the production of negative sentences, it is important to point out that the position of the verb is highly consistent with the predictions. In finite negatives, the verb is systematically reported to precede the negative in the Dutch and French data. In

nonfinite negatives, the reverse order is obtained. Some examples from early child French are given in (20) and (21)

(20) a. ça tourne pas   (Philippe, 2;1.3)
        this turn-3S not
      b. elle roule pas   (Grégoire, 1;11.3)
        she roll-3S not

(21) a. pas rouler en vélo   (Philippe (2;2.1)
        not roll-INF in bicycle
      b. pas manger la poupée   (Nathalie, 1;9.3)
        not eat-INF the doll

Finally, a few words are in order concerning the scope of the negative marker. According to Zanuttini (1991, 1996) and Laka (1994), Neg can only be interpreted sententially if T is present in the derivation. It fo! >ws that in negative root infinitives, from which T is absent, the negative marker should not have sentential scope; rather, it should only have scope over the constituent it dominates. It is unknown whether this is indeed what is found in the negative root infinitives reported in Nathalie's and Daniel's data.[16]

2.7. Evaluation of the Truncation Hypothesis

In the sections above, I have discussed a series of specific predictions drawn from the Truncation Hypothesis and established that most of them are confirmed in the early production data of a variety of languages. In addition, one of the few studies directly investigating the Truncation Hypothesis shows that the predictions are borne out in the early acquisition of Dutch (Haegeman, 1995). In particular, both root infinitives and finite declaratives co-occur in the data; there are almost no wh-questions produced with the main

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[16] In Hein's case, it is not certain what kind of scope is involved in the few negative RIs that he produced (Haegeman does not discuss this).

verb in the infinitival form; clitics do not appear as subjects of infinitival verbs, and auxiliaries are not found in root infinitives. Instead, all instances of wh-questions, subjects clitics, and auxiliaries involved finite verbal forms. Therefore, at the empirical level, the Truncation Hypothesis is strongly supported.

Some problems still remain with negation, especially concerning the issue of scope. As will become apparent in subsequent sections, this is not a problem for the Truncation Hypothesis alone. We might speculate at this point that what regulates the production of negative RIs is the location of NegP in the structure. This seems to be confirmed by the production of nonfinite negatives in early child French, assuming that NegP is below TP. We also saw that regardless of the scope issue, the placement of the verb in negative utterances is highly systematic. In particular, negative adverbials systematically precede nonfinite matrix verbs, thus suggesting that NegP may indeed be a root in early acquisition.

The occurrence of null subjects and nonfinite matrix verbs in wh-questions of early child English is also problematic for the Truncation Hypothesis. Note, however, that these findings are confined to English. Wh-questions have been reported to systematically display finite verbs and overt subjects in the early stages of acquisition of other (non-*pro*-drop) languages. It is therefore very likely that the possibility of null subjects and that of nonfinite verbs are connected in early child English wh-questions. Guasti & Rizzi (1996) posit the existence of a null auxiliary to account for the lack of finiteness, as seen in section 2.5.1. Guasti (1996) further argues that the null auxiliary is able to assign null case to PRO (see Chomsky, 1995: chapter 1). At this point, more research is needed to settle this issue.

The one aspect of the Truncation Hypothesis that I have not addressed yet is how the Root Principle emerges. According to Rizzi (1993/1994) and Haegeman (1995), it is subject to maturation.[17] Truncated structures can take a variety of forms (VP, IP, etc...)

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[17] The decline of RIs might also be explained in terms of pragmatics. As pointed out by Rizzi (1994), the Root Principle fails to apply in very specific registers in adult speech, i.e. diary and colloquial registers (see Chapter 1, section 3.1.). Rizzi (1993/1994) suggests that children possess the Root Principle right at the beginning of acquisition but do not know the pragmatic contexts in which it can be turned off. In other

before the Root Principle matures, although other properties may dictate that certain roots do not occur (e.g. VP roots in early Italian). Assuming maturation, a child language with no root infinitives and no independent reason to rule out VP roots would constitute evidence against the Truncation Hypothesis. Such a language, however, is yet to be found.

2.8. Summary

Most of the predictions for the Truncation Hypothesis are confirmed by early acquisition data from a number of languages. Both finite and nonfinite declaratives are found in early child language, null subjects are confined to root contexts (in the acquisition of non-pro-drop languages), auxiliaries and modals are always finite, clitics and subject DPs only appear with finite forms, and CP constructions are systematically finite. The findings strongly suggest that the distribution of verbal forms is structurally determined: nonfinite verbs appear in NegP and VP roots, whereas finite verbs occur when at least TP is projected. Some problems remain with negation and the question of scope, and with the production of subjectless nonfinite wh-questions in child English. Further research is needed to clarify these issues. In the subsequent sections, I discuss other approaches concerning early grammars and the status of functional categories.

3. No/Weak Continuity Hypotheses

In contrast to the Truncation Hypothesis, it has been proposed that early child grammars include principles of X' theory but do not contain all the syntactic categories present in adult systems. In other words, adult and early child grammars are considered fundamentally different. With respect to functional categories, the initial deficit is

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words, they overgeneralise those contexts. Only when they realize that there are contextual restrictions as to where the Root Principle may be turned off will they stop truncating structures. Here, though, we are facing the problem of triggering data: it is not exactly clear what kind of pragmatic trigger should force children to respect the Root Principle. Negative evidence would seem necessary for the pragmatically-driven emergence of the Root Principle.

considered either total or partial.[18] I examine each of these two positions in section 3.1. and 3.2. In section 3.3. I discuss how the missing functional categories may develop in the grammar. Finally, I evaluate the idea of categorial deficit in section 3.4.

3.1. Absence of functional categories

3.1.1. Main claims

According to some researchers, early child structures are lexical and thematic (Felix, 1987; Lebeaux, 1988; Platzack, 1990; Radford, 1990a, 1990b, 1996; Ouhalla, 1991; Guilfoyle & Noonan, 1992; Vainikka, 1993/1994; Wijnen, 1995). Functional categories are assumed to be absent from initial grammars, i.e. only lexical categories are projected (e.g. NP, VP, AP, PP). An utterance such as *Mommy read book* is a VP with its specifier and object positions corresponding to the agent *mommy* and the patient *book* respectively.

3.1.2. Evidence

Children learning English are reported to initially fail to produce D-related elements such as determiners and genitive case marker *'s*, as in (22a-b). In addition, they tend to avoid personal pronouns and use nominals instead, as in (22), (23a) and (24a). Assuming that personal pronouns fall under the category D, their rarity in early child production is explained if D is absent from initial grammars.[19] The examples in (22) through (26) are taken from Radford (1990a) unless otherwise specified.

(22) a. turn page; want duck; Hayley draw boat   (Hayley 1;8)
      b. Mommy milk; Kathryn shoe; tiger tail   (Kathryn, 1;9)

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[18] The difference between the No and Weak Continuity Hypothesis has do to with the way functional categories are assumed to emerge: while the former relies on emergence via maturation, the latter emphasises the role input in the development of these categories (see section 3.4). I will not make a systematic difference between the two models since they both assume a difference between child and adults grammar in terms of functional categories.
[19] On how the Truncation Hypothesis may account for the apparent absence of D, see section 5.2.3.

Children also fail to produce items that are related to the functional category Infl, such as agreement and tense inflection (26), auxiliaries and modals (27), and the infinitival marker *to* (28).

(23) a. Haylet draw boat   (past context; Hayley 20)
         b. Ashley do pee...Ashley do poo   (present context; Jem 23)

(24) a. Kathryn no like celery   (Kathryn 22; Bloom, 1970)
         b. Wayne taken bubble   (Daniel 21)

(25) a. want teddy drink   (Daniel 19)
         b. want mummy come   (Jem 21)

Finally, there are few complementisers and preposed wh-words or inversion in questions in the early stages, which suggests the unavailability of CP, as in (26). Furthermore, Radford notes that children initially have problems understanding wh-questions, suggesting that they lack the appropriate layer of structural representation, i.e. CP.

(26) a. see hole? sit chair?   (Klima & Bellugi, 1966)
         b. Bow-wow go? (='where did the bow-wow go?') (Louise 15)

According to Wijnen (1995), additional evidence for the initial unavailability of functional categories comes from the lack of verb-movement in early Dutch. Analysing early production data from two boys learning Dutch (Peter, age 1;9-2;4 and Niek, age 2;7-3;6), Wijnen found a predominance of nonfinite utterances with the verb in final position during the first three to four months of investigation, as in (27). The subset of verbs appearing in the finite form was so small that finiteness could not be related to any productive syntactic phenomenon, suggesting the lack or IP and CP. In addition, the set of

finite verbs differed from the verbs that appeared in the nonfinite form, suggesting that the distinction between finiteness and nonfiniteness was a lexical distinction and not a syntactical one (see also de Haan, 1987)).

(27)　a. Peter emmer daan　　　　　　　(Peter, 1;10.3)
　　　　　Peter bucket done
　　　　　'Peter put (in) bucket'
　　　　b. mam　　radio aan doen　　　　　(Peter, 2;0.7)
　　　　　mommy radio on　do-INF
　　　　　'mommy put on radio'

Finally, the rare occurrence of nominative pronouns in early English is argued to show that Agr is not present in early grammars (Vainikka, 1993/1994; Radford, 1996). As seen in (15), many pronouns bear accusative or genitive case in child English. Assuming that Agr is involved in the assignment of nominative case (Pollock, 1989; Chomsky, 1991), the argument is that if Agr was initially available, more nominative pronouns should occur and genitive pronouns should not be found in subject position (genitive case cannot be assigned by Agr). Instead, only VP is assumed to be projected at first and the subject in specVP may be assigned default accusative case or genitive case by the verb. For Vainikka, genitive case assignment, which is usually accomplished by N, is extended to V in child grammar.

3.2. Partial presence of functional categories

3.2.1. Main claims

According to some researchers, there is no pure lexical stage in L1 acquisition (Meisel, 1992; Meisel & Müller, 1992; Clahsen et al., 1993/1994; Penner, 1994). Based on the fact that children make early distinctions between finite and nonfinite forms, it is argued that child grammars have at least one functional category above VP to which the

verb moves in finite contexts. However, there is disagreement as to the nature of that category. Some researchers argue that the functional category above VP is a F(unctional)P hosting the [+F(initeness)] feature (Clahsen, 1990; Clahsen & Penke, 1992; Platzack, 1992; Clahsen et al., 1993/1994). The syntactic category of F is underspecified: it is neither C for reasons explained below, nor Infl (or Agr) because subject/verb agreement has not been acquired yet.[20] Other researchers argue that VP is dominated by a left-headed TP (Meisel & Müller 1992). The head of TP is associated with the feature [+F], which triggers verb-movement. T is also assumed to subcategorise AgrP in early grammars.[21] In spite of this disagreement, all proponents of the weak version of the WCH consider that CP is initially unavailable.

3.2.2. Evidence

Evidence for early knowledge of finiteness comes from verb-placement with respect to negation. In section 2.6, we saw that there was a correlation between the finiteness of the verb and its placement vis a vis negative markers. In early French and German, the order Verb-Negation is observed when the verb is finite, while Negation-Verb is obtained when the verb is not finite (Pierce, 1992; Clahsen et al., 1993/1994).

In addition, verb-subject word orders have been reported in the early acquisitional stages of V2 languages (Meisel, 1990; Müller, 1990; Meisel & Müller, 1992; Clahsen, et al., 1993/1994). Assuming that the subject is base-generated within VP, the fact that the verb may precede it is evidence for verb-movement out of VP. In their investigation of the early speech of seven children learning German (age 1;8 10 2;9), Clahsen et al. (1993/1994) observed a high correlation between finiteness and verb-placement before the

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[20] Clahsen (1990), for instance, observes that the 3rd person singular marker -t is correctly used only in 32% of obligatory contexts. The elements that may appear in F are the ones associated with [+F], e.g. auxiliaries, modals, and -t which is considered an aspect or transitivity marker in the early stages.

[21] Contrary to Clahsen (1990), Meisel & Müller argue that subject/verb agreement is acquired very early in L1 German, relying on findings by Meisel (1990) and Koehn (1989) who show that bilingual children use verb inflection to mark person and number very early on.

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subject, thus calling for the projection of a functional category above VP associated with finiteness. Some examples are given in (28).[22]

(28) a. fehlt   was   (Mathias I; see Clahsen et al. (1993/1994))
         miss-3S something
         'something is missing'
      b. macht das Baby?   (Simone I; Clahsen et al. (1993/1994))
         do-3S the baby
         '(what) does the baby do?'
      c. kaputt is der   (Ivar, 2;4.9; Meisel & Müller (1992))
         broken is it
         'it is broken'

Clahsen et al. (1993/1994) also found that all instances of modals, copulas, and auxiliaries were finite in terms of their morphological form. Moreover, these elements appeared mostly in V1/V2 positions, as in (29).

(29) a. will   Lala   habe   (Simone I)
         want-1/3S dummy have
         'I want to have (my) dummy'
      b. Blöde mag   nich   (Simone I)
         stupid want-1/3S not
         '(the) stupid one does not want (it)'
      c. müssen alle rein   (Sabrina II)
         must-3P all into
         '(they) all must (go) in'

In addition to these findings, Clahsen et al. (1993/1994) observed that some auxiliaries and modals were used along with nonfinite verbs, as in (30), indicating even further that the

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[22] Clahsen et al. (1993/1994)) distinguish between two different stages, Stage I (MLU≤1.75) and Stage II (1.75≤MLU≤2.75).

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children had two positions for verbal elements, one for finite verbs and one for nonfinite verbs.

(30) a. mag   nich Kuche backe   (Simone I)
         want-1/3S not cake   bake
         '(I) do not want to bake a cake'
       b. darf   nich esse   (Inga I)
         may 1/3S not eat
         '(the cat) is not allowed to eat'

Finally, the lack of CP is evidenced by the initial lack of wh-pronouns and lexical complementisers for a period of time during which finiteness effects are observed. Clahsen et al. (1993/1994) report no production of argument wh-questions (such as *was essen wir?* 'what do we eat?') in their stage I of early German. No lexical complementiser is reported at that stage either. Meisel & Müller (1992) report the productive use of complementisers such as *daß* (*that*) at around age 3 in German. Crucially, the lack of lexical complementisers in early production is not assumed to be due to performance limitations. Children are not restricted to simple sentences as they are able to use coordinating conjunction and thus form conjoined sentences. They also use adverbs and prepositions which express semantic relations similar to those expressed by complementisers, e.g. *après/später, dann* ('later', 'then') or *pour/damit* ('with', 'in order to'). Therefore, Meisel & Müller argue, the late emergence of complementisers is not due to an incapacity of building complex sentences or to semantic gaps, but to the absence of CP in initial grammars.

3.3. The emergence of functional categories

If functional categories (some or all) are not available in initial grammars, the question arises as to how they emerge during the acquisition process. One proposal is that

the emergence is triggered by positive evidence from the input, as expressed by the Lexical Learning Hypothesis (Borer, 1984; Clahsen, 1990; Clahsen, 1992; Clahsen, Eisenbeiss & Vainikka, 1994). The Lexical Learning Hypothesis holds that UG principles and the acquisition of particular lexical or morphological items determine the gradual extension of the structure posited by children. For example, learning complementisers may trigger the acquisition of C. In V2 languages, the observation of the V2 phenomenon in the input might also act as a trigger for CP. By the same token, the acquisition of agreement marking on verbs may trigger the emergence of AgrP and CP. According to Clahsen & Penke (1992), the appearance of AgrP and CP in German stems from the acquisition of the second person singular inflection -st, roughly at age 2;04. Until then, subject/verb agreement is considered not to have been acquired. With the -st marker, which is claimed to be the first unambiguous agreement marker, the acquisition of the agreement paradigm is complete. In particular, person agreement is acquired, which, according to Platzack & Holmberg (1989), is crucial for the emergence of AgrP.

Another account for the emergence of functional categories in child language is maturation (Radford, 1990a, 1990b; Ouhalla, 1991; Guilfoyle & Noonan, 1992). The Maturation Hypothesis, originally proposed by Borer & Wexler (1987), holds that specific linguistic principles or constraints emerge according to an internal biological clock or program, regardless of positive evidence from the input. Applying the idea of maturation to functional categories, these categories are considered unavailable initially until a given biologically timed moment. Crucially, functional categories do not mature at the same time; rather, IP is assumed to mature before CP. This would explain why IP-related elements such as verbal inflections, auxiliaries and modals, appear in children's production earlier than utterances related to CP (e.g. questions and embedded clauses).[23]

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[23] However, Guilfoyle & Noonan (1992) do not deny the role played by input in language acquisition, which distinguishes their proposal from Borer and Wexler's original model. For Guilfoyle & Noonan, the maturation process renders children sensitive to lexical elements associated to functional categories. Positive evidence from the input will then help children establish the properties of these categories in their grammars, such as the setting of parameters.

3.4. Evaluation of the No/Weak Continuity Hypotheses

The No/Weak Continuity approaches suffer four main problems. First, they are based on the assumption that a lack of overt evidence for certain lexical items or syntactic phenomena corresponds to a lack of corresponding syntactic structure. Categorial deficits are often based on a 90% acquisition criterion, whereby elements (and their corresponding categories) are supposed to be acquired if they occur in 90% of obligatory context (see Brown, 1973). However, this criterion has been criticized by many as being much too high. Consider for example the assumption that Infl is unavailable initially. This may account for the numerous cases of root infinitives observed in production. Yet, no stage is reported at which only tenseless forms are produced; the occurrence of finite forms cannot be ignored and must be accounted for. In addition, there might be reasons other than categorial unavailability behind the non-occurrence of certain elements in early production. These might have to do with performance constraints such as memory capacity or a mere lack of lexical knowledge. Demuth (1994) appeals to phonological constraints to explain why lexical items corresponding to functional categories are often omitted in child English. Children have been observed to have a tendency to leave out certain unstressed syllables in production. Since lexical items corresponding to functional categories are usually unstressed, they are subject to deletion. In short, lack of production should not readily be associated with grammatical deficiency, as pointed out by Hyams (1992).

Another issue concerning the availability of functional categories is the question of accuracy. A low accuracy rate in the usage of certain lexical items in obligatory contexts is often taken as evidence against the projection of the corresponding categories. For Clahsen (1990), 68% of inaccurate usage of the 3rd person singular-*t* indicates that the acquisition of the German agreement paradigm is incomplete and that AgrP is not present in initial grammars. Still, this leaves 32% of correct usage, which on an alternative view might be enough to indicate the availability of AgrP. As for nominal agreement, Clahsen, Eisenbeiss & Vainikka (1994) argue that 80% of inaccurate agreement is evidence against DP.

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However, there is some sort of agreement on the adjective, albeit incorrect, as shown in (31).

(31) a. kleines   balla   (Simone 1;10)
         small-NEUT ball (MASC)
      b. kleine   balla   (Simone 1;10)
         small-FEM ball (MASC)
      c. großes   balla   (Simone 1;10)
         big-NEUT ball (MASC)

The mere presence of these markers, and the fact that the remaining 20% of nominal agreement is correct, calls for an explanation and does in fact suggest the presence of a functional category.

The third problem concerns the transition from initial systems to adult grammars. If we follow a lexical trigger account, it is very difficult to isolate actual triggers and be sure that they are indeed responsible for the emergence of corresponding functional categories. A mere correlation between the emergence of a would-be triggering item and particular lexical elements or syntactic phenomena is not enough in itself to conclude that that item is a trigger. After all, the real trigger might be any of the co-emerging elements. For example, Clahsen et al. (1994) propose that the acquisition of the genitive -s triggers the emergence of DP in German. This is based on the observed correlation between the appearance of that suffix along with determiners, nominal agreement, and Determiner-Adjective-Noun sequences. In theory, however, Clahsen et al.'s analysis does not rule out alternative accounts identifying, say, determiners as the trigger.[24] In addition to this problem, the capacity for an element to act as a lexical trigger is often subject to debate. While Clahsen &

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[24] In principle, it seems difficult to explain why a particular lexical item all of a sudden should act as a trigger for the emergence of a particular category despite its frequency in the input prior to that moment. This touches on the issue of the 'amount' of positive evidence necessary to qualify a lexical item as a trigger. If indeed the genitive -s is at the origin of the emergence of DP in German, how many times did -s need to appear in the input (and be noticed) before it could be a trigger? The answer to this question is unknown.

Penke (1992) argue that the second person singular marker -st triggers the emergence of AgrP and CP in child German, Verrips & Weissenborn (1992) found that this correlation was not confirmed by the reported data, e.g. Simone's data.

3.5. Summary

By assuming a deficit in functional categories in early child grammars, the No/Weak Continuity Hypotheses posit a fundamental difference between those grammars and adult systems. Evidence for the unavailability of functional categories consists of the lack of lexical items related to those categories in production as well as the inaccuracy in their usage. These shortcomings are in turn assumed to reflect syntactic deficiencies. However, the criteria used in deciding whether a functional category is present in the grammar are too high. As a result, the No/Weak Hypotheses fail to account for a large part of early production data. Moreover, these models have not been convincing in explaining the transition from the initial grammar to the adult one.

4. The Strong Continuity Hypothesis

According to the Strong Continuity Hypothesis (SCH), the child's grammar contains the same categories as the adult grammar, including functional categories (Boser, Lust, Santelmann & Whitman, 1992; Hyams, 1992; Verrips & Weissenborn, 1992; Déprez & Pierce, 1993; Poeppel & Wexler, 1993; Guasti, 1993/1994; Déprez & Pierce, 1994; Lust, 1994; Whitman, 1994; Borer & Rohrbacher, 1997). This means that children are assumed to have the capacity to project phrase and sentence structures similar to adults. Below, I review evidence in favour of the initial availability of DP, IP and CP, and then present on evaluation of the SHC.

4.1. Evidence for DP

Bohnacker (1997) investigates the production of DP-related elements in spontaneous data from a girl learning L1 Swedish, Embla (1;8-2;1) (Lange & Larsson, 1973a, 1973b). She found that half of the nominals exhibit overt determiners, pronouns or the possessive marker 's. In addition, overt target determiners are provided 73.8% of the time in obligatory contexts. Of significance is the fact that D-elements occurred in the earliest recordings. This is the case of overt determiners, as in (32).

(32)   a. bil -en   bada   (Embla, 1;8;2)
            car-the: COMM bathe
           b. Mamma laga   säte-t   (Embla, 1;9;2)
            mummy mend seat-the:NEU

Bohnacker argues against the possibility that early bound determiners such as the ones in (32) are in fact considered part of the noun and not real determiners. She shows that nouns may appear either with a bound or a free determiner, sometimes in the course of the same recording. Compare the occurrence of *bil* (*car*) with a free indefinite morpheme in (32a) to its appearance with a bound definite determiner in (33).

(33)   en   bil   (Embla, 1;8;2)
            a:COMM car:COMM

The possessive marker 's was also found early in the data, as in (34).

(34)   a. katt-en-s hand   (Embla, 1;9;2)
            cat-the-POSS hand
            'the cat's paw'
           b. Embla-s mamma X   (Embla, 1;10;2)
            Embla-POSS mummy [name of the mother]
            'Embla's mummy is called X'

In all, the percentage of overt D-elements in obligatory contexts is 87.5% (14 of 16) and 71.8% (28 of 39) in the first two recordings.

4.2. Evidence for IP

Early productive usage of subject/verb agreement has been reported in a variety of languages with rich inflectional paradigms, such as Polish, Turkish, Hungarian, Tamil, and Italian (see Hyams, 1992). The examples in (35) are from Italian-speaking children aged 1;10-2;0.[25]

(35) a. tu   legg-i   il   libro
          you (NOM) read-2S the book
      b. io   mang-io la pera
          I (NOM) eat-1S the pear
      c. chelo micino no eé   piccino
          that kitty not is:3S little

In her study of early Italian, Guasti (1993/1994) shows that the three children under investigation knew the agreement system of their language very early. In particular, they used person agreement in the earliest files, as early as age 1;8 in the case of Martina. Since subject/verb agreement requires the projection of a functional category specified as AgrP (see Pollock, 1989), it follows that AgrP must be available in early grammars.

In addition to the early usage of agreement, it is reported that inflectional markers are correctly used whenever they occur. In the study mentioned above, Guasti found very few errors with Italian agreement morphemes. The percentage of errors was around 1% for Martina and Diana, and 3% for Guglielmo. Besides, the errors were spread over all the files under examination. In other words, it was not the case that most errors were only observed in the earliest production data. In the acquisition of German by Andreas (aged

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[25] Data collected by M. Monegla and E. Cresti and the Collectivo di Educatori dell'Asilo Nido Rampari di San Paolo in Ferrara, Italy (1981-1982).

2;1), Poeppel & Wexler (1993) found only 7 agreement mistakes out of 231 finite verbs. In particular, there was no mistake in the agreement with first and third person subjects. These findings suggest the projection of AgrP at an age when, according to Clahsen et al. (1993/1994), children learning German only project FP. In fact, the data analysed by Clahsen (1986), on which the proposal of an FP layer is based (Clahsen, 1990), indirectly support the projection of AgrP. Instead of focusing on the low percentage of production of the third person singular marker -*t* in obligatory contexts (25% for Matthias II, see Clahsen (1986)), Poeppel and Wexler show that this marker is almost never used in inappropriate contexts, e.g. with first or second person singular subjects. For instance, Matthias is reported to use -*t* with first person singular subjects only 2% of the time. In other words, when the marker -*t* appears it is systematically used with an appropriate third person singular subject. This suggests that children have the concept of agreement.

Another argument against the FP analysis has to do with the types of verbal elements that are found under F. Until age 2;01, Clahsen et al. (1993/1994) argue that the F position is restricted to auxiliaries, modals, copulas, and intransitive verbs ending in -*t*. However, in a reanalysis of the data from Simone, one of the children investigated by Clahsen et al. (1993/1994), Verrips & Weissenborn (1992) found a large number of transitive verbs as well as verbs ending in other markers than -*t* in the so-called F position during the same period. Some examples are given in (36).[26]

(36) a. mone such mal   (1;10,20)
         Simone look-for ADV
      b. male eier   (1;10,20)
         paint eggs
      c. feuer mache mal   (2;00,01)
         fire make ADV

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[26] Note that in the examples in (36), some verbs end in -*e*, which Clahsen et al. (1993/1994) excluded from their analysis on the ground that this ending was ambiguous in Simone's Southern dialect. Verrips and Weissenborn argue in return that all German agreement markers are ambiguous and thus that none should be excluded from analyses.

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d. brauche nicht lala   (2;00,23)
   need not pacifier

The conclusion is that the functional category above VP is not semantically or syntactically restricted to any particular types of verbs. Thus, it cannot be FP.

The final piece of evidence in favour of the projection of IP comes from the early usage of nominative case. As can be seen in (35), subject pronouns bearing nominative case are correctly used in early Italian. In a study of 12 children learning English, Rispoli (1994) found that nominative pronouns were used twice as much as non-nominative ones. In addition, the early acquisition of case markers, including nominative case, has been reported in languages with a complex case system, such as Polish (Weist & Witkowska-Stadnik, 1985) and Turkish (Slobin, 1982).[27]

4.3. Evidence for CP

The first body of evidence for the early availability of CP comes from topicalisation in L1 German acquisition. In section 3.2.2., we saw that there is a correlation between finiteness and verb-placement in early child German, in that finite verbs correctly appear in the second position of the clause. Verrips & Weissenborn (1992) and Poeppel & Wexler (1993) show that finite verbs might be preceded by a non-subject XP, thus yielding XP-V_{+fin}-Subject word orders (see examples in (21b-d). Analysing the Simone corpus, Verrips and Weissenborn found that out of 472 instances of V2 utterances by age 2;02,21, 130 (28%) involved a preverbal non-subject XP. Importantly, the topicalised elements were different in nature, e.g. locatives and objects (in (37)), which rules out the possibility of movement to specIP only.[28]

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[27] This is reported in Hyams (1992).
[28] According to Hoekstra & Mulder (1990) and Bresnan & Kanerva (1989), a locative may occupy specIP.

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(37) a. da   mach mal   (1;10,20)
         there make ADV

      b. drin ist nich   (2;01,12)
         in-it is not

      c. brauch creme brauch nich   (2;01,19)
         need creme need not

      d. bisschen hat der teddy auch   (2;01,19)
         little bit has the teddy too

Poeppel & Wexler (1993) report the production of XP-V$_{+fin}$-Subject-Adverb/Negation word orders in Adam's data, as in (38). There, the object *den* (*that*) presumably occupies the specifier of CP, the verb *tiegt* (*gets*) is in C and the subject NP *a* (*he*) appears in specIP since it precedes the negator *nich*.

(38) [$_{CP}$ Den   tiegt [$_{IP}$ a nich wieda]]   (Andreas, 2;1)
          that-ACC gets   he not again
      'he can't get that one again'

If IP was the highest projection, XP-V$_{+fin}$-Adverb/Negation-Subject orders should be expected, with IP hosting XP and V and specVP hosting the subject. Yet, such orders are never found in early production data. In addition, if IP was the category hosting the preposed XP and the verb, overgeneralisation of the V2 effect in embedded clauses should be expected; that is, Complementiser-XP-V$_{+fin}$-Subject orders should be observed. However, as pointed out by Poeppel & Wexler (1993), such orders are never found in embedded clauses.

Second, Hyams (1992) argues that early subject/aux inversion involves movement of the auxiliary to C. The examples below are from Klima & Bellugi (1966).

(39) a. Does the kitty stand up?
      b. Will you help me?

Hyams argues against Guilfoyle & Noonan's (1992) analysis of these utterances as IPs, with the auxiliary in Infl and the verb in V. Such an account implies that the subject NP is in specVP. The problem with this analysis, according to Hyams, is that the children who produce subject/aux inversion are generally at a stage of acquisition where the subject is not left inside VP. For example, they produce sentence internal negation with the subject higher than the negator and hence higher than VP (40).

(40)   a. You did not eat supper with us   (Klima & Bellugi 1966)
        b. I not crying

Therefore, the sentences in (39) are best explained by assuming that the subject has raised to specIP and that the auxiliary appears under the higher functional head C.

4.4. Evaluation of the Strong Continuity Hypothesis

The Strong Continuity Hypothesis has a considerable theoretical advantage over the No/Weak Continuity Hypotheses: by assuming that both child and adult grammars are similar, no explanation needs to be given as to the transition between the two systems. In particular, the SCH does not need to explain how functional categories come to be acquired. The logical argument behind the SCH is that as long as data are accountable using an adult system, the adult system should be assumed.

The problem with the SCH is that by holding that functional categories are available initially, it fails to account for why they are not systematically implemented in early production. In the spirit of Meisel (1992), if categories were all present in initial grammars, it would seem natural to expect that all phenomena related to these categories be readily observable. So, for example, if children indeed possess IP - as shown by their very early distinction between finite and nonfinite forms - one might expect the verb to systematically move to Infl; that is, all declaratives should be finite. Instead, verbs appear either in the

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finite or nonfinite form, suggesting that verb-raising is optional. Optionality is clearly not allowed by UG under current theory (Chomsky, 1993, 1995). Movement is either obligatory in the syntax or it does not occur until LF. Likewise, the presence of D in early grammars is strongly supported by Bohnacker (1997). Yet, it fails to explain why determiners are often omitted in early L1 English (Radford, 1990a, 1990b) and L1 German (Clahsen et al., 1993/1994).[29]

It might be argued that lexical omission or the usage of the wrong marker simply reflects a lack of morphological knowledge or problems with particular vocabulary items. Under this account, then, nonfinite forms are substitutes for finite inflection, and (apparently) nonfinite declaratives are in fact finite. If this is correct, finite and nonfinite forms should be randomly used, namely they should be found in similar contexts. As suggested in section 2, however, this does not seem to be the case. In particular, there is evidence suggesting that the incidence of finiteness is determined by structure in early child language, i.e. nonfinite and finite forms are to a large extent in complementary distribution. To conclude, if full competence is to be maintained, something more has to be said about optionality in early child language.

4.5. Summary

Under the Strong Continuity Hypothesis, there is no stage at which functional categories are unavailable. A strong theoretical advantage of this hypothesis is that it does not have to account for the transition - in terms of categorial acquisition - between child and adult grammars. However, from an empirical point of view, it fails to predict why so many root infinitives are found in early production and why functional categories seem to be lacking in other ways. In brief, it fails to answer the following question: if child grammars

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[29] Bohnacker (1997) points out that in L1 German 35% of nominals include a determiner before DP supposedly emerges in the grammar (as a result of the acquisition of genitive 's, according to Clahsen et al. (1993/1994)). Although I agree with Bohnacker that this constitutes evidence for the early presence of D in the linguistic system, the fact that 65% of nominals lack a determiner must be explained.

are so much like adult grammars, why are the sentences that they generate so different from what is allowed in the adult language?

5. Models of optionality

Instead of trying to show that functional categories are either absent or present in initial child grammars, recent theories have been focusing on how to explain the apparent optionality of these projections in the early stages of acquisition. In so doing, they have concentrated on the underlying representation of root infinitives, which are found in child speech but not in the adult language. In this section, I focus on two of these approaches, i.e. the Underspecification of Tense Hypothesis (Wexler, 1994; Bromberg & Wexler, 1996; Harris & Wexler, 1996; Schütze & Wexler, 1996) and the Underspecification of Number Hypothesis (Sano & Hyams, 1994; Hoekstra & Hyams, 1995a, 1995b; Hyams, 1996). After reviewing their main points and the evidence on which they are based, I compare them to the Truncation Hypothesis, concluding that the latter is a more satisfying account.

5.1. The Underspecification of Tense Hypothesis
5.1.1. Main claims

According to Wexler (1994), the difference between child and adult grammars does not lie in the types of categories available; indeed, for him, children's structural representations are adult-like in terms of the categories being projected. The difference is that in child grammars functional categories may be underspecified with respect to certain features. In particular, Infl is assumed to be underspecified with respect to Tense. For Wexler, what creates the impression of optionality in the usage of finite and nonfinite verbal forms is that children initially do not know the different values of tense. For example, they have no notion of past tense at the onset of acquisition. An immediate

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consequence of the underspecification of Infl is that it does not have any interpretation at LF. This means that if Infl is lowered to V, the V+I complex does not raise at LF, contrarily to what would occur in adult grammar. Therefore, I-to-V raising and V-to-I lowering are equally costly in early child grammar: they are both instances of one-step movements. Consequently, children might randomly lower I to V (yielding nonfinite sentences) or raise V to I (yielding finite structure), which explains the optionality of finiteness observed in early child speech. Note that this analysis presupposes that children have knowledge of verb-movement (and that they know how to form chains).

When Tense matures, Infl becomes specified for tense, which means that Infl needs to be interpreted at LF. This forces verb-movement to I (by LF at the latest). Consequently, I-to-V lowering and V-to-I raising are not equally costly anymore. specifically, I-to-V must be followed by raising the V+I complex to I for tense interpretation, which makes the whole operation a 2-step movement. By contrast, raising V to I constitutes a 1-step operation. Because it is a shorter movement, it is maintained and lowering is abandoned. This should result in a dramatic drop in the production of root infinitives, which in turn signals the end of the so-called optional infinitive period. At the same time, the maturation of tense should yield a productive usage of the past tense.

5.1.2. Evidence

Wexler bases his model on the early distinction made by children between finite and nonfinite forms, as suggested in section 2. Evidence comes from the high correlation between finiteness and the V2 position in V2 languages such as German, Dutch and Swedish and between finiteness and verb-placement with respect to negative markers. Poeppel & Wexler (1993) reports a complementary distribution between finite and nonfinite verbal forms in early German production, whereby nonfinite verbs almost always appear in final position, as in (41), and finite forms almost entirely occurred in V2 position, as in (42).

(41)   a. ich der Fos hab'n   (Andreas; 2;1)
          I the frog have-INF
       b. Zahne pussen   (Andreas; 2;1)
          teeth push-INF

(42)   a. Mein Hubsaube had Tiere   din   (Andreas; 2;1)
          my helicopter has animals in it
       b. Caesar tieg e nich ('Ceasar kriegt er nicht')   (Andreas; 2;1)
          Ceasar gets he not
          'He is not getting Ceasar'

The clear distributional difference between finite and nonfinite forms suggest that verb-movement is part of early grammars. Following Poeppel & Wexler (1993), Wexler (1994) assumes that sentences displaying the V2 effect involve the CP projection. When the verb moves, it raises to C, yielding a finite sentence. Such a movement, however, is not systematic, since the verb may stay within VP, resulting in a root infinitive. Assuming that tense is located in C in V2 languages, the non-systematicity of verb-movement can be explained by the underspecification of tense in early grammars.

Wexler (1994) also relies on the position of the verb with respect to the negative marker to show the optionality of verb-movement. As discussed in section 3.2.1, in the early production of a variety of languages finite verbs appear before the negative markers whereas nonfinite ones follow such markers. Harris & Wexler (1996) shows that verb-placement in early child English is also predictable with respect to the negative marker *not*. At issue is whether children produce tensed verbs following the negator, such that *John not sees Bill*.[30] If children have knowledge of the agreement marker, they should attach it to the verb only when the verb raises to Infl and not when it remains within VP, i.e. following the negator. Harris & Wexler examined the production data of 10 children acquiring English, focusing on affirmative and negative sentences with singular third

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[30] The possibility of finding a finite verb before the negator (e.g. *John sees not Bill*) is excluded on principled ground as the presence of *not* blocks verb-movement to I.

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person subjects.[31] They found that both finite and nonfinite forms co-occurred in declarative sentences. However, in negative sentences, the vast majority of verbs were nonfinite, i.e. the third person singular marker -s almost never appeared in these sentences. In other words, utterances such as *John not sees Bill* were almost never found. This shows that the children knew the inflectional marker -s; if not, it would have randomly appeared on verbs regardless of their position in the sentence. That the children had knowledge of inflection is further supported by the fact that -s was never incorrectly overgeneralised to other subject types, such as first person singular. In conclusion, the results suggest that the production of root infinitives does not stem from a lack of knowledge of agreement. Rather, only V-to-I raising, and not I-to-V lowering, can yield finite sentences.

Finally, Wexler (1994) suggests that past tense marking is missing during the optional infinitive stage, which his theory predicts. Without giving statistical evidence, he points out that children learning English sometimes use the bare stem form, e.g. *she take*, to express past events (see Brown, 1973; Cromer, 1974), suggesting that they lack the appropriate tense feature.

5.1.3. Evaluation

The Underspecification of Tense Hypothesis suffers from three main problems. The first problem concerns the exact definition of the concept of underspecification. It is not clear whether this term refers to inoperationality, in which case Tense is present in the grammar but is not specified for [±tense], or whether it signifies absence from the grammar, a view that would not be far from the Weak Continuity Hypothesis. The latter definition would have the advantage of explaining why infinitival markers such as *zu* in German and *to* in English, which are traditionally assumed to be in T, are absent from root

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[31] Data sets available on CHILDES (MacWhinney & Snow 1985).

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infinitives (Harris & Wexler, 1996).[32] Whatever definition should prevail, it would also be necessary to explain why Tense, and not, say Agr, should be underspecified in child grammar, which is not discussed.

Second, some problems can be found with Wexler's (1994) account of null subjects in early acquisition. His model relies on the idea of topic-drop in order to explain the early production of subjectless finite declaratives in the acquisition of non *pro*-drop languages (see Bromberg & Wexler, 1996). As seen in section 2.3.1, such sentences are reported in the early stages of acquisition of Dutch, German and French. The process of topic drop involves a discourse-bound null operator in specCP that binds a variable (Huang, 1984). As operators are generally associated with the 3rd person, only elements marked for 3rd person may undergo topic drop (see Chapter 1, fn 11). According to the examples given in the acquisition literature, however, it is clear that dropped subjects do not all correspond to the 3rd person, as in the French and English utterances below.

(43) a. avant __ veux   chocolat   (Nathalie, 2;2;2; Pierce, 1992)
         before (I) want-1S chocolate
      b. (I) like cereal   (Kathryn III; Bloom, 1970)
      c. (I) see Lois n face   (Kathryn III; Bloom, 1970)
      d. (I) watch noise   (Eric III; Bloom, 1970)

Another problem for the account of null subjects in terms of topic drop is that it concerns both subject and object omission. Therefore, if topic drop was a characteristic of early child grammars, children should be observed to omit both types of elements. However, a number of studies report that subject omission is significantly more frequent than object omission in the acquisition of languages such as English, French, German and Italian (Hyams, 1986; Hamann, 1992; Pierce, 1992). A final problem for the topic drop analysis proposed by Wexler (1994) is that this phenomenon bears no relation to tense. Therefore,

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[32] Note that truncation approach can easily account for this fact since VP roots do not include T.

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there is no obvious reason to expect that the emergence of tense should yield a significant decline of subjectless finite declaratives. Yet, we saw in section 2.4 that root infinitives and subjectless finite declaratives were found to decline at the same time in early child Dutch (Haegeman, 1995; Hamann & Plunkett, 1997). Such a robust finding is left without an explanation under the Underspecification of Tense Hypothesis, whereas it is predicted by the truncation approach.

Third, early Italian facts go against the Underspecification of Tense Hypothesis. According to Wexler, tense features are not part of initial grammars and are subject to maturation, which predicts the existence of a period during which root infinitives are produced. However, in early Italian, no such period is reported, as mentioned in section 2 (Guasti, 1993/1994). It might be argued that children acquiring richly inflectional languages quickly realise that agreement and tense must be specified, thus resulting in a shorter (or even a lack of) RI period. This account, however, goes against the maturational approach proposed by Wexler since it relies on positive evidence from the input to explain language development. In order to capture the crosslinguistic difference between languages in terms of root infinitives, Wexler (1995) proposes the Null Subject/Optional Infinitive Generalisation according to which optional infinitives are only found in the early acquisition of languages which do not license null subjects. Note, however, that this is an ad-hoc stipulation (based on observation) which has no explanatory power.

5.2. The Underspecification of Number Hypothesis

5.2.1. Main claims

According to Sano & Hyams (1994), Hoekstra & Hyams (1995a, 1995b) and Hoekstra et al. (1997), root infinitives result from the underspecification of Number. Their proposal relies on two important assumptions: (a) person and number are specified in separate projections Pers and Num (see Johnson, 1990); (b) tense is expressed via a Tense-chain involving an operator in C, Pers, Num, Tense and V (see Guéron & Hoekstra,

1989). As far as functional categories are concerned, languages are assumed to vary according to the morphosyntactic specification of Pers and Num. Under Sano & Hyams's (1994) approach, root infinitives are observed in the acquisition of languages which are specified for Number, but not for Person. Since Num is assumed to be initially underspecified and Person is otherwise unmarked, there is no inflectional morphology available to express finiteness in those languages. Hence, root infinitives are produced. Consider the inflectional paradigms of Italian, English, French and German given in Table 1.

Table 1: Inflectional paradigm of Italian, English, French and German

		Italian *parlare* ('speak')	English *speak*	French *parler* ('speak')	German *spazieren* ('walk')
Sing.	1 pers	parlo	speak	[parl]	spazier(e)
	2 pers	parli	speak	[parl]	spazierst
	3 pers	parla	speaks	[parl]	spaziert
Plur.	1 pers	parliamo	speak	[parlç]	spazieren
	2 pers	parlate	speak	[parlç]	spaziert
	3 pers	parlono	speak	[parl]	spazieren

In French, there is no morphosyntactic person distinction in the singular. Since number is assumed to be underspecified initially, children learning French initially produce verbs with no finite markers, i.e. root infinitives. In English, the only finite morphology is -s, which marks number. The initial underspecification of Num means that -s is not readily available and that verbs will appear as bare stems. In contrast to French and English, German has person distinctions (e.g. 2S -st, 3S -t). The proposal here is that German children initially assume that their language has no person distinction since they do not know the 2S marker -st (Clahsen et al., 1993/1994), which results in the production of root infinitives. Root infinitives will drop out when children acquire that marker, i.e. when they realize that

Person is specified in German (see Duffield, 1992). Finally, in Italian both Person and Number are marked. Even though Number is underspecified initially, person marking remains available, which is why no root infinitives are produced by children learning that language.

The question arises as to how root infinitives get temporal interpretation. If Num takes part in the expression of finiteness in the adult language, i.e. if it is morphologically marked, Sano & Hyams argue that it is part of the tense-chain originally proposed by Guéron & Hoekstra (1989), as in (44).

(44) Op_i C_i Num_i $[_{TP} T_i [_{VP} V]]$

Now, since Num is assumed to underspecified in early acquisition, the tense chain will be broken. This means that the tense pronominal variable in T will not be interpreted grammatically against C. In this case, Sano & Hyams argue, the tense variable behaves like a deictic pronoun and receives its interpretation from the discourse.

In Sano & Hyams (1994)'s model, Num is also present in the nominal system, following proposals by Ritter (1991) and Valois (1991). A parallel is drawn between clausal and nominal structure in that the definiteness of a noun is interpreted via a chain involving an operator in specDP, D, Num, and an element X (the counterpart of T in the nominal system). This is illustrated in (45).

(45) Op_i D_i Num_i $[_{XP} X_i [_{NP} N]]$

The operator determines specificity (or familiarity), which is then passed on to D. The value of X is interpreted against D, much like T is interpreted against C in the clausal domain. If Num is initially underspecified, the chain in (48) will be broken, which means that nominal specificity will not be able to be interpreted grammatically. Just like T, X will

instead be interpreted discursively. Moreover, since D and Num are interdependent (each determiner is either singular or plural), the underspecification of Num means that children will not be able to use determiners in early acquisition.

The lack of finite markers and determiners will stop once Num emerges. In other words, pronominal T and X will stop being interpreted via discourse once interpretation via binding becomes available. The reason why discourse interpretation is abandoned (and also why it is unavailable in the adult grammar) draws on Reinhart's (1993) Rule 1, according to which interpretation of pronominal variables via binding overrules discursive interpretation.

5.2.2. Evidence

Support for the Underspecification of Number Hypothesis comes from the distribution of null subjects. For Sano & Hyams (1994) and Hyams (1996), the possibility of null subjects is intimately related to the underspecification of Number. They assume that subjectless root infinitives involve PRO as the null subject. When Number is underspecified, Sano & Hyams argue, nothing in Infl can act as a governor for PRO, which is then free to appear as subject. This would account for the high rate of subjectless RIs reported in early child language. In contrast, when Number is specified, PRO should be ruled out. Sano & Hyams (1994) and Hyams (1996) show that null subjects are never used along with inherently finite elements such as modals and uncontracted *am*, *are* and *is* in the acquisition of English. In addition, Valian (1991) reports that the rate of overt subjects occurring with modals (which are also taken as being inherently finite) is at least 94% in a corpus of 21 children learning English. Finally, null subjects are reported to be missing from contexts where Infl must be specified, such as finite embedded clauses (Roeper & Weissenborn, 1990; Valian, 1991).

Evidence for the underspecification of Number also comes from the lack of determiners. This was reported by Radford for early child English, as seen in section 3.1.

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Hoekstra & Jordens (1994) and Schaeffer (1994) also show that many NPs are used without a determiner in early Child Dutch. Investigating the early speech of two children learning that language, Niek (2;7-3;5) and Laura (1;9-3;4), Schaeffer found that 93% of Niek's NPs were determinerless, the rate being 69% for Laura. Another argument suggesting that Number be underspecified in early grammars has to do with scrambling. Scrambling moves definite NPs to a position higher than VP adverbs and negators. For Hyams (1996) nominals that are subject to scrambling must be specified for Number. It follows that nominals that are underspecified for Number, i.e. determinerless NPs, should not scramble in early speech. Schaeffer's (1994) findings on scrambling in early Dutch confirms the prediction. Out of 61 determinerless NPs produced by Niek, only 11 were scrambled (18%). As for Laura, all of her 18 determinerless NPs were unscrambled. Crucially, both children were shown to have knowledge of scrambling, since the majority of pronouns (which are specified for Number) were found in scrambled positions.

5.2.3. Evaluation

The first problem with the Underspecification of Number Hypothesis is that no principled reason is given to explain why Num and not say Person, Tense or D, should be underspecified in the first place. Moreover, the explanation given for the production of RIs in early child German is questionable. As shown in Table 1, there are three different person markers in the singular paradigm of German. In this respect, German is closer to Italian than to French. It is therefore unclear why German should be treated on a par with French and not with Italian. Although the 1S marker -e is sometimes left out in adult German, person agreement is presumably frequent enough for the child to discover that person is overtly realised.

Another problem for the Underspecification of Number Hypothesis pertains to null subjects. Sano & Hyams (1994) assume that null subjects of RIs are instances of PRO. In support to this analysis, Hyams (1996) shows that null subjects are never used along with

inherently finite elements such as modals and uncontracted copula in the acquisition of English. However, this finding does not hold of early French. Pierce (1992) provides many examples of subjectless finite sentences including *est* (*is*) and modals, as in (46) and (47). These utterances should clearly be excluded under Hyams' model.[33]

(46)   a. est pas gros   (Nathalie 2;2;2)
          is not big
        b. est cassé   (Philippe 2;1;3)
          is broken
        c. est tombé   (Guillaume 1;10;3)
          is fallen

(47)   a. avant veux   chocolat   (Philippe 2;2;0)
          before want-1S chocolate
        b. veut lait   (Daniel 1;11;1)
          want-3S milk
        c. veux   monter   (Guillaume 1;10;0)
          want-1S climb-INF

Hyams (1996) further argues that subjectless finite declaratives involving lexical verbs are in fact nonfinite. In English the verbs concerned include forms in *-ed* and *-s*. For Hyams, these suffixes are aspectual markers in early child English. The *-ed* suffix is assumed to mark perfective aspect, while *-s* is considered a participial number agreement, following Kayne (1989). What this means is that the subjectless sentences in which these markers occur include an underspecified Infl, which allows PRO. Their representation is given in (47).

(47)   [$_{IP}$ PRO [$_I$ 0] ... [$_{AspP}$ V-*ed*/V-*s*$_i$ ... [$_{VP}$ ... t$_i$ ...]]]

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[33] The explanation for the discrepancy between the two languages remains unclear.

This analysis appears very controversial. Even though finite markers are often omitted by children, there is evidence that they are nevertheless used correctly, suggesting that children have knowledge of finiteness (Poeppel & Wexler, 1993). This suggests that the usage of *-s* is guided by finiteness and not by aspect. Knowledge of finiteness is further demonstrated by the fact that finite forms systematically precede negation while nonfinite forms always follow it. Assuming that NegP dominates AspP and that *-s* is an aspectual marker in English, verbs bearing *-s* should be expected to follow the negative marker, which Harris & Wexler (1996) show not to be the case.

Finally, the Underspecification of Number Hypothesis predicts that RIs and determinerless nominals should drop out at the time when Number emerges. In other words, functional categories are expected to be simultaneously used in an adult-like way in the sentential and nominal domains. This is questioned by Clahsen et al. (1996) based on evidence from the L1 acquisition of German. They argue that DP internal N-features <Gender> and <Number> must be checked by a corresponding AGR-category: AgrS for subject DPs, AgrO for object DPs, and AgrIO for indirect object DPs. If functional categories develop in parallel in the sentential and nominal domains, then fully specified DPs (i.e. DPs in which <Gender> and <Number> are overtly realized) should not be found until the relevant AGR-categories emerge. Otherwise, the feature checking theory would be violated. AGR categories were assumed to be acquired when the appropriate case marker was correctly used on adjectives and strong determiners (in 90% of obligatory contexts). Out of the five children whose production data were examined, two showed evidence of fully specified DPs used as indirect objects before the availability of AgrIO.[34] In addition, Clahsen et al. (1996) found that despite evidence of the acquisition of DP,

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[34] Importantly, these children did not violate the checking theory as they used most indirect objects together with a preposition, thus allowing feature-checking to take place within the PP, as shown in (i).
(i)   a. und das das schenk ich bei die jujana [=Indianer]   (Svenja, 3;0)
           and that give   I at the Red Indians
        b. dann hau ich bei die Joana eine   (Svenja, 3;2)
           then beat I   at the Joana one

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children kept on producing root infinitives for a while, which is not expected under Sano & Hyams's (1994) model.

Despite these problems, the Underspecification of Number Hypothesis has the merit of providing an account for why determiners and tense seem to be (partly) missing in early acquisition. An obvious question at this point is whether the Truncation Hypothesis can explain why so many nominals appear without a determiner in early child language.[35] A proposal would be to extend the underlying concepts of the Truncation Hypothesis to the nominal domain. In the spirit of the Root Principle, we might posit a nominal=DP principle, whereby all nominals are DPs. In the same vein, Friedemann (1993/1994) proposes that just as children may not systematically project CP in the clausal domain, they may not always project DP in the nominal domain. Drawing on Sano & Hyams' (1994) approach, the obligatory projection of DP would be required so as to interpret the nominal counterpart of T which determines the specificity of the NP (noted X). We would thus maintain the idea of a chain linking an operator in specDP, D, X and NP, much like what is proposed in (45).

(48) Op_i D_i [$_{XP}$ X_i [$_{NP}$ N]]

If the nominal=DP principle is indeed part of the adult grammar and is underspecified in the early stages of acquisition, truncation may apply within the representation of DP. The result would be the randomised projection of DP or NP. Two immediate predictions would be that NP root nominals would not display any determiner and would not allow scrambling. It should be pointed out that although the Root=CP Principle and the nominal=DP Principle are similar in nature, they are not necessarily predicted to emerge at the same time. I leave this proposal for further research.

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[35] The Underspecification of Tense Hypothesis suffers a similar problem.

5.3. Summary

In this section, I examined two approaches accounting for the apparently optional projection of functional categories. These models rely on the underspecification of some functional head (Tense or Number). Although these approaches can account for a wide range of data, including the production of root infinitives, they often make wrong predictions concerning the properties of early child language. For example, the Underspecification of Tense Hypothesis does not necessarily predict that root infinitives and subjectless finite root declaratives should drop out at the same time. As for the Underspecification of Number Hypothesis, it wrongly predicts a parallel development of functional categories in the sentential and the nominal domains. Moreover, it is not clear why Tense and Number should be underspecified initially and not other functional categories. Most of the phenomena analysed by these approaches can be explained by the Truncation Hypothesis. Extending this model to the nominal domain, it was furthermore suggested that truncation may also account for the production of determinerless NPs in early child language.

6. Conclusion

In this chapter, I presented evidence supporting the Truncation Hypothesis and showed that most of the predictions that it generates are borne out in early child language. I also reviewed several theories of language acquisition concerning the nature of the initial state. The No/Weak Continuity Hypotheses and the Strong Continuity Hypothesis suffer empirical drawbacks in that they cannot adequately explain the apparent optionality of finiteness which seems to characterise early production in a variety of languages. By assuming the lack of (all or some) functional categories or the total availability of these categories, they fail to explain variability in the projection of functional categories. As alternatives to these theories, I turned to two other approaches that directly address the

question of optionality of finiteness in early production, the Underspecification of Tense Hypothesis and the Underspecification of Number Hypothesis. Both models assume that initial child grammars contain all categories, including functional ones. However, they appear problematic at a number of levels. This being said, all theories dealing with the optional projection of functional categories are extremely close in terms of the range of data that they can account for. I believe that each brings important insights into the initial state. In particular, the Underspecification of Number Hypothesis draws a parallel between the clausal and nominal domains which I suggested could be incorporated into the Truncation Hypothesis.

Chapter 3

Functional Categories in Early Second Language Acquisition

1. Introduction

In the previous chapter, I suggested that initial L1 grammars are best analysed by the Truncation approach. The question I now investigate is whether the same obtains in L2 acquisition. As in L1 acquisition, there is evidence that functional categories are optionally projected in early L2 production. In particular, verb-movement is not systematically implemented, as suggested by Eubank (1992, 1993/1994, 1994, 1996). Moreover, verbs that do not seem to undergo verb-movement show up in the nonfinite form (Vainikka & Young-Scholten, 1994, among others). This is illustrated by the L2 German sentences in (1) produced by an adult Spanish native speaker after 79 weeks of exposure (from Eubank, 1994).[1] In (1a), the verb *hab* ('have') has raised from VP (presumably to C) as it precedes the subject *ich* ('I'). In (1b), the verb *kommen* ('come') is assumed to be in VP as it follows the subject *ich* ('I'); it also appear with the infinitival marker *-en*.

(1)   a. Hier haus hab   ich eine
          here home have-1S I   one
       b. Vielleicht ich kommen   auch
          maybe   I   come-INF too

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[1] The data come from the ZISA project (Clahsen, Meisel & Pienemann, 1983).

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Similar hypotheses as in L1 acquisition have been proposed concerning the relationship between the initial L2 grammar and the target system with respect to functional categories. Some researchers argue that there is a fundamental difference between the two grammars in that functional categories are absent initially and emerge gradually (Vainikka & Young-Scholten, 1994). This model adopts a weak continuity approach to SLA. In contrast, a strong continuity view of L2 acquisition is held by those who claim that functional categories are fully available from the beginning of acquisition (Schwartz & Sprouse, 1994; Epstein, Flynn & Martohardjono, 1996). As in L1 acquisition, I show that SLA theories adopting either the weak or strong continuity approach fall short in accounting for the apparent variability in the projection of functional categories in the early stages. Such variability, I argue, is best captured by an approach in terms of structural truncation. In sections 2 and 3, I discuss weak and strong continuity in L2 acquisition and the corresponding theoretical approaches. In section 4, I introduce a model that specifically addresses the apparent optionality of projection of functional categories, the Weak Transfer hypothesis (Eubank, 1993/1994). After exposing the problems faced by this account, I lay out the theoretical and empirical motivations for a truncation model of L2 acquisition in section 5.

2. The Minimal Trees Hypothesis: a weak continuity approach

2.1. Main claims

The Minimal Trees Hypothesis applies the weak continuity model to L2 acquisition, holding that initial L2 grammars contain only lexical categories and projections such as VP, NP, AP, and PP (Vainikka & Young-Scholten, 1994, 1996a, 1996b). Lexical projections are assumed to transfer from the L1 grammar along with their headedness specifications. (Headedness characteristics are then switched in response to L2 input if they do not correspond to those of the target language). Unlike lexical projections, functional categories

are assumed not to transfer into the interlanguage grammar. The target functional categories are claimed to be gradually acquired based on positive evidence from the input and access to UG. The first functional category to be posited is an underspecified F(inite)P (akin to Clahsen's (1990) proposal for L1 acquisition), which accounts for optional verb-movement. Once the agreement paradigm is fully acquired, FP is converted to AgrP. As for CP, it is acquired later. The four different stages are represented in (1), assuming the projection of a left-headed VP. Note that Vainikka & Young-Scholten do not characterise the CP-stage per se, but the representation in (1d) is what their theory would predict. Also, I have kept the label NP throughout the four stages since the Minimal Trees Hypothesis does not make any explicit claim concerning the emergence of DP (which is considered unavailable initially).

(1)   a. VP-stage   b. FP-stage   c. AgrP-stage   d. CP-stage
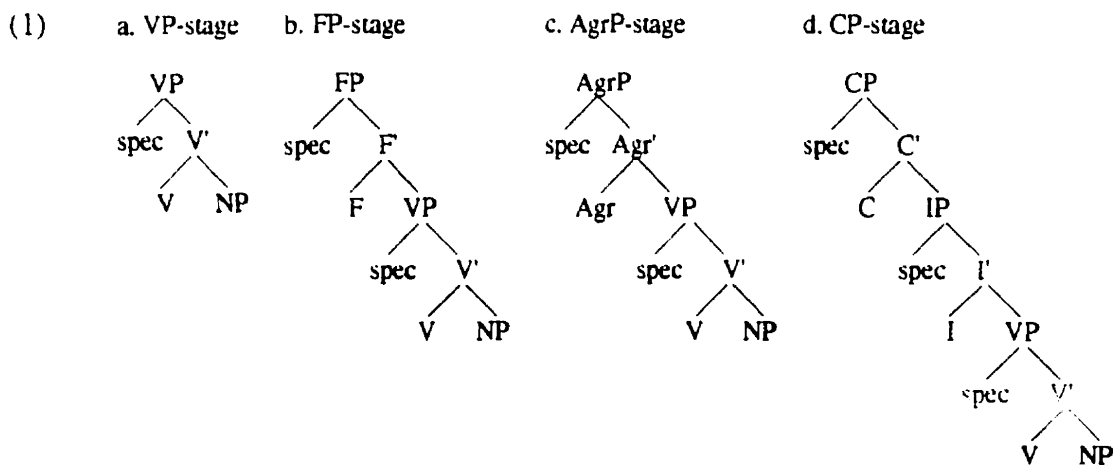
2.2. Evidence

Most evidence supporting the Minimal Trees Hypothesis comes from analyses of longitudinal data from L2 learners of German. These learners are adult speakers of Turkish and Korean (Vainikka & Young-Scholten, 1994, 1996a) as well as Romance languages such as Spanish and Italian (Vainikka & Young-Scholten, 1996b).[2] A criterion of 60% of

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[2] The data from the Turkish and Korean speakers mainly come from a cross-sectional study carried out in conjunction with the LEXLERN project at the University of Düsseldorf. The learners' levels of proficiency (from I to III) were calculated based on the number of phenomena acquired in L2 German (obligatory overt subjects, verb-raising, and agreement paradigm), without any information concerning their lengths of

correct usage in obligatory contexts is applied to decide whether or not a functional category has been acquired. Based on this criterion, Vainikka & Young-Scholten found no evidence for IP (lack of verb raising, auxiliaries, modals, and agreement) and for CP (lack of complementisers and wh-movement) in early production data. Early L2 utterances are thus interpreted as VPs. Sentences characteristic of the lexical stage are given in (2). In these sentences, the verb appears in the nonfinite form *-en*.

(2)   a. Oya Zigarette trinken   (Aysel I, L1 Turkish)
          Oya cigarette drink-INF
          'Oya smokes cigarette(s)'
        b. Eine Katze Fisch alle   essen   (Changsu I, L1 Korean)
          a   cat   fish entire eat-INF
          'a cat ate the entire fish'
        c. Ich sprechen die meine Firma   (Salvatore/3, L1 Italian)
          I speak-INF the my   firm
          'I speak (to/at my firm)

In addition, lexical categories exhibit the headedness characteristics of the L1. Sentences (2a-b) display the order OV which corresponds to both Turkish and Korean right-headed VP, which happens to be the correct specification in German. As for (2c), it displays the order VO, which can be derived from the Italian left-headed VP. Italian and Spanish speakers soon acquire the correct headedness of VP for German, as shown in (3).

(3)   a. Ich immer nur eine Tag in de Woche gucken   (Jose/5, L1 Spanish)
          I always only one day in the week look-INF
          'I always look one day a week only'

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exposure to German. The data from the Italian and Spanish speakers are longitudinal spontaneous production data from the ZISA project (Clahsen et al., 1983); they reflect the initial stages of acquisition. In the examples below involving Italian and Spanish native speakers, the number appearing after the learner's name corresponds to the file number.

b. Vielleicht Schule essen   (Salvatore/6, L1 Italian)

       maybe school eat-INF

       'maybe she/he eats at school'

It might be argued that Italian and Spanish speakers transfer their L1 functional category IP along with the lexical VP projection. IP being left-headed in these languages, verb-movement to I would yield the order SVO observed in (2c). Such a sentence is thus ambiguous as to whether functional categories are initially available in interlanguage grammars: the verb could either be in Infl or in V. However, a look at the placement of negation in the early production of Italian and Spanish learners of German reveals that the verb follows the negation, suggesting that there is no verb-raising, as illustrated in (4). According to Vainikka & Young-Scholten, this suggests that early utterances are not IPs.

(4)   a. Topo   nixe essen   (Bongiovanni/6, L1 Italian)

           mouse (It.) not eat-INF

           'the mouse does not eat'

         b. Verbert nis verstehen   (Salvatore/2, L1 Italian)

           Verbert not understand-INF

           'I do not understand Verbert'

Further evidence that functional categories do not transfer, Vainikka & Young-Scholten argue, comes from the fact that subsequent development is the same for the speakers of the four languages. They all seem to go through a period of optional verb-movement. Instances of verb-raising, as in (5), call for the projection of a left-headed functional category above VP. Sentence (5a) which was produced by a Turkish native speaker exhibits a VO order, suggesting that the verb has moved out of the VP. In (5b) the verb *kommen* (*to come*) has raised past the subject *die Sonne* (*the sun*). In addition, some auxiliaries and modals, i.e. elements that are usually associated with functional categories, start occurring in production. At the same time, L2 learners produce VP-type sentences

with the verb in sentence-final position, as in (5c) (for some learners the percentage of verb-raising is around 50%).

(5)   a Ich sehen   Schleier   (Kemal #604, L1 Turkish)
          I see-INF veil
          'I see the veil'
      b. Und dann nachher   kommen   die Sonne nochmal wieder   (Maria, L1 Spanish)
          and then afterwards come-INF the   sun   yet   again
          'and then afterwards the sun comes out again'
      c. der Deutshce Buch lesen   (Kemal #344, L1 Turkish)
          the German book read-INF
          '(I) read German book(s)'

At that stage, Vainikka & Young-Scholten argue that the German agreement paradigm has not been acquired yet. We can see that the raised verbs in (5a-b) above do not bear correct agreement markers; instead, they display the infinitival suffix -en. The lack of acquisition of the agreement paradigm presumably explains why verb-movement is not systematic. Accordingly, the functional category above VP is left unspecified as to agreement characteristics and is called F. Note that complementisers and wh-movement are not found at this so-called FP-stage; hence, it is argued, CP is not yet available.

Once learners acquire the target agreement paradigm, verb-raising become obligatory, as shown in (6). All verbs in (6) are correctly inflected and have moved out of VP. Moreover, auxiliaries and modals are much more frequent, as in (7). For Vainikka & Young-Scholten, this constitutes evidence that category F is now specified as Agr.

(6)   a. Ich kaufe   dich   Eis   (Gabho #254, L1 Korean)
          I buy-1S you-ACC ice cream
          'I buy you some ice cream'
      b. Der kleine   geht   Kindergarten   (Harva #21, L1 Turkish)
          the small-one go-3S kindergarten
          'the young one goes to kindergarten'

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(7)   Er hat   gesagt, nimmst du Lokomotive?   (Emine #62, L1 Turkish)
        he have-3S said   take-2S you locomotive
        'he said, will you take the locomotive?'

Evidence for CP starts to appear as attested by the observation of some embedded clauses with complementisers and complex wh-questions. However, they are not frequent enough to posit the projection of CP for the data examined, according to Vainikka & Young-Scholten.

2.3. Evaluation

The Minimal Trees Hypothesis has the advantage of offering a straightforward account of the numerous nonfinite sentences that are observed in early L2 German acquisition. The initial absence of functional categories means that the verb remains within VP and cannot bear inflectional markers. The different word orders observed in early L2 German are explained via transfer of VP and its L1 headedness characteristics.

Despite its attractiveness, this approach is problematic at a number of levels. Conceptually, it seems far-fetched to posit that only a subset of the L1 grammar should transfer to the L2 system. As Schwartz & Sprouse (1996) point out, 'linguistic knowledge is a cognitive state [in which] all the modules function together as a coherent system'. It is therefore unclear what kind of mechanism would take away part of this system in order to build a new one. Besides, since learners already have acquired the existence of functional categories, it seems implausible that they should regress to a stage where no such category is posited.

Another conceptual problem with the Minimal Trees analysis has to do with the criterion used by Vainikka & Young-Scholten in deciding whether a functional category has been acquired or not. For them, evidence in favour of a particular functional category mainly rests on the production of lexical items related to that category. Acquisition is

supposed to have taken place when these elements are accurately used in 60% of obligatory contexts. However, as pointed out by Schwartz & Sprouse (1996), there is no one-to-one equivalence between production deficit and categorial deficit (see also Chapter 2). In other words, the fact that certain elements fail to be produced does not mean that the corresponding functional categories are necessarily absent from the grammar. Rather, the lack of production of particular items might be due to performance factors or a lack of lexical or morphological knowledge. The methodology used by Vainikka & Young-Scholten to gather data might also explain certain shortcomings in production. Subjects were administered a description task and story telling task (Vainikka & Young-Scholten; 1994). They were therefore very likely to produce declarative sentences and unlikely to ask a lot of questions. This, however, does not necessarily mean that the structure underlying questions, i.e. CP, was unavailable in their grammar. In fact, a number of researchers have warned that relying only on production data may underestimate the learners' competence (Epstein et al., 1996; Grondin & White, 1996). By the same token, if a form appears late in production, one cannot conclude that the associated representation is also late to appear. The structure might have been part of the grammar much earlier but never overtly instantiated in production. This particularly applies to agreement markers as they are language-specific and thus may take some time to be acquired. Crucially, the observation of production errors concerning such markers does not imply that the category Agr is necessarily absent from L2 grammars.[3]

Finally, little explanation is provided by Vainikka & Young-Scholten concerning the nature of the FP-stage. The projection of F is justified by the observation of (optional) verb-movement, but little is said about the motivation for such movement. In Clahsen et

[3] Gavruseva & Lardiere (1996) found evidence for CP in the early L2 production of a young Russian speaker learning English despite a correct agreement rate of only 40%. In addition, lower percentages than predicted by the so-called AgrP stage were found with the occurrence of modals and auxiliaries in obligatory contexts. According to the Minimal Trees Hypothesis, the acquisition of CP follows the AgrP stage. Applying Vainikka & Young-Scholten's 60% criterion for acquisition, these facts suggest instead that CP is available before AgrP. Gavruseva & Lardiere conclude that relying solely on the production of Agr-elements as evidence for the presence of Agr in the grammar yields an underestimation of grammatical competence.

al.'s (1993/1994) model, the type of elements that can appear under F is strictly defined, i.e. auxiliaries, modals, copula and verbs bearing the -*t* marker. These items are argued to be inherently associated with the [+F] feature under F. Although problems can be found with this approach, it at least gives a principled account for verb-movement to F and theoretically motivates the projection of FP. No such account is given for the FP-stage by Vainikka & Young-Scholten. For one, the F position does not seem to be restricted to the elements mentioned by Clahsen et al. As can be seen in the examples in (5), lexical verbs bearing -*en* are found before the object or the subject. In both cases, argument is made that movement to F has occurred. In contrast, Clahsen et al. did not find instances of -*en* verbs in the F position. Another problem with the FP-analysis is that, as observed by Vainikka & Young-Scholten, -*en* verbs are also found within VP at the same stage of acquisition. In those cases, the verb appears in clause-final position, typically following all VP-material. No distinction whatsoever is made between the -*en* verbs that supposedly appear under F and those that do not: in other words, how can we tell that the verbs ending in -*en* under F are indeed finite? What we are left with is the impression that the FP-stage is proposed to accommodate some data observed in production, without any theoretically motivated foundation.

At the empirical level, the Minimal Trees Hypothesis also suffers from a number of shortcomings. First, evidence for functional categories can be found even at the early stages. As pointed out by Vainikka & Young-Scholten (1994) themselves, some of the early sentences display verb-movement, auxiliaries and agreement markers on the verb. They constitute 15% of the subjects' utterances during the so-called VP-stage. These utterances follow an SVO order which, at least for the native speakers of Korean and Turkish, suggests that the verb has moved out of the right-headed VP, as in the examples below (recall that Turkish and Korean are SOV languages).

(8)   a. Die Frau   alleine trinkt   Saft   (Changsu, L1 Korean)
          the woman alone drink-3S juice
          'only the woman is drinking juice'

       b. Schnee ist da   (Changsu, L1 Korean)
          snow   is there
          '(there) is snow there'

       c. Ama(T) diese Junge so muß Deutsch lernen   (Memduh, L1 Turkish)
          but   this   boy   so must German to learn
          'but this boy must learn German'

Vainikka & Young-Scholten (1994) argue that these sentences are precursors of the subsequent FP-stage. Yet, they are frequent enough to cast doubt on the existence of a purely lexical stage in the first place. Other studies have suggested the existence of functional categories in early L2 grammars, at least in the case of child learners. Examining L2 French production data by two young anglophones, Grondin & White (1996) provide evidence for the functional category DP in early L2 systems.[4] They found that determiners and prenominal possessives, which are assumed to be in D in French (see Authier, 1992), were productively used in the data, even in the first interviews. Lakshmanan (1993/1994) provides evidence for IP in the early L2 system of a Spanish child learning English. In an elicited production task, Lakshmanan observes the production of the copula and auxiliary *be* which suggests the projection of Infl. She also argues that the preposition *for* is initially used as a case-assigner occupying the Infl position.

Finally, the Minimal Trees Hypothesis predicts that L2 learners of a particular language will go through similar developmental stages once the functional categories emerge, regardless of their L1s. This does not appear to be the case, according to Schwartz & Sprouse (1996). They argue that in the acquisition of L2 German, speakers of V2 languages such as Swedish and speakers of Romance languages do not display similar

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[4] Data collected by Lightbown (1977).

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developmental paths. Acquisition of the V2 property of German seems to be facilitated when the L1 already possesses V2 than when it does not.

2.4. Summary

The Minimal Trees Hypothesis holds that L2 grammars only contains lexical categories at first and that functional ones gradually emerge. The predictions for early L2 production appear to be too strong as there is evidence for the early projection of functional categories (even in Vainikka & Young-Scholten's data). The Minimal Trees Hypothesis also suffers theoretical problems concerning the criterion used to decide about acquisition and more generally concerning the assumption that production shortcomings necessarily reflect syntactic deficiencies. In addition, the approach has problems explaining the emergence of functional categories. In particular, the intermediary FP-stage advocated by Vainikka & Young-Scholten does not seem to be theoretically motivated.

3. Strong continuity approaches

In this section, I examine two theories of L2 acquisition that support a strong continuity between initial grammars and the target grammar, The Full Access Hypothesis and the Full Transfer/Full Access Hypothesis. Although these approaches differ from each other, they both argue, contrary to the Minimal Trees Hypothesis, that functional categories are fully available in initial L2 grammars.

3.1. The Full Access Hypothesis

3.1.1. Main claims

According to the Full Access Hypothesis, UG is entirely available to L2 learners in the early stages of acquisition with no interference from the L1 (Flynn & Martohardjono, 1994; Epstein et al., 1996, in press). Since functional categories are part of the categorial

inventory of UG, they are all considered to be present in early grammars. Importantly, since L1 influence is assumed to play no role, functional categories initially available to L2 learners are not restricted to the ones instantiated in the L1. The target properties of functional categories, such as feature strength, are acquired based on positive evidence from the input.

3.1.2. Evidence

Epstein et al. (1996) investigate the acquisition of functional categories in English by native speakers of Japanese. Assuming that Japanese has no functional categories (Fukui, 1988), Epstein et al. report that in an elicited imitation task, Japanese learners of English were able to correctly repeat target sentences instantiating functional categories. Stimulus sentences included IP and CP-related elements such as tense, modals, and do-support (for IP) and topicalisation, relative clauses and wh-questions (for CP). Epstein et al. report that around 60% of the stimulus sentences were correctly repeated by the subjects (both children and adults). Even though sentences targeting IP were repeated significantly more accurately than the ones targeting CP (around 70% versus roughly 50%), this difference was not interpreted as a lack of CP. Rather, it was analysed as resulting from the complexity of CP clauses in terms of long-distance movement to specCP. Thus, both IP and CP were concluded to have been acquired by the learners. Since knowledge of those categories could not have come from the L1, it was assumed to stem from direct access to UG.

Further support for the proposal that L2 learners have access to functional categories that are not instantiated in their L1 comes from White's (1996) investigation of the acquisition of French clitics by two English native speakers (Greg and Kenny)[5]. According to Sportiche (1996), clitics project their own (functional) categories which are called clitic 'voices'. Each clitic (nominative, accusative, dative) is assumed to head its own

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[5] Data collected by Lightbown (1977).

'voice' (noted V"), NomV", AccV" and DatV". White holds that the grammar of English lacks such categories as there is no clitic in that language.[6] In terms of acquisition, this means that if all UG categories are available in SLA, English learners of French should have access to clitic voices and produce clitics in the early stages of acquisition. White (1996) reports that both children used subjects clitics frequently and productively in the early months, as shown in (9).

(9)   a. j'veux un jaune   (Kenny, month 2)
           I want a yellow

          b. i'   crie   (Kenny, month 4)
           he is crying

          c. i'   tombe   (Kenny, month 4)
           he is falling

          d. elle est là   (Greg, month 5)
           she is there

White also found that these pronouns were used consistently with Kayne's (1975) tests for clitics. In the L2 French data examined by White, subject clitics are almost always adjacent to the verb, they never appear in conjoined constructions and never bear contrastive stress. In all these cases, lexical DPs or strong pronouns are used instead, as shown below.

(10)   a. moi juste fais   pas tout le soleil   (Kenny, month 15)
           me also make-1S not all the sun

          b. le kangourou et le bébé-kangourou live there   (Kenny, month 7)
           the kangoroo and the baby kangoroo

          c. MOI j'ai   deux lapins   (Greg, month 5)
           me I have two rabbits

Even though White's objective was not to provide empirical support to the Full Access Hypothesis, her findings suggest that the underlying functional categories for clitics were

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[6] See van Riemsdijk (in press) and Schwartz (1996) for an alternative analysis.

present in the children's early L2 grammar of French despite their absence from the L1 system.

3.2. The Full Transfer/Full Access Hypothesis

3.2.1. Main claims

According to the Full Transfer/Full Access Hypothesis (henceforth FTFA), the whole L1 grammar initially transfers, making up the entirety of the L2 system; hence, Full Transfer (Schwartz & Sprouse, 1994; Schwartz 1996; Schwartz & Sprouse, 1996; Schwartz, in press). In particular, the functional categories of the L1, together with their associated features, are part of the initial interlanguage grammar. In addition, UG is assumed to be available in L2 acquisition (hence, Full Access). Even though learners are restricted to their L1 grammar at first, they will be able to acquire target properties based on the interaction between UG properties and evidence from the input. They will also be able to acquire categories that are instantiated in the L2 but not in their L1. Whenever learners face L2 input that cannot be analysed in terms of the L1 grammar, they will posit a new analysis drawn from UG to accommodate the data.

3.2.2. Evidence

The FTFA model was originally supported by longitudinal naturalistic data from a Turkish learner of German named Cevdet (Schwartz & Sprouse, 1994).[7] Turkish and German are SOV languages with a right-headed VP and IP, and a left-headed CP. They differ in that verb-movement is to C in German matrix clauses, yielding the so-called V2 effect, whereas verb-movement is to Infl in Turkish, where the finite verb appears in clause-final position.

Schwartz & Sprouse (1994) report that most of Cevdet's early utterances in German display an SOV order, which is the same as in Turkish, suggesting that the

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[7] The data come from the ESF project (Perdue, 1984).

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Turkish internal structure of VP has transferred to the interlanguage. Examples are given in (11).

(11)   a. der Mann seine Frau geküßt
           the man   his wife kissed
           'the man kissed his wife'
        b. falsches Wagen ein-gesteige
           wrong   car   in+climbed
           'gotten into the wrong car'

In addition, the few instances of finite verbs in early production never appear in the final position but always precede VP-material. Hence, the SVO order was observed in early data, as in (12).

(12)   a. der ist aus-steigen
           he is out+climb(ed)
           'he got out'
        b. jetzt er hat   Gesicht [das is falsches Wagen]
           now he have-3S face   that is wrong car
           'now he makes a face (that) that is the wrong car'

According to Schwartz & Sprouse, the only explanation for the word order in finite sentences is that the subject and the verb raise respectively to specCP and C. This means that CP is present in Cevdet's L2 grammar, presumably as a result of transfer. Thus, Schwartz & Sprouse argue, not only VP but the whole Turkish structure has transferred to the L2 German grammar. The fact that no finite verb is found following VP material (an order characteristic of Turkish) suggests that the German properties of C have been acquired in the very early stages, presumably via positive evidence. As for the subject, it raises to specCP for Case reasons. In Turkish, nominative case can only be assigned under spec/head configuration, whereas in German it can be assigned either via spec/head or

government. Assuming that the Case properties of Turkish transfer to German, we can then account for why the subject moves out of the VP: the finite verb having raised to C, the subject needs to move to specCP in order to receive Case via spec/head. No XVS order was found in early production, suggesting that case assignment via government had not been acquired by the learner.[8]

When embedded clauses begin to appear, they contain a lexical complementiser and the finite verb in final-position, as shown in (13).

(13) a. daß ich mit Brot war
      that I with bread was
      'that I had some bread'

  b. daß er einen Wagen brauchte
      that he a car need-PAST
      'that he needed a car'

  c. ob   der Zug noch da ist
      whether the train still here is
      'whether the train is still here'

If one assumes that the right-headed IP has transferred, the explanation for verb-placement in subordinate clauses is straightforward. Because the C position is filled with the complementiser, the verb can only move as far as Infl and thus appears at the end of the clause. The subject moves from its base position within VP to specIP to receive nominative Case under spec/head configuration.

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[8] Such a possibility is acquired later on, as evidenced by the numerous cases of postposed subjects in the data. Some examples appear in (i).

(i) a. das hat eine andere Frau gesehen
     that has an other woman seen
     'Another woman saw that'
  b. hat viele Menschen zu ihm gehorcht
     has many people to him obeyed
     'Many people obeyed him'

Note that postverbal pronouns are found before postverbal full NPs. Schwartz & Sprouse (1994) argue that pronouns are initially analysed as clitics, which means that they incorporate into the verb. Thus, the XP-V-S order is obtained without recourse to case-assignment via government (which the learner has not yet integrated).

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3.3. Evaluation

By postulating the availability of functional categories in initial L2 grammars, both the Full Access Hypothesis and the Full Transfer/Full Access Hypothesis can successfully explain early evidence for verb-movement, which a weak continuity approach to SLA cannot account for. However, as these theories focus on showing the early availability of functional categories, they neglect some of the data analysed by Vainnika and Young-Scholten where no functional category seems to be involved (which motivated the Minimal Trees Hypothesis in the first place). In particular, neither the Full Access Hypothesis nor the Full Transfer/Full Access Hypothesis addresses the apparent lack of verb-movement in some of the early utterances of L2 learners. In fact, both theories make the wrong predictions concerning the occurrence of verb-movement and the production of such sentences. According to current theory, as mentioned in section 3, movement can never be optional. If functional categories are available and if there is evidence for verb-raising, such movement should systematically take place. However, this is not what is found in the early stages of SLA. Schwartz & Sprouse (1994) assume that CP is present in the initial grammars of L2 German and that it accounts for early evidence of verb-movement out of VP. Yet, systematic verb-movement into C is not observed initially, as shown by the examples in (11), repeated in (14).

(14)   a. der Mann seine Frau geküßt
          the man   his wife kissed
          'the man kissed his wife'
       b. falsches Wagen ein-gesteige
          wrong   car   in+climbed
          'gotten into the wrong car'

In these sentences, the verb has remained within VP and appears in sentence-final position. As a matter of fact, 85% of the early production reported by Vainikka & Young-Scholten (1994) for the acquisition of L2 German display the SOV order during the so-called VP-

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stage. If Schwartz & Sprouse are right in arguing that the 15% remaining shows evidence for a functional category in initial grammars, the question then arises as to why verb-movement does not always occur.

In addition to the difficulty of explaining non-systematic verb-movement in early acquisition, the Full Access Hypothesis and the Full Transfer/Full Access Hypothesis also suffer from individual problems. Dealing with the Full Access approach first, the elicited imitation methodology used in many studies supporting this model appears to be questionable. The rationale behind it is that language learners are not able to correctly repeat what their grammar does not encode yet (Lust, Flynn & Foley, 1996); if stimulus sentences are correctly repeated, it means that the corresponding target properties, be they categories or parametric values, have been acquired. This rationale does not appear to hold, though, since it might very well be the case that subjects repeat elements without analysing them, i.e. they might repeat elements for which they have no structural representation in the target language. Hence, the fact that subjects correctly repeat grammatical sentences does not necessarily mean that they possess the corresponding L2 properties. In addition, some of the studies using the elicited imitation technique face serious methodological problems. They do not always include a control group, or if they do, the sentences given to the controls often differ from the ones administered to the L2 learners (e.g. Flynn, 1995). Furthermore, tests often include only very few sentences supposedly testing the acquisition of particular L2 properties, which questions the statistical validity of the results. In the study on the acquisition of English by Japanese speakers described in the previous section, only two sentences exemplify each of the ten sentence types under investigation.

Finally, two other problems can be found with the experiment reported in Epstein et al. (1996). First, the results do not support the conclusion that all learners have functional categories. The results reported in the study are mean results. It is therefore likely that some subjects performed relatively poorly on the test. Applying the researchers' criteria, this would mean that some individuals in fact lack functional categories. Unfortunately,

individual results are not discussed by Epstein et al. Second, the participants to the test were reported to be (low) intermediate learners of English. They had received at least three years of formal instruction in ESL (seven years for the adults). The study is thus irrelevant to the issue of initial state.

As for the FTFA model, the predictions that it makes appear to be too strong. In particular, by holding that the L2 initial grammar solely consists of the L1 system, grammatical properties not instantiated in the L1 are expected not to be present in L2 initial systems. This is clearly not borne out by data reported by White (1996) on clitics in early L2 speech. As seen in section 3.1.2, French has clitic voices whereas English does not. If the two young anglophones learning French that White investigated had transferred their entire L1 grammar, they should not have been found to produce subject clitics in the earliest interviews. The fact that they did suggests that the underlying functional categories were present in their early L2 French grammar.

As for L1 properties of verb-movement, they are also predicted to transfer to the L2 grammar initially. In French, the verb moves to Agr overtly, whereas in English verb-raising does not take place until LF. According to the FTFA, French speakers learning English should initially exhibit systematic verb-movement. Such a prediction, however, is disconfirmed by White (1992). In an experiment focusing on verb-placement with respect to question formation, negation and adverbs, children at the beginner level systematically rejected, or never produced, sentences in which the verb preceded the negator *not* (in (15a)), as well as yes/no questions in which the verb preceded the subject pronoun (in (15b)).

(15) a. * John likes not Mary   (*Jean n'aime pas Marie*)
      b. * Likes she John?   (*aime-t-elle Jean?*)

These two types of constructions, ungrammatical in English, involve long-verb movement and are grammatical in French. If transfer of verb-movement properties had occurred, the

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learners should have accepted and produced them.[9] As properties of verb-movement are associated with functional categories, the findings instead suggest that L2 functional properties may be readily available in SLA.

Finally, it is worth mentioning that the data reported by Schwartz & Sprouse (1994) concerning the acquisition of German by Cevdet, a Turkish native speaker, are also consistent with an analysis that does not appeal to L1 transfer. For Schwartz & Sprouse, transfer is argued to have occurred since SOV is the prominent order in Cevdet's utterances and that nominative case is assigned via spec/head configuration, two properties that are characteristic of Turkish. However, these properties are also characteristic of German. Therefore, it is equally plausible to assume that they were acquired via positive evidence from the input. After all, Cevdet produced a number of sentences with the finite verb in second position, which is typical of German and not of Turkish (which Schwartz & Sprouse themselves assume reflect the acquisition of target properties of verb-movement). Crucially, Cevdet does not seem to make errors in German that can be imputable to a transfer of L1 properties. Schwartz & Sprouse observe that sentences displaying the target XVS word order are missing in early speech. In these sentences nominative case assignment is done via government, which is not an option in Turkish. For Schwartz & Sprouse, then, the XVS order is not found because Cevdet initially applies his L1 property of nominative case assignment. However, the lack of XVS sentences in the data could also be interpreted as a delay in the acquisition of the V2 constraint in German. In particular, Cevdet was found to produce finite sentences with the raised verb in third position, i.e. XSVO order. It might be assumed that Cevdet knew that the verb may raise in German, but that he had not yet acquired the fact that it must appear in second position.

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[9] Some problems remain with short verb-movement as subjects often accepted verb-placement before the adverb, which is ungrammatical in English and acceptable in French:
(i)   a. *Linda takes always the metro
        b. Linda prend toujours le métro

3.4. Summary

The Full Access Hypothesis and the FTFA Hypothesis both claim that functional categories are initially available in L2 acquisition. For their purpose, it is enough to show that functional categories are involved in the production of early utterances. However, they cannot explain why the syntactic phenomena involving functional categories, e.g. verb-movement, are not systematic in the early stages of acquisition. Moreover, they cannot account for the numerous examples of nonfinite verbs occurring as main verbs in early production data.

4. Optionality in early SLA: the Weak Transfer Hypothesis

4.1. Main claims

An attempt to account for the optionality of various phenomena related to functional categories is provided by Eubank's Weak Transfer Hypothesis (Eubank, 1992, 1993/1994, 1994, 1996). According to this model, both lexical and functional categories transfer (along with their headedness properties) at the onset of L2 acquisition. However, unlike the FTFA, the features associated with the functional categories do not transfer; hence, Weak Transfer. In the spirit of Wexler's (1994) Underspecification of Tense Hypothesis for early L1 acquisition, feature strength is left underspecified or inert at the onset of SLA. L2 learners are subsequently assumed to randomly posit <strong> or <weak> features until the target values are acquired (based on L2 input and access to UG). To explain why feature strength is initially underspecified in SLA, Eubank points out that feature values are based on morphology (Rohrbacher, 1994). Since inflectional paradigms do not transfer to the second language, features do not transfer either.[10,11]

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[10] According to Rohrbacher (1994), features associated to Infl are strong iff in the most common verbal paradigm in at least one number, the verb forms for first and second person are a) distinct from each other; b) distinct from the form for third person; and c) distinct from the infinitive. Feature strength will in turn determine whether verb-movement should occur before Spell-Out. If we compare the verbal (singular) paradigm of English and Spanish illustrated below by the verbs *to sing* and *cantar*, we can conclude that

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4.2. Evidence

The Weak Transfer Hypothesis addresses the apparent optionality of verb-movement observed in early L2 German and L2 English acquisition. In early L2 German production data from Spanish native speakers, Eubank (1992) distinguishes between three stages in the placement of the verb vis a vis negation and adverbs, as listed in (16).[12] Note that Eubank assumes that the headedness characteristics of AgrP and TP are transferred from the L1 and that these projections are left-headed during the first two stages.

(16) • stage 1: non-thematic verbs, but not thematic verbs, may precede the negator.

• stage 2: all finite verbs (thematic and non-thematic) precede the negator. At the same time, thematic verbs appear in two different positions with respect to adverbs and the subject: they either precede the adverb and the subject (V-Adv-S-X) or appear after the subject and the adverb (S-Adv-V-X). As for non-thematic verbs, they only follow the former pattern.

• stage 3: adverbs do not appear in between the subject and thematic verbs (*S-Adv-V-X)

At stage 1, agreement and tense features are assumed to be unspecified. Since thematic verbs need a strong Agr for the transmission of their thematic roles (Pollock, 1989), they

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English has weak Infl features (since the forms for first and second person are the same) and that Spanish has strong features (since its verbal paradigm complies with Rohrbacher's conditions).

(i)	Singular	English	Spanish
		to sing	*cantar*
	1st	sing	cant-o
	2nd	sing	cant-as
	3rd	sings	cant-a

As predicted by Rohrbacher, English does not display overt verb-movement, whereas Spanish does.

[11] In a recent update of his model, Eubank (1996) suggests that functional categories may not be projected in the early stages of L2 acquisition. Following Speas (1994) and Roeper & Rohrbacher (1995), Eubank adopts the idea that a functional category is projected only if its specifier or its head has some semantic or phonetic content. Since L1 morphology does not initially transfer to the L2 system and because the target morphology is not yet acquired in the early stages, there is no lexical material that can initially license the projection of functional categories such as AgrP and TP. Therefore, only VP may be projected at the onset of SLA. This is reminiscent of the lexical stage proposed by Vainikka & Young-Scholten (1996a, 1996b). Recall, however, that under the Minimal Trees Hypothesis, functional categories are absent from early L2 representational systems all together. This is not what Eubank proposes: for him, functional categories are present in initial L2 grammars (via featureless transfer from the L1), but their projection might not be lexically licensed at first.

[12] The data come from the ZISA project (Clahsen et al., 1983).

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cannot overtly raise to Agr at that initial stage. Crucially, the <strong> Agr feature of Spanish has not transferred to the L2. If it were the case, all verbs would systematically raise and appear in front of the negator. Moreover, the lack of tense features prevents verb-movement to T. Consequently, thematic verbs stay within VP and appear after the negation. In contrast, nonthematic verbs do not need any particular Agr feature to raise. Thus, they may appear in the Agr position, which explains why they are found to precede the negation. At stage 2, the first elements related to Tense make their appearance in the data (auxiliary+participle constructions). Thus, Eubank argues, Tense is not unspecified anymore, which allows thematic verbs to move to T. Since Neg is otherwise assumed to be adjoined to VP, this explains why all verbs are placed before the negation. As for the position of thematic verbs with respect to adverbs and the subject, Eubank argues that it depends on the Agr feature being selected. When a <strong> Agr is posited, the verb can move to Agr, yielding V-Adv-S-X: when <weak> Agr is selected, the verb cannot move up and thus appears after the subject and the adverb (S-Adv-V-X). As far as nonthematic verbs are concerned, the <±strong> distinction does not affect their position for reasons laid out above; hence, they systematically appear under Agr and thus precede the adverb and the subject. In short, Agr is not unspecified anymore at stage 2; however, L2 learners have not yet acquired the proper target value. At stage 3, the German headedness of AgrP and TP is acquired, as well as systematic verb-movement to C. The verb moves to T and Agr (assumed to be <strong>) on its way to C. As a result, no adverb can intervene between the subject and the verb.

In early longitudinal spontaneous data of three francophone children learning English (Gerbault, 1978; Tiphine, 1983), Eubank (1993/1994) reports that the English negator *no* usually precedes the verb in the earliest recordings.

(17)　a. no open the door　　　　　　(Jean-Marc)
　　　　b. no like it today

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Recall that French has long verb-movement (past the negation). The fact that French learners of English do not display verb-*no* orders in English shows that they have not transferred the strong Agr feature of their L1 to the target language (this is similar to White's (1992) findings discussed in 2.3). At a later stage, only non-thematic verbs are found before the negator, as in (18a); thematic verbs keep appearing after it, as in (18b).

(18) a. no, no, it's not broke   (Jean-Marc)
      b. you not understand

Considering that Agr is still unspecified at that stage, Eubank argues that only nonthematic verbs may move to Agr since they have no thematic roles to transmit; in contrast, thematic verbs cannot undergo long verb-raising. Again, if the French <strong> Agr had transferred, no discrepancy between thematic and non-thematic verbs would be observed in terms of movement (i.e. all verbs would raise).[13]

Finally, Eubank (1996) reports optional verb-raising in early spontaneous production data from four German children learning English (Wode, 1981). In (19a), Eubank argues that the finite verb *go* has moved out of the VP as it precedes the negator *not*, while the infinitival form *go* is in VP in (19b) since it follows the negator. According to Eubank, these sentences are characteristic of an acquisition stage at which functional categories and optional verb-raising are found.

(19) a. John go not to the school   (1;13)
      b. You not shut up   (1;13)

German is a language with a <strong> Agr value, whereas Agr is <weak> in English. If the German value had transferred to L2 English, verb-movement past the negator should be

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[13] Eubank (1993/1994) assumes that Agr is associated with a <non-finite> value in the early stages of the acquisition of L2 English. This is akin to the proposal that Agr remains unspecified initially (Eubank, 1992). In other words, Agr is assumed to be neither <strong> nor <weak> in early L2 grammars

systematic. As it is optional, it must be the case that a) the value has not transferred; and b) the target Agr feature has not been acquired yet.

4.3. Evaluation

Eubank (e.g. 1992, 1993/1994) has the merit of addressing the question of optionality of verb-movement and finiteness in early SLA, which no other L2 hypothesis does. Yet, the Weak Transfer analysis is problematic at several levels. Conceptually, there is a problem concerning the nature of features. As pointed out by Schwartz & Sprouse (1996), feature strength is an abstract property of the grammar and not of the inflectional paradigm. Therefore, the fact that the morphology does not transfer should not interfere with the possibility of transfer of features. Indeed, the very facts that Eubank uses to argue in favour of his hypothesis can be reanalysed by postulating the transfer of feature values. Considering verb-placement vis a vis negation in the L2 acquisition of English by French native speakers, Schwartz & Sprouse (1996) propose that the French <strong> Agr responsible for long verb-movement transfers to the interlanguage grammar. They suggest that the English negator *not* is analysed as the French clitic *ne* - and not as *pas* - by the learners (based on phonological similarity between the two forms). In other words, *not* is assumed to be the head of NegP and not its specifier; it is also assumed to be a clitic. As such, it is being picked up by the verb on its way to Agr - just like in L1 French - thus yielding the order Subject-*not*-Verb-Object. Contrary to Eubank (1996), then, the occurrence of a preverbal negator is not due to the lack of verb-movement to Agr; rather, it is assumed to stem from the proclisis of the negative marker onto the raising verb.

In addition, the way Eubank (1996) accounts for Wode's L2 English data does in fact suggest that inflectional properties have transferred. Comparing (18b) with (19a), we can see that French learners of English do not allow raising of thematic verbs past the negator, whereas such a movement is allowed by German native speakers learning English. Crucially, the learners are roughly at the same stage of acquisition. In particular, Agr is still

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assumed to be unspecified, while the tense position is available for verb-movement. Everything else being equal, Eubank argues that the difference in verb-placement between the two learning situations stems from the location of Tense in the interlanguage. Following Platzack & Holmberg's (1989) account of verb-movement in V2 and non-V2 languages, Eubank argues that the French native speakers assume that Tense is under T (below NegP), whereas the Germans speakers locate Tense under C. For francophone learners, then, the verb can only move to T and will always follow the negator. For German-speaking learners, the verb may move to C and thus precede the negator. The problem with this account is that it crucially relies on the transfer of the L1 categories along with their finiteness specifications: [+F] in German C and [+F] in French T. This is in major conflict with Eubank's original claim that functional categories transfer without any particular specification.

Finally, at the empirical level the data reported by Eubank in support of his model does not appear to be optional enough. In particular, it does not seem to be able to offer a powerful explanation for the optionality of finiteness reported by Vainikka & Young-Scholten (1994), among others. For Eubank, there exists a stage at which verb-movement to T is possible while Agr is still unspecified. In L2 German, for example, Eubank (1992) assumes that when L2 learners start randomly selecting Agr features, they are at a stage where verb-movement to T is systematic (stage 2; see section 4.3). In other words, even though verbs may not overtly raise to Agr, they may be under T, which in turn means that the corresponding utterances are finite. Eubank's system thus predicts that a large proportion of early utterances are finite, contrary to what Vainikka & Young-Scholten (1994) argue. In addition, if indeed there is verb-movement to T, the finite verb in T should follow the negator (assuming that NegP dominates TP). Such cases are not reported in the literature.[14] At his stage 2 of L2 German acquisition, Eubank (1992) says that finite verbs

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[14] Eubank (1996) claims that such cases are found in the acquisition of L2 English, as seen earlier in this section. However, the examples all involve uninflected verbs, which makes it difficult to assert that we are dealing with finite forms.

(in T) all precede the negator. His account crucially relies on the assumption that the negator is adjoined to specVP. However, no argument is given as to why this should be the case.[15] If we admit that Spanish is like Italian in that NegP is located between AgrP and TP (Belletti, 1990), then transfer of the L1 Spanish functional categories and tree structure into L2 German, which Eubank claims occurs, should have Neg located higher than T in the interlanguage. Verb-movement to T should therefore locate the verb after the negator. In conclusion, it is questionable whether the verb indeed raises to T and optionally to Agr in early SLA.

4.4. Summary

According to the Weak Transfer Hypothesis, functional categories transfer from the L1 without their associated features. Before acquiring the target features, L2 learners are claimed to randomly select <strong> and <weak> values, which accounts for optional verb-movement. Although there is a genuine concern to explain optionality, several problems can be found with Eubank's account. First, it is not clear why features should not transfer at all, given that they are an inherent part of the L1 grammar. In fact, part of the data presented by Eubank can be analysed using L1 (transferred) features. Additionally, the Weak Transfer Hypothesis claims that verb-movement to T occurs relatively early in SLA, which makes it difficult to account for all the cases of nonfinite utterances reported in the early stages.

5. The Truncation Hypothesis in L2 acquisition

5.1. Main claims

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[15] Incidentally, Eubank is rather inconsistent in his location of NegP. His account of early L2 English presupposes that NegP is above TP, whereas in L2 German it is assumed to be adjoined to specVP, i.e. below TP.

The hypothesis that I propose in this thesis holds that Rizzi's (1994) Root Principle, according to which root declaratives are CPs, is not operational in initial L2 grammars. This proposal is parallel to Rizzi's (1993/1994) analysis of the early stages of L1 acquisition. The predictions laid out in Chapter 1 and further discussed in Chapter 2 also hold within the context of L2 acquisition. In particular, truncation is expected to occur, which should yield the projections of different types of roots, such as CP, IP, or VP. The nature of the root has direct consequences for the finiteness of the corresponding utterance, in that VP roots will yield root infinitives, whereas finite utterances will be obtained when at least IP is projected. Therefore, a period during which both finite and nonfinite declaratives are produced is expected to be observed from the onset of acquisition until the Root Principle emerges.

Under the Truncation Hypothesis, the shortcomings in early L2 production are not related to the question of the availability of functional categories but to the underspecification of the Root Principle. Indeed, it assumes that functional categories are present in initial L2 grammars.[16] Since truncation can apply at any point, the apparent variability in the projection of functional categories in early SLA is explained. Furthermore, by postulating the initial availability of functional categories, a strong continuity is maintained between early interlanguage grammars and later systems. We saw in the previous chapter that it was theoretically advantageous to assume such a relationship between child and adult grammars in L1 acquisition. The same advantages obtain in SLA (except that L2 learners may not acquire the target system).

Despite the parallel between in L1 and L2 acquisition concerning the possibility of truncation, there are two main differences between the two domains of acquisition that

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[16] Concerning the D category, the Truncation Hypothesis does not make any particular prediction concerning its availability in initial L2 grammars. The reason is that D does not directly fall under the scope of the Root Principle. In L1 acquisition, evidence suggests that the determiner system and the tense system do not go through the same developmental process (Clahsen et al., 1996), contrary to what Hyams (1996) proposes. In the context of SLA, the same reservation concerning the parallel development of DP and TP is assumed. In particular, there is evidence suggesting that D is readily available and used consistently in L2 grammars, as suggested by Grondin & White (1996).

merit attention.[17] We first need to deal with the origin of grammatical knowledge. While the Truncation Hypothesis assumes that L2 grammars are constrained by UG, it is relatively neutral concerning where the knowledge of structural representation comes from. Whether or not transfer occurs, it is predicted that truncated structures will be projected. In other words, truncation may apply to projections that have transferred from the L1 grammar or that have been directly accessed from UG. This being said, the Truncation Hypothesis is not totally compatible with the FTFA. Assuming that L2 learners have a mature L1 grammar at the onset of L2 acquisition, the Root Principle is presumably fully operational in that system. Yet, the assumption that the Root Principle is not implemented in early L2 grammars rules out the possibility of transfer of the entire L1 system to the interlanguage.

The second point to be discussed pertains to age. The Truncation Hypothesis holds that initial grammars should allow truncation, regardless of when acquisition starts. Therefore, no qualitative difference is expected between children and adults with respect to truncation. In particular, they should all produce root infinitives in the early stages of acquisition. Conversely, the Root Principle is predicted to become fully operational during the acquisition process, irrespective of the question of age. Both children and adults are thus predicted to stop producing root infinitives at some point. However, it is not necessarily expected that the period during which truncation is allowed in the interlanguage should be of the same length for children and adults.

Finally, it appears important at this point to clearly distinguish the Truncation Hypothesis from the Weak Transfer model in their accounts of variability in early L2 grammars. Eubank (1996) argues that the early stages of L2 acquisition are characterised by the projection of VP roots. According to him, functional categories are present in the initial interlanguage grammar but must be motivated in order to be projected. This idea is not incompatible with truncation. Like Eubank, the Truncation Hypothesis assumes that

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[17] There is also the question of the emergence of the Root Principle (and hence of the nature of underspecification). I come back to this point in the next Chapter.

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functional categories are initially available. It also holds that roots may vary according to what must be encoded. If there is a finite verb, the root will be (at least) IP; if the verb is nonfinite, the root is VP (i.e. there is no reason to project IP). Where the two proposals differ is with respect to finiteness. As seen in section 4.3, the Weak Transfer Hypothesis predicts that V-T movement occurs relatively early, which means that utterances should all be finite at an early stage. In other words, there is no strong connection between optionality of verb-movement and finiteness. Such is not the case for the Truncation Hypothesis. Under this approach, the possibility of verb-movement is intimately related to finiteness. The two models therefore make different predictions concerning the early stages of acquisition. For example, DP subjects should be found in all root declaratives under Eubank's approach, whereas they should only be found in IP or CP roots according to the Truncation Hypothesis.

5.2. Evidence (so far)

5.2.1. Finite and nonfinite declaratives

The Truncation Hypothesis offers a straightforward account for the apparent optionality of finiteness and verb-movement in the early stages of SLA. As predicted, not all utterances produced in the early stages are nonfinite; rather, both finite and nonfinite sentences are found. In the L2 acquisition of German by SOV language speakers (e.g. Turkish speakers), it was argued that root infinitives display the nonfinite main verb in sentence-final position (Schwartz & Sprouse, 1994; Vainikka & Young-Scholten 1994, 1996a, 1996b). This finding is consistent with the assumption that VP roots are projected (and that the headedness characteristics of VP have been transferred from the L1). As to the finite declaratives produced by these learners in the early stages, they can be interpreted as CPs. Since IP is right-headed in Turkish, the fact that the finite verb precedes VP-material calls for the projection of CP, as argued by Schwartz & Sprouse (1994). Note that the co-occurrence of finite and nonfinite declaratives does not require the existence of two

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different stages of acquisition. Under the Minimal Trees Hypothesis, the finite sentences observed in early production data are assumed to be precursors of the subsequent FP-stage. According to the truncation model, these sentences can be part of the root infinitive period. This has the advantage of doing away with the FP-stage, which we saw is theoretically problematic.[18]

In her investigation of L2 French data, White (1996) found that root infinitives represented between 11% to 37% of all main declaratives for about the first 14 or 15 months of exposure. For one of the two children examined, root infinitives were found in almost all interviews. These figures show, not only that root infinitives were produced, but also that both finite and nonfinite declaratives co-occurred in the learners' speech.

5.2.2. Auxiliaries and clitics

Both auxiliaries and clitics are reported to be only found in finite declaratives in early SLA, which is consistent with the Truncation Hypothesis. Schwartz & Sprouse (1994) found no instance of auxiliaries forming root infinitives. As for subject clitics in early child L2 French, White (1996) found that they almost never occurred in root infinitives.

5.2.3. Null subjects

Examining L2 German data, Vainikka & Scholten (1994) report a high percentage of null subjects in so-called VP utterances (root infinitives). From their table D and E, we can infer that Aysel and Meduh (two Turkish speakers) use around 82% of null subjects in RIs at level I (55/66 and 124/151 respectively). Assuming that these sentences are indeed VP, this finding is consistent with a truncation analysis, since a null constant may be licensed and discourse-identified in the specifier of a VP root. Vainikka & Scholten also

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[18] This being said, a number of verbs bearing the -en suffix were found higher than VP in early L2 German. If these verbs are indeed nonfinite, this finding is problematic for the Truncation Hypothesis. I come back to this point in the next two chapters.

report the production of subjectless finite sentences. However, the figures provided do not allow us to decide whether all cases of omitted subjects can be analysed in terms of null constants. These figures concern the production of overt subjects with raised verbs and collapse preverbal and post-verbal subjects. Therefore, where there is a discrepancy between the number of raised verbs and the number of overt subjects, it is impossible to infer the position of the omitted subjects. The Truncation Hypothesis predicts that only pre-verbal subjects can be omitted in the acquisition of non *pro*-drop languages such as German. These null subjects are analysed as null constants located in the specifier of the root. Post-verbal subjects, on the other hand, may not be dropped as they do not appear in the specifier of the root.

5.2.4. Negation

In the early stages of the L2 acquisition of English by a German-speaking children, Eubank (1996) reports that non-thematic verbs precede the negator *not*, while thematic ones may follow it, as in (20a) and (20b).

(20) a. lunch is no ready   (0;27)
      b. no catch it   (0;27)

Eubank argues that at an early stage both types of sentences are instances of VP roots. Differences are assumed to concern the position of the negator in the two structures. While it modifies the AP *ready* in the first one, as in (21a), it modifies the VP *catch it* in the second one, as in (21b).

(21) a. [vp lunch is [AP no [AP ready]]]
      b. [vp no [vp catch it]]]

There appears to be no reason to absolutely maintain a VP analysis for both sentences. For one, such an account should be extended to all the cases of apparent verb-movement at Vainikka & Young-Scholten's (1994) VP-stage. Vainikka & Young-Scholten note that the cases of apparent verb-movement all involve finite verbs. As we are not talking about a few isolated cases, the high correlation between finiteness and verb-placement can better be captured by assuming a functional head above VP that can host the raising verb. In addition, assuming that NegP immediately dominates VP, a truncation analysis avoids the placement of the negator marker in two different positions in finite and nonfinite sentences. Sentences such as (21a) are interpreted as at least IPs, while sentences such as (21b) are considered NegPs. The two representations are in (22).

(22)   a. [$_{IP}$ lunch is [$_{NegP}$ no [$_{VP}$ t ready]]]
       b. [$_{NegP}$ no [$_{VP}$ catch it]]]

The Truncation Hypothesis can also account for subsequent negation data reported by Eubank (1996), namely the difference in verb-movement observed between German and French learners of English. The German learners apparently allow thematic verbs to raise while the French disallow such a movement. Now, if German learners of English assume that Tense is in C, just like in their first language, it follows that whenever they project C the thematic verb will move out of VP and will thus precede the negative marker. If, on the other hand, only NegP is projected, movement will not occur and the verb will be following the negator. As for the French speakers, I adopt Schwartz & Sprouse's (1996) analysis of negation sketched out in section 4.3. If the learners treat the English no -, and even not -, as a clitic, the order Neg-V is obtained both when the structure is truncated below IP (in which case the verb is nonfinite) and when the full structure is generated (in which case the verb is finite and located under a strong Agr transferred from the L1). In short, the difference between German and French learners of English with respect to verb-

placement is not related to the possibility of verb-movement; rather, it stems from a differential treatment of negation in English based on the respective L1s.

5.3. Summary

The Truncation Hypothesis holds that the Root Principle is unavailable in early SLA. It predicts that truncation is allowed in initial L2 grammars, regardless of whether transfer occurs or not, and regardless of the age at which acquisition starts. The optionality of verb-movement is explained structurally: it should occur in IP and CP roots, but not in VP roots. This model of optionality differs from Eubank's Weak Transfer Hypothesis in that a strong correlation between verb-movement and finiteness is predicted. Most of the findings concerning the status of functional categories in early L2 grammars that have been reported in the literature are consistent with the Truncation Hypothesis. These concern the optionality of finiteness and verb-placement, the occurrence of auxiliaries and subject clitics in finite declaratives and verb-placement with respect to negation.

6. Conclusion

In this chapter, recent theories of L2 acquisition bearing on the issues of the initial state and functional categories have been discussed. Most theories try to show that these categories are either absent or present in early L2 grammars. However, by restricting SLA in terms of weak vs. strong continuity, these theories fail to adequately explain large portions of early production data. The Minimal Trees Hypothesis has difficulties accounting for early evidence of functional categories and verb-movement, while the Full Access Hypothesis and the FTFA model cannot explain the non-systematicity of verb-movement in the early stages. The incomplete account for early production data which results from these theories is akin to what was found in L1 acquisition. Eubank's Weak Transfer Hypothesis is so far the only attempt at dealing with the non-systematicity of verb-

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movement in early SLA. Although his approach unveils important research questions, it is relatively problematic. It was argued, for example, that the transfer of functional categories may involve the transfer of corresponding properties, in contrast to what is postulated by Eubank's model. Moreover, the Weak Transfer Hypothesis offers a poor account of the optionality of finiteness observed in the early stages of SLA. Consequently, none of the SLA theory proposed so far manages to provide a strong model for early L2 acquisition. By contrast, both theoretical and empirical arguments were presented in favour of the Truncation Hypothesis. By allowing the possibility of structural truncation in early interlanguage grammars, it can successively account for variability in terms of projection of functional categories, verb-movement and finiteness. As a result, it can explain a wider range of acquisition data than any other theory. A direct investigation of the Truncation Hypothesis is presented in the next chapter.

Chapter 4

The Truncation Hypothesis and the L2 Acquisition of French and German

1. Introduction

In this chapter, I investigate the Truncation Hypothesis in the acquisition of child and adult L2 French and German. In Chapter 1, we saw that the nature of the root yields specific predictions concerning the properties of the utterance that it underlies. If VP is the root, then there is no functional category under which the verb can appear. No tense variable (assumed to be in T) is posited either. Therefore, the verb will appear in a nonfinite form. In other words, root infinitives should be observed in early acquisition. These sentences, however, should not be the only utterances generated by initial grammars. Since the nature of the root may vary, IP or CP can be roots as well. A tense variable requiring identification is posited in such representations, which means that the corresponding sentences will be finite. Further predictions are listed below:

(a)   word order may be affected by the type of root being projected. The headedness characteristics of CP, IP, and VP should determine the position of the verb in these roots.

(b)   no embedded clauses, wh-questions and yes/no questions should involve a nonfinite verb. A VP root does not include the adequate positions to host

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complementisers, wh-words or the Q-marker. All these elements require the projection of the CP node, which in turn means that the clauses in which they appear will be finite.

(c) null constants should be found in VP and IP roots. These elements appear in the specifier of the highest projection where they are identified by discourse (Rizzi, 1994). Thus, subjectless root infinitives and finite root declaratives should be found. In contrast, null constants cannot be identified in CPs such as embedded clauses, wh-questions, and yes/no questions since they do not occupy the specifier of the highest projection. If the target language is not a *pro*-drop language, i.e. if there is no other way to license null subjects, subjectless CPs should not be found.

(d) the possibility of null constants and root infinitives should disappear simultaneously once the Root Principle emerges. CP will then systematically be the root of declarative sentences, which means that null constants in specIP will not be able to be identified by discourse and that main verbs will obligatorily be finite so as to provide identification to the tense variable.

(e) assuming a representation of negation whereby NegP is located in between AgrP and TP, a NegP root would entail the projection of T. The resulting sentences should therefore be finite. In other words, no negative RI should be found.

(f) since auxiliaries and modals require the projection of (at least) T, they should not be found in VP roots. Thus, they are predicted not to appear in root infinitives; instead, they should always be found in the finite form.

(g) subject clitics should not be found in VP roots since there is no functional category under which they can appear; instead they should only appear in finite declaratives (CP or IP roots).

(h) nominative DPs should be banned from VP roots as there is no mechanism providing structural case-assignment/checking; on the other hand, they are expected to appear in finite declaratives (CP or IP roots).

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(i)   the only overt subjects of root infinitives are elements that do not need structural case, i.e. bare NPs, or elements bearing default Case. In contrast, such items should not appear as subject of finite declaratives (in IPs or CPs).

I examine these predictions in longitudinal spontaneous production data from eight learners: four L2 learners of French and four learners of L2 German. Each language group comprises longitudinal production data from two children and two adults collected in the early stages of acquisition. In section 2, I introduce the learners and the methodology used to analyse the data. I then present the results in sections 3 through 10. I show that all the children go through a period during which they project truncated structures. In particular, the findings suggest that the distribution of nonfinite verbs is structurally determined in L2 child grammar, i.e. tenseless verbs only appear in VP roots. The findings are less straightforward in the case of the adult learners who seem to use the infinitival marker as a substitute for finite inflections. Hence, verbs in the nonfinite form are found under high functional projections, which cannot easily be accounted for in terms of structural truncation.

2. The Data

2.1. The learners

Table 1 provides details on the learners and interviews. It indicates the L1 and L2 for each learner and the age at the first interview. It also gives the amount of exposure (in months) for each file.

Table 1: Details on the learners and interviews

	Months of exposure							
	Greg	Kenny	Luigina	Concetta	Abdelm.	Zahra	Zita	Ana
L1	*English*	*English*	*Italian*	*Italian*	*Arabic*	*Arabic*	*Portug.*	*Spanish*
L2	*French*	*French*	*German*	*German*	*French*	*French*	*German*	*German*
Age	*5;8*	*5;4*	*8*	*8*	*??*	*34*	*17*	*22*
Files: 1	—	0.3	0.7	0.2	14	12	3	3
2	—	0.5	1.4	1	15	14	3.5	4
3	—	1	2.3	1.8	16.7	15.5	3.7	4.5
4	—	2	3	2.5	17.7	17	4	4.7
5	—	3	3.7	3.2	18.7	18.5	5.6	5.2
6	—	4	4.4	4	20.5	20	6.5	7.2
7	5	5	5.4	5	21.5	21.7	6.7	7.4
8	—	7	6	5.6	24	23.2	7.5	8.2
9	—	8	7	6.8	25	23.7	8	11
10	9	9	7.9	8.4	25.7	24.5	9	11.7
11	—	9.5	8.6	9.1	27	25.5	9.5	13
12	10	10	8.8	11	27.7	26.7	10	13.5
13	11	11	9.5	12.4	30	27.7	11	14.2
14	14	14	11.4	13.5	30.7	28.2	11.7	23
15	15	15	12.8	14.5	31.7	29.2	13.7	23.5
16	18	18	14	—	32.5	33.7	15	24
17	20	20	14.9	—	33.5	34.4	16.5	24.7
18	25	25	19.8	—	34.5	36	19	—
19	27	27	—	—	35.7	36.5	22	—
20	29	29	—	—	36.7	38.5	22.7	—
21	—	—	—	—	38.7	39.5	23.4	—
22	—	—	—	—	43.5	40	24.4	—
23	—	—	—	—	51.5	41	25.4	—
24	—	—	—	—	52.5	42	25.6	—
25	—	—	—	—	54.5	43.5	25.8	—

The two children of the L2 French group, named Greg and Kenny, are English native speakers learning French in Montreal (Lightbown, 1977). The children's first

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contact with French occurred at age 4;5 et 4;9 respectively when they started a bilingual nursery program. The children spoke very little French at the end of this program. They were then enrolled in an immersion program in kindergarten. The interviews started during this period. In this study, I examine data obtained from the second interview on as both children spoke very little in the first one. At the time of their second interview, Greg was 5;4 and Kenny 5;8. The two children then started attending a regular French kindergarten. Interviews continued into the children's first and second grade. The recording sessions took place at regular intervals (roughly every month) and were conducted by a research assistant who tried to make the children speak by asking them questions and playing with them. Each interview included similar questions and games. In all, Greg took part in 13 interviews whereas Kenny was interviewed 20 times during two and a half years.

The adult learners of French are two Moroccan Arabic native speakers named Abdelmalek and Zahra. Both of them were immigrants to France from Morocco and were interviewed over a period of three years as part of the European Science Foundation (ESF) project on L2 Acquisition by adult immigrants (Perdue, 1984). At the time of their first interview, Zahra was 34 years old, while Abdelmalek's age was not specified. They had been living in France for one year but had had very little contact with French.[1] In addition, they had had no exposure to the target language in their native country. Their proficiency level at the time of the first interview was judged to be very limited. Each learner was interviewed roughly once every month. They participated in a variety of tasks, such as free conversation, story telling, role play and metalinguistic discussion. I chose to analyse the free conversations as this was the only task that was systematically conducted at each session. It was also the task that comprised the largest part of the database and that was closest to the child L2 data. In all, 25 files were considered for each learner. They were obtained over a period of 31 months for Zahra and 50 months for Abdelmalek.

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[1] Zahra's date of arrival in France is not given by the ESF Project. It is simply specified that she arrived in 1981 and that the first interview took place on November 18, 1982. I assumed by default that she had been in France for 12 months at that time. It might be the case that she had been there a little longer. This problem had little effect on the findings, as will become apparent below.

The four learners in the L2 German group are all speakers of Romance *pro*-drop languages. The two children, Concetta and Luigina, are Italian speakers. They were 8 years old when they immigrated to Germany with no prior exposure to German. They were first recorded one week after their arrival in the country (Pienemann, 1981).[2] Interviews took place once a month. In all, Luigina participated in 15 interviews over 14 and a half months, while Luigina was interviewed 18 times over a period of about 20 months.

The two adult L2 German learners, Zita and Ana, are Portuguese and Spanish native speakers respectively. They immigrated to Germany at age 17 and 22. Like the other immigrants, neither learner had had prior contacts with German. They were first interviewed by the ZISA project three months after their arrival in Germany (Clahsen et al., 1983). Each learner was then recorded every month for a little less than two years (except for Zita who went back to Portugal for about 9 months, between month 14 and month 23). Zita had received little education in her country and had come to Germany to stay with her sister who lived in Wuppertal. She was mainly surrounded with foreigners and had few opportunities to interact with German speakers. According to Jürgen Meisel (p.c.), she spent her time as a nanny for her sister's child. Ana had a better education than Zita since she obtained the equivalent of a high school diploma. She had come to Germany to join her German boyfriend and hence was constantly exposed to the target language. She also had begun to attend German classes one month prior to the first interview. Her level of proficiency was higher than Zita's at the first interview. In this study, 17 files were reviewed for Ana and 25 files for Zita.

2.2. Methodology

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[2] Luigina did not produce anything at first interview. The data investigated here start at the second recording done after 3 weeks of exposure.

The child L2 French data were analysed with the CLAN program developed by MacWhinney & Snow (1985).[3] In addition, the transcripts were checked against the audio-tapes. This, unfortunately, was impossible for the other data. For the adult L2 German corpora, I used the LAPSUS program developed by Berthold Crysman. All other data were analysed by hand. As discussed in Chapter 1, I considered endings in [e] and [i] in French and -en in German as nonfinite unless there was evidence to the contrary.

Only verbal utterances of at least two constituents were retained in the analysis. I did not consider single verb utterances as their status was difficult to establish. All instances of imitation and formulaic expressions were disregarded. Examples of such routines in French are c'est... ('it is...'), il y (en) a... ('there are (some)'), il a dit... ('he said...'), je sais ('I know'), je (ne) sais pas ('I don't know'), je comprends ('I understand'), je comprends pas ('I don't understand'), où est ... ('where is...') and qu'est-ce qu'il se passe? ('what's happening?'). German routines include das ist... ('this is...'), ich verstehe ('I understand'), ich verstehe nicht ('I don't understand'), ich weiß ('I know'), ich weiß nicht ('I don't know'), es gibt... ('there is'), and wo ist... ('where is...').

In addition, I encountered problems with words such as je ('I') and ne (negative particle) in the transcription of the French ESF data. Only a few selected passages are phonetically transcribed in this data. Each word phonetically transcribed is then listed at the end of the speaker's intervention. In sequences including [je] or [ne], the corresponding words generally given are je and ne. However, the sound [e] could correspond to the first person singular of avoir ('to have') or the third person of être ('to be'). The sequences [je] and [ne] could therefore mean j'ai ('I have:1S') or j'est ('I is'), and n'ai ('NEG have:1S') or n'est ('NEG is'). In other words, the possibility exists that these forms involve a finite auxiliary or copula. This causes serious interpretational problems when [je] and [ne] precede a phonetically transcribed verb ending in [i] or [e], such as [je travaje] ('I work'),

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[3] The results on Greg's and Kenny's data may differ from Grondin & White (1996) and White (1996) who made their calculations by hand.

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since it is impossible to decide whether such sequences are finite or not, i.e. *j'ai travaillé* ('I have worked') or *je travailler* ('I work-INF'). Therefore, I disregarded all utterances displaying *je* and *ne* item.[4] These include the few cases where [je] and [ne] are indicated to correspond to a sequence involving finite forms of *avoir* or *être*. Including such utterances in the calculations would have distorted the results on finiteness. The only occurrences of *je* and *ne* that were maintained were those that were expressly transcribed with a schwa (noted E), as in [jE travaj] ('I work-1S') and [jE travaje] ('I work-INF'), and [il nE travaj pa] ('he NEG work-3S'). In these cases, there is no ambiguity as to the intended meaning since [E] cannot correspond to any verbal form.

3. Finite and nonfinite root declaratives

According to the Truncation Hypothesis, both finite and nonfinite root declaratives should be found in the earliest data. This is indeed what was found in the corpora examined here. In particular, all L2 learners produced root infinitives, i.e. matrix declaratives whose main verb was nonfinite (infinitival form or past participle).

3.1. Child finite and nonfinite declaratives

3.1.1. Child L2 French data

Appendix Table I displays the detail breakdown of the distribution of finite and nonfinite root declaratives produced by the child learners of L2 French. Kenny produced a majority of NPs in the first 3 months. His first verbal utterance was a root infinitive, at month 0.3. A majority of finite declaratives were found in the three subsequent interviews. Thus, it is impossible to talk about an initial stage at which solely root infinitives were produced. If we consider interviews as of month 3, it is clear that both finite and nonfinite declaratives were used. Between months 5 and 9.5, the rate of root infinitives is over 20%

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[4] I would like to thank Maria-Luise Beck and Lynn Eubank for discussing these issues with me.

(except for month 7), slightly declining to around 15% between months 10 and 15. A sharp drop in root infinitives is observed at month 18 (6.5%).

Turning to Greg, we first notice that he produced many more sentences than Kenny, including more root infinitives. This may be due to the fact that he was first interviewed after 5 months of exposure. In proportional terms, however, his rate of RIs is globally lower than Kenny's. It is between 15% and 20% until month 10 (except for month 9.5) and then declines to around 10%. It then falls to below 7% at month 15 and keeps declining until the last interview. Crucially, Greg showed a drop at month 18, i.e. at the same point when Kenny's root infinitives started declining dramatically.

The vast majority of root infinitives produced by Greg and Kenny clearly occurred during the first 18 months of exposure (Table 2). During this period, root infinitives represent 15.1% of main declaratives for Kenny and 8.9% for Greg. Afterwards these percentages drop dramatically and become insignificant (0.6% for Kenny and 0.4% for Greg). The difference in the proportion of root infinitives between the two periods is highly significant for both children (Kenny: X^2=77.348, p<.0001; Greg: X^2=71.712, p<.0001).[5]

Table 2: Finite and nonfinite root declaratives in child L2 French before and after month 18

	Before month 18				After month 18			
	Total	Finite	RIs	%RIs	Total	Finite	RIs	%RIs
Kenny	504	428	76	15.1	527	524	3	0.6
Greg	659	591	58	8.9	911	907	4	0.4

[5] In the rest of the chapter, the data from Greg and Kenny that I focus on concern the first 18 months of exposure. In each table summarising the child L2 data, Greg's and Kenny's figures always refer to that period unless otherwise indicated.

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3.1.2. Child L2 German data

The detailed number of finite and nonfinite declaratives produced by the two children learning L2 German are given in Table II in the Appendix (see Table 3 for a summary). The first thing to point out is that there is a large discrepancy in corpus size between the child learners of L2 German and L2 French. Concetta and Luigina produced far fewer declaratives than Greg and Kenny during the first 14 and 20 months of exposure. The first utterances of children learning L2 German mainly consisted of nouns and noun phrases. Concetta produced her first utterance including a verb at month 5.6. RIs emerged at month 8.4, and formed above 10% of declaratives until month 14.5 (except for month 9.1). A sharp drop is then observed at month 14.5. However, since this corresponds to the last interview, there is no way to tell whether or not Concetta stopped producing root infinitives altogether from that point on.

As for Luigina, she really started using utterances with a verb at month 5.4; still, finite utterances became frequent only at month 14.9, almost at the end of the data collection period. She produced 8 root infinitives (7 in her last 6 interviews). Overall, the number of utterances including a verb is so low that it is impossible to establish any general developmental trend.

Table 3: Total number of finite and nonfinite root declaratives in child L2 German

	Total	Finite	RIs	%RIs
Concetta	173	150	23	13.3%
Luigina	50	42	8	16%

As indicated in Table 3, each child exhibit a global proportion of root infinitives which is close to Kenny's, namely around 15%. Even though the ratio of root infinitives is similar across these three learners, it is clear that the dissimilar corpus sizes do not allow us to draw strong conclusions.

3.2. Adult finite and nonfinite declaratives

In contrast to the child data, the adult corpora were similar in size and hence more easily comparable. Each learner produced at least 750 root declaratives across all interviews. The most important finding concerning the adult data is that it includes more root infinitives than the child corpora. In addition, there is no sharp drop in the production of root infinitives in the adult data, which differs from what was found for the children acquiring L2 French.

3.2.1. Adult L2 French data

Both finite and nonfinite declaratives are found in the earliest interviews of the two adult learners of L2 French (Appendix Table III). Root infinitives are particularly frequent in the data (see Table 4 for a summary). Abdelmalek produced around 40% of root infinitives between months 17.7 and 25.7, a rate that dropped afterward to 20-25% (on average) until month 36.7; in the last five interviews, the rate was about 15%. As for Zahra, her proportion of root infinitives oscillated between 15% and 30%. On average, the adult learners produced 10.8 RIs per interview (10.9 for Abdelmalek and 10.7 for Zahra), against only 7.5 for the children (5.1 for Kenny and 9.8 for Greg). The proportion of root infinitives is also similar for both adult learners, around 30%, which is twice as much as Kenny's (Table 4).

In sharp contrast with the child L2 data, there was no substantial drop in the percentage of root infinitives at any point for the adults, nor did root infinitives disappear from their data, which is even the more striking since the data collection period was much longer than for the children (over 3 years compared to two and a half years for Greg and Kenny).

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	Total	Finite	RIs	%RIs
Abdelmalek	925	653	272	29.4
Zahra	836	600	236	28.2

3.2.2. Adult L2 German data

As indicated in Appendix Table IV, both finite and nonfinite declaratives were also produced in the earliest interviews by the adult L2 learners of German. Yet, Zita and Ana showed two different developmental patterns. First of all, Zita produced many more RIs than Ana. Overall, Zita's proportion of RIs was 24.6%, which is close to the adult L2 French learners' rate, against 9.7% for Ana (Table 5).[6] Second, Zita was rather inconsistent in her production of root infinitives. Highs and lows alternate throughout her data. For example, the proportion of RIs is a high 71.4% at month 5.6, down to 33.3 at month 6.5, sharply raising to 75% at month 6.7, only to plunge down to 31.25% at the next interview. Still, the proportion of RIs generally tends to decrease throughout the data collection. This is particularly visible when considering the level of highs and lows. Highs are at around 70% during the first 10 months, down to 55.6% at month 11.7, 37.5% at month 16.5, and 26.7% at month 25.4. Lows go down from around 30% in the first 11 months, to 17.3% at month 13.7, 8.1% at month 22.7 and 0% at the final interview. However, as was observed with the adult learners of L2 French, there was no sharp decrease in Zita's production of root infinitives. This is to be contrasted with Ana, who practically stopped producing RIs at month 14.2. Her behaviour is thus comparable to that of the children. Prior to month 14.2, her proportion of nonfinite declaratives was roughly

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[6] The comparatively low ratio of RIs found in Ana's data can probably be explained by the fact that her level of proficiency was higher than the three other learners at the beginning of the recording sessions. Even though she had been in Germany for only three months at the time of the first interview, she had been constantly exposed to the language, in contrast to the other learners. Despite this discrepancy in level, I chose to maintain Ana in the analysis because she displayed a similar behaviour to the other learners in terms of the distribution of non-finite verbs, as will become apparent in the next sections.

between 10% and 20%. It then dropped to between 2% and 7%. Collapsing the figures, Ana produced 63 RIs out of 556 main declaratives (11.3%) before month 14.2, compared to 11 RIs out of 210 afterwards (5.2%). The difference between the two periods is significant (X^2=6.484, p<.05).

Table 5: Total number of finite and nonfinite root declaratives in adult L2 German

	Total	Finite	RIs	%RIs
Zita	778	587	191	24.6
Ana	762	688	74	9.7

3.3. Remarks on optionality

As we have seen, both finite and nonfinite verbal forms were found in all corpora. It is important to point out that most nonfinite verbs were also produced in the corresponding finite forms in the early stages of acquisition. Often, both the finite and nonfinite forms occurred during the course of the same interview (sometimes in very early sessions) as illustrated in (1) through (8).

(1) a. moi jouer   avec le train   (Greg, month 5)
        me play-INF with the train
     b. moi je joue   avec une
        me I play-1S with one
     c. juste mettre   une jaune ici   (Greg, month 15)
        just put-INF a yellow here
     d. c'est quand tu   mets   une...
        it is when you put-2S one

(2) a. toi faire   ça   (Kenny, month 8)
        you do-INF this
     b. Le papa   vache fait   ça
        the daddy cow do-3S this

c. moi jouer   le train   (Kenny, month 10)
          me play-INF the train
       d. moi joue   avec
          me play-1S with

(3)   a. mit Lehrer   oder mit Mutter spielen?   (Concetta, month 11)
          with teacher or   with mother play-INF
       b. spielt   Mutter
          play-3S mother
       c. sie komm ... und machen aua   (Concetta, month 11)
          she come-ø   and do-INF oooh (=she hurt herself)
       d. macht de Papier
          make-3S the paper

(4)   a. du schlafen in er Schule   (Luigina, month 12.8)
          you sleep-INF in the school
       b. warum du   schlafe?
          why   you sleep-1S
       c. ich schreiben   (Luigina, month 14.9)
          I   write-INF
       d. schreibe ich?
          write-1S I

(5)   a. pas demander les papiers   (Abdelmalek, month 17.7)
          not ask-INF the papers
       b. i demande
          he ask-3S
       c. pas donner   (Abdelmalek, month 17.7)
          not give-INF
       d. i donne   une bière
          he give-3S a   beer

(6)   a. i parler   beaucoup   (Zahra, month 18.5)
          he speak-INF much

b. ils parlent

they speak-3P

c. tout le monde rester   à le   salon   (Zahra, month 23.7)

everyone   stay-INF in the living-room

d. deux restent   le bureau

two   stay-3P (at) the office

(7)   a. ich studieren   in Porto   (Zita, month 3.7)

I   study-INF in Porto

b. ich studiere   nicht

I   study-1S not

c. mein Schwester arbeiten   bei Siemens   (Zita, month 4)

my   sister   work-INF at Siemens

d. mein Schwester arbeite   in Bayer

my   sister   work-1S in Bayer

(8)   a. das er kaufen   in en strant (=straße)   (Ana, month 4)

this he buy-INF in a   street

b. er kaufe   ein Blume

he buy-1S a   flower

c. ein Junge lernen   (Ana, month 4)

a   child learn-INF

d. viel Frau   lerne   Deutsch

many women learn-1S German

Crucially, it is not the case that the first occurrence of a verb systematically displays the nonfinite form (contra the Minimal Trees Hypothesis). In fact, when we look at Appendix Tables I through IV, we can see that the first sporadic instances of declarative sentences are finite. The fact that some verbs are found in the finite form when used for the very first time suggests that the learners have knowledge of finiteness. In addition, all learners display knowledge of agreement throughout the data: when finite markers are used, they mainly appear in the correct environment (I come back to this point in Chapter

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6). In sum, the production of root infinitives does not indicate a lack of knowledge of finiteness and inflectional markers.

In addition, the verbs that appear in the nonfinite form do not seem to share any particular semantic or syntactic properties. For instance, we find transitive, unergative and unaccusative verbs, as can be seen in (9) through (11).

(9) a. mettre une comme ça   (Greg, month 5)
   put-INF one like this

  b. ma ferme visiter toi   (Kenny, month 3)
   my farm visit-INF you

  c. das Kind trinken Limonade (Concetta, month 6.8)
   the child drink-INF lemonade

  d. eine Junge spielen Ball   (Luigina, month 6)
   a child play-INF ball

  e. parler le maroccain   (Zahra, month 14)
   speak-INF the Moroccan

  f. donner les billets   (Abdelmalek, month 17.7)
   give-INF the tickets

  g. ein Herr verkaufen Blumen (Ana, month 4)
   a man sell-INF flowers

  h. ich machen die <gâteau> (Zita, month 6.5)
   I make-INF the cake

(10) a. moi jouer avec le train (Greg, month 5)
   me play-INF with the train

  b. pas coucher   (Kenny, month 7)
   not lay+down-INF

  c. jetzt dieser tanzen   (Concetta, month 13.5)
   now this one dance-INF

  d. eine Junge essen   (Luigina, month 9.5)
   a child eat-INF

  e. du schlafen in er Schule (Luigina, month 12.8)
   you sleep-INF in the school

f. i   dormi   la   montagne   (Abdelmalek, month 17.7)
   he sleep-PP the mountain

g. ich schlafen   viel   (Ana, month 4.5)
   I   sleep-INF much

h. ich studieren   in Porto   (Zita, month 3)
   I   study-INF in Porto

(11)   monsieur il   arriver   (Zahra, month 18.5)
        man   he arrive-INF

In the first stages of French L1 acquisition, Ferdinand (1996) suggests that the distribution of finite and nonfinite forms can be accounted for in terms of eventivity. Eventive verbs denote activities, accomplishments and achievements. By their very nature, eventive verbs must be related to a particular point on the time axis, i.e. they must be [+/- present]. In contrast, non-eventive verbs are assumed to be stative verbs that do not need to be associated to any particular moment in time. For Ferdinand, Tense is present in early grammars but its different features (e.g. [+/- present]) are not. Since non-eventive verbs may be [+tense] without having to be [+/-present], Ferdinand argues that they can appear in the finite form. In contrast, eventive verbs cannot be [+tense] without being related to [+/- present]. Since tense features are assumed to be initially unavailable, eventive verbs do not move to Tense and thus appear in the nonfinite form. In the L2 acquisition of French and German, it is clear that eventive verbs do not solely occur in the nonfinite form in the early stages. Verbs such as *jouer* and *spielen* ('to play') and *faire* and *machen* ('to do') are found in both finite and nonfinite forms in the various corpora, as can be seen in (1a-b), (2a-b), (2c-d), (3a-b) and (3c-d) above. This suggests that Ferdinand's account of finiteness in terms of eventivity does not apply to SLA. Rather, it seems that we are dealing with genuine cases of optionality in the usage of finite and nonfinite forms during the early months of acquisition, as predicted by the Truncation Hypothesis.

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3.4. Summary

All L2 learners investigated here produced both finite and nonfinite declaratives during the first months of acquisition, as predicted by the Truncation Hypothesis. Moreover, there was no initial period where RIs were the only utterances being produced. It was also shown that the occurrence of root infinitives did not stem from a lack of knowledge of finiteness and that it was independent from lexico-semantic considerations. This suggests that finiteness is truly optional in early L2 acquisition.

Major differences were also uncovered between the child and adult L2 learners. First, the adult learners produced more root infinitives than the children. The adult proportion of RIs (except for Ana) is about twice that of the children (30% vs. 15%). Second, the child L2 French learners stopped producing RIs at one point in the data (at month 18). Such an abrupt decline was not observed in the adult L2 learners' data (except for Ana). Rather, the production of RIs either remained relatively stable throughout (in adult L2 French) or was very inconsistent (with a gradual decline), as in Zita's case.

4. Word order in L2 German

The nature of the root yields different predictions concerning word order in V2 languages such as German. I review these predictions below.

4.1. Nonfinite root declaratives

According to the Truncation Hypothesis, root infinitives should only be found in VPs. Since VP is right-headed in German, it is predicted that in root infinitives the verb should follow all VP-material and appear in sentence-final position. However, the reverse obtains in the L2 German data (child and adult) investigated here: most nonfinite verbs precede VP-material throughout the data collection periods (Appendix Table V). As can be seen in (1) through (9) above, almost all L2 German utterances have the verb in sentence

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internal position. The distribution of verb-placement in L2 German RIs is summarised in Table 6.

Table 6: Total number of VX and XV orders in L2 German RIs

Age	Learners	VX	XV
Children	Concetta	15	1
	Luigina	4	0
Adults	Zita	115	9
	Ana	52	3

The frequency of the VX order could be explained by L1 influence. All the L1s involved here have a left-headed VP. If transfer of lexical categories and their headedness occurs in early SLA, as argued by many researchers (du Plessis, Solin, Travis & White, 1987; Eubank, 1993/1994; Schwartz & Sprouse, 1994; Vainikka & Young-Scholten, 1994), then the lack of verb-final RIs can readily be explained. Below, I review this possibility for the child and adult data.

4.1.1. Child L2 German learners

Utterances displaying an auxiliary/modal and a nonfinite verb show that Concetta has a left-headed VP in the early stages.[7] When VP-material is involved, it is systematically preceded by the nonfinite verb, as in (12). This is consistent with the VX order found in RIs.

(12) a. mein Vater is gegan in-hier   (Concetta, month 8.4)
         my   father is gone in here

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[7] Luigina produced no utterance with an auxiliary/modal, a nonfinite verb and VP-material. It is therefore difficult to establish the headedness characteristics of VP in her interlanguage grammar. In any case, she produced so few RIs involving VP material that word order is not conclusive as far as the presence of VP roots in her data.

b. du muß gehen   na Hause?   (Concetta, month 9.1)
   you must go-INF to home

Concetta only used right-headed VPs at her last interview, as shown in (13).

(13)   a. i sollte   in Klasse gehen   (Concetta, month 14.5)
           I must-PAST-1S in class   go-INF
           'I had to go to class
        b. du has falsch gemacht   (Concetta, month 14.5)
           you have wrong done
           'you made a mistake'

Only one RI including VP-material was recorded at that session. It is therefore inconclusive as far as truncation is concerned. If the data had covered a longer period of time, we would have been able to see whether the VX order later changed to XV in root infinitives.

Evidence that VP roots are indeed allowed in the child grammars of L2 German comes from verb particles. Recall that verb particles are predicted to remain attached to the verb in VP roots since verb-movement cannot occur. In the two RIs containing a verb and a particle found in the data, the particle (*weg* = 'away') is attached to the verb:

(14)   a. und jezt   Mik-Maus   und Goofy weg- gehen   (Concetta, month 13.5)
           and now Mickey Mouse and Goofy away-go-INF
        b. der Junge weg-fahren   (Luigina, month 9.5)
           the child away-drive-INF

Note that in (14a) the verb *weggehen* ('to leave') might be argued to be in the plural form rather than the infinitive. Yet, the verb was also found to be separated from its particle in a finite context during the same interview (15). In this utterance the verb precedes the particle, as required in German. This suggests that Concetta had knowledge of the particle *weg* and that the sentence in (14a) is really nonfinite.

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(15)   und hier geh *weg*   Mik-Maus   und Goofy   (Concetta, month 13.5)

        and here go-ø away Mickey Mouse and Goofy

4.1.2. Adult L2 German learners

The VX order accounts for about 93% of all RIs displaying VP-material for each adult learner of L2 German. Assuming that these sentences are VPs, this suggests that the headedness characteristics of German VP have not been acquired. However, there is independent evidence suggesting that these properties became part of the learners' grammars at one point during the recordings. In clauses involving an auxiliary/modal and a nonfinite verb, the verb started being placed in clause-final position at month 19 for Zita, as in (16), and at month 23.5 for Ana, as in (17).

(16)   a. ich muß sauber (machen)   (Zita, month 19)

           I must clean   do-INF

           'I must clean'

      b. ich will nicht hier bleiben   (Zita, month 25.4)

           I want:1S not here stay-INF

           'I do not want to stay here'

(17)   a. ich könne nicht eine Sache machen   (Ana, month 23.5)

           I can-1S not   a   thing do-INF

           'I cannot do anything'

      b. ich habe   Dekoration gemacht   (Ana, month 24.7)

           I have-1S decoration done

           'I studied decoration'

After these sentences appeared in the data, Zita and Ana produced respectively 54 and 9 RIs with an VX order. The fact that the target headedness of VP was known to the learners suggests that these sentences are not real RIs; rather, they seem to include functional

categories to which the verb raises, e.g. Infl (the exact nature of these categories is discussed in section 4.2.2).

As for the nonfinite declaratives produced before month 19 for Zita and month 23.4 for Ana, they may be VPs underlyingly. There is evidence that VP is considered head-initial in the early stages, presumably as a result from transfer. When auxiliaries and modals are used along with a nonfinite verb and VP-material, the nonfinite verb systematically appears clause-internally. The VX order observed in early RIs is therefore consistent with the Truncation Hypothesis. Now, there is also evidence that IP is considered head-initial in the early stages, as discussed in section 4.2.2 below. In the light of what was said above, the possibility exists that the VX order of RIs in fact derives from verb-movement to I.

4.2. Finite root declaratives

The Truncation Hypothesis predicts that different word orders should be found in finite L2 German declaratives, depending on whether CP or IP is the root. Specifically, a CP root should yield utterances in which the verb precedes VP-material, whereas an IP root should yield sentences with the finite verb in final position. The latter type of finite root declaratives is practically nonexistent in the child and adult L2 German data, as can be seen in Appendix Table VI and Table 7 below.

Table 7: Total number of VX and XV orders in L2 German finite main declaratives

Age	Learners	VX	XV
Children	Concetta	80	0
	Luigina	28	1
Adults	Zita	409	4
	Ana	594	0

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As is the case for root infinitives, SVO is by far the most common word order of finite root utterances (see Clahsen (1986), Schwartz & Sprouse (1994) and Vainikka & Young-Scholten (1994) for similar findings). All L2 German learners investigated here have L1s whose functional categories are left-headed. Again, the initial transfer of these categories along with their headedness characteristics would explain why so few verb-final expressions were found.

4.2.1. Child L2 German learners

Evidence for the headedness of IP in the child grammars is scarce. Only two embedded clauses with an overt complementiser VP-material were produced by the children (both in Luigina's last file). In adult German, such clauses must include the verb in the final position, as a result of verb-movement to I. In each instance, however, the verb precedes the VP-material, as in (18).

(18) a. [CP warum (=weil) [IP das ist mein Ball]]   (Luigina, month 19.8)
          because   this is my ball
      b. [CP warum (=weil) [IP ich nich versteh   Deutsch gut]] (Luigina, month 19.8)
          because   I   not understand German well

This suggests that IP is left-headed in Luigina's interlanguage grammar. The VX order found in her finite root declaratives could therefore result from verb-movement to C or to the head of a left-headed IP. Both cases are consistent with the truncation hypothesis.

As for Concetta, she did not produce any embedded clause with VP-material. It is thus difficult to determine the headedness properties of IP in her interlanguage grammar. Like Luigina, the systematic VX order found in her finite declaratives is consistent with either a CP representation or a left-headed IP root.

The word order found in the adult embedded clauses suggests that IP is indeed considered head-initial in the early stages of acquisition. These clauses almost always display the verb in clause-internal position, i.e. in Infl, as in (19). Note that embedded clauses appeared early in the adult speech, as discussed in section 5.2.2.2.

(19)   a. [cp wenn [ip mein Schwager   kommt   von die Arbeit]]   (Zita, month 10)
               when   my brother-in-law   come-3S from the work
        b. [cp wann [ip du   habst   Papier]]   (Zita, month 22.7)
               when   you have-2S paper
        c. [cp wann [ip ich liebe   eine Person]]   (Ana, month 7.2)
               when   I   love-1S a   person
        d. [cp weil   [ip ich normal   frühstücke   zeh Uhr]]   (Ana, month 13.5)
               because I   normally breakfast-1S ten o'clock

The number of embedded clauses with a clause-internal verb remains high in Ana's data, even during the latest interviews. This suggests that her interlanguage grammar contains a left-headed IP throughout the data. In contrast, verb-final embedded clauses start appearing at month 25.4 in Zita's transcripts, suggesting that the target right-headed IP has been acquired. Some examples are given in (20).

(20)   a. [cp wenn [ip ich da   bleib]]   (Zita, month 25.4)
               if   I   there stay-ø
           'if I stay there'
        b. [cp wenn [ip ich hier kommt]]   (Zita, month 25.4)
               if   I   here come-3S
           'if I come here'

Despite evidence for the acquisition of the target IP, Zita produced no finite root declarative with the verb in final position during the last three interviews. It is possible that she had acquired systematic movement to C in German at that time, which would have rendered the

projection of IP roots impossible (see du Plessis et al., 1987; Schwartz & Tomaselli, 1990). As for the finite roots produced prior to month 25.4 (as well as those produced by Ana throughout all her interviews), the SVO order could be the result of verb-movement to C or to the head of a left-headed IP. Both cases are consistent with the Truncation Hypothesis. Unfortunately, it is impossible to distinguish between the two possibilities based on word order.[8]

4.3. Summary

Verbs systematically precede VP-material across sentence types throughout the child and adult L2 German corpora. Since VP and IP are left-headed in the learners' L1s, this finding could be interpreted as a result of initial transfer of those categories and their headedness properties. In the child data, there is no evidence for the acquisition of the target headedness of VP and IP (except for Concetta at her last recording). The data are thus consistent with truncation applying to transferred structure. In the adult data, there is evidence for both transfer of the L1 structure and acquisition of the target categories. The fact that word order remains the same in RIs produced after the acquisition of the German VP-headedness suggests that these are not real nonfinite utterances but sentences involving functional categories and verb-movement. As for finite declaratives, it was proposed that by the time IP-headedness was switched to the target value, the properties of verb-movement to C had been acquired, thus preventing the projection of IP-roots and the production of verb-final finite declaratives. Before the acquisition of the target headedness properties by the adult learners, the XV order is thus ambiguous between a VP and IP/CP representation in root infinitives, and between IP and CP in finite declaratives. In the next

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[8] The two instances of finite declaratives displaying an XV order are the only evidence for the possibility of (right-headed) IP roots, and hence of truncation of target structure:
(i)   a. Vater di mein Schwester nicht Vater von mir is   (Zita, month 3.7)
           father of my sister   not   father of me is
           'my sister's father is not my father'
           b. ich Urlaub kommt   (Zita, month 10)
           I   vacation come-3S
           'I'm going on vacation'

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sections, I show that the representation of RIs is not ambiguous in the child data, i.e. they are VPs.

5. CPs

According to the Truncation Hypothesis, if CP is projected the corresponding clause should be finite. Therefore, it is predicted that nonfinite verbs should not be found in nonambiguous CPs, such as embedded clauses, wh-questions, yes/no questions. While the child L2 data confirm the prediction, nonfinite CPs are found in the adult L2 corpora.

5.1. Child L2 CPs

5.1.1. Child L2 French data

Appendix Table VII displays the number of embedded clauses, wh-questions and yes/no questions that appear with a nonfinite verb in the child L2 French data (see Table 8 for a summary). The first appearance of CP was delayed (except for Kenny's yes/no questions which first appeared at month 3). Nevertheless, CPs became productive at times when root infinitives were still being frequently used. Kenny's first embedded clauses were found at month 10 and wh-questions at month 15. Root infinitives represented 16.6% and 15.8% of his root declaratives at those times. Greg's wh-questions and yes/no questions became productive at month 10 when his percentage of RIs was 18.8%. As for embedded clauses, they started occurring at month 14 when RIs represented 9.9% of his root declaratives. Therefore, there was an overlap of a few months during which both CPs and root infinitives were produced, up to month 18.

Table 8: Total number of finite and nonfinite CPs in child L2 French

	CPs	Total	Finite	Nonfinite
Kenny	embedded	49	47 (95.9%)	2 (4.1%)
	wh-questions	58	54 (93.1%)	4 (6.9%)
	yes/no questions	40	37 (92.5%)	3 (7.5%)
	Total	*147*	*138 (93.9%)*	*9 (6.1%)*
Greg	embedded	82	78 (95.1%)	4 (4.9%)
	wh-questions	52	51 (98.1%)	1 (1.9%)
	yes/no questions	26	25 (96.2%)	1 (3.8%)
	Total	*160*	*154 (96.3%)*	*6 (3.7%)*

As clearly indicated in Table 8, most of all CP constructions produced by Kenny and Greg were finite. This is illustrated in (21) through (23).

(21) a. où   est le bébé qui va dans le ... ça?   (Greg, month 14)
        where is the baby who go-3S in the this

      b. il y   parle français quand toi es dans la toilette   (Greg, month 14)
        he to-him speak-3S French when you are in the toilet

      c. c'est parce qu'i fait   mal ici   (Greg, month 18)
        it is because it do-3S bad here

      d. regarde qu'est-ce que le crocodile fait   (Kenny, month 10)
        look   what   the crocodile do-3S

      e. c'est moi qui fait ça   (Kenny, month 10)
        it is me who do-3S this

      f. je pense que après je te   donne ça à moi (Kenny, month 18)
        I think that after I you-DAT give-1S this to me

(22) a. où   ça va?   (Greg, month 5)
        where this go-3S

      b. qu'est-ce que tu fais à ça?   (Greg, month 9.5)
        what   you do-2S to this

c. mon dent où   es-tu?   (Greg, month 15)
   my tooth where are you

d. pourquoi i pleure?   (Kenny, month 3)
   why   he cry-3S

e. qui est le petit homme?   (Kenny, month 9.5)
   who is the little man

f. où   t' achètes ça?   (Kenny, month 11)
   where you buy-2S this

(23)   a. c'est ok maintenant?   (Greg, month 9)
          it is ok   now

       b. est-ce que moi je dis   bonjour?   (Greg, month 14)
          QUEST me I say-1S hello

       c. on dit   (mecanic)?   (Kenny, month 9)
          one say-3S mecanic

       d. il   va   pas en Floride?   (Kenny, month 11)
          he go-3S not in Florida

5.1.2. Child L2 German data

The two children learning L2 German did not produce many CPs, as indicated in Appendix Table VIII.[9] CPs were found toward month 9.1 for Concetta and as of month 9.5 for Luigina. Root infinitives were being produced at those times and coexisted with CPs until the last interviews.

Just like their L2 French counterparts, almost all CP constructions found in the child L2 German data are finite (Table 9). Note that although Concetta's percentage of nonfinite CPs is larger than Luigina's (15.8% vs. 7.4%) it was obtained on only 19 clauses.

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[9] Notice that the table does not include any statistics on topicalisation of a non-subject XP in German. The corresponding sentences would be XVS (with an overt subject) and XVO (with a null subject). Crucially, there is no guarantee that an XVO order corresponds to the projection of CP (hosting X and V) in the L2 German data. Such a word order is also found in the L1, but only involves IP: the null subject and the verb occupy specIP and I, while X is adjoined to IP.

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Table 9: Total number of finite and nonfinite CPs in child L2 German

	CPs	Total	Finite	Nonfinite
Concetta	embedded	2	2 (100%)	0
	wh-questions	14	11 (78.6%)	3 (21.4%)
	yes/no questions	3	3 (100%)	0
	Total	*19*	*16 (84.2%)*	*2 (15.8%)*
Luigina	embedded	2	2 (100%)	0
	wh-questions	16	15 (100%)	1 (6.2%)
	yes/no questions	9	8 (85.7%)	1 (11.1%)
	Total	*27*	*25 (92.6%)*	*2 (7.4%)*

Examples of finite wh-questions, yes/no questions and embedded clauses are given in (24), (25) and (26) respectively.

(24) a. warum has du gesagt: du bis große?   (Concetta, month 14.5)
           why   have-2S you said you are fat

      b. wer is da?   (Concetta, month 13.5)
           who is here

      c. wo bis du?   (Luigina, month 9.5)
           where are you

      d. was macht ihr?   (Luigina, month 19.8)
           what do-2P you

(25) a. du heißt Manfred?   (Concetta, month 6.8)
        you name-2S Manfred (=is your name Manfred?)

      b. Nikolaus kommt deine Haus?   (Luigina, month 14.9)
        Nikolaus come-3S your house

(26) a. klasse wo   wir ist   (Concetta, month 12.4)
        class where we is

b. warum (=weil) das ist mein Ball   (Luigina, month 19.8)
   because   this is my ball

5.1.3. Finiteness in child L2 root declaratives and CPs

The percentage of nonfinite main verbs is significantly larger in root declaratives than in CPs for the children learning L2 French, as indicated in Table 10 (Kenny: $X^2=8.043$, $p<.01$; Greg: $X^2=4.74$, $p<.05$). No statistical significance is reached for the child learners of child L2 German learners (Concetta: $X^2=.091$, $p=.7629$; Luigina: $X^2=1.146$, $p=.2845$). I take this as being the result of a low production of CPs. Note that although significance is not reached for Luigina, her proportion of nonfinite main verbs in root declaratives is twice as large as in CPs.

Table 10: Finiteness vs clause type in child L2 French and German

L2	Learners	Finiteness	Root declaratives	CPs
L2 French	Kenny	+ finite	428	138
		- finite	76	9
		% -finite	15.1%	6.1%
	Greg	+ finite	591	154
		- finite	58	6
		% -finite	8.9%	3.7%
L2 German	Concetta	+ finite	150	16
		- finite	23	3
		% -finite	13.3%	15.8%
	Luigina	+ finite	42	25
		- finite	8	2
		% -finite	16%	7.4%

These results suggest that the structure underlying child RIs is not CP but VP. Note that a large portion of the verbs appearing in CPs are thematic verbs. In L1 French acquisition, Phillips argues that the finiteness effect in wh-questions reported by Crisma (1992) is an artifact of the types of verbs used in these utterances, mostly auxiliaries and modals. A quick look at the verbs found in Kenny's and Greg's wh-questions reveals that Philip's remark does not apply here. In Kenny's speech, out of 33 wh-questions involving a wh-word other than *qui* ('*who*'), 12 (or 36.4%) involve a thematic verb. For Greg, the proportion is 29.4% (10/24). I therefore conclude that the finiteness effect observed here is not due a particular verb type but is a direct consequence of the structure involved, i.e. CP.

The results have one final bearing on the question of word order in child L2 German. In section 4.1.1, I suggested that the VX order found in the RIs produced by the children learning L2 German was consistent with the initial transfer of the left-headed VP and structural truncation. This is now supported by the comparative results in Table 10 (especially in Luigina's case), i.e. child RIs do not seem to include functional categories.

5.2. Adult L2 CPs

5.2.1. Adult L2 French data

As indicated in Appendix Table IX, the adult L2 French learners produced CPs from the earliest interviews on. Most of these CPs were embedded clauses; very few wh-questions and yes/no questions were used (see Table 11 for a summary).

Table 11: Total number of finite and nonfinite CPs in adult L2 French

	CPs	Total	Finite	Nonfinite
Abdelmalek	embedded	117	80 (68.4%)	37 (31.6%)
	wh-questions	19	7 (36.8%)	12 (63.2%)
	yes/no questions	10	5 (50%)	5 (50%)
	Total	*146*	*92 (63%)*	*54 (37%)*
Zahra	embedded	204	145 (71.1%)	59 (28.9%)
	wh-questions	5	3 (60%)	2 (40%)
	yes/no questions	5	4 (80%)	1 (20%)
	Total	*214*	*152 (71%)*	*62 (29%)*

The most important finding for the adult learners of L2 French is that they produced a substantial number of nonfinite CPs (Table 11). Roughly one third of their embedded clauses and at least 40% of their wh-questions include a nonfinite verb. Some examples of nonfinite CPs are given in (27) through (29).

(27) a. parce que changer   nationalité française   (Abdelmalek, month 21.5)
         because change-INF nationality French

     b. il faut tu partir   (Abdelmalek, month 24)
        it has+to you go-INF (=it is required that you go)

     c. c'est pas la peine   tu   entrer   (Abdelmalek, month 30.7)
        it is not the pain (=worth it) you enter-INF

     d. quand parti la Maroc   (Zahra, month 24.5)
        when gone the Marocco

     e. parce que toute la journée assis   (Zahra, month 36)
        because all the day   sit

     f. moi je sais pas qu'est-ce qui passer   avec lui (Zahra, month 36.5)
        me I know not   what   happen-INF with him

(28) a. combien   tu   rester   ici?   (Abdelmalek, month 24)
        how (long) you stay-INF here

b. comment tu rentrer en France? (Abdelmalek, month 34.5)
    how   you enter-INF in France
c. et   Malika, pourquoi téléphoner à toi à la maison? (Zahra, month 38.5)
    and Malika why   call-INF to you at the house

(29) a. tu donner? (Abdelmalek, month 14)
        you give-INF
     b. il acheter nouveau (Abdelmalek, month 52.5)
        he buy-INF new
     c. parler   bien? (Zahra, month 20)
        speak-INF well

This clearly differs from what was found in the child L2 French corpora. It is worth pointing out that nonfinite CPs appear throughout Abdelmalek's and Zahra's data (Appendix Table IX). In other words, it is not the case that they mainly occur in the earlier interviews.

5.2.2. Adult L2 German data

As can be seen in Table X in the Appendix, CPs do not appear until month 10 in Zita's data. In contrast, CPs are found in Ana's earliest interviews. Despite this difference, CPs and root infinitives generally co-exist in both learners' corpora. Note that like the adult L2 French learners, the majority of CPs are embedded clauses. Like Abdelmalek and Zahra, and in contrast to the children, the adult learners of L2 German produced a number of nonfinite CPs (Table 12). This production, however, was inferior to that of the adult learners of L2 French.

	CPs	Total	Finite	Nonfinite
Zita	embedded	65	48 (73.8%)	17 (26.2%)
	wh-questions	5	5 (100%)	0
	yes/no questions	12	11 (91.7%)	1 (8.3%)
	Total	*82*	*64 (78%)*	*18 (22%)*
Ana	embedded	122	110 (89.1%)	12 (10.9%)
	wh-questions	6	6 (100%)	0
	yes/no questions	9	8 (87.5%)	1 (12.5%)
	Total	*137*	*124 (90.5%)*	*13 (9.5%)*

Zita is the one who produced the most nonfinite CPs. Her recordings include 22% of such constructions (18/82). Most of these CPs are subordinate clauses; one nonfinite yes/no question was also found. This is illustrated in (30).

(30) a. wenn Frowein sprechen Spanish   (Zita, month 11.7)
          when Frowein speak-INF Spanish
      b. was ich machen   (Zita, month 15)
          what I do-INF
      c. wenn ich gehen in Schule   (Zita, month 22)
          when I go-INF in school
      d. möchten ma du ein Kaffee?   (Zita, month 10)
          want-INF then you a   coffee

As for Ana, although her proportion of nonfinite CPs is lower than Zita's (9.5%), a number of nonfinite embedded clauses appears in her data, as in (31). Interestingly, 5 of them occur after month 14.2, i.e. after root infinitives disappeared from her speech (Appendix Table X).

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(31) a. weil   ich hier nicht wohnen   (Ana, month 11)
          because I hier not   live-INF
      b.weil   ich (lang)weilen   (Ana, month 11.7)
          because I   bore-INF (=I get bored)
      c. weil   sie in der Zeitung   eine Annonce schreiben   (Ana, month 13.5)
          because she in the newspaper a   ad   write-INF

5.2.3. Finiteness in adult L2 root declaratives and CPs

Table 13 below compares the occurrence of nonfinite verbs in adult root declaratives and CPs. Contingency analyses show no significant difference between the two contexts for either learner (Abdelmalek: X^2=3.423, p=.0643; Zahra: X^2=.086, p=.7697; Zita: X^2=.272; p=.6018; Ana: X^2=.007, p=.9354).

Table 13: Finiteness vs clause type in adult L2 French and German

L2	Learners	Finiteness	Root declaratives	CPs
L2 French	Abdelmalek	+ finite	653	92
		- finite	272	54
		% -finite	29.4%	37%
	Zahra	+ finite	600	150
		- finite	236	62
		% -finite	28.2%	29.2%
L2 German	Zita	+ finite	587	64
		- finite	191	18
		% -finite	24.6%	22%
	Ana	+ finite	688	124
		- finite	74	13
		% -finite	9.7%	9.5%

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The results suggest that some adult RIs are CP underlyingly and not VP, i.e. they are not truly nonfinite. In section 4.1.2, we saw that most adult L2 German RIs involve an VX word order. The findings on finiteness in root declaratives and CPs suggest that in some RIs this order is generated by verb-movement to either the head of a left-headed IP presumably transferred from the L1 grammar or to C. In other words, the lack of finite markers does not necessarily mean that IP is absent from the underlying representation of nonfinite declaratives in adult SLA (see Lardiere, 1998).

In closing, a few words are in order concerning Ana. No statistical significance was reached in her case, due to a similar proportion of nonfinite main verbs in both root declaratives and CPs (around 10%). She might be argued to be out of the 'root infinitive period' and consistently producing finite verbal forms (recall also that she stopped producing RIs at about month 14.2). However, the fact that she produced a number of nonfinite CPs in her last interviews is relatively difficult to explain under such an analysis. In the subsequent sections, I discuss further aspects of her data suggesting that finiteness is more randomly distributed than it might first appear.

5.3. Summary

All learners produced CPs at the same time as root infinitives. Yet, only the child L2 learners were found to clearly confine the usage of nonfinite verbal forms to main declaratives. Almost none of their CPs were nonfinite. By contrast, the adult learners used nonfinite forms in both declarative roots and CPs. These results suggest that the nature of the clause does not determine the distribution of finite and nonfinite verbal forms in adult SLA, contrary to child L2 acquisition.

6. Null subjects

The predictions concerning null subjects are (a) that they should be found in both finite and nonfinite declaratives; (b) that root infinitives and subjectless finite declaratives should disappear at the same time; and (c) that null subjects should not be found in unambiguous CPs such as embedded clauses, wh-questions, yes-no questions. The results concerning these predictions are mixed. While the first prediction is borne out in both child and adult data, the second one is only confirmed in the child L2 French data. As for the last prediction, it is only borne out in the child corpora. Finally, it should be remembered that the child learners of German and all adult L2 learners have *pro*-drop languages as their L1s. This is discussed in sections 6.1.3 and 6.2.3.

6.1. Null subjects in child SLA

6.1.1. Null subjects in child L2 root declaratives

6.1.1.1. Child L2 French data

Both Kenny and Greg produced null subjects in finite and nonfinite declaratives, as can be seen in Appendix Table XI and Table 14 below. Null subjects appear in Kenny's finite and nonfinite declaratives at month 3. His proportion of subjectless finite utterances is first at around 17% and increases to about 30% at month 7. This rate is roughly the same until month 18, at which point it drops down to 9%. As we have seen, it is precisely at that time that root infinitives were found to drop out. There is a highly significant difference between the first 18 months of exposure and the rest of the recordings in the occurrence of subjectless finite declaratives, as indicated in Table 14 (X^2=75.111, p<.0001). The pattern of development of Greg's subjectless finite declaratives is similar to Kenny's, although the proportion of null subjects is much less. It is 5.5% at month 5 and then increases to about 11% at month 9.5. That rate remains about the same until month 20. A sharp decrease can be observed at that point (to just over 1%), i.e. roughly when Greg stopped producing root infinitives. The number of subjectless finite declaratives is significantly higher during the

first 18 months than subsequently (X^2=52.866, p<.0001). Examples of null subjects in Kenny's and Greg's finite root declaratives are given in (32) and (33).

(32)　a. va　　là　　　　　　　　　　　　　(Kenny, month 4)
　　　　　go-3S there

　　　　b. veux　jouer　avec ça　　　　　　　(Kenny, month 11)
　　　　　want-1S play-INF with this

(33)　a. et　là　sont jaunes　　　　　　　　　(Greg, month 9.5)
　　　　　and there are yellow

　　　　b. est l'　auto　　　　　　　　　　　　(Greg, month 11)
　　　　　is the car

The fact that root infinitives and subjectless finite declaratives decline at the same time in the child L2 French data is reminiscent of what is reported in early Dutch by Hamann & Plunkett (1997), as discussed in Chapter 3. Such a simultaneous decline is predicted by the Truncation Hypothesis. Under this account, IP can be a root, which allows a null constant to appear in the highest specifier position and be discourse identified. However, when learners discover that roots must be CPs, root infinitives and null subjects can no longer occur.

Crucially, the simultaneous disappearance of RIs and null subjects in finite environments is not necessarily predicted by an account of early grammars in terms of underspecification of Tense (see Wexler, 1994). Under this approach, the lack of tense in initial grammars yields the production of root infinitives. As for null subjects in finite roots, they are assumed to be instances of topic drop. Once Tense emerges, root infinitives become impossible. However, since the phenomenon of topic drop is unrelated to tense properties, the emergence of tense should not prevent topic drop from occurring. Therefore, subjectless finite sentences could still be observed, which is not the case here.

Regarding subjectless root infinitives, Kenny was less consistent than in finite environments (Appendix Table XI). There were a number of interviews where such utterances did not occur. The proportion of RIs without a subject is quite high during the first 10 months, and then drops down to about the same rate as subjectless finite declaratives (about 30%). It then raises again at month 18 (57.1%).[10] Greg's use of null subjects in RIs also differs from finite contexts. The proportion of subjectless RIs is quite high at first (42.9% at month 5) and remains high until month 18, i.e. when RIs disappear. Examples of Kenny's and Greg's subjectless declaratives are given in (34) and (35).

(34) a. jouer   de hockey   (Kenny, month 9.5)
           play-INF of hockey
      b. séparer   les deux singes   (Kenny, month 15)
           separate-INF the two monkeys

(35) a. manger les oreilles   (Greg, month 10)
           eat-INF the ears
      b. enlever   les dents   (Greg, month 14)
           remove-INF the teeth

The overall findings presented in Table 14 show that the proportion of null subjects is larger in nonfinite environments than in finite ones for both children for the first 18 months. Roughly half of Greg's RIs and one third of Kenny's lack a subject during that period. The percentages of null subjects are lower in finite declaratives, but nonetheless indicative. The existence of a higher rate of subjectless RIs is also reported in the L1 acquisition literature, as discussed in Chapter 2.

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[10] Note that high percentages of subjectless RIs after month 18 (see also Table 14) are due to the low number of RIs being produced (the same applies to Greg).

Table 14: Null subjects in finite and nonfinite root declaratives in child L2 French before and after month 18

	Before month 18				After month 18			
	NS/+Fin	%NS	NS/-Fin	%NS	NS/+Fin	%NS	NS/-Fin	%NS
Kenny	87/428	20.3	23/76	30.3	15/524	2.9	2/3	66.7
Greg	59/591	10	31/58	53.4	15/907	1.7	2/4	50

6.1.12. Child L2 German data

Appendix Table XII gives the detailed findings concerning the occurrence of null subjects in the root declaratives produced by the child learners of L2 German. Of particular interest is the fact that Concetta's development of null subjects in finite roots patterns with that of root infinitives. Her first subjectless finite declaratives appears at month 8.4. The proportion of null subjects in finite contexts remains between 20% and 33% until month 12.4 (with a low at 10% at month 9.1), declining to 13% at month 13.5. The proportion then falls below 10% at month 14.5, precisely at the time when the number of root infinitives plunges. Even though the developmental pattern between RIs and subjectless finite roots is not as conclusive as what was observed for the two children learning L2 French (there are fewer data and the data collection period is shorter and ends at the crucial time), it is nonetheless consistent with the Truncation Hypothesis. As for Luigina, null subjects occurred consistently in her finite root declaratives. The proportion of null subjects is higher than Concetta's, between 20% and 100%, with a drop in the last two recordings. However, lack of data prevents us from concluding whether this drop also corresponds to the disappearance of root infinitives. Some examples of subjectless finite declaratives produced by the two children are given in (36) and (37).

(36) a. fahr Bus   (Concetta, month 11)
         ride-ø bus

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b. macht   de papier   (Concetta, month 12.4)
   make-3S   paper

(37)   a. ist kaputt   (Luigina, month 3)
          is broken
       b. da geh   (Luigina, month 6)
          there go-ø

Turning now to null subjects in root infinitives, they are very common in Concetta's data. Subjectless root infinitives were found at every interview where RIs were produced, representing between 30% and 100% of the number of nonfinite main declaratives. Luigina's development of null subjects in root infinitives stands in sharp contrast with Concetta's, since only one subjectless RI was found in her data (at month 19.8). It should be remembered, however, that Luigina produced very few RIs in the first place. Examples are given in (38) and (39).

(38)   a. putzen   Haus   (Concetta, month 12.4)
          clean-INF house
       b. hier gucken   der geld   (Concetta, month 13.5)
          here look+at-INF the money

(39)   gehen in die schule   (Luigina, month 19.8)
       go-INF to the school

As indicated in Table 15, Concetta's overall use of null subjects is akin to Greg's and Kenny's (for the first 18 months of exposure), i.e. her percentage of null subjects is higher in root infinitives than in finite main declaratives. The reverse obtains in Luigina's case, but this may be due to her low number of RIs.

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Table 15: Total number of subjectless finite and nonfinite root declaratives in child L2 German

	Finite	Null subjects	RIs	Null subjects
Concetta	150	23 (15.3%)	23	11 (47.8%)
Luigina	42	13 (30.9%)	8	1 (12.5%)

6.1.2. Null subjects in child L2 finite CPs

In this section, I further investigate the nature of early null subjects in the child data by investigating their occurrence in finite CPs, such as embedded clauses, wh-questions and yes/no questions.[11] If the null subjects are null constants, they should not appear in such clauses. I should mention that since I am ultimately interested in finding out whether IP roots are projected in early SLA, I focus on the occurrence of null subjects in finite environments.

We saw in section 5.1 that although CPs are late to emerge in the children's data, they co-occur with root infinitives for some time. Crucially, almost no finite CP appears with a null subject (see Appendix Tables XIII and XIV as well as Table 16 below). (Recall that the overall results in Table 16 correspond to the first 18 months for the two L2 French learners.) These results are significantly different from what was observed in finite root declaratives, as can be seen in the contingency table below (Kenny: $X^2=13.538$, p=.0002; Greg: $X^2=4.791$, p<.05). Concetta produced much fewer finite CPs than the L2 French learners; yet, none of them involved a null subject. Luigina is the only one for whom no statistical significance is found ($X^2=1.63$, p=.2017). However, her figures go in the right direction as her ratio of subjectless finite declaratives (30.9%) is twice as high as her percentage of subjectless finite CPs (16.7%).

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[11] Subject relative clauses and subject wh-questions were excluded from the analysis, which explains the discrepancies between the subsequent tables and the tables above reporting on the production of CPs. This also applies to the discussion on adult SLA in section 5.2.2.

Table 16: Null subjects in child L2 finite root declaratives vs. finite CPs

L2	Learners	Subject types	Finite declaratives	Finite CPs
L2 French	Kenny	overt subjects	341	104
		null subjects	87	6
		% null subject	*20.3%*	*5.5%*
	Greg	overt subjects	532	123
		null subjects	59	5
		% null subject	*10%*	*4%*
L2 German	Concetta	overt subjects	127	12
		null subjects	23	0
		% null subject	*15.3%*	*0%*
	Luigina	overt subjects	29	20
		null subjects	13	4
		% null subject	*30.9%*	*16.7%*

The fact that we observe significantly more null subjects in root contexts suggests that subjectless finite root declaratives are of a different nature than finite wh-questions, yes/no questions and embedded clauses, i.e. they are not CPs. This in turn means that, at least in the L2 French data, subjectless finite declaratives are represented by truncated structures, namely IPs.[12] The findings also rule out the possibility of *pro* as the explanation for null subjects in main declaratives. The licensing of *pro* is usually associated to properties of Infl. Its occurrence should thus be unaffected by whether or not CP is projected. In other words, if it is licensed, *pro* should be found in main finite root declaratives as well as in finite wh-questions, yes/no questions and embedded clauses, which of course in not the case. This leaves an account in terms of null constants as the best analysis for subjectless

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[12] As seen in section 4.2.1, the representation of the finite declaratives produced by the children learning L2 German is ambiguous between a (leftheaded) IP and CP root. Thus, a null constant could occur either in specIP or specCP.

declaratives in general. If finite clauses are IPs and root infinitives are VPs, then a null constant may be licensed in the specifier of the root in both cases, but may not be found in specCP, hence the lack of null subjects in CPs.

Concerning the two children learning L2 German, recall that their mother tongue is Italian, a *pro*-drop language. The possibility exists that these learners transferred the *pro*-drop properties of their L1 into the interlanguage grammar (see White, 1985). If this was correct, however, the data should include a high number of subjectless CPs, contrary to fact. Nevertheless, this finding does not necessarily rule out the transfer of *pro*-drop properties at the *earliest* stage of acquisition. Recall that evidence for CP is found relatively late in the data. It is therefore plausible that the children initially considered German a *pro*-drop language (based on their L1), and that they restructured the interlanguage grammar to a non-*pro*-drop type (based on positive evidence from the input) *before* the first production of CP. If such an analysis is correct, it also means that the subjectless finite root declaratives produced after the emergence of CP include a null constant and not *pro*.

6.2. Null subjects in adult SLA

6.2.1. Null subjects in adult L2 root declaratives

6.2.1.1. Adult L2 French data

Null subjects were found relatively early in the finite and nonfinite main declaratives produced by the two adult L2 French learners (Appendix Table XV). The most important finding here is that the two learners show different developmental patterns with respect to null subjects in finite root declaratives. Abdelmalek produced far fewer subjectless finite utterances than Zahra (Table 17). While his proportion of null subjects is almost consistently high between months 14 and 25 (between 20 and 40%), it sharply drops to below 10% at month 25.7. This rate is found throughout the rest of the interviews (except for month 16.7). Crucially, the point at which the proportion of null subjects drops down does not correspond to a decline in root infinitives. On the contrary, we saw that

Abdelmalek produced a high proportion of RIs throughout the data. This is very different from what was found in the child L2 French corpora.

It is also different form Zahra's developmental pattern. Her proportion of null subjects is relatively consistent throughout the data, roughly between 12% and 33%. Such a consistency was also found in the development of her root infinitives (Table 5). This similarity in developmental patterns is reminiscent of the child L2 French learners. However, since subjectless finite declaratives and RIs were not found to drop out in her data, it is not certain whether the occurrence of RIs and subjectless finite roots are related in adult SLA. Examples of subjectless finite declaratives produced by each learner appear in (40) and (41).

(40)   a. jamais travaille le maroc   (Abdelmalek, month 20.5)
            never work-1S the Marocco
        b. pars   à huit heures et demie   (Abdelmalek, month 31.7)
            go-1S at   eight thirty

(41)   a. gonfle beaucoup   (Zahra, month 28.2)
            swell-3S much
        b. part à la mer   (Zahra, month 40)
            go-3S to the sea

Table 17: Total number of subjectless finite and nonfinite root declaratives in adult L2 French

	Finite	Null subjects	RIs	Null subjects
Abdelmalek	653	52 (8%)	272	67 (24.6%)
Zahra	600	111 (18.5%)	236	60 (25.4%)

Differences between the adult L2 French learners can also be found in the way they used null subjects in root infinitives. Abdelmalek tended to produce more subjectless root

infinitives in the earlier interviews than in the later ones (Appendix Table XV). Between months 16.7 and 25, his proportion of null subjects is between 16.7% and 100%, whereas subjectless RIs are more sporadic afterwards, with lows at below 10% in 10 out of 16 last interviews. Zahra, on the other hand, shows the opposite pattern. She produced few null subjects in the early interviews up to month 24.5, but then consistently used them at quite a high rate (roughly between 20% and 50%). On the whole, the rate of null subjects in RIs is about the same for both learners, around 25%, which is more than in finite main declaratives (Table 17). Some examples of subjectless root infinitives follow.

(42) a. rester   à le bureau   (Abdelmalek, month 20.5)
          stay-INF at the office
      b. tomber   avec la   tête   (Abdelmalek, month 30)
          fall-INF with the head

(43) a. parler le maroccain   (Zahra, month 14)
          speak-INF the Maroccan
      b. marcher à la maison   (Zahra, month 36)
          walk-INF to the house

6.2.1.2. Adult L2 German data

The two adult L2 German learners mainly differed in their production of subjectless finite declaratives (Appendix Table XVI and Table 18). Moreover, no similarity between the development of RIs and subjectless finite roots could be found for either learner. Zita produced few subjectless finite declaratives before month 13. After that, these sentences occur rather inconsistently in her data, with alternations of highs and lows. This is similar to her distribution of RIs. However, contrary to what was found with root infinitives, the number of null subjects did not tend to decrease over the data collection period. Between months 9 and 25.8, lows stabilize at around 20%, while highs are between 40 and 50%. As for Ana, she really started producing subjectless finite declaratives at month 4 and

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maintained a high number of null subjects throughout the recordings. Her proportion of null subjects did not drop at month 14.2, contrary to what was observed for root infinitives. Instead, she maintained a high proportion of subjectless finite declaratives until the last interview (between 20% and 54%). In (44) and (45), I show some examples of null subjects in finite root declaratives produced by each learner.

(44) a. koche   schnell   (Zita, month 9)
          cook-1S quickly
      b. habe ein groß Wohnung   (Zita, month 13.7)
          have-1S a big apartment

(45) a. ist die Freund <de> Stefan   (Ana, month 7.2)
          is the friend   of   Stefan
      b. und lerne   langsam   (Ana, month 7.4)
          and learn-1S slowly

Table 18: Total number of subjectless finite and nonfinite root declaratives in adult L2 German

	Finite	Null subjects	RIs	Null subjects
Zita	587	163 (27.8%)	191	32 (16.7%)
Ana	688	248 (36%)	74	23 (31.1%)

As for nonfinite contexts, both L2 German learners started using subjectless RIs after 5 months of exposure and kept producing them throughout the remaining interviews. On the whole, Ana proportionally used more null subjects than Zita. In the period during which she productively used RIs (until month 14.2), her proportion of null subjects was at least 33%. By contrast, Zita was more inconsistent in her production of subjectless RIs, as there were interviews during which no such utterances were found. Globally, her

proportion of null subjects in RIs was below 20% (Table 18). Some examples are given in (46) and (47).

(46) a. trinken   viele Kaffee   (Zita, month 11.7)
         drink-INF   much coffee
      b. dann schlafen   in Straß   (Zita, month 22.7)
         then sleep-INF in street

(47) a. fahren   in Autobahn   (Ana, month 7.4)
         drive-INF in freeway
      b. sprechen mit meine Vater   (Ana, month 24.7)

To sum up, all adult learners were found to produce both finite and nonfinite declaratives. However, in contrast to the child data, there is no general trend in the distribution of null subjects in the adult corpora (compare Tables 17 and 18). The L2 German learners used proportionally more null subjects in finite declaratives than the L2 French learners. Moreover, the L2 German learners used proportionally more null subjects in finite declaratives than in root infinitives, a picture which is reversed in the L2 French data. Most importantly, the adult learners generally showed a differential developmental pattern between subjectless finite declaratives and root infinitives, in contrast to the child L2 French learners.

6.2.2. Null subjects in adult L2 finite CPs

Root infinitives and finite CPs co-exist in the adult learners' data, as seen in section 5.2. Dealing with the adult L2 French data first, differences can be found between the learners with respect to subordinates clauses. While Abdelmalek used very few subjectless finite subordinate clauses, such was not the case for Zahra (Appendix Table XVII). She consistently produced embedded null subjects throughout the recordings. This was not

observed in the child L2 French corpora. Some examples of subjectless finite CPs are given in (48) and (49).

(48)   il faut ø marches   (Abdelmalek, month 36.7)
           it has+to walk-2S
           'it is required that you walk'

(49)   a. quand toujours dort   (Zahra, month 21.7)
              when always sleep-3S
           b. quand cherche   l' autre maison   (Zahra, month 29.2)
              when look+for-3S the other house
           c. quand entre   dans le bus   (Zahra, month 41)
              when enter-1S in   the bus

As for the adult L2 German learners, there was a difference between Zita and Ana in the production of subjectless finite CPs (Appendix Table XVIII). While Zita's finite CPs mostly included overt subjects, Ana produced a number of subjectless finite embedded clauses, especially after month 11.7, as in (50a). In addition, she used four questions without a subject, as in (50b).

(50)   a. weil   ist kleine   (Ana, month 4.5)
             because is small
           b. warum machen diese Fest   (Ana, month 8.2)
              why make-3P this party

In general, the adults used more null subjects in finite CPs than the children did (compare Table 19 below with Table 16). Apart from Luigina, the children's highest ratio of subjectless finite CPs is 6.8% (Kenny). For Zahra and Ana, the percentage of null subjects in finite CPs is close to 25%. If we now compare the occurrence of null subjects in adult finite CPs and root declaratives, different results emerge (Table 19). First, there is no

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relationship between the nature of the clause and the occurrence of null subjects in Abdelmalek's data (X^2=.003, p=.9548). Second, Zahra's null subjects tend to occur proportionally more in finite CPs than in finite main declaratives, a finding that clearly goes against the predictions (X^2=4.565, p<.05). Third, significant differences conforming to the predictions are found in the L2 German learners' data (Zita: X^2=8.473, p<.01; Ana: X^2=7.915, p<.01).

Table 19: Null subjects in adult L2 finite root declaratives vs. finite CPs

L2	Learners	Subject types	Finite declaratives	Finite CPs
L2 French	Abdelmalek	overt subjects	601	79
		null subjects	52	7
		% null subject	*8%*	*8.1%*
	Zahra	overt subjects	489	109
		null subjects	111	39
		% null subject	*18.5%*	*26.4%*
L2 German	Zita	overt subjects	424	57
		null subjects	163	7
		% null subject	*27.8%*	*10.9%*
	Ana	overt subjects	440	89
		null subjects	248	26
		% null subject	*36%*	*22.6%*

It is difficult to establish the nature of null subjects in the adults' finite declaratives based on these results. All L1s are *pro*-drop languages. The initial transfer of *pro*-drop properties could explain Zahra's and Ana's high percentage of subjectless CPs. Assuming that this is correct, the fact that null subjects are found in finite CPs throughout their recordings (even in the last ones) suggests that the non-*pro*-drop properties of German

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have not been acquired. It also suggests that a number of subjectless finite declaratives produced by Zahra and Ana involve *pro*. It is therefore unclear whether null constants were posited at all.

Now consider Abdelmalek. He did not use null subjects much in either finite root declaratives and CPs. If he had transferred the *pro*-drop properties of his L1 into the interlanguage grammar, more null subjectless clauses, especially CPs, would be expected. It is possible that he acquired the non-*pro*-drop characteristics of French prior to the first interview. If this is the case, then the near absence of null subjects in finite root declaratives is inconclusive as to the possibility of null constants in his grammar, and hence of truncation.

Finally, Zita is the only one behaving according to the predictions. Her low number of subjectless CPs suggests that she does not consider German a *pro*-drop language, contrary to her L1. As is the case for Concetta, this does not mean that the interlanguage grammar did not allow *pro* in earlier stages. This particularly applies to the period before the emergence of CPs (at around month 10). Yet, the lack of subjectless CPs suggests that as of month 10 the null subjects found in subjectless finite root declaratives are null constants.[13]

6.3. Null subjects and auxiliaries/modals/copula

In order to present a complete picture of the phenomenon of null subjects in early SLA, I should point out that all child and adult learners investigated here produced a number of subjectless finite roots involving auxiliaries, modals, and copulas, as shown in (51) through (53).

(51)   a. ai   dormi à mon maison   (Greg, month 14)
            have-1S slept at my   house

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[13] Like Concetta, this fact is inconclusive as to the nature of Ana's finite root declaratives after month 10 (CP or IP) since null constants may be found in specCP or specIP in German.

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b. est pas perdu   (Kenny, month 9.5)
   is not lost

c. après est vini   (Abdelmalek, month 24)
   after is come

d. m' a   donné huit jours   (Zahra, month 34.4)
   me has given eight days = 'he gave me eight days'

e. is explodieren in mein Wohnung   (Ana, month 23)
   is explode-INF in my   apartment

(52)   a. peut faire ça   (Greg, month 18)
          can do that

       b. veux   jouer   avec ça   (Kenny, month 11)
          want-1S play-INF with this

       d. hier muß essen   von alles   (Concetta, month 13.5)
          here must eat-INF of all

       e. muß ganz gut   Portugiese schreiben   (Zita, month 25.8)
          must very good Portuguese write-INF

(53)   a. et là   sont jaunes   (Greg, month 9.5)
          and there are yellow

       c. est papa   vache   (Kenny, month 3)
          is daddy-cow

       e. ist kaputt   (Luigina, month 3)
          is broken

       f. hier ist schön   (Concetta, month 11)
          here is beautiful

       g. est comme vous   (Zahra, month 14)
          is like   you

       h. jetzt is in Düsseldorf   (Zita, month 22)
          now is in Düsseldorf

       i. ist die Freund <de> Stefan   (Ana, month 7.2)
          is the friend of Stefan

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This fact is significant as it rules out the possibility of PRO as the subject, contrary to what an account of early grammars in terms of the underspecification of Infl would predict (Hyams, 1996). Hyams argues that all null subjects are PRO in early L1 acquisition. For her, this is due to the underspecification of Infl which provides an ungoverned environment for PRO in specIP. As seen in Chapter 2, Hyams shows that in English L1 acquisition null subjects do not appear with elements that are inherently finite such as auxiliaries, modals, and copula; namely elements for which Infl must be specified. In all cases of (apparently) finite sentences lacking a subject, the verb is assumed to be an aspectual form below Infl, which leaves the door open for PRO to appear in specIP. As far as early SLA is concerned, since null subjects are frequently found with elements that are inherently finite, the underspecification of Infl approach clearly cannot apply to early L2 grammars.

6.4. Summary

Two main differences were uncovered between the child and adult L2 learners in the usage of null subjects. The development of null subjects in the children's finite root declaratives parallels that of root infinitives. When RIs disappear form the child data, so do subjectless finite declaratives. This suggests that the two phenomena are related and that the null subjects are indeed null constants. This is confirmed by the fact that the children did not produce null subjects in finite CPs. All these facts are consistent with the Truncation Hypothesis. Interestingly, the parallel development of RIs and subjectless finite declaratives is not necessarily predicted by a model of acquisition claiming the initial underspecification of Tense.

In contrast, the adult learners show no correlation in the development of root infinitives and null subjects in finite root contexts. Furthermore, no clear tendency can be established in the way null subjects are used by the adults, both in root declaratives and in finite CPs. Some adult learners used null subjects in finite CPs, which children almost never did. Since all of the adults' L1s are *pro*-drop, these null subjects probably were

transferred instances of *pro*. It would have been preferable to have non-*pro*-drop L1s, so as to better understand the development of null subjects and root infinitives in adult SLA. One thing is certain, however: the adult results lack the clarity of the child data.

Finally, the fact that null subjects were used along with auxiliaries, modals and copula by all learners (child and adult) was shown to contradict predictions made by an account of early L2 grammars relying on the underspecification of Infl.

7. Negation

Under the Truncation Hypothesis, NegP may be a root. Assuming that NegP is above TP, no negative RIs should be observed. The L2 data reviewed here disconfirm this prediction. In addition, differences were found between children and adults with respect to verb-placement vis à vis negative markers.

7.1. Negation in child SLA

7.1.1. Child L2 French data

Appendix Table XIX gives details on the production of negative finite and nonfinite main declaratives by the child learners of L2 French. It also indicates the placement of the verb with respect to the negative marker *pas* ('not') in the two environments (the findings are summarized in Table 21 below). Although negation appeared only at month 3 in Kenny's speech, it was on the whole used throughout the data collection period by both children. Contrary to the prediction, negative root infinitives were found in the data. During the first 18 months of exposure, Kenny produced 18 nonfinite negatives, as in (54); for Greg, 6 such utterances were found, as in (55).

(54)   a. pas ouvrir   ça   (Kenny, month 5)
          not open-INF this

b. moi pas aller   à   l'école   (Kenny, month 8)
   me not go-INF to the school

(55) a. pas jouer   avec la ferme   (Greg, month 10)
         not play-INF with the farm
      b. pas gagner   (Greg, month 15)
         not win-INF

The percentage represented by such sentences with respect to the total number of RIs is far from negligible. As summarised in Table 20, Kenny's proportion of negation is actually larger in nonfinite root declaratives than in finite contexts during the first 18 months. In Greg's case, the reverse can be observed: he produced twice as many negative finite main declaratives as negative root infinitives. Nevertheless, his ratio of negative RIs is a non-trivial 10.3%.[14]

Table 20: Proportion of negative root declaratives in child L2 French

	Finite	Negatives	RIs	Negatives
Kenny	428	90 (21%)	76	18 (23.7%)
Greg	591	120 (20.3%)	58	6 (10.3%)

The other important finding is that there the distribution of verbal forms with respect to the negator *pas* is systematic. As indicated in Table 21, the verb always follows the negative adverbial in negative root infinitives. There is no single instance of the reversed order in the data (see examples in (54) and (55)). In finite root negatives, the verb precedes *pas* in almost all cases, as in (56) and (57).

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[14] The discrepancy between the two children on the percentage of negative RIs does not contradict any prediction listed above. Crossindividual variations are also reported in L1 literature (see Chapter 2). What matters is that in all the instances of negative RIs - as is the case in the present study (see below) - the negator precedes the infinitival verb.

(56) a. ça c'est pas ma maman   (Kenny, month 2)
         this it is not my mummy

      b. t'   as   pas d'aide   (Kenny, month 9.5)
         you have-2S not of help

(57) a. moi je va   pas là   (Greg, month 5)
         me I go-3S not there

      b. Duncan veut   pas jouer   (Greg, month 10)
         D.   want-3S not to play

Table 21: Verb-placement in child L2 French finite and nonfinite root negatives

| | Finite negatives | | Nonfinite negatives | |
	V-Neg	Neg-V	V-Neg	Neg-V
Kenny	86	4	0	18
Greg	118	2	0	6

The early occurrence of negative RIs is also reported in the L1 French data of two children investigated by Pierce (1992), Nathalie and Grégoire. In Chapter 2, I suggested that these sentences can be explained by adopting a representation where NegP is located under TP, as argued by Zanuttini (1991). If NegP is the root, no higher functional category is projected, which allows the verb to appear in the nonfinite form.[15] Applying the same analysis here would equally account for the L2 facts. It would also explain the systematicity of verb-placement with respect to the negative adverbial *pas*. A NegP root would have NegP dominating VP; hence the negator would precede the nonfinite verb in V. In contrast, a finite negative would involve verb-movement to Infl past the negative adverbial.

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[15]As to the question of scope, the prediction is that even if negative markers occur in RIs, they should not have sentential scope. This is due to selectional relations between Neg and TP (Zanuttini, 1991, 1996). The child L2 French data do not particularly support the prediction. If we simply look back at the negative RIs in (55) and (56), it is possible to interpret the negation as having scope over the whole clause.

7.1.2. Child L2 German data

The child L2 German data on negation are less powerful than the L2 French data as only 8 root negatives were produced (all found in Concetta's transcripts).[16] Four occurred at month 11, one at month 12.4, and three at month 14.5. Of these utterances, one is a root infinitive in which the verb follows the negator *nicht* (*not*), as in (58a). In the remaining seven finite negatives, the reverse order is found in six occasions, as in (58b) and (58c).

(58)   a. nicht lesen   (Concetta, month 12.4)
           not   read-INF

       b. spiel   nix   (Concetta, month 11)
           (he) play not

       c. in Italien is nicht die Arbeit   (Concetta, month 11)
           in Italy is not   the work

On the whole, negation was used to the same (low) extent in finite and nonfinite main declaratives: 7/173 (4%) in finite context and 1/23 (4.3%) in nonfinite environment. These low figures contrast with the child L2 French data. Nevertheless, the one negative RI found in Concetta's speech can be handled by assuming that NegP immediately dominates VP, as argued above. Haegeman (1995) actually assumes that this representation is characteristic of V2 languages such as German.

7.2. Negation in adult SLA

7.2.1. Adult L2 French data

The adult French learners used negation in almost all interviews, as indicated in Appendix Table XX. In particular, they produced some nonfinite root negatives, especially

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[16] Luigina only produced two negative embedded clauses with a finite verb at month 19.8. In both cases, the negator precedes the verb (as is the case in Italian, her mother tongue).
(i)   a. warum (=weil) du nicht bezahl
              because   you not pay-ø
          b. warum (=weil) ich nicht versteht
              because   I   not understand-ø

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Abdelmalek. 28 negative RIs appear in his files, against 7 for Zahra. Abdelmalek's proportion of negative root declaratives is almost the same in finite and nonfinite contexts (Table 22). Such is not the case for Zahra. Her proportion of finite negatives is much larger than that of her negative RIs.

Table 22: Proportion of negative root declaratives in adult L2 French

	Finite	Negatives	RIs	Negatives
Abdelmalek	653	96 (14.7%)	272	28 (10.3%)
Zahra	600	129 (21.5%)	236	7 (3%)

Although the two learners did not use negative RIs to the same extent, they both produced negative nonfinite declaratives in which the verb precedes the negator (Table 23). This was found in 6 of Zahra's 7 negative RIs and in 4 of Abdelmalek's.[17] Some examples are given in (59) and (60).

(59) a. j'entrer   pas, moi   (Abdelmalek, month 27)
        I enter-INF not me

    b. consulat du Maroc   tu   donner   pas de   feuille   (Abdelmalek, month 24.5)
        consulate of Marocco you give-INF not some paper

    c. j'entrer   pas ici à Toulon   (Abdelmalek, month 52.5)
        I enter-INF not here in Toulon

(60)   maintenant payer   pas deux mois   (Zahra, month 36.5)
        now   pay-INF not two months

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[17] In addition, non-finite verbs were also found to precede the negator in subordinate clauses, as in (i).

(i)   a. parce que moi i parler   pas bien   (Zahra, month 20)
            because me I speak-INF not well

        b. parce que i   payer   pas   (Zahra, month 27.7)
            because he pay-INF not

        c. parce que entrer   la maison pas   (Abdelmalek, month 20.5)
            because enter-INF the house not

As for finite root negatives, the verb precedes the negator in most cases, as in (61) and (62).

(61)   a. mais on peut pas dormir   (Abdelmalek, month 17.7)

           but one can not sleep-INF

           b. il donne rien   (Abdelmalek, month 33.5)

           he give-3S nothing

(62)   a. le docteur il est pas là   (Zahra, month 18.5)

           the doctor he is not there

           b. i mange pas   (Zahra, month 26.7)

           he eat-3S not

Table 23: Verb-placement in adult L2 French finite and nonfinite root negatives

	Finite negatives		Nonfinite negatives	
	V-Neg	Neg-V	V-Neg	Neg-V
Abdelmalek	88	8	4	24
Zahra	129	0	6	1

I come back to the implications of these results after discussing the adult L2 German data in which similar findings were discovered.

7.2.2. Adult L2 German data

As can be seen in Appendix Table XXI, negation was found in almost all Zita's and Ana's interviews, as was the case for the adult L2 French learners. The adult learners of L2 German also produced negative RIs. 27 such sentences were found in Zita's data; 10 occurred in Ana's speech. The extent to which negation was used in finite and nonfinite environments was roughly the same for each learner (12-14%), as indicated in Table 24.

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Table 24: Proportion of negative root declaratives in adult L2 German

	Finite	Negatives	RIs	Negatives
Zita	587	85 (14.4%)	191	27 (14.1%)
Ana	762	97 (12.7%)	74	10 (13.5%)

Zita and Ana produced almost the same number of finite root negatives, 85 and 97 respectively. In these sentences, the order is predominantly V-Neg (Table 25), as shown in (63) and (64).

(63) a. ich studiere nicht   (Zita, month 3.7)
        I study-1S not

      b. ich sage nicht   (Zita, month 15)
        I say-1S not

(64) a. ich spreche nicht Deutsch   (Ana, month 4.5)
        I speak-1S not German

      b. ich bin nicht Deutsch   (Ana, month 8.2)
        I am not German

Nearly half of all the negative RIs produced by the adult L2 German learners display a V-Neg order. This order was found in 12 of Zita's 27 negative RIs (44.4%), as in (65). It also occurred in 6 of 10 negative nonfinite main declaratives produced by Ana, as in (66).

(65) a. <sin> Geld ich kaufen nix   (Zita, month 5.6)
        without money I buy not

      b. du mich verstehn nix   (Zita, month 6.5)
        you me understand-INF not

      c. ich sprechen nich Deutsch   (Zita, month 6.7)
        I speak-INF not German

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	d. ich machen nich	(Zita, month 22)
	I do-INF not	
	e. mein Schwager schlagen nicht	(Zita, month 25.4)
	my brother-in-law hit-INF not	

(66)	a. aber ich sagen nicht die Nummer	(Ana, month 11.7)
	but I say-INF not the number	
	b. vielleicht Montag sie rufen nicht	(Ana, month 13.5)
	maybe Monday she call-INF not	

Table 25: Verb-placement in adult L2 German finite and nonfinite root negatives

	Finite negatives		Nonfinite negatives	
	V-Neg	Neg-V	V-Neg	Neg-V
Zita	78	7	12	15
Ana	94	3	6	4

The fact that the verb precedes the negator in nonfinite environments goes against the predictions and clearly differs from what was found in the child L2 data. It suggests that some of the adults negative RIs are not NegPs. We saw that the location of NegP may vary crosslinguistically: it may be above TP or below it. Crucially, under either possibility, the V-Neg order found in adult nonfinite main declaratives suggests that the verb appears higher than NegP. If NegP is assumed to dominate TP, the verb should be in Agr. If NegP is immediately above VP, the verb should be (at least) in T. In both cases, then, the verb finds itself under a functional projection, which should prevent it from appearing in the nonfinite form. One way to explain this problem is to assume that these verbs are considered finite by the learners. I come back to this point in Chapter 6.

7.3. Summary

All learners used negation in their interviews. They also produced a non-trivial number of negative RIs, which is not predicted by the Truncation Hypothesis. However, by assuming that NegP is below TP, such sentences can be interpreted as NegP roots. This analysis can only apply to those negative RIs in which the negator precedes the verb. This order is found in all the nonfinite negatives produced by the children, suggesting that they project truncated structures in early acquisition. However, many negative RIs produced by the adult learners display the reverse order, namely the verb precedes the negator. These sentences clearly cannot be analysed as NegPs; rather, they involve the projection of at least one functional category hosting the verb. The implication of these findings is that the structure of root infinitives is not the same across learners and that age seems to play a role in determining what this structure may be.

8. Auxiliaries and modals

Since auxiliaries and modals require the projection of IP, nonfinite auxiliaries and modals are not expected to occur in root declaratives. The results show a difference between the children and the adults: while the children always used auxiliaries and modals in the finite form, the adults were found to employ these elements in root infinitives.

8.1. Child L2 auxiliaries and modals

Appendix Table XXII displays the number of auxiliaries and modals and their occurrence as nonfinite main verbs in the child L2 data. The children learning French produced auxiliaries and modals relatively early, which was not the case of the L2 German child learners. Auxiliaries and modals occurred for the first time at month 8.4 for Concetta and at month 14.9 for Luigina. Despite this difference, once auxiliaries and modals appeared, they were found in almost all subsequent interviews, sometimes quite frequently,

as in Kenny's and Greg's case. The distribution of auxiliary and modals in finite and nonfinite main declaratives is summarised in Table 26. It clearly shows that all instances of auxiliaries and modals were finite in the child L2 data, as illustrated in (67) and (68).

(67) a. j'ai   fait ça   (Greg month 5)
         I have done this

      b. c'est fini   (Greg month 5)
         it is finished

      c. moi petit bébé est couché dans lit   (Kenny month 3)
         me little baby is lying   in bed

      d. Kenny   a   crié   (Kenny month 4)
         Kenny has screamed

(68) a. du muß schreiben   (Concetta, month 11)
         you must write-INF

      b. ich kann nicht gucken   (Concetta, month 12.4)
         I can not look-INF

      c. meine Vater ist gesch(xx)en   (Luigina, month 14.9)
         my father is happened (=arrived?)

      d. meine Mutter hat geaufen   (Luigina, month 19.7)
         my mother has bought

Table 26: Total number of finite and nonfinite auxiliaries/modals in child L2 root declaratives

L2	Learners	Total	Finite	Nonfinite
L2 French	Kenny	99	99	0
	Greg	177	177	0
L2 German	Concetta	26	26	0
	Luigina	6	6	0

8.2. Adult L2 auxiliaries and modals

As was observed in the child L2 learners' data, auxiliaries and modals did not appear in the earliest interviews of the adult L2 learners, especially in the case of Zita and Ana (Appendix Table XXIII). Zita's first auxiliary/modal appeared at month 6.5, while Ana produced her first token at month 4.7. Nevertheless, auxiliaries and modals were relatively frequently used by all learners. Zita was the least consistent in using these elements; there were a number of interviews where she did not produce any. This being said, auxiliaries and modals generally co-existed with root infinitives in the adult L2 data.

The vast majority of auxiliaries and modals were finite (Table 27), as illustrated in (69) and (70).

(69) a. il est parti l' espagne lui   (Abdelmalek, month 14)
        he is gone the Spain him

      b. il est venu Nourdine   (Abdelmalek, month 15)
        he has come Nourdine

      c. elle est partie   (Zahra, month 18.5)
        she is gone

      d. lundi mardi a téléfoné le docteur   (Zahra, month 20)
        Monday morning has called the doctor

(70) a. meine Schwester kanne schlafen   (Zita, month 6.5)
        my sister can-1S sleep-INF

      b. ich hab versuchen   (Zita, month 22)
        I have-ø try-INF

      c. viel Leute will nicht <commencar> <estudiar>   (Ana, month 4.7)
        many people want-3S not start-INF study-INF

      d. ich habe gekommen drei mal in Wohnung die Frau Wurke   (Ana, month 7.2)
        I have-1S come tree time in apartment the Mrs. Wurke

L2	Learners	Total	Finite	Nonfinite
L2 French	Abdelmalek	188	188	0
	Zahra	102	102	0
L2 German	Zita	68	56	12
	Ana	62	60	2

However, in contrast to the children, some nonfinite auxiliaries and modals were found in the adult L2 data. These were all produced by the L2 German learners. Zita produced 12 nonfinite auxiliaries out of 68 (17.6%) in root infinitives, as in (71a-c), while Ana produced 2 of 62, as in (71d).

(71)   a. tausand ich nich können   (Zita, month 9.5)
             thousand I not can-INF

        b. ich möchten ein bißchen sprechen   (Zita, month 22)
           I want-INF a   little   speak-INF

        c. die Ana haben   schon gesagt   (Zita, month 25.4)
           the Ana have-INF already said

        d. der Junge wollen   helfen   die Großmutter (Ana, month 4)
           the child   want-INF help-INF the grandmother

Zita and Ana also used nonfinite modals in yes/no questions and embedded clauses, as shown in (72).

(72)   a. möchten ma du ein Kaffee?   (Zita, month 10)
           want-INF then you a   coffee

        b. wenn du eine mußten so   machen Portuguisch   (Zita, month 25.8)
           when you one must-INF like this do-INF Portuguese

c. was das großmutter wollen   nehmen   die Bus   (Ana, month 4)
   that the grandmother want-INF take-INF the bus

It might be argued that Zita and Ana considered German modals as 'full' verbs. However, no other learner, in particular the two children acquiring L2 German, used modals in the nonfinite form. The question is then why Zita and Ana should be the only learners coming up with such an interpretation. Although these findings are difficult to explain, they nonetheless indicate that the adult L2 German data deviate from the predictions.

8.3. Summary

As predicted by the Truncation Hypothesis, the vast majority of auxiliaries and modals were used in the finite form. However, such elements were also produced in the nonfinite form by the adult L2 German learners. There is no immediate explanation for why these learners were the only ones to produce such forms. In particular, it is not immediately clear why we should observe a difference between the two groups of adult learners and between the child and adult learners of L2 German with respect to the finiteness of auxiliaries and modals. Nevertheless, these facts add to the list of differences between child and adult L2 learners concerning the distribution of finite and nonfinite forms in early spontaneous speech.

9. Clitics

The distribution of subject clitics only concerns the acquisition of L2 French. The prediction is that such elements should not appear in root infinitives. Rather, they should only be found in finite declaratives since clitics must be hosted by a functional projection. The findings show a great discrepancy between the child and adult learners of L2 French. While the child data conform to the predictions, the adults produced many clitic subjects in

RIs. Note that the data reported below include cases of clitic doubling such as *moi je* ('me I') and *Jean il...* ('John he...').

9.1. Clitics in child L2 French

The children used subject clitics in their early interviews and continued to use them thereafter (Appendix Table XXIV). Greg's proportion of subject clitics is consistently over 60% throughout almost the entire data collection period. Kenny's rate of clitics is over 20% in practically all interviews, with highs at 61.1% at month 4 and 42.9% at month 14. The rate increases significantly in the last five interviews. Examples of subject clitics produced by both children are given in (73) and (74).

(73) a. elle est là   (Greg month 5)
          she is there

      b. j'ai   fait ça et ça   (Greg month 5)
          I have-1S done this and this

      c. le bébé   i va   là   (Greg month 5)
          the baby he go-3S there

      d. moi je joue   avec   (Greg, month 5)
          me I play-1S with

(74) a. j'veux   un jaune   (Kenny, month 1)
          I want-1S a yellow

      b. je suis ton   ami   (Kenny, month 3)
          I am your friend

      c. i crie   hey!   (Kenny, month 4)
          he yell-3S hey

      d. i tombe   (Kenny, month 4)
          he fall-3S

As predicted, almost no clitic was used as a subject of a root infinitive (at least 96% of all clitics produced by the children occurred in finite main declaratives). Table 28

summarises the occurrence of clitics in finite main declaratives and RIs. There is a very high contingency between finiteness and the occurrence of subject clitics (Kenny: X^2=32.62, p=.0001; Greg: X^2=51.796, p=.0001).[18]

Table 28: Clitic subjects in child L2 finite and nonfinite root declaratives

	Finite	Clitics	RIs	Clitics
Kenny	428	159 (37.1%)	76	3 (3.9%)
Greg	591	411 (69.5%)	58	13 (22.4%)

9.2. Clitics in adult L2 French

Just like the children, the adult L2 French learners used subject clitics in the earliest interviews and thereafter (Appendix Table XXV). Subject clitics were the most common subjects used by the adults learners. The proportion of clitic subjects in finite contexts is above 60% throughout most of the data. The examples below illustrate clitic usage in finite declaratives:

(75) a. il est parti l' Espagne, lui (Abdelmalek, month 14)
         he is gone the Spain   him

       b. j'ouvre (Abdelmalek, month 25)[19]
          I open-1S

       c. lui il parle   arabe   aussi (Abdelmalek, month 34.5)
          him he speak-3S Arabic too

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[18] Greg's relatively high percentage (22.4%) of clitic subjects in RIs is somewhat unpredicted, as illustrated in (i). There is independent evidence that Greg had knowledge of French clitics (see White, 1996). I will thus consider the occurrence of clitic subjects in RIs as production errors.
(i)   a. je mettre   ça comme ça (Greg, month 5)
          I put-INF this like this
       b. je jouer   avec les animaux (Greg, month 14)
          I play-INF with the animals
       c. i coulorer   la maison comme ça (Greg, month 15)
          he color-INF the house like this

[19] Note that the clitic j' is not considered part of the verb, as the form ouvre ('open') is found in the same interview:
(i)   il prend   les clés, ouvre   la porte (Abdelmalek, month 25)
          he take-3S the keys open-3S the door

(76) a. i travaille pas   (Zahra, month 15.5)
         he work-3S not

      b. je reviens pas   (Zahra, month 24.5)
         I return-1S not

      c. i porte   de l' eau beaucoup   (Zahra, month 36)
         he carry-3S some the water much

Like in the child L2 French data, there is a significant contingency between finiteness and the occurrence for clitic subjects for the adults (Table 29), whereby clitics are proportionally more frequent in finite root declaratives than in RIs (Abdelmalek: X^2=40.506, p<.0001; Zahra: X^2=14.974, p<.0001). In contrast to the children, however, the proportion of subject clitics used in adult root infinitives is relatively high (more than 50%) and this finding is not consistent with the Truncation Hypothesis. Roughly 25% of Abdelmalek's and Zahra's subject clitics appear in RIs.[20] Out of 700 subject clitics produced by Abdelmalek, 168 were used along with a nonfinite verb (24%), as in (77); for Zahra, 120 of 512 clitics occurred as subjects of RIs (23.4%), as in (78). This is far in excess of what the children produced.

(77) a. il passer   le douane en France   (Abdelmalek, month 17.7)
          he go+through-INF the customs to France

      b. tu rester   ici   (Abdelmalek, month 25)
          you stay-INF here

      c. tu boire   (Abdelmalek, month 27)
          you drink-INF

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[20] Eubank, Beck & Aboutaj (1997) report different findings on Abdelmalek's usage of clitics. Examining negative declaratives in all of the ESF files, they found that out of 250 clitics, only 2 were used along with a non-finite verb (<1%). My own count of clitic occurrence in Abdelmalek negative root declaratives reveals that out of 28 negative infinitives, 6 included a subject clitic. For Zahra, 5 of 7 negative infinitives displayed a subject clitic. The discrepancy between the two studies may be due to what was eventually retained as instances of clitics in the calculation.

d. moi j'arrêter   à la douane   (Abdelmalek, month 34.5)[21]
   me I stop-INF at the customs

(78)   a. monsieur il arriver   (Zahra, month 18.5)
            mister   he arrive-INF

        b. tu couper tout   (Zahra, month 24.5)
            you cut-INF everything

        c. i casser la fenêtre   (Zahra, month 29.2)
            they break-INF the window

        d. tu pleurer   (Zahra, month 36)
            you cry-INF

Table 29: Clitic subjects in adult L2 finite and nonfinite root declaratives

	Finite	Clitics	RIs	Clitics
Abdelmalek	653	532 (81.5%)	272	168 (61.8%)
Zahra	600	392 (65.3%)	236	120 (50.8%)

A potential explanation for why the adults used so many nominative clitics in RIs is that they considered nominative case as the default case in French, based on their L1 grammar (see Ouhalla, 1994). However, there is evidence that both Abdelmalek and Zahra knew that the default case is objective and not nominative in French. They never used nominative clitic subjects in verbless utterances, as in (79) and (80), and in peripheral positions, as in (81) and (82). Default case is normally assigned in these contexts due to lack of a nominative case assigner. In all cases, objective pronouns were used.

(79)   a. moi complet   (Abdelmalek, month 17.5)
            me full

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[21] The clitic *j'* does not seem to be considered to be part of the verb *arrêter* ('stop') as this verb was used as such with another clitic (during the same interview):
(i)   il arrêter   la voiture   (Abdelmalek, month 34.5)
           he stop-INF the car

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b. toi   pas passeport   (Abdelmalek, month 25)
             you not passport

          c. moi seul   (Abdelmalek, month 25)
             me alone

          d. toi   pas droit le   chômage   (Abdelmalek, month 25.7)
             you not right the unemployment benefit

(80)   a. moi le   ménage   (Zahra, month 12)
            moi the cleaning

         b. et   ça lui   aussi   (Zahra, month 14)
            and this him too

         c. après, moi 100 francs   (Zahra, month 18.5)
            after   me 100 francs

         d. moi la   sécurité sociale   (Zahra, month 18.5)
            me the security social

(81)   a. il est parti l' Espagne, lui   (Abdelmalek, month 14)
            he is gone the Spain   him

         b. pas connais ça moi   (Abdelmalek, month 17.5)
            not know-1S this me

         c. j'en ai   passeport moi   (Abdelmalek, month 25)
            I one have:1S passeport me

         d. j'entrer   pas, moi   (Abdelmalek, month 27)
            I enter-INF not me

(82)   a. moi quand je regarde   comme ça m' énerve   (Zahra, month 20)
            me when I look+at-1S like   this me anger-1S
         b. moi quand reste   comme ça ... c'est mieux   (Zahra, month 20)
            me when stay-1S like   this   it is better
         c. moi le   brouillard c'est pas bon   (Zahra, month 24.5)
            me the fog   it is   not good
         d. moi c'est rare monte   à Saint Antoine   (Zahra, month 41)
            me it is   rare go+up-1S to Saint Antoine

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If Abdelmalek and Zahra did not consider nominative case as the default case in French, then the occurrence of nominative clitic subjects in their RIs suggests that these sentences involve the projection of a functional category. Note that subject clitics in RIs indeed behave like clitics in that they are never found separated from the verb and they never occur in conjoined NPs. All this suggests that they occur under a functional category along with the verb.

9.3. Summary

A substantial difference between the child and adult learners of L2 French was found with respect to the usage of subject clitics. Subject clitics were almost exclusively used in finite sentences by the children, which conforms to the prediction. The adult learners also used subject clitics in finite environment to a large extent. However, a large number of their root infinitives included subject clitics as well. Crucially, both adult learners were shown to know that default case is objective, and not nominative, in French. The findings on subject clitics in adult L2 French expand the evidence which suggests that nonfinite verbs may be considered finite forms by the adults, i.e. that were are not dealing with true root infinitives.

10. Case

According to the Truncation Hypothesis, subject DPs should be absent from root infinitives for Case reasons. On the other hand, they should appear in finite declaratives. RI subjects may include elements that do not bear structural case, i.e. bare NPs, or nominals bearing default case such as strong (objective) pronouns in French. In German, nominative case is the default case; hence it should be found in both finite and nonfinite environments, default in nonfinite contexts and structural in finite environments. While the predictions on pronouns are borne out, L2 German RIs may include subject DPs; moreover, they almost

never display nominative pronominal determiners (Pro-determiners). As for bare NP subjects, they are practically absent from RIs in all corpora .[22]

10.1. Case in child SLA

10.1.1. Child L2 French data

Appendix Table XXVI gives the occurrence of DP and strong pronoun subjects in the finite and nonfinite root declaratives produced by Kenny and Greg. The third person pronouns *lui* ('him'), *elle* ('her'), *eux* ('them:MASC') and *elles* ('them:FEM') were excluded from the calculations, as they may be found as subject of finite declaratives in adult French (bearing contrastive stress).[23] The data are summarised in Table 30. Note that no bare NP subject was found in the transcripts.

Table 30: Total number of child L2 French DP and strong pronoun subjects in root declaratives

	Finite	DPs	Strong Pron	RIs	DPs	Strong Pron
Kenny	428	115 (26.9%)	65 (15.3%)[24]	76	6 (7.8%)	45 (59.2%)
Greg	591	99 (16.7%)	32 (5%)	58	0	15 (25.4%)

DP subjects appeared in the earliest interviews and were consistently used in finite declaratives by both children, which conforms to the predictions. Out of the 121 DP subjects produced by Kenny during the 18 first months of exposure, 115 (95%) occurred in finite contexts, as in (83). As for Greg, all his DPs were found in finite declaratives. The difference between finite and nonfinite utterances in terms of DP subjects is significant for

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[22] I did not consider proper nouns as bare NPs in this count.
[23] See Chapter 1, fn 17. This also applies to the adult L2 French data discussed in 5.2.1.
[24] Four of Kenny's finite root declaratives included the third person strong pronoun subject *lui* ('him'). These sentences were substracted from the total number of finite root declaratives that he produced. The percentage of strong pronoun subjects was therefore calculated over 424 finite root declaratives.

each child (Kenny: X^2=12.736, p<.001; Greg: X^2=10.607, p<.01). Examples of utterances displaying a subject DP are given in (84).

(83)   a. mon papa vient   maison   (Kenny, month 1)
           my father come-3S home
        b. mon nom est Pascal   (Kenny, month 3)
           my name is Pascal

(84)   a. le train est là   (Greg, month 5)
           the train is there
        b. le bébé va   là   (Greg, month 5)
           the baby go-3S there

Strong pronouns were used as subjects of RIs practically as soon as root infinitives were produced. They occurred in almost all interviews where RIs were found, as in (85) and (86).

(85)   a. moi jouer   avec le train   (Greg, month 9.5)
           me play-INF with the train
        b. moi changer   de jeu   (Greg, month 18)
           me change-INF of game

(86)   a. toi aller   à Guy's   (Kenny, month 5)
           you go-INF to Guy's
        b. moi ranger   les animaux   (Kenny, month 15)
           me put-away-INF the animals

Strong pronouns represent over half of Kenny's nonfinite subjects during the first 18 months of exposure. For Greg, the proportion is around 25%. As expected, strong pronouns are proportionally far more frequent in RIs than in finite main declaratives for both learners during that period (Kenny: X^2=72.316, p<.0001; Greg: X^2=32.874,

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p<.0001). Despite these results, it should be pointed out that strong pronoun subjects account for 15.4% of Kenny's subjects of finite main declaratives (Table 30). This is not predicted given that French strong pronouns do not bear nominative case. Yet, most of these pronouns are found in constructions such as *moi est* ('me is') and *moi fait* ('me do') (White, 1996). It is thus questionable whether strong pronouns were productive as finite subjects.

10.1.2. Child L2 German data

In contrast to Greg and Kenny, the child L2 German learners used DPs and default case pronouns in both finite and nonfinite contexts (Appendix Table XXVII). In addition, almost all Pro-determiners, such as *der* ('the:MASC'), *die* ('the:FEM') and *das* ('the:NEU'), occurred in finite utterances. Finally, neither Concetta nor Luigina used any bare NP subjects in their RIs, as was also the case with the two children learning L2 French. Table 31 summarises the findings.

Table 31: Total number of child L2 German overt subjects in root declaratives

	Finite	DPs	Pronouns	Pro-determ	RIs	DPs	Pronouns	Pro-determ
Concetta	150	56 (37.3%)	45 (30%)	26 (17.3%)	23	7 (30.4%)	3 (13%)	3 (8.7%)
Luigina	42	12 (28.6%)	11 (26.2%)	6 (14.3%)	8	4 (50%)	3 (37.5%)	0

In Concetta's transcripts, DP subjects are found in finite declaratives and RIs as soon as these sentences emerge, as in (87). DP subjects are less consistently found in Luigina's data (they only occur in a few recordings). Nonetheless, on the whole, they represent a non-negligible proportion of subjects in both environments (88).

(87) a. die Mutter bringt   Banane   (Concetta, month 5.6)
         the mother bring-3S banana

| | b. meine Mutter putzen | (Concetta, month 13.5) |
| | my   mother clean-INF | |

(88)   a. ein Junge spielen   Ball   (Luigina, month 6)
       a boy   play-INF ball
       b. meine Mutter ist krank   (Luigina, month 14.9)
       mother go-3S chair

Overall, DP subjects were used to roughly the same extent in finite and nonfinite environments by both children (around 30%), except for Luigina who used DP subjects in half of her RIs. There is no significant difference between the two contexts for either learner (Concetta: X^2=.41, p=.522; Luigina: X^2=1.418, p=.2337). This stands in sharp contrast to the child L2 French data.

As for subject pronouns, even though they appeared later that DP subjects in Concetta's data, they nonetheless were used very frequently in the last 5 interviews, as illustrated in (89). Luigina also tended to produce subject pronouns in her last recordings, as in (90). Neither child show any significant difference between finite and nonfinite declaratives with respect to pronominal subjects (Concetta: X^2=2.86, p=.908; Luigina: X^2=.426, p=.5138).

(89)   a. sie gehen   arbeiten   montag   (Concetta, month 12.4)
          she go-INF work-INF Monday
       b. sie sagt   (Concetta, month 12.4)
          she says

(90)   a. ich bin Roberto   (Luigina, month 14)
          I am Roberto
       b. ich schreibe eine auch   (Luigina, month 14.9)
          I write-1S one too
       c. na Hause du schreiben   Blume   (Luigina, month 19.8)
          to house you write-INF flower

d. du schlafen   in er Schule   (Luigina, month 19.8)
   you sleep-INF in the school

Finally, Pro-determiner subjects are relatively frequent in Concetta's data (Luigina did not produce any). Interestingly, they almost always appear in finite environments, as in (91), which differs from DP and pronoun subjects. Although no significant difference is reached with respect to Pro-determiners (Concetta: X^2=2.86, p=.908), the distribution clearly favours finite declaratives. I come back to these findings in section 10.2.2.

(91)   a. die   da   hat eine Affe   (Concetta, month 12.4)
           the:FEM:S there has a   monkey
        b. der   is zu klein   (Concetta, month 14.5)
           the:MASC:S is too small

10.2. Case in adult SLA

10.2.1. Adult L2 French data

Most of the subject DPs produced by the adult learners of French were used along with a clitic. These instances of clitic doubling were included in the discussion on clitics in section 9. The production of non-doubled DPs and strong pronouns is reported in Appendix Table XXVIII (see Table 32 for a summary). Note that only four bare NP subjects were found in root infinitives.

	Finite	DPs	Strong Pron	RIs	DPs	Strong Pron
Abdelmalek	653	53 (8.1%)	13 (2%)[25]	272	15 (5.5%)	19 (7%)
Zahra	600	71 (11.8%)	26 (4.3%)	236	32 (13.5%)	23 (9.8%)

Subject DPs appeared slightly earlier than strong pronouns in both learners' speech. Abdelmalek produced few subject DPs in RIs, which is consistent with the predictions. Subject DPs were more frequent in Zahra's data. In particular, the percentage of nonfinite subject DPs (around 13%) is slightly higher than the percentage of subject DPs in finite root declaratives, which is not consistent with the Truncation Hypothesis. Overall, there is no significant difference between finite and nonfinite root declaratives concerning DP subjects (Abdelmalek: X^2=1.908, p=.1672; Zahra: X^2=.467, p=.4943).[26]

Neither Abdelmalek nor Zahra used strong pronouns much as subjects of nonfinite main declaratives, which differs from the children learning L2 French. The overall proportion of RIs displaying a strong pronoun subject is 7% for Abdelmalek and 9.8% for Zahra, compared to 59.2% for Kenny and 25.4% for Greg. This discrepancy cannot be

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[25] Three finite root declaratives were found to display third person strong pronoun subjects such as *lui* ('him'). I substracted these sentences from the total number of finite root declaratives. The percentage of strong pronoun subjects was therefore calculated over 650 finite root declaratives.

[26] If we add up the cases of clitic doubling, significance is reached for Abdelmalek (X^2=7.839, p<.01) but not for Zahra (X^2=2.799, p=.0977). It is not clear what position the DP occupies in clitic doubling contexts and thus what Case it receives. If it is in specIP and bears nominative case, then Abdelmalek's cumulative results are consistent with the predictions (nominative subjects should not appear in RIs) but Zahra's are not. If the DP is not in specIP and does not bear nominative case, then the results are a function of the occurrence of clitics with finite and nonfinite verbs. Abdelmalek's results would again conform to the predictions since clitics should not appear with nonfinite verbs, whereas Zahra's would not. As it turns out, both learners produced a large number of clitic subjects in finite and nonfinite root declaratives, as discussed in section 9 above. Yet, Abdelmalek used half as many clitic doubling constructions as Zahra in both contexts, as shown in (i).

(i)

	Finite	DP + clitic	RIs	DP + clitic
Abdelmalek	653	56 (8.6%)	272	11 (4%)
Zahra	600	106 (17.7%)	236	26 (11%)

Therefore, the statistical significance reached on the distribution of DP subjects and clitic doubling constructions in Abdelmalek's data results from a low usage of clitic doubling in RIs and not to a reluctance to use clitic subjects in RIs in general.

attributed to the lack of knowledge of objective default case in French on the part of the adult learners, as argued in section 9.2. Alternatively, the difference between the children and the adults might suggest that the RIs in which strong pronoun subjects appear are not 'real' RIs in the adult speech; rather, they may be considered finite declaratives, which would explain the low number of strong pronoun subjects in the adult L2 data. I discuss this point further in the next chapter. In spite of these considerations, there is a significant difference between finite and nonfinite utterances in terms of strong pronoun subjects for each adult learner (Abdelmalek: $X^2=14.225$, p=.0002; Zahra: $X^2=8.993$, p=<.05). Although the results go in the predicted directions, i.e. usage of strong pronoun subjects restricted to RIs, the statistical differences are less dramatic than in child L2 French.

10.2.2. Adult L2 German data

DP and pronoun subjects appear in the earliest files of the adult L2 German data (Appendix Table XXIX). Both learners used them frequently in finite and nonfinite root declaratives throughout the period of data collection. They also used both types of subject to a greater extent than the adult learners of L2 French (Table 33). Note that only two bare NPs were produced as subjects of RIs.

Table 33: Total number of child L2 German overt subjects in root declaratives

	Finite	DPs	Pronouns	Pro-determ	RIs	DPs	Pronouns	Pro-determ
Zita	587	196 (33.4%)	208 (34.4%)	21 (3.6%)	191	54 (28.3%)	105 (55%)	0
Ana	688	183 (26.6%)	263 (38.2%)	4 (<1%)	74	23 (31.1%)	27 (36.5%)	0

Sentences in (92) through (95) include instances of DPs and pronouns used as subjects of finite and nonfinite root declaratives by the two adult learners of L2 German.

(92)   a. meine Schwester arbeite   en...   (Zita, month 8)
          my   sister   work-1S in

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b. jetzt kommt   diese Brief   (Zita, month 15)
   now come-3S this   letter

c. die Frau schreiben   (Zita, month 3)
   the woman write-INF

d. die Elisa gehen   Urlaub in Portugal   (Zita, month 11.7)
   the Elisa go-INF vacation in Portugal

(93)   a. der Baum ist doch   (Ana, month 4)
           the tree   is there

        b. ein Person arbeite   in Hause   (Ana, month 8.2)
           a   person work-1S in house

        c. ein Herr verkaufen Blumen   (Ana, month 4)
           a   man sell-INF   flowers

        d. die Freundin <eh> lieben   nicht die Papa Verde (Ana, month 7.2)
           the girlfriend hmm love-INF not   the Papa Verde

(94)   a. ich arbeite   in Oka an zwei Monate (Zita, month 6.7)
           I work-1S in Oka for two months

        b. er is besser   (Zita, month 25.6)
           he is better

        c. ich kommen   Banhof   (Zita, month 7.5)
           I come-INF train station

        d. du kaufen   ein Banane   (Zita, month 9.5)
           you buy-INF a   banana

(95)   a. ich lesen   Deutsch   (Ana, month 4)
           I   read-INF German

        b. er sprechen Spanish   (Ana, month 4.5)
           he speak-INF Spanish

        c. er denkt nicht   (Ana, month 4)
           he think-3S not

        d. ich habe   Freund <de> Brusselas   (Ana, month 7.2)
           I   have-1S friend   of   Brussels

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Overall, Zita and Ana are consistent across subject and sentence types: DPs and pronouns each represent roughly 30% of the subjects used in finite and nonfinite root declaratives (apart from Zita's high proportion of pronoun subjects in RIs). The usage of DP subjects does not yield any significant difference between finite and nonfinite declaratives (Zita: X^2=1.731, p=.1883; Ana: X^2=.68, p=.4094). As for pronoun subjects, only Zita's results are significant (Zita: X^2=22.881, p=.0001; Ana: X^2=.86, p=.7695).

As for Pro-determiners, they emerged late and were used sporadically (most of them appear in Zita's data). Contrary to DP and pronoun subjects, they were systematically found in finite declaratives (Zita: X^2=7.023, p<.05), as in child L2 German. Some examples follow.

(96)   a. die   arbeite   die Fabrik   (Zita, month 13.7)
         the:FEM:S work-1S (in) the factory
       b. der   ist klein und groß   (Zita, month 22.7)
         the:MASC:S is small and big

These results are similar to the findings in child L2 German, namely that DP and pronoun subjects appear in both finite and nonfinite contexts and that Pro-determiners are restricted to finite utterances. We could say that DP subjects of RIs bear nominative (default) case in L2 German. The problem with this account, however, is that it fails to explain why DP subjects do not appear in the L2 French RIs (child and adult), i.e. why subject DPs do not bear default case in such sentences as well. I have no answer to this puzzle. It would be useful to have more data from children learning L2 German to see whether the tendency observed in Concetta's and Luigina's recordings is confirmed in larger corpora and thus whether child and adult learners of L2 German behave similarly with respect to elements bearing nominative case. At stake is the possibility that the adult L2 German RIs containing subject DPs and nominative pronouns are not VP roots but structures containing a functional projection where structural nominative case is assigned.

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This proposal is supported by the fact that adult L2 learners seem to treat nonfinite verbs differently from the child learners, as suggested throughout this chapter. As to Pro-determiners, they seem to require structural Case. It might be the case that nominative default pronouns can only take one form in German, e.g. *er* ('he') and *sie* ('she'), which would explain why Pro-determiners only occur in finite contexts.

10.3. Summary

With respect to the predictions, all learners except the adult learners of L2 French used pronouns bearing default case in root infinitives. It was suggested that some of the RIs produced by the adult L2 French learners involve a functional projection. Second, subject DPs are not found in RIs in the L2 French data, in either the child or adult corpora, which is in compliance with the predictions. However, DP subjects are found in the child and adult L2 German transcripts. Somehow, subject DPs in RIs may receive default nominative case in these utterances. However, this tendency needs to be confirmed by more data, especially in child L2 German. It is also possible that the adult L2 German root declaratives displaying a DP or pronoun subject are all finite given that nominative case is ambiguous between default case and structural case in that language. Findings on Pro-determiners reveal that they were almost always used as subject of finite declaratives by the child and adult learners of L2 German. I suggested that these elements require structural case and thus that they cannot use as default case pronouns. Finally, almost no bare NP subjects occur in root infinitives.

11. Conclusion

The findings reported here indicate an age effect in the usage of nonfinite verbs. In the child data, nonfinite verbs are found in root declaratives only, auxiliaries and modals occur in the finite form, and negators systematically precede nonfinite verbs. Moreover,

subject clitics are used almost exclusively with finite verbs. In general, most predictions for the Truncation Hypothesis laid out in Chapter 1 are confirmed in the child data. These findings suggest that the distribution of nonfinite verbs is structurally determined in L2 child grammar, i.e. tenseless verbs only appear when VP or NegP is the root. This in turn suggests that children project truncated structures in early L2 acquisition. In addition, finite root declaratives were produced along with nonfinite ones, which suggests optionality in the types of structure being projected. RIs are assumed to be VPs while finite root declaratives are at least IPs. Evidence for IP roots comes from the occurrence of null subjects in finite root declaratives, but not in finite CPs. The period during which truncation occurs was estimated to last for 18 months in the case of Greg and Kenny. Both children were found to use root infinitives during the first 18 months of exposure whereas almost none was produced afterwards. In addition, root infinitives and subjectless finite main declaratives were found to disappear at month 18. This suggests an important qualitative change within the linguistic system underlying L2 knowledge.

In contrast to the children, the possibility of truncation is not confirmed for the adult learners. The distribution of nonfinite forms in the adult data is much less clean-cut than for the children. Even though both finite and nonfinite declaratives occur in early acquisition, the adult data include tenseless verbs in subordinate clauses and questions, nonfinite auxiliaries, tenseless verbs preceding negative adverbials, and subject clitics used in root infinitives.

In closing this chapter, it is crucial to point out that the production of root infinitives is not related to a deficit in functional categories. As said earlier, finite declaratives were produced along with RIs, suggesting that Infl is indeed part of the initial L2 grammar. Moreover, the position of the finite verb with respect to negation indicates that verb-movement is taking place for all learners, and thus that functional categories are involved. Finally, subject clitics are used productively by both children and adults in the earliest interviews of L2 French acquisition. Since these elements can only attach to a verb in Infl,

it follows that every time a subject clitic is used along with a finite verb, that verb is located under a functional category. As for CP, the data are less conclusive as to its early availability since the first production of wh-questions and embedded clauses is delayed, especially in the child L2 data. This, however, does not mean that CP is absent from initial grammars. As Grondin & White (1996) point out, even though Greg and Kenny do not produce sentences involving CP in the early stages, e.g. wh-questions, they understand them perfectly. This suggests that they have the appropriate structural layer in their grammar. Finally, the production of RIs does not appear to be related to any semantic characteristics of the verbs either. As we have seen, very different types of verbs are used in infinitival contexts. Moreover, most of them also occur in finite root declaratives, suggesting true optionality.

Chapter 5

Discussion and Conclusion

1. Introduction

In this chapter, I discuss the findings on truncation in SLA. The investigation of early spontaneous production data suggests that early child L2 speech is consistent with the Truncation Hypothesis, while evidence for truncation in adult early L2 acquisition is unclear. In particular, the distribution of nonfinite verbs is predictable for child learners but not for adults. The results are summarized in detail in section 2. In section 3, I review other potential explanations for the production of root infinitives in child SLA, such as underspecification of Tense, underspecification of Number, underspecification of C, null auxiliaries, optional verb-movement, and missing inflection. I argue that none of these analyses can satisfactorily account for the child L2 data investigated here. In section 4, I look at the theoretical implications of the results in L2 acquisition. I first show that the current SLA theories on the nature of initial grammars have difficulties accounting for the array of properties of the child data presented in Chapter 4. I then discuss the nature of the underspecification of the Root Principle and what may trigger its emergence in L2 (and L1) grammars. Finally, I explore possible explanations for the differences between child and adult learners.

2. Summary of the results

The Truncation Hypothesis holds that Rizzi 's (1994) Root Principle, according to which declaratives are CPs, is underspecified in early L2 grammars. If the Root Principle is initially underspecified, then there is no constraint on the nature of roots. In other words, language learners are not required to systematically project CP roots to represent declarative sentences. Instead, they are free to project truncated structures, namely structures whose root is somewhere below CP, such as IP, NegP or VP. In particular, the projection of VP roots should yield the production of root infinitives in the early stages of acquisition. Moreover, truncation should be allowed in all early L2 grammars, regardless of the age at which acquisition begins.

The investigation of the early speech of four child learners and four adult learners yielded mixed results. Although finite and nonfinite declaratives were found in all corpora, only the child L2 data were found to be consistent with the predictions of the Truncation Hypothesis. This is especially true of the two children learning L2 French (the child L2 German data included fewer utterances and covered a shorter period of time than the L2 French corpora, but was nonetheless consistent with the Truncation Hypothesis). In particular, the distribution of nonfinite forms seems to be structurally determined in child L2 grammars. Evidence for the projection of VP includes the following: (a) nonfinite main verbs are confined to root declaratives; very few of them occur in CPs; (b) root infinitives do not include clitics and DP subjects (especially in the child L2 French data); those subjects are only encountered in finite environments; (c) pronoun subjects bearing default case are significantly more likely to appear in RIs than in finite main declaratives in child L2 French ; (d) auxiliaries/modals never occur in root infinitives; they are all finite; (e) null subjects are found in root infinitives. Evidence for the projection of IP roots is that (a) subjectless finite declaratives occur in the acquisition of a non-*pro*-drop language such as French (with a non-*pro*-drop L1 as well); (b) null subjects do not occur in finite CPs; (c) the development of root infinitives and null subjects in finite root declaratives follows

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similar patterns; in particular, both RIs and subjectless finite main declaratives disappear at about the same time in the child L2 French data, and to a less conclusive extent in the speech of one of the two child L2 German learners (Concetta).

Contrary to the predictions, however, negative root infinitives were found in the child L2 data. These were not sporadic since the proportion of negation in RIs was found to be comparable with, and sometimes to exceed the use of negation in finite main declaratives. As suggested in Chapter 2 for L1 acquisition, these sentences can receive a straightforward truncation account if NegP is considered to be located between TP and VP. This assumption can also explain the distribution of finite and nonfinite verbs with respect to negative adverbials: when NegP is the root, the nonfinite verb follows the negator, whereas when a projection higher than NegP is the root, the finite verb raises and precedes the negator. Finally, the two children learning L2 German produced a number of DP subjects in RIs, in contrast to the child learners of French. Given the discrepancy between the two corpora, however, more data are needed to confirm this finding.

In contrast to the children, the adult L2 learners used nonfinite forms in environments that are not consistent with the Truncation Hypothesis. In particular, the adult corpora include nonfinite CPs, clitics used along with infinitival verbs, and nonfinite forms preceding negative adverbials. In addition, some learners used nonfinite auxiliaries and modals. The occurrence of nonfinite forms in more contexts than in the child data may explain why the proportion of root infinitives produced by the adult learners was twice as much as that of the children. A final difference between the adult and child data is that adult root infinitives and null subjects in finite declaratives follow different development patterns. The occurrence of null subjects either goes down while root infinitives continue to be produced, or the reverse pattern is observed. All this suggests that the nature of adult L2 root infinitives is different from child learners, in that they involve the projection of functional categories. In other words, they are not VPs.

3. Alternative explanations for child L2 root infinitives

In this section, I discuss different analyses that could account for the phenomenon of root infinitives observed in the child L2 data. I first examine proposals made for L1 acquisition (see Chapter 2), i.e. the underspecification of Tense (Wexler, 1994) and the underspecification of Number (Sano & Hyams, 1994). I then explore the possibility of the initial underspecification of C, an analysis inspired by some proponents of the Weak Continuity Hypothesis in L1 acquisition (Meisel & Müller, 1992; Clahsen et al., 1993/1994). A fourth account in terms of optional verb- movement is discussed thereafter (Phillips, 1996). Finally, I review Haznedar & Schwartz's (1997) theory of missing inflection proposed for early (child) SLA.

3.1. Underspecification of T

A possible explanation for the occurrence of child L2 root infinitives is the underspecification of Tense, drawing on Wexler's (1994) proposal for L1 acquisition. Verb-movement is optional under this analysis because of the initial unavailability of tense. Lack of verb-movement yields RIs while verb-raising underlies finite utterances. Applying this analysis to the child L2 data examined here could explain why both finite and nonfinite declaratives were found. It would also account for the distribution of DP and clitic subjects: since these elements need verb-movement to functional categories in order to be licensed, they are predicted to only occur in finite sentences.

However, the underspecification of Tense account raises several problems. The first problem, already mentioned in Chapter 4, has to do with null subjects in finite declaratives. Under the Underspecification of Tense Hypothesis, these null subjects are instances of topic drop. Once tense emerges, root infinitives are supposed to drop out. Moreover, since there is no relationship between the properties of tense and the phenomenon of topic drop, the emergence of tense should not necessarily yield a decline of null subjects in finite declaratives. Therefore, the simultaneous decline of root infinitives

and subjectless finite declaratives observed in the child L2 data is not readily explainable by the initial underspecification of Tense. An analysis in terms of truncation and null constants is much better able to account for that simultaneous decline since the very possibility of null constant is immediately related to the nature of the root. Once the Root Principle emerges and learners are forced to project CP as the underlying root of declarative sentences, the licensing and identification conditions for null constants disappear.

Second, the Underspecification of Tense Hypothesis does not predict a total contingency between finiteness and clause type. In particular, it does not predict that all kinds of CPs should be systematically finite. Wexler's hypothesis relies on verb-movement to explain the occurrence of finite forms; in contrast, lack of verb-movement yields root infinitives. In wh-question and yes/no question, verb-movement is required (overtly or at LF) so as to satisfy Rizzi's (1991) Wh-Criterion. Hence, the Underspecification of Tense Hypothesis correctly predicts that questions should be finite. In embedded clauses, however, the Wh-criterion does not apply, which means that verb-movement may not take place if tense is underspecified initially. Nonfinite forms should thus be found in subordinates clauses, which is clearly not the case in the child SLA data.

3.2. Underspecification of Number

According to Sano & Hyams (1994), root infinitives in non-*pro*-drop languages such as French and German result from the underspecification of Number (see Johnson, 1990). If there is otherwise no morphosyntactic person distinction in the singular, verbs will be produced with no finite markers, hence root infinitives. In early child German, root infinitives are assumed to drop out when children acquire the second person singular (2S) marker -*st*, i.e. when they realize that Person is specified in German. The initial underspecification of Num presumably also rules out the production of determiners and prevents children from using plural nominal and pronominal forms.

The question is now whether Num is also underspecified in early SLA. The answer to this question is no. First, all L2 learners were found to frequently use determiners in the early stages of acquisition. The percentage of use in obligatory contexts was 67% for Greg and 90% for Kenny at the first recording session (Grondin & White, 1996). The children learning L2 German also produced determiners in their earliest interviews. In all, Concetta produced 92 determiners in obligatory contexts out of 127 (72.5%) and Luigina 50 out of 92 (54.3%).[1] Some examples are given in (1) and (2).

(1) a. y a un accident   (Kenny, month 0.5)
        there is an accident
     b. j'veux un jaune   (Kenny, month 1)
        I want a yellow
     c. c'est une gros accident   (Kenny, month 2)
        it is   a   big   accident
     d. moi j' ai   le cirque   (Greg, month 5)
        me I have the circus
     e. le lion mange les girafes   (Greg, month 5)
        the lion eat-3S the giraffes

(2) a. die Mutter   (Concetta, month 3.2)
        the mother
     b. ein Ball   (Concetta, month 4)
        a ball
     c. ein Ball   (Luigina, month 4.4)
        a ball

Second, plural determiners and plural nominals were observed in the early interviews of the four child learners, as can be seen in (3) and (4).[2]

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[1] These figures indicate that determiners are not provided in all obligatory contexts in early SLA. If we assume the idea of a Nominal=DP Principle (see Chapter 2), it might be the case that this principle is also underspecified in early L2 grammars. This would allow determinerless NPs to occur, as well as fully specified DPs. I leave this aside for further research.

[2] Unfortunately, the corresponding singular forms were rarely used in the same interviews, which would have further suggested that number distinction was in place in the early stages of L2 acquisition. The

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(3) a. les   chaises   (Kenny, month 1)

          the:P chairs

     b. douze animaux   (Kenny, month 2)

          twelve animal-P

     c. les   souris   (Kenny, month 2)

          the:P mice

     d. tous les   bébés   (Kenny, month 3)

          all the:P babies

     e. moi j'ai   animaux   (Guy, month 5)

          me I have:1S animal-P

     f. les   deux   (Guy, month 5)

          the:P two

(4) a. zwei Kinder   (Concetta, month 1.8)

          two children

     b. die   Deutschen   (Concetta, month 9.1)

          the:P German-P

     c. Kinder Ball   (Luigina, month 11.4)

          children ball (=the children have the ball)

Third, plural verbal inflections were found to occur quite early in Concetta's data.

Concetta used 13 verbs inflected for plural with 19 plural subjects (68.4%). Her first -en

forms appeared at month 5.6, two weeks after she started using finite verbs. Some

examples are given in (5).[3,4]

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example in (i) contrasts with (3c), suggesting that Kenny knew the difference between singular and plural
determiners in L2 French.
(i)   une souris   (Kenny, month 2)
        a   mouse

[3] It could be the case that the verbs ending in -en are infinitival forms instead of verbs marked for plural.
The rationale for deciding about the status of verbs in -en was that these verbs should be considered
nonfinite unless evidence of the contrary. I considered that a plural subject was a valid reason to include
verbs in -en in the set of finite verbs. If it turned out that some of these apparently plural verbs were non-
finite, there would still be solid evidence from the nominal system that the learners had knowledge of
Number in the early stages of SLA.

[4] Luigina only used three plural subjects overall. As for the child learners of L2 French, Grondin & White
(1996) report that their use of plural agreement on verbs was delayed. Note, however, that many plural
agreement forms are homophonous with singular inflections in French. It is thus difficult to establish
when plural forms appeared for the first time in the child L2 French data.

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(5)   a. die Kinder spielen   (Concetta, month 5.6)
         the children play-3P

      b. de Junge und de Vat (=Vater) spazieren   (Concetta, month 8.4)
         the child and the father   walk-3P

      c. gehen wir spazieren   (Concetta, month 11)
         go-1P we walk-INF

In conclusion, there is ample evidence that learners had knowledge of Num in the early stages of L2 acquisition even though they produced root infinitives.[5]

Finally, as discussed in Chapter 4, the child L2 learners produced subjectless finite declaratives involving auxiliaries, modals, and copula. This is unexpected under Sano & Hyams' model. For them, null subjects are PRO in early acquisition. PRO can only be licensed in ungoverned position. If Infl is underspecified with respect to Number, PRO is free to appear in specIP. If, on the other hand, Infl is fully specified, it governs the specifier position, which rules out PRO. The prediction is that elements that are inherently finite should not appear in subjectless declaratives. It is thus predicted that auxiliaries, modals and copula should always occur with an overt subject, which is not true of the child L2 data.

3.3. Underspecification of C

Rather than saying that the Root Principle is initially underspecified, we could posit that it is the C head which is subject to underspecification in the early stages. This proposal draws upon the idea that C is unavailable in early L1 acquisition, as argued by Meisel & Müller (1992) and Clahsen et al. (1993/1994), among others. We saw in Chapter 1 that C

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[5] Concerning the German 2S marker -st, very few tokens occur in the child L2 German data (three in Concetta's data, in two in Luigina's corpus). Although they appear in the latest recordings, it is unclear whether they should be related to the low number of root infinitives found at the last interviews. Moreover, we do not know whether this low number or RIs really corresponds to the end of the root infinitive period for these two children.

plays an essential part in the interpretation of tense. The underspecification of C would then mean that tense cannot be interpreted in the early phases of L2 acquisition, which would then allow root infinitives to occur. This analysis is supported by the fact that evidence for CP is long to emerge in the child L2 data, while root infinitives are produced from the very beginning. It is only after the 10th month of exposure that wh-questions and embedded clauses start to be frequently used in the child L2 French data. As for the child L2 German corpora, CPs does not consistently occur until the last samples.

Problematic with the underspecification of C account, however, is that it wrongly predicts that when C emerges, root infinitives should decline. For the two children learning L2 French, root infinitives and CPs co-existed for a period of about 8 months, between month 10 and month 18. Moreover, the fact that CPs are not found in the early data does not provide direct evidence for the underspecification of C. As said at the end of the previous chapter, the children understood questions perfectly, which suggests that they had the appropriate structural layer in their grammar.

3.4. Null auxiliaries

For Boser et al. (1992), root infinitives involve a null (finite) auxiliary in the head of a high functional projection. This auxiliary is licensed by discourse and identified by the subject in the specifier position. Assuming that the null auxiliary is in I, the basic representation for a root infinitive in French is as in (6), with the nonfinite verb in V.

(6)   [IP Subjectj Aux [VP tj Verb-fin (Object)]]

If indeed an empty auxiliary is involved in RIs, we should expect the same types of subjects to appear in finite declaratives and RIs. In particular, the null auxiliary should be able to assign Case to the subject under agreement; hence, we should find nominative DP subjects in root infinitives. Moreover, the empty (finite) auxiliary in Infl should act as a

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host for subject clitics, which should then also appear in nonfinite root declaratives. Finally, strong pronouns should not be found as subject of either finite or nonfinite root declaratives in French since they do not bear nominative case. In the child L2 French data, however, DPs and clitics almost never occur as subjects of RIs. Instead, they are almost exclusively found in finite environments. In addition, strong pronoun subjects were found in RIs but not in finite root declaratives.[6] These discrepancies between finite and nonfinite main declaratives cannot easily be explained by a null auxiliary account; instead, they suggest a structural difference between the two types of sentences.

As mentioned above, nominative DP subjects were found in some of the root infinitives produced by the two children learning L2 German. Since default case is nominative in German, the interpretation of these DPs is ambiguous between a null auxiliary analysis (with assignment of structural case) and a default case analysis. Due to the small size of the child L2 German corpora, there is a need for further evidence that subject DPs are indeed productively used in child L2 German root infinitives.

On a conceptual level, it is not clear what would bring L2 learners to posit the existence of null auxiliaries, given that those elements do not exist in their native language. Moreover, even if null auxiliaries were indeed allowed by early L2 grammars, it is not obvious what would count as evidence to force a restructuring of the system and prevent such items from being generated.

3.5. Optional verb-movement

Just like Boser et al. (1992), Phillips (1996) assumes that no structural layer is missing in the representation of root infinitives. For him, these sentences do not differ in nature form finite declaratives. He argues that RIs are finite clauses in which verb-movement has not taken place. The lack of verb-movement is assumed not to stem from a

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[6] Recall that strong pronouns represent 5% of Greg's finite subjects and 16.6% of Kenny's during the first 18 months of exposure (in Kenny's case, strong pronoun subjects mostly occur in routine constructions such as *moi est* ('me is') and *moi fait* ('me do')).

lack of knowledge of finiteness; rather, it is supposedly due to processing problems in accessing inflectional morphology. All declaratives are assumed to include agreement and tense features under I. When V-I occurs, these features get spelled-out as an inflectional morpheme. If there is no verb-movement, the I features do not get spelled out. Instead, the verb appears in a default infinitival form. Phillips' account rests heavily on the assumption that the different types of verb-movement are ranked according to whether they are required or not. For example, I-C movement is considered to be strongly required, which is why wh-questions and V2 constructions always involve finite verbs. In contrast, V-I movement is not considered an absolute requirement. If there is no strong requirement for the verb to raise, it may stay within V, thus yielding a root infinitive. Only when the cost of accessing morphological forms becomes nil will verb-movement be systematic.

An immediate problem for Phillips' approach is that it does not predict any contingency between finiteness and embedded clauses. As mentioned above, nothing 'forces' the verb to move in these clauses (there is no Wh-Criterion to be satisfied). Thus, nonfinite verbs should be found in subordinate clauses under Phillips' account, contrary to what is observed in child SLA.

Another problem faced by the optional verb-movement approach is a theoretical one. If root infinitives include tense and agreement features under I (albeit not spelled-out), it is difficult to see how these features can be interpreted. Interpretation takes place via verb-movement to I (either overtly or at LF). Excluding the possibility of verb-movement in the syntax (as Phillips himself does), it might be argued that the verb raises at LF. Even if it was correct, however, it is difficult to see how the interpretation of tense and agreement features can occur with the verb bearing an infinitival marker. Since infinitival markers are otherwise assumed not to be used as substitutes for finite inflections, there would be a mismatch between the features in I and the nonfinite marker. Phillips' account of root infinitives seems therefore to violate the principle of Full Interpretation. This mismatching problem does not apply to the Truncation Hypothesis since functional categories, and hence

tense and agreement features, are supposedly absent from the representation of root infinitives. Following Sano & Hyams (1994), I assume that tense and agreement properties of nonfinite verbs are established via discourse.

3.6. Missing inflection

Haznedar & Schwartz (1997) contest the possibility of truncation in early child SLA and argue instead that all declaratives produced by children are finite. They examine longitudinal spontaneous production data from Erdem, a Turkish child learning English who was 4;3 at the onset of acquisition. 46 samples covering a period of 18 months were reviewed. Only uninflected forms are produced at first, up until sample 13. Inflected and uninflected forms are then found to co-exist in the rest of the data. Uninflected verbs are mostly used until sample 41 and still represent over 40% of the verbal forms in the last sample.

Three important findings are reported by Haznedar & Schwartz. First, null subjects do not occur with inflected verbs. 875 inflected verbs were produced overall: all of them were used along with an overt subject. In contrast, null subjects were found with uninflected forms. Second, null subjects drop out at sample 13. Before sample 13, the proportion of null subjects used with uninflected forms is 68.97% (20/29); between samples 13 and 46 my calculations indicate that it drops dramatically to less than 1% (9/1,193). In contrast, the proportion of uninflected forms remains quite high throughout the entire data. Third, all subject pronouns are nominative. In particular, out of the 931 pronouns that occur with an uninflected form over the whole corpus, only one carries objective case (recall that default case is objective in English). These findings clearly differ from what is reported in early L1 English acquisition. For Haznedar & Schwartz, then, the usage of uninflected verbs does not reflect a syntactic deficiency; rather these forms should be considered finite verbs with a missing inflection. In other words, the problem faced by Erdem is how to systematise the morphological realisation of finiteness onto the verbs.

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If one assumes that uninflected forms are nonfinite, the findings on child English SLA are in sharp contrast with the properties of the child L2 French and L2 German data investigated in this thesis. Contrary to what is reported by Haznedar & Schwartz, null subjects were found in both finite and nonfinite declaratives for an extended period of time and pronouns bearing objective (default) case were used as subjects of root infinitives in L2 French. At this point, I do not see any way of reconciling the findings reported in the two studies. What I would like to point out, however, is that working on English is problematic because there is only one distinctive inflection in the present paradigm and no infinitival marker. Uninflected verbs are thus ambiguous between finite and nonfinite forms. This leaves the door open for all kinds of interpretational scenarios for the acquisition of L2 English. For example, Haznedar & Schwartz report that null subjects do not occur along with inflected forms in Erdem's data. Moreover, inflected forms do not emerge until sample 13, precisely at the time when null subjects are found to disappear. It is in fact plausible to assume that truncated structures are projected before sample 13 and that only finite declaratives are produced afterwards. Under this assumption, uninflected forms are either finite or nonfinite before sample 13. Null subjects, which are found during this period, are thus used with both finite and nonfinite verbs, which is perfectly consistent with the Truncation Hypothesis. Once the possibility of truncation fades away, the number of null subjects sharply decreases. All verbs produced afterwards are finite, including uninflected forms. According to this analysis, then, missing inflections only characterise the data after sample 13. Of course, such an account remains tentative, but it has the merit of showing that the occurrence of uninflected forms in English is not necessarily inconsistent with truncation. In any event, it would be useful to extend the investigation to other parts of Erdem's speech, such as CPs and negation, so as to have of a more complete picture of the distribution of inflected and uninflected forms in his data.

3.7. Summary

Various proposals were discussed in this section to account for the phenomenon of root infinitives in the child L2 data. None of them proved successful at handling all the facts uncovered in the investigation. In particular, proposals that were originally made to explain optionality of finiteness in L1 acquisition do not seem to be adaptable to early child SLA. One study directly addressing this issue in SLA suggests that the apparent lack of finiteness reduces to a problem of missing inflection (Haznedar & Schwartz, 1997). It is difficult to see how such an approach could accommodate the child L2 data examined in this thesis. Indeed, what is suggested here is that the lack of finiteness is structurally-determined in early child SLA. The results reported by Haznedar & Schwartz's study might in fact be a factor of the L2 selected (English) since early uninflected forms are ambiguous between a finite and nonfinite interpretation.

4. Theoretical Implications for SLA

In this section, I discuss the findings of the child L2 data in the light of current theories of the initial state in SLA. Even though these models are based on adult SLA data, I assume that they also hold in child L2 acquisition. I then provide an explanation for the underspecification and emergence of the Root Principle in early child L2 grammars. Finally, I discuss the difference between children and adults concerning the possibility of truncation.

4.1. The Minimal Trees Hypothesis

According to the Minimal Trees Hypothesis, functional categories are absent in early L2 grammars and gradually emerge via positive evidence from the input (Vainikka & Young-Scholten, 1994). Some predictions based on this model are not supported by the child L2 data analysed here. First, the Minimal Trees Hypothesis predicts the existence of a

VP-stage in the earliest phases of acquisition, i.e. a stage where there is no evidence for functional categories. If VP is the root, then nonfinite verbs should be the only verbal forms being produced. We saw that this was clearly not the case. When the children started producing sentences, they used both finite and nonfinite forms right away, which calls for the projection of a functional layer. Further evidence for the presence of functional categories in early acquisition comes from the production of determiners as early as the first interviews, as seen in section 3.2. Now, of course, it could always be said that the data investigated here were not early enough and that they did not reflect the very first steps of acquisition. I cannot therefore totally exclude the possibility that functional categories were absent from the interlanguage systems prior to the recordings under investigation.[7] There is simply no way to verify this.

Second, the Minimal Trees Hypothesis holds that CP is the last functional projection to be acquired. Its acquisition is assumed to follow that of AgrP. Moreover, verb-movement is assumed to be obligatory once AgrP is acquired. Hence, no RIs should be found to co-exist with instances of CPs in spontaneous speech. The first productive instances of CP occur at about month 10 for Greg and Kenny, month 9.1 for Concetta and month 11.4 for Luigina. Crucially, all learners kept on producing root infinitives afterwards. In the case of Kenny and Greg, RIs were used for another 8 months, which is unexpected under the Minimal Trees account.

Another piece of evidence supporting the fact that root infinitives were produced during the so-called AgrP-stage comes from agreement accuracy rates. According to the Minimal Trees Hypothesis, once the inflectional paradigm of the target language has been acquired (based on a 60% accuracy rate in obligatory contexts), verb-movement should be systematic. Hence, no root infinitives should be observed. This is not what obtains in the child L2 data. Consider the child L2 German corpora first. Most RIs produced by Concetta are found at months 11, 12.4 and 13.5. The proportion of RIs is 17.9% across these three

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[7] For that matter, the argument that L2 data are not early enough cannot be falsified.

interviews (21/117). Yet, her accuracy rate is over 60% at each of the three recordings, for a total of 61.7% (37/60).[8] For Luigina, RIs are mainly found during her last 6 interviews, between months 9.5 and 19.8. She produced a total of 7 RIs out of 34 main declaratives (20.6%) over that period. At each session, her agreement accuracy rate was also over 60% (for a total of 9/14, or 64.3%). Turning now to the child L2 French data, Greg exhibits an agreement accuracy rate of over 60% in 5 of the 7 recordings during the first 18 months of exposure, i.e. while RIs were being produced. As for Kenny, his accuracy rate is above 60% between months 11 and 18. During this period, he produced 34 RIs out of 287 declaratives (11.8%).[9] Moreover, when agreement morphology was used, it was used in the appropriate contexts by all children, which further suggests that they had knowledge of the relevant morphology and that Agr was part of the early interlanguage grammars.

4.2. The Full Access Hypothesis

According to the Full Access Hypothesis, L2 acquisition takes place via direct access to UG and without any influence from the L1 grammar (Epstein et al., 1996). Functional categories are assumed to be readily available and all root declaratives are considered finite. Verbal forms bearing nonfinite markers are considered to result from 'ignorance of morphology' and supposedly appear in structures that do not differ from the representation of finite utterances. In other words, finite and nonfinite forms should randomly occur in similar contexts. The problem with this approach, as was the case with the Haznedar & Schwartz's (1997) Missing Inflection view, is that it is unable to account for the structural distribution of finite and nonfinite forms that is observed in the child L2

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[8] The accuracy rates reported in this section do not take into account instances of *ist* ('is'), as advocated by Vainikka & Young-Scholten (1994).

[9] If the French copula *est* ('is') is taken into account in the accuracy criterion, Kenny would qualify for the AgrP-stage throughout the entire data. There is no consensus as to whether this type of element should be considered when dealing with accuracy of agreement. Contrary to Vainikka & Young-Scholten (1994), Clahsen (1990) incorporates it in his study of German L1 acquisition.

data. In particular, it seems that children indeed consider nonfinite forms as nonfinite and not as substitutes for finite markers.

Moreover, the Full Access model and the Truncation Hypothesis differ on the issue of the transfer of L1 properties into the interlanguage grammar. While the former assumes no transfer, the latter does not hold any strong view on the question. Whether or not transfer occurs, it is predicted that truncated structures will be projected. In other words, truncation may apply to projections which have or have not been transferred from the L1 grammar. Now, there is evidence for transfer in the child L2 data reviewed in this thesis. For example, Concetta and Luigina were found to produce word orders compatible with their L1 but not with L2 German, suggesting that VP and IP have been transferred along with their headedness characteristics. This is not predicted by the Full Access Hypothesis, but perfectly acceptable under the Truncation model (as well as the FTFA Hypothesis).

I should point out in closing that the Truncation Hypothesis does not deny access to UG. The proposal made in this thesis is that the initial inoperationality of the Root Principle is related to the notion of underspecification. An underspecified grammatical property is a property which is present in the grammar but which for some reason cannot be drawn upon. It might therefore very well be that the Root Principle is part of initial L2 grammars via direct access to UG but that something prevents its implementation. In other words, the concept of underspecification per se does not go against the idea of UG-constrained acquisition.

4.3. The Full Transfer/Full Access Hypothesis

The FTFA Hypothesis holds that the L1 grammar in its entirety makes up the initial L2 grammar (Schwartz & Sprouse, 1994). In addition, L2 properties are assumed to be acquirable when there is a mismatch between the transferred grammar and the target input. All the children involved in this study had a mature L1 at the onset of L2 acquisition, which means that the Root Principle was part of their L1 grammar. According to FTFA, then, the

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Root Principle should have transferred to the L2. This does not seem to be the case, however. None of the L1s and L2s involved in the data (English and Italian for the L1s, and French and German for the L2s) allow nonfinite root declaratives, namely VP roots. Hence, the production of root infinitives in L2 French and German does not stem from properties of the L1, nor is it a property of the L2 that would have been acquired based on positive input.[10]

A question we could ask is whether root infinitives in L2 French result from the transfer of properties of verb-movement in L1 English. Verb-movement is delayed until LF in English, while it occurs by Spell-Out in French. Assuming that properties of English verb-movement are indeed part of the initial L2 French grammar, this means that nonfinite main verbs are in V and move to functional projections after Spell-Out. In other words, root infinitives are not represented by VP roots but by full-fledged syntactic structures. Under this account, root infinitives should decline once the properties of verb-movement of L2 French are acquired. Problematic with this analysis is that there is co-existing evidence for overt verb-movement in the data (e.g. Verb-Neg orders). This would mean that verb-movement occurs in some sentences and that it does not take place in others. In other words, the interlanguage grammar would possess verb-movement properties of both the L1 and the L2. This state of affair is not acceptable by the FTFA Hypothesis which holds that once a target property has been acquired, it overrides the corresponding L1 property. Thus, if the French properties of verb-movement have been acquired, lack of verb-movement should not be found, contrary to fact. Another problem with the idea of transfer of verb-movement characteristics has to do with finiteness in CPs. Assuming that L1 properties underlie the lack of verb-movement in some root declaratives, yielding root infinitives, the question is then why embedded clauses are systematically finite in the child L2 data, i.e. why verb-movement seems to systematically take place in those clauses. In particular, the

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[10] Alternatively, it could be the case that the Root Principle transfers but cannot be implemented right away, e.g. due to processing limitations (see section 4.5). The fact remains that some properties of the child L2 data examined in this thesis go against the idea of complete transfer of the L1 grammar in early SLA.

overlap period of 8 months in the child L2 French data during which both root infinitives and finite CPs are found is very difficult to account for under a theory of transfer.

Finally, the FTFA Hypothesis is unable to account for the production of root infinitives from learners whose L1 is a *pro*-drop language, as is the case with Concetta and Luigina. It has been reported that children acquiring a *pro*-drop language as their L1 do not produce root infinitives in the early stages. As seen in Chapter 2, Rizzi (1994) proposes that this is because tenseless verbs possess strong agreement features in those languages. Assuming that this is correct, then the prediction for the FTFA would be that learners whose L1 is a *pro*-drop language should transfer that strong feature into the target grammar. This entails that no root infinitives should be produced in the early stages of L2 acquisition, regardless of the nature of the target language. Such a prediction is clearly not supported by Concetta and Luigina who produced nonfinite declaratives as soon as they starting using root utterances. It might be argued in return that Concetta and Luigina managed to acquire the weak value of the feature in German before they started producing their first declarative sentences, 5 months into the data collection period. Even though this is a possibility, it should be recalled that other aspects of these children's L1 grammar were underlying their L2 production at month 5, including VP and IP headedness. It is reasonable to presume that the children had access to less positive evidence concerning the target value for the agreement feature of tenseless forms than about the target headedness of VP and IP. It would therefore be implausible to assume that the former but not the latter was acquired at the time when the first declarative sentences were produced.

This being said, the Truncation Hypothesis is not incompatible with the idea of transfer. If there is truncation and transfer, one would expect truncation to first apply to L1 projections followed by truncation of L2 projections. This prediction can be best tested when the L1 and the L2 involve a mismatch in headedness characteristics. This was precisely the situation at hand with the child L1 speakers of Italian learning L2 German. VP and IP are left-headed in Italian and right-headed in German. If the L1 projections transfer

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initially, VP and IP roots should involve the verb preceding VP material, hence a VX order. When acquisition of the target VP and IP occurs, the word order should be reversed whenever these projections are roots. Evidence for truncation of transferred structure is found in the child L2 German data with the production of RIs involving an VX order, as mentioned above. Unfortunately, the data do not cover a long enough period to observe truncation of target structure. Further research is needed to investigate this possibility.

4.4. The Weak Transfer Hypothesis

Under the Weak Transfer Hypothesis, functional categories transfer from the L1 without their associated features (Eubank, 1993/1994, 1996). Therefore, C, T and Agr are present in initial L2 grammars, but the characteristics of verb-movement are first left un(der)specified. At a later stage, <strong> or <weak> Agr are randomly selected until the target value is acquired.

Eubank's model predicts optional verb-movement before the acquisition of the target feature. When learners posit a <weak> Agr a root infinitive is produced, whereas a <strong> Agr yields a finite utterance. Only when the <strong> value of French and German Agr is acquired should optionality of verb-movement stop, i.e. the production of root infinitives should cease. At first sight, this account seems to nicely accommodate the child L2 data examined here. However, it fails to account for why only finite CPs are found while RIs are being produced. If indeed feature values were randomly posited, this process should apply to both root and subordinate contexts. We should therefore observe both finite and nonfinite embedded clauses, contrary to fact. Moreover, most declaratives produced by the children were finite, which is difficult to explain if feature strength was indeed randomly posited.

Another problem with the Weak Transfer Hypothesis is that it does not necessarily predict that the postulation of a <weak> Agr should automatically result in a nonfinite form. The selection of <weak> Agr and the production of finite verbs are not mutually exclusive

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in principle. Among other things, this is what we find in adult English. It is thus possible that L2 learners may select a <weak> Agr and yet produce a finite utterance. This predicts that finite verbs may follow the negation before the target agreement feature is acquired. However, such a word order is not found in the child French L2 data during the first 18 months of exposure. Almost all cases of negative finite declaratives display a Verb-Neg order. In contrast, verbs that follow the negator *pas* ('not') are all nonfinite. In sum, Eubank's model fails to account for the clear distribution of finiteness in the data.

4.5. Emergence of the Root Principle

The proposal that truncated structures are projected in the early stages of child L2 acquisition has far-reaching implications In particular, results in L2 acquisition can inform L1 acquisition research in significant ways. Different analyses have been proposed to account for root infinitives in L1 acquisition (e.g. deficit in T, deficit in Number, null auxiliaries, etc...). The facts that can be used to decide between these accounts are not always clear. In contrast, the child L2 acquisition facts presented here strongly support a truncation analysis. If one assumes that L1 and L2 acquisition follow the same process, these findings should be used as a solid argument in favour of truncation in L1 acquisition.

Assuming that the Truncation Hypothesis applies to both initial L1 and child L2 grammars, I would like to propose that the emergence of the Root Principle is of the same nature in both acquisition contexts. Obviously a maturational account is not acceptable in SLA: a principle cannot mature a second time! This would imply that the Root Principle is not subject to maturation in L1 acquisition either.[11] Instead of a maturational account, I would like to suggest that the underspecification and emergence of the Root Principle has to do with processing. First, I assume that processing weight increases whenever a structural layer is added. Thus, a CP is more heavy in terms of processing weight than an IP or a VP

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[11] If more and more evidence is gathered suggesting that L1 and (child) L2 acquisition follow similar patterns of development, the whole concept of maturation might in fact be seriously called into question.

(see Boster (1996) for a similar proposal in L1 acquisition). This would explain, among other things, why evidence for CP such as questions and embedded clauses is delayed.

Second, I assume that there is a processing weight involved with the formal representation of tense, which was argued to underlie the Root Principle. In Chapter 1, I suggested that the temporal properties of Comp allow the sentence to be anchored in time and serve as a reference against which the time of the event in T is interpreted. Specifically, the interpretation of tense is assumed to take place via a tense-chain drawing on principles of the binding theory. What I suggest is that the processing cost involved in establishing the tense-chain is too heavy to be successfully handled by early grammars. More simply put, learners may have already enough in their mind in order to communicate successfully and be understood that relating their utterances to time is not possible. The Root Principle is therefore not operational initially. Following Hyams (1996), I assume that the temporal value of tense is assigned discursively, and not grammatically, until the Root Principle emerges.

As the grammar increases in complexity, the processing load becomes more and more manageable. More CPs are produced, but the systematisation of CP roots is yet to materialise. This would explain why CPs and truncated structures are found to co-exist in production for some time. Once the grammatical system reaches a stage of complexity where it is capable of handling the processing load of the grammatical interpretation of tense, the Root Principle emerges and CP roots become systematic.[12]

If this is on the right track, then we might expect to observe concrete differences between L1 and L2 acquisition concerning the measurable effects of underspecification.

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[12] Under this processing account, each component of the grammar involves a particular processing load. Thus, I do not exclude the possibility that other principles may be underspecified in early stages of acquisition and become operational at different points when the corresponding processing weight becomes manageable. Such an approach could account for Clahsen et al.'s (1996) observation that in L1 acquisition functional categories develop earlier in the nominal domain than in the sentential domain. Consider the following principles which I proposed may constrain the projection of functional categories: Nominal=DP and Root=CP (see Chapter 2). If the processing load involved with the Nominal=DP Principle is lighter than its sentential counterpart, the production of elements associated with D should be systematised earlier than the production of declaratives with a CP root. I leave this issue and the interesting predictions that it might generate to further research.

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Given that L2 learners are more mature, they might be able to better handle processing weight. Effects of underspecification might therefore be downplayed in SLA. This is what is obtained when comparing truncation in L1 and L2 acquisition. Children acquiring their first language were found to produce higher percentages of root infinitives than the L2 children investigated in this thesis. Furthermore, the rate of null subjects is higher in L1 acquisition than what was found in the child L2 data. These differences, I believe, are not indicative of qualitative distinctions between the two acquisition processes; rather they reflect different processing capacities. Children learning a second language might be mature enough to be able to project IP and CP more often than children learning their L1. As a result, they produce more finite declaratives and fewer root infinitives. Yet, L2 learners might not be able to fully implement the Root Principle at the onset acquisition, which explains why root infinitives are produced in the first place.

4.6. Differences between children and adults

According to the Truncation Hypothesis, early L2 grammars should allow truncation, regardless of the learners' age. However, the findings on the adult data are not convincing on that latter point. Particularly disturbing is the occurrence of nonfinite auxiliaries and modals, nonfinite verbs preceding negative adverbials, nonfinite CPs, and subject clitics in root infinitives. A hasty conclusion would be to say that there is a fundamental difference between child and adult L2 acquisition, in that children project truncated structures whereas adults do not.

Instead, I would like to suggest that adults treat infinitival verbs as finite forms. Suppose that this is indeed what adults are doing. What kind of an insight does this give us of their grammar? Does the fact that nonfinite forms are used as if they were finite mean there is a grammatical deficiency? The fundamental issue that these questions raise is the nature of the relationship between knowledge of morphology and syntactic knowledge. Some researchers argue that the two are interdependent, e.g. Vainikka & Young-Scholten

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(1994, 1996a, 1996b). For them, as seen in Chapter 3, shortcomings at the level of morphology reflect syntactic insufficiencies. We saw that they use a 60% criterion targeting the provision and accuracy of inflectional morphology to establish levels of syntactical knowledge. If the learners do not provide the correct agreement markers in at least 60% of obligatory contexts, they are assumed to lack the category Agr. If, on the other hand, the 60% criterion is met, Agr is considered part of their grammars.

In contrast to this view, Lardiere (1998) holds that knowledge of morphology and syntactical knowledge should be kept separate (see also Lardiere & Schwartz (1997) and Parodi, Schwartz & Clahsen (1997)). Lardiere investigated the speech of a Mandarin Chinese native speaker acquiring English (named Patty) who had been living in the USA for at least 10 years at the time of the first recording and had received considerable exposure to the target language. Patty was found to struggle with the past tense marker -ed. She provided it in only 35% of obligatory contexts, even after over 18 years of exposure. If one applied Vainikka & Young-Scholten's 60% criterion, the conclusion would be that Patty's grammar lacked the category T. However, she was also found to be perfect at the provision of nominative pronouns as subjects of finite clauses. Assuming that T is responsible for Case-checking (Chomsky, 1995), these results suggest that T was indeed part of Patty's interlanguage grammar. Lardiere concludes that relying on morphology can provide a distorted picture of L2 grammars.

The adult L2 learners whose production data are investigated in this thesis show a morphological problem similar to Patty. Their accuracy rate concerning the L2 agreement paradigm is globally below 60% throughout the data, even in the last recordings. Zita only used the German third person singular marker -t in 43.8% and 12.5% of obligatory contexts at months 24.4 and 25.4. For Ana, the accuracy rate on this inflection was 41.7% and 28.6% at months 24 and 24.7. Yet, when inflection was used it appeared in the correct environment. For example, the -t marker appears at least 90% of the time with a third person singular subject in Zita's and Ana's data. Moreover, all adult learners had

knowledge of CP since they produced a large number of embedded clauses. Finally, they provided subject nominals that were correctly bearing nominative case. For example, the adult L2 French learners never used strong pronoun subjects in finite declaratives. All this suggests that the adults' syntactic knowledge was quite complex. It is therefore safe to conclude that their production of nonfinite forms in unpredicted environment was not a by-product of syntactical deficiencies.

The next question to ask is why nonfinite forms were produced in the first place. As suggested by Lardiere (1998), if morphology is viewed as the spell-out of syntactic features (Chomsky, 1995), it might be the case that morphological errors are due to problems in the mapping process between the two systems. Under this approach, learners may have target-like knowledge of syntactic derivations and syntactic features but may encounter problems when choosing the morphology that will realise those features. Indications that the adult L2 learners of the present study were struggling with morphology come from the fact that they were found to often produce nonfinite forms after a long pause or a hesitation, as illustrated in (7).

(7)   a. comment euh rester   un temps?   (Abdelmalek, month 24)
          how   hmm stay-INF a while

          b. quand moi euh dormi   (Zahra, month 36)
          when me hmm sleep-PP

          c. Christine euh   manger avec moi   (Zahra, month 36.5)
          Christine hmm eat-INF with me

          d. jetzt <eh> sprechen   Michael du   (Zita, month 4)
          now hmm speak-INF Michael you

          e. <eh> kaufen en nix   (Zita, month 9.5)
          hmm buy-INF one not

          f. der Junge <eh> wollen   <e> helfen   die Großmutter (Ana, month 4)
          the child hmm want-INF hmm help-INF the grandmother

          g. vielleicht Montag <eh> fahren   Bruxelles   (Ana, month 7.2)
          maybe   Monday hmm drive-INF Brussels

These pauses were found in 14 of Ana's 74 RIs (18.9%) and in 9 of Zita's 191 RIs (4.7%). They were also found in 2 of Zita's nonfinite CPs. Although pauses were not that frequent on the whole, I believe that they are nonetheless indicative of a process whereby the learners were scanning for the appropriate morphological markers. As this process proved unsuccessful, they came up with a default infinitival form. Note that finite forms were also produced following pauses and hesitations, as in (8). The interpretation here is that the scanning operation for morphology was successful, although the actual form being produced may be incorrect.

(8)   a. oui, euh cherche   un travail   (Abdelmalek, month 24)
              yes hmm look+for-1S a job

        b. moi euh parte (=part) pas à l' école   (Zahra, month 15.5)
              me hmm leave-1S   not to the school

        c. après l'autre euh rachète   le gâteau   (Zahra, month 26.7)
              then the other hmm buy+again-3S the cake

        d. viel Frau   <eh> lerne   Deutsch   (Ana, month 4)
              many woman hmm learn-1S German

        e. ich <eh> spreche ein wenig   (Ana, month 24)
              I hmm speak-1S a little

        f. mein Schwager   ko- <eh> kommt <ehm> Angola   (Zita, month 8)
              my brother-in-law co- hmm come-3S hmm Angola

        g. ich brauche <eh> fünf Brötsch   (Zita, month 22.7)
              I need-1S hmm five bread

Other infinitival verbs were found to be direct translations of corresponding L1 forms (or even verbs from another language), as shown in (9). In these examples, we can see that an L1/non target form of the verb was produced with an infinitival marker and was then directly followed by the corresponding *infinitival* target verb. In the examples below, the non-target verbs appear in between brackets.

(9)   a. die Freund <de> Stefan <saber>   wissen   (Ana, month 7.2)
          the friend   of   Steven know-INF know-INF
       b. er <écouter> hören   (Ana, month 8.2)
          he hear-INF hear-INF

Five instances of direct translation were found in the adult L2 German data (all were produced by Ana). It seems that Ana was scanning her mental L2 dictionary for the right L2 lexical item. Once the form was found, it was retrieved and inserted as such in the sentence regardless of whether the position in which it was going to appear was a functional one or not. It sometimes was a conscious process which was obvious to the hearer, as in the examples in (9). Some of the pauses illustrated in (7) might also correspond to such a translation process.[13]

To recap, I have suggested, following Lardiere, that the production of nonfinite forms in adult L2 acquisition results from mapping problems between the syntactical and morphological systems as well as from the application of production strategies. Crucially, the occurrence of nonfinite forms does not seem to stem from a syntactic deficit. This is compatible with the Missing Inflection Hypothesis (Haznedar & Schwartz, 1997) and the Full Access Hypothesis (Epstein et al., 1996). In other words, the difference between children and adults in terms of the distribution of nonfinite forms does not correspond to a discrepancy in syntactic knowledge. If anything, the distributional difference suggests that children have an easier time mapping syntax into morphology and that they are less likely to use (conscious) production strategies.[14] As for truncation, the fact that nonfinite verbs

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[13] A number of researchers have proposed that adult L2 acquisition takes place thanks to general learning strategies, namely strategies that are not restricted to the domain of language acquisition (see Bley-Vroman, 1990). It is not my purpose here to engage in the debate of the role played by strategies vs. UG in L2 acquisition. What I would simply like to point out is that the strategy uncovered here applies at the level of production. As such, it does not offer any insight into the learners' L2 competence. As mentioned above, there is independent evidence that the adult learners had knowledge of finiteness in L2 French and German, and that the distribution of finite forms was consistent with UG. For example, the vast majority of finite negatives displayed the finite verb in front of the negator, suggesting that verb-movement, which is UG-constrained, applied in a systematic way.

[14] Of course, I do not want to exclude the possibility that children also have mapping problems and that they have recourse to strategies. However, the evidence is much less visible than for the adults.

occur in unpredicted environments in the adult data does not necessarily mean that early adult L2 grammars do not allow truncated structures altogether. It might very well be the case that some of the root infinitives produced by the adult learners indeed are the result of the projection of NegP and VP roots. For instance, there are a number of negative RIs in the adult data where the negator precedes the nonfinite verb, which is compatible with the Truncation Hypothesis. The problem is that in other cases it is very difficult to tease apart those infinitival forms produced as a result of mapping problems or lexical translation from the ones that are the true products of truncation. On the whole, then, the data do not provide evidence for a qualitative difference between child and adult L2 grammars. Further research is needed to ascertain whether or not truncation is a property of adult SLA.

4.7. Summary

In this section, I argued that current SLA theories on the initial state have difficulties explaining all the properties of the child L2 data under investigation. These theories are unable to account for the apparent optionality of functional categories and finiteness in early L2 grammars. In particular, they have trouble explaining the structural distribution of verbal forms in early L2 root declaratives. In contrast, the Truncation Hypothesis appears to be the best candidate to capture variability in early SLA. Under this approach, errors pertaining to functional categories are due to processing factors which prevent the Root Principle from being implemented initially. I further suggested that this type of underspecification is characteristic of early grammars in general, both in native and nonnative language acquisition contexts. Finally, the distributional differences between child and adult L2 learners with respect to nonfinite verbs were attributed to the adults having problems mapping the syntactic and morphological systems, and not to discrepancies in terms of syntactical knowledge, nor to the total lack of truncation in early adult L2 grammars.

5. Conclusion

In this thesis, I have shown that the Root Principle is underspecified in early child L2 grammars and that truncation is allowed in the early stages of child SLA. No other account can satisfactorily explain the collection of properties of the child L2 data investigated in this work. The key characteristics of the data that single out the truncation account are the following: (a) both finite and nonfinite root declaratives are used in parallel; (b) nonfinite verbs only occur in root contexts; (c) null subjects disappear from finite declaratives at the same time as root infinitives are found to drop out; (d) there is knowledge of Agr, Num, and C while RIs are being produced; (e) there is evidence of verb-movement; and (f) there is evidence of transfer. In sum, the occurrence of finite and nonfinite forms is structurally determined in early child SLA, which is predicted by the Truncation Hypothesis. This approach offers new insights into variability in early SLA that none of the current SLA theories on the initial state can account for.

The findings are not as clear in the adult L2 data, as many of the properties laid out above are not found to hold. The suggestion, however, is not to deny the possibility of truncation in early adult SLA. In particular, the findings may be distorted by mapping problems between the syntactic and morphological systems and by the usage of production strategies such as lexical translation. At this point, further research needs to be done to settle the question of truncation in adult L2 acquisition. One suggestion is to choose learning situations where neither the L1 nor the L2 is a *pro*-drop language, so as to better examine the incidence of null subjects in various contexts, e.g. root declaratives and CPs.

Despite very promising results, further research should also be carried out to investigate the Truncation Hypothesis in early child L2 SLA. This applies not only to L2 English, but to other languages as well. Importantly, the data collection should be extensive enough so as to establish the existence of a root infinitive period. Unfortunately, data collected from young children are not abundant in L2 acquisition. This is rather regrettable, as I agree with Haznedar & Schwartz (1997) that we have much to learn from children

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acquiring another language. Not only can it inform us about the process of L2 acquisition on issues such as the initial state, the end state or the use of strategies, but it can also offer insights into L1 acquisition research.

Evidence from children learning their mother tongue suggests that truncation is also a property of early L1 grammars. What I would like to propose is that the possibility of truncation is of the same nature in both acquisition contexts. I suggest that the Root Principle, according to which all declaratives are CPs, is underspecified initially for processing reasons. Specifically, the processing cost involved in the implementation of the tense-chain which underlies the grammatical interpretation of tense and involves the projection of C is too heavy for initial grammars to handle. Thus, C is not systematically projected and tense is interpreted via discourse. Only when the grammatical system is able to manage the processing weight involved with the Root Principle will CP roots be systematically projected and all root declaratives be finite. I leave it for further research to investigate the exact nature of the processing factors involved.

References

Auger, J. (1994) Pronominal clitics in Québec colloquial French: A morphological analysis. Unpublished PhD dissertation, University of Pennsylvania.

Authier, J.-M. (1992). Is French a null subject language in the DP?. *Probus* 3: 1-16.

Baker, M. (1988). *Incorporation: a theory of grammatical function changing*. Chicago, IL: University of Chicago Press.

Belletti, A. (1990). *Generalized Verb Movement: Aspects of Verb Syntax*. Torino: Rosenberg and Sallier.

Bley-Vroman, R. (1990). The logical problem of foreign language learning. *Linguistic Analysis* 20: 3-49.

Bloom, L. (1970). *Language Development: form and function in emerging grammars*. Cambridge, MA: MIT Press.

Bohnacker, U. (1997). Determiner Phrases and the debate on functional categories in early child language. *Language Acquisition* 6: 49-90.

Bol, G. and F. Kuiken (1988) Grammaticale analyse van taalontwikkelingsstoornissen. Unpublished PhD dissertation, University of Amsterdam.

Borer, H. (1984). *Parametric Syntax*. Dordrecht: Foris.

Borer, H. (1986). *The Syntax of Pronominal Clitics (=Syntax and Semantics)*. Orlando: Academic Press.

Borer, H. and B. Rohrbacher (1997). Features and projections: Arguments for the Full Competence Hypothesis. In E. Hughes, M. Hughes, & A. Greenhill (eds.), *Proceedings of the 21st Boston University Conference on Language Development* (pp. 24-35). Sommerville, MA: Cascadilla Press.

Borer, H. and K. Wexler (1987). The Maturation of Syntax. In T. Roeper & E. Williams (eds.), *Parameter Setting* (pp. 123-72). Dordrecht: Reidel.

Boser, K., B. Lust, L. Santelmann, and J. Whitman (1992). The syntax of CP and V2 in early child German (ECG): The Strong Continuity Hypothesis. In K. Broderick (ed.), *Proceedings of NELS 10*. University of Massachusetts: GLSA.

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 Boston University Conference on Language Development* (pp. 63-75). Sommerville, MA: Cascadilla Press.

Bresnan, J. and J. Kanerva (1989). Locative inversion in Chichewa: A case study of factorization in grammar. *Linguistic Inquiry* 20: 1-50.

Bromberg, H. and K. Wexler (1996). Null subjects in wh-questions. *MIT Working Papers in Linguistics* 26: 421-247.

Brown, R. (1973). *A First Language*. Cambridge, MA: Harvard University Press.

Cardinaletti, A. (1990) Pronomi nulli e pleonastici nelle lingue germaniche e romanze. Unpublished PhD dissertation, Venice University.

Champaud, (1988). On-line documentation. CHILDES.

Chomsky, N. (1981). *Lectures on Government and Binding*. Dordrecht: Foris.

Chomsky, N. (1986). *Knowledge of language*. New York: Praeger.

Chomsky, N. (1991). Some notes on economy of derivation and representation. In R. Freidin (ed.), *Principles and parameters in generative grammar* (pp. 417-454). Cambridge, MA: MIT Press.

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

Clahsen, H. (1990). Constraints on parameter setting: a grammatical analysis of some acquisition stages in German Child language. *Language Acquisition* 1: 361-391.

Clahsen, H. (1992). Learnability theory and the problem of development in language acquisition. In J. Weissenborn, H. Goodluck, & T. Roeper (eds.), *Theoretical Issues in Language Acquisition: Continuity and Change in Development* (pp. 53-76). Hillsdale, NJ: Lawrence Erlbaum Associates.

Clahsen, H., S. Eisenbeiss, and M. Penke (1996). Lexical learning and early syntactical development. In H. Clahsen (ed.), *Generative Approaches to First and Second Language Acquisition* (pp. 129-159). Amsterdam: John Benjamins.

Clahsen, H., S. Eisenbeiss, and A. Vainikka (1994). The seeds of structure: a syntactic analysis of the acquisition of case marking. In T. Hoekstra & B. Schwartz (eds.), *Language Acquisition Studies in Generative Grammar* (pp. 85-118). Amsterdam: John Benjamin.

Clahsen, H., J. Meisel, and M. Pienemann (1983). *Deutsch als Zweitsprache*. Tübingen: Gunther Narr.

Clahsen, H. and P. Muysken (1986). The availability of UG to adult and child learners: a study of the acquisition of German word order. *Second Language Research* 2: 93-119.

Clahsen, H. and M. Penke (1992). The acquisition of agreement morphology and its syntactic consequences: new evidence on German child language from the Simone-corpus. In J. Meisel (ed.), *The Acquisition of Verb Placement* (pp. 181-223). Dordrecht: Kluwer.

Clahsen, H., M. Penke, and T. Parodi (1993/1994). Functional categories in early child German. *Language Acquisition* 3: 395-429.

Clark, E. (1985). The acquisition of Romance with special reference to French. In D. Slobin (ed.), *The Crosslinguistic Study of Language Acquisition Volume 1: the data* Hillsdale: Erlbaum.

Comrie, B. (1985). *Tense*. Cambridge: Cambridge University Press.

Crisma, P. (1992). On the acquisition of wh-questions in French. *GenGenP* 0: 115-122.

Cromer, R. F. (1974). The development of language and cognition: The Cognition Hypothesis. In B. Foss (ed.), *New Perspectives in Child Development* Harmondsworth, Middlesex: Penguin Books.

Davidson, D. (1966). The logical form of action sentences. In *Essays on Actions and Events* Oxford: Oxford University Press 1980.

de Haan, G. (1987). A theory-bound approach to the acquisition of verb-placement in Dutch. In G. de Haan & W. Zonneveld (eds.), *Formal Parameters in Generative Grammar, Yearbook 1987* Utrecht: University of Utrecht, OTS.

Demuth, K. (1994). On the underspecification of functional categories in early grammars. In B. Lust, J. Whitman, & J. Kornfilt (eds.), *Syntactic Theory and Language Acquisition: Crosslinguistic Perspectives* (pp. 119-134). Hillsdale, NJ: Lawrence Erlbaum.

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: John Benjamins.

Déprez, V. and A. Pierce (1993). Negation and functional projections in early grammar. *Linguistics Inquiry* 24: pp 25-67.

Déprez, V. and A. Pierce (1994). Crosslinguistic evidence for functional categories in early child grammar. In T. Hoekstra & B. Schwartz (eds.), *Language Acquisition Studies in Generative Grammar* (pp. 57-84). Amsterdam: John Benjamins.

du Plessis, J., D. Solin, L. Travis, and L. White (1987). UG or not UG, that is the question: a reply to Clahsen and Muysken. *Second Language Research* 3: 56-75.

Duffield, N. (1992) Roots and rogues: Null subjects in German child language. ms. Düsseldorf: Heinrich-Heine University.

Duffield, N. (1997) Rogues and optionality. ms. McGill University.

Enç, M. (1987). Anchoring conditions for Tense. *Linguistic Inquiry* 18: 633-657.

Epstein, S., S. Flynn, and G. Martohardjono (1996). Second language acquisition: theoretical and experimental issues in contemporary research. *Behavioral and Brain Sciences* 19: 677-714.

Epstein, S., S. Flynn, and G. Martohardjono (in press). The strong continuity hypothesis in adult L2 acquisition of functional categories. In S. Flynn, G. Martohardjono, & W.

O'Neil (eds.), *The Generative Study of Second Language Acquisition* Hillsdale, NJ: Lawrence Erlbaum.

Eubank, L. (1992). Verb-movement, agreement and tense in L2 acquisition. In J. Meisel (ed.), *The Acquisition of Verb-Placement* (pp. 225-244). Dordrecht: Kluwer.

Eubank, L. (1993/1994). On the transfer of parametric values in L2 development. *Language Acquisition* 3: 182-208.

Eubank, L. (1994). Optionality and the initial state in L2 development. In T. Hoekstra & B. Schwartz (eds.), *Language Acquisition Studies in Generative Grammar* (pp. 369-88). Amsterdam: John Benjamin.

Eubank, L. (1996). Negation in early German-English IL: more valueless features in the L2 initial state. *Second Language Research* 12: 73-106.

Eubank, L., M.-L. Beck, and H. Aboutaj (1997) OI effects and optionality in the interlanguage of a Moroccan-Arabic speaking learner of French. Paper presented at AAAL 1997. Orlando, March 1997.

Felix, S. (1987). *Cognition And Language Growth*. Dordrecht: Foris.

Ferdinand, A. (1996). *The Development of functional categories: The acquisition of the subject in French*. The Hague: Holland Academic Graphics.

Flynn, S. (1995) The L1 is not the problem. Paper presented at SLRF 1995. Cornell University.

Flynn, S. and G. Martohardjono (1994). Mapping from the initial state to the final state: The separation of universal principles and language-specific properties. In B. Lust, J. Whitman, & J. Kornfilt (eds.), *Syntactic Theory and Language Acquisition: Crosslinguistic Perspectives* (pp. 319-335). Hillsdale, NJ: Lawrence Erlbaum.

Friedemann, M.-A. (1993/1994). The underlying position of external arguments in French: A study in adult and child grammar. *Language Acquisition* 3: 209-255.

Fukui, N. (1988). Deriving the differences between English and Japanese: A case study of parametric syntax. *English Linguistics* 5: 249-70.

Gavruseva, L. and D. Lardiere (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 Boston University Conference on Language Development* (pp. 225-236). Sommerville, MA: Cascadilla Press.

Gerbault, J. (1978) The acquisition of English by a five year old French speaker. Unpublished MA thesis, UCLA.

Giorgi, A. and G. Longobardi (1991). *The Syntax of Noun Phrases: Configuration, Parameters, and Empty Categories.* Cambridge: Cambridge University Press.

Grimshaw, J. (1994). Minimal projection and clause structure. In B. Lust, J. Whitman, & J. Kornfilt (eds.), *Syntactic Theory and Language Acquisition: Crosslinguistic Perspectives* (pp. 75-83). Hillsdale, NJ: Lawrence Erlbaum.

Grondin, N. and L. White (1996). Functional categories in child L2 acquisition. *Language Acquisition* 5: 1-34.

Gruber, J. (1967). Topicalization in child language. *Foundations of Language* 3: 37-65.

Guasti, M.-T. (1993) *Causatives and Perception Verbs: A Comparative Study.* Torino: Rosenberg and Sallier.

Guasti, M.-T. (1993/1994). Verb syntax in Italian child grammar: Finite and nonfinite verbs. *Language Acquisition* 3: 1-40.

Guasti, M.-T. and L. Rizzi (1996). Null Aux and the acquisition of residual V2. In A. Stringfellow, D. Cahana-Amitay, E. Hughes, & A. Zukowski (eds.), *Proceedings of the 20th Boston University Conference on Language Development* (pp. 284-295). Sommerville, MA: Cascadilla Press.

Guéron, J. and T. Hoekstra (1989). T-chains and the constituent structure of auxiliaries. In A. Cardinaletti, G. Cinque, & G. Guisti (eds.), *Constituent Structure* (pp. 35-99). Dordrecht: Foris.

Guilfoyle, E. and M. Noonan (1992). Functional categories and language acquisition. *Canadian Journal of Linguistics* 37: 241-272.

Haegeman, L. (1990a). *Generative Syntax: Theory and Study*. Cambridge: University Press.

Haegeman, L. (1990b). Understood subjects in English diaries. *Multilingua* 9: 157-199.

Haegeman, L. (1995). Root infinitives, tense, and Truncated structures in Dutch. *Language Acquisition* 4: 205-255.

Haegeman, L. (1996). Root infinitives, clitics and truncated structures. In H. Clahsen (ed.), *Generative Approaches to First and Second Language Acquisition* (pp. 271-307). Amsterdam: John Benjamins.

Hamann, C. (1992). Late empty subjects in German child language. *Technical Reports in Formal and Computational Linguistics* 4. University of Geneva.

Hamann, C., L. Rizzi, and Frauenfelder (1996). On the acquisition of the pronominal system in French. In H. Clahsen (ed.), *Generative Approaches to First and Second Language Acquisition* (pp 309-334). Amsterdam: John Benjamins.

Hamann, C. and K. Plunkett (1997) Subject Omission in child Dutch. Paper presented at GALA 1997, University of Edinburgh, April 1997.

Harris, T. and K. Wexler (1996). The optional-infinitive stage in child English. In H. Clahsen (ed., *Generative Approaches to First and Second Language Acquisition* (pp. 1-42). Amsterdam: John Benjamins.

Haznedar, B. and B. Schwartz (1997). Are there Optional Infinitives in child L2 acquisition? In E. Hughes, M. Hughes, & A. Greenhill (eds.), *Proceedings of the 21st Boston University Conference on Language Development* (pp. 257-268). Somerville: Cascadilla Press.

Hoekstra, T. and N. Hyams (1995a). The syntax and interpretation of dropped categories in child language: A unified account. *Proceedings of WCCFL 14* .

Hoekstra, T. and N. Hyams (1995b). Missing heads in child language. In C. Koster & F. Wijnen (eds.), *Proceedings of the Groningen Assembly on Language Acquisition 1995*

(pp. 251-260). University of Groningen: Centre for Language and Cognition Groningen.

Hoekstra, T., N. Hyams, and M. Becker (1997). The underspecification of Number and the licensing of root infinitives. In E. Hughes, M. Hughes, & A. Greenhill (eds.), *Proceedings of the 21st Boston University Conference on Language Development* (pp. 293-306). Sommerville, MA: Cascadilla Press.

Hoekstra, T. and P. Jordens (1994). From adjunct to head. In T. Hoekstra & B. Schwartz (eds.), *Language Acquisition Studies in Generative Grammar* (pp. 119-149). Amsterdam: John Benjamin.

Hoekstra, T. and R. Mulder (1990). Unergatives as copular verbs: locational and existential predication. *The Linguistic Review* 7: 1-79.

Holmberg, A. (1986) Word order and syntactic features in the Scandinavian languages and English. Unpublished PhD dissertation, Stockholm University.

Huang, C.-T. J. (1982). Move Wh in a language without Wh movement. *The Linguistic Review* 1: 369-416.

Huang, C.-T. J. (1984). On the distribution and reference of empty pronouns. *Linguistic Inquiry* 15: 531-74.

Hyams, N. (1986). *Language Acquisition and the Theory of Parameters*. Dordrecht: Reidel.

Hyams, N. (1992). The genesis of clausal structure. In J. Meisel (ed.), *The Acquisition of Verb-Placement* (pp. 371-400). Dordrecht: Kluwer.

Hyams, N. (1996). Underspecification of functional categories in early grammars. In H. Clahsen (ed.), *Generative Perspectives on Language Acquisition* (pp. 91-127). Amsterdam: John Benjamins.

Jaeggli, O. and N. Hyams (1988). Morphological uniformity and the setting of the null subject parameter. *Proceedings of NELS 18* (pp. 238-253). University of Massachusetts: GLSA.

254

Johnson, K. (1990) The syntax of inflectional paradigms. ms. University of Wisconsin.

Jonas, D. (1996). On the acquisition of verb syntax in child Faroese. *MIT Working Papers in Linguistics* 26: 265-280.

Kaiser, A. (1994). More about INFL-ection and agreement: The acquisition of clitic pronouns in French. In J. Meisel (ed.), *Bilingual First Language Acquisition: French and German Grammatical Development* (pp. 131-159). Amsterdam: John Benjamins.

Kayne, R. (1975). *French Syntax.* Cambridge, MA: MIT Press.

Kayne, R. (1989) Notes on English agreement. Unpublished ms., City University of New York.

Kayne, R. (1991). Romance clitics, verb-movement, and PRO. *Linguistics Inquiry* 22: 647-686.

Kayne, R. (1994). *The Antisymmetry of Syntax.* Cambridge: MIT Press.

Klima, E. and U. Bellugi (1966). Syntactic regularities in the speech of children. In J. Lyons & R. Wales (eds.), *Psycholinguistic Papers* (pp. 183-207). Edinburgh: Edinburgh University Press.

Koehn, C. (1989) Der Erwerb der Pluralmarkierungen durch bilinguale Kinder (Französisch/Deutsch). Unpublished MA thesis, University of Hamburg.

Koopman, H. and D. Sportiche (1991). The position of subjects. *Lingua* 85: 211-58.

Krämer, I. (1993). The licensing of subjects in early child language. *MIT Working Papers* 19: 197-212.

Kuroda, S.-Y. (1988). Whether we agree or not: a comparative syntax of English and Japanese. *Lingvisticae Investigationes* 12: 1-47.

Kursawe, C. (1994) Fragesätze in der deutschen Kindersprache ('Interrogatives in German child language'). Unpublished MA thesis, University of Düsseldorf.

Laka, I. (1994). Negation in syntax: The view from Basque. *Rivista di Linguistica* 5: 245-274.

Lakshmanan, V. (1993/1994). The boy for the cookie: some evidence for the non-violation of the Case filter in child SLA. *Language Acquisition* 3: 25-48.

Lambrecht, K. (1981). *Topic, Antitopic and Verb Agreement in Non-standard French.* Amsterdam: John Benjamins.

Lardiere, D. (1998) Case and Tense in the 'fossilized' steady state. *Second Language Research* 14: 1-26.

Lardiere, D. and B. Schwartz (1997). Feature-marking in the L2 development of deverbal compounds. *Journal of Linguistics* 33: 327-353.

Lebeaux, D. (1988) Language acquisition and the form of grammar. Unpublished PhD dissertation, University of Massachusetts.

Lightbown, P. (1977) Consistency and variation in the acquisition of French. Unpublished PhD dissertation, Columbia University.

Lust, B. (1994). Functional projection of CP and phrase structure parametrization: An argument for the strong continuity hypothesis. In B. Lust, J. Whitman, & J. Kornfilt (eds.), *Syntactic Theory and Language Acquisition: Crosslinguistic Perspectives* (pp. 85-118). Hillsdale, NJ: Lawrence Erlbaum.

Lust, B., S. Flynn, and C. Foley (1996). What children know about what they say: Elicited imitation as a research method for assessing children's syntax. In D. McDaniel, H. Smith Cairns, & C. McKee (eds.), *Methods for Assessing Children's Syntax* (pp. 55-76). Cambridge, MA: MIT Press.

MacWhinney, B. and C. Snow (1985). The Child Language Data Exchange System. *Journal of Child Language* 12: 271-296.

Meisel, J. (1990). INFL-ection and subject-verb agreement. In J. Meisel (ed.), *Two First Languages - Early Development in Bilingual Children* (pp. 237-297). Dordrecht: Foris.

Meisel, J. (1992). Introduction: Functional categories and verb-placement in language development. In J. Meisel (ed.), *The Acquisition of Verb-Placement* Dordrecht: Kluwer.

256

Meisel, J. and N. Müller (1992). Finiteness and verb-placement in early child grammars: Evidence from simultaneous acquisition of French and German in bilinguals. In J. Meisel (ed.), *The Acquisition of Verb-Movement* (pp. 109-138). Dordrecht: Kluwer.

Müller, N. (1990). Erwerb der Worstellung im Französischen und Deutschen. Zur Distribution von Finitheitsmerkmalen in der Grammatik bilingualer Kinder. In M. Rothweiler (ed.), *Sprachwerb und Grammatik. Linguistische Untersuchungen zum Erwerb von Syntax und Morphologie* Göttingen: Linguistische Berichte, Sonderheft 3, Westdeutscher Verlag.

Ouhalla, J. (1991) Functional categories and the head parameter. paper presented at the GLOW Colloquium, Leiden.

Ouhalla, J. (1994). Verb movement and word order in Arabic. In D. Lightfoot & N. Horstein (eds.), *Optional infinitives, head-movement and the economy of derivations* (pp. 41-72). Cambridge: Cambridge University Press.

Parodi, T., B. Schwartz, and H. Clahsen (1997). On the L2 acquisition of the morphosyntax of German nominals. *Essex Research Reports in Linguistics* 15: 1-43.

Penner, Z. (1994). Asking questions without CPs?. In T. Hoekstra & B. Schwartz (eds.), *Language Acquisition Studies in Generative Grammar* (pp. 177-213). Amsterdam: John Benjamins.

Perdue, C. (1984). *Second Language Acquisition by Adult Immigrants: A Field Manual.* Rowley, MA: Newbury House.

Phillips, C. (1996). Syntax at age 2: Crosslinguistic differences. *MIT Working Papers in Linguistics* 26: 325-382.

Pienemann, M. (1981). *Der Zweitspracherwerb ausländischer Arbeiterkinder.* Bonn: Verlag Grundmann.

Pierce, A. (1989) On the emergence of syntax: a crosslinguistic study. Unpublished dissertation, MIT.

Pierce, A. (1992). *Language Acquisition and Syntactic Theory.* Dordrecht: Kluwer.

Pierce, A. (1994). On the differing status of subject pronouns in French and English child language. In B. Lust, J. Whitman, & J. Kornfilt (eds.), *Syntactic Theory and Language Acquisition: Crosslinguistic Perspectives* (pp. 319-333). Hillsdale, NJ: Lawrence Erlbaum.

Platzack, C. (1990). A grammar without functional categories: A syntactic study of early Swedish child language. *Nordic Journal of Linguistics* 13: 107-126.

Platzack, C. (1992). Functional categories and early Swedish. In J. Meisel (ed.), *The Acquisition of Verb-Placement* (pp. 63-82). Dordrecht: Kluwer.

Platzack, C. and A. Holmberg (1989). The role of Agr and finiteness in Germanic VO languages. *Working Papers in Scandinavian Syntax* 43: 51-76.

Plunkett, B. (1993). The position of the subject in Modern Standard Arabic. In M. Eid & C. Holse (eds.), *Perspectives on Arabic Linguistics V: Papers from the 5th Annual Symposium in Arabic Linguistics* (pp. 231-260). Amsterdam: John Benjamins.

Plunkett, K. (1985). Projekt Barnesprogr. *Nordisk Psykologi* 38: 14-26.

Poeppel, D. and K. Wexler (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.

Radford, A. (1990a). *Syntactic Theory and the Acquisition of English Syntax*. Oxford: Blackwell.

Radford, A. (1990b). The syntax of nominal arguments in early child English. *Language Acquisition* 1: 195-223.

Radford, A. (1996). Towards a structure-building model of acquisition. In H. Clahsen (ed.), *Generative Approaches to First and Second Language Acquisition* (pp. 43-89). Amsterdam: John Benjamins.

Reichenbach, H. (1947). *Elements of Symbolic Logic*. New York: MacMillan.

Reinhart, T. (1983). *Anaphora and Discourse Interpretation*. London: Croom Helm.

Rhee, J. and K. Wexler (1996). Optional infinitives in Hebrew. *MIT Working Papers in Linguistics* 1996: 383-402.

Rispoli, M. (1994). Pronoun case overextensions and paradigm building. *Journal of Child Language* 21: 157-172.

Ritter, E. (1989). Two functional categories in noun phrases: Evidence from Modern Hebrew. In S. Rothstein (ed.), *Syntax and Semantics 26* (pp. 37-62). New York: Academic Press.

Rizzi, L. (1982). *Issues in Italian Syntax*. Dordrecht: Foris.

Rizzi, L. (1986). Null objects in Italian and the theory of pro. *Linguistics Inquiry* 17: 501-557.

Rizzi, L. (1991). Residual verb-second and the Wh-critetion. *Technical Reports on Formal and Computational Linguistics* 2, University of Geneva.

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: John Benjamins.

Rizzi, L. (1997). The fine structure of the left periphery. In L. Haegeman (ed.), *Eleme--- of Grammar* (pp. 281-338). Dordrecht: Kluwer.

Roberts, I. (1993). *Verbs and Diachronic Syntax*. Dordrecht: Kluwer.

Roeper, T. and B. Rohrbacher (1995). Null subjects in early child English and the theory of Economy of Projection. *University of Pennsylvania Working Papers in Linguistics:* 83-119.

Roeper, T. and J. Weissenborn (1990). How to make parameters work: comments on Valian. In L. Frazier & J. de Villiers (eds.), *Language Processing and Language Acquisition* (pp. 147-162). Dordrecht: Kluwer.

Rohrbacher, B. (1994). Explaining the syntactic consequences of rich agreement morphology: On the licensing of V-to-AgrS raising and pro. *WCCFL 13*.

Sano, T. and N. Hyams (1994). Agreement, finiteness and the development of null arguments. In M. González (ed.), *Proceedings of NELS 24* (pp. 543-58). University of Massachusetts: GLSA.

Schaeffer, J. (1994). On the acquisition of scrambling in Dutch. In D. MacLaughlin & S. McEwen (eds.), *Proceedings of the Boston University Conference on Language Development 1* (pp. 521-532). Sommerville, MA: Cascadilla Press.

Schütze, C. and K. Wexler (1996). Subject case licensing and English root infinitives. In A. Stringfellow, D. Cahana-Amitay, E. Hughes, & A. Zukowski (eds.), *Proceedings of the 20th Boston University Conference on Language Development* (pp. 670-681). Sommerville, MA: Cascadilla Press.

Schwartz, B. (1996) Some specs on Specs in L2 acquisition. ms. University of Durham.

Schwartz, B. and R. Sprouse (1994). Word-order and nominative case in non-native language acquisition. In T. Hoekstra & B. Schwartz (eds.), *Language Acquisition Studies in Generative Grammar: Papers in Honor of K. Wexler from the 1991 GLOW Workshops* (pp. 317-368). Amsterdam: John Benjamins.

Schwartz, B. (in press). On two hypotheses of transfer in second language acquisition: Minimal Trees and Absolute L1 Transfer. In S. Flynn, G. Martahordjono, & W. O'Neil (eds.), *The Generative Study of Second Language Acquisition*.

Schwartz, B. and R. Sprouse (1996). L2 cognitive states and the Full Transfer/Full Access Model. *Second Language Research* 12: 40-72.

Schwartz, B. and A. Tomaselli (1990). Some implications from an analysis of German word order. In W. Abraham, W. Kosmeijer, & E. Reukand (eds.), *Issues in Germanic Syntax* (pp. 251-274). Amsterdam: John Benjamins.

Shaer, B. (1997) Making sense of tense: Tense, time, reference, and linking theory. Unpublished PhD dissertation, McGill University.

Slobin, D. (1982). Universal and particular in the acquisition of language. In E. Wanner & L. Gleitman (eds.), *Language Acquisition: The State of the Art* Cambridge: Cambridge University Press.

Speas, M. (1994). Null arguments in a theory of Economy of Projection. *University of Massachusetts Occasional Papers in Linguistics* 17: 179-208.

Sportiche, D. (1988). A theory of floated quantifiers. *Linguistic Inquiry* 19: 425-450.

Sportiche, D. (1996). Clitic constructions. In J. Rooryck & L. Zaring (eds.), *Phrase Structure and the Lexicon* Dordrecht: Reidel.

Stowell, T. (1982). The tense of infinitives. *Linguistic Inquiry* 13: 561-570.

Stowell, T. (1983). Subjects across categories. *The Linguistic Review* 2: 285-312.

Suppes, P., Smith, R. and M. Leveille (1973). The French syntax of a child's noun phrases. *Archives de Psychologie* 42.

Tiphine, U. (1983) The acquisition of English statements and interrogatives by French speaking children. Unpublished PhD dissertation, University of Kiel, Germany.

Tomaselli, A. (1990). Comp° as a licensing head: an argument based on cliticization. In J. Mascaró & M. Nespor (eds.), *Grammar in Progress* (pp. 433-446). Dordrecht: Foris.

Vainikka, A. (1993/1994). Case in the development of English syntax. *Language Acquisition* 3: 257-325.

Vainikka, A. and M. Young-Scholten (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: John Benjamins.

Vainikka, A. and M. Young-Scholten (1996a). Gradual development of L2 phrase structure. *Second Language Acquisition* 12: 7-39.

Vainikka, A. and M. Young-Scholten (1996b). The early stages in adult L2 syntax: additional evidence from Romance speakers. *Second Language Research* 140-176.

Valian, V. (1991). Syntactic subjects in the early speech of American and Italian children. *Cognition* 40: 21-81.

Valois, D. (1991) The internal syntax of DP. Unpublished PhD dissertation, UCLA.

Van Riemsdijk, H., ed. (in press). *Clitics in the Languages of Europe*. Berlin: Mouton de Gruyter.

Verrips, M. and J. Weissenborn (1992). Routes to verb-placement in early French and German: The independence of finiteness and agreement. In J. Meisel (ed.), *The Acquisition of Verb-Placement* (pp. 283-331). Dordrecht: Kluwer.

Wagner, K. (1985). How much do children say in a day? *Journal of Child Language* 12: 475-87.

Weist, R. and K. Witkowska-Stadnick (1985) Basic relations in child language and the word order myth. Unpublished MA Thesis, SUNY/Fredonia and Adam Mickiewicz University.

Weverink, M. (1989) The subject in relation to inflection in child language. Unpublished MA thesis, University of Utrecht.

Wexler, K. (1994). Optional infinitives, head-movement and the economy of derivations. In D. Lightfoot & N. Horstein (eds.), *Verb Movement* (pp. 305-50). Cambridge: Cambridge University Press.

Wexler, K. (1995) Feature-interpretability and optionality in early child grammar. Paper presented at the Workshop on Optionality, Utrecht.

White, L. (1985). The pro-drop parameter in adult second language acquisition. *Language Learning* 35: 47-62.

White, L. (1992). Long and short verb movement in second language acquisition. *Canadian Journal of Linguistics* 37: 273-286.

White, L. (1996). Clitics in child L2 French. In H. Clahsen (ed.), *Generative Approaches to First and Second Language Acquisition* (pp. 335-368). Amsterdam: John Benjamins.

Whitman, J. (1994). In defense of the strong continuity account of the acquisition of V2. In B. Lust, J. Whitman, & J. Kornfilt (eds.), *Syntactic Theory and Language Acquisition: Crosslinguistic Perspectives* (pp. 273-287). Hillsdale, NJ: Lawrence Erlbaum.

Wijnen, F. (1995). Incremental phrase structure. *Proceedings of NELS* 25. University of Massachusetts: GLSA.

Wijnen, F. and G. Bol (1993). The escape from the optional infinitive stage. In A. de Boer, J. de Jong, & R. Landeweerd (eds.), *Language and Cognition 3* Groningen: University of Groningen.

Wode, H. (1981). *Learning a second language*. Tübingen: Gunter Narr.

Zanuttini, R. (1991) Syntactic Properties of Sentential Negation. A Comparative Study of Romance Languages. Unpublished PhD dissertation, University of Pennsylvania.

Zanuttini, R. (1996). On the relevance of Tense for sentential negation. In A. Belletti & L. Rizzi (eds.), *Parameters and Functional Heads* (pp. 181-207). New York: Oxford University Press.

Zwart, C. J. W. (1993) Dutch syntax: A minimalist approach. Unpublished PhD dissertation, University of Groningen, Groningen, The Netherlands.

Appendix

Table I: Finite and nonfinite root declaratives in child L2 French

Months	Kenny				Greg			
	Total	Finite	RIs	%RIs	Total	Finite	RIs	%RIs
0.3	1	0	1	100	—	—	—	—
0.5	1	1	0	0	—	—	—	—
1	5	5	0	0	—	—	—	—
2	5	4	1	20	—	—	—	—
3	10	6	4	40	—	—	—	—
4	18	18	0	0	—	—	—	—
5	22	17	5	22.7	43	36	7	16.3
7	43	37	6	13.9	—	—	—	—
8	32	25	7	21.9	—	—	—	—
9	19	14	5	26.3	—	—	—	—
9.5	31	23	8	25.8	39	36	3	7.7
10	30	25	5	16.7	69	56	13	18.8
11	39	33	6	15.4	24	22	2	8.3
14	67	57	10	14.9	134	121	13	9.7
15	74	63	11	15.8	209	196	13	6.6
18	107	100	7	6.5	131	124	7	5.3
20	110	109	1	0.9	156	154	2	1.3
25	134	133	1	0.7	310	309	1	0.3
27	137	136	1	0.7	218	218	0	0
29	146	146	0	0	227	226	1	0.4
Total	1031	952	79	7.6	1560	1498	62	4
to m. 18	504	428	76	15.1	649	591	58	8.9
after m. 18	527	524	3	0.6	911	907	4	0.4

Table II: Finite and nonfinite root declaratives in child L2 German

	Concetta					Luigina			
Months	Total	Finite	RIs	%RIs	Months	Total	Finite	RIs	%RIs
0.2	0	0	0	0	0.7	0	0	0	0
1	0	0	0	0	1.4	0	0	0	0
1.8	0	0	0	0	2.3	0	0	0	0
2.5	0	0	0	0	3	1	1	0	0
3.2	0	0	0	0	3.7	1	1	0	0
4	0	0	0	0	4.4	0	0	0	0
5	0	0	0	0	5.4	4	4	0	0
5.6	6	6	0	0	6	2	1	1	50
6.8	6	6	0	0	7	5	5	0	0
8.4	7	6	1	14.3	7.9	2	2	0	0
9.1	10	10	0	0	8.6	0	0	0	0
11	29	26	3	10.3	8.8	1	1	0	0
12.4	34	24	10	29.4	9.5	3	0	3	100
13.5	54	46	8	14.8	11.4	0	0	0	0
14.5	27	26	1	3.7	12.8	3	2	1	33.3
—	—	—	—	—	14	4	4	0	0
—	—	—	—	—	14.9	11	10	1	11.8
—	—	—	—	—	19.8	13	11	2	16.7
Total	173	150	23	13.3	Total	50	42	8	16

Table III: Finite and nonfinite root declaratives in adult L2 French

Abdelmalek				Zahra			
Months	Total	Finite	RIs	%RIs	Months	Total	Finite	RIs	%RIs

Months	Total	Finite	RIs	%RIs	Months	Total	Finite	RIs	%RIs
14	4	4	0	0	12	2	2	0	0
15	5	4	1	20	14	16	5	11	68.8
16.7	11	10	1	9.1	15.5	4	3	1	25
17.7	95	56	39	41.1	17	12	10	2	16.7
18.7	18	10	8	44.4	18.5	29	23	6	20.7
20.5	13	7	6	46.2	20	12	8	4	33.3
21.5	37	20	17	45.9	21.7	17	12	5	29.4
24	36	22	14	38.9	23.2	4	0	4	100
25	79	43	36	45.6	23.7	16	12	4	25
25.7	43	27	16	37.2	24.5	43	26	17	39.5
27	51	39	12	23.5	25.5	22	15	7	31.8
27.7	16	14	2	12.5	26.7	63	52	11	17.5
30	60	41	19	31.7	27.7	28	19	9	32.1
30.7	55	43	12	21.8	28.2	11	9	2	18.2
31.7	29	16	13	44.8	29.2	40	29	11	27.5
32.5	7	6	1	14.3	33.7	38	27	11	28.9
33.5	32	24	8	25	34.4	59	42	17	28.8
34.5	126	93	33	26.2	36	91	69	22	24.2
35.7	41	32	9	22	36.5	63	43	20	31.7
36.7	9	7	2	22.2	38.5	81	65	16	19.8
38.7	55	47	8	14.5	39.5	60	47	13	21.7
43.5	13	11	2	15.4	40	10	5	5	50
51.5	33	31	2	6.1	41	80	52	28	35
52.5	21	15	6	28.6	42	5	3	2	40
54.5	36	31	5	13.9	43.5	30	22	8	26.7
Total	925	653	272	29.4	Total	836	600	236	28.2

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Table IV: Finite and nonfinite root declaratives in adult L2 German

	Zita					Ana			
Months	Total	Finite	RIs	%RIs	Months	Total	Finite	RIs	%RIs
3	3	3	0	0	3	0	0	0	0
3.5	1	1	0	0	4	44	35	9	20.5
3.7	12	10	2	16.7	4.5	44	40	4	9.1
4	5	3	2	40	4.7	11	11	0	0
5.6	7	2	5	71.4	5.2	13	11	2	15.4
6.5	21	14	7	33.3	7.2	59	53	6	10.2
6.7	12	3	9	75	7.4	37	29	8	21.6
7.5	16	11	5	31.2	8.2	52	43	9	17.3
8	12	10	2	16.6	11	76	70	6	7.9
9	14	11	3	21.4	11.7	79	68	11	13.9
9.5	13	4	9	69.2	13	39	39	0	0
10	25	17	8	32	13.5	98	90	8	8.2
11	23	16	7	30.4	14.2	48	47	1	2.1
11.7	36	16	20	55.6	23	42	41	1	2.4
13.7	51	43	8	15.7	23.5	10	9	1	10
15	63	44	19	30.2	24	68	63	5	7.4
16.5	8	5	3	37.5	24.7	42	39	3	7.1
19	7	7	0	0	—	—	—	—	—
22	70	47	23	32.9	—	—	—	—	—
22.7	86	79	7	8.1	—	—	—	—	—
23.4	25	22	3	12	—	—	—	—	—
24.4	91	75	16	17.6	—	—	—	—	—
25.4	105	77	28	26.7	—	—	—	—	—
25.6	31	26	5	16.1	—	—	—	—	—
25.8	41	41	0	0	—	—	—	—	—
Total	778	587	191	24.6	Total	762	688	74	9.7

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Table V: Verb-placement in L2 German root infinitives

Child L2 German						Adult L2 German					
Concetta			Luigina			Zita			Ana		
Months	VX	XV	Months	VX	XV	Months	VX	XV	Months	VX	XV
0.2	0	0	0.7	0	0	3	0	0	3	0	0
1	0	0	1.4	0	0	3.5	0	0	4	8	0
1.8	0	0	2.3	0	0	3.7	1	0	4.5	3	0
2.5	0	0	3	0	0	4	2	0	4.7	0	0
3.2	0	0	3.7	0	0	5.6	1	0	5.2	1	0
4	0	0	4.4	0	0	6.5	2	1	7.2	5	0
5	0	0	5.4	0	0	6.7	4	0	7.4	5	0
5.6	0	0	6	1	0	7.5	3	1	8.2	7	0
6.8	0	0	7	0	0	8	2	0	11	3	1
8.4	0	1	7.9	0	0	9	1	0	11.7	7	1
9.1	0	0	8.6	0	0	9.5	4	0	13	0	0
11	1	0	8.8	0	0	10	5	1	13.5	2	1
12.4	8	0	9.5	0	0	11	5	0	14.2	1	0
13.5	5	0	11.4	0	0	11.7	12	0	23	1	0
14.5	1	0	12.8	1	0	13.7	6	1	23.5	1	0
—	—	—	14	0	0	15	13	1	24	5	0
—	—	—	14.9	0	0	16.5	0	0	24.7	3	0
—	—	—	19.8	2	0	19	0	0	—	—	—
—	—	—	—	—	—	22	14	1	—	—	—
—	—	—	—	—	—	22.7	3	0	—	—	—
—	—	—	—	—	—	23.4	3	0	—	—	—
—	—	—	—	—	—	24.4	10	2	—	—	—
—	—	—	—	—	—	25.4	20	1	—	—	—
—	—	—	—	—	—	25.6	4	0	—	—	—
—	—	—	—	—	—	25.8	0	0	—	—	—
Total	15	1	Total	4	0	Total	115	9	Total	52	3

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Table VI: Verb-placement in L2 German finite main declaratives

| | Child L2 German | | | | | | Adult L2 German | | | | |
| | Concetta | | | Luigina | | | Zita | | | Ana | | |
Months	VX	XV	Months	VX	XV	Months	VX	XV	Months	VX	XV
0.2	0	0	0.7	0	0	3	1	0	3	0	0
1	0	0	1.4	0	0	3.5	1	0	4	28	0
1.8	0	0	2.3	0	0	3.7	4	1	4.5	34	0
2.5	0	0	3	1	0	4	2	0	4.7	10	0
3.2	0	0	3.7	1	0	5.6	0	0	5.2	8	0
4	0	0	4.4	0	0	6.5	7	0	7.2	45	0
5	0	0	5.4	3	0	6.7	2	0	7.4	27	0
5.6	6	0	6	0	0	7.5	7	0	8.2	36	0
6.8	5	0	7	4	0	8	8	0	11	66	0
8.4	2	0	7.9	2	0	9	8	1	11.7	63	0
9.1	8	0	8.6	0	0	9.5	4	0	13	36	0
11	17	0	8.8	1	0	10	9	1	13.5	87	0
12.4	13	0	9.5	0	0	11	10	0	14.2	36	0
13.5	17	0	11.4	0	0	11.7	12	0	23	33	0
14.5	12	0	12.8	1	1	13.7	40	0	23.5	5	0
—	—	—	14	3	0	15	22	1	24	53	0
—	—	—	14.9	5	0	16.5	1	0	24.7	27	0
—	—	—	19.8	7	0	19	4	0	—	—	—
—	—	—	—	—	—	22	34	0	—	—	—
—	—	—	—	—	—	22.7	60	0	—	—	—
—	—	—	—	—	—	23.4	22	0	—	—	—
—	—	—	—	—	—	24.4	58	0	—	—	—
—	—	—	—	—	—	25.4	52	0	—	—	—
—	—	—	—	—	—	25.6	15	0	—	—	—
—	—	—	—	—	—	25.8	26	0	—	—	—
Total	80	0	Total	28	1	Total	409	4	Total	594	0

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Table VII: Nonfinite CPs in child L2 French

Months	Kenny						Greg					
	Emb	-Fin	Wh	-Fin	Y/N	-Fin	Emb	-Fin	Wh	-Fin	Y/N	-Fin
0.3	0	0	0	0	0	0	—	—	—	—	—	—
0.5	0	0	0	0	0	0	—	—	—	—	—	—
1	0	0	1	0	0	0	—	—	—	—	—	—
2	0	0	0	0	0	0	—	—	—	—	—	—
3	0	0	1	0	1	0	—	—	—	—	—	—
4	2	0	1	0	3	0	—	—	—	—	—	—
5	0	0	1	0	2	0	0	0	2	0	0	0
7	1	0	1	0	1	0	—	—	—	—	—	—
8	1	0	2	0	0	0	—	—	—	—	—	—
9	0	0	3	0	2	1	—	—	—	—	—	—
9.5	2	0	3	0	3	2	2	1	6	0	0	0
10	12	0	5	0	1	0	0	0	10	0	0	0
11	3	2	3	1	1	0	0	0	7	0	0	0
14	5	0	5	1	1	0	23	1	9	0	10	0
15	10	0	20	0	8	0	29	1	12	1	11	1
18	13	0	12	2	17	0	28	1	6	0	5	0
20	30	1	3	0	7	0	32	0	9	0	8	0
25	36	0	10	0	8	0	128	0	19	0	29	1
27	37	0	9	0	26	1	75	0	18	0	22	0
29	49	3	4	0	5	0	97	0	16	0	16	0
To m. 18	49	2	58	4	40	3	82	4	52	1	26	1
%-Fin		4.1		6.9		7.5		4.9		1.9		3.8

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Table VIII: Nonfinite CPs in child L2 German

	Concetta							Luigina					
Mths	Emb	-Fin	Wh	-Fin	Y/N	-Fin	Mths	Emb	-Fin	Wh	-Fin	Y/N	-Fin
0.2	0	0	0	0	0	0	0.7	0	0	0	0	0	0
1	0	0	0	0	0	0	1.4	0	0	0	0	0	0
1.8	0	0	0	0	0	0	2.3	0	0	0	0	0	0
2.5	0	0	0	0	0	0	3	0	0	0	0	0	0
3.2	0	0	0	0	0	0	3.7	0	0	0	0	0	0
4	0	0	0	0	0	0	4.4	0	0	1	0	0	0
5	0	0	0	0	0	0	5.4	0	0	0	0	0	0
5.6	0	0	0	0	0	0	6	0	0	0	0	0	0
6.8	0	0	0	0	1	0	7	0	0	0	0	0	0
8.4	0	0	0	0	0	0	7.9	0	0	0	0	0	0
9.1	0	0	3	0	0	0	8.6	0	0	0	0	0	0
11	0	0	0	0	0	0	8.8	0	0	0	0	0	0
12.4	1	0	3	2	0	0	9.5	0	0	1	0	0	0
13.5	0	0	4	1	0	0	11.4	0	0	4	0	0	0
14.5	1	0	4	0	2	0	12.8	0	0	1	0	0	0
—	—	—	—	—	—	—	14	0	0	1	0	2	0
—	—	—	—	—	—	—	14.9	0	0	2	1	5	1
—	—	—	—	—	—	—	19.8	2	0	6	0	2	0
Total	2	0	14	3	3	0	Total	2	0	16	1	9	1
%-Fin		0		21.4		0	%-Fin		0		6.2		11.1

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Table IX: Nonfinite CPs in adult L2 French

	Abdelmalek							Zahra					
Mths	Emb	-Fin	Wh	-Fin	Y/N	-Fin	Mths	Emb	-Fin	Wh	-Fin	Y/N	-Fin
14	3	1	0	0	1	0	12	0	0	0	0	0	0
15	3	0	0	0	0	0	14	2	1	0	0	0	0
16.7	1	0	0	0	0	0	15.5	1	0	0	0	0	0
17.7	7	0	1	0	0	0	17	4	2	0	0	0	0
18.7	1	1	0	0	0	0	18.5	16	7	0	0	0	0
20.5	5	1	0	0	0	0	20	4	1	0	0	1	1
21.5	4	2	2	2	0	0	21.7	3	2	0	0	0	0
24	2	2	4	4	2	1	23.2	2	1	0	0	0	0
25	4	4	4	2	3	3	23.7	2	0	0	0	0	0
25.7	5	2	1	0	0	0	24.5	4	0	1	0	1	0
27	6	2	0	0	0	0	25.5	2	0	0	0	0	0
27.7	5	2	0	0	1	0	26.7	6	0	0	0	0	0
30	3	1	0	0	0	0	27.7	3	3	0	0	0	0
30.7	15	5	0	0	0	0	28.2	7	2	0	0	0	0
31.7	5	2	1	0	0	0	29.2	6	4	0	0	0	0
32.5	0	0	0	0	0	0	33.7	11	5	0	0	0	0
33.5	5	1	0	0	0	0	34.4	8	2	0	0	0	0
34.5	14	1	3	2	0	0	36	32	10	0	0	0	0
35.7	6	2	0	0	0	0	36.5	12	2	1	0	1	0
36.7	2	0	0	0	0	0	38.5	29	5	1	1	2	0
38.7	7	3	1	1	0	0	39.5	18	7	0	0	0	0
43.5	3	1	0	0	0	0	40	1	0	0	0	0	0
51.5	3	1	0	0	0	0	41	26	5	2	1	0	0
52.5	3	1	1	1	2	1	42	1	0	0	0	0	0
54.5	5	2	1	0	1	0	43.5	12	3	0	0	0	0
Total	117	37	19	12	10	5	Total	212	62	5	2	5	1
%-Fin		31.6		63.2		50	%-Fin		29.2		40		20

Table X: Nonfinite CPs in adult L2 German

	Zita							Ana					
Mths	Emb	*-Fin*	Wh	*-Fin*	Y/N	*-Fin.*	Mths	Emb	*-Fin*	Wh	*-Fin*	Y/N	*-Fin*
3	0	*0*	0	*0*	0	*0*	3	0	*0*	0	*0*	0	*0*
3.5	0	*0*	0	*0*	0	*0*	4	2	*1*	0	*0*	0	*0*
3.7	0	*0*	0	*0*	0	*0*	4.5	2	*0*	0	*0*	0	*0*
4	0	*0*	0	*0*	0	*0*	4.7	3	*0*	0	*0*	0	*0*
5.6	0	*0*	0	*0*	0	*0*	5.2	0	*0*	0	*0*	0	*0*
6.5	0	*0*	0	*0*	0	*0*	7.2	2	*0*	0	*0*	0	*0*
6.7	0	*0*	0	*0*	0	*0*	7.4	1	*0*	0	*0*	1	*0*
7.5	1	*0*	0	*0*	0	*0*	8.2	7	*0*	0	*0*	0	*0*
8	0	*0*	0	*0*	0	*0*	11	13	*1*	2	*0*	1	*0*
9	0	*0*	0	*0*	0	*0*	11.7	7	*1*	0	*0*	3	*0*
9.5	0	*0*	0	*0*	0	*0*	13	10	*0*	2	*0*	3	*0*
10	2	*0*	0	*0*	1	*1*	13.5	19	*4*	2	*0*	0	*0*
11	1	*0*	0	*0*	0	*0*	14.2	9	*1*	0	*0*	0	*0*
11.7	1	*1*	0	*0*	0	*0*	23	7	*1*	0	*0*	0	*0*
13.7	0	*0*	1	*0*	3	*0*	23.5	5	*0*	0	*0*	0	*0*
15	3	*1*	0	*0*	0	*0*	24	16	*2*	0	*0*	0	*0*
16.6	1	*0*	0	*0*	1	*0*	24.7	19	*1*	0	*0*	1	*1*
19	0	*0*	0	*0*	0	*0*	—	—	—	—	—	—	—
22	7	*4*	2	*0*	3	*0*	—	—	—	—	—	—	—
22.7	10	*1*	0	*0*	0	*0*	—	—	—	—	—	—	—
23.4	2	*1*	1	*0*	0	*0*	—	—	—	—	—	—	—
24.4	8	*2*	1	*0*	1	*0*	—	—	—	—	—	—	—
25.4	21	*5*	0	*0*	1	*0*	—	—	—	—	—	—	—
25.6	2	*1*	0	*0*	0	*0*	—	—	—	—	—	—	—
25.8	6	*1*	0	*0*	2	*0*	—	—	—	—	—	—	—
Total 65		*17*	5	*0*	12	*1*	Total 122		*12*	6	*0*	9	*1*
%-Fin		*26.2*		*0*		*8.3*	%-Fin		*10.9*		*0*		*12.5*

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Table XI: Null subjects (NS) in child L2 French root declaratives

Months	Kenny						Greg					
	Finite	NS	%NS	RIs	NS	%NS	Finite	NS	%NS	RIs	NS	%NS
0.3	0	0	0	1	1	100	—	—	—	—	—	—
0.5	1	1	100	0	0	0	—	—	—	—	—	—
1	5	0	0	0	0	0	—	—	—	—	—	—
2	4	0	0	1	0	0	—	—	—	—	—	—
3	6	1	16.7	4	2	50	—	—	—	—	—	—
4	18	1	5.5	0	0	0	—	—	—	—	—	—
5	17	3	17.7	5	4	80	36	2	5.5	7	3	42.9
7	37	11	29.7	6	1	16.7	—	—	—	—	—	—
8	25	7	28	7	0	0	—	—	—	—	—	—
9	14	4	28.6	5	0	0	—	—	—	—	—	—
9.5	23	9	39.1	8	3	37.5	36	4	11.1	3	2	66.7
10	25	5	20	5	0	0	56	2	3.6	13	7	53.8
11	33	9	27.3	6	2	33.3	22	5	22.7	2	1	50
14	57	12	21	10	3	30	121	14	11.6	13	5	38.5
15	63	15	23.4	11	3	27.3	196	19	9.7	13	8	61.5
18	100	9	9	7	4	57.1	124	13	10.5	7	5	71.4
20	109	7	6.4	1	1	100	154	2	1.3	2	1	50
25	133	2	1.5	1	1	100	309	4	1.3	1	1	100
27	136	3	2.2	1	0	0	218	4	1.8	0	0	0
29	146	3	2	0	0	0	226	5	2.2	1	0	0
To m. 18	428	87	20.3	76	23	30.3	591	59	10	58	31	53.4
Af. m.18	524	15	2.9	3	2	66.7	907	15	1.7	4	2	50

Table XII: Null subjects (NS) in child L2 German root declaratives

	Concetta							Luigina					
Mths	Finite	NS	%NS	RIs	NS	%NS	Mths	Finite	NS	%NS	RIs	NS	%NS
0.2	0	0	0	0	0	0	0.7	0	0	0	0	0	0
1	0	0	0	0	0	0	1.4	0	0	0	0	0	0
1.8	0	0	0	0	0	0	2.3	0	0	0	0	0	0
2.5	0	0	0	0	0	0	3	1	1	100	0	0	0
3.2	0	0	0	0	0	0	3.7	1	0	0	0	0	0
4	0	0	0	0	0	0	4.4	0	0	0	0	0	0
5	0	0	0	0	0	0	5.4	4	3	74	0	0	0
5.6	6	0	0	0	0	0	6	1	1	100	1	0	0
6.8	6	0	0	0	0	0	7	5	1	20	0	0	0
8.4	6	2	33.3	1	1	100	7.9	2	0	0	0	0	0
9.1	10	1	10	0	0	0	8.6	0	0	0	0	0	0
11	26	7	26.9	3	1	33.3	8.8	1	1	100	0	0	0
12.4	24	5	20.8	10	5	50	9.5	0	0	0	3	0	0
13.5	46	6	13	8	3	37.5	11.4	0	0	0	0	0	0
14.5	26	2	7.7	1	1	100	12.8	2	2	100	1	0	0
—	—	—	—	—	—	—	14	4	1	25	0	0	0
—	—	—	—	—	—	—	14.9	10	1	10	1	0	0
—	—	—	—	—	—	—	19.8	11	2	15.4	2	1	50
Total	150	23	15.3	23	11	47.8	Total	42	13	30.9	8	1	12.5

Table XIII: Null subjects (NS) in child L2 French finite CPs

Months	Kenny						Greg					
	Emb	*NS*	Wh	*NS*	Y/N	*NS*	Emb	*NS*	Wh	*NS*	Y/N	*NS*
0.3	0	*0*	0	*0*	0	*0*	—	—	—	—	—	—
0.5	0	*0*	0	*0*	0	*0*	—	—	—	—	—	—
1	0	*0*	0	*0*	0	*0*	—	—	—	—	—	—
2	0	*0*	0	*0*	0	*0*	—	—	—	—	—	—
3	0	*0*	1	*0*	1	*0*	—	—	—	—	—	—
4	0	*0*	1	*0*	3	*1*	—	—	—	—	—	—
5	0	*0*	1	*0*	2	*0*	0	*0*	2	*0*	0	*0*
7	1	*0*	0	*0*	2	*0*	—	—	—	—	—	—
8	0	*0*	1	*0*	0	*0*	—	—	—	—	—	—
9	0	*0*	3	*0*	1	*0*	—	—	—	—	—	—
9.5	2	*0*	0	*0*	1	*1*	0	*0*	2	*0*	0	*0*
10	10	*0*	4	*1*	1	*0*	0	*0*	7	*0*	0	*0*
11	1	*0*	2	*0*	1	*0*	0	*0*	1	*0*	0	*0*
14	4	*0*	2	*0*	1	*0*	17	*2*	9	*0*	10	*0*
15	5	*1*	12	*1*	8	*1*	27	*1*	11	*0*	10	*0*
18	11	*0*	8	*0*	17	*0*	24	*0*	4	*1*	3	*1*
20	23	*0*	2	*0*	2	*0*	32	*0*	4	*0*	8	*0*
25	32	*0*	10	*0*	2	*0*	116	*1*	18	*0*	29	*0*
27	29	*0*	9	*0*	10	*0*	73	*1*	17	*1*	22	*0*
29	42	*1*	3	*0*	5	*0*	84	*0*	16	*2*	16	*0*
To m. 18	34	*1*	35	*2*	41	*3*	68	*3*	36	*1*	24	*1*
%NS		*2.9*		*5.7*		*7.3*		*4.4*		*4.3*		*4.2*

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Table XIV: Null subjects (NS) in child L2 German finite CPs

| | Concetta | | | | | | | Luigina | | | | | |
Mths	Emb	*NS*	Wh	*NS*	Y/N	*NS*	Mths	Emb	*NS*	Wh	*NS*	Y/N	*NS*
0.2	0	*0*	0	*0*	0	*0*	0.7	0	*0*	0	*0*	0	*0*
1	0	*0*	0	*0*	0	*0*	1.4	0	*0*	0	*0*	0	*0*
1.8	0	*0*	0	*0*	0	*0*	2.3	0	*0*	0	*0*	0	*0*
2.5	0	*0*	0	*0*	0	*0*	3	0	*0*	0	*0*	0	*0*
3.2	0	*0*	0	*0*	0	*0*	3.7	0	*0*	0	*0*	0	*0*
4	0	*0*	0	*0*	0	*0*	4.4	0	*0*	1	*0*	0	*0*
5	0	*0*	0	*0*	0	*0*	5.4	0	*0*	0	*0*	0	*0*
5.6	0	*0*	0	*0*	0	*0*	6	0	*0*	0	*0*	0	*0*
6.8	0	*0*	0	*0*	1	*0*	7	0	*0*	0	*0*	0	*0*
8.4	0	*0*	0	*0*	0	*0*	7.9	0	*0*	0	*0*	0	*0*
9.1	0	*0*	1	*0*	0	*0*	8.6	0	*0*	0	*0*	0	*0*
11	0	*0*	0	*0*	0	*0*	8.8	0	*0*	0	*0*	0	*0*
12.4	1	*0*	1	*0*	0	*0*	9.5	0	*0*	1	*0*	0	*0*
13.5	0	*0*	2	*0*	0	*0*	11.4	0	*0*	4	*0*	0	*0*
14.5	1	*0*	3	*0*	2	*0*	12.8	0	*0*	1	*0*	0	*0*
—	—	—	—	—	—	—	14	0	*0*	1	*0*	2	*1*
—	—	—	—	—	—	—	14.9	0	*0*	0	*0*	4	*1*
—	—	—	—	—	—	—	19.8	2	*0*	6	*1*	2	*1*
Total	2	*0*	7	*0*	3	*0*	Total	2	*0*	14	*1*	8	*3*
%NS		*0*		*0*		*0*			*0*		*7.1*		*37.5*

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Table XV: Null subjects (NS) in adult L2 French root declaratives

	Abdelmalek							Zahra					
Mths	Finite	NS	%NS	RIs	NS	%NS	Mths	Finite	NS	%NS	RIs	NS	%NS
14	4	1	25	0	0	0	12	2	1	50	0	0	0
15	4	1	25	1	0	0	14	5	1	20	11	5	45.5
16.7	10	1	10	1	1	100	15.5	3	1	33.3	1	0	0
17.7	56	3	5.4	39	25	64.1	17	10	3	30	2	0	0
18.7	10	2	20	8	5	62.5	18.5	23	3	13	6	0	0
20.5	7	3	42.9	6	5	83.3	20	8	3	37.5	4	3	75
21.5	20	1	5	17	5	29.4	21.7	12	3	25	5	0	0
24	22	5	22.7	14	3	21.4	23.2	0	0	0	4	0	0
25	43	12	27.9	36	6	16.7	23.7	12	0	0	4	0	0
25.7	27	0	0	16	1	6.2	24.5	26	5	19.2	17	0	0
27	39	2	5.1	12	0	0	25.5	15	3	20	7	4	57.1
27.7	14	1	7.1	2	0	0	26.7	52	12	23.1	11	4	36.4
30	41	4	9.8	19	3	15.8	27.7	19	1	5.3	9	0	0
30.7	43	3	7	12	1	8.3	28.2	9	5	55.6	2	2	100
31.7	16	1	6.2	13	1	7.7	29.2	29	6	20.7	11	5	45.5
32.5	6	1	16.7	1	0	0	33.7	27	10	37	11	3	27.3
33.5	24	0	0	8	1	12.5	34.4	42	5	11.9	17	5	29.4
34.5	93	5	5.4	33	1	3	36	69	14	20.3	22	5	22.7
35.7	32	2	6.2	9	4	44.4	36.5	43	7	16.3	20	6	30
36.7	7	0	0	2	0	0	38.5	65	5	7.7	16	5	31.2
38.7	47	3	6.4	8	2	25	39.5	47	6	12.8	13	3	23.1
43.5	11	0	0	2	0	0	40	5	1	20	5	3	60
51.5	31	0	0	2	0	0	41	52	10	19.2	28	4	14.3
52.5	15	0	0	6	2	33.3	42	3	1	33.3	2	2	100
54.5	31	1	3.2	5	1	20	43.5	22	5	22.7	8	1	12.5
Total	653	52	8	272	67	24.6	Total	600	111	18.5	236	60	25.4

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Table XVI: Null subjects (NS) in adult L2 German root declaratives

	Zita							Ana					
Mths	Finite	NS	%NS	RIs	NS	%NS	Mths	Finite	NS	%NS	RIs	NS	%NS
3	3	1	33.3	0	0	0	3	0	0	0	0	0	0
3.5	1	0	0	0	0	0	4	35	2	5.7	9	0	0
3.7	10	1	10	2	0	0	4.5	40	5	12.5	4	0	0
4	3	2	66.7	2	0	0	4.7	11	2	18.2	0	0	0
5.6	2	0	0	5	1	20	5.2	11	3	27.3	2	1	50
6.5	14	1	7.1	7	1	14.3	7.2	53	19	35.8	6	2	33.3
6.7	3	0	0	9	0	0	7.4	29	14	48.3	8	3	37.5
7.5	11	2	18.2	5	2	40	8.2	43	10	23.3	9	5	55.6
8	10	3	30	2	0	0	11	70	34	48.6	6	2	33.3
9	11	2	18.2	3	1	33.3	11.7	68	25	36.8	11	4	36.4
9.5	4	2	50	9	2	22.2	13	39	23	59	0	0	0
10	17	7	41.2	8	3	37.5	13.5	90	38	42.2	8	3	37.5
11	16	4	25	7	2	28.6	14.2	47	10	21.3	1	1	100
11.7	16	5	31.2	20	4	20	23	41	16	39	1	0	0
13.7	43	22	51.2	8	1	12.5	23.5	9	2	22.2	1	0	0
15	44	9	20.5	19	0	0	24	63	24	38.1	5	1	20
16.6	5	2	40	3	1	33.3	24.7	39	21	53.8	3	1	33.3
19	7	0	0	0	0	0	—	—	—	—	—	—	—
22	47	7	14.9	23	4	17.4	—	—	—	—	—	—	—
22.7	79	22	27.8	7	1	14.3	—	—	—	—	—	—	—
23.4	22	10	45.5	3	0	0	—	—	—	—	—	—	—
24.4	75	22	29.3	16	3	18.7	—	—	—	—	—	—	—
25.4	77	27	35.1	28	3	10.7	—	—	—	—	—	—	—
25.6	26	5	19.2	5	3	60	—	—	—	—	—	—	—
25.8	41	7	17.1	0	0	0	—	—	—	—	—	—	—
Total	587	163	27.8	191	32	16.7	Total	688	248	36	74	23	31.1

Table XVII: Null subjects (NS) in adult L2 French finite CPs

	Abdelmalek							Zahra					
Mths	Emb	NS	Wh	NS	Y/N	NS	Mths	Emb	NS	Wh	NS	Y/N	NS
14	2	0	0	0	1	0	12	0	0	0	0	0	0
15	3	0	0	0	0	0	14	1	0	0	0	0	0
16.7	1	0	0	0	0	0	15.5	1	0	0	0	0	0
17.7	7	1	1	0	0	0	17	2	1	0	0	0	0
18.7	0	0	0	0	0	0	18.5	9	3	0	0	0	0
20.5	3	0	0	0	0	0	20	3	1	0	0	0	0
21.5	1	0	0	0	0	0	21.7	1	1	0	0	0	0
24	0	0	0	0	1	0	23.2	1	0	0	0	0	0
25	0	0	2	1	0	0	23.7	2	1	0	0	0	0
25.7	2	0	1	0	0	0	24.5	4	1	1	0	1	0
27	4	1	0	0	0	0	25.5	2	0	0	0	0	0
27.7	3	0	0	0	1	0	26.7	6	2	0	0	0	0
30	0	0	0	0	0	0	27.7	0	0	0	0	0	0
30.7	9	0	0	0	0	0	28.2	5	3	0	0	0	0
31.7	3	0	1	0	0	0	29.2	2	1	0	0	0	0
32.5	0	0	0	0	0	0	33.7	6	2	0	0	0	0
33.5	4	0	0	0	0	0	34.4	6	2	0	0	0	0
34.5	13	0	1	0	0	0	36	22	5	0	0	0	0
35.7	4	1	0	0	0	0	36.5	6	1	1	0	1	0
36.7	2	1	0	0	0	0	38.5	21	5	0	0	2	0
38.7	4	2	0	0	0	0	39.5	10	2	0	0	0	0
43.5	2	0	0	0	0	0	40	1	0	0	0	0	0
51.5	2	0	0	0	0	0	41	20	4	1	0	0	0
52.5	2	0	0	0	1	0	42	1	1	0	0	0	0
54.5	3	0	1	0	1	0	43.5	9	3	0	0	0	0
Total	74	6	7	1	5	0	Total	141	39	3	0	4	0
%NS		8.1		14.3		0			27.7		0		0

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Table XVIII: Null subjects (NS) in adult L2 German finite CPs

	Zita							Ana					
Mths	Emb	NS	Wh	NS	Y/N	NS	Mths	Emb	NS	Wh	NS	Y/N	NS
3	0	0	0	0	0	0	3	0	0	0	0	0	0
3.5	0	0	0	0	0	0	4	1	0	0	0	0	0
3.7	0	0	0	0	0	0	4.5	1	1	0	0	0	0
4	0	0	0	0	0	0	4.7	3	0	0	0	0	0
5.6	0	0	0	0	0	0	5.2	0	0	0	0	0	0
6.5	0	0	0	0	0	0	7.2	2	0	0	0	0	0
6.7	0	0	0	0	0	0	7.4	1	0	0	0	1	0
7.5	1	0	0	0	0	0	8.2	6	1	0	0	0	0
8	0	0	0	0	0	0	11	8	0	2	0	1	1
9	0	0	0	0	0	0	11.7	5	0	0	0	3	1
9.5	0	0	0	0	0	0	13	10	1	2	0	3	1
10	2	0	0	0	0	0	13.5	13	5	2	1	0	0
11	1	0	0	0	0	0	14.2	8	1	0	0	0	0
11.7	0	0	0	0	0	0	23	6	1	0	0	0	0
13.7	0	0	1	1	3	0	23.5	5	1	0	0	0	0
15	2	0	0	0	0	0	24	14	5	0	0	0	0
16.6	1	0	0	0	1	0	24.7	18	6	0	0	0	0
19	0	0	0	0	0	0	—	—	—	—	—	—	—
22	3	1	2	0	3	0	—	—	—	—	—	—	—
22.7	9	0	0	0	0	0	—	—	—	—	—	—	—
23.4	1	1	1	1	0	0	—	—	—	—	—	—	—
24.4	6	1	1	0	1	0	—	—	—	—	—	—	—
25.4	16	2	0	0	1	0	—	—	—	—	—	—	—
25.6	1	0	0	0	0	0	—	—	—	—	—	—	—
25.8	5	0	0	0	2	0	—	—	—	—	—	—	—
Total	48	5	5	2	11	0	Total	101	22	6	1	8	3
%NS		10.4		40		0			21.8		16.6		37.5

Table XIX: Negation in child L2 French root declaratives

Months	Kenny						Greg					
	+Fin	V-neg	neg-V	-Fin	V-neg	neg-V	+Fin	V-neg	neg-V	-Fin	V-neg	neg-V
0.3	0	0	0	1	0	1	—	—	—	—	—	—
0.5	0	0	0	0	0	0	—	—	—	—	—	—
1	0	0	0	0	0	0	—	—	—	—	—	—
2	0	0	0	0	0	0	—	—	—	—	—	—
3	1	1	0	1	0	1	—	—	—	—	—	—
4	2	0	2	0	0	0	—	—	—	—	—	—
5	2	2	0	3	0	3	10	10	0	2	0	2
7	12	11	1	2	0	2	—	—	—	—	—	—
8	5	5	0	3	0	3	—	—	—	—	—	—
9	1	1	0	1	0	1	—	—	—	—	—	—
9.5	10	10	0	1	0	1	4	4	0	0	0	0
10	7	7	0	2	0	2	8	7	1	1	0	1
11	5	5	0	2	0	2	1	1	0	1	0	1
14	13	12	1	0	0	0	22	21	1	1	0	1
15	11	11	0	2	0	2	50	50	0	1	0	1
18	21	21	0	0	0	0	25	25	0	0	0	0
20	11	11	0	0	0	0	32	32	0	0	0	0
25	30	30	0	0	0	0	64	64	0	2	0	2
27	23	23	0	0	0	0	56	56	0	0	0	0
29	26	26	0	0	0	0	34	34	0	0	0	0
To m. 18	90	86	4	18	0	18	120	118	2	8	0	8

Table XX: Negation in adult L2 French root declaratives

	Abdelmalek							Zahra					
Mths	+Fin	V-neg	*neg-V*	-Fin	V-neg	*neg-V*	Mths	+Fin	V-neg	*neg-V*	-Fin	V-neg	*neg-V*
14	0	0	0	0	0	0	12	0	0	0	0	0	0
15	1	1	0	1	0	1	14	2	2	0	0	0	0
16.7	1	1	0	1	0	1	15.5	3	3	0	0	0	0
17.7	5	4	1	9	0	9	17	0	0	0	0	0	0
18.7	3	2	1	0	0	0	18.5	5	5	0	0	0	0
20.5	3	2	1	1	0	1	20	1	1	0	1	0	1
21.5	2	2	0	3	0	3	21.7	0	0	0	0	0	0
24	3	3	0	1	0	1	23.2	0	0	0	0	0	0
25	7	3	4	2	0	2	23.7	1	1	0	0	0	0
25.7	5	5	0	1	0	1	24.5	2	2	0	0	0	0
27	2	2	0	1	1	0	25.5	1	1	0	0	0	0
27.7	0	0	0	0	0	0	26.7	6	6	0	0	0	0
30	1	1	0	1	1	0	27.7	0	0	0	0	0	0
30.7	10	10	0	0	0	0	28.2	2	2	0	0	0	0
31.7	2	2	0	2	0	2	29.2	6	6	0	0	0	0
32.5	1	1	0	0	0	0	33.7	4	4	0	1	1	0
33.5	7	7	0	0	0	0	34.4	6	6	0	3	3	0
34.5	13	12	1	2	1	1	36	14	14	0	1	1	0
35.7	6	6	0	1	0	1	36.5	14	14	0	1	1	0
36.7	0	0	0	0	0	0	38.5	21	21	0	0	0	0
38.7	7	7	0	0	0	0	39.5	12	12	0	0	0	0
43.5	2	2	0	0	0	0	40	0	0	0	0	0	0
51.5	6	6	0	0	0	0	41	20	20	0	0	0	0
52.5	3	3	0	1	1	0	42	1	1	0	0	0	0
54.5	6	6	0	1	0	1	43.5	8	8	0	0	0	0
Total	96	88	8	28	4	24	Total	129	129	0	7	6	1

Table XXI: Negation in adult L2 German root declaratives

| | Zita | | | | | | | Ana | | | | | |
Mths	+Fin	V-neg	neg-V	-Fin	V-neg	neg-V	Mths	+Fin	V-neg	neg-V	-Fin	V-neg	neg-V
3	1	0	1	0	0	0	3	0	0	0	0	0	0
3.5	0	0	0	0	0	0	4	3	3	0	1	0	1
3.7	4	4	0	0	0	0	4.5	6	6	0	1	0	1
4	0	0	0	1	1	0	4.7	5	5	0	0	0	0
5.6	1	1	0	2	2	0	5.2	3	3	0	0	0	0
6.5	5	5	0	2	1	1	7.2	5	5	0	0	0	0
6.7	0	0	0	3	3	0	7.4	7	7	0	3	2	1
7.5	2	1	1	0	0	0	8.2	3	3	0	0	0	0
8	0	0	0	0	0	0	11	8	6	2	0	0	0
9	2	2	0	0	0	0	11.7	5	5	0	3	2	1
9.5	1	1	0	3	1	2	13	2	2	0	0	0	0
10	3	3	0	1	0	1	13.5	19	18	1	2	2	0
11	2	2	0	1	0	1	14.2	8	8	0	0	0	0
11.7	5	2	3	4	1	3	23	5	5	0	0	0	0
13.7	1	1	0	2	1	1	23.5	3	3	0	0	0	0
15	6	6	0	2	0	2	24	9	9	0	0	0	0
16.6	1	1	0	1	0	1	24.7	6	6	0	0	0	0
19	0	0	0	0	0	0	—	—	—	—	—	—	—
22	7	6	1	1	1	0	—	—	—	—	—	—	—
22.7	9	8	1	1	0	1	—	—	—	—	—	—	—
23.4	3	3	0	0	0	0	—	—	—	—	—	—	—
24.4	6	6	0	1	0	1	—	—	—	—	—	—	—
25.4	16	16	0	2	1	1	—	—	—	—	—	—	—
25.6	2	2	0	0	0	0	—	—	—	—	—	—	—
25.8	8	8	0	0	0	0	—	—	—	—	—	—	—
Total	85	78	7	27	12	15	Total	97	94	3	10	6	4

Table XXII: Auxiliaries and modals (Aux) in child L2

| | L2 French | | | | | L2 German | | | | |
| | Kenny | | Greg | | | Concetta | | | Luigina | |
Mths	Aux	-Fin	Aux	-Fin	Mths	Aux	-Fin	Mths	Aux	-Fin
0.3	0	0	—	—	0.2	0	0	0.7	0	0
0.5	0	0	—	—	1	0	0	1.4	0	0
1	0	0	—	—	1.8	0	0	2.3	0	0
2	0	0	—	—	2.5	0	0	3	0	0
3	2	0	—	—	3.2	0	0	3.7	0	0
4	6	0	—	—	4	0	0	4.4	0	0
5	0	0	4	0	5	0	0	5.4	0	0
7	8	0	—	—	5.6	0	0	6	0	0
8	5	0	—	—	6.8	0	0	7	0	0
9	2	0	—	—	8.4	1	0	7.9	0	0
9.5	7	0	11	0	9.1	0	0	8.6	0	0
10	8	0	19	0	11	2	0	8.8	0	0
11	7	0	1	0	12.4	1	0	9.5	0	0
14	11	0	27	0	13.5	11	0	11.4	0	0
15	15	0	92	0	14.5	11	0	12.8	0	0
18	28	0	23	0	—	—	—	14	0	0
20	55	0	43	0	—	—	—	14.9	1	0
25	59	0	119	0	—	—	—	19.8	5	0
27	32	0	73	0	—	—	—	—	—	—
29	33	0	85	0	—	—	—	—	—	—
to m.18	99	0	177	0	Total	26	0	Total	6	0
%-Fin		0		0	%-Fin		0	%-Fin		0

Table XXIII: Auxiliaries and modals (Aux) in adult L2

| | L2 French | | | | | | L2 German | | | | |
| Abdelmalek | | | Zahra | | | Zita | | | Ana | | |
Mths	Aux	-Fin	Mths	Aux	-Fin	Mths	Aux	-Fin	Mths	Aux	-Fin
14	1	0	12	0	0	3	0	0	3	0	0
15	6	0	14	2	0	3.5	0	0	4	6	2
16.7	8	0	15.5	0	0	3.7	0	0	4.5	1	0
17.7	31	0	17	1	0	4	0	0	4.7	1	0
18.7	4	0	18.5	3	0	5.6	0	0	5.2	1	0
20.5	1	0	20	4	0	6.5	4	1	7.2	1	0
21.5	6	0	21.7	4	0	6.7	0	0	7.4	9	0
24	7	0	23.2	0	0	7.5	0	0	8.2	2	0
25	7	0	23.7	5	0	8	0	0	11	1	0
25.7	6	0	24.5	10	0	9	0	0	11.7	2	0
27	2	0	25.5	1	0	9.5	1	1	13	3	0
27.7	1	0	26.7	8	0	10	1	0	13.5	1	0
30	9	0	27.7	1	0	11	0	0	14.2	10	0
30.7	8	0	28.2	3	0	11.7	0	0	23	7	0
31.7	4	0	29.2	4	0	13.7	2	0	23.5	5	0
32.5	1	0	33.7	11	0	15	4	0	24	10	0
33.5	5	0	34.4	8	0	16.6	0	0	24.7	2	0
34.5	19	0	36	10	0	19	2	0	—	—	—
35.7	13	0	36.5	5	0	22	19	8	—	—	—
36.7	0	0	38.5	10	0	22.7	3	0	—	—	—
38.7	15	0	39.5	2	0	23.4	0	0	—	—	—
43.5	2	0	40	2	0	24.4	4	0	—	—	—
51.5	16	0	41	4	0	25.4	14	2	—	—	—
52.5	8	0	42	0	0	25.6	4	0	—	—	—
54.5	8	0	43.5	4	0	25.8	10	0	—	—	—
Total	188	0	Total	102	0	Total	68	12	Total	62	2
%-Fin		0	%-Fin		0	%-Fin		17.6	%-Fin		3.2

Table XXIV: Clitic subjects in child L2 French root declaratives

Months	Kenny						Greg					
	Finite	Clitic	%Cl	RIs	Clitic	%cl	Finite	Clitic	%cl	RIs	Clitic	%Cl
0.3	0	0	0	1	0	0	—	—	—	—	—	—
0.5	1	0	0	0	0	0	—	—	—	—	—	—
1	5	1	20	0	0	0	—	—	—	—	—	—
2	4	1	25	1	0	0	—	—	—	—	—	—
3	6	2	33.3	4	1	25	—	—	—	—	—	—
4	18	11	61.1	0	0	0	—	—	—	—	—	—
5	17	4	23.5	5	0	0	36	22	61.1	7	3	42.9
7	37	7	18.9	6	1	16.7	—	—	—	—	—	—
8	25	6	24	7	0	0	—	—	—	—	—	—
9	14	6	42.9	5	0	0	—	—	—	—	—	—
9.5	23	5	21.7	8	0	0	36	24	66.7	3	0	0
10	25	4	16	5	0	0	56	43	76.8	13	0	0
11	33	6	18.2	6	0	0	22	7	31.8	2	0	0
14	57	16	28.1	10	0	0	121	92	76	13	4	30.8
15	63	23	36.5	11	1	9.1	196	138	70.4	13	5	38.5
18	100	67	67	7	0	0	124	85	68.5	7	1	14.3
20	109	98	89.9	1	0	0	154	128	83.1	2	0	0
25	133	115	86.5	1	0	0	309	265	85.8	1	0	0
27	136	124	91.2	1	1	100	218	196	89.9	0	0	0
29	146	129	88.4	0	0	0	226	192	85	1	0	0
To m. 18	428	159	37.1	76	3	3.9	591	411	69.5	58	13	22.4

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Table XXV: Clitic subjects in adult L2 French root declaratives

	Abdelmalek							Zahra					
Mths	Finite	Clitic	%Cl	RIs	Clitic	%Cl	Mths	Finite	Clitic	%Cl	RIs	Clitic	%Cl
14	4	2	50	0	0	0	12	2	1	50	0	0	0
15	4	3	75	1	0	0	14	5	3	60	11	6	54.5
16.7	10	7	70	1	0	0	15.5	3	1	33.3	1	0	0
17.7	56	46	82.1	39	5	12.8	17	10	6	60	2	2	100
18.7	10	7	70	8	2	25	18.5	23	16	69.6	6	4	66.7
20.5	7	2	28.6	6	0	0	20	8	4	50	4	0	0
21.5	20	7	35	17	9	52.9	21.7	12	7	58.3	5	3	60
24	22	14	63.6	14	9	64.3	23.2	0	0	0	4	3	75
25	43	29	67.4	36	24	66.7	23.7	12	9	75	4	1	25
25.7	27	22	81.5	16	14	87.5	24.5	26	14	53.8	17	7	41.2
27	39	34	87.2	12	12	100	25.5	15	9	60	7	2	28.6
27.7	14	13	92.9	2	2	100	26.7	52	28	53.8	11	2	18.2
30	41	31	75.6	19	11	57.9	27.7	19	13	68.4	9	7	77.8
30.7	43	37	86	12	11	91.7	28.2	9	3	33.3	2	0	0
31.7	16	12	75	13	10	76.9	29.2	29	19	65.5	11	3	27.3
32.5	6	5	83.3	1	1	100	33.7	27	10	37	11	6	54.5
33.5	24	23	95.8	8	6	75	34.4	42	31	73.8	17	10	58.8
34.5	93	84	90.3	33	28	84.8	36	69	45	65.2	22	9	40.9
35.7	32	28	87.5	9	5	55.6	36.5	43	36	83.7	20	11	55
36.7	7	7	100	2	2	100	38.5	65	51	78.5	16	6	37.5
38.7	47	34	72.3	8	6	75	39.5	47	34	72.3	13	8	61.5
43.5	11	11	100	2	2	100	40	5	3	60	5	2	40
51.5	31	31	100	2	2	100	41	52	34	65.4	28	22	78.6
52.5	15	14	93.3	6	4	66.7	42	3	1	33.3	2	0	0
54.5	31	29	93.5	5	3	60	43.5	22	14	63.6	8	6	75
Total	653	532	81.5	272	168	61.8	Total	600	392	65.3	236	120	50.8

Table XXVI: DP and strong pronoun (Str) subjects in child L2 French root declaratives

Months	Kenny						Greg					
	Finite	DP	Str	RIs	DP	Str	Finite	DP	Str	RIs	DP	Str
0.3	0	0	0	1	0	0	—	—	—	—	—	—
0.5	1	0	0	0	0	0	—	—	—	—	—	—
1	5	3	1	0	0	0	—	—	—	—	—	—
2	4	1	2	1	1	0	—	—	—	—	—	—
3	6	3	0	4	0	1	—	—	—	—	—	—
4	18	6	0	0	0	0	—	—	—	—	—	—
5	17	8	2	5	0	1	36	7	5	7	0	1
7	37	16	3	6	0	4	—	—	—	—	—	—
8	25	9	3	7	2	5	—	—	—	—	—	—
9	14	2	2	5	0	5	—	—	—	—	—	—
9.5	23	7	2	8	1	4	36	8	0	3	0	1
10	25	8	6	5	0	5	56	6	5	13	0	6
11	33	12	6	6	0	4	22	2	8	2	0	1
14	57	8	21	10	0	7	121	19	6	13	0	4
15	63	10	16	11	1	7	196	35	4	13	0	1
18	100	22	1	7	1	2	124	22	4	7	0	1
20	109	3	1	1	1	0	154	22	1	2	0	1
25	133	16	0	1	0	0	309	37	2	1	0	0
27	136	9	0	1	0	0	218	17	0	0	0	0
29	146	9	0	0	0	0	226	26	2	1	1	0
To m. 18	428	115	66	76	6	45	591	99	32	58	0	15
%DP/Str		26.9	15.4		7.8	59.2		16.7	5		0	25.4

Table XXVII: DP, pronoun (Pro) and Pro-determiner (Det) subjects in child L2 German root declaratives

	Concetta									Luigina							
Mths	Fin	DP	Pro	Det	RIs	DP	Pro	Det	Mths	Fin	DP	Pro	Det	RIs	DP	Pro	Det
0.2	0	0	0	0	0	0	0	0	0.7	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	1.4	0	0	0	0	0	0	0	0
1.8	0	0	0	0	0	0	0	0	2.3	0	0	0	0	0	0	0	0
2.5	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0
3.2	0	0	0	0	0	0	0	0	3.7	1	0	1	0	0	0	0	0
4	0	0	0	0	0	0	0	0	4.4	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	5.4	4	1	0	0	0	0	0	0
5.6	6	6	0	0	0	0	0	0	6	1	0	0	0	1	1	0	0
6.8	6	6	0	0	0	0	0	0	7	5	2	1	1	0	0	0	0
8.4	6	4	0	0	1	0	0	0	7.9	2	2	0	0	0	0	0	0
9.1	10	4	3	2	0	0	0	0	8.6	0	0	0	0	0	0	0	0
11	26	11	8	0	3	2	0	0	8.8	1	0	0	0	0	0	0	0
12.4	24	12	5	2	10	2	3	0	9.5	0	0	0	0	3	3	0	0
13.5	46	8	15	17	8	3	0	2	11.4	0	0	0	0	0	0	0	0
14.5	26	5	14	5	1	0	0	0	12.8	2	0	0	0	1	0	1	0
—	—	—	—	—	—	—	—	—	14	4	0	2	1	0	0	0	0
—	—	—	—	—	—	—	—	—	14.9	10	5	2	2	1	0	1	0
—	—	—	—	—	—	—	—	—	19.8	11	2	5	2	2	0	1	0
Total	150	56	45	26	23	7	3	2	Total	42	12	11	6	8	4	3	0
%sbj		37.3	30	17.3		30.4	13	8.7	%sbj		28.6	26.2	14.3		50	37.5	0

Table XXVIII: DP and strong pronoun (Str) subjects in adult L2 French root declaratives

	Abdelmalek							Zahra					
Mths	Finite	DP	Str	RIs	DP	Str		Mths	Finite	DP	Str	RIs	DP	Str
14	4	1	0	0	0	0		12	2	0	0	0	0	0
15	4	0	0	1	1	0		14	5	1	0	11	0	0
16.7	10	2	0	1	0	0		15.5	3	0	1	1	0	0
17.7	56	3	4	39	1	8		17	10	1	0	2	0	0
18.7	10	0	1	8	0	1		18.5	23	3	1	6	2	0
20.5	7	2	0	6	0	1		20	8	1	0	4	0	1
21.5	20	7	3	17	1	2		21.7	12	0	2	5	1	1
24	22	3	0	14	0	1		23.2	0	0	0	4	0	1
25	43	1	1	36	4	2		23.7	12	3	0	4	2	1
25.7	27	5	0	16	0	1		24.5	26	7	0	17	9	1
27	39	3	0	12	0	0		25.5	15	3	0	7	0	1
27.7	14	0	0	2	0	0		26.7	52	10	2	11	2	3
30	41	6	0	19	5	0		27.7	19	5	0	9	2	0
30.7	43	2	1	12	0	0		28.2	9	1	0	2	0	0
31.7	16	3	0	13	2	0		29.2	29	4	0	11	1	2
32.5	6	0	0	1	0	0		33.7	27	5	2	11	0	2
33.5	24	1	0	8	0	1		34.4	42	5	1	17	1	1
34.5	93	3	1	33	1	2		36	69	4	6	22	2	6
35.7	32	1	0	9	0	0		36.5	43	0	0	20	3	0
36.7	7	0	0	2	0	0		38.5	65	7	2	16	3	2
38.7	47	8	2	8	0	0		39.5	47	4	3	13	2	0
43.5	11	0	0	2	0	0		40	5	0	1	5	0	0
51.5	31	0	0	2	0	0		41	52	4	4	28	1	1
52.5	15	1	0	6	0	0		42	3	0	1	2	0	0
54.5	31	1	0	5	0	0		43.5	22	3	0	8	1	0
Total	653	53	16	272	15	19		Total	600	71	26	236	32	23
%sbj		8.1	2.4		5.5	7				11.8	4.3		13.5	9.8

Table XXIX: DP, pronoun (Pro) and Pro-determiner (Det) subjects in adult L2 German root declaratives

	Zita							Ana							
Mths	Fin	DP	Pro	Det	RIs	DP	Pro	Det	Mths	Fin	DP	Pro	Det	RIs	DP	Pro	Det

Mths	Fin	DP	Pro	Det	RIs	DP	Pro	Det	Mths	Fin	DP	Pro	Det	RIs	DP	Pro	Det
3	3	2	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
3.5	1	1	0	0	0	0	0	0	4	35	18	15	0	9	5	4	0
3.7	10	6	3	0	2	0	2	0	4.5	40	13	22	0	4	0	4	0
4	3	1	0	0	2	2	0	0	4.7	11	1	8	0	0	0	0	0
5.6	2	1	1	0	5	2	2	0	5.2	11	0	8	0	2	0	1	0
6.5	14	6	7	0	7	2	4	0	7.2	53	18	16	0	6	1	2	0
6.7	3	0	3	0	9	2	7	0	7.4	29	8	7	0	8	2	3	0
7.5	11	6	2	1	5	0	2	0	8.2	43	10	32	1	9	1	3	0
8	10	2	4	1	2	1	1	0	11	70	25	11	0	6	2	2	0
9	11	6	2	1	3	2	0	0	11.7	68	9	33	1	11	2	5	0
9.5	4	1	1	0	9	1	7	0	13	39	5	10	1	0	0	0	0
10	17	7	3	0	8	3	2	0	13.5	90	25	26	1	8	4	1	0
11	16	3	9	0	7	1	4	0	14.2	47	10	27	0	1	0	0	0
11.7	16	7	5	0	20	7	9	0	23	41	17	8	0	1	1	0	0
13.7	43	10	8	3	8	5	2	0	23.5	9	1	6	0	1	1	0	0
15	44	14	20	1	19	2	17	0	24	63	9	30	0	5	3	1	0
16.6	5	2	1	0	3	1	1	0	24.7	39	14	4	0	3	1	1	0
19	7	4	3	0	0	0	0	0	—	—	—	—	—	—	—	—	—
22	47	19	18	3	23	2	17	0	—	—	—	—	—	—	—	—	—
22.7	79	37	18	2	7	3	3	0	—	—	—	—	—	—	—	—	—
23.4	22	5	3	4	3	2	1	0	—	—	—	—	—	—	—	—	—
24.4	75	20	32	1	16	5	8	0	—	—	—	—	—	—	—	—	—
25.4	77	19	30	1	28	11	14	0	—	—	—	—	—	—	—	—	—
25.6	26	8	12	1	5	0	2	0	—	—	—	—	—	—	—	—	—
25.8	41	9	23	2	0	0	0	0	—	—	—	—	—	—	—	—	—
Total	587	196	208	21	191	54	105	0	Total	688	183	263	4	74	23	27	0
%sbj		3.4	34.4	3.6		28.3	55	0	%sbj		26.6	38.2	<1		31.1	36.5	0

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