Transfer and access to universal grammar in adult second language acquisition
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Chapter 1

Generative approaches to syntactic transfer in second language acquisition

1.1 Introduction

If an Italian learner of English spontaneously produces an utterance like ‘after come back the fire brigade’ it is immediately apparent that this is not a normal English sentence. Since native speakers of English do not produce such sentences, it is unlikely that this learner is simply reproducing an English sentence he has heard. More likely, the learner’s anomalous string of English words reflects his idiosyncratic mental representation, or grammar, of English. The main issue of this study is how much of the non-native grammar is determined by the learner’s native language. This issue involves consideration of several interrelated questions about native language influence. Do differences and similarities between the native language and the second language affect the role of the native language? Is the role of the native language limited to surface constructions, or do the abstract knowledge representations of the native grammar carry over into the non-native grammar? Do learners adopt the native language as their initial theory of the second language or does transfer take place at later stages? Is native language influence selective in that some parts transfer, while others do not? How long do transfer effects last? The role of the native language is one of the most extensively discussed theoretical issues of second language acquisition research. Even though there is consensus that the native language influences the non-native language in ways that extend beyond borrowing or falling back on the native language, there is little agreement about what and how much of the native language transfers into the non-native language. The aim of this study is to continue this research tradition by contributing to the debate about the nature and extent of transfer of the native language into the syntax of adult learners of a non-native (or second) language.

Chapter 1 broadly reviews different proposals on transfer by second language researchers working in a generative framework and is generally restricted to the question of transfer within the morphosyntactic domain. Before discussing more recent generative perspectives on syntactic transfer, a few

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1 This particular utterance comes from the European Science Foundation (ESF) corpus (as do the other IL data used in the study that is described in chapter 4); the utterances was produced by an adult Italian learner of English known as Andrea.

2 Transfer is a somewhat controversial term (Ellis 1994, 301; Sharwood Smith and Kellerman 1986), which I will nevertheless use throughout this text.
earlier (non-generative) conceptions of transfer deserve to be mentioned to show how research on this topic has developed over time (section 1.2). Generative second language acquisition research is by no means limited to the issue of transfer, since transfer alone cannot provide a complete explanation for the developmental routes taken by non-native language learners. It is the very nature of generative second language acquisition research to centre upon the role of Universal Grammar in second language learning. Generative second language researchers always relate transfer to the extent to which Universal Grammar constrains second language acquisition. Section 1.3 discusses six partially overlapping positions on the relation between transfer and Universal Grammar in second language acquisition. Section 1.4 tentatively evaluates the different positions and eliminates positions that claim transfer plays no role in second language acquisition (No Transfer). Then, the four research questions that aim to arbitrate between the remaining positions (Partial or Full Transfer and No or Full Access) are presented. Section 1.4. concludes with a brief introduction to the linguistic area that serves as the testing ground for the research questions: the cluster of properties associated with the Null Subject Parameter.

1.2 A historical perspective on the notion of transfer

The behaviourist Contrastive Analysis approach to second language acquisition in Lado (1957), particularly popular in the 1960s before generative approaches to second language acquisition gathered momentum, attributed an almost exclusive role to transfer. Linguists embracing behaviourist views considered language learning as the training of habits. Being grounded in behaviourism, Contrastive Analysis was dedicated to a detailed comparison of the similarities and differences between the first language and the target language, assuming that second language acquisition is easy where the target language is similar to the first language, but difficult where the two are dissimilar. In the case of similar patterns, so-called ‘positive transfer’ was thought to facilitate second language acquisition, whereas different patterns were predicted to cause ‘negative transfer’ errors, as a result of interference of wrong habits from the first language. In this way, Contrastive Analysis researchers attempted to predict which errors could be expected from second language learners of different language backgrounds. However, the simplistic and restricted Contrastive Analysis Hypothesis was refuted by empirical findings. The findings showed, on the one hand, that many of the predicted errors did not occur and, on the other hand, that many of the occurring errors could not be explained on the basis of L1 transfer (Hatch, 1978). Clearly, the learner’s native language is not the exclusive factor in second language acquisition.

The notion of transfer as a crucial theoretical construct of second language acquisition theories temporarily lost ground altogether as a result of the
The demise of the behaviourist view of language acquisition: transfer was intimately associated with Contrastive Analysis and hence with Behaviourism. Habit-formation theories of language acquisition had become untenable after Chomsky’s (1959) acquisition arguments in his critical review of Skinner’s (1957) *Verbal Behaviour*. Consequently, the behaviourist perspective on language acquisition was supplanted by a mentalist perspective on language acquisition. The central role of transfer in L2A theories was replaced by the view that L2 learners followed similar developmental paths, regardless of their L1.

The best-known studies that played down the role of the L1 by emphasizing similar acquisition orders for L2ers with different L1s were based on morpheme-order. The highly influential study by Dulay and Burt (1974) found similar accuracy orders of English grammatical morphemes for both Spanish and Chinese child L2ers of English. These results were confirmed by the results of replication studies investigating adult L2ers of English from a wider variety of language-backgrounds (Bailey, Madden and Krashen 1974). In the interpretation of the results, it was stressed that these L2A studies resembled L1A studies that had found similar acquisition orders of grammatical morphemes in children acquiring English as their native language (Brown 1973, De Villiers and De Villiers 1973). This was taken as compelling evidence for the position that L2 development is similar to L1 development. Not surprisingly, this unitary theory of L1A and L2A left no room for L1 transfer effects in L2A.

The morpheme-order studies have been much criticised on both conceptual and methodological grounds (for overview of this criticism cf. Ellis (1994); Gass and Selinker (1994)). For example, the description of developmental sequences in itself offered no *explanation* for what were thought of as universal orders. As it turned out, the pivotal role of learner-internal “universal cognitive mechanisms” (Dulay and Burt, 1974: 52) was challenged by the role of external factors like input: accuracy orders were found to be largely determined by frequency effects of morphemes in the input (Larsen-Freeman 1976; Snow et al. 1980). Moreover, cross-sectional morpheme-order studies like the one by Dulay and Burt (1974) have also been criticised for seriously underestimating the role of L1 transfer. Their morpheme orders did not match those of several longitudinal studies that followed the individual development of L2 learners (Hakuta 1974; Rosansky 1976; Schmidt 1983; Wode et al 1978). The latter studies found that L2ers with similar language backgrounds followed similar developmental orders, suggesting that the L1 does affect L2A.

The behaviourist Contrastive Analysis Hypothesis and the universalist position advocated by Dulay and Burt represent opposite extremes in terms of the issue of L1 transfer. Obviously their respective positions that the L1 exclusively affects L2A and that the L1 has no effect on L2A are both too strong. Since the late 1970’s the notions of L1 transfer and linguistic universals have been reconciled (e.g. Andersen 1983; Gass 1979, 1984; Gass and Selinker 1983a; Schumann 1979; Sharwood Smith 1979; Zobl 1980). As generative grammar developed, proposals for universal principles became more
sophisticated. Especially the introduction of Chomsky’s (1981a) Principles and Parameters approach to Universal Grammar (UG) inspired many L2 researchers to investigate how UG works together with L1 transfer. As a matter of fact, it has become difficult to distinguish between the question of transfer and the question of UG in current generative L2A research.

Universal Grammar is thought of as an innate language system of abstract constraints that makes first language acquisition possible by restricting the class of possible natural human grammars. UG consists of principles and parameters: the principles of UG are invariant constraints on all human languages, whereas the parameters permit a limited degree of variation between languages. The principles and parameters of UG are assumed to provide the child with (subconscious) innate knowledge of what is impossible in human language in general. This built-in knowledge greatly reduces the range of logically possible hypotheses a child is to consider, when constructing a grammar on the basis of input. UG is motivated by the ‘poverty of the stimulus’ or the ‘logical problem of language acquisition’: the input to which children are exposed is a necessary, but inadequate source of information for language acquisition, as it underdetermines the complex and abstract knowledge of the final grammar which children uniformly achieve with ease and success, despite their cognitive immaturity. One way in which the input underdetermines the final grammar is that it does not provide information about ungrammaticality. Nevertheless, adults know which sentences are ungrammatical in their native language. Generative linguists assume that, without the constraints imposed by UG, L1A would be ridden with false generalizations and hypotheses about the target language from which the child would not be able to retract (so-called ‘wild grammars’, cf. Goodluck 1986) and, in many respects, L1A would be simply impossible.

Universal Grammar thus serves as a (partial) model for L1 acquisition. However, it is neutral about L2 acquisition. Since the early 1980s, it has been the subject of extensive debate and research whether UG helps L2ers overcome input deficiencies by constraining their hypothesis space. Do L2ers produce grammars that violate well-established universal principles? Do L2ers have knowledge of abstract and complex grammatical properties beyond the input, or beyond what they already know from their L1? Are L2ers capable of converging on the target language grammar? Some of the -often contradictory- empirical findings will be discussed in section (1.3) below. There are some obvious differences between L1A and L2A, such as the cognitive maturity of adult L2ers, their knowledge of the first language, the fact that they often receive formal instruction and corrections on the target language, and their variable success at acquiring the target language.3 Some theorists have concluded that L2A is

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3 This study is concerned with adult second language acquisition, rather than child second language acquisition.
qualitatively different from L1A and therefore that L2A is not UG-constrained.\textsuperscript{4} Others, however, claim that L2A is only quantitatively different and that UG continues to function in L2A as it does in L1A.

Some of the early generativist L2 studies that were concerned with the relation between L1 transfer and UG, tried to predict when transfer would or would not occur. For instance, Liceras (1986) tested the hypothesis that L1 transfer is affected by UG-defined markedness.\textsuperscript{5} She investigated whether transfer of English into non-native Spanish was limited to ‘unmarked’ properties (e.g. pied piping) of the L1, as she expected, or also involved transfer of ‘marked’ properties (e.g. preposition stranding). Contrary to her predictions, she found that both unmarked and marked properties of the L1 transferred. White (1989b) was interested in the role of the L1 transfer in relation with the Subset Principle.\textsuperscript{6} She investigated a binary UG parameter that accounts for cross-linguistic differences in adverb placement.\textsuperscript{7} With respect to this parameter, English constitutes the subset grammar, while French is the superset grammar. White argued that if native French learners of English observe the Subset Principle, they should begin with the English subset value, whereas transfer of the French superset value implies a failure of the Subset Principle. Unlike the native English controls, the French learners of White’s study accepted ungrammatical English adverb placement, the French equivalents of which would have been grammatical. White concluded that the L1 grammar transfers in violation of the Subset Principle, and therefore that this learnability principle does not operate in L2A (see Zobl 1988 for similar conclusions).

\textsuperscript{4} Bley-Vroman (1989) lists nine differences between L1A and adult language learning leading to the formulation of the Fundamental Difference Hypothesis.

\textsuperscript{5} Many researchers have argued that markedness is an important theoretical construct for explaining L2A, but there are many different definitions of markedness (cf. Kellerman 1979; Gass 1979; Hyltenstam 1984). Markedness as defined in generative grammar assumes a distinction between unmarked and marked ‘core’ rules which are equivalent to the innate principles and parameters of UG, and ‘peripheral rules’, which are not UG-defined and are marked by definition. See chapter 2 for a brief discussion of additional L2A studies concerned with markedness and transfer (Liceras 1989; Phinney 1987).

\textsuperscript{6} The Subset Principle (Berwick 1985; Manzini and Wexler 1987; Wexler and Manzini 1987) was formulated to explain why children are succesful in acquiring their L1 on the basis of positive evidence only. Assuming that a binary parameter has one parameter value that is responsible for a certain set of sentences, and another value that generates the same set of sentences, but is also responsible for an additional set of sentences, the latter value represents the superset value, and the former the subset. The Subset Principle requires the learner to begin with the subset value generating the most restricted grammar. This default value can later be adapted easily to the superset value if this is warranted by positive input. Therefore, the Subset Principle guarantees that learners do not wrongly assume a marked or superset grammar from which they cannot retract on the basis of positive evidence.

\textsuperscript{7} The parameter White (1989b) investigated is related to the Adjacency Condition on Case Assignment (Chomsky 1981b).
1.3 The role of the first language and Universal Grammar in second language acquisition

Since the mid-1990s, UG-based L2 research has paid increasing attention to the L2 initial state. One of the main questions is whether L2ers adopt all or parts of the L1 grammar as their initial theory of the target language. The focus on transfer at the starting point of L2A distinguishes theorising from earlier work on transfer. While earlier proposals differed on the question of when transfer occurs (e.g. Flynn 1984), there now seems to be consensus that transfer relates in particular to the L2 initial state, although its effects may last for a while (if it occurs at all).8 Despite reasonable agreement about the timing of transfer, current positions are divided about the extent to which transfer defines the L2 initial state.9

The recent interest in the make-up of the L2 initial state is caused to some extent by the division in proposals about the initial state in first language acquisition. Although all generative acquisition researchers share the fundamental assumption that L1A is UG-constrained, they propose different explanations of the developmental route child L1ers take, crucially depending on what they attribute to the L1 initial state. To understand the ways in which proposals about the L1 initial state affect the accounts of L2A, we need to consider the basic tenets of these proposals briefly.

For a generative language acquisition researcher, the most interesting properties of grammar are the parameterised principles of UG, since children must find out what the parameter values are of the language they are learning. Therefore, a statement about what parameters comprise has far-reaching implications for acquisition research. In current linguistic theory, parameters are crucially related to functional categories, that is, categories associated with morpho-syntactic features like tense, agreement, case, etc. (cf. Borer 1984; Fukui and Speas 1986; Baker 1988; Chomsky 1989; Ouhalla 1988; Pollock 1989).10 Consequently, the debate

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8 Mazurkewich (1984) and White (1985, 1986) were among the first generativist L2A researchers to assume that L2ers start out with their L1 grammar.

9 Generative L2 research is by no means limited to the issue of transfer, since transfer alone cannot provide a complete explanation for the developmental routes L2 learners take after the L2 initial state. The very nature of UG-based L2 research is to centre upon the role of UG in L2 development. Therefore, to explain what happens during the L2 initial state and beyond, generative L2 researchers always use the notion of transfer in conjunction with theorising about the extent to which UG constrains L2 development.

10 Chomsky, 1989, 44: "If substantive elements (verbs, nouns, etc.) are drawn from an invariant universal vocabulary, then only functional elements will be parameterized".
revolves around the question whether L1 initial state grammars contain the full repertoire of functional categories.

According to researchers who subscribe to the Strong Continuity Hypothesis, early child grammars and mature native grammars are minimally different (e.g. Hyams 1983; Pinker 1984; Weissenborn 1990; Boser et al 1992; Hyams 1992; Poeppel and Wexler 1993). Under this hypothesis children begin with complete phrase structures, including all functional categories. Children acquire the lexical elements and the related language-specific properties that are subject to variation. At the other extreme of the continuum of proposals about the L1 initial state is the Weak Continuity Hypothesis. It claims that early child grammars contain just thematic-lexical categories, and the functional projections are initially absent. (Radford 1986, 1990; Platzack 1990; Guilfoyle and Noonan 1992). Functional projections are assumed either to mature gradually following a genetically predetermined programme (‘maturation’, e.g. Borer and Wexler 1987; Cinque 1988) or to emerge step by step on the basis of input (e.g., Clahsen et al. 1994). However, some (e.g., Radford 1992) argue that all functional projections come on line simultaneously, once the child reaches the “functional stage”. One of the intermediate positions on the L1 initial state entails the early presence of functional projections which are incompletely, or differently specified in early child grammars as opposed to mature grammars (e.g. Clahsen and Penke 1992; Meisel and Müller 1992; de Haan and Frijns 1992).

These different proposals about the L1 initial state are relevant for L2A in two ways. Firstly, as White (2000, 132) points out, the implications of these proposals for L2A relate indirectly to how much of UG they assume to be given at the early stages of L2A. They may hint at what happens to functional categories and associated features that have not been activated at any point during the acquisition of a particular L1. For instance, under some versions of Weak Continuity, functional categories are absent until they are triggered by language-specific input or emerge maturationally. So some parts of UG never emerge if the particular L1 does not need them. By the time unused properties are required for learning a non-primary language in adulthood, they may be beyond activating. Even assuming a Strong Continuity approach, the full range of UG options thought to be available at the onset of L1A may shrivel to the small subset of the L1 instantiations (leaving only those that are needed to account for the L1 grammar). It is also possible that the unused properties of UG do not wither over the course of time, but remain candidates for triggering in L2A. Solving this problem of UG ‘accessibility’ in adult L2A features high on the research agenda. Secondly, as Schwartz (1999, 226) puts it, “L2 researchers need to hypothesize about the starting point of non-native grammatical knowledge, because it is crucial for figuring out the structure of subsequent stages and hence it is crucial for finding explanations for development”.

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11 This tripartite presentation of the different proposals is a gross oversimplification, since there are many different versions of these positions.
L2 theorists have adopted the gist of a particular account for the L1 initial state, and attempt to make parallel cases for the L2 initial state.

Six partially overlapping positions on the L2 initial state differ from each other with respect to the roles they attribute to L1 transfer and UG. I will review each of these positions, adapting White's (2000) extensions of the terms used by Schwartz and Sprouse (1996) to refer to them: each position is named according to its particular combination of the extent of transfer (No Transfer, Partial Transfer, Full Transfer) and the extent to which L2A is constrained by UG (No Access, Full Access). Combining these two factors results in the following six positions: No Transfer/No Access, No Transfer/Full Access, Partial Transfer/No Access, Partial Transfer/Full Access, Full Transfer/No Access, Full Transfer/Full Access.

No Transfer/No Access
The No Transfer/No Access discards UG as a factor in L2A altogether. Its proponents assume that UG is not involved at any stage of L2A, either directly or indirectly via the L1 instantiations. This is not to say that they assume that UG does not constrain L1A. Instead, they claim that L1A is fundamentally different from L2A, in that L1A is guided by UG, whereas L2A proceeds on the basis of general problem-solving skills. Bley-Vroman (1989, 1990) is mistaken to be advocating this position by some (e.g. by Epstein et al. 1996) because of his Fundamental Difference Hypothesis. However, Bley-Vroman takes a somewhat

12 The current focus on the L2 initial state is related to the idea that L2 grammars should be considered in their own right, instead of focussing on whether they match or mismatch the TL grammar (cf. Bley-Vroman’s comparative fallacy (1983)). Given that we don’t know what the L2 final state looks like and must avoid the comparative fallacy of imposing target structures on the learner data, defining the L2 initial state can serve as a starting point for tracing subsequent IL development.

13 Unlike White (2000), I do not use the label Partial Access for any of the different positions. In White’s overview, Partial Access means that some or all UG principles and parameters as instantiated in the L1 constrain L2A, while the unused properties of UG cannot be activated (so, no parameter resetting, for instance). In this sense, Partial Access can be identified with Partial Transfer or Full Transfer, which confuses the notion of transfer and the notion of UG Access. In order to distinguish direct UG influence from L1 influence, I use the labels No Access and Full Access: No Access means no direct influence from previously unused properties of UG, while Full Access means Access to both used and unused properties of UG.

14 This terminology is used to make clear the differences and similarities between the different positions, but much of the work relating to these positions is actually known under a different name: for instance, Vainikka and Young-Scholten term their (1994, 1996) work ‘Minimal Trees’, instead of Partial Transfer/Full Access, and Eubank’s (1994a, 1994b, 1996) work which takes a slightly different Partial Access/Full Access approach is better known as ‘Valueless Features’.
different view, in assuming that UG does have a weak effect on L2A via knowledge of the L1. True advocates of No Transfer/No Access are Clahsen and Muysken (1986) and, more recently, Meisel (1997).

On the basis of a comparison between the word orders of child learners of German as an L1 and adult Romance learners of German as an L2, Clahsen and Muysken (1986) argue that UG does not constrain L2A, but that L2ers construct unnatural grammars using general learning strategies instead. Unlike child L1 learners of German, who manifest early (unconscious) knowledge of the fact that German is an SOV language, “adult L2 learners of German make use of SVO orders, irrespective of their language background, even in those cases in which SOV is suggested by the target and the source language”, according to Clahsen and Muysken (110). They interpret the differences in developmental sequences between L1A and L2A as evidence against transfer and against the operation of UG.

Both conclusions have been challenged by other L2 studies. Several studies on L2A of the OV languages Dutch (e.g. Jansen, Lalleman and Muysken 1981; Van der Craats 1994) and German (e.g. Meisel, Clahsen and Pienemann 1981; Vainikka and Young-Scholten 1994, 1996) have found that native speakers of OV languages, such as Turkish and Korean, do start out with OV orders in L2 Dutch and L2 German; by contrast, native speakers of VO languages like Moroccan Arabic, Italian and Spanish) start out with VO orders when learning Dutch or German. These results demonstrate that L2ers from language backgrounds that are different with respect verb-complement orders accordingly use different word orders during the early stages of L2A, disconfirming Clahsen and Muysken’s (1986) claims that transfer does not occur. Moreover, duPlessis, Solin, Travis and White (1987), and later Schwartz and Tomaselli (1990), and Tomasselli and Schwartz (1990) reanalysed the word orders of the Romance L2 learners of German on which Clahsen and Muysken had based their conclusions. duPlessis et al. and Schwartz and Tomaselli came up with analyses of the data that followed logically from transfer of the Romance grammar and were perfectly compatible with (independently motivated) UG constraints. Tomasselli and Schwartz (1990) remark that L2 learner language and even the language of native speakers can be analysed in terms of unnatural, ad hoc rules, but this does not prove the superiority of such an analysis above UG-based analyses.16

15 (S)OV refers to the head-final order subject-object-verb; SVO refers to the head-initial order subject-verb-object.

16 Schwartz and Sprouse (2000) use the debate that resulted from Clahsen and Muysken’s (1986) publication as a case to illustrate how changes in linguistic theory may affect the interpretations of the same data regarding the roles of transfer and UG in L2A. Ignoring the technical details of the various proposals, Schwartz and Sprouse argue that the differences between the analysis of Clahsen and Muysken (1986) on the one hand, and those of duPlessis et al. (1987) and Schwartz and Tomaselli (1990) reduce to whether the existence of functional category IP is
**No Transfer/Full Access**

The No Transfer/Full Access position makes predictions about L2A that are the exact opposite of those made by the No Transfer/No Access approach, despite the fact that both positions are committed to the absence of L1 properties in the L2. Contrary to No Transfer/No Access, No Transfer/Full Access assumes that the processes of L2A and L1A are similar. Therefore, this position is also known as the L2A = L1A position. Under this approach, the L2 initial state mirrors the L1 initial state, in that all (both used and unused) properties of UG are still available to the L2 learner (hence, Full Access). Importantly, proponents of No Transfer/Full Access assume that the L1 parameter settings do not constitute the L2 learner’s initial theory about the L2. This is radically different from what other Full Access positions claim for the L2 initial state, as will become clear below. With regard to grammatical development after the L2 initial state, No Transfer/Full Access claims that L2A is fully constrained by UG and that the final state L2 grammar is similar to the final state grammar of native speakers of the target language.

Platzack (1996), for instance, advocates a No Transfer/Full Access position, by proposing that both L1 learners and L2 learners alike assume only weak functional features as their initial hypothesis about the target language grammar. According to Platzack, the reason why L2 learners assume weak features by default, regardless of the strength of the features in their L1, is a UG-based sensitivity to the ‘cost’ of strong features: strong features induce movement and movement is costly (e.g. Chomsky 1995). Platzack further predicts that only after learners have encountered sufficient evidence for movement in the target language will they set the parameterised features to their strong values, in accordance with the target language grammar.\(^ {17}\)

As we have seen, the findings on early L2 Dutch and L2 German verb-complement orders show that No Transfer positions are incorrect (Jansen, Lalleman and Muysken 1981; Van der Craats 1994; Meisel, Clahsen and Pienemann 1981; Vainikka and Young-Scholten 1994, 1996): the L1 linear order of the verb and its complement initially carries over into the L2 grammar. However, these data do not settle the question whether L1 functional projections and their feature specifications transfer. According to some (e.g. Vainikka and Young-Scholten 1994, 1996), transfer of the L1 verb-complement order involves no functional projections, but only the lexical projection VP and its linear orientation. According to other proposals, differences in word order do involve functional projections.

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\(^ {17}\) For another example of a No Transfer/Full Access account see Epstein, Flynn, and Martohardjono (1996), and the commentaries on their publication.
To disconfirm Platzack’s predictions, we need less controversial evidence for the transfer of functional categories and their associated feature strength. Such evidence exists. For example, as White (2000, 136) points out, her (1991a, 1991b, 1992) studies on adverb placement by native French learners of English show evidence of verb movement to a functional category (Agr). In these studies, French learners of English produced French-like adverb orders in English: Subject Verb Adverb Object (SVOA). The correct English order is Subject Adverb Verb Object (SAVO). Given that English is commonly assumed to have no verb movement as a result of a weak feature in Agr, the learners’ SVOA orders strongly suggest that the strong feature triggering verb movement in French transfers into their English grammar.

Partial Transfer/No Access

Advocates of the third position assume that the L2 initial state consists of some, but not all of the L1 properties, and that subsequent development is only UG-constrained by the L1 properties that have carried over into the L2 grammar. As a consequence, L2ers do not converge on the target language grammar. Moreover, L2ers with different L1 backgrounds end up with different L2 grammars.

Eubank, Bischof, Hufnstutler and West (1997) exemplify a Partial Transfer/No Access approach. They assume that the lexical and functional

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18 White’s adverb studies are based on Pollock’s (1989) proposal that differences between English and French in adverb placement follow from different values of the verb-raising parameter (See also Emonds, 1978, Chomsky 1989, and Belletti, 1990). Assuming that the verb is base-generated in the VP, the raises out of the VP in some languages (like French), but stays in the VP in others (like English). Under Pollock’s (1989) proposal, adverbs are adjoined to the left of the VP and hence function as indicators of verb raising. If the finite verb does not raise, the verb remains to the right of the adverb yielding the surface word order Subject Adverb Verb Object (SAVO) as in the English example (i-a). However, obligatory verb raising of the finite verb in French yields the order Subject Verb Adverb Object (SVOA) in (i-d).

(i)  
(a) Mary often takes the train  
(b) *Mary takes often the train  
(c) *Marie souvent prend le train  
(d) Marie prend souvent le train  

Mary often takes the train  
Mary takes often the train  

According to Pollock (1989), differences in verb raising are caused by parameterised differences in the strength of Agr: strong (or transparent) Agr in French permits the moved verb to assign theta roles to its complement in the VP; weak (or opaque) Agr in English blocks theta role assignment. The minimalist program attributes differences in verb movement (in fact, all movement) to the strength of features: strong features cause the verb to move overtly, to check off features; weak features permit the verb to remain in the VP (until after Spell-Out).
categories of the L1 final state grammar transfer into the L2 initial state grammar, but without (some of) the L1 feature specifications (hence Partial Transfer). Moreover, assuming that unused parametric values are no longer available in L2A (hence No Access), they predict that the strength of particular functional features remains indeterminate, that is, neither strong nor weak. This results in divergence from the target language grammar as is evident from persistent syntactic optionality in verb movement, for instance.

As argued above against No Transfer/Full Access, White’s adverb placement studies (1991a, 1991b, 1992) seem to provide evidence of verb raising to a functional category (Agr). If the verb consistently raises, the claim by Eubank et al. (1997) that feature strength does not transfer seems to be incorrect. Additional counterevidence comes from an experimental study by Hulk (1991), investigating the word order of Dutch learners of French. Dutch is an OV language, which is obscured in main clauses by the operation of V2; whereas French has VO order in main and subordinate clauses. Hulk found that her beginning learners accepted ungrammatical OV orders in French, suggesting transfer of Dutch OV. Moreover, the same learners rejected grammatical French sentences with non-V2 order, this time suggesting transfer of the Dutch V2 constraint. Taken together, these results provide evidence of transfer of both lexical and functional categories, including their feature specifications: a strong feature in C, which motivates verb movement to this position, explains the striking preference for V2. Apparently, these transfer effects do not last, since the intermediate Dutch learners of French consistently reject OV orders and accept non-V2 orders, as French requires. Therefore, the prediction of Eubank et al. that optionality of verb movement persists in L2A does not seem to be borne out either by this set of L2 data.

Eubank et al. (1997), as well as Eubank in earlier work (Eubank 1994a, 1994b) see under Partial Transfer/Full Access, below) and Meisel (1997), among others, relate the lack of functional features or feature strength to the well-known variable use of inflectional morphology in L2A: they equate the overt tense and agreement markings with the syntactic feature values they encode ([+/- strong T] and [+/- strong Agr]). Advocates of this perspective conclude from the widely accepted fact that overt inflectional forms do not transfer that the associated feature values of these forms do not transfer either. This interpretation of optional inflections is now known as the Impaired Representation Hypothesis (Prévost and White 2000). An alternative explanation is the Missing Surface Inflection Hypothesis, which regards variable use of inflections as a surface phenomenon, not resulting from impaired representations of abstract features, but rather from (mapping) problems L2 learners have with the realisation of the surface forms in the target language (see Haznedar and Schwartz 1997; Lardiere 1998, 2000; Prévost and White 2000; Sprouse 1998). For instance, Lardiere (2000) concludes that the data of a fossilised Chinese L2er of English, who has lived in the USA for 18 years, exhibit syntactic reflexes of the category Tense (e.g. in the correct case marking of pronouns) despite the scarcity of
tense inflections on the verb. This suggests at least a partial dissociation between L2 syntax and morphology.

Optionality is by no means limited to the area of inflectional morphology. It is a well-known characteristic of L2A, found even in very advanced L2 learners (Sorace 1993; Robertson and Sorace 1999). The indeterminate grammaticality judgments of many advanced L2 learners distinguishes these non-native speakers from native speakers because adult native speakers have very clear intuitions of what is grammatical and ungrammatical in their mother tongue (Bley-Vroman 1989). Well-known examples of syntactic optionality in L2A relate to alternating positions of the verb relative to negation (Eubank 1994a,b) or adverbials (e.g. White 1991a, 1991b, 1992; Schwartz and Gubala-Ryzak 1992; Eubank 1996). It is still a matter of debate whether variable verb raising is related to variable use of verbal inflections.

Although the debate on optionality may be unresolved, persistent optionality in advanced L2 grammars clearly shows that the acquisition of target-like constructions does not force out non-target constructions. Sorace (2000: 98) puts it as follows: “L2 grammars clearly have a much greater degree of tolerance for synonymy than native grammars”.

**Partial Transfer/Full Access**

As far as the L2 initial state is concerned, the Partial Transfer/Full Access approach is similar to the previously discussed Partial Transfer/No Access position, in that both assume that parts rather than all of the L1 grammar transfer and define the L2 initial state grammar. The two approaches differ in the extent to which they claim subsequent L2A to be UG-constrained and their predictions regarding the L2 final state grammar. According to Partial Transfer/Full Access, L2ers can reset parameters on the basis of target language input interacting with unused UG properties, eventually leading to convergence upon the target values.

Eubank (1993/1994, 1996) takes a Partial Transfer/Full Access approach, which he himself calls ‘Valueless Features’. His central claim is that the L2 initial state comprises all the L1 lexical and functional categories, and that the functional features encoding tense and agreement are neither strong nor weak, but valueless (or ‘inert’). The underspecification of features is thought to be responsible for optional verb raising in early L2 grammars. So, with respect to the L2 initial state, this proposal is identical to the later Partial Transfer/Partial Access proposal by Eubank et al. (1997), discussed above. However, Partial

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19 Sorace (2000) says about optionality that “[p]re-theoretically, it can be defined as the coexistence within an individual grammar of two or more variants of a given construction, which 1) make use of the same lexical resources, and 2) express the same meaning.”
Transfer/Full Access predicts that acquisition of the L2's inflectional paradigms leads to target-like specification of the features and stops optional verb raising.

Eubank and Grace (1996) present evidence against these predictions in experimental data from Cantonese and Mandarin learners of English. The L1s of these learners, as well as the target language English are assumed to be non-raising languages. However, Eubank and Grace found protracted optional verb raising after the learners had acquired English verbal inflection, contrary to their expectations.

Another, more restrictive approach exemplifying Partial Transfer/Full Access is Vainikka and Young-Scholten's (1994, 1996a, 1996b) 'Minimal Trees' account. From this perspective, Partial Transfer means exclusive transfer of lexical categories. Functional categories are assumed to be completely absent during the L2 initial state, resulting in a minimal syntactic tree structure that consists of a VP only. L2 development involves the gradual creation of functional projections above VP via the interaction of L2 input (especially lexical items associated with functional projections, such as auxiliaries and complementisers for IP and CP, respectively) and UG-constrained structure building. In the sense that functional categories are initially lacking and develop gradually on the basis of input and UG, the 'Minimal Trees' account for L2A parallels a 'Weak Continuity' account for L1A. L2A differs from L1A in that transfer of the L1 linear orientation of the VP head determines the headedness of the L2 initial state VP. Apart from possible transfer effects in VP headedness during early stages, Minimal Trees predicts that L2 grammars develop in much the same way as in native language acquisition and equally converge on the target language grammar.

Minimal Trees has thus no trouble accommodating evidence for transfer in the constituent order of lexical projections, such as the OV orders in the early grammars of Korean and Turkish learners of German, and the initial VO orders produced by Italian and Spanish learners of German (e.g. Vainikka and Young-Scholten 1996a). However, evidence for transfer of functional projections and feature specifications, as provided by White's (1991a, 1991b, 1992) adverb placement studies discussed above does undermine the narrow Minimal Trees conception of transfer. For additional evidence and arguments against Minimal Trees, see Schwartz and Sprouse (1996).

**Full Transfer/No Access**

Proponents of a Full Transfer/No Access position share the assumption that the L1 grammar constitutes the L2 initial grammar, which amounts to a 'L1 final state = L2 initial state' position (Clahsen and Hong, 1995; Schachter 1989, 1990; Tsimpli and Roussou 1991). Moreover, they propose that UG constrains L2 development only via the L1 instantiations. Therefore, resetting parameters to unused values is deemed impossible. Instead, where the L2 input cannot be accommodated into the transferred grammar, L2 learners resort to general
problem solving strategies to construct IL structures. As a result, L2 end state grammars are predicted to diverge qualitatively from native grammars.

Some advocates of Full Transfer/No Access focus on L2 learners’ failure to observe principles of UG that are not instantiated in their L1 grammars. For instance, Schachter (1989, 1990) compared Korean and Dutch learners of English with respect to their grammaticality judgments on Subjacency, to test the hypothesis that L2 grammars may be in conflict with UG principles if the L1 lacks this particular UG principle. Korean does not exhibit wh-movement and therefore lacks the Subjacency Principle, whereas Dutch is similar to English with respect to Subjacency. She found that the Korean learners accepted Subjacency violations, while the Dutch correctly rejected them, in support of her claim that UG constraints do not extend beyond the transferred L1 realisations.20

Others have tried to advance Full Transfer/No Access by showing that UG parameters cannot be reset in L2A (see chapter 2 for a discussion of L2 studies on the Null Subject Parameter, e.g. Clahsen and Hong, 1995; Tsimpli and Roussou 1991). Evidence for resetting depends crucially on evidence for the clustered acquisition of properties associated with the target language value. Therefore, absence of developmental clustering provides evidence against resetting, in support of Full Transfer/No Access. Neeleman and Weerman (1997) argue against parameter resetting in L2A on the basis of the results of a grammaticality judgment task testing the acquisition of a cluster of five properties assumed to fall out from the OV/VO parameter (OV/VO order, distribution of particles, scrambling, ECM, and extraction from objects of complex predicates). Their subjects, English adolescent learners of Dutch and Dutch adolescent learners of English, generally exhibit knowledge of basic word order in the target language, but not of (all of) the related properties. Moreover, there is a lot of variation between learners and within individual learners in the extent to which they master the different constructions. Neeleman and Weerman take these results as evidence that the parameter-related constructions are learnt independently, suggesting that, instead of parameter resetting, L2A involves the positing of construction-specific rules. As Neeleman and Weerman (1997, 159) point out, such rules must be structure-dependent rather than linear, since at least some L2 learners pass for near-native speakers.

There is independent evidence that adult L2 learners are capable of constructing complex and structure-dependent rules that fall outside the limitations of UG. Smith, Tsimpli and Ouhalla (1993) demonstrate that adults

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20 Schachter’s findings are corroborated by Johnson and Newport (1991), who found that advanced adult Chinese learners of English incorrectly accepted subjacency violations. Furthermore, they found age effects in that Chinese participants who had learnt English as adolescents performed significantly worse on the Subjacency tests than those who had acquired English as children. However, White and Genesee (1996) and White and Juffs (1998) did not find such age effects for advanced Chinese learners of English, none of which differed significantly from native English speakers with respect to Subjacency.
learning an artificial language (Epun) are quite successful at learning structure-dependent constructions not attested in any natural language, which are assumed to violate UG principles. Nevertheless, the fact that adult L2 learners resort to using non-linguistic structure-dependent rules, when confronted with unnatural language input, does not necessarily imply that they will also resort to using construction-specific rules that do not relate to UG to accommodate natural target language input. Likewise, it is not necessarily the case that the unused properties of UG are automatically activated, if the existing IL grammar fails to accommodate the input, given that cognitive mature L2 learners have the alternative possibility of constructing structures through general learning strategies.

Full Transfer/Full Access
The last approach to be discussed here is known as Full Transfer/Full Access, which is similar to the previous approach in assuming that the L1 final state grammar makes up the L2 initial state grammar. In other words, the learner’s default hypotheses about the L2 input derive directly from the UG principles and parameter values of the L1. Recent versions of Full Transfer/Full Access propose that L2 development is failure-driven: only when the L2 initial state grammar fails to assign a structure to the target language input is the full UG inventory called upon. Full Transfer/Full Access thus differs from Full Transfer/No Access in the assumption that unused properties of UG are reactivated if the existing grammar cannot accommodate the input. This situation may arise when the input exhibits constructions that go against the parameter value as realised in the L1, or when the input motivates positing a functional category or UG principle lacking in the L1-based IL grammar.

White (1985b, 1989) was one of the first L2A theorists who adopted an approach that was later refined and called Full Transfer/Full Access by Schwartz and Sprouse (1994, 1996). On the basis of experimental studies investigating the pro-drop parameter, White (1985; 1986) concluded that L2 learners start out with the L1 parameter value and then reset it to the target language value. Schwartz and Sprouse (1994, 1996, 2000), however, propose that even though UG fully constrains L2A, L2 grammars may -but need not - converge on the target grammar. Whether or not UG-constrained resetting of a particular parameter takes place, depends both on the L1-based value and the L2 surface input. They explain this lack of determinacy in L2A by claiming that UG-constrained restructuring is motivated by a failure of the existing grammar to

21 An example of such a structure-dependent but linguistically impossible construction in Epun involved the formation of negative sentences by placing the verb before the subject in sentence-initial position, but without using a negative morpheme (see Smith et al. 1993 for a justification of the unnaturalness of this structure)
accommodate the target language input. Some structures in the input cause early restructuring, being in conflict with the L2 initial state grammar; other constructions in the input can be reconciled with the L1-based grammar and thus do not call upon previously unused parts of UG. The latter situation is predicted to lead to protracted L1 influence in L2 grammars. The former situation, in which there is evidence for restructuring, however, does not necessarily lead to convergence upon the target values either. Because the L2 initial state grammar starts from L1-based assumptions, it may sometimes misanalyse the input and adopt an unused UG constraint that is not the TL constraint. Schwartz and Sprouse (1994:356) sum up the implications of their proposal as follows: 

"[...] in the process of creating the L2 knowledge system, (UG) mechanisms that are adopted in attempts to incrementally and locally accommodate PLD (primary linguistic data, i.e. target language input –KS) may be such that no further PLD will be able to engender retraction".

Schwartz and Sprouse (1994, 1996) illustrate their proposal by means of the longitudinal case study of a Turkish learner of German. Their focus is on the learner’s verb placement, and particularly on the temporary asymmetry between pronominal and non-pronominal subjects he exhibits in inversion constructions. Schwartz and Sprouse argue that the learner’s strong preference for inversion with pronominal subjects cannot be attributed directly to L1 grammar nor to TL input effects, since neither Turkish, nor German displays this asymmetry. The learner’s grammar is nevertheless UG-constrained, because a similar asymmetry between pronominal and non-pronominal subjects in inversion constructions exists in a natural language grammar, namely French. Because the IL asymmetry derives neither directly from the L1 grammar nor from the L2 input and yet represents a property of natural language, they claim that its only logical cause is the application of a novel UG-constraint. Although the fact that French has a similar asymmetry is interesting, it does not warrant their conclusion that UG is the only possible source for the asymmetry: the asymmetry might derive from non-UG sources such as processing strategies or general learning strategies.

1.4 Research questions on the role of the L1 and UG

The six positions on the role of transfer and UG outlined above show some overlap in their assumptions and hence in their predictions. This overlap allows refutation of several positions at once. Indeed, many of the empirical data discussed prove No Transfer positions to be wrong. Undeniably, the L2 initial state has an intimate relation to the L1 grammar, as exemplified by early IL properties that can be retraced directly to the L1 grammar. Moreover, proposals that predict the developmental route and outcome of L2A to be similar to those of L1A, such as No Transfer/Full Access, are at odds with the non-trivial differences
between L2A and L1A: such as variation between learners as well as variation or optionality within individual learners with respect to IL development and ultimate attainment. Unlike L1A, L2A is clearly a non-deterministic process. In some cases the overlap in predictions makes it difficult to find empirical evidence that arbitrates between positions. This problem is particularly evident in the evaluation of proposals assuming Partial Transfer or Full Transfer, and No Access or Full Access.

Partial Transfer and Full Transfer share the following assumptions about transfer, which are compatible with previous L2A research:

1. Transfer takes place regardless of the similarities or differences between the L1 and the TL;
2. Transfer occurs during the earliest stages of L2A, but its effects may last for a while;
3. Transfer causes different developmental paths for learners from different language backgrounds, (at least initially);
4. Transfer involves abstract, formal properties of the L1 grammar, not surface properties, as these are epiphenomena (at least in L1 grammars).22

Partial Transfer and Full Transfer crucially differ in which formal properties they assume to carry over into the L2 initial state. As we have seen, empirical evidence on verb placement relative to adverbials suggests that transfer is not constrained to lexical projections, but involves at least some functional projections too. Such evidence unequivocally rules out restrictive versions of Partial Transfer, exemplified by Minimal Trees. However, it fails to make the more subtle distinction between Partial Transfer positions that claim transfer of the L1 functional categories, but not of the related L1 feature values, and Full Transfer positions claiming transfer of functional categories and their L1 feature values alike. The question of feature strength is important, since current syntactic theory considers feature strength to be the locus of parametric variation. So, what is at stake here is whether L1 parameter values transfer. So far, evidence on the issue of parametric transfer has been quite conflicting. For example, we do not know whether optional verb raising is caused by unspecified feature strength, or by a combination of transfer of L1 feature values and contradictory L2 input, or by some other factor.

Surprisingly, one type of potential counterevidence against Partial Transfer has not received much attention in recent L2 initial state studies, namely clustered transfer. If learners transfer the L1 parameter value (i.e. the L1 strength of feature-value), they should show evidence of transfer of the whole cluster of L1 properties associated with this value. Although a fair number of

22 “Constructions do not exist as discrete mental entities or objects” but relate to abstract formal structures (Chomsky and Lasnik 1993). Therefore, abstract formal properties transfer instead of surface constructions.
earlier L2 studies have investigated parametric clustering, the focus has always been more on clustered acquisition of the target language value as evidence for parameter resetting and UG access. What evidence there is on clustered transfer does not unequivocally rule out Partial Transfer (see the overview of pro-drop studies in chapter 3). Since the L2 initial state grammar is currently at the centre of attention, more convincing evidence of clustered transfer is required to see if there is indeed evidence for Full Transfer.

Answering the question of Partial Transfer versus Full Transfer logically precedes the question to what extent the L1 grammar constrains subsequent development. This second question indirectly bears on the issue of UG Access, as it can be rephrased in terms of whether UG is constrained only by previously realised properties of UG (No Access), or also by previously unused properties of UG (Full Access). The most convincing type of evidence against Full Access would be evidence that L2ers construct IL grammars that conflict with UG constraints. However, for IL data to confirm Full Access, it is not enough to show that these data conform to UG principles. We cannot automatically attribute data that generally accord with constraints on natural languages to full access to the pool of UG options. The reason being that such data may be constrained by UG principles via the L1 only. As I take it, the only type of evidence to support Full Access convincingly comes from clustered acquisition of syntactic properties related to a single parameter which is different from the L1 value.

The idea of clustering is thus central to the four research questions of this study:

- **Research question 1**
  Is the L2 initial state defined by clustered transfer of properties that relate to L1 parameter values?

- **Research question 2**
  What are the implications of the empirical results of the present research for theories of Partial Transfer and Full Transfer?

- **Research question 3**
  Is L2 development characterised by clustered acquisition of properties that relate to TL (or non-L1) parameter values?

- **Research question 4**
  What are the implications of the empirical results of the present research for theories of No Access and Full Access?

These research questions are investigated by looking in the L2A context at what is known as the Null Subject Parameter (Chomsky 1981a; Jaeggl 1982; Rizzi
This parameter captures the phenomenon that some languages may omit subject pronouns, while other languages require subject pronouns to be expressed. For instance, the Italian sentences in (1) allow the subject pronoun to be dropped in main (1a) and subordinate clauses (1b), whereas their English counterparts require an overt subject pronoun.

(1)

a. Ha parlato
   He /she/it has spoken

b. Gianni canto quando è contento
   Gianni sings when he is happy

The Null Subject Parameter is a suitable testing ground for UG-based accounts of L2A for a number of reasons. First, the Null Subject Parameter or Pro-drop Parameter was one of the first parameters to be proposed in generative linguistic theory. (Chomsky 1981a; Jaeggli 1982; Rizzi 1982). Since its introduction, linguists have scrutinised missing subjects and related properties, resulting in a rich body of observations about their nature. Furthermore, from a generative perspective the notion of an empty element -as well as the formal syntactic constraints which bear on the phenomenon of empty elements- is taken to be too abstract to be learned consciously. If this assumption is correct, knowledge related to null subjects must be part of UG.

Another reason for choosing the Null Subject Parameter, is its cluster of empirical domains. Crosslinguistic variation strongly suggests that subject omission is not an isolated property, but forms part of a cluster of properties. For languages like Italian and Spanish, it is commonly assumed that missing subject pronouns are related to missing expletive subjects (2) and rich agreement inflection (3). Moreover, many versions of the Null Subject Parameter also take subject-verb inversion (4) to be part of the cluster of properties related to the [ + null subject] value.

(2) Piove
   It rains

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23 The Null Subject Parameter is also known as the Pro-drop Parameter, because the empty element in the subject position is often referred to as pro.

24 In [+ null subject] languages like Spanish and Italian, the subject is not always missing. Subject omission is governed by grammatical and pragmatic constraints. For instance, a subject pronoun may only remain unexpressed if it refers to an established discourse topic. This means that first and second person subject pronouns can always be omitted without previous introduction, but third person subjects must have been mentioned before in the previous discourse context.
Clustering of properties allows evaluation of the various proposals about the roles of L1 transfer and UG constraints in L2 acquisition. For instance, clustered transfer is only predicted if the parameter value of the L1 carries over into the L2. Likewise, clustered development of the properties associated with the TL parameter value can be taken as evidence for parameter resetting, and hence as evidence for the activation of unused UG properties. However, if there is evidence for transfer and/or acquisition of some properties, but not of all properties related to a particular parameter value, this suggests that transfer and/or UG access is selective, partial or construction-specific.

The Null Subject Parameter has received considerable attention from L2A researchers working in a Principles and Parameters framework. Therefore, the resulting data and theorizing can serve as a point of departure to pursue some matters in more depth. The next chapter reviews the research on the Null Subject Parameter in L2 acquisition. Most of the studies in chapter 2 involved L2 contexts where native speakers of null subject languages like Italian or Spanish were learning non-null subject languages like English and German. This means that the L1 and the TL had different values of the Null Subject Parameter, to account for different clusters of properties. For reasons of comparison, the present study too, investigates Romance L2 learners of Germanic languages: Spanish and Italian learners of English, German and Swedish. The more practical reason was that longitudinal data of these particular L2A situations were readily available via the internet.25 The data described in chapter 4 come from the European Science Foundation corpora, which were collected in various

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25 The internet site is www.mpi.nl
European countries during the 1980s (Klein and Perdue 1988). In addition to being accessible, the ESF corpora are very useful because they consist of naturalistic spoken production data, covering the early stages of L2A up to about two years of subsequent development at intervals of approximately six weeks. Moreover, the ESF corpora consist of longitudinal data which allow one to follow and compare the L2 development of individual learners and assess whether the relevant properties pattern together at all stages. Furthermore, longitudinal data complement the results of cross-sectional studies. By the same token, spontaneous production data complement the grammaticality judgments elicited in experiments.

1.5 A lexicalist notion of grammar

So far, this text has been inexplicit about what transfer entails. To describe L1 transfer, it is necessary to define what constitutes the existing adult native L1 first. I adopt a lexicalist notion of grammar which accounts for all parametric variation in terms of variation in the lexicon. The generative procedure with which the adult native L1er constructs sentences consists of two components: a language-specific lexicon, and a language-invariant computational system of human language.26 The lexicon, on the one hand, comprises lexical items of a particular language, and encodes phonological, semantic, and grammatical information such as parameterised properties. So, UG defined variation is stored as lexical information. The computational system, on the other hand, is the structure building component. It draws its structural information, the building blocks for syntactic trees, from the lexicon.

Given this perspective on the native L1 grammar, how can we picture L1 transfer into the IL grammar? I suppose that the invariant computational system remains available to L2ers. This computational system operates when people generate and parse L1 sentences, but it is not language-specific. It just draws its grammatical knowledge from a language-specific lexicon, which happens to be the L1 in native monolingual speakers. Native bilingual or multilingual speakers, who have more than one L1, are assumed to have two or more language-specific lexicons, but only a single, shared computational system. Therefore, it is likely that this invariant computational system functions in non-native L2ers just as it does in native speakers. What we are interested in then is not the computational system, but the IL lexicon which serves as input for the computational system, and, in particular, how much of the IL lexicon derives

26 I generally adopt Chomsky’s (1992, 1994) proposals, with some adaptations that are necessary to accommodate Speas’ (1995) notion of the [+ strong] Agr parameter which is responsible for typical null subject properties, such as missing and post-verbal subjects.
from the L1 lexicon. The questions of Transfer and UG Access are thus cast in terms of which parametric properties derive from the L1 instantiations of the lexicon and which parametric properties derive directly from previously unused, but UG-constrained instantiations.

1.6 Structure of the dissertation

The present dissertation is organised as follows. Chapter 2 reviews previous studies concerned with null subjects in L2A. It summarizes the empirical results of these studies and points out a number of unresolved issues which the multiple case studies in chapter 4 address. Chapter 3 introduces the version of the Null Subject Parameter adopted in this study (3.2), reviews the relevant properties of the languages involved in the empirical studies of chapter 4, and presents the research hypotheses (3.3). Chapter 4 describes the longitudinal data of nine adult Romance learners of Germanic languages: Spanish learners of Swedish and Italian learners of German and English. Chapter 5, discusses the empirical results (5.2) and the implications of these results for the hypothesis of Full Transfer (5.3). The results are then related to the Null Subject Parameter adopted throughout this study (5.4). Finally, the implications for the hypothesis of Full Access (5.5) are given, as well as general directions for future research (5.6).