

**When Danes learn English first and German afterwards:
Word order in second and third language acquisition**

MA Thesis

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Submission date: 10/7 2012

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ENGLISH DEGREE PROGRAM

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Summary

This thesis examines the second and third language acquisition of English and German by Danish learners. Specific focus is placed on problems with respect to word order related to differences of verb placement in the three languages. On the background of generative theories of second language acquisition, the role of transfer from one language to another is critically evaluated.

After an introduction to the topic of the thesis in chapter 1, chapter 2 outlines the basic word orders of Danish, English and German and briefly introduces the generative theory of sentence structure. The basic word orders of the three languages are illustrated in syntactic trees showing that Danish and English are both SVO languages whereas German is an SOV language. In Danish and English, the verb therefore precedes its object contrary to German where the verb follows the object. In generative theory, this difference is one of headedness of the VP (verb phrase). In Danish and English, VPs are head-initial, while they are head-final in German. Danish and German, however, share the V2 constraint which requires the finite verb to occur in second position and therefore partly obscures the underlying head-final position of the verb in German (specifically in main clauses with only one verb). English, on the other hand, no longer has this V2 constraint.

Chapter 3 outlines the process of first language acquisition. It is established that we have an innate language learning ability which explains why children are able to learn their first language so quickly and effortlessly based on limited input. The chapter makes a distinction between performance (what the speaker does) and competence (what the speaker implicitly knows). It further introduces Universal Grammar (UG) which consists of both invariant principles and a range of parameters which are set to a specific value on the basis on linguistic input.

Chapter 4 compares and contrasts first and second language acquisition. A number of factors are considered which can affect the rate and success of second language acquisition: age, learning environment, type of input, learner motivation and aptitude. Furthermore, the term *interlanguage* is introduced to describe non-native grammars at different stages of development. Finally, the importance of the concept of transfer for second language acquisition research is accounted for.

Chapter 5 introduces generative approaches to second language acquisition. While some theories argue that second language learners no longer have access to universal grammar, others argue that interlanguages are in fact constrained by these innate principles and parameters.

Chapter 6 continues to pursue the issue of UG involvement and transfer in second language acquisition, as different hypotheses about the initial state are explored. Transfer approaches are considered which assume that the parameter settings of the first language, either partially or completely, constitute the initial state. These hypotheses are contrasted with a non-transfer

approach to the initial state which assumes the existence of a canonical word order and of a universal developmental route independent of the first language of the learner and restricted by processing principles.

In chapter 7, a selection of contrastive analyses, teacher instructions and grammar books written specifically for Danish learners are analysed for underlying assumptions about the role of transfer in the second language acquisition of English and third language acquisition of German. It is found that Danish learners of English are predicted to have problems with the fact that English does not have V2. Furthermore, Danish learners of German are expected to have problems *both* with respect to the relative order of object and verb *and* with V2, even though the two languages share this property.

Chapter 8 returns to the question of access to UG in second language acquisition and examines the possibility of re-setting parameters. Two opposing views are presented; one suggesting that parameter re-setting is possible, and one suggesting that only general learning strategies are available to second language learners.

In chapter 9, two grammaticality judgment tasks are presented. Due to a data gap in the area of interlanguage syntax, these tasks were conducted with learners at different stages in the educational system, from the Danish *folkeskole* to the Danish *gymnasium*. The learners' judgments of a range of grammatical and ungrammatical sentences provide useful data on the role of transfer in word order acquisition and on interlanguage development.

A discussion of the data obtained from the English and the German grammaticality judgment tasks is undertaken in chapter 10. The results are analysed and evaluated against the theoretical framework outlined in the previous chapters.

It is concluded that the data presented in this thesis suggest transfer of parameter settings for Danish when Danes begin to learn English, causing learners to have problems where the two languages differ with respect to V2. It is further suggested that transfer from both first language Danish and second language English plays a part in the acquisition of German as a third language. While the transfer of the SVO structure from Danish gives rise to problems with the SOV order in German, the partial transfer of non-V2 from English causes Danish learners to have word order problems even where Danish and German are alike, namely with respect to the V2 constraint.

1. Introduction

The importance of ensuring that Danish learners achieve a high proficiency level in foreign languages is constantly debated in the media. Consequently, foreign languages are introduced earlier and earlier in the school system. English undoubtedly holds a special place in the consciousness of most Danish learners and in the Danish educational system as a whole, since it is the first foreign language introduced and often the preferred one. Although it is likely that the preference for English is, first and foremost, linked to massive everyday exposure to the language, learners seem to perceive English as being easier to acquire than German.

This thesis focuses on the acquisition of English and German by Danish learners. By closely examining and comparing the word order of the three languages with respect to verb placement, the fact is established that while Danish and English share some properties, Danish and German share others.

The thesis will endeavour to evaluate the specific problems Danes have with respect to verb placement when acquiring English and German, respectively. Initially, first language acquisition is compared and contrasted to second language acquisition, thereby pointing out and discussing factors that potentially influence the rate and success of second language acquisition.

A selection of contrastive analyses, teacher instructions and grammar books will be analysed in search for predicted problem areas. Against the background of generative studies on parameter setting in language acquisition, hypotheses about the starting point and nature of interlanguage development are discussed. These hypotheses differ in their view on how similar or fundamentally different the processes of first and second language acquisition are, and with respect to the role they ascribe to transfer. In an attempt to gain insight into the interlanguages of Danish learners of English and German, data from two grammaticality judgment tasks carried out in the Danish *folkeskole* and *gymnasium* are presented. The results are analysed and discussed with respect to the role of transfer from Danish and from second language English into third language German.

2. The word order of Danish, English and German

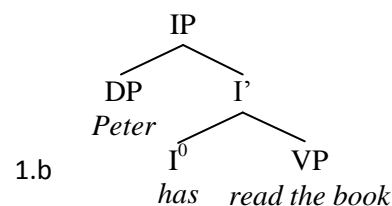
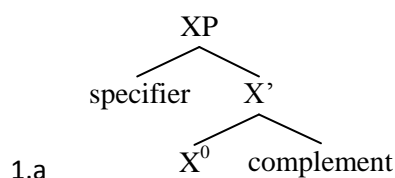
This chapter will outline the basic word order of Danish, English and German so as to build a foundation on which to base the discussion in the following chapters on the problems Danes face when learning the two languages. In doing so, it will also briefly introduce the generative theory of sentence structure and the relevant concept of movement. Since Danish is the point of departure, its word order will also be used here to contrast with English and German.

A discussion of the different accounts of sentence structure that co-exist within the generative framework obviously lies far beyond the scope of this thesis, and I will therefore generally refrain from going into too many theoretically controversial details. I will, however, attempt a brief structural account of the linear order of the constituents of a sentence within a Principles and Parameters model because these syntactic models are referred to time and time again in the generative theories of second language acquisition to be discussed later on. As Bohnacker points out, “[i]n syntactic acquisition research it is generally advisable to keep the- often ephemeral - formal syntactic apparatus to a minimum” (2006, 451).

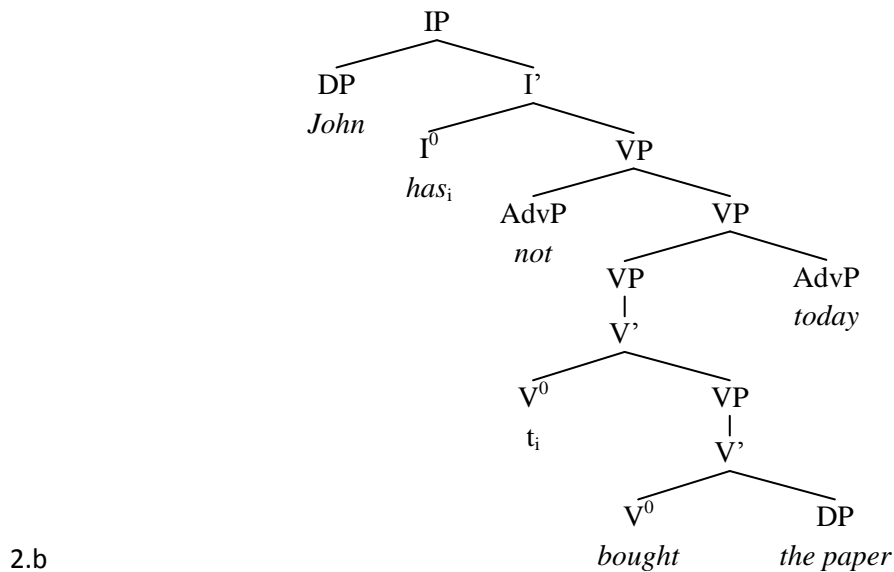
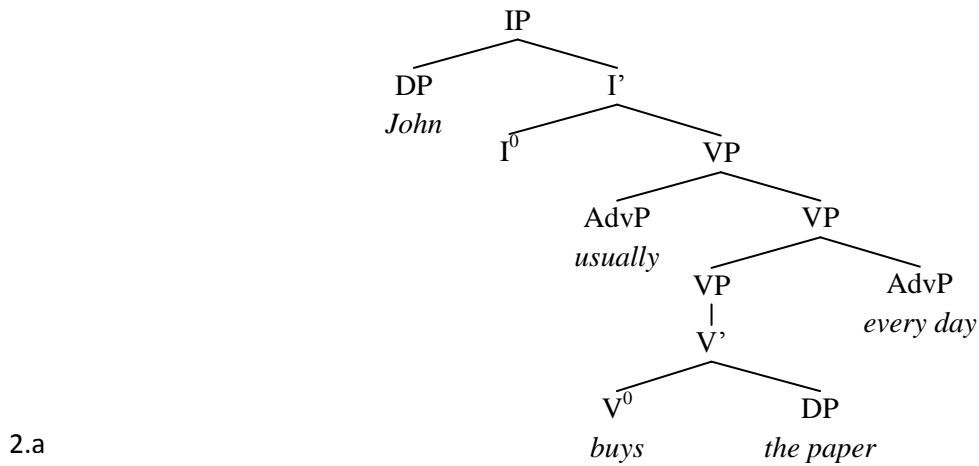
After making these first reservations with respect to the theoretical framework, a basic sentence structure will be outlined in the following and the three languages will be described and compared in terms of verb placement.

2.1 Sentence structure

It is assumed within generative theory that the structure of a sentence can be illustrated as a syntactic tree with words represented in nodes. The syntactic tree with its nodes is the abstract representation of a sentence and is built up according to a certain branching system known as X-bar theory (or X'-theory). Each word or lexical item is a head (X^0) with a maximal projection (XP) and an intermediate projection (X'). As illustrated in 1.a below, X^0 can have a complement, and XP can have a specifier. 1.b illustrates how the X is in practice replaced by the relevant category, here an inflectional phrase (IP) with a subject as the specifier and a verb phrase (VP) as its complement.



The three categories that will be mentioned several times throughout this thesis are VP (verb phrase), IP (inflectional phrase) and CP (complementiser phrase). V^0 is a lexical category which contains the main verb and this means that the verb is base-generated here. I^0 is a functional category which contains inflectional endings (tense and agreement). C^0 is a functional category which contains subordinating conjunctions, among other elements (cf. 6.a and 6.b further below) (see e.g. Haegeman and Guéron 1999, 97-104). The syntactic tree in 2.a illustrates an English simple tensed main clause (the present tense), “John usually buys the paper every day”, and 2.b shows a main clause with a compound tense (the present perfect), “John has not bought the paper today”.



The relative order of the adverbial *usually* and the verb *buys* in 2.a shows that the main verb is in V^0 and not in I^0 , while 2.b illustrates movement, since auxiliary *has* is taken to be inserted under V^0 and moved to I^0 (see e.g. Haegeman and Guéron 1999, 88). The elements of a sentence are thought to have an underlying position from which they can move. When a constituent moves in the tree it will leave behind a trace, marked as t_i in the position where it is base-generated.

2.2 SVO vs. SOV

Within linguistic typology, languages are divided into types according to their basic word order, i.e. the order of the subject (S), Verb (V) and object (O). The classification of languages according to type (SVO, SOV or VSO) tells us about the underlying position of the verb. Danish and English are both so-called SVO languages. In Danish and English we therefore see both simple tensed sentences like 3.a and 3.b with just one finite verb preceding the object, and 3.c and 3.d with compound tenses and both verbs preceding the object.

3.a Da. Hun kender svaret.

She knows answer-the

3.b En. She knows the answer.

3.c Da. Hun har købt avisen.

She has bought paper-the

3.d En. She has bought the paper.

German, on the other hand, is an SOV language with the verb following the object. However, when there is only one finite verb, German may on the surface look like an SVO language in main clauses (as illustrated in 3.e below) (see e.g. Fabricius-Hansen 2010, 219).

3.e Ge. Sie kennt die Antwort.

She knows the answer

This is due to the verb second constraint that will be described shortly. So even though it can sometimes look like German is also an SVO language, it is in fact not (See e.g. Vikner 2007 for a discussion of why it makes sense to view German as an SOV language).

The OV structure in German reveals itself as soon as more than one verb is present. 3.f and 3.g are examples of main clauses with compound tenses where the nonfinite main verbs are in final position.

3.f Ge. John hat heute die Zeitung gekauft. (auxiliary + past participle)

John has today the paper bought

3.g Ge. John wird heute die Zeitung kaufen. (auxiliary + the infinitive)

John will today the paper buy

Non-finite constructions show the OV order as well.

3.h Ge. Er versprach, die Zeitung zu kaufen.

He promised the paper to buy

Finally, the OV order clearly manifests itself in subordinate clauses with the finite verb in the end (3.i) and following non-finite verb parts in compound tenses (3.j).

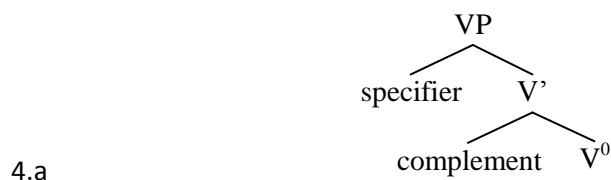
3.i Ge. Sie hofft, dass John heute die Zeitung kauft.

She hopes that John today the paper buys

3.j Ge. Sie hofft, dass John heute die Zeitung gekauft hat.

She hopes that John today the paper bought has

German thus differs from Danish and English with respect to the underlying position of the verb. In generative theory, the difference between VO and OV is one of headedness i.e. the setting of the head-directionality parameter. German is generally considered to have a head-final VP, while Danish and English are head-initial. This means that the head (V^0) precedes its complement in English and in Danish (cf. illustration 1.a), while in German the head of VP (V^0) follows its complement, resulting in a structure like 4.a (which is a reversed version of 1.a).



2.3 Verb Second

As demonstrated above, Danish resembles English in that the verb precedes its object. But in other respects, Danish and German are more alike. Both languages are constrained by the so-called verb second phenomenon (henceforth abbreviated V2). This constraint forces the verb to always be in second position, i.e. following the first constituent¹.

¹ For reasons of space and relevancy to the main topic of this thesis, I will leave aside discussions of symmetric versus asymmetric analyses of V2 and simply follow Schwartz and Vikner (1989) in assuming that all clauses in Danish and German are CPs, while clauses in English are usually IPs.

In English, the verb *can* be in second position and often is in main declarative clauses with the subject in first position and with an auxiliary (cf. 2.b, “he has not bought the paper today”). But unlike Danish and German, the verb in English does not have to be in second position. This becomes evident when there is no auxiliary (as in 2.a repeated here as 5.a).

5.a En. John usually buys the paper every day.

It also becomes clear that English is not a V2 language when the first constituent is something other than the subject (e.g. a fronted adverbial as in 5.b)

5.b En. Today John bought the paper.

In English a fronted element thus forces the verb to a third position so that the subject always comes before the verb in declarative clauses. This is often referred to as straight word order (cf. section 7.1).

Old-English was, however, a V2 language and because there are still traces of this in the language, English is sometimes called a “residual V2 language” (Rizzi as cited in Vikner 1995,39). There are still a few cases where English has V2. For example when CPspec is filled by a topicalized negative element as in 5.c or a *wh*-element (i.e. in questions) as in 5.d.

5.c En. Never have I seen anything like that.

5.d En. What has he bought?

Notice again that only a finite auxiliary can move in English. Therefore the phenomenon is referred to as subject-auxiliary inversion (SAI).

When a constituent other than the subject is fronted in Danish and German (for emphasis or other stylistic purposes), the verb moves into second position and the subject is pushed to third position.

5.e Da. I dag har han købt en avis.

Today has he bought a paper

5.f Da. Avisen har han købt i dag.

Paper-the has he bought today

5.g Ge. Heute hat er eine Zeitung gekauft.

Today has he a paper bought

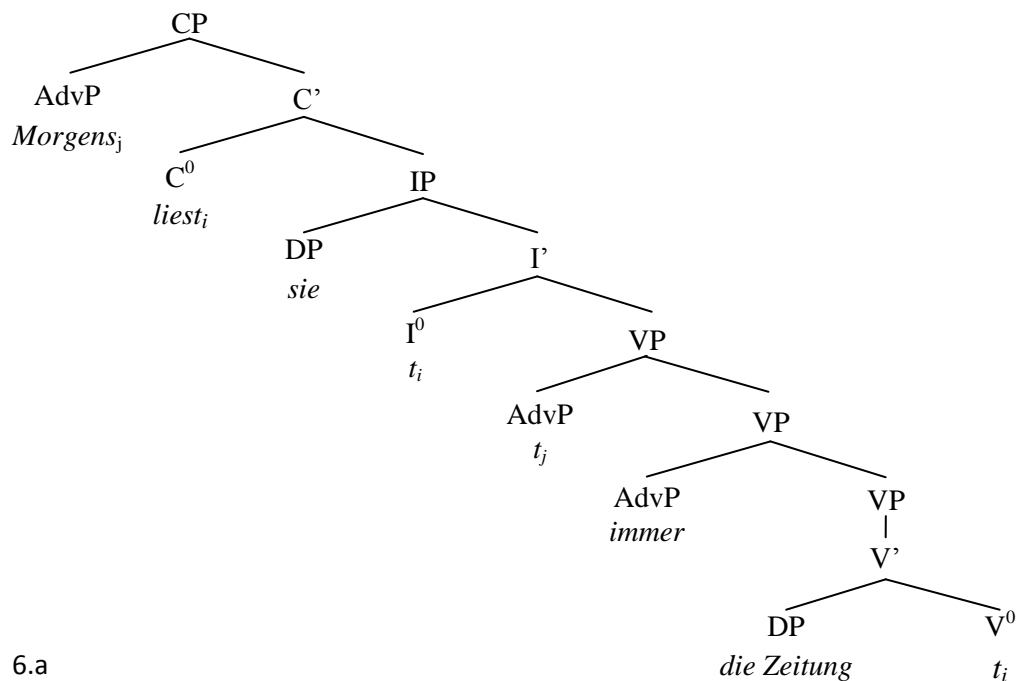
5.h Ge. Die Zeitung hat er heute gekauft.

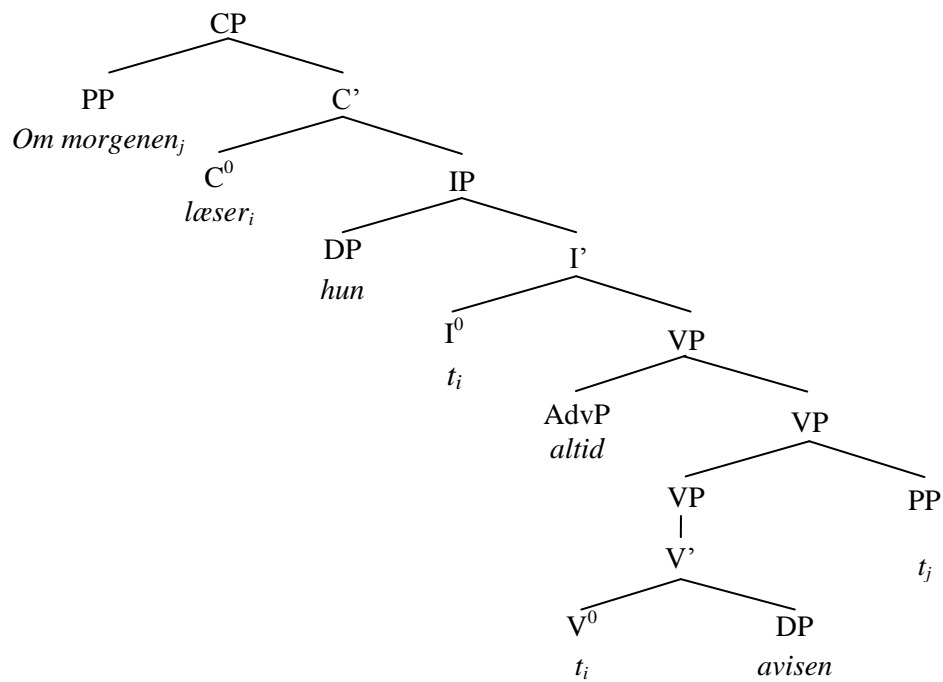
The paper has he today bought

The contrasts between 5.b and 5.e-5.h show that Danish and German are V2 languages and that English is not.

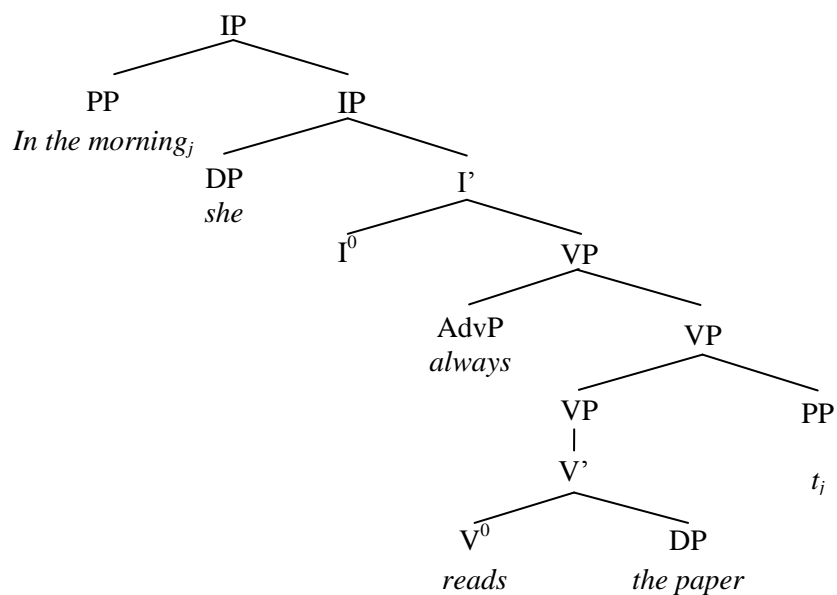
2.4 Word order similarities and differences

As mentioned above, the V2 phenomenon that causes movement of the finite verb to second position, C^0 , in main clauses, partly obscures the OV structure of German. The tree in 6.a serves to illustrate the effect of V2 in German, showing how the verb has moved from its underlying head-final position, so that it immediately follows the first constituent (here a fronted adverbial). It also illustrates that V2 is a two-step movement of the verb from $V^0 \rightarrow I^0 \rightarrow C^0$ (e.g. Vikner 1995).





6.b



6.c

As 6.b shows, the equivalent Danish sentence also has movement of the verb out of its VP through I⁰ to C⁰. The difference between 6.a and 6.b can be seen in the headedness of the VP where the verb is base-generated; in German, VP is head-final, while in Danish, it is head-initial. In contrast, 6.c shows that in English the verb stays in its VP, causing the subject to always occur before the verb in declarative clauses (straight word order). However, the trees in 6.b and 6.c have the headedness of VP in common, since both Danish and English are head-initial.

This chapter has introduced the basic word order of Danish, English and German. It has been shown that Danish and English are both SVO languages, while German is an SOV language. It has also been shown that Danish and German, but not English, share the V2 constraint causing verbs to always occur in second position. Having introduced these similarities and differences with regard to verb placement, the next chapter will approach the topic of first language acquisition in order to set the frame for the discussion of second language acquisition that will follow through the remaining pages of this thesis.

3. First Language Acquisition

Before taking a closer look at second and third language acquisition, it is necessary to establish how we learn languages in the first place. This chapter will therefore explore briefly the ideas about the nature of languages and the processes of first language acquisition that are fundamental to any writing within a generative framework.

3.1 Beyond habit formation

Fundamental to the discussion in this thesis is the assumption that first language acquisition is not simply a matter of imitation. Chomsky (1959) firmly established this in his famous and critical review of Skinner's *Verbal Behavior*. Chomsky rejected the idea that the theory of Behaviorism could be applied to language acquisition i.e. he rejected the claim that the process was one consisting of habit formation on the grounds of stimulus and response in the form of reinforcement. Contrary to the assumption that a person is born as a *tabula rasa*, a blank slate, having to learn everything, including language, on the basis of stimuli, it is thus presupposed in this thesis that we are in fact born with an innate ability or instinct to learn languages (e.g. Pinker 1994). In his review of Skinner, Chomsky (1959) comments on the behaviorist view of language acquisition by stating that "[t]he magnitude of the failure of this attempt to account for verbal behavior serves as a kind of measure of the importance of the factors omitted from consideration, and an indication of how little is really known about this remarkably complex phenomenon" (28). The change of perspective that took place within the field of linguistics in the 1960s, *the cognitive turn*, meant a step away from Behaviorism and an increased interest in studying the human cognition and looking closer at the mental capacities of the learner (see e.g. Meisel 2011, 3).

3.2 Competence and Performance

Research on language acquisition within a generative framework, whether first, second or third, attempts to characterize the unconscious knowledge in the mind of the speaker. After the cognitive turn in linguistics, focus shifted from *performance* to *competence*. This meant that instead of focusing on what the speaker does (performance), research saw a prevailing interest in what the speaker implicitly knows (competence)(e.g. Chomsky 1966, 9). These two aspects of language are also referred to as E-language (E for external) and I-language (I for internal), respectively (e.g. in Chomsky 1986:24). Generative grammar is thus occupied with trying to describe this competence, i.e. it seeks to describe what it is we know when we know a language (Chomsky 1966, 10). The distinction between competence and performance is essential because the interest in the mental representation of a language in the speaker's mind necessarily requires us to try to work our way around performance factors to deduce information about the underlying grammatical knowledge. This point will be further explored in section 9.2.1 on methodological issues.

3.3 The logical problem of language acquisition

The main reason for arguing that there is something innate at stake is what has come to be known as the "Poverty of the Stimulus Argument" (e.g. Chomsky 1986, 7). The argument is based on the observation that there is a mismatch between the linguistic input that a child is exposed to and what it is able to produce. The linguistic input is simply too limited and too flawed for that to be the only explanation. Furthermore, children are able to understand and produce a range of sentences that they have never heard before, something often referred to as the "creativity of language" (e.g. Chomsky 1966, 11). Speakers of any language unconsciously know things that are far too complex to be explained on the basis of habit formation. When children are exposed to linguistic data, they will learn to speak a language without instruction of any kind and without having to rely on response or corrective feedback. This means that even without access to negative evidence, i.e. information about ungrammaticality, children will still learn a language, because they do not need this evidence. Ayoun (2003) suggests that while explicit negative evidence may not be available to the child, implicit negative evidence might play a role. Implicit negative evidence should be understood as the absence of certain structures.

Although acquisition does not rely on negative evidence, it is seldom the case that children are never corrected. Evidence suggests, however, that young children tend to ignore such corrections. One typical way of giving corrective feedback to children is through so-called recasts. Ayoun defines a recast as "a caretaker's reformulation of the child's utterance with its original meaning but one or

more syntactic changes” (2003, 52). It is also typical, at least in some parts of the world, to talk to small children in a certain way, sometimes called *Motherese* or *babytalk* (e.g. Ayoun 2003, 51). Again, while simplified input might be a facilitative factor, is not necessary for children. This becomes evident when we look at parts of the world where neither Motherese nor recasts are the norm. Here, children learn how to master their first language successfully nevertheless (Pinker 1994, 40). All the child needs in order to acquire its first language then is to hear language being produced around it.

3.4 The Language Acquisition Device and Universal Grammar

The language faculty or innate ability to learn a language mentioned above is thought to consist of a Language Acquisition Device, LAD, which is accountable for the fact that children are able to learn a language so quickly and, under normal circumstances, always successfully (e.g. Chomsky 1986,3). The ability to learn a language successfully is thus independent of intelligence, parental encouragement, personality, social environment etc. Although certain factors may influence the speed of acquisition, all native speakers will acquire complete grammatical knowledge of their language. There is something special about the acquisition of a language that sets it apart from learning other skills like math or riding a bike. Pinker (1994) describes it as “a distinct piece of the biological makeup of our brains” and as “a complex, specialized skill, which develops in the child spontaneously, without conscious effort or formal instruction (...)” (18). Pinker further describes this ability as an instinct and explains that this term is meant to convey the idea “that people know how to talk in more or less the sense that spiders know how to spin webs” (1994, 18).

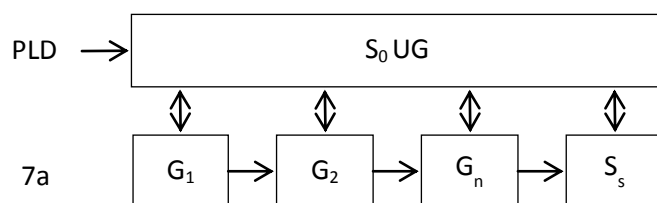
Universal Grammar (henceforth UG) makes up an essential part of our LAD. UG permits the language acquirer to build an internal grammar or mental representation of the specific language on the basis of input, often also referred to as Primary Linguistic Data (PLD). UG consists of invariant principles that are universal to all languages. It defines what a language can and cannot be like, in that no language can violate the principles of UG. Besides these innate universal principles, UG consists of parameters, which give rise to cross-linguistic variation and thereby all the different languages in the world.

3.5 Parameter-setting

Each parameter of UG must be set to a certain value. This parameter-setting process is triggered by the PLD and is an essential part of language acquisition. A cluster of seemingly unrelated syntactic properties can in fact be related to the same underlying parameter. The theory of parameter-setting therefore entails that children do not have to learn each and every rule of their language individually but can in fact organize the input so that a range of phenomena are associated under a particular parameter and acquired more or less at the same time, i.e. once the relevant parameter has been

set. Chomsky (1966) sums up these ideas of clustering and parameter-setting: “The language learner equipped with the theory of UG as a part of the initial state requires evidence to fix the parameter and then knows the other properties of the language that follow from this choice of value” (241). So even though principles and parameters are innate, the setting of the parameters to a certain value happens only after linguistic exposure.

The illustration below², 7.a, sums up this view of language acquisition by showing that the initial state, S_0 , in first language acquisition is UG, implying that children innately know something and are not blank slates before being exposed to language (PLD). The child acquiring its first language then begins to build up a lexicon and set the parameters, eventually ending up with a steady state grammar, S_s , of the language in question. On its way to S_s , the child goes through a number of developmental stages, indicated as G (for grammar) in the illustration (cf. section 4.5 on interlanguages).



3.6 The Critical Period

The relationship between first language acquisition and age has been a central topic in applied linguistics for many years. This connection was explored by the psycholinguist Lenneberg (1967), among others, by examining brain changes in young children and connecting these with the development of speech. It was suggested that the language acquisition device has to be stimulated at the right time, i.e. that there is a “critical period” in which acquisition must take place. While language normally emerges between the age of two and three, the upper limit to this critical period is early puberty (e.g. Lenneberg 1967, 158). The beginning of the critical period is determined by the maturation of the brain, while the end of the period is determined by the loss of brain plasticity.

Because the acquisition of a first language is the obvious and inevitable starting point for acquiring subsequent languages, this chapter has sought to outline this process thus laying the foundations for the comparison between first and second language acquisition in what follows.

² After White (2003, 3)

4. Second Language Acquisition

After having briefly outlined the process of first language acquisition, this chapter will turn to the actual interest of the thesis, namely second language acquisition (henceforth also referred to as SLA). A few obvious questions arise: What makes second language acquisition different from first language acquisition? Are the two processes similar or fundamentally different?

One important and indisputable difference already mentioned between the two processes is that first language acquisition is always successful and happens effortlessly, whereas second language acquisition is rarely very successful despite the determined effort put into it. A range of factors seem to influence the success of SLA. Although there is no general consensus on the importance of the individual factors, a few of the most commonly recognized will be outlined below.

First of all, factors such as age, learning environment and type of input will be discussed and compared to the situation that obtains in first language acquisition. Subsequently, characteristics of the individual learner, such as motivation and aptitude will be considered. Finally, two important concepts in SLA research, namely the concept of interlanguage and the concept of transfer, will be presented.

4.1 The age factor

As mentioned in the previous chapter, there is a critical period for first language acquisition which is thought to end around the onset of puberty. The debate concerning a critical period has also extended to the acquisition of subsequent languages. The idea that the developmental changes taking place in the brain also cause older second language learners to be less successful is intuitively appealing and in agreement with many people's experiences (compare e.g. immigrant children to their parents). But whether the difference is in fact caused by biological factors is still open to debate. Lenneberg (1967) stated that "foreign accents cannot be overcome easily after puberty" (176), a claim which has been tested and supported many times since then. But whether pronunciation is the only factor subject to a critical period is more uncertain. Even though many people learn second languages in adulthood, Lenneberg (1967) suggests that the "automatic acquisition from mere exposure to a given language seems to disappear" (176). This claim indicates that there is a biologically significant difference between young and adult learners of second languages. Scovel (2000) reviews the literature on the critical period for SLA and concludes that there is no agreement on whether or not morphology and syntax are also affected by the age factor. Nevertheless, the idea that age affects all areas of SLA is prevalent in the media, thus giving rise to a general "the younger the better" view (see e.g. Lightbown and Spada 1999, 67). So much so, Scovel (2000) states, that the Critical Period Hypothesis more than any other research area of applied

linguistics has influenced language teaching methods and especially the planning of language teaching in many countries. This has had the effect that (especially) English is introduced earlier and earlier “in the belief that this policy will ensure a pool of fluent ESL [English second language] speakers in the future” (Scovel 2000, 214). Despite the lacking consensus on the existence and possible scope of a critical period for SLA, the idea thus seems to have gained a foothold in society as a whole.

Every age has its advantages, however. While young children learning second languages may be less inhibited than teenagers and adults, the latter learners can make use of other learning strategies and approach the task of learning a language in a different way (see e.g. Lightbown & Spada 1999, 60-68 for comparisons of learners at different ages).

While it is undisputed that second language learners can draw on other cognitive skills than the young child acquiring its first language, there is no consensus on whether or not general learning strategies are the only cognitive mechanisms involved in SLA (cf. section 5.1 on the issue of access to UG in SLA).

4.2 Learning environment

There are many ways to come into contact with a second language. Some people learn it because they move to another country or associate with people of a different cultural background, thereby gradually beginning to understand and be able to use an extra language, i.e. they learn it in a natural setting. However, most of us learn a second language in a classroom. The question of whether the acquisitional setting makes a difference in SLA in terms of success and learning rate has long received interest both in and out of scientific circles. The two situations are obviously different, but it is less clear if the outcome is different as well.

Ellis (1990, 2) defines the difference between the two learning situations sociolinguistically in terms of domains affected by factors of location, participants, topics and purposes. As a result of these factors, the input available to the learner in the two situations is most likely different. Learning in a naturalistic environment entails listening to all sorts of language samples often from native speakers of the language. On the one hand, this input will be varied in terms of vocabulary and structures, as the learner will hear many different people speak about many different topics. On the other hand, this input will naturally include slips of the tongue, unfinished sentences, non-standard language use etc. On the basis of this unstructured input the learner will then draw his/her own conclusions without explicitly being taught what is right and wrong.

Meanwhile, the learner in a classroom is likely to be exposed to language which is somewhat simplified or modified by the teacher, as he/she will often try to start from scratch with very simple

syntactic constructions. Furthermore, the learner will most often receive plenty of explicit instruction on the sounds, word formation principles and syntactic structures of the language. The instruction often focuses on the conscious learning of grammar in the form of various exercises, drills, translations etc. How much emphasis is placed on this explicit and conscious focus on form depends on the language teaching approach underlying the activities in the classroom³. The input available to the learner in the classroom surely will not be flawless since other learners are likely to produce language with all sorts of errors that would hardly be found in a naturalistic setting. The learner in a classroom setting will also be exposed to the language only for short periods of time, while in a naturalistic setting the learner will often be exposed to language input for hours a day.

The opinion is widespread that learning in a naturalistic setting is better than learning in the classroom (described e.g. in Lightbown and Spada 1999, 91). This general perception is likely to be based on personal experiences from going abroad on holiday, for example. But even among researchers, it has been advocated that naturalistic environments are more fruitful for language learning. Hawkins (2001) questions whether the acquisitional setting really makes any difference in the long run. He argues that the difference in types of input has little effect on how the learner's language develops (Hawkins 2001, 18-24). Hawkins (2001) refers to studies showing that learners of German acquire word-order patterns in the same order regardless of whether they learn it in or out of the classroom. Hawkins (2001) concludes on the basis of studies from naturalistic environments, classroom settings and studies of learners having had some instruction that the course of development is not affected by the type of input. However, Hawkins (2001, 24) suggests that enhanced input in classroom situations may speed up the process of acquisition and, as one might expect, that it can affect performance as measured in grammar tests and other metalinguistic tasks (primarily testing explicit knowledge).

4.3 Negative evidence

While direct negative evidence is not readily available to the child acquiring its first language, it is almost always available in second language acquisition (cf. section 3.3). Especially learners in classroom settings have plenty of access to negative evidence, i.e. information about ungrammaticality.

As mentioned in section 3.3, a distinction can be made between direct and indirect negative evidence (see e.g. White 2003, 164). The former gives explicit information about what is disallowed in the form of correction or grammar teaching. There is no consensus on the value of this type of evidence, but it undoubtedly plays a great role in most language teaching approaches. Surely the

³ Due to space restrictions and in order to keep focus on the central topic of the thesis, different approaches to language teaching will not be considered here.

popular and intuitive perception of direct negative evidence is that it is of great importance. While the possibility of parameter re-setting in SLA will be considered in 8.1, it should be noted that, in principle, direct negative evidence should play no role in this process, since parameter setting is driven by positive evidence (cf. 3.5). However, indirect negative evidence (the absence of certain structures) is recognized by Chomsky (as cited in White 2003, 165) as being available to learners at all times thereby influencing acquisition.

4.4 Learner motivation and aptitude

There is no doubt that a small child is highly motivated to learn how to speak because it needs to be able to communicate with the world around it. It might seem that second language learners would naturally be less motivated, since it is rarely a necessity for them to learn an extra language. Motivation is thought to have a great influence on the success of SLA. Motivated learners who are eager to learn and have a positive attitude are often found to be more successful learners. But trying to determine how motivation is related to learning is like asking whether the chicken or the egg came first. Are learners successful because they are motivated, or do they become motivated because they are successful? Motivation can be connected to learning in a naturalistic environment versus in the classroom (see e.g. Hedge 2000, 22-24). In the former situation, the learner's communicative needs are often more obvious and readily perceivable seeing as he/she might have to communicate professionally with speakers of the language or take part in different social situations. Motivation is also linked to attitudes towards the second language community as the wish to communicate with member of the community will be a great incentive to acquire proficiency in the language (Hedge 2000, 23). Meanwhile, in the classroom learners have less tangible reasons for putting in an effort to learn a new language. Pressure to do well at an exam is not in itself a convincing motivational factor. Therefore the teacher in these contexts plays an important role in choosing topics of interest to the learners and varying classroom activities in order to avoid boredom, enhance positive attitudes and increase motivation (see e.g. Lightbown and Spada 1999, 57).

Despite this motivational factor, some learners are perceived to have an aptitude for language learning often associated with speed of acquisition. Specific tests have been developed to identify efficient second language learners by testing their ability to memorize sounds and new words, figure out the function of words and the underlying grammar of a language (Lightbown and Spada 1999, 53). Although such tests are not very popular within current communicative approaches to language teaching, Lightbown and Spada (1999, 54) suggest that teachers might benefit from specific information about the strengths and weaknesses (the so-called "aptitude profile") of their pupils when planning classroom activities.

4.5 The concept of interlanguage

Since the late 1960s, the need for a term to describe non-native grammars has been advocated independently by several researchers, most famously Corder (1967), Nemser (1971) and Selinker (1972). Instead of seeing non-native grammars exclusively as deviations from the target language and focusing on the errors that they displayed, these grammars began to be studied as languages in their own right. Nemser (1971) suggested the term *approximative system* to capture the idea that non-native grammars are neither like the L1 nor the L2. He described learner speech as “the patterned product of a linguistic system, L_a [approximative language]” and as being “internally structured” (Nemser 1971, 116). This point is important because it implies that non-native grammars are rule-governed and not just an accumulation of more or less random mistakes. Nemser (1971, 120) also notices that an approximative *system* can undergo rapid structural changes as the learning proceeds.

Corder (1967) supports the view that learner errors are not random and describes them as evidence of an underlying system which he refers to as the learner’s *transitional competence* (166). Those errors that can be traced back to performance factors are referred to as *mistakes* and are viewed as unimportant in surveying the underlying knowledge of the L2 learner (Corder 1967, 167). To account for the underlying linguistic system, Selinker (1972) introduced the term *interlanguage* which has become widely accepted and is still generally used today. The term has made its way into practically all areas of second language research. In fact, it is even adopted into the curricula of the Danish *gymnasium* which testifies to the wide acceptance of the concept.

Selinker (1972) also described a phenomenon called *fossilization* which is a special stage in the development of the learner’s interlanguage where he/she seems to freeze or fossilize certain structures before attaining native-like competence. Selinker (1972) underlines the fact that second language learners are rarely successful and states that “fossilizable linguistic phenomena” seem to stick to the *interlanguage* no matter how much input, explanation and instruction the learner receives (215).

4.6 Transfer

One of the significant factors setting SLA apart from first language acquisition is the concept of transfer. While transfer is definitely not relevant for the child acquiring its first language, it most likely plays at least some part in the acquisition of subsequent languages. A distinction is often made between *positive transfer* which facilitates acquisition and *negative transfer* or *interference*.

Regardless of scientific persuasion or preferred language teaching approach, transfer has long been a major factor underlying any view of SLA. Transfer has certainly played a bigger role in some

approaches to language teaching than in others. While phonological transfer is widely accepted to take place, transfer in other areas of language is a much more controversial subject (cf. chapter 6). Transfer was the key concept in the Contrastive Analysis Hypothesis (CAH) which was closely linked to Behaviorism and its ideas of habit-formation, as outlined in chapter 3.1. The habits of the L1 were thought to interfere with the L2 and SLA was seen as purely a matter of changing the habits of the learner. Lado (1957) assumed that “we can predict and describe the patterns that will cause difficulty in learning (...). Those structures that are similar will be easy to learn because they will be transferred and may function satisfactorily in the foreign language. Those structures that are different will be difficult because when transferred they will not function satisfactorily in the foreign language and will therefore have to be changed.” (59). CAH thus claimed to be able to predict where learners would make mistakes. Intuitively appealing as this might sound, it was since proven that some of these predicted trouble spots did not in fact pose problems for learners, while they made other errors not predicted by the theory (see e.g. Cook 1993, 11). According to Meisel (2011) and others, CAH overstated the role of transfer and, because of its roots in Behaviorism, neglected other factors determining SLA.

The idea that errors can to some degree be explained on the basis of transfer and interference still permeates SLA research and teaching approaches today, decades after the concept of interlanguage was widely accepted. Meisel (2011) argues that “[t]he crucial issue is to determine the nature of what is transferred. In our understanding today, transfer must necessarily happen in the mind of the learner”(5). Meisel (2011) further states that SLA research “suffered longer than first language research from its behaviourist heritage” (7). Transfer is still important in generative approaches to SLA assuming that parameters of the L1 are transferred to the L2, but here the mental representation of the language in the learner’s mind is in focus. How big a part transfer plays in SLA is continuously debated and the question is far from settled. This will become evident in the rest of this thesis and especially in the discussion in chapter 6 of transfer versus non-transfer theories.

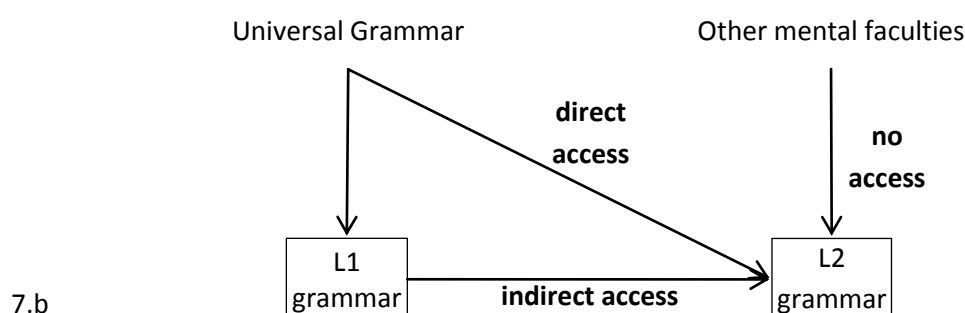
5. Generative approaches to second language acquisition

Other than the above mentioned differences between first and second language acquisition related to age, type of input, learning situation etc., one other question in particular is pivotal to generative approaches to language acquisition and has been hotly debated since the cognitive turn in linguistics: Is UG also involved in the acquisition of second or subsequent languages? Any comparison of the two processes will necessarily have to take this question into consideration.

The poverty of the stimulus argument that is crucial for the theory of UG in first language acquisition is also essential to research on SLA. Is there also a logical problem of acquisition when it comes to second languages? If learners of second languages learn things that go beyond the input they receive then that would indicate that there is also something innate at stake here. There is no agreement, however, on whether or not there is in fact an underdetermination problem in SLA that would call for explanations of innateness, or whether learners arrive at the abstract and complex structures of the second language on the basis of their first language. The real dispute revolves around the issue of how similar and how different the two processes are and whether second language learners come to know what they know in the same way as the child acquiring its first language, namely with help from UG.

5.1 The question of access to UG

In the 1980s, the debate started to focus on the so-called *access issue* (e.g. Cook 1993, 210). Different positions were taken as to whether or not UG remains available to L2 learners, and researchers looked for evidence that interlanguages were or were not controlled by UG. The hypotheses about access to UG ranged from those arguing that L2 learners have no access, to those in favor of direct access, with a middle position arguing for indirect access via the L1.



The illustration in 7.b⁴ shows that these early theories on the access issue consequently differed with respect to the role they ascribed to the existing parameter settings of the L1 (the issue of transfer will be dealt with separately in chapter 6, however) and to other cognitive learning strategies or mental faculties. They will be summarized briefly below as they form the background for other theories that are relevant to the main interest of this paper; namely transfer and parameter resetting.

5.1.1 No access to UG

One example of a *no access* position is the Fundamental Difference Hypothesis put forward by Bley-Vroman (1990) according to which there are major differences between L1 and L2 acquisition. The

⁴ After Cook 1993, 210.

main point is that “[f]irst language knowledge fills the role which Universal Grammar has in child language acquisition, and (...) general problem-solving principles fill the role of the language-specific learning procedures of children”(Bley-Vroman 1990, 5). The difference then is that L2 learners are drawing on the L1 grammar and not on UG itself. This is supported by Clahsen and Muysken (1986) who take the acquisition of German word order as their example and claim, much in line with Bley-Vroman, that while children have access to UG when acquiring their L1, adults can make use only of general learning principles in SLA. The back ground for their hypothesis is a comparison of studies of German children who effortlessly produce verb-final patterns in embedded clauses (OV) and raise the verb to the second position in main clauses (V2) with adult L2 learners who do not succeed in grasping the underlying word order pattern of German. It was concluded that interlanguages showed no evidence of being constrained by UG and that L2 learners are therefore not able to reset parameters of UG. This view of SLA will be further explored in sections 6.3 and 8.1.

5.1.2 Direct Access

Others have argued that L2 learners *do* have access to UG and that interlanguages are therefore controlled by the principles of UG. As a reply to Clahsen and Muysken, DuPlessis et al. (1987), for example, argued that interlanguages have underlying parameter-settings that can, at some point, differ from both L1 and L2, but are still characteristic of natural languages. Therefore, learners must have access to UG, it is argued (e.g. duPlessis et al. 1987, 57). Other studies that follow this line of argumentation will be explored in section 8.1, particularly the Full Transfer/Full Access of Schwartz and Sprouse (1994, 1996).

5.1.3 Indirect Access

Supposedly, somewhere in the middle are those who ascribe a certain role to UG in SLA. Access to UG, however, is thought to find place through the L1 grammar. The term, however, is very misleading and used differently in the literature on SLA. If it is meant to convey the idea that there is transfer in the initial state i.e. that learners start out with L1 parameter settings, then at least the Full Transfer/Full Access hypothesis falls under this heading as well. But it seems logical, keeping transfer out of the question for the time being, that there is either access to UG or there is not. The somewhat problematic term will therefore not be used throughout this thesis.

6. UG at different stages of acquisition

Throughout the 1990s, new theories developed about UG involvement in second language acquisition. Their names were disputed and changed a number of times as researchers began to investigate further in what form L2 learners had access to UG. The overall question of access or no access was gradually replaced by theories on the role of UG at different stages of acquisition: in the initial state, in developing interlanguages and in the steady state. Explicit claims were made about the starting point in SLA and the role of UG and the L1, respectively. As such theories on the initial state are a point of departure for explaining the development of subsequent stages, the most prominent of them will be explored in what follows

6.1 The initial state

As mentioned in section 3.5, the initial state (S_0) in L1 acquisition is UG. But there is still no agreement on what happens after the initial state; Does UG turn into the grammar of a particular language? Or does it stay in the mind as something separate from the L1 grammar? This point is important for research on SLA because theories about what happens to UG in L1 acquisition potentially say something about the initial state of L2. Bley-Vroman's Fundamental Difference Hypothesis (1990), mentioned above, rests on the assumption that UG turns into the L1 grammar which is why UG cannot be accessible in SLA according to this hypothesis. This is an example of an implicit claim on the initial state in L2. White (2003) points out that assumptions about the initial state were almost always implicit in theories on SLA until the mid 1990s when researchers began to make explicit claims about the nature of the initial state in L2. Before turning to these more recent hypotheses, it will be discussed briefly what is meant by an initial state in L2.

In connection to L1 research, the initial state refers to the a priori knowledge in the child's mind, i.e. what the child knows before being exposed to input in the form of primary linguistic data. But it is less clear what the term refers to in SLA, since the learner has obviously already had exposure to language and has experience in language acquisition. Precisely what the term is meant to convey is hard to say, though it probably refers to some "very early" state of SLA. As Meisel (2011, 95) points out, learners will have to have acquired at least some vocabulary and possibly also more before we can begin to investigate what their initial state is, and then it is no longer an initial state, in the strict sense. Meisel (2011, 95) further criticizes the fact that most research on the initial state is based on learners who have had much more than just a few weeks or months of language exposure. In fact, researchers rely on being able to infer something about the initial state on the basis of data from later periods, suggesting that the initial state is never really observable in SLA (Meisel 2011, 95).

Although this is certainly a relevant issue to raise, it is hard to see how it can be avoided altogether, seeing that learners have to have learnt *something* before we can test their knowledge.

When it comes to theories on the initial state, UG and L1 are the two possible sources of knowledge. There are a number of hypothetical possibilities of combining knowledge from these two sources. With regard to transfer from the L1, it can be assumed that learners can either learn a second language without reference to the first language (no transfer), they can rely completely on their first language (full transfer), or they can transfer only parts of the L1 (partial transfer). These possibilities can then be combined with three hypothetical possibilities for UG as a source of knowledge (corresponding to the positions described above, namely full access, partial or indirect access and no access) thus forming different scenarios for the initial state and interlanguage development. However, not all of these possibilities will be considered here in any great detail, as only the most influential or perhaps most contradictory hypotheses are relevant for the purpose of this thesis.

Hypotheses about the initial state can roughly be placed on a continuum ranging from complete transfer to no transfer. On one end of this continuum, we find the Full Transfer/Full Access Hypothesis (Schwartz and Sprouse 1994, 1996) according to which SLA builds on L1 knowledge. On the other end of the continuum is Pienemann's Processability Theory (Pienemann 1998) which assumes that the L1 plays a minor role and that learners across languages follow the same learning route. Somewhere in between these two opposites we find Eubank's Valueless Features Hypothesis (1994) and the Minimal Trees Hypothesis of Vainikka and Young-Scholten (1994, 1996). These hypotheses assume that only parts of the grammatical representations of the L1 are transferred. The approaches will be presented below with a focus on the two most contrasting theories at each end of the continuum.

6.2 Transfer approaches

6.2.1 Full Transfer/Full Access

The Full Transfer/Full Access Model (henceforth FT/FA) of Schwartz and Sprouse (1994, 1996) maintains that the initial state of L2 acquisition is the final state (the steady state, S^s) of L1 acquisition. This implies that the initial states of the two types of acquisition are very distinct in that transfer plays a major role in L2 acquisition. Nevertheless, the cognitive processes underlying L1 and L2 acquisition are similar, both being constrained by UG (Schwartz & Sprouse 1996, 42). Critics of the FT/FA model often compare it to the Contrastive Analysis Hypothesis mentioned in section 4.6 (e.g. Meisel 2011). The fundamental difference, however, is that even though both hypotheses assign a

central role to transfer in L2 acquisition, transfer in FT/FA refers to abstract entities, underlying structures and parameters, while in CAH it referred to surface properties (“habits”).

Everything, i.e. all abstract properties of the L1, is thought to transfer, excluding specific lexical items. Considering the kinds of word order phenomena discussed in this thesis, the FT/FA hypothesis predicts that learners will transfer characteristics of the L1 with regards to which functional heads verbs can raise to (assuming that the verb is generated in the head of VP). Furthermore, it is assumed that learners transfer the head-directionality parameter setting (determining whether a given projection is head-initial or head-final).

Schwartz and Sprouse test their hypothesis on an adult native speaker of Turkish acquiring German as an L2. Turkish and German share the OV word order, but only German has the V2 constraint which partially obscures the underlying OV order in declarative main clauses (cf. section 2.2). The Turkish learner is therefore an appropriate candidate for testing whether the predictions of FT/FA are verifiable. The hypothesis predicts that the learner will transfer the head-final order inside VP and place both finite and nonfinite verbs in final position because of the lacking V2 constraint in Turkish. Schwartz and Sprouse do in fact find that the Turkish L2 German learner always places non-finite verbs in final position. They do not, however, find examples of him also placing finite verbs in final position. Although this is contradictory to the hypothesis, Schwartz and Sprouse contend that this missing data can be explained by a hypothetical stage in development which has preceded the data collection period, so that the learner has in fact initially produced sentences with finite verbs in clause-final position. The authors “assume that this is a gap in Cevdet’s data, but that he also passed through such a stage [...]” and introduce a stage which they label “Stage 0” (1996, 44). Meisel (2011) criticizes this way of circumventing the evidence and claims that “postulating an unattested preceding stage is hardly a satisfactory solution” (99). Schwartz and Sprouse are not discouraged by the fact that the Turkish learner was never recorded producing sentences with finite verbs in final position causing them to assume a stage 0. Instead, they argue that at each stage of his development, the learner shows clear signs of influence from his L1. Their specific arguments for evidence of L1 transfer will not be discussed here, but the main claim, namely that transfer affects and guides the development of interlanguages from the initial state, should be underlined.

FT/FA thus predicts that learners of different L1s acquiring the same L2 will behave differently in the acquisition process and follow different developmental routes based on their different initial states. The hypothesis makes claims about grammars at different stages. While *full transfer* is the hypothesis’ claim about the initial state, *full access* is its claim about subsequent stages and about the possibility of restructuring grammars and resetting parameters. This part of the hypothesis will be further explored in section 8.1.

6.2.2 Minimal Trees Hypothesis

Another hypothesis which also assigns a central role to transfer in the initial state of L2 acquisition is the Minimal Trees Hypothesis of Vainikka and Young-Scholten (1994, 1996). This hypothesis assumes partial transfer of L1 properties. More specifically, it is assumed that initial state grammars lack functional categories and their associated projections (IP, CP and DP). This means that in the initial state, sentences are represented as VPs. The lexical properties present in the initial state are derived from the L1 and have the head-directionality parameter settings of the L1. From the very beginning, interlanguage representations are either head-initial or head-final, meaning that the verb comes before or after its complement. Vainikka and Young-Scholten (1996) assume gradual development of phrase structure after the initial state claiming that “the development of functional projections is driven solely by the interaction of X'-Theory with the target-input”(2). The functional categories are believed to be acquired or added to the mental representation of the learner in a fixed order, so that IPs are added before CPs. Thus, the input cannot alter this assumed sequence of acquisition. Furthermore, Vainikka and Young-Scholten postulate “an intermediate stage with an underspecified functional projection” (1994, 265) which they call “FP”. This category is meant to account for verb-raising before the acquisition of CP (which the hypothesis claims is the last projection to be acquired).

Vainikka and Young-Scholten use production data from adult learners of German with different backgrounds to support their hypothesis. Some learners have head-final L1s (Turkish and Korean), while others have head-initial L1s (Spanish and Italian). The hypothesis predicts that these two groups of learners will have different initial states due to their transfer of the head-directionality parameter from their L1s. Vainikka and Young-Scholten do in fact find that Turkish and Korean learners start out by assuming that German is head-final, while the Spanish and Italian learners start out with an incorrect assumption about headedness and only later set this parameter correctly for German (1996, 15). But the hypothesis' main claim, namely that early grammars only hold lexical categories, and therefore only VPs, is more controversial. Vainikka and Young-Scholten assume that if inflectional morphology and function words are absent in the production data of the learners, then the associated category is also absent in the learner's mental grammar. Their rather arbitrary limit for determining presence of a lexical item in the data is that it has to be produced in at least 60% of obligatory contexts (1994, 276). The fact that learners in the early stages rarely use modal verbs and auxiliaries, both of which are assumed to be generated in I^0 , together with an often lacking inflectional morphology for person and number in the data, is taken as evidence that there is no IP in their grammar. This line of argumentation is continued for the other functional projection to do with verb movement, CP: “In addition to the lack of evidence for IP/AgrP in these learners' data, there is also no evidence of a CP projection” (Vainikka and Young-Scholten 1996, 19). Because they find no

wh-elements or complementisers introducing questions and subordinate clauses respectively, Vainikka and Young-Scholten conclude that CPs are absent. As pointed out by White (2003, 73), all it takes to dismiss the Minimal Trees Hypothesis is evidence that functional categories are in fact present in early grammars. White (2003, 73) reviews a range of studies that have in fact shown the presence of functional categories in early L2 grammars e.g. manifested through the presence of negations, determiners, subject-auxiliary inversion and more. While a critical review of the literature on this hypothesis lies far beyond the scope of this thesis, suffice it to say that the Minimal Trees Hypothesis is, at the very least, quite controversial in its claims and that there is no general agreement on its predictions for L2 acquisition.

Applied to the specific context of this thesis, the Minimal Trees Hypothesis predicts that Danish learners of English start out with a head-initial VP resulting in VO order. Furthermore, the hypothesis predicts that Danish learners will *not* transfer the V2 phenomenon since this involves movement of the verb out of the VP to a functional projection which is thought to be absent in early L2 grammars. When functional categories emerge, their properties will not be derived from the L1 but only from L2 input. As the following sections will show, this prediction is in stark contrast to both underlying assumptions of teaching approaches today (chapter 7) and to intuitional data from Danish learners (chapter 9).

The Minimal Trees Hypothesis also assumes access to UG and the possibility of restructuring, which will be dealt with in section 8.1.

6.2.3 Valueless Features Hypothesis

Like FT/FA, the Valueless Features Hypothesis (VFH) of Eubank (e.g. 1994) claims that both lexical and functional categories of the L1 transfer to the L2 and constitute the initial state. But although functional categories from the L1 are available to the learner, VFH claims that their feature strength does not transfer. Features can otherwise be either strong or weak and is in some theories seen as the motivating factor for verb movement. If the feature strength of I is strong, then the finite lexical verb raises out of V. But if feature strength is weak, as in English, the verb stays in its VP. Eubank claims that feature strength is inert, i.e. valueless, in the initial state of SLA. One of the things Eubank (1994) points to in his presentation of the theory is data from a Spanish learner of L2 German indicating that there is a period in which subject-verb inversion, i.e. V2, is optional so that the learner sometimes produces sentences with and sometimes without V2. Eubank argues that this is due to the fact that feature strength is valueless in the initial state of SLA. Once the learner acquires inflectional morphology, he or she will also acquire feature strength, since the two are thought to be correlated.

VFH predicts that learners will behave in the same way regardless of whether their L1 has weak or strong features. The hypothesis thus expects that Danish learners of English will produce sentences with and without V2, not because of transfer or interference from Danish of the V2 parameter setting, but because the verb can optionally raise or not raise. Similarly, Danish learners of German should produce sentences with and without V2, even though the two languages both have V2, because of valueless features. The hypothesis thus excludes e.g. the possibility of non-V2 interference from English when this is acquired before German (a possibility to be further discussed in section 10.3). From the assumption of a correlation between inflectional morphology, specifically person agreement, and feature strength follows the prediction that once learners have acquired subject-verb agreement, they will also have acquired feature strength and therefore stop optionally raising verbs (Eubank 1994, 378).

In sum, the Valueless Features Hypothesis claims that interlanguages are initially characterized by optional verb raising due to inert features. Assuming that valueless features would have this effect (considering that strong features are thought to cause movement and weak ones not) is far from uncontroversial. As White points out, “[s]ince inert implies not strong, all verbs should remain within the VP” (2003, 87). Even though it is unexplained why inertness should cause movement to be optional, the hypothesis at least makes specific predictions which again make it falsifiable.

6.3 A non-transfer approach

6.3.1 Processability Theory

A completely different theory of the initial state in SLA is found in Pienemann’s (1998) Processability Theory (henceforth PT). According to this theory, the L1 plays only a minor role, since no transfer is thought to take place. Instead, PT states that learners with different L1s will behave similarly and follow the same route of development. This development is not constrained by UG, neither in whole nor in part, as suggested by the transfer approaches presented above. In this respect, PT is in line with the Fundamental Difference Hypothesis of Bley-Vroman (1990) (cf. section 5.1.1). On the contrary, the development of an interlanguage is from the very beginning, i.e. from the initial state, constrained by processing principles determining which grammatical structures the learner is able to learn at a given stage of development. Pienemann uses the concept of a so-called language processor in L2 which is not the same as in L1 and he states that “one cannot take it for granted that L1 structures are processable in the L2” (1998, 333). Pienemann (1998) therefore finds full transfer “highly implausible” (333). According to PT, every learner develops an interlanguage grammar

stepwise constrained by a developing ability to process. This ability to process is independent of the L1.⁵

While PT excludes transfer in the initial state of SLA, Pienemann (1998) suggests that transfer may occur at later stages: “I hypothesise that L1 procedures may be transferred when they are processable within the overall interlanguage system, i.e. as soon as the necessary processing prerequisites have been developed” (82). This view of transfer has been further explored in later theories based on the original Processability Theory. The Developmentally Moderated Transfer Hypothesis (henceforth DMTH) (e.g. Håkansson et al. 2002) thus incorporate transfer into PT, but only transfer after the initial state and apparently only positive transfer.

With respect to verb placement, PT claims that learners in the initial state consistently use SVO order regardless of the word order of the L1. There should therefore be no basic word order transfer in the initial state of SLA. The SVO order is referred to as the “canonical word order” within PT (contradicted by e.g. Schwartz and Sprouse 1994 and Vainikka and Young-Scholten 1994, cf. sections 6.2.1 and 6.2.2).

The idea of a canonical word order is also defended by DMTH and it is argued that “there is a clear preference in early IL [interlanguage] to follow canonical word order (SVO) without verb-second (SVO/–V2), irrespective of the word order in the source and target language” (Håkansson et al. 2002, 253). The reason why learners do not transfer V2 from their L1 is, according to DMTH, that V2 requires processing resources which the L2 learner does not have in the initial state. In section 10.3, I will return to a discussion of the study by Håkansson et al. (2002) of Swedish learners of German which they claim support the Developmentally Moderated Transfer Hypothesis and disproves FT/FA showing that V2 is not transferred.

This overview of selected theories on the initial state has shown that there is certainly no consensus among second language researchers on the role of transfer in the initial state. While in some theories transfer is the be all and end all, others ascribe only a minor role to transfer. The following section will, on the one hand, endeavor to evaluate to what extent, if any, this range of theoretical view points on transfer is also reflected in grammar books, teacher instructions and other literature on the subject of grammar teaching. On the other hand, it will try to deduce information from this literature about specific problem areas for Danes acquiring English and German.

⁵ Due to space restrictions and relevancy to the main theme of this thesis, I will refrain from going into the psycholinguistic framework of Processability Theory, Levelt’s model of language production and the Lexical Functional Grammar which partly form the background of the theory (see Pienemann 1998, 54-73 and 93-116).

7. Word order problems for Danes

This section will look at the specific problems Danes meet when learning English and German, respectively. Again, focus will exclusively be on verb placement and the related consequences for word orders. The first part of each section will use contrastive analyses, teacher instructions and grammar books written specifically for Danish learners as a point of departure, as these should give an idea of the types of word order problems that typically occur in the second and third language acquisition of English and German.

7.1 When Danes begin to learn English

When searching for descriptions of word order problems in the L2 English of Danish learners, it quickly becomes clear that one area in particular seems to cause problems, namely the order of subject and verb. A small sample of different grammar books has been chosen here to represent the type of literature directed at Danish learners and their teachers and targeting specific problem areas.

In *The Danish Learner* (Davidsen-Nielsen et al. 1982), the typical distinction between straight and inverted word order is outlined. It is then stated that “[l]earning problems in this area are caused by the fact that the rules for when to use either of these types of word-order are not quite the same in the two languages: by and large, Danish makes more use of the inverted word-order than English.” (Davidsen-Nielsen et al. 1982, 42). The book is written as a manual for language teachers instructing them on where to focus their attention. The authors establish that the straight word-order (subject before verb) is the neutral one and most widely used in English. They then go on to list each exception to the basic word order separately. It is interesting that the authors choose to describe and contrast the two languages not in terms of being V2 or not, but by focusing on the specific contexts where Danish allows for inversion and English does not. This approach is typical of the genre, namely teacher instructions, in that it focuses on the specific problems that need to be addressed in the classroom and gives a very detailed account rather than looking at the overall structural differences between the languages that cause problems for learners.

In line with this approach is a commonly used book of grammar exercises for the Danish *gymnasium*; *Fejlstøvsuger* (Bøgh and Hovgaard 1987). Here, the description of the word order in the two languages is kept to a minimum (English is established as always having straight word order and Danish as having both straight and inverted) and very little space is devoted to exercises on differences with respect to verb placement. The book is directed at pupils in the Danish *gymnasium*, typically teenagers, and obviously the explanations and the terminology are influenced by that fact in

that they are kept relatively simple and are always exemplified. What can be inferred from this example of a book of grammar exercises, in spite of the scarcity of space devoted to the subject, however, is that Danish learners are expected to have difficulties with finding out when to invert subject and verb in English.

This same fact is repeated, although in a different terminology, in *A Concise Contrastive Grammar of English for Danish Students* (Hjulmand and Schwarz 2008). This book is written for students of English at bachelor level at Danish universities which explains why it deals with the subject in a slightly different way, e.g. making more general comments about English being an SVO language. In general, however, the same problem areas are pointed out as it is stated that “Danes need to pay special attention to the order of subject and verb”(Hjulmand & Schwarz 2008, 31). Again, it is established that “the subject is normally placed before the verb in declarative sentences in English” (Hjulmand and Schwarz 2008, 37). As would be expected of a grammar book at this level, Danish is described as a V2 language. It is pointed out that “[i]f Danes transfer this verb-second order into English, the result will be fine if the sentence starts with the subject (...), but will be ungrammatical in most cases where the sentence begins with another constituent” (Hjulmand and Schwarz 2008, 45).

In the book *Learner English –A teacher’s guide to interference and other problems*, the Scandinavian languages Norwegian, Swedish and Danish are grouped together and dealt with in the same chapter (Davidsen-Nielsen and Harder 2001). Here it is predicted that speakers of Scandinavian languages will have problems with the constituent order of English, because subject-verb inversion is more restricted in English: “In the Scandinavian languages, it is easy to begin a sentence with something other than the subject- which is then placed after the verb. In English, only adverbials are regularly ‘fronted’, and this does not generally cause subject-verb inversion” (Davidsen-Nielsen and Harder 2001, 26).

Finally, *Contrastive Studies in Syntax* (Klinge 2000) is written to address those problems that seem to stick even after at high proficiency level of English has been reached. More specifically, the book’s three articles address those problems that Danish learners have related to the V2 constraint: “A good many of the differences of constituent structure observed between English on the one hand and Scandinavian and German on the other may be traced ultimately to (...) the so-called *verb-second constraint*”(Klinge 2000, 7). The articles in the book point out “trouble spots for L2 learners” (Klinge 2000, 7) where their Danish intuition will cause them to avoid certain structures. The intended reader of this book is either a proficient English learner who has studied English at the university, a professional translator, or, more likely, teachers at the Danish universities. For example, one of the articles looks into the strategies that Danish translators make use of when translating from English

while trying to circumvent the fact that English allows for a succession of adverbials before the verb while Danish, with its V2 constraint, does not. Furthermore, the implications of the V2 constraint are explained in detail within a field analysis approach to sentence structure. In the preface of the book, the editor clearly points out that the assumption that identifying structural differences between languages means being able to predict problem areas for learners is “oversimplified” (Klinge 2000, 7), but he nevertheless underlines the necessity of addressing these contrasts in language teaching: “We can either cross our fingers and hope that the difference in adverbial distribution will somehow seep in automatically via exposure, which indeed it does with some students, thus in essence obviating any need for language teachers, or we can make it a component, albeit a small one, of our language teaching strategy to focus attention on differences of constituent order” (Klinge 2000, 8).

While these selected works on English grammar describe the subject differently, are directed at different readers and partly serve different purposes, they all have one thing in common: To some degree, they all assume transfer from the L1, Danish, to the L2, English. As demonstrated above, most of the authors even make explicit claims about the role of transfer.

It can be inferred from these examples of ways to handle the subject of verb placement that Danes are expected to have problems where English and Danish differ with respect to the ordering of subject and verb. This indicates that Danes transfer the structures of their first language and that the transfer affects not only the initial state but continues to play a part even after a high proficiency level has been achieved.

7.2 When Danes begin to learn German

By looking at grammars of German written for different purposes and directed at different readers, this section will investigate where Danes typically have problems with respect to verb placement when they begin to learn German.

In an introduction to German grammar, *Tysk Basisgrammatik* (Bepler et al. 2000), written for pupils in the Danish *folkeskole* and intended for the first 4-5 years of German language teaching, verb placement in main clauses is described in the following way, avoiding any overall comments on typology and comparisons with other languages: “In the present and past tense, the verb is placed right after the subject (...). In the perfect, past perfect and future tense, the verbs are placed differently (...). The past participle (...) and the infinitive (...) are placed in the end of the main clause. The finite auxiliary verb (...) is placed right after the subject.” (Bepler et al. 2000, 93)⁶. In the same

⁶ Translated from the Danish text: “I nutid og datid står udsagnsordet lige efter grundledet (...). I førnutid, førdatid og fremtid er udsagnsordene placeret anderledes (...). Den korte tillægsmåde (...) og navnemåden (...) står sidst i hovedsætningen. Det personbøjede hjælpeudsagnsord (...) står lige efter grundledet” (Bepler et al. 2000, 93). The parentheses, (...), mark that example sentences have been left out.

way, verb placement in subordinate clauses is described as being sentence-final and examples are given of the different tenses showing that the finite verb is always placed after the non-finite verb. This very basic grammar points out all of the places where the learner is expected to have difficulties due to the difference between Danish as an SVO and German as an SOV language. It does so by using plenty of examples while avoiding potentially confusing (for the young learners) terminology in pointing out typological contrasts between the languages. The authors of this grammar book do not, however, devote space to explaining or giving examples of how the V2 constraint affects word order. Presumably, the authors have considered this knowledge unnecessary for a learner coming from a language with V2.

In another beginner's grammar, *Regnbuen- en differentieret tysk grammatik* (Jaentsch 1998), the contrast with Danish is made more explicit in that every chapter of the grammar begins with a comparison with Danish. The chapter on word order thus points out that the verb is in second position in main clauses as it is in Danish. The differences between the languages with regard to verb placement (SVO vs. SOV) are then described and exemplified. In every case, it is explicitly stated that the SOV order differs from Danish, e.g.: "In a subordinate clause, the finite verb is placed finally, unlike in Danish" (Jaentsch 1998, 122)⁷.

These two books represent grammars of the type directed at young learners at beginner's level, but although their way of describing the word order of German is similarly simply and pedagogical, there is a significant difference between the two. Jaentsch (1998) has chosen a description which is much more contrastive in nature than the one presented by Bepler et al. (2000). This gives an even clearer indication that a high degree of L1 transfer is assumed. However, the contrast and comparison with Danish can also be seen as a pedagogical way of overcoming the fact that the young learners for whom the grammar is intended probably have very limited knowledge of grammatical terminology and typological differences between languages in general.

The main objective of these two grammar books seems to be to turn learners' attention to the differences in word order related to the SVO and SOV structures. This is hardly surprising. The fact that German V2 is mentioned at all and not completely left out on the assumption that it will cause no problems at all is slightly more interesting. In fact, Danish learners *do* seem to have problems here despite the similarities of the languages. In *Kontraster og Fejl*, Fabricius-Hansen (1981) looks at Norwegian learners of German to find out where they have problems. Since Norwegian is similar to Danish with respect to V2, the contrastive analysis is highly relevant for the topic of this thesis as well. As Fabricius-Hansen (1981) points out, "most German teachers know word order errors of the

⁷ Translated from the Danish text: "I en bisætning står det personbøjede udsagnsord sidst – I modsætning til dansk" (Jaentsch 1998, 122).

type *Gestern ich war nicht zu Hause (...)” (118)⁸. This is a clear-cut V2 error and Fabricius-Hansen states that the only way to explain this error is to take transfer from English into consideration (1981, 118). In another publication, Fabricius-Hansen (2010) states that the V2 constraint causes problems for learners coming from V2 languages as well, but suggests another reason: “Thus learners of very different mother tongues produce ungrammatical constructions time and time again like *gestern, ich kam zu spät (...)”(2010, 225)⁹. Here, Fabricius-Hansen suggests that the fact might have to be explained not in terms of transfer, but in terms of some universal structure principles which cause even learners from L1s with V2 to produce non-V2 sentences (cf. the hypotheses presented in sections 6.2.1 and 6.3.1).

To sum up, Danes beginning to learn German are expected to have problems with regards to verb placement caused by the typological difference between the two languages. The SOV structure of German is predicted to pose a problem for Danes and much attention is therefore paid to this area in educational literature. Danes are also to some degree expected to have problems with verb placement where the two languages are similar, namely with regard to the V2 constraint. It was provisionally suggested that this fact could either be caused by transfer from English or have to do with universal processing and structural principles. This will be further discussed in chapter 10.

8. Developing interlanguages

After the presentation in chapter 6 of different hypotheses about the initial state of SLA, this chapter will go on to consider the nature of interlanguages after the initial state. As already mentioned in chapter 6, hypotheses vary as to their view on the role of UG in SLA. On the one hand, some theories claim that learners have access to UG and that SLA is therefore in most respects similar to 1st LA (e.g. Schwartz and Sprouse 1994; Vainikka and Young-Scholten 1994, and Eubank, 1994). On the other hand, there are theories which maintain that UG is not available to learners of second languages, that the two processes are fundamentally different and that learners draw on cognitive learning mechanisms other than UG (e.g. Bley-Vroman 1990; Neeleman and Weerman 1997). These opposing views are reflected in theories about interlanguages after the initial state, how interlanguage grammars develop and how they are constrained. While the child sets the parameters of its first language after exposure to input (cf. 3.5), it is not clear whether parameter setting plays a role in SLA. One of the dividing questions in SLA research is thus: Can the parameters of the L1 be re-set for

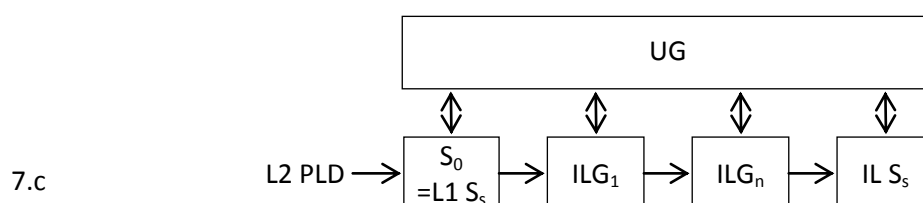
⁸ Translated from: “[D]e fleste tysklærere kender vel til ordstillingsfejl af typen *Gestern ich war nicht zu Hause (...)” (Fabricius-Hansen 1981, 118).

⁹ Translated from : “So produzieren Lerner ganz verschiedener Ausgangssprachen immer wieder ungrammatische Konstruktionen wie *gestern, ich kam zu spät (...)” (Fabricius-Hansen 2010, 225).

subsequently acquired languages? A presentation of two opposing views on parameter re-setting will be given below.

8.1 Parameters re-setting

The Full Transfer/Full Access hypothesis of Schwartz and Sprouse (1994, 1996) was considered with respect to the role of transfer in section 6.2.1. As mentioned, FT/FA maintains that the learner has full access to UG throughout the whole acquisition process. This means that while the learner starts out with the parameter settings of the L1 (recall that both lexical and functional categories are thought to transfer), he or she is able to restructure the mental representation of the language by re-setting parameters. This restructuring is caused by the L2 input when this does not match the L1 parameter settings.



The illustration above, 7.c, shows that FT/FA sees each stage of the acquisition process as a distinct interlanguage grammar and that UG interacts with the input (L2 PLD) at each stage to reevaluate and restructure the interlanguage (Schwartz and Sprouse 1996, 41). Schwartz and Sprouse do not make any predictions about when the influence of transfer from the L1 ends and when restructuring begins. Nor do they predict how long the restructuring process will take: “In some cases, this restructuring may occur quite rapidly; in others, much more time may be needed” (Schwartz and Sprouse 1996, 41).

As mentioned in 6.2.1, Schwartz and Sprouse (1994) look at production data from a Turkish learner of German which they divide into stages (stage 0, 1, 2 and 3). They argue that the development of the learner’s interlanguage shows signs of being constrained by UG. While the Turkish learner starts out with SOV order (shared by L1 and L2), he only later starts producing sentences with V2 which is characteristic only of German. As V2 sentences start occurring in stage 2, there are still many cases of non-V2 sentences. It is in the difference between these sentences with and without inversion, Schwartz and Sprouse argue, that UG becomes evident. The learner makes a distinction with respect to inversion, which is not found in German (nor in Turkish, obviously, since

the V2 constraint is absent altogether), between sentences with a personal pronoun as subject and sentences with full a DP as subject. In sentences with a pronominal subject, the learner almost always inverts subject and verb, while the opposite goes for sentences with a non-pronominal subject. Schwartz and Sprouse relate this finding to case-checking and argue that the learner's interlanguage exhibits an incorporation option of case-checking similar to the one found in French. Here there is an asymmetry between pronominal and non-pronominal subjects when it comes to inversion so that only pronominal subjects are allowed to occur after the verb (Schwartz and Sprouse 1996, 47-48). By proposing that pronominal subjects be analysed as clitics in stage two of the learner's interlanguage development, it is suggested that the learner can resort to options of UG found in neither his L1 nor the target language.¹⁰

FT/FA predicts that L2 learners may or may not end up with a steady state, S_s , that matches the target language. Schwartz and Sprouse mention input or linguistic data as one reason why a learner's interlanguage may fossilize while still diverging from the target language. Either the negative evidence (which they suggest is ineffective in the first place) or the positive evidence available to the learner can be insufficient (Schwartz and Sprouse 1996, 42).

8.2 No parameters in interlanguages

An opposing view, represented by e.g. Neeleman and Weerman (1997), holds that interlanguages are not UG-constrained. This view is similar to the Fundamental Difference hypothesis of Bley-Vroman (1990) mentioned in section 5.1.1. Neeleman and Weerman (1997) argue that there are no parameters in interlanguages. This means that learners have to learn each construction of the L2 separately. They thus follow Clahsen and Muysken (1986) (cf 5.1.1) in claiming that learners are guided by general learning strategies rather than UG when acquiring a second language.

Neeleman and Weerman (1997) compare L1 acquisition where the setting of the OV/VO parameter (also referred to as the head-directionality parameter or as the headedness of the VP) seems to have a range of effects, to SLA to see if the same is in evidence here. The languages under investigation are Dutch, which has OV order like German, and English with VO order. They argue that the following phenomena are associated with the OV/VO parameter¹¹: Scrambling (which is permitted in Dutch, but not in English), particle distribution, extraction from the object of a particle verb and exceptional case marking (which is possible in English but only rarely possible in Dutch). Neeleman and Weerman (1997) conclude that once children acquiring their L1 have set the OV/VO

¹⁰ The details of the account of subject clitics in French and the assumptions on which this explanation of interlanguage development builds will not be explored here, but can be found in Schwartz and Sprouse (1994, 343-346).

¹¹ These topics will not be dealt with in this thesis, as they do not appear in the grammaticality judgment task presented in chapter 9. For a detailed account see Neeleman and Weerman (1997, 127-143).

parameter, there are certain mistakes which they never make (152). Knowledge of one construction implies knowledge of another construction associated with the same parameter, it is claimed. It is also noted that “even if there is parametric clustering this does not mean that all consequences of the pertinent parameter can be observed simultaneously” (Neeleman and Weerman 1997, 143). The children in the studies under analysis do not in fact start using all the above mentioned constructions at the same time, which is explained by the fact that they have to be able to produce complex sentence structures before some of the constructions can be shown. Therefore Neeleman and Weerman use a different criterion for determining whether the constructions are related to the same parameter; Once the child starts producing these constructions, errors have to be absent (1997, 144). The fact that certain mistakes are never made is seen as evidence that the relevant phenomena cluster under one parameter.

When Neeleman and Weerman look at SLA, however, the results are different. They use grammaticality judgment tasks (see section 9.2 for a description of such tasks) on English learners of Dutch and Dutch learners of English and compare the results to control groups of adult native speakers of the two languages. The results show that even if learners master the basic word order (VO for English and OV for Dutch), they do not show knowledge of the related constructions. In both L2 groups, the percentage of learners who master both basic word order *and* all the related constructions is zero % (Neeleman and Weerman 1997, 158).

Their main argument is therefore lack of clustering; those properties which are expected to cluster under one parameter and do so in L1 acquisition do not cluster in SLA. They sum up their findings by stating that “[b]asic word order and the constructions related to it are acquired independently in L2 acquisition, and therefore knowledge of one of these constructions should not imply knowledge about the others” (Neeleman and Weerman 1997, 159).

This section has presented two opposing views on the possibility of parameter re-setting in second language acquisition. It has been shown that the possibility of restructuring grammars is dependent on the assumption of access to UG.

9. Word order in the interlanguages of Danish learners

9.1 Aim of the grammaticality judgment tasks

The purpose of conducting the two grammaticality judgment tasks presented below was to gather more concrete information about Danish learners of English and German at different stages. In the search for literature for this thesis, it quickly became clear that there was a great data gap in the area of interlanguage syntax of Danish learners of both English and German. Although a wealth of contrastive analyses and grammar books exists (cf. chapter 7), it became clear, after searching high and low, that there are no available data based on actual studies of the interlanguages of Danes with a focus on verb placement. The most promising data about interlanguage verb placement therefore stem from a closely related language, namely Swedish, where such investigations of verb placement have been carried out with respect to German (to be discussed in section 10.3). Similar as the two languages might be, small differences do exist with respect to verb placement (see e.g. Bohnacker 2005). Therefore, verb placement in the second and third language acquisition of Danes might be a potential area for future research as it would certainly be interesting to see more in-depth studies that could shed new light on the role of transfer and the development of interlanguages.

The idea for conducting the grammaticality judgment tasks thus arose out of a need for relevant data on which to base the discussion of interlanguage verb placement. More specifically, by using questionnaires the aim was to find out which word orders the participants would accept as grammatical and which they definitely would not. By choosing learners at different stages in the educational system, the hope was to get an insight into the process these learners go through when acquiring word order. One questionnaire was used to test groups of learners of English and another to test different groups of learners of German. The participants in the two tests are thus not the same. The two tasks will be presented and discussed separately after a general comment on the nature of the data conducted through these types of tasks.

9.2 Methodology

Grammaticality judgments are widely used in linguistics and particularly in language acquisition research to gather data on the intuition of speakers of a language. There are many different forms of these tasks, but typically the participants are presented with a number of sentences and asked to judge on a scale whether or not they are grammatical. Sometimes there are just the two options, yes or no, but most often there are at least an extra choice for uncertainty and often a whole scale of ranking opportunities. The sentences might, for example, be presented as sound bits, on a computer, or in written form on paper (as was the case for the task presented below). The test can be speeded, i.e. giving the participant only a short time to judge each sentence, or it can be unspeeded (Ellis and

Barkhuizen 2005, 17-20). There are thus many ways of planning and modeling a task depending, for one thing, on what one wishes to test for.

9.2.1 Methodological issues

It is impossible to get direct access to the underlying competence of a speaker of any language, regardless of whether it is a native speaker of the language or not. Obviously we cannot just take a look at the mental representation of the language in the mind of the speaker. When trying to elicit data on the competence of a speaker, we therefore always have to take into account a number of performance factors that can influence the data.

The kind of data we can obtain from grammaticality judgment tasks of this kind is called *intuitional data* (as opposed to *production data*, where the speaker produces speech or writing in some form or *comprehension data*) (e.g. White 2003, 17).

Since grammaticality judgment tasks do not require the participant to produce speech or to demonstrate his/her understanding, it might be tempting to think that performance factors (false starts, slips of the tongue, nervousness etc.) can be avoided altogether thus giving a more direct insight into linguistic competence. Unfortunately, this is not the case, as pointed out by Schütze (1996): “While grammaticality judgments offer a *different* access path from language use to competence, they are themselves just another sort of performance” (6). Schütze (1996) points to the psychological factors that underlie the judgment process and urges linguists to take into account the “psychology of grammaticality judgments” from the planning of the task to the analysis of the outcome (10).

It is hard, if not impossible, to know what goes on in the mind of a person while being asked to judge and rank a sentence. For one thing, performance factors such as nervousness or anxiety may play a role. Furthermore, it is highly likely that metalinguistic factors, e.g. in the form of the learner’s explicit grammatical knowledge, play a role in the judgment process particularly with second language learners who have had instructional or class room teaching. Learners may therefore be distracted and influenced by their explicit knowledge of the language, i.e. the prescriptive standards learnt in school, or by expectations and ideas about what they feel they ought to know. More of these possibly distracting factors will be discussed where relevant to the results.

Although the grammaticality judgment task might not give us direct access to the competence of the learners, we can look at overall tendencies or patterns in the results. Thereby we might hope to learn more about the structure of their interlanguages and how their parameters are set. This will be attempted below.

9.3 Presentation of the test on Danish learners of English

The questionnaire consists of 18 randomly organized sentences. Three different versions of the questionnaire, i.e. with different orderings of the sentences, were handed out to the participants so as to avoid the temptation of looking over the shoulder of a class mate. The participants were not informed about the purpose of the task.

The sentences are numbered in the result sheets (see appendices 12.1.1-12.1.5) in order to facilitate the discussion of them. The ordering is thus different from the actual randomized order in which they occurred. The sentences did not occur in pairs of structurally related examples. 11 out of the 18 sentences are ungrammatical. They are repeated here with the same numbering as in the result sheets for the sake of clarity¹².

- | | |
|-----|--|
| 1.1 | Today the weather is good. |
| 1.2 | *Yesterday was the weather bad. |
| 1.3 | *Today should it rain. |
| 1.4 | Tomorrow it might snow. |
| 2.1 | *Now have I the book read. |
| 2.2 | *Maybe they have the film seen. |
| 2.3 | *Today has he bought the paper. |
| 2.4 | Suddenly she could hear the music. |
| 2.5 | *All day I have football played. |
| 2.6 | *Today has she the piano played. |
| 2.7 | From 10 to 11 I will play basketball. |
| 2.8 | Tonight I must play badminton. |
| 3.1 | *She thinks that Thomas smart is. |
| 3.2 | He thinks that she is nice. |
| 4.1 | *When we go to England, we will a museum visit. |
| 4.2 | *When we to Sweden go, might we a moose see. |
| 4.3 | Because I live in Denmark, I have often seen the Queen. |
| 4.4 | *Even though he in Denmark lives, has he never seen the Queen. |

The first sentences (1.1.-1.4) are simple main clause declarative sentences with a sentence-initial adverbial. The point was to see if Danish learners would apply the V2 constraint from their mother tongue (L1) to English sentences of this type, or if their judgments would comply with the English structure of subject before verb. Sentences with compound tenses (2.1-2.8) give an opportunity to test both V2 and OV together. Subordinate clauses with OV (3.1) and VO (3.2) are included so as to see if the participants react to the OV structure which neither complies with their L1 nor with English. Finally, the last of the sentences, 4.1-4.4, consist of both a main clause with the possibility of transferring V2 from Danish and a subordinate clause with OV and VO, respectively.

¹² Throughout this section the asterisks (*) mark ungrammatical sentences. Such markings did not, of course, occur on the original grammaticality tasks given to the participants.

9.3.1 Participants

The questionnaire was presented to learners of English in the Danish *folkeskole* and *gymnasium* respectively. All in all, 160 participants filled out the questionnaire and the results are listed in numbers and percentages in the result sheets. The learners can be divided into 5 groups on the basis of their place in the educational system:

Group 1 consists of 51 pupils in the 5th grade of the Danish *folkeskole*, where English teaching begins in the 3rd grade. These learners have therefore received less than 2 years of English language teaching at the time of testing.

Group 2 consists of 45 pupils in the 8th grade having had approximately 6 years of English teaching.

Group 3 consists of 21 pupils of the first form of the Danish *gymnasium* with a background of 9-10 years of language teaching.

Group 4 then consists of 27 pupils of the second form.

Finally, group 5 consists of 16 pupils in the third form of the *gymnasium*.

9.4 English results

The results of the 5 groups will be presented and subsequently compared.

Because groups 3, 4 and 5 are so similar both in terms of results and in terms of the number of years the participants have received language teaching, the results of these three groups will be dealt with together.

9.4.1 Group 1

Although most of the participants (82.3%) in group 1 agree that sentence 1.1 is grammatical, only half of them (49.0%) are sure that 1.4 is grammatical as well. This gives a rather muddy first picture of the learners' hypotheses about English having the V2 constraint, which is not made clearer by the fact that half of the participants (49.0%) accept 1.2 with incorrect V2 while as much as 25.0% express uncertainty. The similarly incorrect 1.3 is accepted as grammatical by 21.6%. So far, it would seem that the learners in the 5th grade are at least uncertain about whether or not English is constrained in the same way as Danish by V2.

Sentences 2.1 and 2.2, which both incorrectly have OV order, are not accepted by very many of the participants (5.9% and 27.5%, respectively). The fact that fewer accept 2.1 could indicate that the participants do, after all, react to the incorrect V2 in this sentence. But already in 2.3, the picture

gets confusing again, as participants are divided (33.3%, 37.3% and 29.4% for each of the ranking opportunities) on the acceptability of V2 after a fronted adverbial. In 2.5 and 2.6 the reverse situation appears, as a few more participants accept the sentence with both V2 and OV (2.6) (19.6%) than the one only with OV (9.8%). Half of the participants are either in doubt or judge the grammatically correct 2.4 to be wrong (25.5% and 29.4% respectively). Meanwhile the majority of participants (78.4% and 72.5%) accepts the grammatically correct 2.7 and 2.8.

The order of subject and verb in subordinate clauses causes some insecurity among the participants, although most reject the OV order in 3.1 (80.4%). However, not all are convinced that 3.2 is correct (only 68.6%). Similarly, only about half of the participants reject 4.1, 4.2 and 4.4 with OV and, in the case of 4.2 and 4.4, V2. The grammatically correct 4.3 with VO order and subject before verb is judged to be correct by an unconvincing 58.8%.

The somewhat inconsistent judgments of the participants both with regards to V2 and OV indicate that 5th graders are, at the very least, unsettled when it comes to word order in English. They do not seem to have figured out which word orders are grammatically correct, whether OV is possible in English and whether V2 constrains the word order of English in similar ways as it does Danish.

9.4.2 Group 2

Sentence 1.1 still divides the participants with only 44.4% in favor of its acceptability against the 42.3% who reject it. A few more than in group 1 are willing to accept the grammatically correct 1.4 (66.7%). Meanwhile, the results for 1.2 and 1.3 are almost identical to those in group 1 (51.1% and 22.2% clearly accept V2). The results for sentences 2.1, 2.2, 2.5 and 2.6 show that the participants in group 2 react more negatively and consistently to OV order in English than did group 1. Meanwhile, exactly the same percentage of participants as in group 1 accept the incorrect V2 construction in 2.3 (namely 33.3%). The greater part of the group also accepts 2.4 (80.0%). Surprisingly, more of the participants in this group than in group 1 reject 2.7 and 2.8 with English (straight) word order following a fronted element. The results for 3.1 and 3.2 are, once again, quite similar to group 1, with a tendency, however, for more participants to reject OV order (93.3% compared to 80.0% in group 1). Still only 68.9% (exactly the same as in group 1) accept 3.2 as a perfectly formed English sentence.

Most of the participants reject sentence 4.1 with OV (86.7%) showing a clear increase from group 1. The same tendency prevails in 4.2 and 4.4 where 80.0% and 68.9%, respectively, reject (either or both) OV and V2. There is also a slight increase in the acceptability rate for the grammatically correct 4.3 (68.9%), but as much as 24.4% still reject the sentence.

The results from the first two groups thus show that learners in the 8th grade (group 2) react more strongly (i.e. negatively) to both V2 and OV word orders in English than learners in the 5th grade (group 1). There is a general tendency for a fair number of the participants to reject sentences with either of these two structures thus, at least ideally, indicating that their mental representation of English is becoming more target-like.

9.4.3 Groups 3, 4 and 5

Surprisingly, the simple sentences 1.1 and 1.4 with a fronted adverbial still seem to give rise to some insecurity. Only half of group 3 (52.4%) marks 1.1 as perfect, a few more in group 4 (77.8%) and almost everyone in group 5 (87.5%). For 1.4, the numbers are slightly higher. It could be that we see a development here (especially with 1.1.) over the course of three years of language teaching with regard to V2, but it is probably more likely that some other factor is disturbing the results. We can only speculate on whether the content of the sentence might cause some participants to react negatively (seeing that the participants did not know what was being tested and the statements might not have corresponded with the weather situation on that particular day) thereby obscuring the results. Most of the participants agree, however, that sentences 1.2 and 1.3 with incorrect V2 are impossible in English (81.5-100%).

There is general agreement across the three groups that the sentences 2.1-2.3 and 2.5-2.6 which incorrectly have V2 and/or OV structure are impossible (87.5-100% of the participants think so). They all agree, however, that 2.4 is just right with the subject before the verb and the object following the verb (VO). Although 2.7 and 2.8 are similar in structure, the picture here is less clear, as a larger number of the participants express doubt about their grammaticality or judge them as wrong. 2.7 is thus judged to be impossible by every fifth (19 % and 18.5 %) in group 3 and 4. Even in group 5, every fourth participant is either uncertain (12.5%) or finds the sentence impossible (12.5%)¹³. Quite many of the participants are in doubt about the grammatically correct 2.8 (4.8 %, 14.8 % and 18.8 %, respectively) and some even find it impossible (9.5%, 3.7% and 6.3%). The explanation for this is not obvious and one might speculate on whether the content of the sentences might influence the participants' judgments, for example the semantics of the modal verb "must" in 2.8. Nevertheless, most participants accept these sentences as correct.

Almost all participants judge 3.1 with OV structure in the subordinate clause to be impossible (85.7-93.8%) and find the correct version in 3.2 perfect (81.3-100%). Both 4.1 and 4.2 with incorrect OV and both OV and V2 are judged impossible by almost everyone in all three groups. Again, one of

¹³ It is perhaps also worth considering the issue of statistical significance here, seeing that the number of participants in group 5 is significantly lower than in the other groups. For this reason, the judgment of just one person corresponds to 6.3%.

the grammatically correct sentences, 4.3 (“Because I live in Denmark, I have often seen the Queen”), causes uncertainty and only 71.4% in group 3 and 66.7% in group 4 are sure that the sentence is correct. The uncertainty diminishes somewhat in group 5, however (87.5% find it perfect). What triggers this uncertainty is hard to say. Perhaps some participants are influenced by the content again (and want to state that living in a country with a Queen does not necessarily mean that you run into her on the street time and time again). Perhaps this could also explain why every fifth in group 4 (18.5%) actually judges 4.4 (*“Even though he in Denmark lives, has he never seen the Queen”) to be perfect. Yet most of the participants in all three groups (90.5%, 77.8% and 87.5%) agree that this sentence with OV and V2 is impossible.

9.4.4 Interim assessment of results

It seems that learners in the Danish *gymnasium* react quite strongly to the grammatically incorrect sentences with an OV structure which neither complies with their second language (L2), English, nor with their mother tongue (L1), Danish. This indicates that learners at this stage are no longer insecure about the setting for the head-parameter in English; they know that the VP in English is head-initial like Danish, i.e. has VO structure. Learners at this level also react more negatively to the sentences with V2 than learners in the 5th and 8th grade of the *folkeskole*. This can be taken to indicate that their mental representation of English is now differently structured with regards to V2 than that of their first language. In a parameter re-setting approach this could be taken to indicate that the parameters of their first language have been reset at this point (cf. section 8.1 and see discussion in chapter 10).

There is, however, one obvious complicating factor to the results, namely the conscious knowledge of grammar derived from instruction. It cannot be ruled out that learners at this relatively advanced level have explicit grammatical knowledge that tells them, for example, only to accept declarative sentences which have the subject before the verb. We know that this is a grammatical area which receives a lot attention in language teaching and that learners are repeatedly tested on exactly this point, also in final written examinations. For that reason, the result of the grammaticality judgment task cannot be taken as evidence that learners in fact would not themselves produce sentences with incorrect V2. Their parameters might not be reset then, but their explicit knowledge might have become more developed during their school years concurrently with their general cognition.

In so far as we can justifiably infer anything about the initial state of L2 acquisition on the basis of group 1 (cf. the discussion in section 6.1), it would be that transfer from Danish plays at least some role in the acquisition of English. Learners in group 1, 5th graders, are more prone than the older learners to accept English sentences with V2. Since they have already had almost two years of

teaching at the time of testing, the results hardly represent the initial state of L2 acquisition, and we can only guess that learners at an earlier stage would be even more influenced by their first language with respect to V2. Further discussion of these speculations and potential interpretations of the results will be postponed until chapter 10 and tested against the relevant theories (cf. chapters 6 and 8).

9.5 Presentation of the test on Danish learners of German

The questionnaire consists of 18 randomly organized sentences. Here, three different versions were created as well, although the result sheets list the sentences according to structural comparability (see appendices 12.2.1-12.2.4). 12 out of the 18 sentences are ungrammatical. They are repeated below with the same numbering as in the result sheets (with word-for-word translations in italics below).

- 1.1 *Heute das Wetter ist gut.
 Today the weather is good.
- 1.2 Gestern war das Wetter schlecht.
 Yesterday was the weather bad.
- 1.3 Heute wird es regnen.
 Today will it rain.
- 1.4 *Morgen es soll schneien.
 Tomorrow it should snow.
- 2.1 Jetzt habe ich das Buch gelesen.
 Now have I the book read.
- 2.2 *Gestern wir haben den Film gesehen.
 Yesterday we have the film seen.
- 2.3 *Heute hat er gekauft die Zeitung.
 Today has he bought the paper.
- 2.4 *Plötzlich sie hat gehört die Musik.
 Suddenly she has heard the music.
- 2.5 *Gestern ich habe Fußball gespielt.
 Yesterday I have football played.
- 2.6 Heute hat sie Klavier gespielt.
 Today has she piano played.
- 2.7 *Von 10 bis 11 ich habe gespielt Handball.
 From 10 to 11 I have played handball.
- 2.8 *Gestern habe ich gespielt Badminton.
 Yesterday have I played badminton.
- 3.1 Sie denkt, dass Thomas klug ist.
 She thinks that Thomas smart is.
- 3.2 *Er denkt, dass sie ist schön.

- He thinks that she is nice.*
- 4.1 *Als wir waren in Deutschland, wir haben ein Museum besucht.
 When we were in Germany, we have a museum visited.
- 4.2 Als wir in Schweden waren, haben wir einen Elch gesehen.
 When we in Sweden were, have we a moose seen.
- 4.3 *Weil ich wohne in Dänemark, ich habe oft gesehen die Königin.
 Because I live in Denmark, I have often seen the Queen.
- 4.4 *Obwohl er in Dänemark wohnt, hat er nie gesehen die Königin.
 Eventhough he in Denmark lives, has he never seen the Queen.

Some of the sentences (1.1., 1.2, 1.3. and 1.4.) are designed exclusively to test how the participants react to grammatically correct sentences with V2 after a sentence-initial adverbial (such as 1.2 and 1.3) as opposed to grammatically incorrect sentences that do not comply with the V2 constraint (1.1 and 1.4). Other sentences (3.1, 3.2) test the OV word order as it manifests itself in subordinate clauses. However, most of the sentences (2.1-2.8) test the V2 constraint as well as the OV word order in grammatically correct sentences that comply with both these structures (such as 2.1), in incorrect sentences where one of the two principles is violated (e.g. 2.3, *"Heute hat er gekauft die Zeitung", which does not conform to the OV word order) and in sentences where neither of the structures are correct (e.g. 2.7, *"Von 10 bis 11 ich habe gespielt Handball"). The last sentences (4.1-4.4) test both V2 and OV as well, but here the sentence-initial adverbial is exchanged for a subordinate clause functioning as a cause adverbial. In this way, both the OV order which causes the finite verb to occur sentence-finally in subordinate clauses and the V2 phenomenon in declarative main clauses can be tested.

9.5.1 Participants

A total of 123 learners of German participated in the grammaticality judgment task. All of them are native speakers of Danish and have learnt English before German. The participants can be divided into four groups according to their place in the Danish educational system at the time of testing and thereby how many years of German teaching they have received:

Group 1 consists of 37 pupils in the 9th grade of the Danish *folkeskole*. These learners have had about 2 ½ years of German teaching at the time of testing.

Group 2 consists of 25 pupils in the first form of the Danish *gymnasium*. These learners have had 3 ½ to 4 ½ years of German teaching (depending on whether or not they have attended the 10th grade).

Group 3 consists of 42 pupils in the second form of the Danish *gymnasium*.

Group 4 consists of 19 pupils in the third form of the Danish *gymnasium*.

9.6 German results

The results of the four groups will be presented separately below and then compared.

9.6.1 Group 1

As much as half of group 1 (48.7%) accepts sentence 1.1 with the verb in third position (V3). Furthermore, 32.4% of the participants also accept the structurally identical and therefore incorrect sentence 1.4. Interestingly, their grammatically correct counterparts with V2 (1.2 and 1.3) are far from accepted by all participants (only 75.7% and 54.1% respectively). Based on these simple sentences, it seems that the participants in group 1 are almost equally divided on the question of V2 in German. They certainly do not seem to assume at this point that German is a V2 language.

Moving on to the sentences where both the V2 constraint and the OV order are tested, we find that most participants accept the sentences 2.1 and 2.6 which conform to both of these principles (91.9% and 86.5%, respectively). It seems then that most learners can recognize a grammatically correct German sentence when they see one, but that they find it harder to decide which ones are impossible. As much as 40.5% in group 1 thus accept 2.2 and 2.5 where the V2 constraint is violated and 2.3 which incorrectly has VO order. One third of the participants also accepts the VO order in 2.8 (32.4%). The sentences 2.4 and 2.7 which violate both of these principles are accepted by fewer of the participants and rejected by the majority (73.0% and 81.1% respectively).

The VO order in the subordinate clause in 3.2 is accepted by 54.1%, while its structurally reversed variant in 3.1 is accepted by 73.0%. Again, this indicates that it is easier for the participants to hear that something is right than to judge which structures are impossible. This also goes for the last sentences, 4.1-4.4. Here again, most of the participants (78.4%) recognize the grammatically correct 4.2, while at the same time over half of them (54.1%) accept 4.1 where the subordinate clause incorrectly has VO order and the main clause lacks V2. Notice, however, that the main clause in 4.1 does have OV. This is a somewhat disturbing factor when it comes to analyzing the results. It seems to have affected the participants since fewer (only 27.1%) accept 4.3 where both main and subordinate clause incorrectly have VO while the main clause also lacks V2. As with 4.3, 70.3% of the participants in group 1 reject 4.4 with VO order in the main clause.

After almost two years of German language teaching, 9th graders seem to have picked up the fact that German has a different order of object and verb (OV). They have not, however, quite figured out how this different ordering works which gives a somewhat confusing picture, where they sometimes reject and sometimes accept sentences with the familiar Danish order of verb before object (VO). With regard to V2, learners at this point definitely do not seem convinced that German is constrained in the same way as Danish by this verb movement phenomenon.

9.6.2 Group 2

Learners in group 2 are slightly better at recognizing sentences with correct V2 and thus as much as 96.0% accept 1.2 while 68.0% accept 1.3. Nevertheless, 44.0% of them also accept 1.4 which lacks V2 and a third of group 2 (32.0%) also accepts 1.1. The first picture is therefore still a bit unclear although judgments seem to be getting somewhat more target-like.

The results for 2.1 and 2.6 show that not much has changed compared to group 1 with regard to recognizing the correct sentences (88.0% and 92.0% accept these to be perfect). Meanwhile, participants in group 2 react more negatively to lacking V2 and to VO structures than group 1. Only about a third (32.0% and 36.0%) accepts 2.2 and 2.5 which lack V2. There is also a noticeably more negative reaction to VO structures so that only 20.0% accept 2.3 and still fewer (12.0%) accept 2.8. In line with this, almost everyone rejects the sentences 2.4 and 2.7 which lack V2 and have incorrect VO order.

The learners' judgments of 3.1 and 3.2 indicate a development from group 1. As much as 88.0% accept the subordinate clause with OV in 3.1, while a third (32.0%) accepts the VO order in 3.2 (compared to 54.1% in group 1).

This general tendency towards more target-like judgments also becomes evident in the last quartet of sentences (4.1-4.4). Here, almost all participants (92.0%) accept 4.2. The sentence in 4.3 with VO in both main and subordinate clause and lacking V2 is rejected by almost everyone (92.0%). However, fewer learners reject 4.1 (64.0%), perhaps affected by the fact that this sentence partly has OV (in the main clause) causing some learners to have a more positive reaction. This inconsistency with regards to OV might also explain why the judgments of 4.4 are almost identical for group 1 and 2, where the VO structure in the main clause is rejected by 72.0%.

9.6.3 Group 3

The results from group 3 generally give a slightly confusing picture, since learners in this group seem to be a bit further from the target language norms in some respects. The judgments of the sentences in 1.1-1.4 actually show almost no development from group 2. In the case of the grammatically correct 1.2 and 1.3 the number of participants who accept these sentences has either dropped a bit or remains the same as in group 2 (83.3% and 66.7%). At the same time, however, fewer learners than in groups 1 and 2 accept the incorrect sentences 1.1 and 1.4 lacking V2 (21.4% and 26.2% respectively). This inconsistency makes it difficult to draw any preliminary conclusions about whether or not learners in group 3 have become more target-like than the first two groups.

The picture does not get any clearer when we look at 2.1-2.8. The number of accepting judgments for the correct sentences in 2.1 (78.6%) and 2.6 (88.1%) is either the same or slightly lower than in the other groups. The learners in this group do not come any closer to target-language standards when it comes to their judgments of the grammatically incorrect sentences 2.2, 2.3, 2.4, 2.5, 2.7 or 2.8 either. This tendency is also reflected in the results for 3.1 which is accepted by 85.7% (compared to 88.0% in group 2, i.e. an almost identical result) and 3.2 which is accepted by a surprising 50.0% despite the VO structure in the subordinate clause. The results for the last sentences in 4.1-4.4 show that more learners accept the incorrect sentences with VO and lacking V2 and that fewer learners accept the correct 4.2 (83.3%) compared to the other groups.

Although I certainly realize that the results from group 3 should not be explained away and that one should be very careful about overlooking or circumventing data that might be crucial, I feel that it is just to suggest a possible explanation for the results. It is not unlikely that the learners in group 3 are weaker students, or perhaps have not reached an equivalent stage in L2 development, than those in the other groups since many of their judgments are less target-like than those of the younger learners in group 1 and 2 and since their result diverge from the general development that can be traced between the other groups.

9.6.4 Group 4

In group 4, almost everyone (94.7%) recognizes and accepts that 1.2 is a grammatical sentence in German. This is the highest percentage of all the groups. However, even in group 4, only slightly more than half of the participants (57.9%) accept 1.3 ("Heute wird es regnen"), and while fewer reject it than in the other groups (21.2%), there are many undecided learners (21.1%). Recall that this sentence also caused insecurity in the other three groups and was only accepted by 54.1%, 68.0% and 66.7%, respectively. One reason for this might be that the learners are not yet familiar with the construction of the future tense in German with the auxiliary verb "werden" and therefore react negatively to this sentence. This might also explain why a larger percentage across all groups accepts 1.2 with simple past tense ("Gestern war das Wetter schlecht").

The sentences 2.1-2.8 with compound tenses reflect the same tendency, namely that judgments are generally becoming more target-like. Almost everyone accepts 2.1 and 2.6 (89.5% and 94.7%). But still judgments are not quite consistent. We would expect those who reject 2.2 with lacking V2 also to reject 2.5 which is structurally identical. This is not the case, however. While 84.2% reject 2.2, fewer (68.4%) reject 2.5). The number of learners who accept 2.5 is still lower than in the other groups (26.3%) so that the general tendency of development towards target-like judgments is seen here after all. Similarly, we would expect the learners who reject 2.3 with VO order to also reject 2.8. Although the two sentences have the same structure, 89.5% reject 2.3 while only 79.0%

reject 2.8. Here, the number of learners who accept 2.8 (15.8%) is a little higher than in groups 2 and 3 (12.0% and 7.1% respectively)¹⁴. Learners react very negatively to the incorrect sentences 2.4 and 2.7 with VO order and lacking V2. Almost everyone rejects 2.4 (89.5%) and the same goes for 2.8 (84.2%). While some express doubt about 2.8, no one actually accepts it as a grammatical sentence.

Learners in group 4 react in line with the tendency in the other groups to 3.1, which has the correct OV order in the subordinate clause so that everyone (100.0%) accepts this sentence. We would therefore ideally expect no one to accept its structurally reversed counterpart in 3.2. But in fact every fifth (21.1%) still accepts 3.2 with VO order. This number is still lower than in the other groups though.

Finally, the results for the last quartet of sentences, 4.1-4.4, are pretty consistent. Almost everyone in group 4 rejects 4.1 (89.5%) and 4.3 (84.2%) with VO and without V2. Meanwhile, 4.4 invokes a similar reaction in group 4 as in the other groups (cf. section 9.6.2) in that 79.0% reject it, while a few (15.8%) accept it despite the VO structure in the main clause. Learners in group 4 almost unanimously agree that 4.2 is a correct German sentence (94.7%).

9.6.5 Intertim assessment of the results

Over time it seems that learner judgments become more and more target-like. Learners across all groups never categorically reject VO or lacking V2, not even the most proficient of them. It is interesting that in most cases, even when all (or almost all) of the participants accept a grammatical sentence, a disproportionately large number of participants also simultaneously accept its ungrammatical counterpart.

On the basis of the above presented intuitional data from Danish learners of English and German, a critical evaluation and discussion will be carried out of the probability of the scenarios predicted by the theories of SLA presented in chapters 6 and 8.

¹⁴ Again, the issue of statistical significance arises because the number of participants in group 4 is considerably lower than the other groups.

10. Discussion of the results

Throughout the presentation in chapter 9 of the two grammaticality judgment tasks, possible interpretations and analyses of the results were hinted at. These possibilities will be further explored and discussed in this chapter as the results will be put into the theoretical framework outlined in chapters 6 and 8.

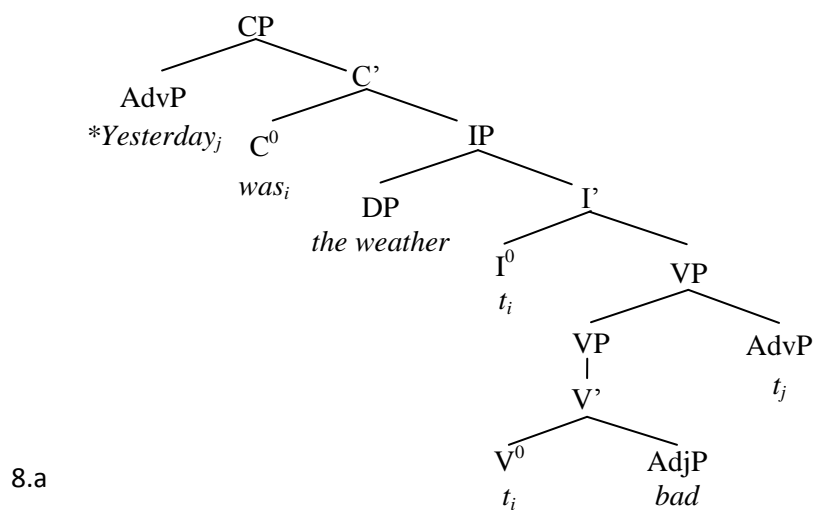
10.1 The results for English

By choosing to ignore, for the time being, the problems concerning the extraction of data on the actual initial state of learners (cf. section 6.1) and assuming that it is in fact possible to deduce information about the initial state on the basis of a later state, we can assess the results of group 1 with regards to transfer. The different approaches to transfer in the initial state presented in chapter 6 all make different predictions, some more specific than others, about what to expect from these intuitional data.

The non-transfer approach presented in Pienemann's Processability Theory (PT) (1998) completely excludes transfer in the initial state. Learners are expected to start out by producing sentences with "canonical word order" (SVO, according to the theory) regardless of the headedness of VP in both L1 and L2. Only when learners are ready to process certain structures are they able to produce them. Consequently, the theory predicts that V2 will not be transferred in the initial state, since this is too complex a phenomenon for learners to process. On the one hand, the results from the English grammaticality judgment task are not of much relevance to the theory's predictions of a canonical SVO order, since both these languages have this word order. Nor are these data appropriate for making any qualified statements about a universal path of interlanguage development. On the other hand, the results from group 1 clearly show that learners accept sentences with V2 contrary to what the hypothesis would expect. The fact that sentences with V2 are accepted less and less as the learners grow older further indicates that this is a matter of initial transfer from Danish which slowly diminishes over time. Therefore the relatively high percentage of learners who accept V2 at an early stage would seem to contradict the claim put forward within Processability Theory that this phenomenon is too complex for learners to process and produce and therefore should be absent in early interlanguages.

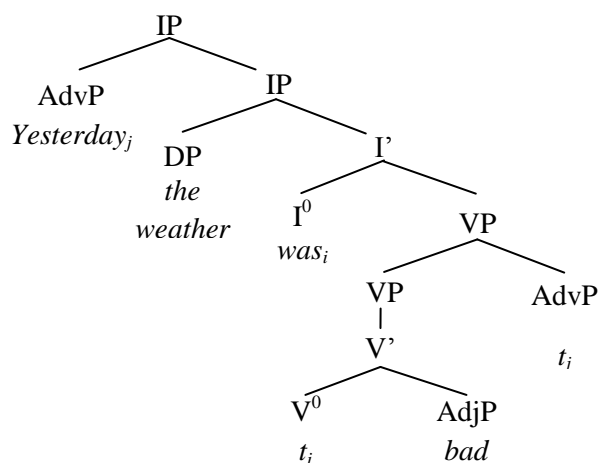
The data seem to contradict at least one of the transfer approaches as well. The Minimal Trees Hypothesis (MTH) (Vainikka and Young-Scholten 1994) also predicts that Danes will start out with SVO order when learning English, but for other reasons than those of PT. The reason, according to MTH, is that the headedness of VP transfers to the initial state. This prediction in itself is not controversial and is in agreement with the data. But the claim that *only* the VP transfers is in sharp

contrast to the results. On the contrary, many learners clearly accept V2 sentences which require the presence of functional categories in the grammar. This indicates that a great deal of the learners in the initial state assume that movement of the finite verb out of its VP is an option in English declarative main clauses. MTH predicts that once functional categories are acquired, their properties will be those of the L2 and never of the L1. This claim does not match the results presented in this thesis. Firstly, the results indicate that functional categories are present in the grammar early on. Secondly, their properties are never completely target-like, not even in the older groups. The fact that functional categories are present in the early grammars of these learners is illustrated in the tree in 8.a below.



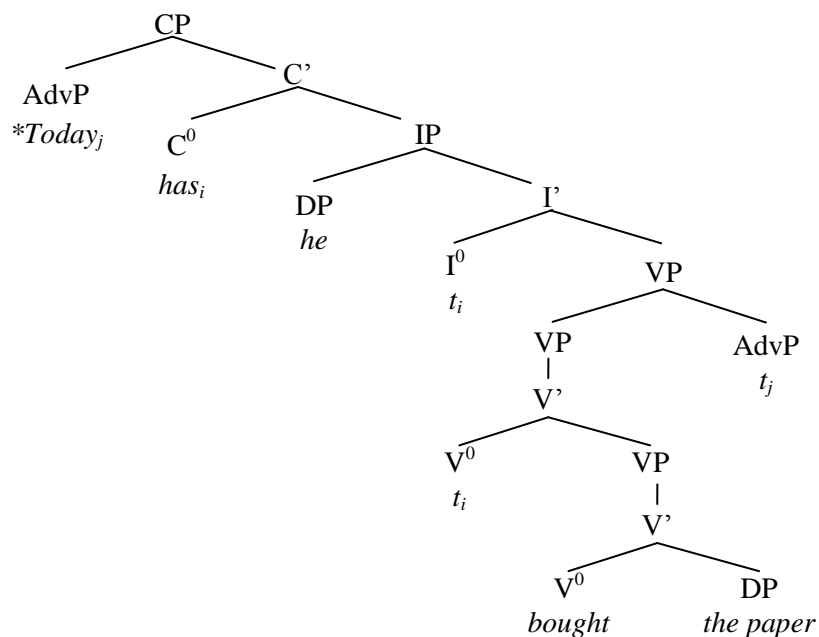
The tree in 8.a is a suggestion of the structure that many of the learners must assume for English when as much as 49.0% of them accept the ungrammatical sentence 1.2, *‘‘Yesterday was the weather bad’’. It seems that learners must have transferred the functional categories of Danish and assume that $V^0 \rightarrow I^0 \rightarrow C^0$ movement is a possibility in English declarative main clauses.

8.b shows what the grammatically correct version of the sentence (‘‘Yesterday the weather was bad’’) looks like. When we compare the two trees, it becomes clear that learners most likely transfer the whole CP structure to the initial state.

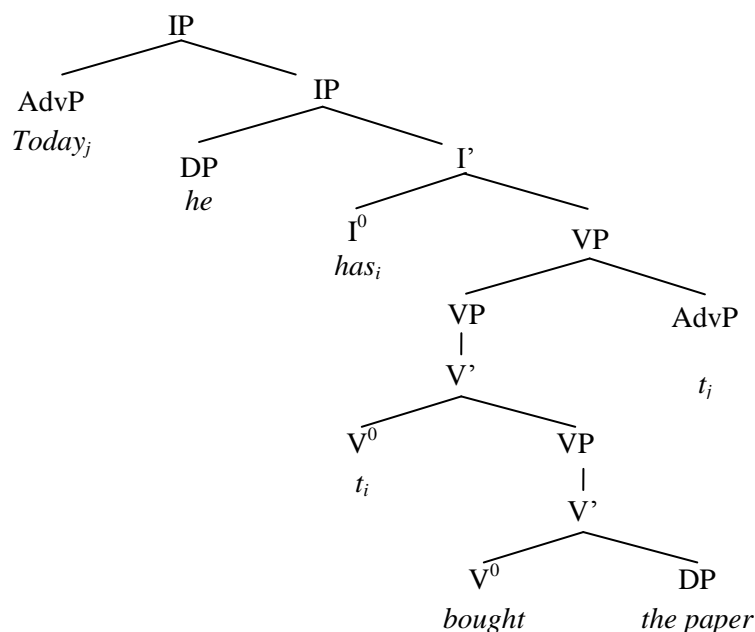


8.b

The same goes for the other incorrect V2 sentences of course. Below is another example, namely the ungrammatical sentence 2.3, *"Today has he bought the paper"*, accepted by 33.3% in group 1 and illustrated in 8.c. When compared to the structure of its correct version, *"Today he has bought the paper"*, illustrated in 8.d, it is clear that the learners who accept 2.3 (and the other V2 sentences) must have an extra functional category, CP, in declarative main clauses which stems from their Danish L1 and to which the verb can raise.



8.c



8.d

The Valueless Features Hypothesis (Eubank 1994) claims that while both lexical and functional categories of the L1 are transferred to the L2, the feature strength is inert in the initial state. Following from the theory's claim that inert feature strength equals optional movement, Danish learners of English might be expected to produce V2 sentences roughly half of the time in the initial state, because the verb can choose to raise or not. Although the data from group 1 show that learners are unsettled on the setting of the V2 parameter in English in that they sometimes accept sentences with V2, the distribution of judgments is not fifty-fifty, as would be expected in the initial state, according to VFH. On the contrary, there is a consistent preference for target-like English word order over V2 (except for the judgments of sentence 1.2 in group 1 where learners are equally divided). Once again, the inevitable question of falsifiability arises, because it is always possible to claim that this data do not in fact represent the initial state and that we do not know for sure what the earliest grammar might look like. Because of the nature of the data (the fact that it is not production data), the claimed connection between the acquisition of inflectional morphology and feature strength cannot be disproved either. But the claims about what the acquisition of feature strength implies can surely be questioned. The theory claims that once feature strength is acquired, it will be target-like and therefore never show signs of the L1 (unless of course the two languages happen to be identical in this respect). This means that once the inertness (resulting in optional verb movement, according to VFH) has been replaced by the relevant feature strength, interlanguages should be consistently target-like. So even if we take into account that these learners might theoretically have exhibited completely optional verb movement in a state preceding the one represented by group 1, the fact that learners in even the most proficient of the groups, despite

being almost target-like, still sometimes accept V2 sentences does not go well with the prediction that acquired feature strength is completely devoid of transfer from the L1.

Due to their quite concrete predictions, the three theories discussed above are relatively easy targets of criticism. The last of the hypotheses, the Full Transfer/Full Access (FT/FA) hypothesis (Schwartz and Sprouse 1994), however, is not challenged by the data for English. As it predicts that both lexical and functional categories, including feature strength, are transferred from the L1, it can explain why the youngest learners, i.e. group 1 and 2, do not reject sentences with V2. The fact that learners in groups 3, 4 and 5 still sometimes, though rarely, accept V2 is also not problematic for the hypothesis because it does not suggest a specific end point to transfer (cf. section 8.1). This inaccuracy of the predictions also makes it more difficult to assess the view on access to UG and the possibility of parameter re-setting put forward by FT/FA. The hypothesis thus makes no claim as to when parameter re-setting starts or if this restructuring procedure should result in instant acquisition of clustering properties and the end of transfer influence (Schwartz and Sprouse 1996, 41). Whether the residual tendency to transfer shown in the English results for groups 1-5 is in fact an expression of re-set parameters is hard, if not impossible, to say. It can be concluded, however, that there is a significant difference in the judgments of the youngest two groups and the oldest three groups. Groups 3, 4 and 5 are significantly more target-like in their judgments, but transfer effects can still be seen even among these proficient learners.

10.2 The results for German

The results from the German grammaticality judgment task contradict even more clearly than the English ones the predictions of Processability Theory with respect to V2. Sentences with V2 are clearly accepted by learners in group 1 (with as much as 91.9% accepting 2.1, “Jetzt habe ich das Buch gelesen”) even though PT claims that this phenomenon is too complex for learners in the initial state. However, PT would take the fact that sentences *without* V2 are also accepted as an indication of learners being affected by universal processing principles favoring a straight word order with subject before verb. This is also suggested by Fabricius-Hansen (2010) (cf. section 7.2). Nevertheless, both V2 and non-V2 sentences are accepted with a slight favoring of V2 in group 1 and more so in the older groups.

The widespread acceptance of V2 by Danish learners of German clearly contradicts the Minimal Trees Hypothesis in that it testifies to the presence of functional categories. Minimal trees, i.e. VPs, are not enough to account for these sentences (cf. illustration 6.a).

The headedness of VP seems to transfer as predicted not only by MTH, but by all three transfer approaches under consideration here. This transfer of the headedness of VP results in the fact that the learners, particularly in group 1, are willing to accept sentences which conform to the Danish word order (SVO) rather than the German one (SOV). This is evidenced, for example, by the fact that as much as 54.1% of learners in group 1 accept 3.2, **“Er denkt, dass sie ist schön”*, with SVO order.

In sum, transfer approaches expect Danish learners of German to transfer SVO. The results clearly support this prediction. We would also expect them to transfer the V2 constraint which is common to both languages. But the results show that learners also accept sentences where the V2 constraint is violated, thus indicating that transfer from Danish alone is not a sufficient explanation. Seeing that all the participants in the grammaticality judgment task have learnt English as a second language (L2), German is really their third language (L3). It therefore seems reasonable to consider the possibility of transfer from L2 to L3.

10.3 Transfer from English to German

The issue of transfer from second language (L2) English to third language (L3) German in the interlanguages of Danish learners can be examined by looking at a language closely related to Danish; namely Swedish. Here we find a number of publications on the issue of L2 to L3 transfer from both proponents and opponents of the idea. Although small differences exist between Danish and Swedish with regard to the V2 constraint (see e.g. Bohnacker 2005, 45-51), these are not relevant here and will therefore be left out of the discussion, seeing that Danish is the main interest.

Håkansson et al. (2002) investigate the acquisition of German by young Swedish learners with respect to V2 on the background of Processability Theory (Pienemann, 1998). The article analyses data from Sayehli (2001) from first and second year learners of German in the Swedish comprehensive school (equivalent to the Danish *folkeskole*) in the form of oral productions based on a cartoon-strip description task (see Sayehli 2001, 22-27 for a detailed description). While not excluding the possibility of transfer after the initial state, the Developmentally Moderated Transfer Hypothesis (DMTH) (cf. section 6.3.1) presented by Håkansson et al (2002) maintains that even though both Swedish and German are V2 languages, this phenomenon will be acquired only late due to its complexity (e.g. Håkansson et al. 2002, 264). In an attempt to refute the claim of L1 to L2 transfer in FT/FA (e.g. Schwartz and Sprouse 1994), it is underlined in the article that V2 is not transferred despite the typological proximity of the languages. Because of the low number of sentences with V2 and the occurrence of non-targetlike V3 (Adv-SVX) found in the data, it is concluded that there is no transfer from Swedish. Bohnacker (2005) points out that the data basis is

perhaps too small to draw such conclusions in that the design of the task only creates very few contexts where V2 could or should actually be produced (2005, 54). Nevertheless, the authors themselves declare that the results of their corpus study are a “blunt falsification” of FT/FA (Håkansson et al. 2002, 270). But in fact, Håkansson et al. (2002) treat German as if it was the learners’ L2 and only mention as an aside that it is actually an L3 since all the learners have had at least three years of English language teaching before being exposed to German: “Given that in our study German was in fact the third language of the informants and that English was the second, it may be easy to conclude that the nonapplication of INV (or V2) was due to transfer from English. In fact, this explanation is popular amongst Swedish school teachers of German (...). Swedish teachers of German disrespectfully term this phenomenon the ‘English illness’” (2002, 269). It is not easy to understand why the idea of transfer from English is so categorically rejected on the basis of the data, since nothing contradicts this possibility. Furthermore, the idea that a transfer approach to acquisition should be an *easier* explanation (cf. the quotation above) is hardly reason enough to refute it. On the contrary, straightforward explanations appealing to common sense are rarely unfavorable, provided of course that they are supported by evidence. Saeyhli (2001) even acknowledges that there is lexical transfer from both L1 Swedish and L2 English into L3 German in her data while still excluding the possibility of syntactic transfer (2001, 24). The reason for accepting one type of transfer but rejecting the other is not obvious and can rightly be questioned based on the data presented by Bohnacker (2005, 2006) to be discussed in what follows.

Bohnacker (e.g. 2005, 2006) also uses data from Swedish learners of German to examine the influence of English on German. But contrary to the corpus study used by Sayehli (2001) and Håkansson et al. (2002), Bohnacker has collected data from two different types of learners; one group with prior knowledge of English and one without. The data are very rare because English has been a compulsory subject in Swedish (as in Danish) schools for many years. These data thus provide an opportunity to take English out of the equation. If the two groups behave exactly alike, then the possibility of transfer from English can be ruled out.

Bohnacker (2005, 2006) contests the claim that V2 is universally difficult to acquire by showing that both groups of learners produce this structure early on. They even produce V2 long before they switch the parameter setting for VP headedness from initial to final. Bohnacker therefore claims that for both groups of learners, V2 is easier to acquire than the head-final VP (2006, 477) and that “acquisition of V2 is *not developmentally dependent on target headedness of the VP* (here, OV) having been acquired first” (2005, 60). This finding is in sharp contrast to the claims of both PT (e.g. Pienemann, 1998) and DMTH (e.g. Håkansson et al. 2002) about universal development. It also contradicts MTH (e.g. Vainikka and Young-Scholten 1994) which claims that lexical categories are

acquired before functional ones, as well as VFH's (e.g. Eubank 1994) claim of inert feature strength (cf. sections 6.2.2, 6.2.3 and 6.3.1).

What is even more interesting, however, is that the learners with no prior knowledge of English never violate the V2 constraint: "V2 is productive and targetlike (100% contexts) already after just 4 months in Swedish ab initio learners of German as their first L2" (Bohnacker 2005, 68). In contrast, Bohnacker's data show that the learners with prior knowledge of English produce V2 in 50% of obligatory contexts after 4 months (2005, 68). This finding indicates two things; namely that there *is* transfer of V2 from L1 Swedish to L2 German and that prior acquisition of English disturbs this transfer. Bohnacker therefore suggests partial transfer from L2 English to L3 German (e.g. 2005, 43).

The fact that there is transfer of the head-initial VP and the V2 phenomenon from L1 Swedish thus making it easier to acquire the familiar V2 than the unfamiliar SOV structure caused by the head-final setting of VP is completely compatible with a full transfer approach (e.g. Schwartz and Sprouse 1994). The fact that those learners with knowledge of English produce non-V2 sentences (i.e. in this case V3 sentences with the subject before the verb after a fronted constituent) is not in itself a challenge to the other approaches discussed and specifically to PT and DMTH, as Bohnacker points out, but "[i]t is the *absence* of nontarget V3 utterances in the learners who do not know English that remains a complete mystery under their approach" (2005, 66). And it is precisely this difference between the data from the two groups which solidly supports the theory of L2 to L3 transfer. Bohnacker further suggests that the transfer from English is only intermittent and that even learners with prior knowledge of English seem to acquire V2 earlier than learners with non-V2 L1s, suggesting that the L1 still plays a large and in this case facilitative role (2005, 66).

Recently, studies have been carried out aiming to examine syntactic transfer from multiple languages. One example of recent research in this area can be found in Falk and Bardel (2010) who suggest that even when the L1 and L3 are typologically similar, L2 transfer seems to be favoured. This means that even when L1 transfer would have resulted in targetlike production, the L2 still interferes. Falk and Bardel (2010) describe a general tendency to activate previously acquired foreign languages when using a non-native language which they call the "L2 status factor" (188). They suggest that "cognitive differences between the acquisition of an L1, an L2 and an L3 might (...) explain why L2 is often present and sometimes even preferred over L1 as transfer source" (Falk and Bardel 2010, 190). The differences between the types of acquisition pointed out by Falk and Bardel (2010) correspond to those outlined in section X of this thesis and are related to age, acquisitional setting, learning strategies and metalinguistic knowledge. Falk and Bardel consider neurolinguistic aspects of the transfer process as well, and support the idea that while the L1 grammar is implicitly acquired, the L2 grammar is partly based on explicit knowledge. Their point is that the two types of

knowledge are neurolinguistically distinct and have different memory sources causing the conscious, explicit knowledge of the L2 to be more readily available for transfer (Falk and Bardel 2010, 192). Due to space restrictions, this line of argumentation will not be further explored here, but is mentioned in order to show *one* type of approach to L2 to L3 transfer currently under investigation in this area of research. The most interesting suggestion put forward by Falk and Bardel (2010) for the present discussion of transfer from L2 English to L3 German is that “L2 may hinder L1 transfer in both a positive and negative manner” (2010, 206).

On the basis of the studies presented in this section, it can be concluded that the study of L2 to L3 transfer is a promising area for further research in trying to understand why Danish learners of German make mistakes which they would otherwise not be expected to make coming from an L1 with V2.

11. Conclusion

This thesis has examined the word order of second language English and third language German of Danish learners. Danish and English share the SVO sentence structure which is in contrast to the SOV order of German. Meanwhile, it was pointed out that Danish and German, but not English, share another property related to verb placement, namely the V2 constraint which causes finite verbs to appear in second position. Through the analysis of teacher instructions and grammar books written specifically for Danish learners, it was found that Danish learners are predicted to have word order related problems where structures of the languages differ. Intuitional data obtained from grammaticality judgment tasks were analysed and discussed on the background of theories on transfer of parameter settings in the initial state and on the possibility of parameter re-setting implicating access to UG. The results suggest transfer of first language Danish into second language English resulting in problems related to V2. Furthermore, transfer from Danish alone does not seem sufficient to explain the problems Danes have when acquiring German word order. Following Bohnacker (e.g. 2005), partial transfer from second language English into third language German was thus suggested as a possible explanation for the problems related to the V2 constraint which is otherwise shared by Danish and German. Transfer from English might also explain why Danish learners perceive the word order of German to be even more different from Danish than it actually is.

12. Appendices

Grammaticality Judgment task (English): Result sheet								
Group 1 (5th grade)								
Total number of participants: 51		Perfect		Don't know		Impossible		
Today the weather is good.	1.1	42	82.3%	3	5.9%	6	11.8%	
Yesterday was the weather bad.	1.2	25	49.0%	13	25.5%	13	25.5%	
Today should it rain.	1.3	11	21.6%	8	15.7%	32	62.8%	
Tomorrow it might snow.	1.4	25	49.0%	13	25.5%	13	25.5%	
Now have I the book read.	2.1	3	5.9%	6	11.8%	42	82.3%	
Maybe they have the film seen.	2.2	14	27.5%	9	17.6%	28	55.0%	
Today has he bought the paper.	2.3	17	33.3%	19	37.3%	15	29.4%	
Suddenly she could hear the music.	2.4	23	45.1%	13	25.5%	15	29.4%	
All day I have football played.	2.5	5	9.8%	9	17.6%	37	72.5%	
Today has she the piano played.	2.6	10	19.6%	7	13.7%	34	66.7%	
From 10 to 11 I will play basketball.	2.7	40	78.4%	5	9.8%	6	11.8%	
Tonight I must play badminton.	2.8	37	72.5%	7	13.7%	7	13.7%	
She thinks that Thomas smart is.	3.1	7	13.7%	3	5.9%	41	80.4%	
He thinks that she is nice.	3.2	35	68.6%	4	7.8%	12	23.5%	
When we go to England, we will a museum visit.	4.1	12	23.5%	13	25.5%	26	51.0%	
When we to Sweden go, might we a moose see.	4.2	7	13.7%	15	29.4%	29	56.9%	
Because I live in Denmark, I have often seen the Queen.	4.3	30	58.8%	16	31.4%	5	9.8%	
Even though he in Denmark lives, has he never seen the Queen.	4.4	19	37.3%	11	21.6%	21	41.2%	

Grammaticality Judgment task (English): Result sheet								
Group 2 (8th grade)								
Total number of participants:45		Perfect		Don't know		Impossible		
Today the weather is good.	1.1	20	44.4%	6	13.3%	19	42.3%	
Yesterday was the weather bad.	1.2	23	51.1%	5	11.1%	17	37.8%	
Today should it rain.	1.3	10	22.2%	6	13.3%	29	64.4%	
Tomorrow it might snow.	1.4	30	66.7%	7	15.6%	8	17.8%	
Now have I the book read.	2.1	1	2.2%	0	0.0%	44	97.8%	
Maybe they have the film seen.	2.2	5	11.1%	2	4.4%	38	84.4%	
Today has he bought the paper.	2.3	15	33.3%	4	8.9%	26	57.8%	
Suddenly she could hear the music.	2.4	36	80.0%	4	8.9%	5	11.1%	
All day I have football played.	2.5	3	6.7%	4	8.9%	38	84.4%	
Today has she the piano played.	2.6	8	17.8%	3	6.7%	34	75.6%	
From 10 to 11 I will play basketball.	2.7	29	64.4%	5	11.1%	11	24.4%	
Tonight I must play badminton.	2.8	27	60.0%	6	13.3%	12	26.7%	
She thinks that Thomas smart is.	3.1	3	6.7%	0	0.0%	42	93.3%	
He thinks that she is nice.	3.2	31	68.9%	5	11.1%	9	20.0%	
When we go to England, we will a museum visit.	4.1	3	6.7%	3	6.7%	39	86.7%	
When we to Sweden go, might we a moose see.	4.2	5	11.1%	4	8.9%	36	80.0%	
Because I live in Denmark, I have often seen the Queen.	4.3	31	68.9%	3	6.7%	11	24.4%	
Even though he in Denmark lives, has he never seen the Queen.	4.4	9	20.0%	5	11.1%	31	68.9%	

Grammaticality Judgment task (English): Result sheet								
Group 3 (1.g)								
Total number of participants: 21			Perfect		Don't know		Impossible	
Today the weather is good.	1.1	11	52.4 %	3	14.3 %	7	33.3 %	
Yesterday was the weather bad.	1.2	0	0.0 %	0	0.0 %	21	100.0 %	
Today should it rain.	1.3	0	0.0 %	1	4.8 %	20	95.2 %	
Tomorrow it might snow.	1.4	19	90.5 %	1	4.8 %	1	4.8 %	
Now have I the book read.	2.1	0	0.0 %	0	0.0 %	21	100.0 %	
Maybe they have the film seen.	2.2	0	0.0 %	0	0.0 %	21	100.0 %	
Today has he bought the paper.	2.3	0	0.0 %	0	0.0 %	21	100.0 %	
Suddenly she could hear the music.	2.4	20	95.2 %	0	0.0 %	1	4.8 %	
All day I have football played.	2.5	0	0.0 %	0	0.0 %	21	100.0 %	
Today has she the piano played.	2.6	0	0.0 %	0	0.0 %	21	100.0 %	
From 10 to 11 I will play basketball.	2.7	17	81.0 %	0	0.0 %	4	19.0 %	
Tonight I must play badminton.	2.8	18	85.7 %	1	4.8 %	2	9.5 %	
She thinks that Thomas smart is.	3.1	3	14.3 %	0	0.0 %	18	85.7 %	
He thinks that she is nice.	3.2	21	100.0 %	0	0.0 %	0	0.0 %	
When we go to England, we will a museum visit.	4.1	0	0.0 %	1	4.8 %	20	95.2 %	
When we to Sweden go, might we a moose see.	4.2	0	0.0 %	0	0.0 %	21	100.0 %	
Because I live in Denmark, I have often seen the Queen.	4.3	15	71.4 %	1	4.8 %	5	23.8 %	
Even though he in Denmark lives, has he never seen the Queen.	4.4	0	0.0 %	2	9.5 %	19	90.5 %	

Grammaticality Judgment task (English): Result sheet								
Group 4 (2.g)								
Total number of participants: 27		Perfect		Don't know		Impossible		
Today the weather is good.	1.1	21	77.8 %	2	7.4 %	4	14.8 %	
Yesterday was the weather bad.	1.2	1	3.7 %	4	14.8 %	22	81.5 %	
Today should it rain.	1.3	0	0.0 %	1	3.7 %	26	96.3 %	
Tomorrow it might snow.	1.4	24	88.9 %	3	11.1 %	0	0.0 %	
Now have I the book read.	2.1	0	0.0 %	0	0.0 %	27	100.0 %	
Maybe they have the film seen.	2.2	0	0.0 %	1	3.7 %	26	96.3 %	
Today has he bought the paper.	2.3	0	0.0 %	3	11.1 %	24	88.9 %	
Suddenly she could hear the music.	2.4	27	100.0 %	0	0.0 %	0	0.0 %	
All day I have football played.	2.5	2	7.4 %	1	3.7 %	24	88.9 %	
Today has she the piano played.	2.6	1	3.7 %	2	7.4 %	24	88.9 %	
From 10 to 11 I will play basketball.	2.7	20	74.0 %	2	7.4 %	5	18.5 %	
Tonight I must play badminton.	2.8	22	81.5 %	4	14.8 %	1	3.7 %	
She thinks that Thomas smart is.	3.1	3	11.1 %	0	0.0 %	24	88.9 %	
He thinks that she is nice.	3.2	25	92.6 %	1	3.7 %	1	3.7 %	
When we go to England, we will a museum visit.	4.1	1	3.7 %	1	3.7 %	25	92.6 %	
When we to Sweden go, might we a moose see.	4.2	0	0.0 %	2	7.4 %	25	92.6 %	
Because I live in Denmark, I have often seen the Queen.	4.3	18	66.7 %	6	22.2 %	3	11.1 %	
Even though he in Denmark lives, has he never seen the Queen.	4.4	5	18.5 %	1	3.7 %	21	77.8 %	

Grammaticality Judgment task (English): Result sheet								
Group 5 (3.g)								
Total number of participants: 16			Perfect		Don't know		Impossible	
Today the weather is good.	1.1	14	87.5 %	1	6.3%	1	6.3%	
Yesterday was the weather bad.	1.2	1	6.3 %	0	0.0%	15	93.8%	
Today should it rain.	1.3	0	0.0 %	0	0.0%	16	100.0%	
Tomorrow it might snow.	1.4	12	75.0 %	4	25.0%	0	0.0%	
Now have I the book read.	2.1	0	0.0 %	0	0.0%	16	100.0%	
Maybe they have the film seen.	2.2	0	0.0 %	1	6.3%	15	93.8%	
Today has he bought the paper.	2.3	2	12.5 %	0	0.0%	14	87.5%	
Suddenly she could hear the music.	2.4	16	100.0%	0	0.0%	0	0.0%	
All day I have football played.	2.5	1	6.3%	0	0.0%	15	93.8%	
Today has she the piano played.	2.6	1	6.3%	1	6.3%	14	87.5%	
From 10 to 11 I will play basketball.	2.7	12	75.0%	2	12.5%	2	12.5%	
Tonight I must play badminton.	2.8	12	75.0%	3	18.8%	1	6.3%	
She thinks that Thomas smart is.	3.1	1	6.3%	0	0.0%	15	93.8%	
He thinks that she is nice.	3.2	13	81.3%	2	12.5%	1	6.3%	
When we go to England, we will a museum visit.	4.1	0	0.0%	1	6.3%	15	93.8%	
When we to Sweden go, might we a moose see.	4.2	0	0.0%	1	6.3%	15	93.8%	
Because I live in Denmark, I have often seen the Queen.	4.3	14	87.5%	1	6.3%	1	6.3%	
Even though he in Denmark lives, has he never seen the Queen.	4.4	1	6.3%	1	6.3%	14	87.5%	

Grammaticality judgment task (German): Result sheet							
Group 1 (9th grade)							
Total number of participants: 37	Perfect		Don't know		Impossible		
Heute das Wetter ist gut. 1.1v2	18	48.7%	2	5.4%	17	46.0%	
Gestern war das Wetter schlecht. 1.2v2	28	75.7%	3	8.1%	6	16.2%	
Heute wird es regnen. 1.3v2	20	54.1%	5	13.5%	12	32.4%	
Morgen es soll schneien. 1.4v2	12	32.4%	8	21.6%	17	46.0%	
Jetzt habe ich das Buch gelesen. 2.1v2ov	34	91.9%	1	2.7%	2	5.4%	
Gestern wir haben den Film gesehen. 2.2v2ov	15	40.5%	2	5.4%	20	54.1%	
Heute hat er gekauft die Zeitung. 2.3v2ov	15	40.5%	0	0.0%	22	59.7%	
Plötzlich sie hat gehört die Musik. 2.4v2ov	9	24.3%	1	2.7%	27	73.0%	
Gestern ich habe Fußball gespielt. 2.5v2ov	15	40.5%	3	8.1%	19	51.4%	
Heute hat sie Klavier gespielt. 2.6v2ov	32	86.5%	2	5.4%	3	8.1%	
Von 10 bis 11 ich habe gespielt Handball. 2.7v2ov	4	10.8%	3	8.1%	30	81.1%	
Gestern habe ich gespielt Badminton. 2.8v2ov	12	32.4%	1	2.7%	24	64.9%	
Sie denkt, dass Thomas klug ist. 3.1ov	27	73.0%	3	8.1%	7	18.9%	
Er denkt, dass sie ist schön. 3.2ov	20	54.1%	2	5.4%	15	40.5%	
Als wir waren in Deutschland, wir haben ein Museum besucht. 4.1v2ov	20	54.1%	1	2.7%	16	43.2%	
Als wir in Schweden waren, haben wir einen Elch gesehen. 4.2v2ov	29	78.4%	3	8.1%	5	13.5%	
Weil ich wohne in Dänemark, ich habe oft gesehen die Königin. 4.3v2ov	10	27.0%	1	2.7%	26	70.3%	
Obwohl er in Dänemark wohnt, hat er nie gesehen die Königin. 4.4v2ov	7	18.9%	4	10.8%	26	70.3%	

Grammaticality judgment task (German): Result sheet							
Group 2 (1.g)							
Total number of participants: 25		Perfect		Don't know		Impossible	
Heute das Wetter ist gut.	1.1v2	8	32.0%	0	0.0%	17	68.0%
Gestern war das Wetter schlecht.	1.2v2	24	96.0 %	0	0.0%	1	4.0%
Heute wird es regnen.	1.3v2	17	68.0 %	1	4.0%	7	28.0%
Morgen es soll schneien.	1.4v2	11	44.0 %	4	16.0%	10	40.0%
Jetzt habe ich das Buch gelesen.	2.1v2ov	22	88.0 %	1	4.0%	2	8.0%
Gestern wir haben den Film gesehen.	2.2v2ov	8	32.0 %	0	0.0%	17	68.0%
Heute hat er gekauft die Zeitung.	2.3v2ov	5	20.0 %	1	4.0%	19	76.0%
Plötzlich sie hat gehört die Musik.	2.4v2ov	0	0.0 %	0	0.0%	25	100.0%
Gestern ich habe Fußball gespielt.	2.5v2ov	9	36.0 %	0	0.0%	16	64.0%
Heute hat sie Klavier gespielt.	2.6v2ov	23	92.0 %	1	4.0%	1	4.0%
Von 10 bis 11 ich habe gespielt Handball.	2.7v2ov	2	8.0 %	0	0.0%	23	92.0%
Gestern habe ich gespielt Badminton.	2.8v2ov	3	12.0 %	0	0.0%	22	88.0%
Sie denkt, dass Thomas klug ist.	3.1ov	22	88.0 %	0	0.0%	3	12.0%
Er denkt, dass sie ist schön.	3.2ov	8	32.0 %	0	0.0%	17	68.0%
Als wir waren in Deutschland, wir haben ein Museum besucht.	4.1v2ov	7	28.0 %	2	8.0%	16	64.0%
Als wir in Schweden waren, haben wir einen Elch gesehen.	4.2v2ov	23	92.0 %	2	8.0%	0	0.0%
Weil ich wohne in Dänemark, ich habe oft gesehen die Königin.	4.3v2ov	2	8.0 %	0	0.0%	23	92.0%
Obwohl er in Dänemark wohnt, hat er nie gesehen die Königin.	4.4v2ov	4	16.0 %	3	12.0%	18	72.0%

Grammaticality judgment task (German): Result sheet							
Group 3 (2.g)							
Total number of participants: 42		Perfect		Don't know		Impossible	
Heute das Wetter ist gut.	1.1v2	9	21.4%	4	9.5%	29	69.1%
Gestern war das Wetter schlecht.	1.2v2	35	83.3%	2	4.8%	5	11.9%
Heute wird es regnen.	1.3v2	28	66.7%	3	7.1%	11	26.2%
Morgen es soll schneien.	1.4v2	11	26.2%	6	14.3%	25	35.4%
Jetzt habe ich das Buch gelesen.	2.1v2ov	33	78.6%	1	2.4%	8	19.1%
Gestern wir haben den Film gesehen.	2.2v2ov	10	23.8%	7	16.7%	25	59.5%
Heute hat er gekauft die Zeitung.	2.3v2ov	12	28.6%	3	7.1%	27	64.3%
Plötzlich sie hat gehört die Musik.	2.4v2ov	3	7.1%	2	4.8%	37	88.1%
Gestern ich habe Fußball gespielt.	2.5v2ov	14	33.3%	3	7.1%	25	59.5%
Heute hat sie Klavier gespielt.	2.6v2ov	37	88.1%	1	2.4%	4	9.5%
Von 10 bis 11 ich habe gespielt Handball.	2.7v2ov	4	9.5%	3	7.1%	35	83.3%
Gestern habe ich gespielt Badminton.	2.8v2ov	3	7.1%	3	7.1%	36	85.7%
Sie denkt, dass Thomas klug ist.	3.1ov	36	85.7%	3	7.1%	3	7.1%
Er denkt, dass sie ist schön.	3.2ov	21	50.0%	1	2.4%	20	54.1%
Als wir waren in Deutschland, wir haben ein Museum besucht.	4.1v2ov	14	33.3%	5	11.9%	23	54.8%
Als wir in Schweden waren, haben wir einen Elch gesehen.	4.2v2ov	35	83.3%	3	7.1%	4	9.5%
Weil ich wohne in Dänemark, ich habe oft gesehen die Königin.	4.3v2ov	6	14.3%	2	4.8%	34	81.0%
Obwohl er in Dänemark wohnt, hat er nie gesehen die Königin.	4.4v2ov	13	31.0%	5	11.9%	24	57.1%

Grammaticality judgment task (German): Result sheet							
Group 4 (3.g)							
Total number of participants: 19		Perfect		Don't know		Impossible	
Heute das Wetter ist gut.	1.1v2	4	21.1%	0	0.0%	15	79.0%
Gestern war das Wetter schlecht.	1.2v2	18	94.7%	0	0.0%	1	5.3%
Heute wird es regnen.	1.3v2	11	57.9%	4	21.1%	4	21.1%
Morgen es soll schneien.	1.4v2	2	10.5%	0	0.0%	17	89.5%
Jetzt habe ich das Buch gelesen.	2.1v2ov	17	89.5%	0	0.0%	2	10.5%
Gestern wir haben den Film gesehen.	2.2v2ov	3	15.8%	0	0.0%	16	84.2%
Heute hat er gekauft die Zeitung.	2.3v2ov	1	5.3%	1	5.3%	17	89.5%
Plötzlich sie hat gehört die Musik.	2.4v2ov	1	5.3%	1	5.3%	17	89.5%
Gestern ich habe Fußball gespielt.	2.5v2ov	5	26.3%	1	5.3%	13	68.4%
Heute hat sie Klavier gespielt.	2.6v2ov	18	94.7%	1	5.3%	0	0.0%
Von 10 bis 11 ich habe gespielt Handball.	2.7v2ov	0	0.0%	3	15.8%	16	84.2%
Gestern habe ich gespielt Badminton.	2.8v2ov	3	15.8%	1	5.3%	15	79.0%
Sie denkt, dass Thomas klug ist.	3.1ov	19	100.0%	0	0.0%	0	0.0%
Er denkt, dass sie ist schön.	3.2ov	4	21.1%	0	0.0%	15	79.9%
Als wir waren in Deutschland, wir haben ein Museum besucht.	4.1v2ov	1	5.3%	1	5.3%	17	89.5%
Als wir in Schweden waren, haben wir einen Elch gesehen.	4.2v2ov	18	94.7%	0	0.0%	1	5.3%
Weil ich wohne in Dänemark, ich habe oft gesehen die Königin.	4.3v2ov	1	5.3%	2	10.5%	16	84.2%
Obwohl er in Dänemark wohnt, hat er nie gesehen die Königin.	4.4v2ov	3	15.8%	1	5.3%	15	79.0%

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