Acquisition of English Relative Clauses by German L1 and Turkish L1 Speakers

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Abbreviations

- L1   : First Language
- L2   : Second Language
- L3   : Third Language
- CL   : Contrastive Linguistics
- CA   : Contrastive Analysis
- AP   : Applied Linguistics
- SLA   : Second Language Acquisition
- TL   : Target Language
- SL   : Second Language
- ML   : Mother Language
- FL   : Foreign Language
- NL   : Native Language
- LL   : Language Learning
- ENG   : English
- GER   : German
- TUR   : Turkish
- TRANS : Translation
- RC   : Relative Clause
- LT   : Language Typology
- LU   : Language Universal
- UG   : Universal Grammar
- PP   : Prepositinal Phrase
- NP   : Nominal Phrase
- ACL   : Applied Contrastive Linguistics
- CAH   : Contrastive Analysis Hypothesis
- SLL   : Second Language Learning
- SCT   : Sentence Combination Task
- GJT   : Grammar Judgment Task
- TRANS : Translation

- SUBJ   :   Subject
- OBJ   :   Object
- F   :   Female
- M   :   Male
- PREP   :   Preposition
- IO   :   Indirect Object
- DO   :   Direct Object
- OCOMP   : Object of Comparison
- LDH   : Linear Distance Hypothesis
- SHD   : Structural Distance Hypothesis
- WDH   : Word Order Difference Hypothesis
- NPAH   : Nominal Phrase Accessablity Hypothesis
- PDH   : Perceptual Difference Hypothesis
- SOHH   : Subject Object Hierarcy Hypothesis
- ECP   : Empty Category Principle
- MDH   : Markedness Differential Hypothesis
- ATN Grammar: Augmented Transition Network Grammar
- SRN   : Simple Recurrent Networks

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1.0. Introduction

The topic of contrastive analysis (CA) is a topic which has been discussed in many books and articles and which has attracted a great deal of attention and speculation. The topic holds significant interest for me because it is at some levels a continuation of my previous work, having explored some aspects in my Masters thesis which relate to the topic of CA, and I am now going to discuss other interesting points which have not been dealt with. In this work I am going to deal with relative clauses (RC). I began to be interested in RC during my Master of Arts at the "Freie Universität Berlin". I learned that it held an important position in the research of contrastive linguistics: For instance, the study of Schachter (1974) concerning the avoidance phenomenon, and Eckman's (1977) relativisation index of languages. Both the research of Schachter on RC and the study by Eckman gave new insight to contrastive linguistics (CL).

Was it by chance that CA or CL emerged? I think it was not. Because of globalisation and increased immigration the need to learn a foreign language (FL) has grown significantly. One of the most important reasons for this situation is human mobility. English (ENG) has become the *lingua franca* of a so-called interdependent world. It is better to say that ENG is the international language today. ENG as an L2 has, for most people in the world, increasingly become the international language of business and commerce, science and technology, international relations and diplomacy. It is estimated that the ENG language is spoken by 325 million as L1 of the 4.7 billion (circa) world population; it is for as many as 1.4 billion an official L2 (Crystal 1985). According to another resource, there are today more than 350 million native ENG speakers and more than 400 million speakers of ENG as an L2 (English as a Second Language: The Internet TESL Journal, Vol. II, No. 4, April 1996). As a result of globalisation and wide-scale immigration in the past 50 years the need to learn a foreign language has become greater than ever before, as has the need for teaching. People compare their mother tongue consciously or unconsciously with the language they are going to learn. Some scholars have made great efforts to make language

teaching easier. As a consequence, CL arose as a domain of research. In the next part CA will be handled.

1.1. The Contrastive Analysis (CA)

Since my research is a CA in itself, I must situate this subject by explaining why and how the discipline of CA has been developed. In my research I will compare three languages, ENG, GER, and TUR, with respect to RCs and try to determine if the ENG RCs are more difficult to acquire by GER L1, TUR L1 or TUR L2 speakers. Thus CA is a tool in this investigation.

It should be said here that CA, which is a part of Applied Linguistics, emerged as a discipline from the need for learning and teaching a foreign language. Indeed, CA is older than the second language acquisition (SLA).

Even though the work of Lado's "Linguistics Across Culture" (1957) is generally thought to be the beginning of modern "Applied Contrastive Linguistics", we see, however, some other important works at an earlier point in time such as the work of Charles H. Grandgent, entitled "German and English Sounds" in 1892, and the third edition of the work "*Elemente der Phonetik und Orthoepie des Deutschen, Englischen und Französischen mit Rücksicht auf die Bedürfnisse der Lehrpraxis*" by Wilhelm Vietör, in 1884.

Wardhaugh (1970) proposed a distinction between a strong version and a weak version of the contrastive analysis hypothesis (CAH). The proponents of the strong version were Lado, Fries, Banathy, Trager, and Waddle. According to the main idea of the strong version, it is possible to contrast the system of one language with the system of a second language. At this point Lado (1957:2) says: "*Those elements that are similar to his native language will be simple for him and those elements that are different will be difficult*". This statement was/is the best known in linguistics.

The target of these attempts was to predict the typical difficulties of an L2 learner and to construct teaching materials around those difficulties in order to help him learn SL. When the similarities were found, the target language would be more easily acquired.

It is also possible to discover the interference during the comparison of the languages. The researchers list the errors the students have made and describe the conflicts between the systems that cause the errors. Fries (1945:9) says: "*the most effective materials are those that are based upon a scientific description of the language to be learned, carefully with a parallel description of the native language of the learner".* It means that one would get closer to the language problems by a systematic comparison of the native and foreign language. A question can be raised here: How close can one get to language problems with this approach? It is difficult to give an exact answer to this question.

On the other hand some linguists point out that CA without reference to the speakers of the two languages is unrealistic, Weinreich (1953). The main idea of the weak version is to use the best linguistic knowledge available in order to account for observed difficulties in SLA. Other linguists, for example Banathy, Trager and Waddle (1966) thought that after comparison not similarities but differences were the reasons for difficulty as similarities would make it easier to learn the target language. It should also be noted here that some errors which are made in foreign language learning are due to interference. I think that the reason can not be explained only with linguistics. In other words all of the errors can not be solved linguistically. They are pedagogical, psychological and sociological in origin as well.

Corder (1967) emphasises that systematic errors are those that learners make as a result of their lack of knowledge. These kinds of errors are the errors which are always repeated by learners. Furthermore, Corder (1967) distinguishes between a mistake and an error. He says that errors are more significant than mistakes. Mistakes are the consequences of our psychological situations.

The premises of CA were: L1 and foreign languages differ fundamentally, similarities between L1 and foreign languages will cause no difficulties (positive transfer), but differences will, because of the negative transfer or interference. And when a systematic comparison is made, then foreign language teaching could be more efficient. In spite of the fact that these claims were plausible the learning process was

more complicated than that. It was not enough to show similarities or differences, ease or difficulty. Stockwell, Bowen and Martin (1965) made a comparison of ENG and Spanish. They found a hierarchy of difficulties. If L1 and L2 corresponded structurally and functionally, it could be expected that the easiest linguistic points for the learners are there, and thus allow for them to acquire the language very easily. They claim that more difficult elements are the elements which are present in L1, but not in L2. The most difficult elements are those with splits. In these cases, an element that is present in L1 is present in L2 with two or more applications.

The proponents of EA emphasise that the CAH gives attention only to predicting what the learner will do, and does not pay attention to the study of what the learner actually does. At the same time they point out that many errors are not the result of NL interference. They are the result of both the strategies used by the learner in the acquisition of the TL and also the mutual interference of items within the TL.

The recurring errors produced by learners are analysed in order to discover why the errors occur. CA can be used as one of the identifying reasons for these errors. This methodology is called error analysis (EA). EA assumes that errors show learning difficulties and that the frequency of a particular error is evidence of difficulty that the learners have in learning a particular form of an L2. Schachter (1974) conducted a study which involved a comparison of relative clause (RC) errors produced in free compositions in ENG as an L2 by native speakers of Persian, Arabic, Chinese, and Japanese.

Schachter (1974) concluded that *a posteriori* CA is untenable because its only data is from learner productions. Avoidance can only be predicted by the strong version of CA.

The strength of EA lies in the fact that, for nearly the first time, researchers began to investigate what learners really said and wrote. I want to pose one question here: Does one and only one reason for a particular error exist in all instances? Some patterns of learner errors appear to be attributed to L1, some to L2 and some others to both L1 and L2 together or to the interlanguage. One of the shortcomings of EA is that

it is not successful in accounting for all areas in which learners can experience difficulty. This can be proven by considering the avoidance phenomenon and the degree to which EA allows or does not allow for the accounting of this phenomenon.

A number of proponents of the EA approach claim that CA can not serve as an adequate tool for identifying the areas of difficulty for learners of an L2. On the other hand, it has been shown that EA is not able to explain the avoidance phenomenon because EA registers only the actual errors made by learners of an L2 (Schachter 1974). Avoidance behaviour represents a communicative strategy of a learner of an L2 by which the learner prefers avoiding the form or using a simpler form instead of the target linguistic element for the reason of difficulty on the part of the TL. Consequently, avoidance behaviour serves as a manifestation of learning problems. When the syllabus and tests are compiled, the results should be definitely taken into consideration (Laufer, B., Eliasson, S. (1993)).

The reality of avoidance for my research is very relevant, because it is expected that the GER and TUR adults, who are the subjects of my research, will apply avoidance when they try to combine two sentences in SCT (especially in centre-embedded and right embedded ones) with the target of composing a correct RC. It is also possible that avoidance will be used by them during the written production of RCs in other tests i.e. GJT and TRANS. I am, now, going to discuss the studies related to avoidance.

In the study by Schachter (1974), it was observed that there is syntactic avoidance. In her study she found that Chinese and Japanese students of ENG avoided RCs. Dagut, M., and Laufer B. (1993) reported that Hebrew students of ENG avoid phrasal verbs. Kleinmann (1977) studied avoidance behaviour of native speakers of Arabic and native speakers of Portuguese and Spanish. Portuguese and Spanish students avoid infinitive complements and direct OBJ pronouns, whereas a tendency to avoid the passive construction and present progressive has been indicated in Arabic students of ENG. Swain (1975) showed in her study that children learning French as an L2 avoided using many indirect OBJ pronouns they came across in a repetition exercise. Tarone, Frauenfelder, and Selinker (1975) registered several cases of

semantic avoidance. Ickenroth (1975) and Varadi (1980) reported cases of semantic avoidance as well. On the other hand, Dutch learners of ENG avoided some situations semantically in studies conducted by Hulstijn and Marchena (1989). Phrasal verbs were avoided on the grounds that the Dutch students perceived them "as being too idiomatic, too Dutch-like, and therefore non-transferable".

I should talk about the new insights that have been found in relation with CA and its strong version. Krzeszowski (1990) found that not all of linguistic theories are suitable for CA. Bausch K.-R- and G. Kasper (1979) concluded that SLA is a process which improves in two directions and not directly from NL to TL.

Duskova (1969) carried out a study of EA in which she chose some Czech students who were learning ENG as L2. She came to the conclusion that there was an interference of the ML with syntax. It was illustrated that for the use of the ENG article it was advantageous to apply CA together with EA. Hammarberg (1974) discovered in his study of the Swedish learners of ENG that if learners are taught where the differences are, many errors can be prevented. As an example he used ENG grammatical structures in which the meanings differed from their Swedish counterparts. He suggested that the differences between the numbers of meanings should be taken into consideration. If this were done, he emphasises, a possible negative transfer is avoided.

There are some considerations and studies that support a strong version of CA. One of the significant developments that made CA stronger is "markedness", or The Markedness Differential Hypothesis (MDH). The other is The Empty Category Principle (ECP).

As was previously discussed, merely to compare the native and target languages will not achieve the desired results. What could improve the predictions of CA? Eckman (1977) proposes that the CAH should be revised to incorporate the notion of degree of difficulty. In fact, he has shown the MDH is a generalisation of implicational typological rules. This has been done so that the predictions of a CA can be empowered. It is postulated here that "*A phenomenon A in some languages is more marked than B if*

the presence of A in a language implies the presence of B; but the presence of B does not imply the presence of A" (Eckman 1977:320)

Hansen (1985) discussed the relationship between CA and language typology. Krzeszowski (1976) explored the vertical organisation of CA on the basis of a generative grammar. This means he compared the languages not only superficially, but also according to their deeper structures.

Finally, improvements for better comparisons and a better description of CA have been found as result of generative grammar.

The classification of language is made according to their linguistic properties. For instance, Hawkins (1986) indicated the following implicational universal based on the work made by Greenberg (1966:78):"*If a language has a V-S-O word order, then it has prepositions*".

Consequently SUBJ is the most, and OBJ comparative particle the least, related nominal phrase. Moreover, this hierarchy predicts that there will be no language which can both relativise possessive NPs without leaving a pronoun behind, and relativise an OBJ of a preposition, leaving a pronoun behind.

If Eckman's (1977) relativisation index of languages, as discussed above, is brought together with the avoidance strategy of Schachter, then errors can be better described and, at the same time, better predicted. Actually, with a combination of CA and MDH better results can be obtained.

There is another universal principle which is called the 'Empty Category Principle' (ECP). ECP dictates that a trace must be either lexically governed [c-commanded by head and with no XP except IP intervening] or anteceded by governed [bound by and subjacent to its antecedent] language invariant (Chomsky 1981). He says that traces must be governed properly.

The word *trace* here marks an empty category. Because of its complexity, the ECP is especially suitable for analysis when the differences between languages are subtle. In such situations, when the comparison of languages is necessary, better predictions can be made. As a result of this complexity, some structure dependent phenomena

appear. These are: C-command, Government, and Proper Government. More about this point will appear in detail in the third chapter.

In order to improve a CA, language typology and universals are also important subjects in linguistics. Before passing to some concrete examples of TUR and ENG RCs, some typological properties about both languages should be given. In many ways the particular languages of man are alike; they have many common properties. Even though languages have great differences in their surface structures, they have fewer differences at deeper levels (Corder 1973). Corder claims that languages have greater differences in their surface structures than they have at their deeper level. Regarding typological classification, TUR belongs to the agglutinating or agglutinative languages, whereas ENG and GER belong to inflectional or flectional languages.

Language universals are features available in all or in an overwhelming majority of languages. Other universals are implicational (Greenberg 1974); that is, if feature x is available in a language, then (it is highly likely that) *y* will be available in that language, but not vice versa. In a large number of studies word-order is common as a grammatical language typology. Scholars type languages in terms of the order in which S, O, V takes place in the sentences of the languages.

The studies of language universals based on the premise that "*underlying the endless and fascinating idiosyncrasies of the world's languages there are uniformities of universal scope. Within this infinite diversity, all languages are ultimately cut from the same pattern*" (Greenberg 1966:15). The theory of language universals indicates which features are necessary to human languages. These properties are sometimes possible, sometimes not. Thus the study of language universals, over all, aims to define limits on variation within human language. Due to the fact that linguistic typology deals with studying these variations, a strong connection exists between linguistic typology and language universals.

When discussing RC typology I will make use of some work in this field. There are already some prominent works about the typological properties of RCs, for example Downing (1978), Andrew (1978), Lehman (1986), Cole (1987), Basilico (1996).

Basilico provides an analysis of internal RCs in various languages. Asudeh (2004) analyses the resumptive pronouns and aspects of the syntax of post-nominal RCs in many languages. I think the most important work among these studies in the area of typology about RCs is that of Lehmann (1984). This work will be a source for me. There is also a dissertation by Helgander (1971) about RCs which focuses largely on the historical development in connection with the Germanic languages. Further research that might be useful for my study are: Thume, Karl-Heinz (1972) "Relative Clause"; Andrews, Avery D. (1985) "Studies in the syntax of relative and comparative clauses" and Vries, Mark de (2002) "The syntax of relativisation". A historical survey of the investigations that have been carried out on RCs in the past and present will be given. Additionally, when talking about wh-movement and relativisation the related part of my study will be based on the work of Quirk R. (1985).

The language families of ENG and GER are part of the Indo-European languages whereas TUR is a Ural-Altaic language. Because of the fact that TUR on one hand, ENG and GER on the other hand come from different languages families, there are many differences between them in the formation of RCs. However ENG, GER and TUR, as we are going to see in the comparison of RCs, have certain similarities. This also can support Corder's idea (1973) that the languages are the same in the deep structure but are different in their surface structure. This is also true for UG.

On the grounds that ENG, GER, and TUR are structurally different languages I will analyse first the RCs of ENG and GER and than those of TUR showing how RCs are constructed and the problems these languages have in themselves regarding RCs. After doing so I will show the differences and similarities between them.

1.2. The Relative Clause in English

In the grammar books the ENG RC is considered a part of subordinate clauses. Principally the RC functions as adjective. That is why some writers call it an adjectival clause. In many ENG grammars different terms are used. For example, defining or identifying is used for restrictive RCs and bare RCs are used instead of zero RCs. Furthermore, the division of RCs is not the same among authors. I am going to use

and classify the following terms about RC in English: 1) The relative pronouns 2) Restrictive RC 3) Non-restrictive RC 4) The use of relative clause with preposition 5) The reduction of RCs 6) Nominal RCs 6) Adverbial RCs 7) Gapless RCs 8) Sentential RCs. ENG has "who", "whom", "whose", "which" and "that" as relative pronouns. Some writers call the word "that" a 'particle' (for instance Greenbaum S. and Quirk R., 1990). In many languages the relative pronoun directly follows the clause containing its antecedent. It is mostly the same in ENG. If the antecedent is human it is "who" and "whom"; if the antecedent is non-human it is "which"; "whose" can be used for human and non-human antecedents. In the same way, "that" can be reserved for non-human and human ones.

This should also be said about the relative pronouns: It is known that the case of a relative pronoun is generally marked in its form in the Germanic languages. But this exists only in "who" in ENG. This pronoun "who" has a possessive case form, "whose", and an objective case, "whom". Nevertheless, the form "whom" is seldomly used nowadays. It is usually seen in formal use. "Which" and "that" do not have a possessive form. Instead of both, "whose" is used. This discussion about the relative pronoun in ENG will also be handled in the fifth chapter of my work.

1) a. The writers, <u>who write very good books</u>, will be famous (restrictive RC)

   b. The writers <u>who write very good books</u> will be famous (non-restrictive RC)

2) a. The book <u>which is</u> lying on the table was a present from Alice.

   b. The book lying on the table was a present from Alice.

3) a. Paula is the girl **with whom** <u>John fell in love </u>(in formal English and prosody)

   b. Paula is the girl **who** <u>John fell in love</u> **with** (in speech and informal English)

   c. Paula is the girl **whom** <u>Amen fell in love with</u>.

Non-restrictive RC is preceded by pause in speech or a comma in writing, whereas this normally is not the case for a restrictive clause. Without a comma in writing (one in front of the clause, one at the back of it) a great difference occurs. This difference is not in form only, but also in the meaning. In order for the semantic difference to be

clear, let's take a look at the non-restrictive RC in example 1)a: It tells us that this specific group of writers (who happen to have written good books) will be famous, but in 1) b: It tells us that all writers who have written good books will be famous. The difference in form between 1) a., which is non-restrictive RC, and 1) b., which is restrictive RC, is: the former occurs with commas in writing and it would be with a different intonation curve in speech. In contrast, the latter has no comma and only one intonation.

Restrictive RCs, as we see above, explain which thing or person we are talking about. We use a restrictive RC in a sentence in order to make the meaning clear. It helps us to identify the antecedent. But a non-restrictive RC gives information which is not necessary to identify the person. In other words, if we omit a clause in a restrictive RC the meaning changes; but, if we omit a clause in non-restrictive RC, the meaning does not change, as illustrated above. Because this element of RCs will be handled in detail in "ENG RCs" in the fifth chapter, I do not want to talk about this much here. There it will be explained to what extent it is possible to make a distinction between restrictive and non-restrictive RCs both semantically and syntactically.

However, example 2) b. is constructed so that "*which is*" omitted i.e. the meaning is given with "-ing". The omission/reduction takes place only when the meaning stays the same. Different authors give information about the omission of RC with the present participle, past participle and with "to". I am going to try to determine where the omission is possible and where it is not, by giving examples from these different writers, especially such as Greenbaum S. and Quirk R. (1990); Huddleston, R. D., (2005); Gelderen E. van (2002); and Carter R. (2006).

There is some variation in the use of RC with prepositions. Even though 3) b. is acceptable, it is not the formal form. However, 3) a. is more formal, i.e. used in written texts. In this example it is also possible to leave out the relative pronoun and put the preposition "with" at the end of the sentence or to replace "who" with "that". However, the latter is not formal usage. Introducing the RCs "which" and "that" with non-human antecedents can occasionally cause controversy. In the restrictive RC both "that" and

"which" can be utilised, but only "which" is commonly used in non-relative clauses. This discussion will also be handled in the fifth chacpter.

1.3. Relative Clauses in German

RC in GER is generally accepted as an adjective as in ENG and TUR. RCs are subordinate clauses as in ENG. They explain the head noun or noun phrase. The following example illustrates this:

4) Der Mann, der Birnen verkauft, ist mein Nachbar.

RCs are subordinate clauses; the conjugated verb comes at the end of RC (final position; word-order parameter SOV), so the conjugated verb "verkauft" has come at the end of RC in given example. However, there is also another construction that is said to be RC-like in the example below.

5) The first usage: a. Der dem Staat dankbare Sportler ist im Fernsehen aufgetreten.

6) The second usage: b. Der auf das Geschenk gespannte Junge hat die Tür geöffnet.

7) Der Sportler, der dem Staat dankbar war/ist, ist im Fernsehen aufgetreten.

It is worthy to say that the positioning of the conjugated verb in sentence 5 in the first usage does not exist both in ENG and TUR. GER, as I have written before, has two types of word-order parameter: SVO in main clause and SOV in subordinate clause. The latter is valid for RCs, as the relative constructions are also subordinate clauses. Even though the GER RC precedes the head it modifies, we can see that it also precedes the noun phrase it modifies. So it can be said that in contrast to the ENG and TUR RCs the syntactic features of GER RCs are different.

Various relativisers exist in GER. Nevertheless relative pronouns are less complicated than ENG ones except in their highly inflected forms. ENG has some difficulty regarding the properties of RCs such as: their position, for example, stranding in the sentence; especially preposition-stranding; the existence of different alternative relative pronouns; and gapless ones. There are only two variations in the GER

Relative Pronoun: with the definite article, "der, die, das", or with distinctive forms in the genitive "dessen" and "deren". In addition, it uses the form "denen" in the dative plural. It is said that this from is historically related to the ENG "that". The Relative Pronouns "welcher, welche, welches" (this can be compared with the "which") are old forms and they are seldomly used today.

As in most Germanic languages, including Old ENG, both kinds of Relative Pronouns inflect according to gender, case and number. They take their gender and number from the noun they modify, but the case from their function in their own clause. The classification of RCs in GER will be made so: Restrictive RCs, Non-restrictive RCs, Adverbial RCs, Interpretive RCs, et cetera. Finally, the similarities and differences between GER and ENG will be listed.

1.4. The Relative Clause in Turkish

Not only monolingual TUR students but also those who are bilingual (TUR-GER) will be the subject of the 2nd empirical study. They will have the third test-TUR-ENG TRANS- to answer. Most of the sentences in this translation are formed with either "-an" or "-dık". The sentences 3, 9 are built with "-an"; the sentences 1, 4, 5, 6, 7, 8 with "-dık"; the sentences 2, 10 with POSS and the last two sentences do not exist in TUR. Therefore "-an" and "dık" will be explained in detail.

In the TUR grammar books RCs are usually handled under" Fiilimsiler". They can also be seen under the titles such as "Ortaçlar" (participles) or "Sıfat- Fiil" (adjectival verb; attributives). RC in TUR is used as an attributive construction like in ENG. The construction of RCs in the ENG language is made with the relative pronoun but in the TUR language it is made with suffixes which are participles. In the order words, TUR does not have overt relative pronouns. The participle suffixes in TUR are "-an", "-dık", "-ası" "-mez", "-ar", "-ecek" and "-miş". They function as attributives (modifing the noun) and predicates. I will use the term relativisers for them when they are used as attributives (for building a RC) and the tempus constructors when they are used as predicates. In order to construct a RC these suffixes are added to the verb stem with

their variants as a result of vowel harmony or consonant mutation. It can be said that having these new forms makes them sometimes difficult to be recognized e.g. "dık", "düĝ", "tıĝ" et cetera.

I have not seen the suffixes "–ası", "-mez" in the book of Gencan, T.N. (1979) even though this book is one of the best known TUR grammars. Likewise I have not found the suffix "–ası" in the book of Ediskun H. (1985), Bilgin M. (2002), Buhur İ. (2000), Hengirmen M. (2005) und in some other books. I am going to explain the reason for that in the fifth chapter. On the other hand nearly every TUR grammar authors subdivide RCs according to these suffixes. But Demir, T. (2004) and Bangoglu T. (2007) sub-divide them into three: 1) The present tense participle (Şimdiki Zaman Ortacı) 2) The past tense participle (Geçmiş Zaman Ortacı) and 3) The future tense participle (Gelecek Zaman Ortacı). I am going to handle the TUR RCs like Demir, T., and Bangoglu T., because the suffixes used for RC are carrying a tempus meaning. Sometimes the form of RC in TUR can be confusing at first sight especially for children and the learners of TUR as FL when it is build with the third person singular, because the form of RC and of predicate is similar in this case. However this confusion can easily be surmounted in the way we look at whether it stays at the end of the sentence i.e. predicate formation or in front of the head noun inside RC i.e. attributive formation. In the latter case it is relativiser and in the former case it is tempus constructor. In other words the place where they stay and the context in which they are used are usually helpful in such situations. The following example demonstrates this:

8) a. Hiç <u>otur**acak**</u> zaman-ım yok.

    (any/sit+"-acak"/time+POSS/predicate)

   (I do not have any (free) time to sit)

  b. Arkadaşım bu mahallede <u>otur**acak.**</u>

(friend+POSS/this/neighborhood+localitive/verb stem "otur"+ "-acak"=predicate)

    (My friend will live in this neighbourhood)

Let's take a look at 8) a; here we can understand that it is a RC, because"-**acak**" as relativiser precedes the head noun "zaman". In 8) b. "-**acak**" has a predicative function for the future in 3rd person singular, because it stays at the end of the sentence and not before the head noun i.e. does not modify the head noun (note that the word "oturucak" in both cases looks alike).

There is another point to which I want to pay attention in my work. It can sometimes be difficult to determine the tense of the relative construction. Will it not be difficult to acquire the structure of the word "gördüĝün" in the following example? I think it is likely that it will cause the acquisitional problems.

9) Orada gör**düĝ**ün adam (benim) öĝretmenimdir.

   (there/ verb stem "see"+suffix "dık"+POSS for 2nd person singular/man (POSS)/predicate (The man who you see/are seeing there is my teacher)

Only looking at the subordinate clause (RC) we can not know whether it is build in simple present tense or in the past tense. But we can understand that it is a RC. The predicative construction and the context of the situation (and sometimes the time expression) are helpful to recognize the tempus in order to translate into ENG. I am going to talk about this in detail in the fifth chapter. Apart from that point, I am going to show where and what kind of functions these suffixes can have. I am going to focus on another point in relativisation. That is: with the nominalisation of participles TUR forms new words. Nearly all of the suffixes that function as relativisers seem to be nominalised e.g. yaka**cak** (fuel /for heating): Yaz**ar** (writer/author). Especially I have realized that the nominalization occurs often with (-an) like in "Bakan" (minister). This is the other point in TUR that will be focused on in detail.

1.5.   About the Acquisition of Relative Clauses

The main subject of the dissertation is acquisition of RCs. Thus in the 2nd empirical test it will be examined how difficult are ENG RCs for GER L1, and TUR L1 and TUR L2. If the typological similarities and differences of these three languages are helpful or a

hinderance for the acquisition of Rcs - which is an interesting aspect - is the focus of this dissertation. Furthermore, the effect of crosslinguistic influences should appear in the TRANS task of GER and TUR. Before passing to the related discussion, let's look at the following example that demonstrates how ENG, GER, and TUR typologically differ.

10) a. ENG: The flower that the man gave to the women is a tulip.

   b. TUR: Adam-ın   kadın-a   ver-diĝ -i   çicek   bir lale-dir.
    (men+genitive-women+dative-give+Rel.suff+his-flower-one-tulip-is).

   c. German: (a) Die Blume, die der Mann der Frau gegeben hat, ist eine Tulpe.
                 (b) Die vom Mann der Frau gegebene Blume ist eine Tulpe.

As we see from these sentences the order of head noun and RC in ENG, GER and TUR is different. While in ENG (and in GER a) the noun (N) precedes the RC, in TUR RC precedes the noun (N). Namely the word–order of TUR as a grammatical language typology is SOV while ENG has a SVO word-order. On the other hand in the GER language there are two positions of this as in (a) and (b). And the word-order of GER is both SOV (in the subordinate clause) and SVO (in the main clause).

The form of RCs in ENG, GER, and TUR is very different. Does this present any difficulties for GER and TUR learners of ENG? ENG and GER belong to the Indo-European language family. TUR, in contrast, belongs to a different language family. Does that explain the differences between RCs of these languages? I am going to investigate these questions together with others that I will mention after talking about the actuation of RCs.

Another point that I am going to explain relates to UG. It is known that UG has received great attention in SLA on the grounds that the specification of universal principles and parameters is relevant to theoretical developments and understandings and may have practical value in second language teaching. It is worthy to take a short

look at some rules of UG related to the ENG (GER is similar to ENG), GER, and TUR languages.

According to Chomsky, every phrase in every language has the same elements, including a Head. For instance, a noun phrase (NP) must always have a noun head, a verb phrase (VP) must always have a verb head (V), a prepositional or postpositional phrase (PP) must always have a preposition or postposition head (P), and so forth. The only alternative or parameter setting that speakers have in different languages is Head Direction or the position of the head in relation to other elements in the phrase. Chomsky (1965) says that there are only two possible choices. One is head-initial; the other is head-final. In terms of this subject I think that ENG children who are learning ENG as their L1 when getting the input begin to know that the ENG language generally has a head parameter setting. The reason is that they hear the following sentences and begin to learn this.

11) a. John {kicked the ball} VP

   b. John rode {in the car} PP

The verb in 11) a. is "kicked". And the word order of this verb phrase shows that the parameter setting in ENG is head-initial. The head in the example 11) b. is "in" as a preposition. Namely the preposition precedes "the car". This gives us additional evidence that the parameter setting in ENG language is head-initial. I want to put these two examples in TUR.

12) a. Ali {topa vurdu} (subj: Ali, dative object: topa (the ball), predicate: vurdu).

   b. Ali {arabaya} bindi (subj: Ali, araba (the car)+ DAT(y)a, predicate: bindi).

In contrast to the ENG language, as seen above, the TUR language is final-headed. Because the verb "vurdu" comes after in VP and the dative (-a=to) comes after "araba", the car. Both these parameters of TUR are similar to Japanese. The children acquiring TUR or ENG as their mother tongue need to hear only a limited amount of input to establish the parameter for this principle in the right way, more about UG later.

The work on the typology of RCs by Keenan and Comrie (1977) had a great influence on many works that have been done in order to find out the relative difficulty of processing and acquiring different types of RCs. This has occupied a considerable place in SLA. This kind of typology depended on the markedness attained from a large number of comparative studies of RC structures in various typologically different languages. The central point of that was the position of a noun phrase (NP) that can be relativised. İt changes from language to language in a systematic way. They say that if a language permits the relativisation of the nominal phrase of a particular type, such as indirect OBJ, then those nominal phrases of the type which are staying in a higher position in the hierarchy may undergo relativisation too. This can be seen below (Keenan and Comrie 1977: 66):

Subject > direct object >indirect object > oblique> genitive

Among the efforts to find an answer for the relative difficulty of comprehending different types of RCs is the research of Tarollo and Myhill (1983) and Hawkins (1989). Their hypothesis (LDH) is that the relative difficulty of acquiring different types of RC is not due to relational status of the nominal extraction site but rather due to the proximity of the head of RC to that extraction site from the wh-phrase; specifically, they say that this hierarchy results from the linear distance between the gap and head noun. In the following examples, we see only one word in 13) a. between the gap and head noun. But in 13) b. we see four words between the gap and head noun[1].

13) a. The man who loves the woman

   b. The man who the woman loves

The RCs have been investigated by different scholars regarding to their acquisition and production for example: Eckman, Bell and Nelson, 1988; Gass, 1979; Hamilton, 1994; Izumi, 2003; O'Grady, Lee, and Cho, 2003; Pavesi, 1986; Wolfe-Qintero, 1992. Many works on SLA give evidence showing that SUBJ RCs like in example 13) a. are easier to produce and acquire than direct OBJ RCs like in example 13) b.

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[1]In order to understand the explanation "distance between gap and head" see example 13) a.

In the acquisition of RCs, six hypotheses emerged among the researchers: Linear distance hypothesis (LDH), structural distance hypothesis (SDH), word order difference hypothesis (WDH), nominal phrase accessability hypothesis (NPAH), perceptual difference hypothesis (PDH) and subject object hierarchy hypothesis (SOHH). These hypotheses explore whether RCs are difficult to acquire. The formulation of LDH is: Words or words with different referents, namely the number of elements that intervene between the gap and the head, decide the difficulty of a RC. In this way we see that there is a similarity between the prediction of Keenan and Comrie's hierarchy and the LDH. Both assume that the acquisition of a SUBJ RC is easier than that of OBJ RC in ENG.

In SDH it is shown that this difficulty in acquiring RCs is determined by structural distance. The structural distance is the number of phrasal boundaries that intervene between the gap and the head (Collins 1994; O'Grady 1997; Hawkins 1990). Thus this hypothesis gives different ways of deciding how the structural distance between the gap and the head can be counted. Let's look at an example.

14) a. SUBJ relative: the lion [CP that [IP_ carries the cow]]   2 nodes (CP & IP)

    b. OBJ relative: the lion [CP that [IP the cow [VP carries_]]] 3 nodes(CP, IP & VP)

So we see that the structural difference between the head and the gap in a SUBJ RC (2 nodes) is shorter than in a direct OBJ RC (3 nodes).

But in contrast to this, Collins counts X' projection and XP projection. Every approach within the SDH shows the same predictions for ENG RCs. In other words, the acquisition of SUBJ relatives will be easier than OBJ RCs. O'Grady et al. (2003) say that the depth of the gap corresponding to the relativised elements determines the difficulty of a RC. A new investigation related to this theme was conducted by cognitive psychologists such as MacDonald & Christiansen (2002) and Tabor, Juliano & Tanonhaus (1997). In particular MacDonald & Cristiansen reported, because of the fact that SUBJ relatives (like SOV word order) are relatively regular in their word order

and this structure is the same word order as simple active one-clause sentences which are very frequent in ENG (SVO word order) than the direct OBJ relative which is OSV word order. People experience the former much more than the latter. Therefore they understand the SUBJ relative first and it is easier for them. This hypothesis is called 'word order difference hypothesis' (WDH). From all six hypotheses (NPAH, LDH, SDH, PDH, SOHH, WDH) there are three hypotheses which I found most relevant for my research. These are NPAH, PDH, and SOHH. I will explain the reason for this in the eighth chapter, "Literature review concerning RCs".

There are a number of investigations made about the acquisition of TUR RC as L1 (see, for example, Slobin 1982). But no research has been made on the acquisition of TUR RCs in L2 speakers (apart from Özgür Aydın, 2004[2]). Actually, the acquisition of RCs has been the subject of much recent work in L1 acquisition (For example: Aarssen 1996; Emekçi 1990; Slobin 1986; Özcan 1997). In his research about the development and use of RCs in the speech of ENG speaking and TUR speaking children, Slobin found that the acquisition of RC in TUR is much slower and happens later in comparison with ENG. He explains this with two psycholinguistic processing problems in TUR. One is the non-finite verb forms in TUR recognised as interpretable verbs by children. The other is that the construction of SUBJ relatives and OBJ relatives is not uniform in TUR. Similar to the results of Slobin (1986) and Cağrı (2005), it was found that TUR adults use RCs about half as often as ENG speaking adults. Thus TUR children receive half as much input when compared to ENG speaking children. However, my methodology is different. They showed the children pictures and wanted them to build the RCs. I am going to give the adults a test, in which there are two sentences, and ask them to construct RCs by combining the two sentences.

Some of the authors whose work I will make use of for the comprehension of TUR and ENG RCs, are Slobin Dan I., Ekmekçi F. Özden, Çağrı Ilhan, Sheldon A., Kornfilt J., Özcan H., Özgür H, Ekmekçi Ö., Hankamer I., & Knecht L.,

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[2]He conducted a study to investigate whether the acquisition of Subject Relative is easier than Object Relative. The result was that the processing of SUBJ relative in Turkish is easier than OBJ relative.

The aspects of UG, which have an important role in SLA, should be taken into consideration. UG proposes a set of rules, intended to explain language acquisition in child development. The application of this idea to the area of SLA is, among others, represented by the McGill University linguist Lydia White. It is said that there are some variations in terms of accessibility of UG for the adults such as fully accessible, partially accessible, and not accessible. After discussing the work of Lydia White, Universal Grammar in SLA[3], I am going to try to make a connection with the acquisition of RCs.

The main goal of my study is to examine whether ENG RCs are more difficult in the acquisition and production for GER L1 or TUR L1 and L2 speakers taking into account the typological effects. We have already seen in example 10) a.b.c that, apart from the syntactic issues, the role of language systems is important in the formation and acquisition of RCs. Of course, first of all, the diversities and similarities in the formation of RCs in ENG, GER, and TUR will be pointed out. So the difficulty - considering the hypotheses NPAH, PDH and SOHH - of the acquisition of ENG by GER and TUR adults is the cardinal of the dissertation. The other aim of my work is to show whether the influence of L1 of GER and TUR students on the acquisition of ENG RCs exists, bringing to light the transfer errors with consideration of the typological differences. The other questions are: Which type of RC (SU, DO, IO, PREP, GEN, and COMP) is easier to acquire? Will the three hypotheses I selected predict correctly the difficulty of ENG RCs? Will GER students be more successful than TUR students, on the grounds that there are more similarities (syntactically) between ENG and GER as a consequence of language typology? Will these predictions by CA be supported? (Similarities→positive transfer; differences →negative transfer or interference). How difficult will some items of RCs be for GER and TUR students, such as the resumptive

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[3]The argument of Lydia White (2003) in her book is that SLA is constrained by principles and parameters of UG. Giving emphasis on characterising and explaining the underlying linguistic competence of L2 learners in terms of these constraints, she gives a discussion pertaining to the theories developed about the role of UG, MT/L1 influence and the nature of the interlanguage grammar.

pronoun, preposition stranding, relativiser selection, and avoidance? What are the implications for UG?

I have divided my investigation about RC into two empirical studies. **In the first part of the research,** which is a corpus analysis, I am going to collect the RC data from different types of corpus. The ENG corpus consists of school books such as chemistry and history on the one hand, literature and the press on the other hand. I have chosen the school books of 10th and 11th grades on the grounds that they are at the same grammatical level with the test items which are going to be applied to the students of these grades. Again, it is with the same materials (and grades) where I will make my other investigation pertaining to the acquisition of the ENG RCs and gather the data from high schools. The question in this section is: What is the frequency of some ENG relative pronouns in different branches (and types of RCs), and are the ENG RCs used more in social science or in natural science? After collecting all necessary data from the written literature about RCs, a description and an evaluation will be provided.

The second part of the research pertains to the items of three tests. It deals with the acquisition of the ENG RCs by speakers of GER L1 (group 1) in Germany; TUR L1 in Germany (group 2) and L2 in Turkey (group 3) learning ENG as L2 or L3 and attending the 11th grades of high school. The collected data is from those participants: 16 GER students and 16 TUR students in Germany and in Turkey. The students will be asked to perform three separate tasks: A Sentence Combination Task (SCT-12 sentences); a Grammaticality Judgement Task (GJT-29 sentences true/false) and a GER/TUR Translation Task (TRANS-12 sentences). The tests of this research - SCT, GJT and GER/TUR TRANS - will be analysed and the findings will be presented. The results from the GER and TUR students' papers will be compared with regards to the correct construction of ENG RCs. The last step is to determine the percentage success of of GER L1 and TUR L1 and L2 speakers. After the evaluation I will point out what kind of mistake students typically make and whether the acquisition of ENG RCs presents a major difficulty for them. At the end, a general discussion of learner problems due to the different sentence structures of ENG, TUR, and GER will be given.

There is an additional section (under test 2B) for TUR students living in Germany. It will be handled separately. It was better to give to group 2 not only a TUR-ENG TRANS test but also a GER-ENG TRANS, because they were born and raised in Germany. Their academic language is therefore GER and not TUR, i.e. they could perform better on a GER-ENG TRANS test. Thus I applied the test GER-ENG TRANS (GJT additionally) to a new TUR bilingual/trilingual group in order to compare them with the old data. The reason that I also gave GJT to these students was because the word "all" was missing in the test item number 11 in GJT as a typo ("Almost **all** of the people appear on television wear makeup"). These results will be compared and analysed with the others in the related part of group 2.

Another point that will be researched is the difference between the genders, as we know the genders may react differently to the same questions/tests. I will attempt to determine the difference in success rate between male and female informants (also between the three groups) and attempt to determine the kinds of errors that Fs make that Ms do not and vice versa.

My working hypothesis of the 1st part of the research is: the frequency of RCs in the social science is higher than the frequency of RCs in natural science. My working hypothesis of the 2nd investitation (three tests) is: CA predicts that ENG RCs would be difficult both for GER and TUR spreakers. GER speakers would be more successful than TUR speakers in the acquisition of ENG RCs because GER and ENG are typologically similar. The acquisition of ENG RCs would be more difficulty for the third group because TUR is typological different from ENG and GER. My hypotheses are: Transfer errors are predicted to be found in all groups GER L1, TUR L1 and L2 students. The language typology is predicted to have an influence (in language transfer) on the acquisition of ENG as L2 (GER L1), L3 (TUR L2), or L2 (TUR L1). It is also predictable that GER L1 speakers will apply language transfer (as a result of language typology) in learning ENG as L2 more than TUR L2 speakers since GER and ENG are Indo-European languages. Trilingual TUR speakers are expected to transfer more from their L2 (GER) than their L1 (TUR) in the acquisition of ENG as L3,

as a result of typological closeness of GER with ENG. The center-embedded RCs of ENG is predicted to be more difficult both for GER and TUR monolingual and TUR bilingual/trilingual groups, as a result of this: center-embedded RCs will be avoided more than right embedded ones as has already been found by other researchers such as Gass (1980) and Izumi (2003)

The data that I have used here concerning RCs is mostly chosen from the works of contemporary ENG, GER and TUR writers. Some of the examples are also from grammar books and I have also chosen and added some examples of my own.

In the first chapter the introduction will be presented.

In the second chapter of my dissertation, some general information about CA, together with EA and its importance for SLA will be given. I am going to handle the criticisms raised about it and its relationship to Error Analysis.

In the third chapter the progress made in CA should be explained and the reality of evidence exhibited. Another point in this chapter that is going to be discussed is the contribution of MDH and ECP to the development of CL. I am going to try to make it clear the extent to which these two tools can help the CL so that a better CA can be carried out. In a summary of attempts to make a better comparison, the emphasis on language typology and language universals will be underlined.

The fourth chapter deals briefly with the clause in detail, together with its definition and classification. Additionally, the structure and the types of the subordinate clauses will be explained because it is crucial for understanding the nature of RC formation. After that, I will talk about two types of subordinates: the noun clause and adverbial clause and their sub-genres.

The fifth chapter of my dissertation deals with the definition and subdivision of RCs, as well as their formal characteristics in the ENG, GER, and TUR languages. Other aspects of RCs will also be dealt with, such as: the construction of RCs, the explanation of pre-and post modified RCs of ENG, GER, and TUR, their typological features in grammar and an overview about the previous studies related to RCs in three languages.

In the sixth chapter, information related to the psychosyntactic approach for the ENG RCs together with Cognitive Modeling and the Gargen Path Effect will be given.

In the seventh chapter, SLA from different points of view such as internal and external factors, transfer, interference, trilingual studies, and the emergentist approach will be discussed, and the role of UG in the discipline of SLA will be talked about. Before making a study about the students' papers from the high schools in Turkey and in Berlin, my prediction was that UG is partly accessible for GER and TUR students aged between 16-18 years.

The eighth chapter deals with the literature review of RCs, RCs in the field of scientific research, the treatment of RC such as augmented transitional network (ATN) grammar, wh-movement of Rcs, and the six hypotheses.

In the ninth chapter the presentation of the results of my first empirical research about ENG RCs that has been carried out in different contexts such in literature, school books, and press will be made. In order to be clear how the RCs are used in scientific contexts an investigation conducted from high school books will be presented. Before I started with my investigation I predicted that RCs are used in the press more frequently than in school books or in novels; this has been confirmed. I am going to comment on the consequences that I have extracted from the corpus on the basis of these three contexts, namely novels, press, and school books. In this context, the syntactic and semantic use of RCs based on the evidence taken from this study will be demonstrated. My prediction about the use of RCs is that they are used infrequently in spoken language, but frequently in written language.

In the tenth chapter, the methodology used in this investigation will be presented. After that findings and statistics from the papers will be illustrated. At the same time, the results from other items such as "resumptive pronouns", "relativiser selection", "preposition-stranding", "avoidance" and implications for UG will be given. Then it will be shown how many errors the GER L1 and TUR L1 and L2 students made, the reasons will be explained, and it will be discussed whether these errors can be attributed to their ML. Even though I am going to compare the results from the GER L1

and TUR L1 and L2 students' papers, the emphasis of this investigation will be on the comparison between the acquisition of ENG RCs by GER L1 and TUR L1 and L2.

In the eleventh chapter a summary and a conclusion will be made.

2.0. Contrastive Analysis (CA)

This work is a CA in itself. I will try to highlight whether my GER and TUR informants (in the second empirical part) transfer the structures of their mother tongue into ENG, the role their language family plays, and compare whether ENG RCs are easier for GER or TUR speakers. It is important to talk about the situation of this analysis. In this part I am going to talk about some important theoretical points of CA such as terminological issues, challenges to CA and the attempts to revive it. Then I am going to discuss the relationship between CA and EA and try to highlight why this analysis has a significant place in language learning and language teaching.

2.1. The Appearance of Constrastive Analysis

I have found in the literature that sometimes the terms CA and CL are used differentially. While some authors differentiate between these terms, some authors see both terms as the same. For example, David J. Allerton pointed out (2005: 21-39) that CL is originally comparative philology. It is a branch of historical linguistics that is concerned with comparing languages. The aim of it is to establish a historical relatedness of languages that are the subject of the comparison. Thus it is a part of Applied Linguistics (AL). Apart from this applied aspect, however, it also has a strong theoretical purpose, contributing to our understanding of CL and language universals. With the comparison of languages, a relation can be found. It can be possible that this relationship is determined by the convergence through borrowing or by geneological descent. Another aim of CL is to construct the language families based on their relatedness; by doing so it tries to find the changes.

CA is the systematic study of a pair of languages with a view to identify their structural differences and similarities. As a subdiscipline in linguistics, CA arose from the

language contact studies of Weinreich (1953) and Haugen (1956), who were trying to describe the erosion of immigrants' first language by their new language. According to Crystal (1992) CA is the study of foreign language learning, the identification of points of structural similarity and difference between two languages. CA appeared in the 1950s and 1960s, and it was practised in that period as the application of structural linguistics to language teaching (Richards, Platt & Platt (1992)). Actually, CA is a method from the 1950s and 1960s, from the pedagogical point of view. Before SLA as an area of scientific branch appeared, researchers were carrying out CA by comparing two languages systematically (Lado 1957).

Comparisons were made in order to improve the method and results of language teaching. CA describes similarities and differences among two or more languages at such levels as phonology, grammar, semantics, et cetera. The comparison can be made at interlinguistic and intercultural levels. Additionally, the comparison can be carried out within languages and cultures (Fries 1945; Hellinger & Ammon 1996; Lado 1957; Trager 1949). At the same time, the purpose of CA investigations can be to compare/contrast linguistic and socio-cultural data across different languages or within individual languages, namely from the cross-linguistic/cultural perspective or intra-linguistic/cultural perspective (Altenberg&Granger 2002b; Hawkins 1988; Hellinger & Ammon 1996; Johanson & Hofland 1994; Oleksy 1989).

It can be possible to find a new approach for the linguistic knowledge by comparing the diversities and similarities in languages. At the same time, studying the grammar of individual languages is helpful for the grammatical theory of all languages. It has been found that there are many similarities among languages, i.e. they have many common properties (Greenberg 1974). Whatever is true for all languages can be considered universal. To give an example for such a universal, nouns and verbs occur in all natural languages. Another example for a universal is that there are consonants and vowels in all spoken languages. Because of the adaptation and changes, there are variations in particular languages. It is said that the language universal is an abstraction containing all processes and forms vital to the general theory of language. Di Pietro (1971) states that all languages share universals; the differences between

languages are found in the ways these universals are realised in particular languages.

It has been pointed out by scholars that languages show great differences in their surface structures (i.e. in syntax), but they have fewer differences at deeper levels (Corder 1982). Because of the fact that this subject is related to transformational grammar (Chomsky 1957, 1965), I want to write here something about the transformational grammar of Chomsky.

The transformational grammar consists of two levels of representation of the structure of sentences, as it has already been explained (i.e. surface and deep structures). Consider the two sentences "*Steven wrote a book on language."* and "*A book on language was written by Steven.*" Chomsky held the view that there is a deeper grammatical structure from which both these sentences are derived. So the transformational grammar of Chomsky provides a characterisation of this common form and how it is transformed to produce actual sentences. We are confronted with a similar view by Corder. He asserts (Corder 1982: 238): *"The rules which generate the deep structure of sentences in all languages are the same; they differ outwardly or superficially only because the same underlying structure has undergone different transformational derivations. The languages differ only in respect of having different sets of non-comparable transformation rules".*

Linguists have described a number of languages so that the shared parts and common parts could be found. So as to carry out a linguistic study they must have known well the structure of the languages to be compared. Before the languages are compared the properties of each language must be described and the ways in which these languages can be compared must be established. In order to do that, we can simply use a translation as a method. Nevertheless it is quite difficult to compare languages as a whole so as to find out all of the linguistic similarities and differences (We will see that this idea changed in the mid-1980s due to studies by, for example, Hawkins, who compared many grammatical categories of ENG and GER). It was thought that it is better to compare them level by level or category by category

because in this way it would be possible to find the common properties among languages[4].

An example of the former is Greenberg (1974). He had the idea that it is important to extract many differences and similarities by comparing many languages. Greenberg in particular made important comparisons among many languages at the level of lexicology, but later scholars like Hawkins (1986) supported the idea of comparing only two languages in all categories of their grammar. He said that it was more useful in this way because he thought that many differences and similarities could be found. Otherwise some similarities and differences could be overlooked, i.e. with complete comparison in all grammatical categories of two languages, more similarities and differences could be detected. Additionally, such a method would be more useful for the language pedagogy. This was the base assumption.

Yuen Ren Chao's (1933) "Preliminary Study of ENG Intonation (with American Variants) and its Chinese Equivalents" can be considered the first contrastive study between these languages. Then, with the investigation of bilingualism, came the application of structural linguistics to CA. After this, Lado and Fries, American structuralists, applied the principles of linguistic science to the teaching of ENG in their book "Teaching and Learning ENG as a Foreign Language"(in 1965). "The Contrastive Structure Series" was edited by Charles Ferguson (1971). Of course there are many others who have worked in this field. The "19th Annual Round Table Conference" at Georgetown University (in 1968) dealt entirely with CL.

The studies about CL were started in Central Europe before the Second World War and progressed afterwards in North America. In the United States in the late 1950s, Lado suggested CA as a means of identifying areas of difficulty for the people who are learning a language, although already in 1945 Fries had formulated the theory. The earlier researchers who carried out CA focused on language. It means their investigation was language-focused. During the pre-Chomskyan structuralist period,

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[4] Consider how difficult it is to compare all languages: today the number of natural languages in the world is estimated to be about 6000-7000

linguists determined the features of NL which contrasted with features of FL, indicating that these would be areas most likely to cause difficulty for FL learners. By the early 1970s, this CA theory had been to a great extent replaced by EA, which examined not only the influence of transfer errors but also those related to TL, including overgeneralisation (Bowen, Madsen & Hilferty (1985).

At the beginning of the 1960s, CA was used extensively in the field of SLA as a method. The target was to explain why some features of a TL were more difficult to acquire than the other features. According to the behaviourist theories (Sidman, 1969; Skinner, 1953, 1957) prevailing at the time, language learning was a question of habit formation in a process of stimulus, response, and reinforcement. Language learners respond to the stimulus i.e. linguistic input, and reinforcement habituates the response. The language learners imitate and repeat the language that they hear. And when their responses are reinforced, learning takes place. What is implicated here is that learning can progress by practice.

CA was mainly valuable for teaching a SL. The idea of this analysis follows: The difficulty in learning a SL depends on whether the systems are similar or different. When the two languages are compared, the learner's attention is drawn to language contrasts which make learning easier. Nevertheless the target of Applied Contrastive Linguistics (ACL) is not simply this; it also helps the textbook author and the teacher in preparing their material and presenting their subject matter. We should keep in mind that the effect of CA will change according to the age of the learner and the teaching objectives and according to many other reasons. It is said that ACL is more useful for adults than for children on the grounds that an adult's cognitive faculties are better developed. Children can adapt themselves to the SL structure easily, because it is thought that the so-called 'critical period' is available to them. This is the field in which many studies have been carried out. One of the prominent studies on this subject is the study made by Krashen (Krashen & Scarcella, 1982; Jia, 1998). It was shown that, though older language learners have an initial advantage over younger learners, in the

long run young language learners tend to achieve higher levels of success than older learners. This last result is generally[5] interpreted as evidence in favour of the Contrastive Analysis Hypothesis (CAH). However, in order to test the assumption that the critical period effect is caused by neurophysiological factors, as Lenneberg (1967) proposes, one needs additional types of evidence (see, for example, Bongaerts, 2003).

Wardhaugh (1970) suggested a distinction between a strong version (predictive/a priori) and a weak version (a posteriori/explanatory). The proponents of the strong version were Lado, Fries, Banathy, Trager, and Waddle. According to the main idea of the strong version, it is possible to contrast the system of one language with the system of a SL. The aim of CA was to predict those difficulties which a learner of a SL had in learning their NL and to construct teaching materials around those difficulties in order to help him learn a SL. And when similarities were found, the TL would be more easily acquired. Some linguists, for example Weinreich (1953), point out that contrastive studies without reference to the speakers of the two languages are unrealistic. However there were phonological problems when phonemes, phones, and allophones are contrasted.

The main idea of the weak version is to use the best linguistic knowledge available in order to account for observed difficulties in SLA. The analyses are made on the basis of evidence provided by linguistic interference. The evidence is utilised to explain the similarities and differences between systems. Wardhaugh says that one of the greatest difficulties CA has is the comparison of phonetic and phonological items between languages. Similar expressions came from Fries (Peter H. Fries&Nancy M. Fries, 1985:351): "*in learning a new language, however, chief problems of materials is not at first that of choosing vocabulary items; it is, first, the mastery of the sound system to understand the stream of speech, and it is, second, the mastery of the features of arrangement that constitute the structure of the language*".

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[5]Even though there are other studies with different results.

In the book written by Valdman (1966), entitled "*Trends in Language Teaching*", the notion of CA (strong version) was explained by Banathy, Trager, and Waddle (p55) as follows: "*the change that has to take place in the language behaviour of a foreign language student can be equated with the differences between the structure of the student's native language and culture and that of the target language and culture. The task of the linguist, the cultural anthropologist, and the sociologist is to identify these differences. The task of the writer of a foreign language teaching program is to develop materials which will be based on a statement of these differences; the task of the foreign language teacher is to be aware of these differences and to be prepared to teach them; the task of the student is to learn them.*"

After comparison, they thought that differences, not similarities, were the reasons for difficulty, as similarities would make it easier to learn the target language. Even though we see here that these researchers give the framework of CA, and show the task of those persons whose jobs deals with CA. We will see later that it is not the reality, i.e. it is not so easy to compare languages and draw differences.

As I have written above, CA was used extensively in the field of SLA in the 1960s and early 1970s as a method of explaining why some features of a TL were more difficult to acquire than others. According to the behaviourist theories emerging at the time, language learning (LL) was a question of habit formation. We see later that this theory was put into the question by the nativist approach, whose proponents were Chomsky and Piaget. According to the idea of behaviourist theory, learning involves three things: The first is imitation, the second is practice, and the third is reinforcement. If these are followed, learning takes place. During that time, many scholars tried to find out how learning occurs. For example Postman (1971:1019) states: "*Learning is a cumulative process. The more knowledge and skills an individual acquires, the more likely it becomes that his new learning will be shaped by his past experiences and activities. An adult rarely, if ever, learns anything completely new; however, unfamiliar the task that confronts him, the information and habits he has built up in the past will be his*

point of departure. Thus transfer of training from old to new situations is part and parcel of most, if not all, learning. In this sense the study of transfer is coextensive with the investigation of learning". In this context this statement is worthy: If SLA is disturbed by the habits of your NL, it is reasonable to focus on the differences between NL and TL. Thus we can say that CA was developed from the theoretical assumptions of behaviourism.

The NL sometimes interferes during the learning of a SL, and this interference should be surmounted. Otherwise, errors can be habituated. Do problems in SL learning come from only one reason? In learning a SL, problems arise not only from the new language, but also from NL or interlanguage and from other sources. In the past there had been a tendency to interpret the TL in terms of the NL. But later it was realised that doing only this was wrong. With CA, the sources of errors due to interference were found and described in order to eliminate their effects.

On the other hand errors are also important. In this connection Corder (1967) says that the errors in SL are interesting because they reflect underlying linguistic rules. SLA should not be looked at from a purely pedagogical perspective, he continues, and the study of SL can be seen as a subfield of general linguistics or cognitive science. It can be said that not all but many of the errors which are made in FL learning are due to interference. The reason can not be explained only with linguistics. In other words, all of the errors can not be solved linguistically. They are also pedagogical, psychological, and sociological in origin. It is noteworthy that Corder makes a difference between systematic and non-systematic errors (1981b). Corder emphasises that systematic errors are those that learners make as a result of their lack of knowledge. These kinds of errors are the errors which are always repeated by learners. Furthermore, Corder distinguishes between a mistake and an error. He says that errors are more significant than mistakes. Mistakes are the consequences of our psychological situations.

I agree with this statement. Not only one factor of performance induces a mistake. In terms of this matter Radford (2004:4) says: *"Performance errors (not with the*

distinction by Corder) are attributable to a variety of performance factors like tiredness, boredom, drunkenness, drugs, and external distractions and so forth."

During the 1950s and 1960s, scholars made the comparison in order to discover the sources of interference. They listed the errors students had made and described the conflicts between the systems that caused the errors. Fries says (1945:9): *"the most effective materials are those that are based upon a scientific description of the language to be learned, carefully compared with a parallel description of the native language of the learner".* One can get closer to the language problems by a systematic comparison of the NL and the FL. We should raise a question here: Was it enough to get closer to the language problems by a systematic comparison? Were there no other language problems apart from this comparison? Yes, there were other language problems such as the problems caused by psychological or biological situations. In the course of time, the idea changed in consequence of new investigations about language and LL.

In the connection of the statements by Fries, Lado (1957:7) points out that *"we can predict and describe patterns that will cause difficulty in learning and those that will not cause difficulty by comparing systematically the language and culture to be learned with the native language and culture of the student".* The researchers had to identify the differences between the structure of the student's NL and TL and how a FL teacher ought to be prepared to teach them. Due to the fact that the students and the teacher have no common NL, it is impossible to do that. There are also other things that influence the ease or difficulty of learning, such as motivation, intelligence, the quality of teaching, and teaching materials, et cetera. Lado (1957:2) says: *"those elements that are similar to his native language will be simple for him and those elements that are different will be difficult".* But what is identified as a difference and predicted as a difficulty may not cause a problem for the learner. For example, something that is entirely different from one's NL may be learned more easily than that which is only slightly different. Of course, the amount and type of difficulty varies

according to individuals. All the speakers of a language may not have the same amount of difficulty with each problem.

In this section a short summary of CA has been given. Despite the criticisms raised against CA, It has been shown that the strong version of CA can still be useful because the difficulties predicted as a result of this analysis can be analysed and teaching materials can be prepared around these difficulties. Owing to the fact that the acquisition of RCs of ENG, which is the main theme of this work, by GER and TUR students is a comparison in a way, it was relevant to talk about CA, especially its strong version.

2.2.   **The Contrastive Analysis Hypothesis (CAH)**

Many definitions of CA can be made. CA is a way of comparing FL and SL of the learners in order to analyse the possible difficulties which the learners might come across in a SL learning situation. The supposition of CAH is that the patterns and rules of a FL cause many difficulties to the learning of those who try to learn a SL.

The main difficulties are found based on the linguistic structure comparison of two languages. In this connection Lado (1957:59) asserts: *"Since even languages as closely related as German and English differ significantly in the form, meaning and distribution of their grammatical structures, and since the learner tends to transfer the habits of his native language structure to the foreign language, we have here the major source of difficulty or ease in learning the structure of a foreign language. 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."*

We see a similar statement by Weinreich (1953:1) who said: *"the greater the difference between two systems, i.e. the more numerous the mutually exclusive forms and patterns in each, the greater is the learning problem and potential area of interference."*

The opinion that the prediction of difficulty could be made through CA was the key. According to CAH, when two languages are compared, the following happens: Where two languages are similar, positive transfer occurs; where they are different, negative transfer (or interference) takes place. As a result of this new approach, SLA was highly motivated. It was known as transfer theory. It grew out from the common observation of the classroom teachers. The idea was that the pronunciation habits and the grammatical and lexical categories of the NL were unconsciously transferred to the learning of the SL, especially during the time of initial stages (Fries 1945). This sight or technique became the foundation for the appearance of CA.

CA could not predict a great majority of errors, as was shown by EA. The more valuable aspects of CA have been incorporated into the study of language transfer. Nevertheless a significant finding of EA has been that many errors are made by the language learners making faulty inferences about the rules of the language they learn. This will be a part of discussion later.

It should be indicated that the learning process is more complicated. It was not enough to show similarity or difference, ease or difficulty. For instance Stockwell, Bowen and Martin (1965) made a comparison of ENG and Spanish. They found a hierarchy of difficulties. This was published in the University of Chicago series[6]. They took examples from ENG speakers who were learning Spanish. According to this hierarchy there are five types of difficulty: The first one is "Split" i.e in the FL one element exists, but in the SL two elements, for example in ENG "for" has two forms in Spanish: "por" and "pora". The second is "new" when there is one element in SL but there is no equivalent in FL (for example, marking grammatical gender in Spanish). The third is "absent", which means that in the FL there exists one element, but there is no equivalent in the SL. The fourth is "coalesced", i.e there are two elements in the FL but

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[6]The University of Chicago Press's Contrastive Structure Series (Charles Ferguson, General Editor) includes volumes comparing English to the major European languages taught in American schools: German/English(Moulton 1962; Kufner 1962), Spanish/English (Stockwell and Bowen 1965; Stockwell, Bowen and Martin 1965a), and Italian/English (Agard and Di Pietro 1965a, 1965b) were published. Studies comparing French and Russian to English were prepared but never published (van Els et al.1984).

one equivalent for both in the SL. And the last one is "correspondence", where one element in the FL corresponds to one element in the SL or vice versa.

They asserted that if FL and SL corresponded structurally and functionally, it could be expected that the easiest linguistic points for the learners are there, and thus allow for them to acquire the language very easily. At the same time they claim that more difficult elements are the elements which are present in the FL, but not in the SL. The most difficult elements are those with splits. In these cases, one element that is present in FL is present in SL with two or more applications. It can be said that the system of these researchers is relevant. Stockwell, Bowen and Martin (1965), in contrast to Lado, do not predict the greatest difficulty in the new and missing categories, where perhaps the differences between the two languages are the greatest. Their position has been supported by further research. For example, Buteau (1971) found that for ENG speakers who were learning French the French sentences that correspond literally to their ENG equivalents are not necessarily the easiest to learn. On the other hand this phenomenon had been handled earlier by Osgood, also a psychologist. His statement follows *(*Torrey 1971:226): "*When two sets of material to be learnt are quite different or are easily discriminated by the learners, there is relatively little interaction that is, learning one has little effect upon learning the other. If they are similar in such a way that the learning of one serves as partial learning of the other, there may be facilitation, or positive transfer. If, however, the similarities either of stimuli or responses are such that responses interfere with one another, then there will be greater interference as similarity increases*".

Even though differences between the conclusions of these scholars (Lado 1957), Weinreich (1953) and Buteau (1970) existed, their findings have been important for new empirical studies.

It should be repeated here that CAH is rooted in psychological theory of behaviourism and in the linguistic theory structuralism (Bloomfield 1933, Fries 1945). It means that LL takes place as a habit formation process. In addition to that, CAH can be understood (at least the beginning of the hypothesis) in structuralism, in the theory of linguistics, i.e. language is seen as a set of patterns. From the point of language

acquisition and language teaching one claim was significant: the best language teaching materials are those based on a contrast of two competing linguistic systems. This was popular in language teaching. It can be said that the strong version arose from evidence of transfer and had a predictive power whereas the weak version arose from the evidence of the language interferences and had an explanatory power. Wardhaugh(1983:7-8) says: "*The starting point in the contrast is provided by actual evidence from such phenomena as faulty translation learning difficulties, residual foreign accents and so on . And reference is made to the two systems only in order to explain actually observed interference phenomenon.*"

Even though CAH opened a new page in describing language, like many approaches in SLA, it received criticism. This happened when the predictions which had been made on the basis of CA were subjected to empirical tests. Serious flaws were discovered (see Alatis 1968). I want to list here the more important ones. CA predicted some errors, but not all of them. It means that it underpredicted (Hyltenstam 1977). There were other errors that were predicted, but they never materialised. Thus, again, CA underpredicted (e.g. Dulay and Burt 1974). The errors were classified. However, scholars did not know exactly whether these errors were due to FL interference, because the methods differed from study to study. There were variables such as age and language proficiency which affected the proportion of the interference errors that were committed (Taylor 1975).

It has been claimed that the strong version of the hypothesis is untenable and even the weak version creates difficulties for the linguist. The advances that were made in linguistic theory have led some people to claim that CAH is no longer useful in either the strong or the weak version. Maybe such a claim was unwarranted. On the other hand, one study should be noted here. It is the study made by Jackson and Whitman in 1972 (Diana Larson –Freeman and Long M. H.,1991:124). They studied the ENG performance of 2500 Japanese secondary school students on a multiple choice and Cloze Test. They tested the predictions of four different CAs of these students. They concluded that CA could not predict the interference problems of a language learner.

They said in their study that CA was inadequate and continued (Diana Larson – Freeman and Long M. H., (1991:56) *"Interference plays such a small role in language learning performance that no contrastive analysis, no matter how well conceived could correlate highly with performance data, at least at the level of syntax"*

Again, maybe one of the most important flaws of CA was expressed by Long and Sato (1984). They pointed out that a true insight couldn't be extracted only by taking an analysis of the linguistic product into consideration. According to their view, by not focusing on the psycholinguistic process in SLA, the method produced a doubtful presumption. In spite of the facts that these criticisms revealed, CA has not been abandoned. The researchers have continued to be interested in looking into and trying to identify where and when a FL affects a SL. As mentioned above, even though CAH has been unproven, researchers have used it as a methodological option.

It should be repeated here that the results of the empirical investigations were a disappointment for CAH. Some scholars tried to bring a new approach or a new idea to this hypothesis. One of these was Wardhaugh's (1970) proposition to distinguish between a strong version and a weak version of CAH, as mentioned above. On the basis of an a priori CA of FL and SL, the strong version would try to predict errors in SL learning. As I have written above, the predictions that were made did not validate CA. The predictive power of CAH was refuted through a study carried out with 4000 Japanese test subjects by Jackson and Whitman (1972). They cite: "*In terms of the capacity of Contrastive Analysis to make accurate predictions, it must be concluded that the Contrastive Analyses examined failed utterly to predict the problems that Japanese students would have." (*Huebner T. 1983:10)

Thus the strong version gave way to the weak version. The weak version researchers began with learner errors and give an explanation for them by pointing to the similarities and differences between the two languages. This occurred on the basis of differences between two languages. I want to write here again two citations: "*the weak version: it starts with the evidence provided by linguistic interference and uses such evidence to explain the similarities and differences between systems*" (Wardhaugh 1970:126).

"The proponents of CA a posteriori take a difference methodological approach. Assuming that speakers of language A are found by the construction in their attempts to learn language B, the investigation makes an analysis of the construction in language B, and the comparable construction in language A, in order to discover why the errors occur" (Schachter 1974:206).

As it has been pointed out before, in the 1980s, and especially from the early 1990s, a more theoretically oriented direction of the research regarding CA emerged. In this context, the investigation by Hawkins (1986) is quite important. According to Hawkins, CA should be considered as the complement of a typological study. It means that in the place of comparing a large number of languages with respect to a single variant property, only two languages are compared with respect to a wide variety of grammatical properties. So we see that a separation is made in the way CA is handled, which is different from strictly application-oriented research. After that, CA became more attractive for a wide circle of scholars. Apart from that, new methods and the availability of corpora (i.e. language data collection) contributed to a more rigorous empirical basis. However, it should be kept in mind that specific branches of AL have looked into CA again. Some examples for that can be: The translation studies (or computer-aided), psycholinguistics, neurolinguistics, and the investigations into bilingualism (in GER Der Bilingualismus or Zweisprachigkeit).

As a result of detecting the sources of errors the learners made, this gave way to EA. EA will be addressed will be in the following section.

2.3.   Error Analysis (EA)

It can be said that CA was an interesting idea from the point of view of a methodology. The practice of CA in a learning situation with the claim of prediction for error was an important point. There could be two reasons why some criticism has been raised against it. Firstly, both foundations (structuralism and behaviorism) from which the hypothesis rooted were not maintainable. Secondly, it operated only on a formal linguistic level without taking into consideration psychological learning and memory process.

Regarding this subject Murray (1984:847) indicated: *"The Contrastive Analysis Hypothesis is based on a false assumption that complete and comprehensive linguistic descriptions of the languages have been carried out prior to the Contrastive Analysis, A one-to-one comparison (between languages, d. Verf.) seems impossible. Another failure of the Contrastive Analysis was its concentration on solely surface structure of the languages".*

While CA used the knowledge of the general linguistic research for the description of compared languages, EA introduced the knowledge of the theories of SLA. In a situation of CA, the scholars tried to create a prediction through the comparison based on similarities and differences (strong version). However, EA is mostly based on the description and analysis of learners' errors. It was not built on linguistic structures that explained similarities/differences or interference as a result of studying a FL and SL. EA was an approach to SLA which comprised an internal focusing on the errors of the learners for the first time so as to bring to light why they made errors. And the weak version of CA used the data of EA and gave an explanation for the reasons which caused the errors. In other words, the weak version of CA explained on the basis of contrasts made between languages, i.e. the weak version has a role in explaining the errors after they are made.

On the other hand, it has been pointed out that the weak version of CAH possesses explanatory power and is useful because it detects the sources of errors. EA became an important approach for researchers. The supporters of EA emphasised that CAH only gives attention to the study of what the learner actually does. At the same time it was indicated that many errors were not the result of NL interference. They were the result of both the strategies used by the learner in the acquisition of the TL and also the mutual interference of items within TL; in other words, it was not unidirectional but bidirectional (Bausch & Kasper 1979). Other reasons, such as the communicative competence of language learners or social and situational factors were mentioned.

For the analysis of the learner errors, certain steps were followed. After collecting a sample of the learner's language, they were identified, described and classified. Then they were explained and an attempt was made to find out why they occurred. First of

all, there were good reasons for focusing on errors. They were important from three points of view. The first point is: They were carrying the features of the learner's language. It raised the crucial question (Corder 1973) of "Why do learners make errors?" The second point is that it was important for the teachers to know what errors learners made. The third point states that perhaps it would actually help the learners to learn when they self-corrected the errors they made.

EA deals with what is happening in the head of the learners and "Why do the learners commit the errors" i.e. cognitive processing, not with what did they do. So EA backs the theory of language acquisition by Chomsky (1965, 1995) in a way. The view of Chomsky was that language acquisition was not the result of habit formation but rather one of rule formation. Chomsky pointed out that humans have a certain innate predisposition to create the rules of a TL from the input to which they are exposed. After they acquired these rules, they would have a chance to create and understand novel utterances. In other words they would not have understood or produced language if they were limited to imitating input from the environment.

We can easily understand that EA gives us proof of the fact that children who are acquiring their FL internalise certain rules. They then master the limitations of these rules. It shows that children do not simply repeat forms from the input they come across. From this point of view, it is important that SL learners committed similar "*developmental errors*". In other words, errors were not made only due to interference from the FL. Thus scholars argue that the process of SLL is one of rule formation. Here the rules are acquired through a process of hypothesis formation and testing. The learners are exposed to the TL and they then form a hypothesis about the nature of the rules. When they produce TL utterances, they test their hypothesis. Utterances increasingly conform to TL as the learners change their hypotheses about the nature of TL rules. It is thus evident that the view of learners from an EA perspective differs on a large scale from the view of learners from a CA perspective. In the latter errors are the results of the intrusion of the FL. The learners do not have any control over them. From the point of view of an EA, the learner is no longer seen to be a passive recipient of TL input, but rather plays an active role in processing input, creating

hypotheses, testing these hypotheses, and refining them. He can determine the ultimate TL level which will be acquired.

It has been pointed out that the errors can occur from the field of another source i.e. interlanguage. They have been named "the errors of interlanguage". Thus it is better if I talk also a little about this subject. It can be explained which level the learners accomplished in terms of interlanguage[7] and the learners' points of fossilisation. We can regard the concept of interlanguage as a continuum between the first and SL with different learners at different points along the continuum. Interlanguage is a unique system which carries features both from the source language and TL. Selinker can be considered the first who proposed the term interlanguage, despite the fact that the same phenomenon had been described by other theorists, like Nemser (1971:115-124) and Corder (1971), but under different terms, such as "approximative systems" and "idiosyncratic dialects" or "transitional competence" (Ellis, 1985). Selinker (1972) says that interlanguage is a linguistic system separate from FL and SL. At any point along the continuum the learner language is systematic and rule-governed in its own right. The statement of Ellis R. (1990) about interlanguage is significant. He says that a learner's interlanguage is a linguistic system. A learner's interlanguage consists primarily of implicit linguistic knowledge. A learner's interlanguage is permeable, transitional, and variable; at the same time, it is the product of multiple interacting forces: transfer, general learning mechanisms, input. A learner's interlanguage may fossilise.

Let me talk little about the definition of fossilisation, too. There is a point in the interlanguage of speakers where the learners stop; learners fossilise. It may be that some learners stop earlier while others go further. It depends on the language competence of the individuals. Better said, as soon as the learner's interlanguage grammar is sufficiently developed to enable the learner to communicate, in general the motivation to improve disappears. The theory of interlanguage is very important to the process of SLA, because it was one of the first major attempts to explain this process.

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[7]In German it is called "Interimsprache" or "Zwischensprache".

It was one of the few theories of that time which was not in contradiction with the critical period hypothesis. It is also important because of the fact that interlanguage is best viewed as an attitude toward language acquisition. In order to explain the process of SLA, the theory of interlanguage asks three important questions. The first one is: what processes are involved and responsible for interlanguage construction? Second, it addresses a question on the nature of interlanguage continuum. Third, it asks for an explanation to the fact that most learners do not achieve full SL competence. (Ellis, 1994)

In CA, it was considered that the errors were caused by unconscious transfer of ML structures to the systems of the TL and that they carry information from both systems. One of the central issues of this work is to find out whether my informants transfer the linguistic structure of their ML into ENG. If yes, how much does the language family they belong to, affect their production in ENG? The errors will be examined at the end of the work.

Errors in the interlanguage hypothesis of SLA are indicative of different intermediate levels. They also provide useful pedagogical feed-back. EA in both these situations is an important methodological tool for diagnosis and evaluation of the language acquisition process. One can learn and get information from errors in psychoanalysis, in universal language research, and in other fields of linguistics (like linguistic change). Despite the descriptive study of learners' language, certain scholars of SLA undergo more research in order to understand the LL better, without going back to the factors that occur outside of the LL. It could be that the investigations reach an adaptation of interlanguage perspective. The researchers may accept exploring the LL as a linguistic system or how the LL compares to the TL. Much about this view I have explained above. Nevertheless it is worth writing here the central question of such researchers: What are the unique characteristics of the learner language?

The scholars who are interested in investigating the error often try to develop a typology of errors. According to one typology of errors, errors are classified (basic type) as omission, addition or substitution or related to word order. Similar to this classification of errors I have found another taxonomy which is called surface structure

taxonomy of errors (at the homepage of the Jena University in Germany). The classification of errors according to the level of language is: semantic errors, phonological errors, vocabulary or lexical errors, syntactic errors, etcetera. It can also be encountered that the errors are evaluated according to the degree to which they interfere with communication. Such errors are global errors which make the utterance difficult to understand and local errors which do not make the utterance difficult to understand. On the other hand there are such errors which are appearing as actual to our eye or mind. These are overt errors and covert errors (Brown, 2000:170). Overt errors are clear even out of context; for example, "I angry"; whereas covert errors are evident uniquely in context. So, according to definition of covert errors it is very difficult to perceive, for example, "I angry" without a context.

However, there is no agreement between linguists about the classification or the stages of errors. Apart from those which I have already written there is another error taxonomy given in the book of Diana Larson-Freeman and Long M. H., (1991) these types of error are described by them: i. Interlingual interference; ii. Intralingual overgeneralisation; iii Simplification (Redundancy reduction); iv. Communication based; vi. Induced errors.

It was found that the learners frequently made two types of error. The interlingual errors are those which the FL caused. Intralingual errors are the errors which are committed by the people who are learning a SL without taking their FL into account. The researchers are conducting an inquiry to understand the strategies that SL learners adopt. These sorts of errors are significant for them: overgeneration, simplification, communication based, and induced errors.

It is known that one of the criticisms against CA was that the process of SLA is not sufficiently described by the characterisation of errors. Errors in SLA do not only arise from interference. The structural differences between two languages are not sufficient to predict the occurrence of errors in SLA. Errors which learners make can be caused by many factors such as pedagogical and psychological factors along with interlingual, intralingual, and so forth.

At the beginning EA was mostly based upon methodological problems. It is usually impossible to decide in a suitable way what kind of error the learners are making from the perspective of linguistic data only. It can be said, I think, that EA can deal effectively only with "speaking" and "writing" (the productive position) but not with "listening" and "speaking" (the receptive position). In addition to that, EA does not have the power to account for the learner use of communicative strategies. For instance, one of the communicative strategies is avoidance. I am going to talk about avoidance in detail under the heading "The Reality of Avoidance". Here I want to discuss it briefly. In addition I am going to give detailed information about the study made by Schachter (1974) because this study about RC formation is also related to my empirical study. Avoidance in SLA means that the learners simply do not utilise a form if they are not comfortable with it. In spite of the fact that EA is still used in order to find the answers to the specific question in SLA. The pursuit for a dominant theory of learner errors has mostly been abandoned. As I have written before, Corder (et al. 1976)) passed to another direction of a more wide-ranging approach in the language of the learners i.e. interlanguage.

EA assumes that errors show learning difficulties and that the frequency of a particular error is evidence of difficulty that the learners have in learning a particular form of a SL. Schachter (1974) conducted a study which involved a comparison of RC errors produced in free compositions in ENG as a SL by native speakers of Persian, Arabic, Chinese, and Japanese. There were 50 students for each language represented; 25 at the intermediate level and 25 at the advanced level.

There are many important points in this study, but I want to discuss only the number of errors that the learners committed. The prediction made by scholars of CA was that the order of difficulty in learning ENG RCs would be, respectively, Japanese, Chinese, Arabic, and Persian. This was the assumption. However, it was pointed out in the study conducted and published by Schachter (1974) entitled "*An Error in Error Analysis*" that results differed from their expectation. The apparent accuracy of the Japanese and Chinese was probably due to the avoidance of producing RCs in ENG; namely, the native speakers of these languages thought that the rule of RC was

difficult. As a result, they avoided producing many RCs and as a result made fewer errors. Schachter concluded that the weak version of CA is untenable because its only data is from learner productions. Avoidance can only be predicted through strong version of CA.

Though CA is a useful procedure for the research of SLA, there are some criticisms of it. Here are some of its weaknesses: CA has been disappointing in its prediction of errors because it has underestimated the contribution of the learner; it has not recognised fully the nature of what is to be learned. Furthermore, it has not taken into account the method of presentation of the SL. EA, on the other hand, looks at the errors made in SL, and claims that the identification, description, and explanation of these errors will lead to a better understanding of the language learning process. It was also thought that the errors made more systematically would reflect the learner's interlanguage competence. Even though non-systematic errors are attributed to performance problems, they are not included in research. Other possible explanations for learners' errors can be seen in the conclusions of Selinker (1972). Selinker says that there are five processes which can lead to the fossilisation of interlanguage. On account of the fact that I have already considered these and a general view about interlanguage I do not want to repeat it here. It was also indicated that both non-errors and errors should be investigated so that a full picture of the learners' competence can be drawn. Since EA focuses uniquely on learners' production, certain significant properties of learners' competence may not be apparent, such as the structures they avoid. One question should be raised here: Is one and only one reason for a particular error sufficient? The answer is "no", there are many reasons: some patterns of learner errors appear to be attributed to FL, some to SL and some others to both FL and SL together. The last two shortcomings can be explained as lack of positive data and potential for avoidance.

What has been outlined so far about CA and EA will be summarized here: CA → orientation on pedagogical side; attention to input, practice and inductive learning; dealing with the errors of negative transfer (according to CA transfer was unidirectional) is, to a great extent, a behaviourist approach (structuralism). EA →

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orientation usually on psychological/cognitive side; attention to linguistic and cognitive processes; dealing with multiple types of errors, chiefly, can be described as a cognitive approach; focus mostly on internalised errors, i.e. what goes on inside the head of language learners. There is one interesting point that the proponents of EA brought against CA. They defined the cognitive area of the human as a "black box", because we can not know what occurs in the head of the learners.

CA is being handled in the typological researches of languages nowadays. Corpus Linguistics (CL) came out from CA and was developed at the beginning of the 1990s. CA still gives impulse to the preparation of many grammars (and many unpublished masters' theses and doctoral dissertations at universities around the world) (Muriel Saville-Troike 2007). There are two approaches concerning Comparative Grammar. The one is comparison against contrast (because in its origin contrast is concerned with differences not with similarities) and the other is theoretical against practical targets (Flynn and Wayne, 1988). The analytic procedures of CA have been usefully applied to descriptive studies and to translation including computer translation. Additionally, there has been more recent revival and revision of CA, which I will explain in the next part of the theoretical background of my work. It also includes the contrast of languages at more abstract levels. At the same time the extension of the view of this analysis to the domain of cross-cultural communication and rhetoric can not be excluded from these.

In the next part I want to talk about the new developments which have been made to make CA stronger.

3.0. The New Insights About Contrastive Analysis

In the past sections I have given extensive information about CA and EA by showing what contributions have been brought to this subdiscipline of SLA in particular, and to linguistics in general, together with their pro and contra arguments. Because of its claims about the prediction of errors in SLA and language teaching, CA in its strong version has an important place. If the areas of difficulty in SLA can be identified in this way, the number of transfer errors can be reduced. Improvement, using the strong

version, has been achieved by complementing EA with the markedness phenomenon and language universals (LU). In this section I am going to handle the topics of revision, revival and progress made in order to make the CA stronger such as Avoidance Phenomena, the Empty Category Principle (ECP) and the Markedness Differential Hypothesis (MDH). First I am going to talk about the reality of avoidance than pass to ECP and MDH.

3.1. **The Reality of Avoidance**

Since avoidance is also a subject handled in the second empirical research of this work (for example, how much avoidance will be applied by GER and TUR speakers), a general view of avoidance together with the discussion should be given. A number of avoidances in my data made by both GER and TUR students when producing ENG RCs have been found. These will be categorised and explained in my second empirical item of research. Below, the nature of avoidance will be dealt with.

As it has been underlined before, concerning EA, we have no access to the so-called whole picture of SLA. Via EA it is, uniquely, possible to diagnose what causes SL learners' errors. However, it can not demonstrate what makes SL learners successful. Picking out the singular source of an error is difficult, and that is another problem with EA. Another shortcoming of this analysis is that it is not successful in accounting for all areas in which learners can experience difficulty. We can prove this by considering the avoidance phenomenon and the degree to which EA allows or does not allow for the accounting of this phenomenon. I want to focus on this now.

There have been many supporters of EA who asserted that CA can not be used as an adequate tool for identifying the areas of difficulty for learners of a SL. It has also been pointed out that EA can not explain the avoidance phenomena on the grounds that EA registers only the real errors which the learners of a SL committed Schachter (1974). Avoidance behaviour represents a communicative strategy of a learner of a SL. With a communicative strategy the learners prefer avoiding the form or using a simpler form instead of the target linguistic element; because they think that they will have difficulty

on this part of the target feature. As a result of this avoidance behaviour the learning problems are shown. When syllabus and tests are compiled, the results should be taken into consideration (Laufer, B., Eliasson S. 1993). On the other hand, EA neither considers nor can explain the avoidance phenomenon. That is why we cannot accept it as an adequate approach for helping a teacher of an SL with learning materials.

Avoidance Strategy is one of the themes which is well known in SLA and has been a subject after the appearance of EA and continues with an analysis of the different approaches to the topic and an examination of the limited number of empirical studies carried out until now. Avoidance is a strategy used by the students, and thus plays an important role in the learning process. Before passing to these studies it is relevant to write the kinds of classifications of avoidance strategy. There are few classifications of avoidance. I think the most important one was determined by Tarone, Cohen, and Dumas (1976, 1983) and Tarone (1979, 1982). Their classification is the most comprehensive one. It comprises six different categories: avoidance of the topic, semantic avoidance, stopping mid-sentence, paraphrasing, asking for help and changing the language. Each can make an impact on the different levels of the interlinguistic system: phonology, morphology, syntax, and lexis. "Avoidance of the topic" consists in avoiding using structures which require the use of grammatical rules. These rules are those which the student has still not mastered, for example, where the speaker shies away from referring to hypothetical situations, as they require the use of the conditional tenses. He is in a situation without self-confidence. "Semantic avoidance" is different from "avoidance of the topic" in that learners of SL express themselves through constructions that are close to them, even though they are not the required ones. In this case they indirectly answer the question that has been posed. Another category of avoidance phenomenon is "stopping mid-sentence". It takes place in the time when the student begins to talk about a subject and leaves the sentence unfinished. For example 'He wanted me to…' instead of saying, 'He wanted me to go to the shop'. "Paraphrasing" comprises conveying a message through an alternative SL construction with the target of avoiding any problems that may arise. The speakers

may *ask for help* via three different types of behaviour: (a) They can ask someone to tell them the necessary linguistic form (b) they can ask if they are using the right or wrong form (c) they can search for the answer themselves, for example, in a grammar book, a textbook, or a dictionary. The last category of avoiding strategy mentioned by Tarone et al. (1988) is that of *change of language,* where the student uses an expression or structure from their NL without attempting to translate it.

What kind of empirical evidence exists concerning this phenomenon? The few empirical studies made in this field have had the origin of avoidance*.* This empirical study is the reason that avoidance has been a main inquiry topic. In the following theoretical and empirical studies avoidance is a fundamental cognitive strategy. Schachter (1974), Hakuta (1976), Kleinmann (1977), and Dagut and Laufer (1985) concluded that the reason can be found in the difference that exists between the syntactic structures of the mother tongue/FL and SL. They conclude that the FL plays an important role in the learning of the SL. They say that avoidance is a valid index of learning difficulty that can be predicted through analysis. Hakuta (1976), like Schachter (1974), concluded that avoidance was determined by the different syntactic structures occurring between the FL and SL. A complete study was made by Kleinmann (1977); I will discuss this study in detail later. Kleinmann came to the conclusion that avoidance could be considered as a symptom of transfer. Gass (1980) criticised Kleinmann's study, saying that avoidance does not depend on the differences between the FL and SL. Gass (1980) states that it is not related to linguistic transfer. Chiang's study (1980) of RCs adds another new aspect. Gass agreed with Kleinmann that avoidance occurs from the differences between the FL and SL. But Gass states that we can explain this by looking at the proficiency level of the student. In relating to the expressions of Kleinmann, Liao and Fukuya (2004:193-226) say: "*To investigate whether the L2 learner adopts avoidance strategy, why he/she adopts this strategy and how this strategy affects performance in an L2 is momentous since both the L2 forms consistently avoided by the learner and those actually produced by him/her are two*

important aspects of a developmental manifestation of interlanguage from avoidance to nonavoidance".

Babear (1988) carried out a study of avoidance of passive voice structures with Arabic and Hispanic students, showing a relevant occurrence of this in both groups. Irujo (1993) showed how Spanish speakers with a fluent knowledge of ENG avoided using colloquial expressions.

In the case of avoidance the people who are learning an SL do not utilise an expression or word which has some difficulty in speech production. Instead they use another expression, because they think that it is simpler and gives more or less the same content as the statements they avoided. Namely, those linguistic means are used by them which make them safe from error and adopt a so-called "play-it-safe" strategy.

It should be noted that the avoidance phenomenon and lack of competence are two different things. Laufer and Eliasson (1995:36) state: "*Complete ignorance and full-fledged knowledge are states of mind and are seen as the end points of a scale or continuum relating to the amount of mentally stored or memorized information in a given area".*

They state that avoidance is a strategy or process for proceeding and conveying information, and its application can occur anywhere along this scale. The indication of the avoidance behaviour is that a learner suddenly understands a given word or expression of the TL. The learner decides to change that feature of the TL into something else. At the "presystematic stage of learning" (Corder 1971), a learner is not able to avoid a given syntactic structure, morpheme, or lexical item, because of the fact that it does not exist in his linguistic repertoire Kleinmann (1977). As Kleinmann says, avoidance can be discussed when the structure in question is known, though not freely used by the learner. Otherwise it is not a genuine case of avoidance, but rather an indication of ignorance. The people who are learning an SL are not able to avoid doing something which they can not do. The reason is: having the ability to avoid something presupposes the ability to choose not to avoid it, i.e to use it. In order

to start an idea the learners must know two alternatives. The reason for avoidance does not mean ignorance.

According to Laufer and Eliasson (1993), avoidance does not necessarily result in error. However, it is surely a sign of underrepresentation of certain linguistic features in the learner's performance in the SL. There are many language elements which can be avoided. Different researchers observed different grammatical categories by examining them. I am going to talk briefly about these studies which have been conducted in different years. One study among these which I will mention in detail at the end of this chapter is the study by Kleinmann (1977): "Avoidance behaviour in adult second language acquisition". We can see that at any linguistic level avoidance can occur. I have said before that it is a communicative strategy used by learners. In the research of Schachter (1974), it was observed that there is syntactic avoidance. In her study she found that Chinese and Japanese students of ENG avoided RCs. I have discussed this before and given significant information. Some other important studies follow: Dagut and Laufer (Dagut M., Laufer B., (1985)) reported that Hebrew students of ENG avoid phrasal verbs. Kleimann (1977) studied avoidance behaviour of native speakers of Arabic and native speakers of Portuguese and Spanish. Portuguese and Spanish students avoid infinitive complements and direct OBJ pronouns whereas a tendency to avoid passive construction and present progressive has been indicated in Arabic students of ENG. Swain (1975) showed in her study that children learning French as an SL avoided using many indirect OBJ pronouns, they found in a repetition exercise. Tarone, Frauenfelder, and Selinker (1975) registered several cases of semantic avoidance. There were children learning French as an SL in their study. These scholars presented children with several pictures showing a story. The children were supposed to look at the pictures and describe them in French. It was discovered that some children avoided talking about the things represented in the pictures. The reason was that they lacked the vocabulary for these concepts. Ickenroth (1975) and Varadi (1975) reported cases of semantic avoidance as well. They mentioned many "escape routes" which learners take, for example, choosing a synonym or superordinate term, paraphrasing, and others. Dutch learners of ENG avoided some

situations semantically in studies conducted by Hulstijn and Marchena (1989). They avoided the phrasal verbs because the Dutch students perceived them "as being too idiomatic, too Dutch-like, and therefore non-transferable". "Topic avoidance" has been reported on the pragmatic level. This describes learners' total avoidance of talking about topics for which they lack the vocabulary.

A study was conducted by Kleimann (1977) called "Avoidance Behaviour in Adult Second Language". The aim of the study was to find out if it was possible to see the avoidance behaviour for two groups of learners of ENG in accordance with the CAs prediction of the areas of difficulty. Native speakers of Spanish and Portuguese and native speakers of Arabic were two groups of learners of ENG. Passive voice, present progressive, infinitive complements, and direct OBJ pronouns were the structures which were analysed. For these grammatical structures a CA between ENG and Arabic, ENG and Spanish, and ENG and Portuguese was made. In terms of the predictions made on the basis of CAs for these grammatical structures, it was expected that each group would have difficulty with certain target structures, namely the Arabic learners would have difficulty with passive voice and present progressive whereas Spanish and Portuguese learners would have difficulty with infinitive complements and direct OBJ pronouns. One of the unusual aspects of this study was that the tests included the measuring the level of anxiety and success orientation. A revised version of the Achievement Anxiety Test (Alpert, R. and Haber, RN 1960:207-215), which was designed "to measure the facilitating and debilitating effects of anxiety on performance", was administered. It was observed that the results of the test correlated with the frequency of production of TL structures. The strength of a test person's motivation to be successful and avoid failure was seen in the test as "success achievement and failure orientation". At the same time the result of this test was correlated with the frequency of the produced target structures. Kleinmann (1977) is primarily interested in the results of testing the passive and present progressive in this investigation.

According to the predictions made by CA, the Arabic group would have more difficulty with passive structures than the Spanish-Portuguese group. This assumption was confirmed in the study. It occurred as anticipated, in other words the Arabic group avoided passive structures and used fewer passives than their Spanish-Portuguese counterparts. I think that it is important to say here that, despite the fact that linguistic avoidance cannot be observed directly, Kleinmann observed a case of "deliberate avoidance". An Arabic student presented with a picture was asked:"What happened to the woman?" so that the passive voice could be tested. The student should have answered using the direct OBJ as the main SUBJ, which frequently causes a passive construction. After some hesitation, he gave an answer using an active sentence. As Kleinmann says, before an active sentence is uttered this situation can produce an object topicalisation common in Arabic, but we can interpret and say that the behaviour of the student was one of avoidance. Kleinmann asserted that he had observed an avoidance strategy. Two things should be mentioned here. Firstly, if it is supposed that the cause of this object topicalisation is owing to the avoidance rather than linguistic interference, it can be accepted that the same phenomenon would take place more frequently in the Arabic group. However, this did not happen. Secondly, Kleinmann states that if a learner makes the choice to avoid a certain structure, then he or she would not, like others, in particular teachers, know that this is so. Kleinmann concludes that it is realistic to assume that a learner will hide his or her avoidance strategy. We, as Kleinmann points out, can see that the topicalisation of the object by Arabic students is as a case of deliberate avoidance. To accept this as evidence of linguistic interference would not be realistic. In respect to the use of the passive construction, avoidance behaviour showed itself in the Arabic group. This supports the validity of the predictions made based on CA. However, the results that were taken from the test seem to be problematic. With regard to the present progressive, no difficulty was predicted for Spanish-Portuguese group relative to Arabic subjects. They supposed that the Spanish-Portuguese group would correctly use this form more frequently than the Arabic group. However, this prediction was not confirmed. The mean score of the Arabic group was higher than that of Spanish-Portuguese group.

Because of these reasons, we can suppose that the Spanish-Portuguese group used the avoidance strategy as an expedient. Related to this assumption, Kleinmann supports the test on success-achievement. The Spanish-Portuguese group demonstrated a high motivation to be successful. From this, Kleinmann (1977) came to the conclusion that the greater the orientation of the subject to achieve success, the less likely he is to produce the ENG present progressive, because the subject realises that, because of its' "superficial similarity" to his NL, the present progressive is more difficult than it seems to be. In the end, because the present progressive is *formally similar, but functionally dissimilar*" to the form in his NL, the present progressive is avoided by the learner so that a mistake caused by the confusing nature of the present progressive is not made. The advocates of CA traditionally agree on this idea. Lado (1955) emphasises that the linguistic feature of two languages which are similar in form but different in meaning constitute a speech group very high on the scale of difficulty. This is the reason why Keinmann claims in his conclusion that such linguistic elements will be avoided in the first turn.

Another point that should be made clear here is that it was not correct to say: "*English present progressive is similar to the Spanish-Portuguese form*". This reality was overlooked by some scholars favouring CA. This is the reason why the assumptions made before were erroneous and this again caused the incorrect conclusion that the manifestation of avoidance weakens the prediction of CA. If the postulation of CA is corrected and the fact that the ENG present progressive is only formally similar but functionally different to the Spanish-Portuguese form then the avoidance behaviours of the Spanish-Portuguese group can be properly understood. This also proves the correctness of CA predictions. In addition to these conclusions Kleinmann (1977:93) says "*avoidance is at least a partially viable explanation for the relative nonuse of certain structures*". He suggests that several affective variables such as orientation on success achievement and risk taking, motivation, confidence, and level of anxiety influence a learner's choice to avoid or not to avoid. He states that the performance of the Arabic group on the passive voice is another example of this. As I have already written above, significantly fewer passive constructions were utilised by this group than

by the Spanish-Portuguese group. Their confidence in the comprehension of the passive directly correlated with the use of the structure. Confidence is not synonymous with the learner's level of proficiency, but it reflects the learner's perception of his knowledge. Another statement of his is that it was this perception that had affected the decision of the Arabic learners to avoid or not avoid the passive. This test on the level of anxiety also indicated that this anxiety correlated significantly with the use of the passive in the Arabic group and with the use of other structures by the Spanish-Portuguese group.

I have talked about the predictions made by CA before in connection with using present progressive by the Arabic group. Regarding this point, Kleinmann (1977) gives two possible explanations. The first: There is no such structure in Arabic. The Arabic students found it easier to learn and, because of the fact that it differs so much from anything existing in their own language the "novelty effect" allowed them to learn this structure so easily that they do not have to avoid it. The second point is: Only because some linguistic elements are not avoided, it should not be thought that there is no difficulty in learning these elements.

The scholars who research this area can then see the results of teaching in students' linguistic behaviour. The followings are the pedagogical factors. If a SL is taught it is given importance to certain linguistic elements in two ways. The first one is the nature of the TL, i.e. the frequency of use of a certain structure in the TL by native speakers. The second one are the predictions of CA based on an EA as to what the learners could find difficult in the acquisition of the TL. Namely when the predictions of CA are given, the learners' avoidance of some elements in language must be considered as an additional factor. I think that we should emphasise the difference between properties in any two languages. The properties of a TL which do not exist in the NL constitute another issue to be pointed out. As an overview I can say that CA is more or less a good predictor, even though it can not foresee when the learners will avoid a given structure, as opposed to when they will produce it with the likelihood of error. I want to finish the discussion about the reality of avoidance by saying that an

intersection of linguistic and psychological factors exists in this area. The reason can be found in the reality that the predictions mentioned above can only be made with additional knowledge regarding various affective variables, such as confidence, anxiety, and success-achievement orientation.

As a conclusion I want to repeat that avoidance has gained wide recognition in SL research. I have given a comprehensive review about the avoidance phenomenon both with respect to its development, previous studies, and current situation. In other words, what I have tried to do is to give a general view from earlier conceptualisation of single SL learner behaviour as a communication strategy. I have encountered different ideas in the studies of this phenomenon, even in its classification. My view is that avoidance as a strategy is a far reaching and popular as well as controversial theme in the discipline of SLA. Furthermore, I agree with Zhang (2005), who stated that theoretical discussions on the phenomenon of avoidance tend to predominate over empirical studies into its use, especially in terms of its relationship with SLA. The inadequacies of previous studies on avoidance therefore call for more research in the future.

Despite these controversial points about avoidance, I want to say that we can not evade the reality of avoidance. In the next chapter I will consider new developments or attempts with respect to CA.

3.2. Some Important Insights Made About Contrastive Analysis and the Definition for Typological Classification of the Languages

I have discussed before and said that CA has been used as a methodological tool in the discipline of SLA. But I want to note that it is always possible to find evidence or ideas about CA in the results of new experiments and studies which are/will be carried out. We see that some attempts have recently been made to bring new developments to CA. Brieflly speaking; the knowledge of CL can be broadened of any time. Thus it

can change the insights of CA. I have talked about the possibility that the nativist approach has replaced the behaviourist approach in SL teaching and learning. I have also mentioned the criticisms made against CA, one of which is positive and negative transfer. The pioneer of CA Lado (1957:2) asserts: *"individuals tend to transfer the form and meanings, and the distribution of form and meanings, of their native language and culture to the foreign language and culture... those elements that are similar to his language will be simple for [the students], and those elements that are different will be difficult."*

Following the statement of Lado, enormous efforts were made in order to improve the hierarchy of difficulty. This, however, led to mixed results. Researchers have since pointed out that in the direction of new insights in linguistics the situation between similarities and differences of language and simplicity or difficulty between them ought to be taken for granted, in a different way than was proposed by Lado (1952). We see the contributions of other scholars. For example, Krzeszowski (1990) made an investigation and showed that not all linguistic theories are suitable for CA. Furthermore, Bausch and Kasper (1979) ascertained that SLA is a process which goes forward in two directions and not directly from NL to TL. This finding brought new criticism to CA. It has been reported that this result of Bausch and Kasper (1979) is apparently correct. It is worthy to say that this idea is in contrast to Lado (1952), who writes that transfer is usually in one direction, from NL to FL.

In addition, both researchers asserted that CA does not account for the L3 that the student has already learned, and said that the learners of a TL can have interference from their SL. Again, there is variation between the FL and SL, the communicative competence of the learners (for example, social and situational factors) which they did not take into account. Their criticisms demanded on the first sight (an immediate) change of SLA methodology to focus on the internal structure of the acquisition process.

After we have considered all these theories and results, we can come to a conclusion and say that the method with which errors are observed in CA in the form of EA has been altered. I have also underlined that identifying, classifying, and explaining of learner errors is done by both the weak version of CA and EA. The strong version, however, diverges in large proportion from EA. The prediction of errors is an important claim of the strong version of CA while the SL is being acquired.

Before I pass to talk about recent progress in the strong version, it is significant to note which idea of the strong version there was in the past and what kind of knowledge we have now, concerning this version. In the case of accepting the claims of Lado (1957), utilising CA will be the only tool which would not be convenient in reaching our target. The goal outlined by Lado (1957:2) is quoted here: "*to diagnose the difficulties of the learner, to prepare new teaching materials and to supplement inadequate materials*". In addition, it is stated that the linguistic theory which builds on the foundations of descriptions of the comparison of two languages will come to the new level of discussion.

We often encounter the discussion about reaching a result whether the use of the strong version in SLA is advantageous or not. Moreover, the question that is usually raised is whether or not predictions that have already been made can be useful; the answer is "yes" but to what extent? EA helps us to understand the theories of SLA. CA is utilised to make an evaluation after the comparison has been implemented. Even though linguists have discovered a lot of problems in EA after their research it is said that a solution for these problems can be found in the way that EA and CA work with one other. I think in terms of this subject there are two studies which are crucial. The first study is by Duskova (1969) and the second one is by Hammarberg (1974). Duskova (1969) made a study of EA in which she chose some Czech students who were learning ENG as an SL. She came to the conclusion that there was an interference of the ML with syntax. She emphasised that for the use of ENG article it was advantageous to apply CA together with EA. After she had completed her study, she made important explanations. Briefly speaking she found an important way to

classify errors. Following her investigation scholars paid great attention to such errors. Another researcher is Hammarberg (1974). It can be said that he drew the limitations of EA. His focus was not solely an explanation of errors but also on the fact that some particular errors should not be committed. He gave the reason that errors can not be separated from the system to be acquired. He carried out a study on learners of the Swedish language who were learning ENG. He found out that if the teachers teach the learners where the differences are, many errors can be prevented. As an example he used those ENG grammatical structures which differ from their Swedish counterparts. He recommended that the differences between the numbers of meanings should be taken into account. If this were done, he accentuates, a possible negative transfer will not occur. Thus I have discussed some important studies which attempted to enlighten whether it is possible to make CA more advantageous. After this additional information, I am going to talk about new developments made about the strong version of CA. Before that, I want give some useful information about LT and LU because both MDH and ECP are related to these concepts. I am going to consider this later.

There are some indications that similarities between languages exist. It has been said that the differences among languages is not so great at the deeper level, while greater difference is found superficially. Regarding this idea Corder (1973:238) says: *"The rules which generate the deep structure of sentences in all languages are the same; they differ outwardly or superficially only because the same underlying structure has undergone a different transformational derivation. The languages differ only in respect of having different sets of non-comparable transformation rules"*.

So he emphasises that the deep structure of all languages is very similar, and the differences appeared because of the fact that several transformational derivations occurred. According to him, the differentiations are due to the noncomparable transformation rules. And they are the clues for that occurrence. We can see that different definitions of LT have been formulated. I think the best proposal is that of Greenberg (1974:54). He states it as: *"The way in which languages differ from each*

other are not entirely random, but show various types of dependencies among those properties of languages which are not in variant differences statable in terms of the "type". The construct of the "type" is, as it were, interposed between the individual language in all its uniqueness and the unconditional or invariant features to be found in all languages".

While the comparison of languages made in that LT is put into consideration, genealogical classification is carried out in the historical sense. Nevertheless the first one is not historical. We see that the first use of the word "typology" in linguistics was recorded by Greenberg in the theses presented by Prague linguists to the First Congress of Slavonic Philologists held in 1928. Before this development linguists classified the languages in great proportion according to genetic properties (Malmkjaer, Kirsten 2003). It can be understood that the categorisation took place on the basis of the development of languages from older source languages. It is largely included in a discipline called Historical Linguistics. In the middle of the 20th century scholars mostly focused on syntax as a result of typological research and these had been closely related with LU. LU is features available in all or in an overwhelming majority of languages. Other universals are implicational; that is, if feature *x* is available in a language, then *y* will be available in that language but not vice versa (Greenberg 1963).

Many definitions of LT can be made. One of them has been made by Frawley (2003). He pointed out that language typology is the study of types of languages (or types of constructions or linguistic systems) defined by particular structural characteristics; its aim is to discover the range of variation in human languages with respect to those characteristics.

It should be noted here that LU are the generalisations made cross-linguistically and it keeps in position the set of all or most human languages. It is also worth addressing the differences between LT and LU. The former pays more attention to differences, whereas the latter focuses on commonalities. Malmkjaer (1991) says that the interplay with typology can be seen in the selection of the features in terms of which universals

are defined. For instance, he states that many of Greenberg's (1966) universals imply a typological analysis in terms of the order of subject (S), object (O), and verb (V). These are clause or sentence constituents. In typology, it is referred to as **word-order-typology**. In a large number of studies, word-order is accepted as a common feature in LT. Scholars use type languages in terms of the order in which S, O, V takes place in the sentences of the languages. There are six possible logical configurations; frequencies are: SOV, SVO, VSO, VOS, OVS, and OSV. All of these have been found by linguists. However there are also languages that do not have any basic word order; for instance, Dyirbal (Frayley, W. J. 2003) in north-eastern Queensland of Australia. As this dissertation deals with the acquisition of ENG RCs by GER and TUR speakers it is relevant to talk about what kind of languages GER and TUR are. The word-order of TUR is SOV, whereas, in the other language in comparison - ENG - has a SVO word-order which is very common among different languages and GER has both SOV and SVO. I am going to explain this in my work later. It can be said that word-order typology can be advantageous for CA. In dealing with CA, LT and LU are very useful. This point will also be discussed in the next section. Word-order typology is significant because all languages logically correlate independent of each other with regard to word-order parameters.

On the other hand, grammatical categories such as case, gender, number, and tense as bases for classification are utilised by grammatical typology. LU studies based on the premise that *"underlying the endless and fascinating idiosyncrasies of the world's languages there are uniformities of universal scope. Within this infinite diversity, all languages are ultimately cut from the same pattern (Greenberg 1966:15*). The theory of LU indicates which features are necessary to human languages. These properties are sometimes possible, sometimes impossible. The study of LU, above all, aims to constitute limits on variation within human language. Owing to the fact that LT deals with studying these variations, a strong connection exists between LT and LU. It means that the study of LU can help to build the parameters for typological research. In connection to this, Comrie (1989) points that if it is discovered that all languages have vowels then it would not be fruitful to make the presence versus the absence of

vowels as the basis for the typological classification of languages. For the study of LU there are two basic approaches: the first was suggested by the work of Greenberg, while the second appeared with the work of Chomsky.

In the following, I will discuss further significant developments that made CA stronger. One of them is "markedness", or MDH. The other is ECP. I am going to handle the first one now.

3.3.   The Markedness Differential Hypothesis

This part is related to mechanisms that improve CA. It will be helpful to understand how CA can be made stronger since the aim of this doctoral dissertation is to extract the differences and similarities of languages that will be examined here and to know where the acquisition of ENG RCs is easy or difficult for GER and TUR Students. I have given importance to the inadequacy of only comparing NL and TLs, and said that the desired results have not been found. A question raised here: What could improve the predictions of CA? MDH is one of the attempts which have been made in order to empower the strong version of CA. Some scholars, for example Comrie (1984) and Hawkins (1987), have pointed out the appropriateness of implicational hierarchies found in typological researches for SL investigations. It is important to say that one of the typological universals is the Noun Phrase Accessibility Hierarchy (Keenan and Comrie 1977, Comrie 1989) that aroused the interest for studies on RCs in SLA (Gass 1979).

Another proposal is that of Eckman (1977, 1985). Eckman used the idea of typological markedness to predict the area of difficulty that an SL learner would probably find. His study made the typological universal into SLA. He analysed the reality of transfer in a systematic way with respect to CA. As a result he attained a stronger predictive power. Eckman's proposal is a reworking of CAH incorporation of the degree of difficulty. He states (Eckman 1977:315): "*This notion corresponds to typological markedness which can be determined independently of any particular language and independently of the facts concerning second language acquisition. Moreover, it is argued that if typological*

markedness is incorporated onto the contrastive analysis hypothesis, it is possible to predict not only the areas of difficulty for a second language learner, but also the relative degree of difficulty. Finally, it is argued that given certain assumptions about language and human learning typological markedness is a natural and highly plausible notion of difficulty."

So it has been indicated that MDH is a generalisation of implicational typological rules. According to the theory of MDH, NL interference was not only a factor in determining the extent to which a SL was acquired, but, in addition, inconsistencies in language acquisition were the result of markedness relationships between the two languages. This was not accounted for by CAH. Those aspects of TL which were more marked than those in NL would prove more difficult, while those aspects less marked would prove less challenging for an SL learner. Forms in a language that are *unmarked* are more basic or neutral, more universal, and more frequent than forms which are *marked*, those being more specific, less frequent, and more limited (Celce-Murcia, et al., 1996).

I have just said that the aim was to empower the predictions of a CA. The determination which was drawn is that "*A phenomenon A in some language is more marked than B if the presence of A in a language implies the presence of B; but the presence of B does not imply the presence of A.*" (Eckman 1977:320)

It has also been pointed out that such results brought an improvement in predictions for CA. Doing this, the area of difficulty is able to be determined both through superficial differences in the languages in comparison and through their relative markedness. Eckman applied the MDH to the data of Schachter and he could elicit better results. I see it as significant to repeat here some points of the study made by Schachter. She researched the acquisition of RCs in ENG with four different languages whose forms of relativisation differ. There was one difference, i.e. the description of relativisation within the Nominal Phrase. In ENG It is impossible to see the marking lexically. It is marked with a trace, or a pronoun copy, (t). An example is necessary. In the following I show the examples of marking the Nominal Phrase in ENG, if ENG had an equivalent structure as the other languages studied.

Sub.	:	The boy that <u>he</u> came
Dir. Obj.	:	The boy that John hit <u>him</u>
Ind. Obj.	:	The boy that I send a letter to <u>him</u>
Obj. Prep.	:	The boy that I sat near <u>him</u>
Poss. NP	:	The boy that <u>his</u> father died
Obj. Comp	:	The boy that Jone is taller than <u>him</u>

Table 1 Marking Nominal Phrases in English

The distribution of marking all four languages that were studied by Schachter is shown in the following table. (+) denotes sometimes obligatory and sometimes optional, whereas (+) is obligatory present and (-) is obligatorily absent. Pronominal reflexes are shown in five languages as in table 2 (Schachter 1974).

	Subj. Obj.	Dir. Obj.	Ind. Prep.	Obj. NP	Poss. Part	Obj. Comp.
Persian	(+)	+	+	+	+	+
Arabic	+	(+)	+	+	+	+
Chinese	-	-	+	+	+	+
Japanese	-	-	-	(+)		
English	-	-	-	-	-	-

Table 2 Pronominal Reflexes in five Languages

Another difference that exists between ENG and the other languages analysed by Schachter can be noted here respectively: The position of RCs, relative to the Nominal Phrase and the marking of head RC via the pronominal, such as "that" and "who". I want to talk about these studies made about RCs in ENG in more detail as it helps us to discover the structure of RCs of ENG, because the acquisition of RCs by GER and TUR native speakers is the target of my dissertation.

There are other points in the research of Schachter which are important to mention. More differences between ENG and the languages investigated are in the position of

RC, relative to the nominal phrase and the marking of head RC via the pronominal, such as "that" or "who". The changing relationship between these three dimensions, on the basis of a CA, would imply that the native Japanese and Chinese speakers would commit errors more frequently than the Arabic and Persian speakers. But it has been shown that the results of the research are the opposite.

It is crucial to mention other developments which were made in order to empower the prediction of CA. So I write here that some studies in this field, such as typological markedness, language universals, generative grammar in the form of the government and binding version, are informative and advantageous. Incorporating some of these studies in a CA will increase its predictive power. For instance, Hansen (1985) discussed the relationship between CA and LT. Krzeszowski (1974) explored the "vertical organisation of CA on the basis of a generative grammar", i.e. he compared the languages not only superficially, but also according to their deeper structures. A better description of CA has been reached as result of generative grammar (or as generally used; transformational-generative grammar). After all, other simplifications for a comparison of two languages from the descriptive perspective emanated from transformational-generative grammar. I have already emphasised that there is a relationship between typological markedness and linguistic universals. The classification of a language is made according to its linguistic properties. For example, Hawkins (1986) indicated the following implicational universal based on the work made by Greenberg (1966) "If a language has a V-S-O word order, then it has prepositions".

Returning to the markedness principle of Eckman (1977), this can be said: It is based on the access hierarchy of Keenan and Comrie (1977). It is accepted that the relationship of every nominal phrase and its RCs can not be random. Rather, the hierarchy (Eckman 1977:326) of table 2 (Prenominal reflexes in five languages) is valid. If a language can relativise indirect objects (without pronominal reflexes) that language can also relativise direct objects, but not necessarily objects of prepositions, possessive NPs or objects of comparative particles. Respectively, SUBJ is the most,

and OBJ comparative particle the least related nominal phrase. In other words, all languages have indirect OBJ in relativisation but not necessarily SUBJ or direct OBJ.

In addition to what has been mentioned above, this hierarchy predicts that there will be no language which can both relativise possessive NPs without leaving a pronoun behind, and relativise an OBJ of a preposition, leaving a pronoun behind. The scholars point out that if Eckman's relativisation index of languages, as I have discussed above quite in detail, is put together with the avoidance strategy of Schachter, then errors can be both better described and better predicted. What is underlined by the researchers is that better results can be obtained provided that CA and MDH are joined together.

Eckman (1977: 317) comments on CA and says that he is interested in the strong form, namely that differences would predict difficulty. But I think we can not say that this is the only "strong form" of CA. In order to understand this point we should review what was written above about the hierarchy of difficulty proposed by Stockwell, Bowen, and Martin (1965). It should be repeated that the claim of MDH is that unmarked structures are easier to acquire than marked ones. Moving from a language where feature X is marked to a language where it is unmarked is less problematic than the converse. Those areas of a TL that are different from the NL and are relatively more marked than in the NL will be difficult. So in contrast to CAH it anticipates that not every difference between the TL and NL will cause learners difficulty.

The proposal is that CAH should be revised to incorporate a notion of degree of difficulty. This notion corresponds to typological markedness which can be determined independently of any particular language and independently of the facts regarding SLA. In addition to that, it is argued that if typological markedness is incorporated into CAH, it is possible to predict not only the areas of difficulty for a SL learner, but also the relative degree of difficulty. Finally, it is argued that given certain assumptions about language and human learning, typological markedness is a natural and highly plausible notion of difficulty.

In the following section ECP should be dealt with. It is another universal principle which can assist CAH to be better.

3.4.   **The Empty Category Principle**

The empty category principle states that a trace must be either lexically governed [c-commanded by head and with no XP except IP intervening] or be preceded by a governed [bound by and subjacent to its antecedent] language invariant (Chomsky 1981). Let's look at the sentence below:

Traces must be governed properly.

The word trace here marks an empty category. Because of its complexity, the empty category principle is especially suitable for analysis when the differences between languages are subtle. In such situations, when the comparison of languages is necessary, better predictions can be made.

As a result of this complexity, some structure-dependent phenomena appear. They are illustrated below (from the book by Kunsmann 1993:136):

C- Command: Here "C" means constituent. The idea of c-command is: One category x c-commands another category y, but only if the first bound constituent that dominates x also dominates y. This is shown in the following schema (Kunsmann 1993:136):
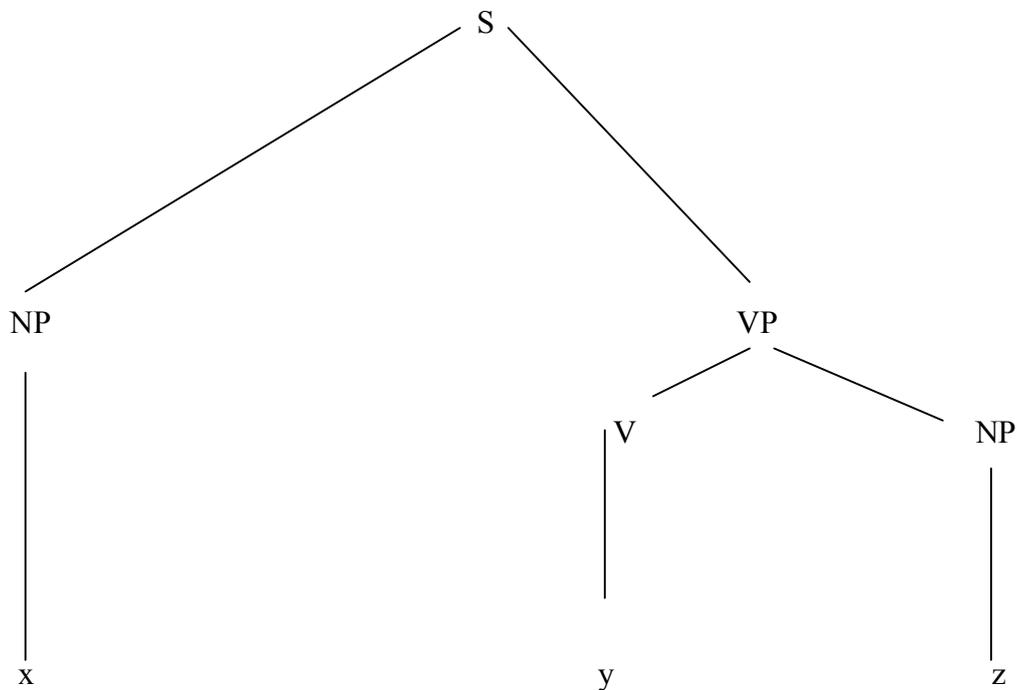
Diagram 1 C-Command

X c-commands y and z, y c-commands z, but not x and z. c-commands y, but not x.

To visualise this, Radford (2004:159) gives a good example: *"this is to think like a diagram as representing a network of train stations, with each of the labelled codes representing the name of a different station in the network, and the branches representing the rail tracks linking the stations. We can then say that one node X c-commands another node Y if you can get from X to Y on the network by taking a northbound train, getting off at the first station, changing trains there and then travelling one or more stops south on a different line".*

The illustration of the c-command relation in a syntactic description can be made, by looking at the way the distribution of anaphor, which includes reflexives and reciprocals, is exemplified below. The rule is: such anaphors have the property that they can not be used to refer directly to an entity in the outside world, rather they must be bound by an antecedent elsewhere in the same phrase or sentence (Radford 2004). Where an anaphor has no (suitable) antecedent to bind it, the resulting structure is ungrammatical.

(1) (a) He must be proud of *himself*

   (b) *She must feel proud of *himself*

   (c) *Himself* must feel proud of you

The anaphor "himself" (3.prs.msc.sng.) in (1a) is bound by an appropriate "he" (3.prs.msc.sng). The consequence is that the sentence is grammatical. However we can not see in (1b) a suitable antecedent for "himself". "She" (fmn.prl.) is not a suitable antecedent for the masculine anaphor himself. So it is unbound. On the other hand, (1c) has no antecedent of any kind for the anaphor himself. The result here is again unbound and so the sentence is ill-formed. Another structure dependent phenomenon is Government.

Government: The condition that movement may not cross more than 2 bounding nodes (nodes subject to variation).

 X governs y for a situation where y is c-commanded by x. This situation also exists in the same maximal projection (XP). No other XP should come between x and y as in the schema below (Kunsmann 1993:137):

```
                               S
              ┌────────────────┴──────┐
             NP                       VP
              │          ┌────────────┼──────────────┐
              │          V           NP              PP
              │          │            │          ┌────┴────┐
              │          │            │          P        NP
              │          │            │          │         │
              z          x            y                    w
```
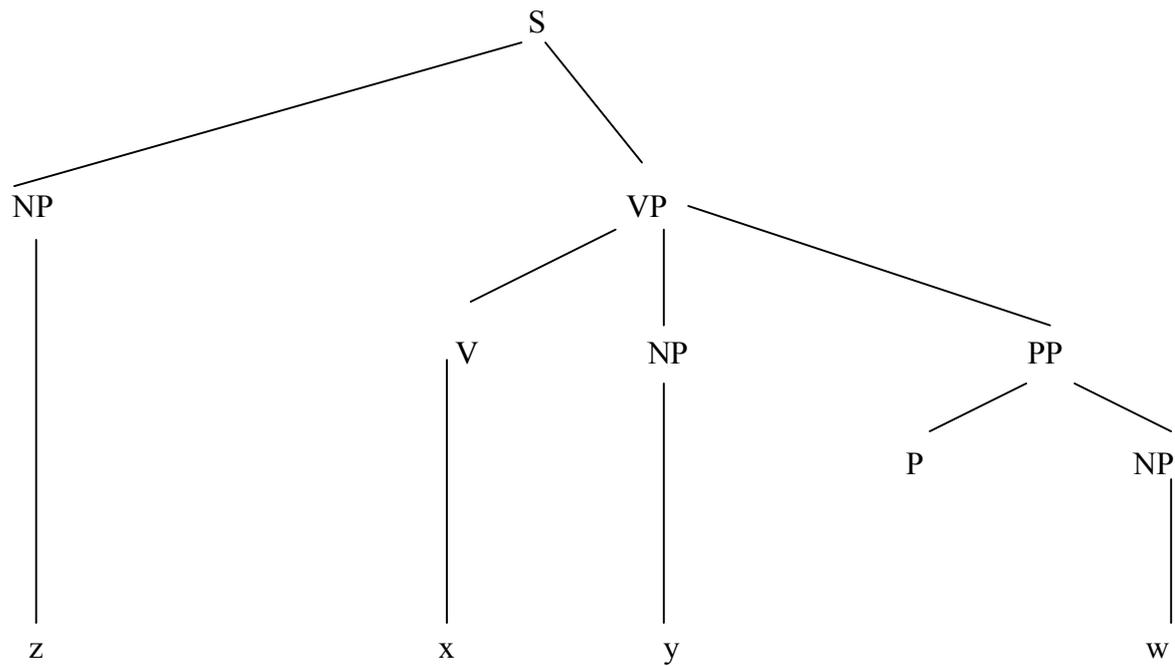
Digram 2 Government

X governs y, but, because of the violation of the c-command condition, x does not govern z. In the same way, x does not govern w, owing to the fact that the maximal projection (PP) intervenes. The last structure dependent phenomenon is proper government. Now I pass to this.

Proper government: X governs y properly, but only if x is a lexical category. This structural phenomenon can be demonstrated:

(2) Who $_{(i)}$ do you think that Mary met (t_i) yesterday

(3) *Who $_{(i)}$ do you think that (t_i) arrived yesterday

In the first sentence the trace (t_i) is properly governed by the lexical category V (met). However, because of the fact that the empty category principle is violated, the second sentence is not grammatically sound. "That" is not a lexical category. Consequently, trace (t_i) is not properly governed.

After noting the above phenomena, the following assumptions of a CA in the acquisition of an SL could be justified. If the NL has no such trace in either sentence, then a speaker of this language would have difficulties in the acquisition of the ENG

language. For example, the Korean language does not have any movement rules. So this language has no trace similar to the first sentence above (2) which was chosen from the ENG language. In the research of Schachter (1989), it was discovered that native speakers of the Korean language had difficulties in acquiring ENG. Errors of subjacency which is related to ECP were observed in her investigation. If I give some examples from this study made by Schachter or explain what kind of errors concerning subjacency were discovered it would exceed my work.

Thus a general overview about CA can be expressed as follows: On the one hand there have been many challenges for the CA. Many investigations to understand the productive and receptive/comprehensive message-processing systems are to be done. Kühlwein (1990) and Hawkins (1994) say that these systems should function in the context of human interaction and in accordance with the varying cognition processes undergone by speakers/learners. On the other hand neither the CA nor EA alone can solve the aforementioned difficulties. Reliable predictions: A following appropriate explanation could not be possible in FL teaching. However, as I have discussed above, if the strong version of CA can be complemented with an EA and with the combination of other tools such the MDH and ECP, predictions for the areas of difficulty can be much better.

In the next section subordination and the subordinate clauses will be handled because of the fact that the RCs belong to the subordinate structures. It will be illustrated how subordination is realised and how RCs are integrated into the subordinate clauses. The description will include both the form and the function that RCs receive in this integration.

4.0. The Subordination and the Sub-ordinate Clauses

In the past chapter I have underlined the importance of the emergence of CA (with contrastive linguistics). I have emphasised that despite the criticism raised against CA, it is a significant tool in SL learning (i.e. acquisition) and teaching. After explaining new perspectives made for it, together with attempts of empowering its strong version, I have said that nowadays many CAs are carried out and it is used under the discipline of LT.

The purpose of this section is not to analyse the subordinate clauses from the syntatical point of view (for example, linguistic analysis), but rather to give an overview of what a subordinate clause is, what kind of subordinate clauses exist and how they are classified as RC. Another objective of this part is to make clear how subordinate clauses are constructed. I am going to do this so that the rules of RC formations, considering that the tests items in the 2nd empirical research consist of types of RCs, can be better understood. This section can, thus, be characterised as a "survey".

4.1.0. The Definition and the Classification of Sub-ordinate Clauses

Because of the fact that the title of this work is a study of RC, it is relevant to begin with the subordinate clauses and types of subordinate clauses. But before that, I want to give some information about clauses together with specific definitions and the elements that are contained in it. What is a "clause" in grammar? Different definitions of the clause in ENG exist in dictionaries and encyclopedias. For example, according to the Cambridge International Dictionary of English (1995:239): "A clause is *a group of words, consisting of a subject and a finite form of a verb (= the form that shows the tense and subject of the verb), which might or might not be a sentence".* In this definition it is not certain that when there is a group of words consisting of a SUBJ and a finite form of a verb, it is a sentence. Collins English Dictionary (2003:318) defines "*Clause as a group of words consisting of a subject and a predicate including a finite verb that does not necessarily constitute a sentence".* This definition is similar to the first one (apart from "predicate"). Let me give another one: Jespersen (1940:341)

says: "*By clause I understand that linguistic expression of a dependent nexus in so far as it is framed on the model of a sentence (an independent nexus), thus as a rule containing a finite verb besides its subject*". So a SUBJ and a finite verb seem to be two compulsory elements for constructing a clause. It is said that a clause is a sentence, but the thought which it contains is not complete. It needs a main clause so that its meaning or thought can be completed. There can be one clause in a sentence. There can also be two or more clauses in a sentence. While there is a finite verb and the SUBJ of it in a clause, a phrase can consist of only a finite verb without its SUBJ or there can be no finite verb in it. A clause comprises at least one predicate and one SUBJ (implicitly or explicitly). Both clauses and phrases can be broken down into the smaller units. The main difference between a clause and a phrase is that there is a SUBJ and a predicate in the clause whereas either the SUBJ or the predicate (or both of them) can not be in the phrase. In order to illustrate this let's take a look at the following example.

1. She was walking with a friend <u>who went to my school</u>.

We see that "who went to my school" is a clause because it contains both a SUBJ and a predicate. Nevertheless its meaning, i.e. its thought, is not complete and it is dependent on the main clause. But in the same example, "with a friend" is a prepositional phrase, because it does not have a SUBJ and a predicate. In the following example there are two main sentences which are equally significant and each can be a separate sentence.

2. I <u>can't cook very well</u> but <u>I make quite good omelettes.</u>

But in the following sentences there is a main and a subordinate or dependent clause, because it is functionally different from the main clause of the sentence and could not exist as a separate sentence.

3. I'll get you some stamps, <u>if I go to town</u>.

Again, the following example sentence contains two clauses (Hartmann, R.R.K., and F.C. Stork. 1972):

4. It is cold, <u>although the sun is shining</u>.

The main clause is "it is cold" and the subordinate clause is "although the sun is shining".

Before passing to the elements in a clause it should be enlightening how the main clause and subordinate clauses can conjoin. It is displayed in the figure below:

sentence

main/superordinate clause

S   V   O

He   predicted

subordinate/superordinate clause

S   V   O   A

that he would discover the tiny particle

subordinate clause

S   V   O

when   he   conducted   his next experiment
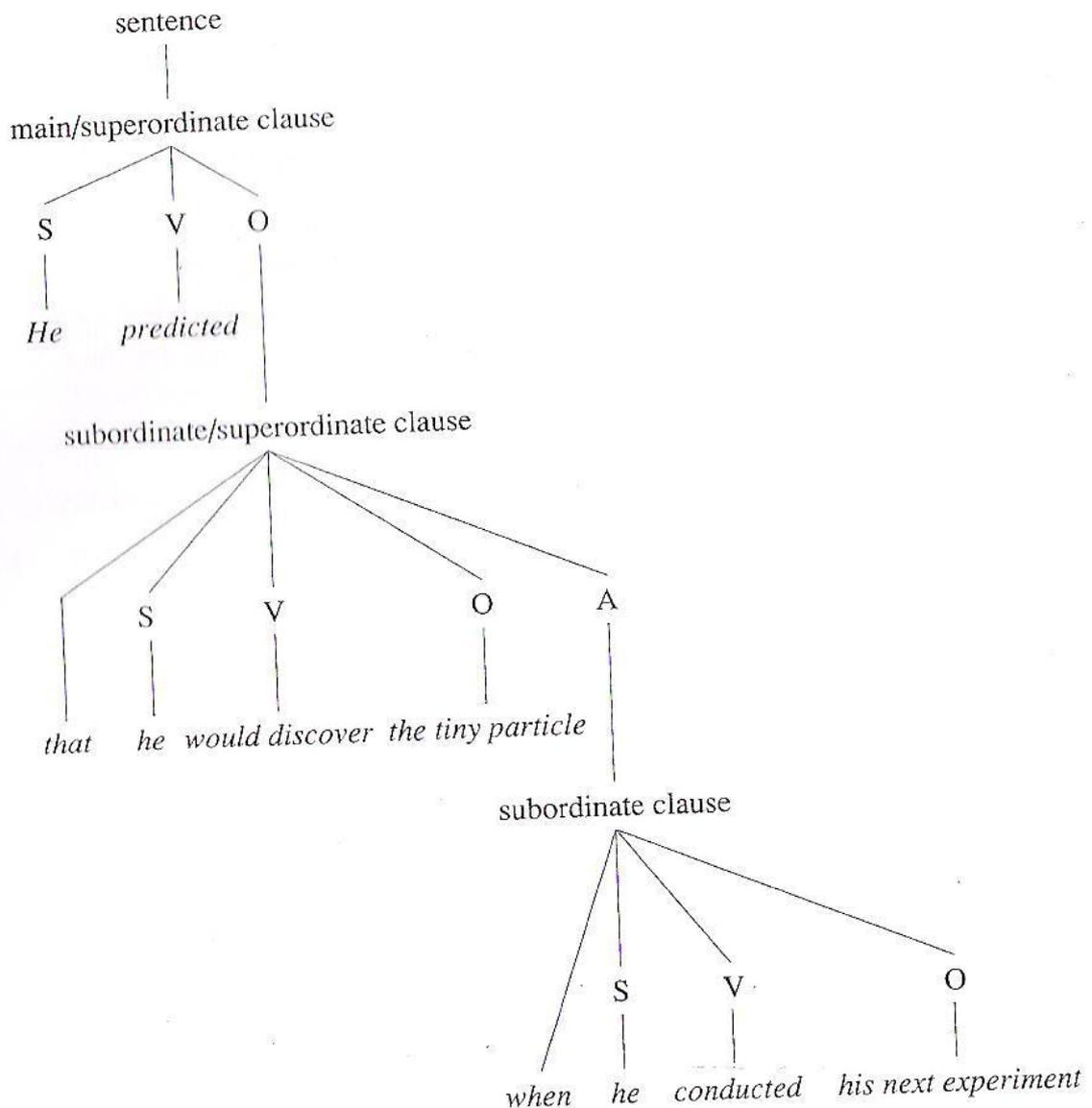
Diagram 1 Main Clause and Subordinate Clause (Greenbaum S., Quirk R., 1990:283)

So it is clear that clauses can be subordinated to other clauses in a sentence. In the figure we see that the sentence is a complex sentence consisting of one main clause.

The main clause is superordinate (in the terminology; superordinate clause or independent clause is main clause. I will use matrix clause later) to the subordinate "that-clause" (which is direct OBJ) that continue to NP "the tiny particle". The "that-clause" is in turn superordinate to the subordinate "when-clause" (which is adverbial) that extends from "when" to the end of the sentence. Thus the hierarchy is a good example for superordination and subordination.

We can build clauses by putting together clause elements (Biber, 2004). Five clause elements exist, each of which has a particular function and renders a specific meaning. These are (Slim, M., 2004):

Subject (S=e.g. John, Morning, it, etcetera)

Object (O=e.g. a book, the tree, etcetera)

Adverbial (A=e.g. very hard, currently, until next week, etcetera)

Verb (V=e.g. has written, speaks, have gone, etcetera)

Complement (C=with a medal (obj.comp), a nice person (subj. Comp), etcetera)

We can use all of these or some of them in a clause. In addition, the meaning of the verb must be complete. For this reason the verb element is usually followed by an OBJ or complement. Usually the OBJ and complement elements follow the SV (Subject, Verb) in a clause. There may also be some adverbial elements. I think that it is not necessary to give more information in detail about what I have mentioned because the objective of this section is subordinate clauses. Of course it should be made clear what "clause" means and what elements it contains. But the form and the type of a clause is more important.

Now I shall discuss the form of clauses. There are four generally accepted forms of clause: Finite clauses, non-finite clauses, active clauses, and passive clauses.

4.1.1. **Finite Clauses:**

The characteristic properties of the finite clause are: There is a finite verb in the construction. The verb in the construction is marked for tense. In ENG the SUBJ

precedes the verb in a finite clause. However, the SUBJ can be omitted so that no repetition turns out.

5. Michael <u>is working</u> for our company. ("is working"=finite verb=present continuous tense)

6. She is very busy at work and <u>can not go out with you</u>. ("can not to go out with you" = a clause with finite verb but without subject, i.e. the subject is gapped).

It should be noted there that there are two clauses in this sentence. These are main and subordinate clauses. I am going to discuss this later.

4.1.2. **Non-finite clauses**:

The characteristic properties of non-finite clause are: There is a finite verb. The verb has the form of "to, infinite" or "bare infinite", present participle "–ing" form and the past participle "-ed" form. It is often a part of a finite clause. The construction "by itself" is not grammatically correct. There can be no SUBJ in it. Finally all verbs, apart from modal auxiliaries, have non-finite forms. As an example let's take a look at the following sentence.

7. We went to Berlin <u>to see the German Parliament</u>. ("to see the Berlin Parliament"=to infinite verb form=non-finite clause)

The structure underlined is a subordinate clause which is not marked for tense, so it is a non-finite clause. At the same time there is no SUBJ for us to see. Another example for non-infinite clause follows.

8. Jane assisted <u>John to develop a CV</u> ("John" is subject of "non-finite clause"; "a CV" is object of the "non-finite clause"; "to develop" is "to infinitive").

4.1.3. **Active Clauses**:

They have the following peculiarities: There is an active verb form which shows the activity of the agent. It makes something happen. The subject is grammatically an

agent. Because of the fact that it is the typical voice in language use, it is used extensively. To illustrate this, an example is shown below:

9. John **is writing** a letter. ("is writing"=active verb)

In this example John is the agent, because he takes the action. Hence it is an active clause with a present continuous tense. It can be said that the structure of the active clause is regarded as the primary structure. From this structure the passive clause is built.

4.1.4. **Passive Clause**:

The following characteristic properties belong to the passive clause: There is a passive verb form which shows something is done to the agent/subject. Passive clause forms can be constructed from the statements with the transitive verb. Using of passive clause seems to be more formal. Let me give an example and compare with the active example that I have written above.

10. A letter <u>is being written</u> by John. ("is being written" is in the present continuous tense and it is the modification of the example above i.e. "is written"; "being" is the present continuous form of the verb "be").

Considering this example this can be said: The OBJ in 9) is now a SUBJ for the example in 10) because it is affected by the action. The "by-phrase" comes after the agent John. "By John" is an adverbial element which is used in passive clauses. It should be added that it is optional. As we see from example 10) even though the sentence is grammatically complete the adverbial element is used. It is like additional information.

After this information about the form of the clauses I will pass to types of clause, i.e. subordinate clauses (there are two types of clauses: main and subordinate/dependent clause). In the following I am not going to talk about the definition or sub-categorisation of the sentence. I just want to note here that a sentence may comprise only one clause or two or more clauses. A sentence may be simple, compound or complex (the

illustration has already been given). There is at least one clause in simple sentence. Another feature of simple sentences is: When the structure of a sentence can not be broken down into other sentences, the sentence is a simple sentence. The clauses have their own particular internal structure, like the sentences. It has been mentioned before what the difference between a clause and a sentence is. I write here a short repetition of their difference: all (complete) sentences are clauses. But not all clauses are sentences. A sentence is: at least one clause beginning with capitalized letter and ending in stop punctuations such as a period, exclamation mark or question mark.

A subordinate/dependent clause supports the main clause. It has a SUBJ and a predicate. We can not see that a subordinate clause stands alone like a sentence. While the thought or meaning in a main clause is complete, it is not complete in a subordinate clause. For this reason, subordinate clauses are called "dependent clauses" too. It means that a subordinate clause depends on a main clause. A subordinate clause is not a sentence. The subordinate clause functions as a single part of speech (as a noun, an adjective, or an adverb).

There is no agreement among the grammars with respect to the classifications of subordinate clauses (and every writer uses his own terms). Very detailed information related subordinate clauses exist in the grammar book of Carter R. and Carthy Mc. M. (2006). They handled the subject from the linguistic perspective. Even in most popular ENG Grammars such as Collins Cobuild English Grammar (1990), Longman Grammar of Spoken and Written English (2004) or "the Cambridge Grammar of the English" (2006). A standard of classification and terminology regarding subordinate clauses can not be found. For me the grammar book of Greenbaum S. and Quirk R., (1990) has been helpful.

Subordinate clauses are generally classified according to their functions into three categories. These are: 1) Noun/Nominal Clauses 2) Adverbial Clauses 3) Relative Clauses. Different grammars subcategorize subordinate clauses in different ways (e.g. concessive, causal, etcetera). Some writers add "comparative clauses" (for example, Greenbaum S. and Quirk R. 1990) to these three categories. Nevertheless I am going

to handle subordinate clauses in three categories because there is no agreement among the grammarians when the comparative clause is the subject of research. An example for each is given below so that an overview can be given in order to understand the difference between these types.

Main Clause (the first part)   Subordinate Clause (second part or the bold side)

1-Noun Clause → He says **that he may come to the concert** (the subordinate clause here functions as nominal)

2-Adjective Clause → I know the man **who wrote the story** (the subordinate clause here modifies the noun)

3-Adverbial Clause →The baby woke up **when the dog barked** (the subordinate clause here modifies the verb)

Now I am going to talk about the first one. The first one is Noun Clause.

4.2.   Noun Clauses

The function of noun clauses or nominal clauses is similar to that of a noun phrase. They may function as SUBJ or OBJ/complement in the main clause. To understand better, consider the following examples (Carter R., Carthy Mc M. 2006).

11. His sincerity can't be denied. (Nominal phrase as SUBJ)

12. That one British child in four is born into poverty is a disgrace. (Nominal "that-clause" as SUBJ)=It is a disgrace that one British child in four born into poverty.

13. I forgot his name (noun phrase as object).

14. I forgot to ask how long it would take. (Nominal "infinitive- clause" "to ask how long it would take" as OBJ of "forgot", and "how long it would take" as OBJ of "ask").

So we see from the examples above how noun clauses have a similar function as phrases. It can be repeated here again: A noun clause can function as an OBJ (direct or indirect), SUBJ or complement of the main clause. Noun clause can also be a predicate nominative, appositive, or OBJ of the preposition. The words such as "that",

"whether", "who", "why", "whom", "what", "how", "when", "whoever", "where", and "whomever" introduce a noun clause. The following example demonstrates that a noun clause can act like an **object**. In the examples the underlined part is always a noun clause.

15. We know <u>that the business will grow.</u>

16. I wonder <u>if you're staying with us</u>.

The following example demonstrates that a noun clause can be a **direct object**:

17. I noticed <u>that he spoke English with an Australian accent</u>.

The following example illustrates that a noun clause can be an **indirect object**:

18. We told the police <u>that we were strangers in London</u>**. (**the police=direct OBJ; the noun clause=indirect OBJ)

On the other hand there are verbs which frequently have clause objects (Praninskas J., 1959). The following verbs very frequently have clauses as direct objects, although many of them are occasionally followed by other patterns also: believe, discover, hope, realise, suggest, wish, demand, find, know, day, think. An example is below:

19. Professor Baker **demanded** that Jane hand in her report before taking the exam.

In the following example "what he had asked her" is "OBJ of the preposition" "in".

20. She found fault in <u>what he had asked her</u>.

The word that defines the SUBJ "we" in the sentence below is "adults". So it is an **appositive**.

21. We <u>adults</u> understand life better than children.

Here is another example for appositive:

22. Your criticism, that no account has been taken of psychological factors, is fully justified.

The example below shows that a noun clause acts like **subject**:

23. <u>Whether (or not) he is given a reward</u> does not concern me.

One thing should be noted here: Slim (2004:262) says: *"when a noun clause is the subject, it does not start with* if*"*. The following sentence also demonstrates that a noun clause can be a SUBJ.

24. <u>That day my son returned from the war</u> was the most memorable day.

The wh-question words, "what", "when", "where", "which", "who", "whom", "whose", "how" and "why", can be used to understand the noun clauses. Let me give an example:

25. I can not understand <u>how he found the house</u>.

Another example:

26. <u>How the book will sell</u> depends on the reviewers.

That a noun clause can act as a **complement** of the main clause is shown by the example below:

27. The fact is <u>that they are happily married.</u>

After some **adjectives** and nouns, a noun clause can be utilised:

28. I am **glad** <u>that John has returned home safely</u>. ("glad" is adjective)

29. Your **belief** <u>that she is rich is only imagination</u>. ("belief " is noun)

As it is known, "that" can be omitted in the sentence. If it is done, the meaning does not disappear. An example for that is: I know <u>that he is here</u>. (I know he is here). As we see, if the word "that" is taken out the meaning of the sentence is not changed. This case is called zero "that-clause" by Greenbaum S. Quirk R. (1990). They say that the zero "that-clause" is particularly common when the clause is brief and uncomplicated. An example follows:

30. They told us once again <u>(that) the situation was serious</u>.

The example below demonstrates that a noun clause can come after a **preposition**.

31. Our job depends **on** <u>what management decides today</u>.

It is seen that there are many functions of the **Nominal "to-clause"**. It can be SUBJ, direct OBJ, SUBJ complement, appositive, and adjectival complementation. Here are some other examples (Greenbaum S., Quirk R., 1990):

32. Subject   :   <u>To be neutral in this conflict</u> is out of the question.

33. Direct Object   :   He likes <u>to relax</u>

34. Appositive   :   Your ambition, _to become a farmer_, requires the energy

     and perseverance that you so obviously have.

35. Adjectival Complementation: I'm very eager to meet her.

Another item that introduces a noun clause is the "ing-clause". It can be SUBJ, Direct OBJ, SUBJ complement, appositive, and adjectival complementation. In the following there is an example for each of them.

36. Subject   :   Watching television keeps them out of mischief.

37. Direct object: He enjoys playing practical jokes.

38. Appositive :   His   current   research,   _investigating   attitudes   to   racial stereotypes,_ takes up most of his time.

The word "that" is significant in constructing a noun clause and it has many functions. Therefore it is necessary to talk about it in detail. In the following I write the place where "that "is often used to build a noun clause.

1. It can be the subject of the sentence.

        That you keep telling lies angers me.

2. It can be the indirect object of the sentence:

        Show everybody that this is our first visit to an Italian restaurant.

3.   It can function as the second phrase in the construction like "Nominal Phrase + to be + nominal phrase". For example:

    Our understanding is that many cancers are curable.

4. It can be used as "appositive" of some nouns such as "fact", "axiom", "circumstance", "reason", "theory", "thesis", "notion", "principle", "news", "hypothesis", "announcement" et cetera (Seher A., 1992: 252).

5. It can be used as pattern complementary II. For example:

    It is not that I don't like you.

6. It can be used after some adjectives in the pattern "nominal phrase + to be + adjective". Some of these adjectives should be listed in the following (nominal phrase should demonstrate a person): afraid, shamed, aware, certain,

confident, conscious, convinced, delighted, disgusted, furious, glad, grateful, happy, hopeful, sure, pleased, positive, proud, satisfied, surprised, sorry, thankful, thrilled. For example (see also example (27)):

(You are late for dinner!) You are fortunate that I haven't started it yet.

7. In some patterns that mutated into a nominal phrase "that" is usually used. Here are some examples:

-There is some evidence that there has been foul play.

-There is no certainty that the murderer will be arrested.

-There is no possibility that he will lend me the money.

8. Another place where "that" is used as subordinator of the noun clause is: In the nominal clause the verb is not conjugated. It stays in non-finte. This occurs often in some of the indirect speeches. Consider the example below.

a) The doctor suggested that she stop smoking.

b) She demanded that she be given the money.

In both sentences we see that the verbs "stop" and "be" have not been conjugated. However in some conversations in daily life "should" can be placed before these verbs which are not conjugated. The verbs that are in this groups are (Seher A. 1992:250): "advise", "ask", "command", "demand", "desire", "forbid", "insist", "move", "propose", "recommend", "request", "require", "stipulate", "suggest", "urge". An example for this case is: The doctor recommended that she (should) take a vacation.

9. I will discuss the last function or place of "that". It is used with some adjectives of urgency or recommendation. Either the verb in subordinate clause is not conjugated or "should" is required as the last point. For example:

It is urgent that a message be sent now = A message should be sent now.

The second category of subordinate clauses is adjective clauses which will be dwelled on next.

4.3. Adjective Clause

Because of the fact that adjective clauses or adjectival clauses are also RCs this part will be handled in detail in the chapter "RCs". Here I am only going to explain the

relationship between adjectives and RCs. After giving a definition, some examples will be listed so that the subject can be made clear.

According to Longman Grammar of Spoken and Written ENG (Dougles B., Stig J., Conrad S., Finegan E., Quirk R.: 2004) an adjective clause is characteristically a postmodifier in a noun phrase. It is introduced by the words which have a grammatical role in RC. The relativiser points back to the head of the noun which is generally referred to as the antecedent. Consider the following example:

39. The lady <u>who bought some tea bags</u> is my aunt.

In this sentence a relative pronoun ("who" joins the RC to the main clause which is "the lady is my aunt") has been used. "Who" acts in ENG as the postmodifier of the noun phrase "the lady"? Among the grammars a noun or a noun phrase which is postmodified is called the antecedent. In the sentence above, the antecedent is "the lady". Let's look at another example:

40. My father didn't like <u>the pen that I bought</u>.

Here the main clause is "my father didn't like the pen". The subordinate clause is "the pen that I bought", and the word "that" has been used as a relative pronoun. The function of "that" in this sentence is OBJ i.e. "the pen". The head word "the pen" in the subordinate clause is postmodified by a RC. The RC begins with the relative pronoun "that".

So it has been seen that a RC functions as an adjective clause. I do not want to talk further about RCs here since this will be defined and classified in detail under the name of RCs; this is also the topic of my work. I think one of the most complicated and longest categories of subordinate clauses is adverbial clauses. There are also many pieces of adverbial clauses which require much knowledge in order to understand them. As I was researching the adverbial clauses I realised that among the grammar writers there are many diverging points of discussion inside the adverbial clause. As they have no direct bearing on many theses I will not discuss all of them here. In

addition, a few of the classifications of adverbial clauses are of my own. In the next section adverbial clauses will be handled.

4.4.0. Adverbial Clauses

It can be said that an adverbial clause in a complex sentence acts in the same way as an adverb in a simple sentence. I have written before that an adverbial clause modifies the verb. It gives to the main clause additional information about time, manner, cause, concession, place, condition, purpose, result/effect, duration, contingency, reservation, comparison, and etcetera. (Seher A.: 259). An adverbial clause can be used in the first position, in the middle of the sentence, at the end of the sentence. When it is used in the first position, i.e. at the beginning of the sentence, a comma is inserted between the adverbial clause and the main clause. The example below illustrates this:

41. <u>When we were in that town</u>, we often played games.

Here the adverbial clause "when we were in that town" modifies the main clause "we often played games". Indeed it gives the information about the time.

When an adverbial clause is utilised at the end of the sentence, i.e. in the end position, a comma is not utilised.

42. We often played games <u>when we were in that town</u>.

And finally, when an adverbial clause is used in the middle position, i.e. in the middle of the sentence (main clause), a comma is put both in front and in back of it. Let me give an example:

43. My brother, <u>because he hates swimming</u>, never goes to the seaside.

Here, "because he hates swimming" is an adverbial clause and it has been used in the middle of the main clause. Namely "my brother never goes to the seaside" is in the function of main clause. I have already given the information about the classification of adverbial clauses. Adverbial clauses are needed to express different situations. In the following I want to give place to each of these situations together with an example.

4.4.1. **Adverbial Clause of Time**

Adverbial clauses of time relate to a period or an event. The words which are used with this purpose are: "When", "whenever", "while", "since", "after", "before", "until", "as", "by the time (that)", "now that", "once", "as soon as", "as long as". The examples below demonstrate these:

44. <u>When I got to this office</u>, he had already left.

45. <u>By the time you come home</u>, we will have had our dinner.

46. <u>Once you stop talking</u>, I will finish my speech.

47. He asked me for a loan <u>whenever he saw me</u>.

The words which introduce the adverbial clause of time have been written above. Apart from these words there are also the following usages that have the operation of adverbial clauses of time:

No sooner … than: He had **no sooner** drunk the coffee **than** he began to feel drowsy.

Or "no sooner" can be taken in the first position as illustrated below. In this case the auxiliary verb comes after. But "than" stays in both word-orders in the same position. It is used in front of the second clause.

No sooner had he drunk the coffee **than** he began to feel drowsy.

Hardly ... when : The film had **hardly** begun **when** the lights went out.

Hardly had the film begun **when** the lights went out.

As we see from both examples above, this type of adverbial clause of time consists of two words similar to "no sooner … when". Similarly, if the first word is put in front of the subordinate clause, the auxiliary verb comes after. But if "when" is in its position in the other words it stays in front of the main clause.

Immediately: (to feel drowsy) immediately he earns any money he spends it (or he no sooner earns any money then he spends it)

As we understand from this example, "immediately" introduces an adverbial clause with respect to time.

4.4.2. Adverbial Clause of Place

Adverbial clauses of place are related to the location or position of something. The words that introduce an adverbial clause are: "Where", "whenever", "as far as", "as near as". Let's look at the following examples:

Where: Where our house is now was a farmland.

She has always lived where she was born.

Wherever: She meets interesting people wherever she goes.

As far as: She walked as far as she could.

As near as: You can go as near as you like to this lion.

A complete summary of clauses is shown in the following diagram.
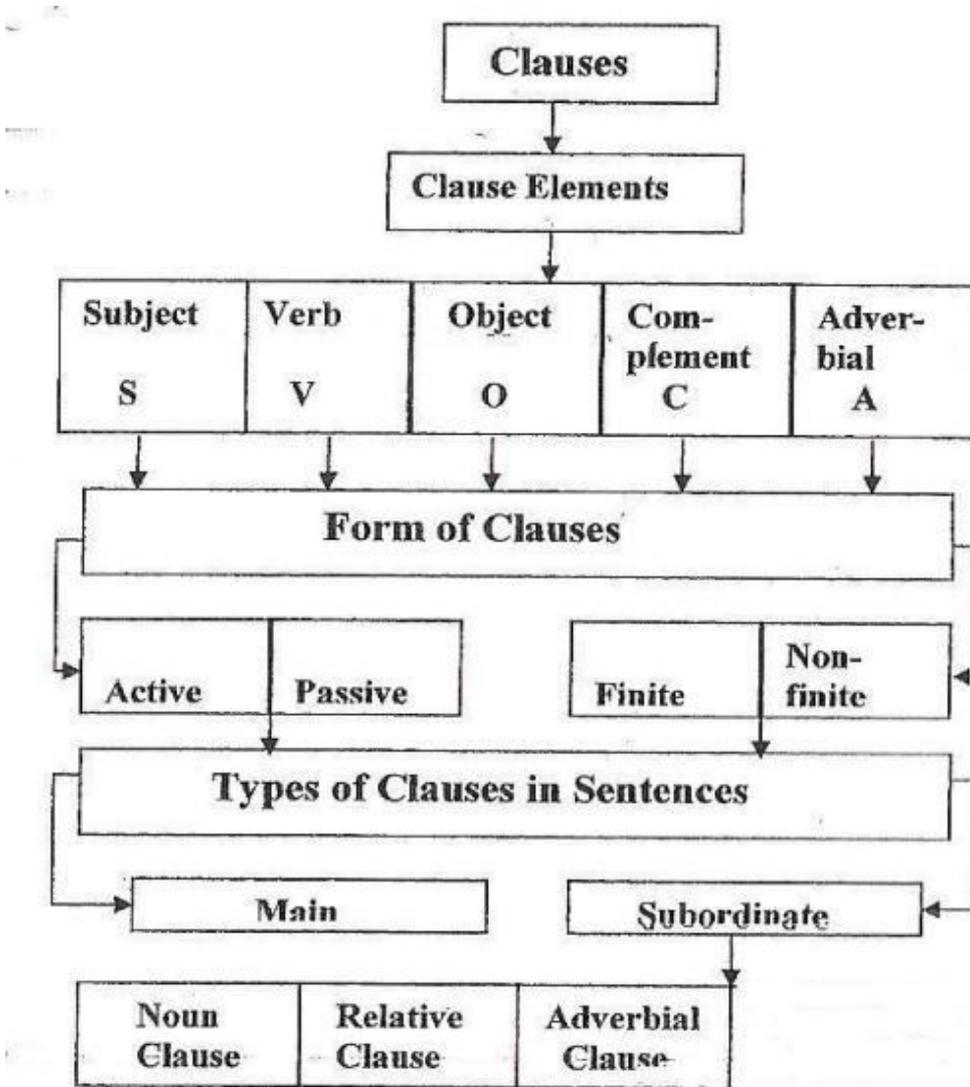
Diagram 2, The Summery of Clauses (Slim 2004:239)

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5.0.   Relativisation and the Relative Clauses

This part is central to the question of the 2nd empirical assessments of the hypotheses that will be examined. So the structures of RCs in ENG, GER, and TUR will be typologically discussed, i.e. it will be considered how relativisation in ENG, GER and TUR in view of language typology is structurally realised and what kind of constraints can be found. After giving a definition and classification of RCs, syntactical information in connection with RCs about these languages will be given. The formation of RCs in these three languages will be given, and it will also be clear where these languages differ and where they are similar to help us understand the acquisition process of such kinds of grammatical structure. The sentences of the first corpus analysis and of the second study in all three tests (SCT, GJT, GER/TUR TRANS) are RCs. In addition the test items of second research are constituted according to the types of RCs in ENG, GER and TUR. At the end of this chapter it will be clear what the construction of RCs in ENG, GER, and TUR look like and how RC structures of these three languages typologically differ. All these languages, like many other languages, have problems about RCs. First ENG RCs will be handled, depicting the construction and comprehension problems related to RC. Later, GER and TUR ones will be handled with the comparison of ENG RCs listing the differences and similarities.

5.1.0.   English Relative Clause as Postmodified ones

As with most of the Germanic languages RCs in ENG are marked with the so-called relative pronouns with the exception of "that" which is sometimes named the "relative particle". This will be discussed later. First I want to talk about the types and subcategorisations of RCs of ENG and their formation along with their rules and limitations in syntax. Here one question arises: Where and in what way do ENG RCs differ from GER and TUR ones regarding their formal characteristics? RC is one of the subordinate clauses which has already been mentioned in the previous section. On the grounds that RCs function as adjectives it is also called an adjectival clause by some grammar writers. An RC is used for describing or telling more about a person or a thing.

Sinclair says (Sinclair, I., 1990:362): "*When you mention something or someone in a sentence, you often want to give further information about them. One way to do this is to use a relative clause.*"

In ENG the RC is located after the noun it modifies. In the construction of ENG RCs the relative pronouns are utilised. This is the reason why they are called RCs. Let me give an example in order to make it clear.

1) The guy **who** shouted must have been on about the seventh floor.

As could be seen the RC "who shouted" postmodifies the noun phrase "the guy". The word "who" is a relative pronoun which connects the RC with the main clause "*the guy must have been on about the seventh floor*". The noun or noun phrase which is postmodified is called the antecedent. In the example above the antecedent is "*the guy*". There are other relative pronouns that will be discussed next.

5.1.1. The Words That Introduce Relative Clauses (for example, Relative Pronouns)

The word relativiser, which refers to the words that make the RCs in ENG begin, seems to be logical, because in GER the RCs are not only introduced with a relative pronoun, they are often introduced with articles. In TUR they are made with specific suffixes. Accordingly the word relativiser is the correct word for me. Relative pronouns of ENG RCs seem to be problems for GER and TUR speakers (as the strong version of CA would predict), on account of the fact that RCs of ENG are sometimes built with a relative pronoun and are sometimes not built with a relative pronoun (omitted). Additionally, in the texts examined for the empirical study there is not a uniquely used form of such constructions, for example, "who" and "whom". In the first part of the research all RCs with or without relative pronouns will be extracted and listed, with the target of seeing the frequency of use of relative pronouns. In the second part of the research, there is, indeed, no type of ENG RC without relative pronoun. All of the ENG RC types in the three tests are constructed with a relative pronoun, so this part is very important for both the first and the second study.

The relative pronouns (wh-words) in ENG are "who", "whom", "that", "which", "whose". (There are other words which are used in relative clause constructions such as "when", "where", "why"; they will be discussed later). There are some writers who call "that" a "particle", and not a "relative pronoun". Greenbaum S. and Quirk R. (1990) and Huddleston, Rodney D. (2005) handle it as subordinator (not as a relative pronoun). These relative pronouns can function as subjects or objects of verbs in RC. They usually join sentences together: a subordinate to the main clause.

In many world languages, as in ENG, relative pronouns directly follow the clause containing its antecedent. If the antecedent is human, it is "who" and "whom". If the antecedent is non-human, it is "which". "Whose" can be used for human and nonhuman antecedents (i.e. animate or inanimate). "That" can be reserved for nonhuman and human ones in the same way. There are two series' of relative pronouns: either "wh-pronouns" or "that, zero". The wh-pronouns determine gender selection: "Who" is utilised for humans i.e. people; "which" is used for non-humans i.e. for things or animals. At the same time, the case distinction (for example, "who", "whom", "whose") is determined by "wh-pronouns". The relative pronouns can be generally shown in the following table.

	defining		non-defining	
	personal	non-personal	personal	non-personal
subjective case	who	which	who	which
	that	that		
objective case	whom	which	whom	
	that	that		
	zero	zero		
genitive case	whose			

Table 1 The Relative Pronouns in English (Quirk, R. et al, 1985:377).

Apart from these relative pronouns, other words through which RCs are introduced are "where", "when", and "why". "When" and "where" can be utilised with the meaning "at which" or "in which" after nouns referring to times or place. "That" can also be used

after "reason" or can be omitted and replaced by the relative pronoun "why". Here are the examples for each one (Swan, M. 1991):

2) The place <u>in which they found themselves</u> (where).

3) The time <u>at which the original mineral was formed</u> (when).

4) That is the reason<u> I am checking it </u>(why).

Sinclair (1991) states that no relative "how" exists to express manner with an antecedent noun except these two:

5) That's <u>how she spoke</u>

(That's the way (that) she spoke)

Quirk R. (1985) indicates that zero-relative is usually used to express direction with the condition that an antecedent noun such as "way" exists. For example:

6) Was that <u>the way she went.</u>

But as it has been said before there are other words that make a RC begin (Huddleston, Rodney D. 2005); such as "while", "whence". For example:

7) From 1981 to 1987, <u>while his uncle lived with them,</u> she had a full-time job.

With "while" the antecedent denotes a period of time and instead of "while" these words can be used: "when", "during", "in which (time)". According to Huddleston, Rodney D. (2005) "whence" belongs to a formal style, serving in its primary sense to express spatial source as in the following example:

8) He sent his son with the papers to another congressman's house, <u>whence they were spirited to governor</u>.

He continues that "whence" has the same meaning as "from from" and is used in general in somewhat archaic language, even though it is still found in journalistic writing. "Where + preposition" can introduce a RC too. There are many prepositions formed from "where" plus a preposition such as "whereat", "whereby", "wherefrom", "wherein", "whereof", "whereto", "whereupon", etcetera. Huddleston, Rodney D. (2005) points out that many of these are old forms, i.e. archaic. But "whereby" and to a lesser extent "wherein" and "whereupon" are still regularly used. For example:

9) She told him that his essay was incoherent, <u>whereupon he tore it up and stormed out of the room</u>.

After all of these words that make the relative begin (see Table 1 the Relative Pronouns in English on the previous page), I want to list below the place where "that" is used as subordinator or relative pronoun.

I. "That" as a relative pronoun or "that-subordinator" can be used in the place of all agents. In the adjectival clauses it can be used instead of SUBJ and OBJ. An example for that will be given later.

II. "That" pronoun can not come after the prepositions. See this example:

10) The people <u>that I work with</u> are friendly. (with whom)

III. "That" pronoun is used in "adjectival clauses" modifying the nouns defined by superlative adjectives. These examples below illustrate this:

11) We always buy the best books <u>(that) we can find</u>.

12) She is the most intelligent student <u>(that) I have ever met.</u>

IV. The adjectival clauses which define noun phrases containing the words such as "all, any, few, little, no, none, much, only, etcetera" can be built with the "that" pronoun. The examples follow:

13) We couldn't find anything <u>(that) we wanted in the shop</u>.

14) A few of the eggs <u>(that) my brother bought</u> were stale.

V. "That" as a relative pronoun can only be used in defining RCs. This is the reason why RCs introduced with "that" are not allowed to be separated from the main clause. An example for that will be given later in the section, defining RCs.

VI. RCs which come after the nouns defined by some adjectives such as "first, last, next" may use "that" relative pronoun. For example:

15) This is <u>the first/next/last book that</u> is selling well.

VII. RCs which define the indefinite pronouns such as "all, everything, anything" may use "that" as relative pronoun. For example:

16) Anything/everything that is kept here belongs to a smuggler.

Apart from these usages of relative pronouns, there are other usages as well. For instance, they can be used with quantifiers, superlatives and determiners. Their appearance can look like "of whom", "of which", etcetera. To illustrate, the following examples are given:

17) Miss Moore has a lot of friends, <u>all of whom think she is wonderful</u>.

18) The fans started throwing bottles, <u>one of which injured a player</u>.

The next section will be about the classification of RCs. I have seen that there are many differences among the writers about the subcategorisation of RCs with respect to their definition or naming. But the important ones will be handled here.

5.1.2. **Restrictive Relative Clauses**

I have encountered different grammars who call the restrictive RC with different terms. I have found that there are another three terms for restrictive RCs: "defining RCs", "essential RCs" or "identifying RCs". "Restrictive RCs" will be used. My reason for this is that it restricts the meaning, as will be seen later. RCs can function differently in a sentence:

Relative pronouns as subject: As shown in the table 1, relative pronouns "who" or "that" is used when the antecedent is human, as exemplified below:

19) The boy <u>who/that won the race</u> is fourteen years old.

"Which" or "that" is used when the antecedent is nonhuman, as exemplified below:

20) I hate the books <u>which/that have over one hundred pages</u>.

Relative pronoun as object: in restrictive RCs "who" (or whom) and "that" are used as the OBJ if humans are referred to. According to Quirk R. (1985) "whom" would seem pedantic while "who" as the OBJ in RCs is informal and tends to be regarded as incorrect. This situation is illustrated below:

People that I visit; rather than: People (who(m)) I visit.

In restrictive RCs "which" or "that" is usually used if the antecedent is nonhuman, as shown in the following sentence:

21) Is that the camera <u>that/which you bought in Berlin</u>?

The omission of relative pronouns in restrictive RCs is possible provided that it is the OBJ of the verb. Let me leave out "that/which" from example 21) above: the result would be:

22) Is that the camera (-) <u>you bought in Berlin</u>? (Such sentences are also called contact clauses as they come immediately after their antecedent).

A restrictive RC is one which is necessary to identify the noun it modifies (to know which words i.e. pronouns are used for restrictive RCs, see table 1 for relative pronouns). We can omit it from the sentence in which it occurs. If we do that we change the complete meaning of the sentence. Let's look at the following example:

23) A freshman <u>who tries to attend all the social events on campus</u> can't pass all his courses.

As it is seen the head of RC is "*a freshman*", the relative pronoun "*who*" introduces the RC which is underlined. The information given in the restrictive clause is essential. We can not omit it. Otherwise it would not be clear which "*freshman*" is meant. Thus we never separate the restrictive clauses from the words they modify by any mark of punctuation.

Here are other examples:

24) Annemarie does not want customers <u>who waste her business time</u>.

In this sentence the head noun is "*customers*"; the relative pronoun used is "*who*". The aim of utilising an RC here is to make it clear what type of customers Annemarie does not want.

25) They were asking for the shopping centre <u>that has a car park in front of it</u>.

In this sentence the relative pronoun is "*that*"; the head noun is "*shopping centre*". A restrictive RC is used in order that the head of RC which is a noun (shopping centre) can be defined. Otherwise it would not be clear which "*shopping centre*" is meant. Perhaps there are many shopping centres in the district. So the restrictive RC helps us here identify which "*shopping centre*" they were asking for. Thus we have seen that a restrictive RC is necessary to identify or describe the head noun/antecedent.

It can be said that RCs are a part of matrix clauses on the grounds that they mostly stay within the matrix clause with respect to their function. In other words RCs are usually embedded in or contained in a matrix clause.

In ENG syntax (or in syntax theories) the demonstration of the constituents of the sentence is shown formally either with the help of square brackets or by rankshifting (which seems to be like a tree). In the following an example for each notation will be written.

An example for the first appearance can be illustrated with the sentence:

26) The cat <u>that is mad</u> loves dog.

[S_1 *The cat* [S_2 *that is mad*] *loves dog*].

From the demonstration we see that the square brackets are used for the subordinate clause which is a RC (restrictive). Notice that the entire subordinate clause S2= the first sentence which is RC is considered a constituent in the matrix clause S1=the second sentence (Radford 2004:223).

For the second figure let's take a look at the following sentence:

27) Two people <u>I know </u>have gone there.

It can be illustrated with the schema below (Carter R. et.al. 2006).
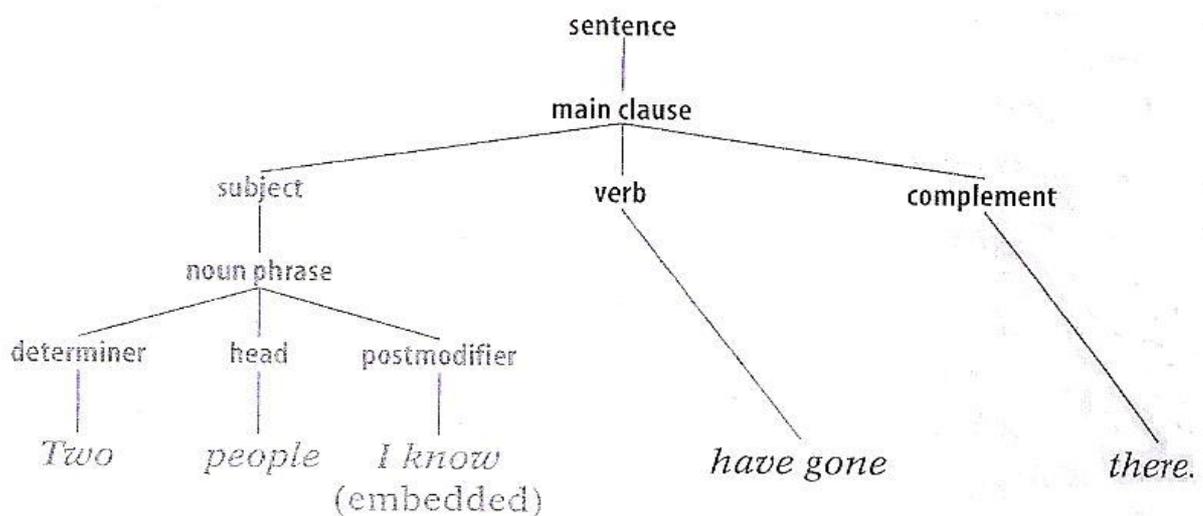
Diagram 1 Subordinate Clause

It is clear from this schema that an RC which is a restrictive one is embedded in the main clause as a part of the modifier. And "*I know*" modifies the noun "*people*". Another important point which should be mentioned here is that "*I know*" seems to be a constituent of the noun phrase which is functioning as SUBJ (Carter R. et.al. 2006:564).

After I have given such information about restrictive clauses I am going to talk about non-restrictive RCs by giving further examples and show the difference between both kinds of RCs.

5.1.3. **Non-restrictive Relative Clauses**

Here, again, in some grammar books different terms are used for this, such as "non-defining RCs", "non-essential RCs" "non-identifying RCs" or "adding clause". Non-restrictive RCs are my choice. Again this will be demonstrated below in accordance with their different functions.

Relative pronoun as subject: As noted before, "who" is used when it refers to a human antecedent, as in the following sentence.

28) Heath Robinson, **who** died in 1944, was a graphic artist and cartoonist.

When a nonhuman antecedent is referred to, "which" is used, as below:

29) We spent our last holiday in Brighton, which is a famous resort.

Relative pronoun as object: As shown in the relative pronoun, table 1, "whom" is used when a person is referred to, as illustrated in the following:

30) The president, **whom** I have never seen before, looked older than I expected.

"Which" as the OBJ is used, if there is a nonhuman antecedent as in the following example:

31) We landed at Gatwick, which is London's second airport.

In contrast to the restrictive clause, non-restrictive RCs can be easily removed from the sentence. By doing so, we do not change the meaning of the main clause. In other words, it is not necessary to identify or describe the head noun. A non-restrictive clause gives additional information about the head noun/word in the matrix clause.

Therefore some grammars call it the "adding clause" (pronouns used for non-restrictive RCs are given in tabel 1). Consider the following example:

32) Buda, <u>which is one part of Budapest in Hungary</u>, has many historical buildings.

In this sentence additional information about the noun "Buda" has been given. And if the subordinate clause, i.e. non-restrictive RC, is left out, the meaning of the main clause makes sense. Because of the fact that the information between two commas is not restrictive, it is called a non-restrictive RC. According to Swan (1991), non-restrictive RCs are often used in formal or written ENG and less used in conversational ENG. Here is another example of a non-restrictive RC:

33) George, <u>who came here from Greece about a year ago</u>, is one of the best students in the college.

Here we see again that the head noun is postmodified by a non-restrictive RC introduced by the relative pronoun "who". It provides additional information about the antecedent. However, this information is not essential.

It is emphasised that commas must be used. Many students use one comma either before or after the clause. It can be said that one comma is more confusing than none at all. That's why a correct punctuation is crucial: one comma in front of the subordinate clause and one at the back. In spoken ENG they are preceded by a pause. Even in written texts, books, or newspapers, commas may be forgotten or not used. This sometimes causes great misunderstanding. In order to exemplify such case and see the difference between a restrictive and a non-restrictive RC consider the following sentence:

The sentence belongs to a famous American author whose article was published (Seher A. 1992).

34) The American Indians <u>who took delight in torturing their captives</u> deserve to be called savages.

The type of RC, as it is seen, is a restrictive RC. The meaning of it is that only those of the American Indians who took delight in torturing their captives deserve to be called savages.

35) <u>The American Indians, who took delight in torturing their captives</u>, deserve to be called savages.

However, this type of RC, as it is seen, is a non-restrictive RC. The meaning of it is that all of the American Indians took delight in torturing their captives and that all deserve to be called savages. The same usage follows in this example:

36) a. Turks <u>who are wage-earners</u> are having great difficulty making ends meet.

   b. Turks, <u>who are wage-earners</u>, are having great difficulty making ends meet.

It can be easily seen that the first sentence, which is a restrictive RC, tells us that the Turks, who are wage-earners, are having great difficulty making ends meet. But according to the second sentence, which is a non-restrictive RC, all of Turks are wage-earners and all of them are having great difficulty making ends meet.

Finally two important differences between restrictive and non-restrictive RCs can be drawn so: In non-restrictive RCs "that" can not be used, while in the restrictive RCs it is possible. In the non-restrictive relative RCs, pronouns can not be omitted, while in the restrictive RCs it is possible. The example shows that "that" can be omitted from the restrictive RCs.

37) I enjoyed the books <u>that you lent me</u>.

   (I enjoyed the books <u>you lent me</u>.)

I have read in some grammar books that non-restrictive RCs resemble the apposition because the additional information is separated with two commas as in the non-restrictive RC without changing the meaning in the main clause. For instance:

38) Her answer, <u>that she had forgotten to set her alarm clock,</u> was not a convincing excuse.

In the relation of using a comma or not, the following example demonstrates that the relative pronoun is necessary for identifying the SUBJ:

39) The cricket teams <u>who were in outfits</u> won the game (restrictive RC).

In this sentence there is no need to put a comma because the restrictive clause identifies the earlier noun in the main clause. It gives some essential information about

the antecedent. If the subordinate clause constructed by restrictive RCs is taken out, it becomes difficult to identify the correct antecent. But this is not the same case as that of the non-restrictive RCs, as has been indicated above. The head word of this sentence is "*the cricket teams*". It is part of the matrix clause and is postmodified by a RC which starts with the relative pronoun "who". The next will be about RCs in which prepostitions and possessive pronouns are used.

5.1.4. **The Use of Relative Clauses with Prepositions and Possessive Pronouns**

This part is important because these are two types of ENG RCs which will be researched in the third investigation. S/OPREP is the third and GEN (possessive) is the fifth level of NPAH, which is one of the competing hypotheses of this work. Furthermore, attention will be on the S/OPREP on the grounds that preposition-stranding that is examined with the title "other items research" in the findings after three tests seems to be an obstacle for both GER and TUR students. The reason can be typological because neither has this usage in its language system.

The prepositions which are often used with relative pronouns are "in, for, with, to, etcetera". The relative pronouns which usually contain one of these prepositions are "which" and "who(m)". Mostly, prepositions tend towards the beginning of RCs. It is rarely seen that they are used in front of the pronoun. The following examples illustrate this situation (Fleischhack, E. 1993):

40) The woman **who** Muller left his money **to**…

41) Mr. Grant, **with whom** we had a conversation, has a lot of influence.

If there is no pronoun in RC which is a subordinate clause, the preposition stays at the end of sentence:

42) Angela was the only person I could talk **to**.

43) The girl I sang the song **for** …

In formal style the preposition can appear at the beginning of the clause in front of "whom" and "which". For example:

44) These are the people **to whom** Catherine was referring.

The use of "whom" after a preposition in the RC is formal. The sentence below is an example of this:

45) The Plew family **with whom** I stayed in Germany is visiting us.

When there is a phrasal verb with a preposition, it is impossible to remove the preposition to the beginning of the clause. For example:

46) All the things I have had put up **with**……...

If there is a relative pronoun and it functions as the indirect OBJ of a verb "to" or "for" is used. Consider the following example:

47) The man **that** she wrote the letter **to**.

In this sentence "to" must stay there because the relative pronoun which is an indirect OBJ needs the preposition "to". Let's look at the sentence below:

48) I am not the fool **that** you take me **for**.

Here the preposition is at the back of the sentence, and the relative pronoun is the OBJ of the preposition. For an example of the preposition "in", consider the following sentence:

49) Let's drink a toast to the town **that** I was born **in.**

In this sentence the word "that" functions as so called relative adverbial, because the RC here defines a place, i.e. town, and the preposition "in" is related to the town. It could be used with "in which" instead of the "that" pronoun and preposition "in" at the end of sentence. The modified version is below:

50) Let's drink a toast to the town **in which** I was born.

"Whose" as possessive pronoun is used in restrictive and non-restrictive RCs. "Whose" is called a possessive relative word which we use with a noun. "Whose" can refer to humans as in the example below:

51) I was talking to a girl **whose** uncle lives in Darwin. (referring to human)

Or it can refer to a nonhuman antecedent as exemplified below:

52) I am from a country **whose history** (or history of which) goes back thousands of years. (referring to non-human)

53) The governments **in whose** territories they operate…(with preposition)

It should be noted here that in written ENG "of whom" and "of which" can be utilised in the place of "whose". Consider the example below:

54) The thieves stole the car from a garage **the door of which** had been left open (The article "the" must be at the beginning of RC).

It should be repeated that the use of "whom" is not common in spoken ENG. The speakers choose to use "who" and put the preposition at the end of sentence (or at the other place in the sentence i.e. it is stranded). For example:

55) You are not telling me **who** you went out **with** last night.

It is seen that "who" is often used in the place of "whom" in non-restrictive clauses. In these cases the omission of the relative pronoun is not allowed, as in the following sentence:

56) Our Russian colleague, **who** we bought a wedding present **for**, is a father now.

It should be borne in mind that "that"[8] in the place of "who" in the sentence above is not permitted.

5.1.5. **Zero/bare Relative Clauses**

This type of ENG RC is not placed in the sentences of three tests in the second study; few informants have used it. But in the first study, the corpus analysis, this type is examined by eliciting all of such types from different scientific fields, for example social and natural sciences. At the same time, this type is the reason that I have come to the conclusion that ENG is on the way to a grammatical change: in the course of time, people frequently begin to use this structure, without a relative pronoun. It is my thesis which will be discussed in the first study (corpus research).

As has been discussed before, a defining RC referring to the OBJ (not SUBJ) of the clause can not receive a relative pronoun: it is omitted. This takes place particularly in speech or in informal context. RCs headed by zeros are also called contact clauses. For example:

57) That is a job I could never do.

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[8] More recently, there are exceptions in some American dialects

("That is a job which/that I could never do")

The omitted RC can occur as the complement of a preposition. It is possible with the condition that the preposition stays at the end of RC (Carter R., Carthy Mc. 2006). For example:

58) Huh, there is you in the back garden of the second house <u>we lived in</u>.

(showing someone an old photograph in which they appear)

In this sentence we understand………"*the second house **that/which** we lived in*"

On the other hand Carter R. Carthy Mc. (2006) points out that zero relative pronouns may occur with reference to the SUBJ of a defining or non-defining RC. He says that this takes place particularly with existential "there" constructions. An example for a subject:

59) There was a train <u>came by every morning about half-past eight</u>.

We understand from this sentence "*there was a train which/that came by every morning*"

An example for OBJ can be shown below:

60) There is quite a lot of colour photocopying <u>needs doing</u>.

We understand from this sentence, "*colour photocopying which/that needs doing*".

The next will be about the reduction of RCs in ENG. I am going to explain where the reduction is possible and where it is not.

5.1.6. **The Reduction in Relative Clauses**

This kind of RC seems to cause perceptual difficulties in understanding whether a sentence contains a RC or not for GER and TUR speakers because it does not exist in both language systems (it is sometimes hard to realise this from in the syntax even for native speakers of ENG, considering that such reduction of ENG RCs creates the phenomenon "garden path effect" among the psycho/neurolinguists (see more in part 6.2.) In the 1st study of my dissertation, I am going to take out all reduced ones from the corpus (showing frequency use in corpus) and explain where there may be a problem for the GER and TUR students in distinguishing between a sentence

(especially with reduced (-ing)) that contains or does not contain an RC. At the end of the first study a list of all reduced types will be made.

Because of the fact that the reduced RCs contain a non-finite verb, they are also called non-finite RCs[9]. Carter R. et al. (2006) say*: "Many of the same principles which apply to finite, definite and non-defining relative clauses apply to their non-finite equivalents. However, with non-finite relative clauses, the zero pronouns is used"*

61) The woman <u>sitting next to Marian is her sister</u>.

The sentence above is a defining RC that refers to the noun phrase "*the woman*". As it is clear, the pronoun "who" is omitted. Here is another example:

62) The book <u>I am reading</u> is really useful for my work ("which/that" is omitted)

When some elements are reduced and present participles "-ing" (which is usually an active participle) and past participles "-ed" (with regular verbs, and by irregular verbs the third form) are used one should be careful. "-ing" and "-ed" are utilised with the condition that the SUBJ of the non-tensed verb is similar to the referent of the head noun. For example, because the word "man" in the following sentence is OBJ, the RC can not contain "-ing" (it is also called non-finite "-ing").

63) The man <u>I am looking for</u> has dark hair.

Sometimes we see that the reduction occurs with the passive voice in the way that the participle "-ed" remains and other elements of the passive voice formation are omitted. The following construction exemplifies this:

64) Turkey <u>stuffed with bread and spices</u> is the traditional Thanksgiving fare in America.

It means that "*Turkey which is stuffed with*…." Here is another example:

65) Projects <u>submitted today</u> will be assessed and returned to you by 30th June.

In this sentence above "relative pronoun+auxiliary" namely "*which were*" is left out. Note here that "*submitted*" is the passive participle in this sentence and it refers to the "*projects submitted today*" (*the activity done by other people*). In non-finite relative

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[9] www.wikipedia.org: in linguistics, a non-finite verb (or a verbal) is a verb form that is not limited by a subject and, more generally, is not fully inflected by categories that are marked inflectionally in language, such as tense, aspect, mood, number, gender, and person. As a result, a non-finite verb cannot generally serve as the main verb in an independent clause; rather, it heads a non-finite clause.

"-ing" clauses, the verbs that are normally not utilised in the progressive form in a normal situation (for example, requiring, consisting, etcetera) may be used. If that is the case, the reduction can be confusing. Accordingly, one who wants to do that may not. An example which illustrates this follows:

66) Half a mile later, they reached what appeared to be <u>a derelict complex</u>, consisting of half a dozen buildings.

Here the so called "-ing" clause can not be used. Because it is not equivalent with progressive finite form ("…*a derelict complex, which was consisting of half a dozen buildings"*), because there are some verbs, for example "require"[10,] that are not allowed to be used in progressive formation. Carter R. et al. (2006) state that a "to-infinite clause" may be used provided that the noun is SUBJ or is the complement of a preposition in the non-finite clause. For example:

67) The person <u>to answer any question about computers</u> is Tania.

In this sentence the SUBJ is "*the person*". The meaning in construction made with an active "to- infinitive clause" and passive "to- infinitive clause" may not be easily recognised. Consider the following formation:

68) There are all those apples <u>to peel</u>. (Passive: *There are all those apples to be peeled*)

As seen here, the meaning is not recognised in a simple way. This is particularly the case for "there is/are". Thus use of it depends on the person who wants to express such constructions, i.e. it is. One last deletion of reducing relative pronouns can be made: In restrictive RCs, if the relative pronoun is the SUBJ of RC, it can not be omitted as can be seen in (69) and (70).

69) I hate people **who** are insincere (omission not possible)

But if it is the OBJ of RCs it can be left out:

70) I enjoyed the books **that** you lent me.

(I enjoyed the book<u> you lent me</u>.)

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[10]"Motions requiring further discussion" is ok. But "motions which are requiring further discussion" is not ok. Similarly, we can say "I require your aid" but we do not say "I am requiring your aid"

Thus from the examples above it is obvious that in terms of reducing of RCs, there are some points where we should be careful. In the next section complex RCs will be explained.

5.1.7. Complex Relative Clauses

We have seen that RCs come immediately after the head noun or antecedent. It can be seen that in many languages in the world an RC has to come immediately after the clause comprising its antecedent (Greenbaum S., Quirk R., 1990). However, it can be said that the ENG language does not belong to these languages, because an RC in ENG can be moved from the clause containing its antecedent by one, two, or even more intervening clauses. These constructions, which are rather common in ENG, are called complex RCs. This is exemplified in the following sentence so as to be understood better:

71) The guest (who/that/Ǿ) Lady Farnsworth told the chauffer to drive to the station missed his train.

Taking a look at the sentence we see that the matrix clause is: "The guest … missed the train." The complex sentence is: "*Lady Farnsworth told the chauffeur to drive the guest to the station*". And finally the complex RC is: "*who Lady Farnsworth told the chauffeur to drive to the station*." Another thing in these complex RCs is that the relative pronoun "who" or "that" can be used or both can be left out. In this connection it should be noted that there is an RC which is called the **conjoined RC.** The conjoined clauses have the same head noun in a sentence. Let's take a look at the sentence below:

72) The man that closed the door and walked out into the night was never seen again.

As it is easily seen there are two RCs attached to each other sharing the same relative pronoun "that". Apart from such constructions there is a kind of RCs that can be tied to the entire sentence. These connective RCs will be handled next.

5.1.8. **Sentential/connective Relative Clause**

There are some RCs in which the relative pronoun "which" can refer to or comment on a whole previous sentence, series of clauses or a longer stretch of discourse (Carter R., Carthy Mc., 2006). This kind of RC can be considered an exception, on account of the fact that the pronoun "which" as the only pronoun of the sentential RC does not refer to a head noun, rather to the whole sentence before. It occurs frequently in informal spoken ENG.

73) He's always in the office and then he complains about not having any time off and how wonderful he is to the company, <u>which is his own fault</u>.

Here the pronoun "which" tells us about the previous clauses. In such constructions a comma must be put at the end of sentence which RC defines. Let me give another example:

74) He didn't buy a present for his wife's birthday, <u>which made her furious</u>.

We can paraphrase the example above and extract two different constructions namely: "*He didn't buy a present for his wife's birthday, and* <u>THIS</u> *(*i.e. not getting a present) *made her furious*" or "*<u>His not buying a present for his wife's birthday</u> made her furious*" (i.e. that he didn't buy a present)

In this case if RC is not separated with a comma, the noun "*birthday*" would be defined. And it would be the noun "*birthday*" which made his wife furious. Thus the importance of a comma has been shown again.

Greenbaum S. and Quirk R. (1990) noted another kind of clause that is similar to those which I have just discussed. They emphasise that this is the word ("what") which can be utilised to refer to a following sentence. It is in a continuation in a way. That is the reason why they name this kind of RCs **"continuative clauses"**. Consider the following example:

75) Mark is a good man, <u>and what is more</u>, he really understands politics.

In this example it can be understood that the word "what" anticipates the sentence "*he really understands politics*". Another type of RC is Nominal RC.

5.1.9. **Nominal Relative Clauses**

As already been explained, there is a rule that RCs are to be placed closest to the nouns (antecedents) they modify. There are different ideas about naming the "wh-element". In order to understand this, consider the following sentence:

76) I paid <u>what it cost</u>

The paraphrase of this sentence would be: "*I paid that <u>which it cost</u>*".

Huddleston Rodney D. (2005:1069) calls "*what* structures", like in the sentences above "fused relative construction". We see that his term is quite different. It is important to note that the word clause is not his choice in this construction.

For Huddleston Rodney D., the paraphrased one is an RC because for him "*what it cost*" is the "fused relative construction". This is itself a noun phrase. In addition it includes the antecedent that fused to the relative pronoun "which" to form "what" (=that which)

The "wh-elements", which can be both relative and interrogative, are identical. We can only distinguish between them by analysing their place and meaning in the sentence. Returning to both examples, I want to write that in contrast to Huddleston Rodney D., Jespersen calls the whole structure (including *what*) an RC (*or an interrogative clause, depending on some ill-defined rules of context -Jespersen O. 1940*). It should be said again that for Jespersen, one must appeal to semantics (*perhaps he means the verb*) to disambiguate between RCs of such type (fused relative constructions, according to Huddleston Rodney D.) and "*interrogative clauses of such type*". After this discussion about "wh-elements", I will discuss the Nominal RCs. This type of RC is a RC which can act as SUBJ, OBJ or complement of a sentence. In this connection Quirk R. (1990) says that it is basically a noun phrase modified by an adnominal RC, except that its "wh-element" is merged with its antecedent. I write in the following the "wh-elements" which make nominal RCs begin.

The word "what" can mean "*the thing which*" or "*the things which*". In the sentence below, "what" introduces a nominal RC:

77) I believe that, that is a very good account of <u>what happened</u>.

Nominal RCs which begin with the interrogative word "where" are usually utilised after a preposition or after the verb "be". It has the meaning of "*the place where*". Let me give an example:

78) God would return from <u>where the sun rises</u> and lay waste to the Aztec civilisation.

Other words that introduce nominal RCs are "whoever", "whatever", and "whichever" (Sinclair 1990). All are used to refer to someone or something that is unknown or indefinite. While "whoever" refers to human and "whatever" to things only, "whichever" can be used either for people or for things. It is often followed by the preposition "of". One example for these kinds of nominal RCs follows:

79) These wild flowers are so rare I want to do <u>whatever I can</u> to save them.

Let's look at the interrogative word "what" in the nominal RCs now.

80) <u>What worried Harry</u> was a pain in his stomach.

This construction is a semantically the reduction of an RC because the pronoun "what" replaced "*the thing which*" and functions as SUBJ. In the next section, the adverbial RCs will be discussed.

5.1.10. **Adverbial Relative Clauses**

This type of RC receives the name "adverbial", because it shows us a time (we use "when") and sometimes place (we use "where"). For the illustration an example is give for each below:

81) Cursed be the day <u>when I was born.</u>

82) Have you ever seen the city <u>where Marco Polo was born</u>?

For the first sentence instead of "when" "on which" can be used. Thus RC "*when I was born*" specifies the head noun "day" because "day" is an expression of time, RC is an adverbial RC. Similarly in the place of "where" "*in which*" can be used and "*where Marco Polo was born*" refers to the noun "city" which is a place. So we have again an adverbial RC. The last type of relativisation in ENG which I have chosen is the gapless RC.

5.1.11. **Gapless Relative Clauses**

It is stated that gapless RCs are common in spoken ENG and it is said that they look like bad style or are grammatically false. In order to understand such constructions the following sentence is given:

83) Portman, who **I wonder if she**'ll ever better her role in Leon, is good here also, [….] The second message comes from a person **who I don't know** if the military is the right thing for them because they [….]

The person who has produced this sentence seems to alter in mid-track: After he has begun to use a clause he thinks that the pronoun can be neither its SUBJ nor OBJ. He attempts a repair "on the roof". However, these kinds of constructions could be changed into standard RCs in the way the introducing verbs of speech (part in bond) are missed out:

Portman, who will never better [….]; a person for them the military is not [….],

Or in order that the relative is not necessary, it can be started with the following verb: *(I wonder if Portman will [….]; I don't know if the military is [….]*

It is being emphasised that such usages usually occur in spoken context. In writing, however, many people would select one of the options I have just written. In addition, one more thing should be pointed out: the hybrid part can not be an attractive formation on the grounds mentioned above. The next section is about the RCs in GER.

5.2.0. **German Relative Clauses as Premodified and Postmodified ones**

Since the acquisition of ENG RCs by GER speakers in the 2nd research is also examined, and GER is one of compared languages in this work, it should be shown how GER RCs are constructed and where they typologically differ from ENG and TUR. Furthermore, one of the applied tests in the second study is a GER-ENG TRANS task where it is possible to see transfer error from GER speakers into ENG.

RCs in GER are regarded as adjectives, as in ENG and TUR. That's why they are often called "Attributivsatz" among the GER authors (for example, Schönig 1992:74). RCs in GER are subordinate clauses, and they are dependent on the head noun, as in ENG. They provide one explanation for the head noun (also noun phrase) and they are generally constructed after the head noun, which they modify (Ulrich E. 2005).

84) Der Mann, der Birnen verkauft, ist mein Nachbar.

As we see in the example above, the RC in GER comes after the noun; namely it postmodifies the noun "*Der Mann*", as in ENG, as shown in example 1) in this chapter. Owing to the fact that RCs are subordinate clauses, the conjugated verb comes at the end of the RC (final position; word-order parameter SOV). So the conjugated verb "verkauft" has come at the end of the RC in the given example. While only nonrestrictive RCs in ENG are used with a comma (see example 32 in this chapter) almost all RCs in GER use commas. Apart from the relative construction in GER, as shown above, there is also another construction that is said to be an RC. I want to give examples for both types:

85) a. Der dem Staat dankbare Sportler ist im Fernsehen aufgetreten.

b. Der auf das Geschenk gespannte Junge hat die Tür geöffnet.

86) Der Sportler, der dem Staat dankbar war/ist, ist im Fernsehen aufgetreten.

So 85) a and 85) b are the first usage of RCs and the sentence in 86 is the second type of RCs. In the sentence 85) a, the word group stays between the article of the head noun "der" and the head noun „Sportler". Such usage does not exist in the ENG language. The example below is like the first two examples 85 a and b which can be defined as premodifying relative (i.e. prenominal construction) types; attributing the noun head and the example 86 above can be identified as postmodifying relative (i.e. postnominal construction) type attributing the head noun.

87) Unter den innerhalb des vergangenen Jahres von der japanischen

Eisenbahn Reisenden vergessenen 1.87 Millionen

Gegenständen…….(Tageszeitung: Sommerfeld K. E., Starke G., 1992:229)

It is worth noting that this positioning of the conjugated verb in sentence 87 does not exist both in ENG and TUR. GER, as I have written before, has two types of word-order parameters: SVO in main clauses and SOV in subordinate clauses. The latter is valid for the discussion of RCs, as the relative constructions are also subordinate clauses. Even though the GER RCs precede the head it modifies, we can see that it also precedes the noun phrase it modifies. Let's look at the following examples:

88) Er kannte sogar **die Maler des Mittelalters**, die ansonsten fast völlig in Vergessenheit geraten waren. The bold part is the noun phrase and „die" as relative pronoun modifies it (Lehmann 1984).

In the case when the sentence becomes unclear or confusing, especially in long/complex sentences as in the example below, some changes might be made.

89) Er hatte die Maler gekannt, **die von allen anderen, egal ob tot oder lebend, vergessen worden waren**.

Normally, the word "gekannt" should be used after the bold part, which is an RC, but then it would be problematic in its meaning. In contrast to the replacement of ENG and TUR RCs, the replacement of GER RCs takes place in a variety of ways.

One of the important problems in GER RCs is: if many items come between the head noun and the relativiser (especially where there seems to be more than one noun as head noun) it may cause confusion, as in the following example:

90) Eine kraftvolle Petition mehrerer Stipendiatennetzwerke wäre sicher wirkungsvoller als unterschiedlich, die dann gegeneinander ausgespielt werden können[11].

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[11]Rundmail der Friedrich-Ebert-Stiftung (FES): 02.02.2010

Which NP does relativiser „die" refer to: „eine kraftvolle Petition "or „Stipendiatennetzwerke"? As it is stressed it may cause perceptive difficulty.

5.2.1. **The Placement of German Relative Clauses in the Sentence**

RCs in GER can be placed in a different section of the sentence: they can be in the matrix clause, subordinate clause, infinitive constructions, and in relative sentence. In the following there are examples for each placement (Dreyer 2000:181).

Matrix Clause: Der Polizist fragt den Passanten, <u>der den Unfall gesehen hat,</u> nach seiner Meinung.

Subordinate Clause: Der Polizist vermutet, dass der Passant, <u>der den Unfall gesehen hat,</u> vor Gericht nicht aussagen will.

Infinitive Construction: Der Polizist hofft den Passanten, <u>der den Unfall gesehen hat,</u> wiederzuerkennen.

Relative Construction: Der Polizist verfolgt den Mann, <u>der den Unfall gesehen hat,</u> bei dem ein Kind verletzt worden ist.

Apart from these kinds of RC positions in GER, it can sometimes be problematic. An RC in GER should be connected carefully so as to avoid the wrong relation, otherwise ambiguity or wrong interpretations can occur. Let's see the following example:

> 91) Kolumbus entdeckte 1492 mit seinen <u>Schiffen</u> die Westindischen <u>Inseln</u>, **die** klein wie Nussschalen waren.

Here a question arises: What does the relative pronoun "die" connect to: "Schiff" or "Inseln"? This sentence is wrong, because the RC refers to "Die Inseln" not "Schiffen". So the RC should be put after the noun "Schiff". The correct one is: "Kolumbus entdeckte 1492 mit seinen Schiffen, **die** <u>klein wie Nussschalen waren, die</u> <u>Westindischen Inseln</u>".

Some sentences are not accepted, as in the following. The reason here is, I think, that our short term memory is limited. Liebsch, H. and Döring H., (1976:243) give the sentence below as an example of overexpanding caused by RC and said that it is

questionable. But they did not mention the real reason. I think that its low acceptance is because of the impacted meaning induced by our memory.

92) a. Der Gelehrte **schritt** schnell zu einem Teleskop, <u>das gegen den Nachthimmel gerichtet war,</u> **zurück**. (the conjugated verb of the matrix clause stands far away) This one is not really accepted. But the one below is accepted more often.

 b. Der Gelehrte **schritt** schnell zu einem Teleskop **zurück**, <u>das gegen den Nachthimmel gerichtet war.</u>

As we have seen, the replacement of GER RCs is varied and sometimes causes ambiguity. In the next section, we will see that GER have different relativisers.

5.2.2. The Relative Markers in German (e.g. relative pronouns)

Though there are various relativisers in GER, it is said that GER relative pronouns are less complicated than ENG ones except for their highly inflected forms. ENG pronouns have some difficult properties of RCs such as: their position, for example, stranding in the sentence; especially preposition-stranding; the existence of different alternative relative pronouns; gapless ones, et cetera. However, there are only two variations in the GER Relative Pronoun: with the definite article, "der, die, das" or with distinctive forms in the genitive "dessen" and "deren". In addition, it has the form "denen" in the dative plural. The Relative Pronouns "welcher, welche, welches" (these can be compared with "which") are an old form and they are seldomly used today. If they are used they are used either in the literary style or for situations which need to be emphasised. Both the first one and the second RC in GER are inflected (this is the case for the most Germanic languages and Old ENG, but not Modern ENG as it disappeared in the course of time) in accordance with gender and number of the noun which they modify. They receive their gender from their function in their own construction.

The relative pronouns governing nominative, accusative, and dative relative pronouns are normally forms of the articles "der, das, die", regardless of whether they refer to a person or a thing, as shown in the table, but depend on gender and number.

	Masculine	Neuter	Feminine	Plural
Nominative	Der	Das	Die	Die
Accusative	Den	Das	Die	Die
Dative	Dem	Dem	Der	**Denen**
Genitive	Dessen	Dessen	Deren	Deren

Table 2 Articles in German as Relativisers

Here is an example for masculine:

Nominative: Der Mann, der dort steht, kennt den Weg nicht.

Accusative: Der Mann, den ich gefragt habe, ist nicht von hier.

Dative **:** Der Mann, dem ich geantwortet habe, versteht mich nicht.

Genetive : Der Mann, dessen Haus rot ist, ist der Arzt meines Onkels.

The gender of the relative pronoun in GER is the same as the gender of its antecedent. The case of the relative pronoun (nominative, accusative, dative, or genitive) depends on its grammatical function in the RC. It does not depend on the grammatical function of the antecedent in the matrix clause. I will give an example below how an antecedent in the nominative case can be referred to by a relative pronoun in the nominative, accusative, or dative case. It depends on the function of the NP in the RC.

93) Das ist der Laden, der(Nom.) die besten Gummibärchen verkauft.

94) Das ist der Laden, den (Acc.) ich liebe.

95) Das ist der Laden, dem (Dat.) ich €20.000 schulde.

In the case of 93, the store is the SUBJ of the action in the RC (*it sells the gummi-bears*), and hence is referred to by a relative pronoun in the nominative (*der*). In the

case of 94, the store is the direct OBJ of my love (*den ich liebe*), and so is referred to by a relative pronoun in the accusative (*den*). In the case of 95, the store is the OBJ of the dative verb "schulden" (to owe), and so is referred to by a relative pronoun in the dative case (*dem*).

There are two kinds of usage for RCs which semantically have different functions in German: Restrictive RCs and Non-Restrictive or Appositive RCs (Hentsched E./Weydt H., 2003). First I will explain the restrictive RCs then non-restrictive RCs.

5.2.3. **Restrictive Relative Clauses**

In the literature in GER I have found miscellaneous terms for this topic. I have found for restrictive RC: einschränkende/determinierende/bestimmende: For nonrestrictive RCs: erläuternde/appositive/präsentierende/explizierende/erklärende Attributsätze.

I will use the term restrictive and nonrestrictive as in ENG. These kinds of RCs are similar to ENG ones. Such RCs limit the extent of the reference word, and they are necessary for what is meant exactly in the sentence. For example:

> 96) Die Filme, <u>die ich in letzer Zeit gesehen habe,</u> haben mich enttäuscht.

Here the RC restrains the statement for a group of films. Accordingly, it is restricted. In other words, the RC is used to make it clear which films are being talked about. In GER the restrictive clauses are marked by two commas (also: Ich kann den Film nennen, den ich in letzer Zeit gesehen habe).

In the next section, non-restricted RCs are explained.

5.2.4. **Non-restricted Relative Clauses**

Non-restrictive RCs give additional information for the identification what/who is being talked about. It can be omitted without misunderstanding or without changing the meaning. It is separated through a full stop in speeches and is stressed (Sommerfeld K.E/ Starker G., 1992) For example:

97) Der Urlaub, <u>den ich im Gebirge verlebte,</u> hat mir neue Kraft für künftige Anstrengungen gegeben.

The interpretation here is that I have experienced the holiday in the mountains. This holiday gave me new energy. The meaning is not restricted. So we see that RCs depict us the extra information which is not obligatory to extract which holiday is meant.

In the position of apposition: It is also possible that the RC stays unconnected in a sentence. This type is especially used in verbal communication (Schulz D., Griesbach H., 1960). An example for this below:

98) Gestern besuchte mich Herr Schulte, <u>er war früher Bürgermeister in unserer Stadt,</u> um mich zu sich einzuladen.

In (98) the underlined part of the sentence is semantically an RC that stays unconnected, though it seems to be a noun clause. It can be changed to an RC (directly: structurally and semantically) so: <u>der früher Bürgermeister in unserer Stadt war</u> or only <u>früher Bürgermeister in unserer Stadt</u> is also possible.

After I have talked about these types of GER RCs I will turn to the genitive ones.

5.2.5. Relative Clauses with Genitive

In the second empirical study there are always two sentences constructed with GER: one is in the RC matrix sentence SUBJ position, like the second sentence of the GER-ENG TRANS task and one in the RC matrix sentence OBJ position like the tenth sentence of this task. GER speakers are expected to transfer the GER form of their ML into ENG. This part is important to see the difference between GER and ENG in particular.

In contrast to the genitive relative pronoun in ENG (whose) one should be careful when using a GER one. In GER there are some forms determined by the gender of

the antecedent (For GER relative pronouns, see the table 2 "Article in GER as Relativisers" on the page 127).

As is seen in table 2, the form of the genitive relative pronoun for masculine and neuter head nouns/noun phrase is "dessen". When the head noun/noun phrase is feminine or plural it is "deren". Here are examples:

99) Ich liebe Sam Donaldson, *dessen* Toupee unwiderstehlich ist.

100) Ich bewundere Barbara Walters, *deren* Interview mit Fidel Castro wirklich beeindruckend war.

GER speakers have problems with gender (Liebsch H. und Döring H., 1976:240). One should pay attention to the head noun that is modified by a relative pronoun in the genitive function. In other words, the function of the genitive relative pronoun in RC should be regarded with care, in which case it is used as nominative, accusative, or dative. Examples for these are in the following:

101) Der Arzt, **dessen**(falsch:dessem) Hilfe ich in Anspruch nehme …

102) Die Ärztin, **von deren**(falsch:derem) geschicktem Operieren viel Rühmendes gesagt wird….

Die Formen „derer"und „dessen"werden leicht verwechselt.

103) Die Jubelfeier, **deren**(nicht: derer) wir stets gedenken werden, war sehr eindruckvoll. „Derer" is for the genitive, singular, feminine, and genitive plural of all three genders. So it must be:

104) Die Kameraden, **deren**(nicht:derer) wir gedenken.

But: Wir gedenken **derer**, die uns jahrelang verbunden waren.

Even speakers of GER have some difficulties of choosing the genitive form. How, then, can it be not difficult for the foreign learner of GER? After this exemplification about the genitive form, the use of RCs in GER with the preposition will be given.

5.2.6. **Relative Clauses with Preposition**

It is important to describe the RC of GER with PREP and show the problems of such types of RC and its differences with ENG ones. Because RCs with PREP are contained in both in matrix sentence SUBJ position, and matrix sentence OBJ position in all three tests of the second empirical study. Again, GER students in GER-ENG TRANS task are expected to confuse PREP RC in their ML with those of ENG.

The prepositional RC is an RC which consists of a preposition and a relative pronoun. The case of relative pronoun is dependent on the case government of the preposition (Weinrich H., 2007).

105)　Der Planet, **auf dem** wir leben, wird zerstört.

From the example above it is clear that the article "der" is governed by the preposition it takes. And the answer to the interrogative "wo" (where) affects the relative pronoun which is put into dative form. ENG does not have such rules. Another difference in the prepositional RC between ENG and GER is whether it can be stranded inside the sentence. Let's take a look at two ENG examples in the following.

106)　a.The woman **to whom** I can make my complaint is called Mrs. Leung.

　　　b.The woman **who/that** I can make my complaint **to** is called Mrs. Leung.

　c. False: The woman **to who/that** I can make my complaint is called Mrs. Leung.

So we see that the preposition "to" can move up to the end of clause. I want to translate this sentence into GER:

107)　Die Frau, **bei der** ich mich beschweren kann, heißt Frau Leung.

So the preposition in GER must stay in front of the relative pronoun. We can not strand it. Its position is similar to the (107c), but ENG does not allow such usage. All of the prepositions in the GER language can build prepositional RCs with an appropriate relative pronoun such as "aus dem, bei denen, für die, gegen die, ungeachtet dessen", etcetera. Examples:

108)　Das Forschungsgebiet, **auf das** sich zur Zeit die größten Anstrengungen konzentrieren, ist Gentechnologie.

109)   Einige Häuser, **für die** die Nachbarn gekämpft haben, sollen erhalten
        bleiben.

The omission of the relative pronoun in GER is not possible, whereas in ENG it is possible. But according to Lehmann (1984:379), an omission of the relative pronoun in Old GER was possible. This construction (Otfried I: 17):

Today:"*Den Weg, den sie reisen sollten*".

Old German: "then (*den*) *Weg, sie fahren scoltun*".

On the other hand, Lehmann (1984) pointed out that such constructions probably represent an old form of RCs which was originally used in the language of the GER people. There are also some RC types in GER that are called "Connective RCs". They will be explained in the following.

5.2.7. The Sentential/Connective Relative Clauses

This kind of RC is like that of ENG. In GER it is called „weiterführende Nebensätze". The sentential RC is the special RC which does not attribute a part of the sentence but uses the whole sentence as antecedent. We can easily understand the use of the sentence (Sommerfeld K. E. und Starke G., 1988) in the examples below:

110)   Sie hat mich gestern angerufen, **was** mich gefreut hat (=*Das, was mich
        gefreut hat, ist, dass sie mich gestern angerufen hat.*)

The ENG equivalent is: She called me yesterday, **which** made me happy.

111)   Sie hat sich seit Tagen nicht gemeldet, **worüber** ich besorgt bin.(=*Das,
        worüber ich besorgt bin, ist, dass sie sich seit Tagen, nicht gemeldet hat*)

The ENG equivalent is: She has not contacted me for the past few days, **about which/what** I am worried.

I have found different comments about these kinds of RCs, "worüber, worauf", etcetera. (They are called in GER Pronominaladverbien.) For instance, Behaghel O., named it weiterführende Nebensätze/continuous subordinates (Zeitschrift für Germanistische Linguistik 2002).

It has been said that if a "retention pronoun" for the subordinate does not belong either to the subordinate or to the piece of the subordinate clause, then it should be called a

sort of RC "weiterführende Nebensätze" (cf. Grundzüge 1984: 787; Eichner 1982 in Sommerfeld K. E., Starke G. 1992:244).

In addition to these kinds of RCs in GER, other types should be given too.

5.2.8. Other Kinds of Relative Clause Types in German:

This section contains the types of RCs that are differently subcategorised by grammarians. They all will be explained under this topic: "Other Kinds of RC Types in GER".

Relative clause with infinitive construction:

The infinitive RCs as attributive define the content of terms. In the following examples they define "die Hoffnung", "die Sorge", "der Wunsch" and "die Faulheit", separated by a "comma":

112)   Wir haben keine Hoffnung, ihn wiederzusehen.

113)   Die Sorge, ihr Kind wieder zu verlieren, machte die Mutter fast wahnsinnig.

114)   Liebe ist der Wunsch, etwas zu geben und nicht zu erhalten.(Kafka)

The other infinitive constructions that are often used with adjectives are given below with the relevant examples:

115)   Er ist viel **zu faul**, um an diesem Project mit**zu**wirken.

Relative clause with comparisons of complement:

Positive: Sie war schön, wie man es sich nicht vollkommener vorstellen konnte.

Comparative: Die Situation war schlimmer, als sie gedacht hatte.

Another comparitive usage of this kind can be given so: The relative clauses with an adjective are "wie, als", they are a part of a matrix clause. In the main clause, "so" is positioned in front of the adjective, a "solch" in front of noun or noun phrase. Examples:

116)   Sie fuhr **so** schnell, **wie** sie sonst nie fuhr.

117) Wir fuhren auf **(solch)** eine Insel, **wie** <u>wir es uns immer gewünscht</u> <u>hatten</u>.

It is also possible to add „genau, eben, ganz, kaum" to the adjectives. Examples:

118) Sie fuhr **genau so schnell**, **wie** <u>wir befürchtet hatten.</u>

119) Er war **ebenso groß**, **wie** <u>sein Großvater gewesen war</u>.

Superlative: Die schwierigste Aufgabe, die ihnen je gestellt war.

Relative clause as prepositional complement: Here they are actually dependent on the adjective. Example:

120) Je schneller du fährst, <u>desto teuer wird die Sache für dich.</u>

As in ENG, the GER language has the adverbial RCs which I am going to talk about in the following section.

5.2.9. **Adverbial Relative Clauses**

We encounter with these kinds of RCs only with so called" subjunctive sentences" and they are exclusively used in complementary function. The important types of such RCs are used as temporal and locative adverbial. Here are some examples:

121) Damals, **als** <u>wir nach Bamberg fahren wollten</u>…

122) Irgendwann, **als** <u>wir Langeweile hatten,..</u>

123) Dort, **wo** <u>er wohnt,</u> ist es schön (locative).

124) Morgen fahren wir nach Berlin, **wo** <u>mein Freund studiert</u>.

125) Die Kleinstadt, <u>wohin ich umgezogen bin</u>, gefällt mir sehr gut. (In+acusative locative). (We know that such kinds of RC exist in ENG too).

In the next section, other relative markers in GER will be handled.

5.2.10. **Other Relative Markers in German**

If an RC depends on a relativiser, the second person singular is often not given (Schulz D., Griesbach H., 1960) as in the following examples:

126) Diejenige, **mit der** <u>du eben gesprochen hast,</u> arbeitet als Zimmermädchen in unserem Hotel.

127) Demjenigen, **der** meine Uhr reparieren kann, verspreche ich eine Belohnung.

The short RCs, with „wer, wen, wessen, wem ", introduce RCs which refer to definite people. For example:

128) **Wer** mir bei meiner Arbeit hilft, dem zahle ich einen guten Lohn.

129) **Wessen** Herz für die Freiheit schlägt, den nenne ich einen edlen Mann.

After the demonstrative pronoun „das", indefinite words such as „alles, nichts, etwas, einiges", and neutral superlative „das Schönste, das Letzte", an RC is constructed with "was" because of the need for explanation.

130) **Alles**, was du mir erzählt hast, habe ich schon gehört.

131) **Das**, was mich ärgert, ist der Inhalt deines letzten Briefes.

If an RC is whole statement of the main clause we use "was" in order to make the RC be approximated. For example:

132) Er hat niemals **darüber/davon** gesprochen, **was** bei dem Unfall geschehen ist.

The last type of GER RCs that I find interesting is Interpretive RCs.

5.2.11. **Interpretive Relative Clauses**

Interpretive RCs are introduced by a conjunction. This happens when they have the character of a demand or a statement on which they are dependent. If they are dependent interrogative sentences then they are introduced with the interrogative pronouns (wer, was, welcher) and adverbs (wo, wann, wieviel, warum) or conjunction "ob". The verbs that are used are similar to such cognitive verbs as, "think", "express". The other nouns that are constructed in such a way are mostly abstracts; Ansicht, Appal, Auffassung, Feststellung, Gedanke, Idee, Konsequenz, Meinung, Tatsache, Voraussetzung, Zusage, Zweifel, et cetera (Sommerfeld K. E. 1988:217).

The following sentences show these:

133) Seine Forderung, **dass** wir uns beeilen sollen, war gut gemeint.(*i.e.Er forderte von uns, dass wir uns beeilen sollten*)

134) Die Frage, **was** wir trinken wollen, war schnell beantwortet (*i.e. Sie fragte, was wir trinken wollen*)

135) Die Sorge, **dass** Fritz die Reifeprüfung nicht bestehen würde, war völlig unbegründet.

So far I have given general information about the syntactic aspects of ENG and GER RCs. In the next part I want to demonstrate the differences and similarities between ENG and GER RCs. This is also a summary of this section.

5.2.12. **Differences and Similarities between English and German RCs**

Differences:

1. There is no prepositions-stranding in GER, in GER the preposition must be positioned in front of the relative marker. But preposition-stranding in ENG is possible.

2. There is no omission of relative pronoun or bare relative pronoun in GER. But the omission of relative pronouns in ENG exists.

3. In ENG RCs are formed using specific relative pronouns but in GER relative pronouns have the same form as articles, and question words such as "Welch, welcher, welches" are seldom used.

4. Relative pronouns in GER take their gender (which is more complex than ENG ones), number from the antecedent, and case from their function. That is, the GER RC is reflected according to gender and number of its antecedent. However, an uninflected "was" (that) as relative pronoun is used in GER when the antecedent is "alles (everything), etwas (something), nichts (nothing) etcetera". This inflexion for the ENG relative pronouns is not possible.

5. Every RC in GER is generally separated with commas from other part of the sentence. In ENG only non-restricted RCs are separated by commas.

6. Because of the fact that RCs in GER are subordinate clauses, the verb is in final position (word-order parameter; SOV). Normally in a matrix clause the

word-order parameter of GER is SVO. In ENG whether in the subordinate or matrix clause, the word-order parameter is always SVO.

7. There are a variety of RCs in GER: premodifying and postmodifying ones. But there is only one construction in ENG. (i.e. Der <u>auf seinen Erfolg stolze</u> Junge=der Junge, <u>der auf seinen Erfolg stolz ist</u>....)

Similarities:

1. In both languages, relative pronouns can connect directly with the antecedent or whole sentences.

2. In both languages, indefinite pronouns can be used as relative pronouns.

3. There are some pronominal adverbs which function like relative pronouns in both languages.

4. In both GER and ENG there is no resumptive pronoun.

5. In both languages, RCs have adjectival function.

6. In GER and ENG the relativisers modify their head nouns, as in example 84.

5.3.0. **Turkish Relative Clause as Premodified ones**

In the 2nd empirical study the acquisition of ENG RCs by TUR students in all three tests is examined. The subject of the study is ENG RCs and whether they are utilised more easily by TUR or GER students. It is relevant to show the structure and the typological properties of TUR RCs in order to understand the differences that occur between ENG and TUR RCs and perhaps how the psycholinguistic process of TUR students proceeds when utilising ENG RCs. Apart from that, there is a TUR-ENG TRANS test (the 3rd test) to be applied to the 2nd and 3rd groups. Thus, presenting this part is especially important for the TRANS task.

My view about the TRANS is that it is not easy. I think there is a tendency, consciously or subconsciously, for people to translate their FL rules into TL or vice versa (sometimes unidirectionally sometimes bidirectionally). The informants of this study may, therefore, encounter this in such situations when acquiring or producing RCs.

Regarding the TRANS of ENG RCs into TUR RCs Lewis Geoffrey makes the following statement: "*The purist may object that such a heading as this has no place in a TUR grammar. The uses of the TUR participles, however, are difficult to grasp through a purely descriptive treatment and the author is therefore emboldened to hope that he may be forgiven for approaching the topic from the wrong end*" (2000:256).

All sentences in the TUR-ENG TRANS test are constructed with the suffixes "-**an**"and "-**dık**". The sentences in the TRANS test 3, 9 are built with "-an"; the sentences in 1, 4, 5, 6, 7, 8 with "-dık"; the sentences in 2, 10 with POSS and the last two in 11 and 12 do not exist in TUR. Therefore, "-an" and "dık" will first be explained in detail then the others will be depicted. In those cases where the relativized noun is the subject of its clause, "-an" is attached to the verb of the RC e.g. the 3rd and 9th sentences from 2nd empirical study (the 3rd test TRANS) Kapıda dur-**an** kadın bir diş doktorudur/The woman who stands in the door is a dentist. The suffix "-an" is also attached to the verb of the RC in those cases where the relativized noun is the possessor of the subject e.g. "Köpeĝi hasta-lan-**an** çocuk çok üzüldü" or "Köpeĝi hastalanmış ol**an** çocuk çok üzüldü" (The boy whose dog got ill felt very sad) or the localitive phrase of the RC in which the subject is indefinite e.g. "Üstünde üç kitap OLAN masa öĝretmenin masası" (The desk on which there are three books is the teacher's desk). The suffix "-an" is attached to those verbs that are marked with the passive suffix e.g. (Herkes tarafından) beĝen-il-**an** kitap (The book that is liked by everyone). It is said that there is only one place where "-an" is used to refer to the OBJ, it is: Su bulunan yer/the place where the water is available. Non-SUBJ relative "-dık" can be used: Suyun ol-**duĝ**-u yer or Suyun çık-**tıĝ**-ı yer.

It should also be emphasied that on the grounds of the 2nd part of empirical research, three functions of RCs in TUR are relevant: if SUB, OBJ or POSS are referred to by the relativizers.

In those cases where the relativized noun is the object of its clause or any non-subject constitutent, the embedded verb is marked with the "-dık" and POSS suffix that agrees with the subject of the RC (Özsoy A. S.: 1999).

An example of this is "(Ben-im) dün yak-**tığ**-ım yemeĝ-i herkes çok beĝendi" (POSS pronoun 1ˢᵗ person singular/yesterday/verb stem"yak"+"dık"+POSS+1ˢᵗperson"-ım"/food+noun case accusative"-ı"/ everybody/ very / liked) /Everyone liked the food that I burned yesterday. In those cases where the relativized noun is the possessor of the localitive phrases but the SUBJ of the RC is definite, the embedded verb is marked with "-dık" e.g. "Üstünde kitaplarımın dur-**duĝ**-u masa"/ The table on which my books are is mine. TUR relative constructions as a whole, together with their subcategories, will now be dealt with.

RCs in TUR are usually handled under "Fiilimsiler" in the TUR grammer books. The common definition for "Fiilimsiler" is: They are the words, combinations of a verb stem plus some suffixes, which are necessary so that the syntactical units can be constructed such as noun clause, attributive clause or adverbial clause. The suffixes used for noun clauses and adverbial clauses will not be presented in this work, only the suffixes used for attributive clauses will be presented.

"Fiilimsiler" are generally subdivided into three groups by the TUR writers: "isim-fiil" ("noun-verb", like noun clause in ENG), "baĝ-fiil"/ulaçlar ("connective-verb", like adverbial clause in ENG) and "sifat-fiil"/"ortaçlar" ("attributive clause": like relative clause in ENG; I will use RC for such clauses).

The participle suffixes in TUR are "-an", "-ası", "-mez", "-ar", "-dık", "-acek", "-miş" (I will use the term relativizer for all of these). These suffixes can function as an element for building both predicate (tempus) and relative clauses. The latter is at the center of this section. My terminology regarding these suffixes will be as follows: When the participle suffixes function as predicates, the term "tempus constructor" will be used and when the participle suffixes function as attributes, the term "relativizer" or "relativizing suffixes" will be used. Göksel A. and Kerslake C. (Göksel A. and Kerslake C., 2005) point out that the most typical type of RC in TUR is non-finite. Non-finite RCs contain one of the suffixes "-an", "-dik" or "-ecak".

All relativizers of TUR correspond to the relative pronouns "who", "which", "that", "whom", "whose", "where"...etc in ENG. This will be discussed later in this chapter. In ENG, RCs function like attributes. This is also the case for the TUR language i.e.

relativizers which are morphological units attribute to the nouns/head nouns (they are attributives e.g. iyi adam:"iyi" is attribute and "adam" is head noun: "good man". The word order here is the same in TUR and ENG). As an example of both languages let's take a look at the following sentences:

136. I know the MAN *who is sitting at the table*.

The RC with "who" identifies the noun "MAN" i.e. it is postmodifed. It is obvious that the RC "who is sitting at the table" functions like an attributive clause. I have translated this sentence into TUR and analysed it to show the similarities in the construction of RCs.

 137. *Masaya otur**an** ADAMı tanırım*

(Table+dative "to"/verb stem"sit"+ "-an"/man+direct.obj(-ı)/ predicate "tanırım")

The relativizing suffix "-an" is added to the verb stem "otur" and together with the suffix of the direct object "((y)-ı), they define the noun "ADAM" i.e. it is premodified. As we see the direction of the arrow in TUR is to the right, but it is to the left in ENG, because of the typological difference between TUR and ENG. So it functions like an attritubute as in ENG. While RCs in ENG are constructed with a relative pronoun (who, which, what....etc), in TUR they are constructed with participle suffixes. The TUR language in particular does not have any overt relative pronouns.

I want to repeat here that the **participle suffixes** attached to the verb stem are: "**-an**", "**-dık**", "**-ası**", "**-mez**", "**-ar**", "**-ecek**", "**-miş**" and their variants which are the result of vowel harmony or consonant mutation. As I was researching these suffixes in the TUR grammar books I did not find the suffixes "**–ası**", "**-mez**" in the book by Gencan, T. N. (1979) despite the fact that this book is considered to be one of the best known grammar books in TUR. Likewise I have not encountered the suffix "–ası" in the books by Ediskun H. (1985), Bilgin M. (2002), Buhur İ. (2000), Hengirmen M. (2005) and some others.

I have seen that many TUR grammar books sub-divide RCs according to these suffixes. However Demir, T. (2004) and Bangoĝlu T. (2007) sub-divide them into three groups: 1) Geçmiş zaman ortaçı (The past tense participle), 2) Şimdiki zaman Ortaçı

(The present tense participle) and 2) Gelecek zaman ortaçı (The future tense participle). I have decided to handle the TUR RCs like Demir, T. (2004) and Bangoĝlu T. (2007) on the grounds that the suffixes that are used for RCs are carrying a predicate meaning. Demir T. (2004) says that "Ortaçlar" are considered to be adjectival words because they define the head noun that comes after them; they are considered to be verbal words because they are carrying a predicate meaning and initiate the subordinate clause by introducing a subject, an object or a complement. Despite the fact that noun clauses ("isim-fiil") cannot be used as a predicate nor can they be used as items modifying the head noun in TUR, RCs can be used for these purposes. As I have already mentioned, this is the reason I have subdivided them into three categories as below:

It should be noted that the relativizing suffixes "-an" and "-dık" have already been discussed. In the following they will repeatedly appear in the same catagories, but some additional information will be mentioned about them at the relevant places.

5.3.1. The Past Tense Participle (Geçmiş Zaman Ortacı)

The relativizers under this heading are "-**dik**" and "-**miş**" and they define the definition/identification of objects or concepts that are in the past. First of all, I will write those which are utilized as tempus constructors, then those which are utilized as relativizers.

Tense Form: 138) for **"-dık"** → Biz beş yıl Adana'da yaşa**dık** (*We have lived in Adana for five years*).

139) for **"-mış"** → Arkadaşım Berlin'de yedi yıl kal**mış** (*My friend had stayed in Berlin for seven years*).

The first sentence above can be analysed as follows: We/five years/Adana+ localitive "in"/predicate "yaşadık". The second sentence can be paraphrased as: Friend+ possessive suffix of 1st person singular"-ım"/Berlin+ noun case locative "-de"/seven years/ predicate "kalmış".

It should be noted here that in TUR the 3rd person singular suffix in the past, present and future tense is not marked. That's the reason why both functions of the suffixes

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(relativizers and tempus constructors) have the same form in such sentences (3rd person singular).

Relative Clause Form: 140) Koca şehirde <u>tek tanı**dık**</u> insan yok (*there is no acquaitant person (people) in the big city.*

141) Bugüne kadar <u>görülme**miş**</u> bir hakkızlık var ortada (*Here there is one injustice which has not been seen until today or rephrased: Nobody has seen/experienced such an injustice here until now*).

We can examine the examples in the following way: The first sentence: Big/ city+ noun case locative "de"/one, unique/verb stem "tanı"+ "-**dık**"/human, people/there is no. The second sentence can be analysed as follows: today+until "-e kadar"/verb stem "gör"+passive suffix "-ül"+negation suffix "me"+ "**mış**" /one injustice/predicate "var"/in the middle.

Thus it can easily be recognized from the above examples that "-dık" in 138 is used as a tempus constructor and in 140 as a relativizer; likewise "-miş" as a tempus constructor in 139 and as a relativizer in 141. In order to realize the difference between both functions one (especially the learner of TUR as FL) should sometimes be careful with the following points: There are two ways to distinguish between a tempus constructor and a relativizer. Firstly, the former usually stays at the end of the sentence but the latter is attached to the verb stem with the purpose of defining/identifying the head noun or antecedent. Secondly, attention should be paid to the meaning. Another difference between both functions is that when they are used with the first function they do not allow noun declination, whereas when they are used with the second function they allow the noun to be declined. From now on, when I talk about the Present Tense Participle (Şimdiki zaman ortaçı), The Future Tense Participle (Gelecek zaman ortaçı) I will not emphasize the participle suffixes which are used with both or reiterate the difference between them.

According to Demir T., RCs constructed with "-dik" are common with its negative form (-medik,-madık).For example: 142) Evliya Çelebi <u>imparatorluk sınırları içinde gez**medik**</u> yer bırakmamış (Evliya Çelebi visited mostly all of the places within the border of the Ottoman Empire).

143) <u>Derdine derman bulmak için çal**madık**</u> kapı bırakmadı (He didn't leave any door that he hadn't knocked on (for help) in order to find a remedy for his trouble/pain/problem; It means that he knocked on most of the doors in order to find a remedy for his trouble/pain/problem)

Ediskun H. says (1985) that the relativizer "-dık" can have possessive (POSS) suffixes (But when it is negated no POSS is used e.g. ara**madık** yer kalmadı (we looked absolutely everywhere for it) and it is inflected as in these examples: 144) <u>oku**duğ**um kitap</u> (The book that/which I read/have read) 145) <u>yaz**dığ**ım mektup</u> (The letter that/which I wrote/have written) 146) <u>anlat**tığ**ımız fıkra</u> (The story which we told). It is worth bearing in mind that the last relativizer "-dik" has changed phonologically so that its form is not easily recognized. I think this can be difficult for acquisition too. Of course it is because of the consonant mutation ("d" became "t"; "k" became "ğ") and vowel harmony. Some of RCs with "-dık" and "-miş" have lost their function as relativizers and have become nouns. For instance: er**miş** (Saint/holy person); dol**muş** (Bus), Tanı**dık** (acquaintant).

Below is a form of RC which exists in modern TUR but is rarely used. This is because its usage comes from the Persian language and its place in TUR is not as widely spread as it was in the past. It is formed with the help of "ki". The illustration is below:
147) a. <u>Biliyorum **ki**</u> beni seviyorsun.   b. <u>Beni sev**diğ**ini</u> biliyorum.
The first sentence (a) is not suited to the TUR language (An ENG translation could be: I know that you love me) its usage is restricted nowadays. I think that this form, which is a Persian form, is more suitable to the Indo-European languages (it corresponds to "that" in ENG and "dass" in GER; note that the Persian "ki" (it is actually "ke") has many functions as a relative pronoun such as "who", "which", "that", "whom", "where" and so on in Persian grammar). If we look at the second sentence, we can say that this form is the correct one for TUR Grammar. In addition this construction is more natural to TUR speakers today. A possible translation of (b) is: I know (that) you love me. The first sentence has a similar order to ENG. With the exception of the

subordinator "ki" (it is better to call this as subordinator not a relative suffix, because it is isolated in the sentence and does not precede the noun phrase it modifies as is seen in the example.) According to Göksel A. and Kerslake C. (2005) finite RCs which are incorporating "ki" are quite limited. They say that the most common type of RC is the non-finite RC which I agree with. For me, the second classification of RCs in TUR is the present tense participle, which will now be discussed.

5.3.2. The Present Tense Participle (Şimdiki Zaman Ortacı)

This type of relative construction is formed in such a way that relativizers such as "-**an**" (we talked about this in the introduction of this section), "-**ar**", "-**mez**" (this is the negative form of "-**ar**") and their variants are added to the verb stem i.e to the root of the verb. As I have talked about them before, we can understand that when they function as tempus constructors they usually stay at the end of the sentence. They do not define/identify a noun when they are tempus constructors. Another way of knowing that they are tempus constructors is from their meaning. RCs that are built with "-an" have the meaning of the past, present and wide tense, which in itself carries a contemporary definition (Demir T. 2004). In order to exemplify this, the following sentences are given:

The present tense meaning: 148) <u>Gel**en** adayların kaydını</u> yapıyorlar (They register the people who are coming).

The wide tense meaning: 149) <u>Ak**an** kanı</u> durdurmalı önce (The flowing blood should be stopped first).

The past tense meaning: 150) <u>Kaç**an** mahkumları</u> yakalamışlar (They had caught the prisoners who were escaping). On the other hand "-ar" and "-mez" and their variants have the wide tense (i.e.predicate) meaning which carries a permanent definition for example:

151) <u>Dönül**mez** akşamın</u> ufkundayız, vakit çok geç

(On the horizon of the night, it is too late to return) It is understood that the relative construction "dönülmez" defines the night (akşam) as continuous. 152) <u>Mahallemizde bir tane çık**maz**</u> sokak var. (There is a street in our neighbourhood which does not have an exit/way out.). So we see that the street is carrying a permanent definition i.e. that the state of the street is permanent 153) <u>Koş**ar** adımlarla</u> eve geldi (He came running home; with exact words "with the steps with which he is running").

It is important to explain the relativizer "-an" further. The reason is that this also corresponds to the possessive pronoun in ENG provided that it is used with the auxiliary verb stem "ol-". For example: 154) <u>Çocuğu doctor ol**an**</u> komşum geçti (My neighbour whose son is a doctor passed away). The sentences 2, 10 of the TUR-ENG TRANS test are constructed in this way. There is of course another use of "ol**an**".

Göksel A. and Kerslake C.(2005:457) state:" *When relativizing a constituent of a nominal sentence the supplitive form "ol-" of the copula is used as the stem of the participle suffixes*". An example for this is given below: 155) <u>Ağır yaralı ol**an**</u> hastalar (the patients who are seriously injured). So, relative construction modifies the noun "hastalar"(the patients). At the same time the verb "bulun-" can be used in the relativization of a nominal construction constituent, in particular that of location. For example: 156) <u>İçinde üç top bulun**an**/ol**an**</u> kutu (Such usage of SUBJ relative "-an" has been dealt with at the beginning of this section, "bulunan" or "olan" are optional. (The box which has/had three balls inside it). If somebody were to translate this as "There are three balls in the box", the defining of the relative construction for the head noun (hier: the box) would be weakened. Indeed "the box" is the subject modified by the RC with "bulunan/olan".

If a head noun can be recovered from the context or if it is a general noun like "insan(lar)" it can be removed from the sentence. In headless RCs (this type of RCs will be handled later), the verb of the embedded clause must stay there, and must be marked by the plural form. In these cases the deleted referent is a plural noun. Such sentences are called headless RCs e.g. there is a head noun in this sentence: Çok mektub yaz**an** <u>insanlar</u> çok sevilir/those who write lots of letters are loved a lot. But if

we remove the head noun, it would be: Çok mektup yaz**an**lar çok sevilir /who writes lots of letters are loved a lot.

In some words "-en" and "-ar" can function as nouns (the head noun is dropped). Examples for both suffixes are: Çalış**an** (worker); düz**en** (regime, sytem, arrangement); Ok**ur** (reader); Gel**ir** (income). Next the future tense participle will be discussed.

5.3.3. The Future Tense Participle (Gelecek Zaman Ortacı)

In the TUR language relativizers which are used in this way are "-**ecek**" and "-**esi**" and their variants (Bangoĝlu T., 2007). The construction appears in the following way; these relativizers are attached to the verb stem in the subordinated part. These relativizers tell us about a time in the future (predicate meaning) giving some temporary definition about the head noun. These relativizers (functioning as the past participles, the present tense participles and the future tense participles) are carrying a predicate meaning inside the RC structures i.e. we can observe that relativizers used here give us an idea about the time in which they take place. As is dicussed before, one way to understand their function as relativizers is to establish whether they define the head noun. So it is important to see whether they remain before the head noun; especially when the basic structure and the subordinated structure co-exist as in the following sentence:

157) Karadeniz'in görül**esi** güzellikleri göreni büyülüyor.

(The beauties of the Black Sea which/that are worthy of being visited/should be visited are admired by the people who have seen them). Thus the RC defines the noun "the beauties" and gives a short attribution to it. Gencan T.N. (1979) says that RCs with

"-esi" can also be inflected with the noun case suffix "-e" and then becomes the adverbial clause of manner. For example: 158) Atı öldür**esiye** koşurdu. (He has run/ran the horse as if he would kill it). So "-esi" has been used in the noun case (dative) and it tells us how the verb "to run" occured. In other words it informs us of the manner in which the action "to run" occurred.

On the other hand Ergin M. (1997:333) says: *The suffix "-esi" has been used for a long time in TUR but it is not more common than "-ecak", even though both encode the future time*". He says that this suffix appeared from "-ağası,-gesi" which was used in old Anatolian TUR "-ĝa, -ge" which is the future tense participle and possessive suffix "-sı, -si".

159) <u>Hastaya bak**acak**</u> kimse yok (There isn't any person who will look after the patient). As it is seen from the sentence above "-ecek" defines the head noun i.e. person, carrying a contemporary definition. I agree with Demir T. that the negative form of the suffix "-ecek" is more common today. For instance: 160) <u>Çözül**meyecek**</u> bir sorun yok (There is no problem which cannot be solved) "ecek" can also have a possessive form and can be inflected. For example:

161) <u>Yaz**acağ**ım</u> dilekçe iyi görünmeli (The petition which I am going to write should seem to be good). So here the consonant "k" has changed to the "ĝ" and it has taken the possessive form of 1st person singular (-ım).

It is necessary to say that the relativizers "-ecek" and "-esi" have also become nouns in some cases where they have lost their RC meaning like the other relativizers such as "-ar", "-mış" and so on. Ediskun H., (1985:250) says: "They have also become nouns in the course of time[12]. Examples of the words with "-ecek" and "-esi" that do not have a RC meaning anymore are: İç**ecek** (drink, beverage); Gel**ecek** (future); Giy**si** (cloth/dress); Ver**esi**ye (on credit).

Both "-**dik**" and "-**ecek**" can generate new constructions in the way that the possessive suffix for 3rd person singular "-i" is added, after the dropping of the head noun; such contructions are inflected too. For example: 162) <u>Yapıl**acak**ları</u> belirledim (I have decided about the things that are going to be done). Another translation is possible: I have decided what is going to be done. So we can see that "what" as relative pronoun can replace "the things" when it is translated. As I have indicated before participle suffixes have the function of relativizers and tempus constructors. Consider the examples below:

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[12] Whether this could be accepted as an example of how the grammaticalization occurs is a point of interest.

163) a. Bu konu uzun sure **tartışılacak** (tempus constructor).

      b. Uzun sure **tartışılacak** bir konu bulduk (relativizer).

From the two sentences above we can see that the same words in bold (construction) include the same suffix i.e. "**tartışılacak**". In 163a it stays at the end of the sentence and is a tempus constructor i.e. it is inflected in terms of tense and personal suffix, but note that the personal suffix of the 3rd person singular is not marked in the TUR. An ENG equivalent could be: This theme will be discussed for a long time. On the other hand, "**tartışılacak**" in 163b premodifies the noun phrase "bir konu"/a topic, so the word "**tartışıklacak**" can instantly be recognized as a relativizer. An ENG translation could be: We found/have found a theme that will be discussed for a long time.

This use, when the personal suffix of the 3rd person singular is dropped, can be one of the points in TUR that might be difficult for acquisition. Another important point is whether the head noun in TUR RCs can be left out or not; this will be discussed next.

5.3.4. The Omission of the Antecedent (Headless) in Turkish Relative Clauses

I have found another name for this topic in a book by Göksel A. and Kerslake C. (2007). They handled this as "headless relative clauses". In the TUR language RCs can be used as a noun complement or a nominal phrase in the sentence. Furthermore, it should be remembered that a RC, like other predicates, in TUR, can be in any voice (çatı) such as causative, reflexive, transitive, intransitive and so on.

Gencan T.N states that, in TUR, it is common for the head noun of the RC to be left out. He says that if this is the case then one should consider whether the words omitted in the phrase actually exist in reality. There are many RCs whose subjects have been omitted. These RCs are inflected like nouns. For example:

164) a. <u>Çalış**an**lar</u> bugün tatilde (Subject)   b. <u>Şenliklere katıl**acak**lar</u> adlarını yazdırsın (Subject)   c. <u>Yıkan**an**ları</u> kenara at (Direct object)

In sentence 164a the head noun "insanlar "/people, which is embedded or remains after the word "çalışan-" is left out (Çalışan insanlar bugün tatilde). Its translation could be: The people who are working are on holiday today. In (b) it occurs in the same way (The people who are going to participate at the festivities should have their names

registered). The head noun "insanlar" or "kişiler" is omitted. In (c) we see again that the head noun "elbiseleri" (the clothes" in accusative form) or "şeyleri" (the things) is left out. The ENG translation could be: Put the clothes (or the things) which have been washed to the side. The last type of subcategorization of TUR RCs that I have made is the aorist participle.

5.3.5. **Aorist participle**

Some writers of the TUR Grammar books use the term aorist participle [13](Geoffrey L.: 2000; Underhill R.: 1990). I have thought about this and decided to discuss this kind because it expresses something like permanency for the head noun. Underhill R. (1990:281) points out:" *This participle is used to express conditions that are habitually, permanently, or inherently properties of the head noun."* Here are some examples for that grammatical feature:

Finite verb: 165) a. Su ak**ar** (Water flows)   b. Ak**maz** su (Water does not flow)

Aorist participle: 166) a. Ak**ar** su (Flowing water) b. Ak**maz** su (Stagnant water)

The relativizers here (aorist participles) are the same "relativizers" that are dealt with under the heading "The present participle". These types are not used very commonly. As Underhill R. says, the aorist participle is not productive except perhaps in the passive. For example:

167) Okun**ur** bir kitap (a readable book; here "-n" is passive suffix)

Some of these relativizers have become common nouns such as: Yaz**ar** (writer); okur yaz**ar** (literate-writer); düşün**ür** (thinker); çık**ar** (profit, adventage). The following examples make it clear how they describe or define the noun.

168) Sözünde dur**ur** bir erkek (the man who keeps his word) 169) Bil**ir** kişi (wise man, expert) 172) Çal**ar** saat (alarm clock).

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[13] Collins English Dicitionary (2003:73) :" A tense of the verb in classical Greek (i.e. not limited) and in certain other inflected languages, indicating past action without reference to whether the action involved was momentary or continuous". www.wikipedia.org: **Aorist** (from the Greek: ἀόριστος, *aóristos*, "without horizon, unbounded") is an aspect or, used more specifically, a verb tense in some Indo-European languages such as Greek. The term is also used for unrelated concepts in some other languages, such as Turkish. In contrast to the imperfective aspect, which refers to an action as continual or repeated, or to the perfect aspect, which calls attention to the consequences generated by an action, the *aorist aspect* has no such implications, but refers to an action "pure and simple". In the indicative mood, the aorist refers to a past action, in a general way or as a completed event. It may also be used to express a general statement in the present (the "gnomic aorist"). Used this way, it is described as the *aorist tense*. In other moods (subjunctive, optative, and imperative), the infinitive, and (largely) the participle, the aorist is purely aspectual. In these forms, it has no temporal meaning, and acts purely as an alternative to the other aspects.

All of these participle suffixes used as relativizers can be illustrated as in the table below.

	The Past Tense Participle	The Present Tense Participle	Future Tense Participle	Aorist Participle
The participle suffixes as tempus constuctors and relativizers	-miş -dık	-mez -ar -an	-ecak -esi	-ar -mez

Table 3 The relativizers of Turkish

5.3.6. **Differences and Similarities between English and Turkish RCs.**

Differences:

1. In ENG RCs are constructed with the relative pronouns (who, which...etc), but in TUR they are built with participle suffixes ("-esi", "-an", "-mez", "-(a) r", "-dık", "-ecek", "-miş") in the way that they are attached to the verb stems of the subordinate clauses.

2. ENG has overt relative pronouns; however TUR does not have overt relative pronouns.

3. In the TUR language the participle suffixes can function as relativizers and as tempus constructors. This is not the case in the ENG language.

4. While the ENG RC postmodifies the antecedent in the RC, the TUR RC premodifies the antecedent in the RC.

5. In ENG RCs can make use of a so called bare/zero/null pronoun, but this is not so in TUR.

6. Different kinds of reduction of ENG RCs are possible such as passive elements, auxiliary elements or relative pronouns. However this is not the case for the TUR language.

7. In ENG the relative pronouns can semantically replace subjects or objects in syntax (escp. in SUBJ position). It is possible to avoid the repetition of the head noun. However, this is not the case for relativizers in TUR.

8. Some relativizers in the TUR language have lost their function as relativizer or tempus constructor and have become nouns, but no relative pronoun in ENG has this kind of usage.

9. Some relativizers e.g. "-dık" can be inflected according to possessive, dative, accusative and personel suffixes. But this is not the case in ENG.

Similarities:

1. Both ENG and TUR RCs define the head noun. In both languages they function like attributive construction.

2. The inflection and the plural form of the relative pronouns in ENG are not possible. Likewise relativizers in TUR do not permit the inflection e.g they do not have a plural form.

3. The omission of the head noun is possible both in ENG and TUR. As a result the relative pronouns in ENG are dropped and in TUR the relativizer with its verb stem can function as a noun ...etc.

4. It can be said that there are finite and nonfinite RCs both in TUR and ENG. However non-finite RCs are limited in TUR in contrast to ENG.

6.0. The Use of Relative Clauses in Different Contexts by Psychosyntactists

This section concerns the human cognition examined in psycholinguistics or by neurolinguistics. Generally, the investigation of RCs, which is the cardinal subject of this dissertation, is important because they can give us some clues about how SLA proceeds.

This part is relevant for the work for two reasons: The first one is that the 2nd empirical part is related to the acquisition i.e. the difficulties in the RC processing by GER L1, and TUR L1 and L2 students. The second point is that in the first empirical test the

frequency of use of RCs in ENG has been studied, including the reduced types which has been examined widely by psycho-neurolinguistic investigations in recent times. First the psychosyntatic explanation about how sentences are processed by human cognition will be discussed; some models in this subject will be presented. Then the possible difficulties of acquiring some types of ENG RCs will be dealt with in order to show whether such constructions hamper the perception of the FL learners of ENG. The comprehension of syntax, explaining its cognitive aspects and how important the ENG reduced RCs are for the psychological investigations is the framework of this section.

6.1. **Psychosyntactic Approach to the English Reduced RCs**

A detailed knowledge about when and where ENG RCs can be reduced has been given in the descriptive part this thesis. Here, from the psychosyntactic aspect of how the reduced ENG RCs might cause some perceptual difficulty will be elaborated. As will be shown in the findings, this type of RC in ENG causes ambiguity, namely the garden path effect, as described in psycholinguistics. I have come to the conclusion that this subject is perhaps the most examined topic in sentence processing (Gibson, E. 1987). So I want to present information about this phenomenon (Pritchett, B. 1988) which is significant for the acquisition of ENG RCs.

6.2. **Syntax as a Cognitive Model and the Garden Path Effects**

Syntax has been researched by scholars for the past few decades. Syntax is considered a cognitive module (serial or interactive processing). The significant question which rests at the centre of this theme is whether syntactic rules are context-free or not; in order words, whether semantic and pragmatic information affect syntactic structure formation. Most of the approaches that have been developed try to find an answer to this question. It is being made in the way that syntactic ambiguities are examined. Two different types of ambiguity underlined are shown below, giving for each an example:

Syntactic ambiguity: local vs. standing

Local ambiguity (e.g. DO/SC ambiguity)

Standing ambiguity

Ian knew the answer ⟨ by heart / was complex

(1)
a. [[They $_{Prn.}$]$_{NP}$ [are eating $_V$[apples $_N$]$_{NP}$]$_{VP}$]$_S$
b. [[They $_{Prn}$]$_{NP}$ [are $_V$[eating $_{Adj}$ apples $_N$]$_{NP}$]$_{VP}$]$_S$

(2)
a. [[Ian]$_{NP}$ [knew$_V$ [the answer]$_{NP}$ [by heart]$_{PP}$]$_{VP}$]$_S$
b. [[Ian]$_{NP}$ [knew$_V$[[the answer]$_{NP}$ [was complex]$_{VP}$]$_{Ssub}$]$_{VP}$]$_S$

Table 1 Syntactic Ambiguity (Tischvorlage from Härtl H., professor of Linguistics, HU-Berlin/Germany: ws 2009-2010: Session 05/17)

Psycholinguistic models are structurally-based models (serial parsing: for example the garden path effect (Rayner K. and Frazier L, 1987) and constraint-based models (parallel parsing; MacDonald, M.C., Pearlmutter, N.J., Seidenberg, M.S., 1994). This can be illustrated in the following:

Accounts in psycholinguistic modelling

Psycholinguistic models

Structural models (e.g. Garden-Path-Theory Frazier 1987) → Serial parsing

Constraint-based models (e.g. MacDonald 1994) → Parallel parsing
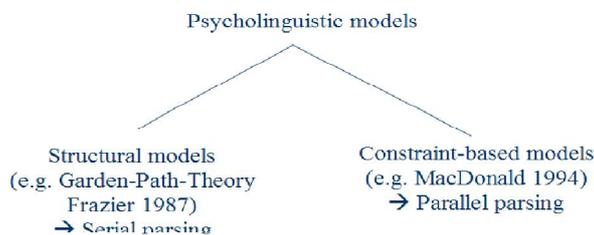
Diagram 1 Accounts in Psycholinguistic Modelling (Härtl 2009-2010: Session 05/17)

The assumption and the mechanism of structurally-based models are: There is a limit to relevant processing, i.e. parsing has to reduce complexity to a minimum. Another property of these models is that at the early stage of comprehension the human parser uses only syntactic category information to build up representations of the assumed syntactic structure of the incoming sequence. Constituency is determined by grammatical rules that specify possible phrase structures. Phrasal nodes are built on the basis of very few parsing heuristics, "minimal attachment" and "late-closing". Their last property is that whenever the integration of a perceived unit into the postulated phrasal category can not occur the parser will postulate a new phrasal node.

The garden path effect was developed by Frazier and Rayner in 1982. According to him, this theory consists of two stages that postulate the autonomy of the parsing mechanism. At the first stage, the parsing mechanism uses only syntactic (structural) information but no semantic information. It creates an initial structure of the sentence based on two principles, one of which is "minimal attachment", and the other "late closure". At the second stage, the initially constructed structure is checked against semantic and new syntactic information. Then, if the results of the initial analysis are not compatible with the new information, a semantic or syntactic re-analysis occurs[14]. I want to provide an example that I have often seen in the articles in terms of syntax processing. It is listed below:

1) The horse raced past the barn fell.

Will all speakers understand it in the same way here? Probably many would interpret it in two ways: The word "raced" is a main verb or belongs to a subordinate clause which is a reduced RC (passive reduction: "which/that was raced"). It is said that one will perceive the "raced" as the main verb but then re-analyse the structure of the given sentence and begin to know that it belongs to the class of reduced RCs. Thus such sentences (Juffs A., 1998) usually produce the garden path effect (These sentences are problematic for learners of ESL, the case may be the same for the informants of my study; however, the reduced types are not included in the test items).

The structures of the sentences that create obstacles for human cognition (I leave the question of whether the languages are at fault at this point) are available in many languages. GER also has such perception difficulties, even in RCs, as ENG. Let's look at the following example:

2) a. Das sind die Arbeiterinnen, die die Managerin entlassen hat.

   b. Das sind die Arbeiterinnen, die die Managerin entlassen haben.

A reader in GER may not understand the meaning of the sentece in 2)a and 2)b until he/she reads the whole sentence (ambiguity), because the meaning - until the

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[14]Garden path sentences are utilised rarely in spoken communication, owing to the prosodic qualities of speech and the tone of voice serve to find a solution to the ambiguities that have been encountered in text.

auxiliary verbs of the subordinate clause - is not clear. It is not clear if the "Managerin" fired the workers or the workers made protest against the "Managerin", until she is dismissed. Probably, after he/she has read the auxiliary verb "hat", or"haben", he/she can understand the whole sentence, since the OBJ of matrix clause is plural.

Since the phenomenon mentioned above is meant as a metaphor, one goes through the garden, takes a path, but later realises that it was the wrong one (misled). This can be shown as a diagram (the preferred structure would be a. not b.):

a.

b.

A garden path sentence. The garden path effect is shown in *a*. The correct interpretation is represented in *b*.
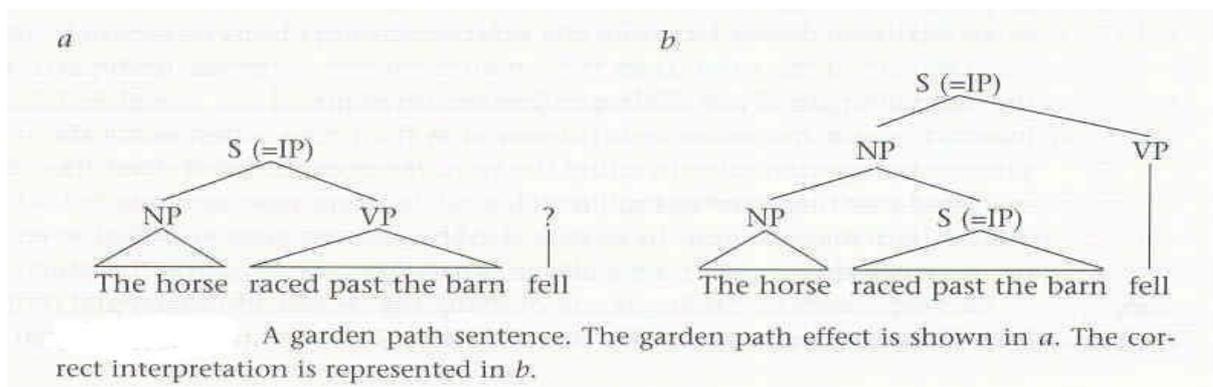
Diagram 2, A Garden Path Sentence (O'Grady et al. 2006 in Härtl 2009-2010: Session 05/11)

3) a. *Since Jay always walks a mile … seems like a short distance to him.*

b. [Since Jay always walks a mile]… seems like a short distance to him.

c. Since Jay always walks [a mile seems like a short distance to him]

In the sentence above the preferred structure would be again 3) b. Looking at both examples we can ask: Where do these preferences come from?

It has been pointed out that the garden path effect leads to the initial structure of the sentence. It is based on two principles (minimal attachment and late closure). In the following both shall be explained in brief:

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The Minimal attachment principle (explains the garden path effect for "*The horse raced past the barn fell*) assumes that incoming material should be attached to the currently analysed phrase using the fewest nodes possible, i.e. the simplest structure. Frazier's (1979:24) minimal attachment principle underlines: "*Do not assume new syntactic nodes unless you absolutely have to!*" The illustration about this principle is below: The first sentence is the first stage and the second sentence is the second stage.

If the word "harmed" in bold is read before the underlined part, it does not work. So it is re-analysed as in (4b) so that the sentence can be processed.

4) a. The criminal <u>confessed his sins</u> **harmed** many people.
   b. The criminal <u>confessed his sins</u> **harmed** <u>many people.</u>

The Late closure principle (explains the garden path effect for "*Since Jay always walks a mile…*") postulates that the incoming material should be incorporated into the phrase or clause currently being processed (i.e. attach new words to the clause currently being processed). In other words, the clause should be kept open as long as possible. And when late closure conflicts with minimal attachment, the latter wins. Consider the example below:

5) Since Jay always jogs a mile seems a short distance to him.

The first stage would look like as below:

a.   Since Jay always <u>jogs a mile</u> **seems a** short distance to him.

This does not work when "seems" in bold is read, so it is re-analysed in the one below:

b. Since Jay always jogs <u>a mile</u> **seems** <u>a short distance to him.</u>

Other evidence for the serial processing (structural models) comes from reading experiments. The sentence (i) "The cop watched the boy with the revolver" takes longer than the sentence (ii) "The cop watched the boy with the binocular", because the last closure began to conflict the phrase/clauses already processed (the word

"revolver" does not match with verb "watch", whereas the the word "binocular" does match) as shown in figures A and B. This suggests that independent of the meaning, the structure in A was built up for both first – which then needs to be revised for (i) to produce B – which is time consuming:

A   **B**
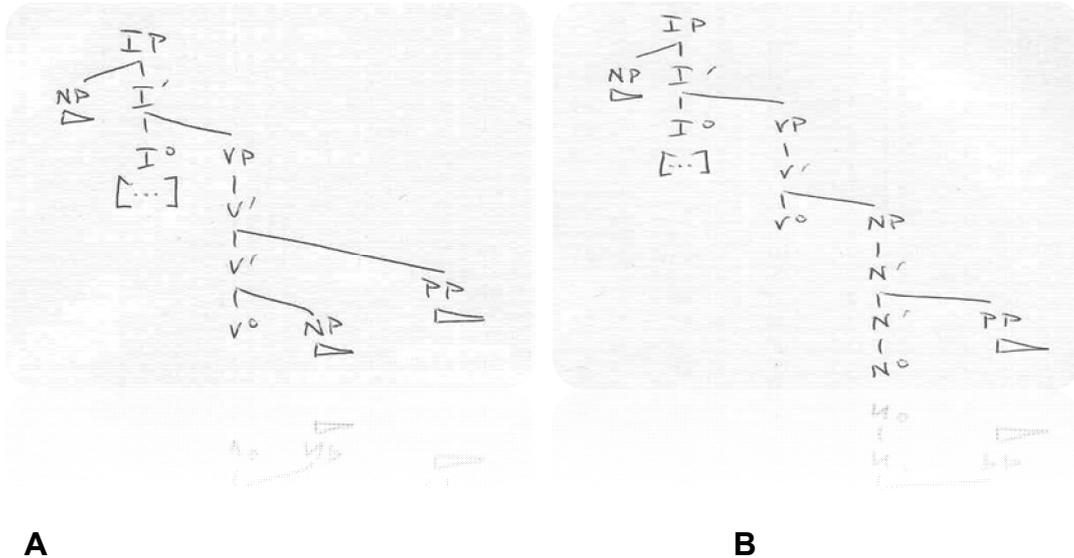
Diagram 3 Minimal Attachment Principle (Tischvorlage from Härtl H., professor of Linguistics, HU-Berlin/Germany: ws 2009- 2010: Session 06/16)

According to the late closure principle the incoming material should be incorporated into the phrase/clause processed. So it is clear from diagram 3b: Before the late closure i.e. the node "prepositional phrase", N` (Nominal) should come, not V´ (Verb). Thus the approaches to sentence processing have been shown. Some diagrams and figures as well as clarifications have been given for the understanding of the subject. The last figure which summarizes the serial psycholinguistic model (Gibson, E. & Pearlmutter, N.J. 2001; Mc Donald, M.C.1997) is given in the following:
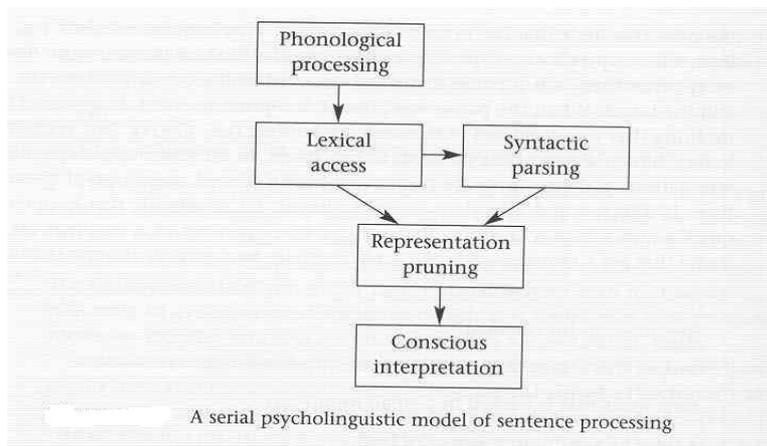
Diagram 4, A Serial Psycholinguistic Model of Sentence Processing (O'Grady et al. 2006 in Härtl 2009-2010: Session 06/3)

We see that such cognitive processing in the figure above begins with phonological processing, then continues with lexical and syntactic parsing, before going to the stage "representation pruning". The individuals finally try to interpret it by placing it in their cognitive world. So far it has been illustrated that syntactic structures are not arranged by a single model. It can be said that much more has to be done for the further research of linguistic cognition on the grounds that one can not reach an explanation within a single model.

In the next section, the important principle in the reduced version of ENG RCs - which in this context neither GER nor TUR have, and is often the subject (Hoffman 2008:78) of psychosyntactic research, especially by cognitive linguists or theorists of grammar. The extended properties together with further examples will be focused on.

6.3.   **What Problems Do the Constructions of Reduced RCs Cause?**

If we have a SUBJ RC as in the following examples we can not omit the pronoun and leave this part which begins with the verb, except that when the whole RC is reduced to a non-finite -ing verb form. We can choose either to use the relative pronouns shown in examples 6), 7), 8), and 9), or to omit them adding "-ing" (this is also called reduced RCs with non-finite verbs) shown in examples 10), 11), 12), and 13). In fast colloquial speech, omission is the norm, but in written ENG people tend to leave them in.

6) I can't find my notebook <u>that contains all my addresses</u>. (Present Simple)

7) She has never met the lecturer <u>who is leading today's seminar</u>. (Present Continuous)

8) The tall man <u>who was standing by the bar</u> is my uncle. (Past Continuous)

9) The newspaper <u>which first reported the incident</u> is being sued. (Past Simple)

10) I can't find my notebook <u>containing all my addresses</u>.

11) She has never met the lecturer <u>leading today's seminar</u>.

12) The tall man <u>standing by the bar</u> is my uncle.

13) The newspaper <u>first reporting the incident</u> is being sued.

The following examples are also reduced SUBJ RCs. However, this time the past participle "-ed" form is shown instead of the "-ing" form. The latter exists in the active form but the former replaces the passive verb as in example 15) of almost any tense.

14) The information <u>given in the brochure</u> is wrong.

15) The criminal <u>picked up at the airport</u> was taken into police custody.

16) We saw the new play <u>written by Tom Stoppard at the Old Vic</u>.

17) The second piece <u>played by the orchestra</u> was very well received (or with continuous passive tense "being played").

So from the examples above it is not difficult to see reduced elements: "which is" in 14); "who was" in 15); "that was" in 16); "which was/ being" in 17) respectively.

Furthermore, the classifying of reduced RCs is also possible. That can be shown in two categories: a. essential reduced RCs (needed to define the meaning of the word before) b. non-essential reduced RCs (providing extra information which could be omitted). One significant point here is that the finite clauses can be confused with the reduced RCs on the ground that both are used with "-ing" and "-ed". Let's look at the following passage:

Many of America's best performers, such as Microsoft or Sun MicroSystems, did not exist 30 years ago. Not only have such young stars created jobs in their own right,

they have made America a more competitive place, forcing older companies, from IBM to Hewlett-Packard, to change too.

As seen, the present participle "forcing" is used not to form the RC but to form a non-finite clause which has been constructed with the "-ing" form. **Non-finite clauses** are always separated from the main clause by a comma.

Another non-finite clause is built with "-ed" in the following example (which is separated with a comma again): The past participle "optimised" is used here not to form an RC again but to form a non-finite clause.

In a significant finding, researchers at Northwestern University's Center for Quantum Devices have demonstrated solar-blind avalanche photodiodes (APDs) that hold promise for universal biological agent detection. Once optimized, these sensitive detectors could be combined with the ultraviolet light-emitting diodes (LEDs) already pioneered by the Center for Quantum Devices to create an inexpensive detection system capable of identifying the unique spectral fingerprints of a biological agent attack.

Apart from these analyses we can find others in the same passage: "*already pioneered by the Center for Quantum Devices*" is an essential RC. The adjective "capable"is the reduced form of RC *"which is capable of"* i.e. an **essential RC**. Both are not separated from the sentence by commas.

There is also what among grammarians is called a "resultative –ing". Resultative clauses can typically be preceded by the causative conntors "thus" or "thereby". An example for that follows in the following paragraph:

Placed in a properly aligned electric field, nanotubes should shoot out electrons like water hoses emitting streams of water. Many materials emit electrons when sufficient voltage is applied; the difference is that nanotubes should actually accelerate the particles along their lengths, thus allowing them to emit electrons of sufficient energy to activate phosphors in very low-voltage fields. Working with Noritake, a big Nagoya

ceramics and electronics firm, Yahachi Saito assembled a small array of nanotubes that shot electrons into a phosphor screen, creating a bright light.

Finally I want to give a last passage below and then analyse it: The first (a) is an essential RC, the second (b) is a resultative "-ing" clause, the third(c) is non-finite clause and the fourth one (d) is a non-finite clause.

Imagine that a pandemic flu has broken out in Asia. An airplane <u>carrying exposed passengers (a)</u> is travelling across the Pacific Ocean toward Los Angeles. One of them begins to cough, <u>causing palpable fear to spread throughout the cabin (b)</u>. <u>Acting swiftly and efficiently(c)</u>, a flight attendant pulls a small device from the overhead compartment, takes a throat sample from the ailing passenger, and identifies the virus as influenza. On landing, all the travellers are quarantined -- and the spread of the flu is thwarted. It's a scenario that may become a reality in the not-too-distant future, thanks to a group of researchers who've been working on ways to derive genetic information from human DNA more efficiently. <u>Combined with a wireless network (d),</u> it could track the spread of flu strains throughout the world.

Even the use of "-ing" in a phrase as noun can induce difficulties by reading. Let's take a look at the following example[15]:

18) "We offer a free accommodation finding service only for members, prospective members and staff of the University"

The word "finding" as noun can be read as a reduced RC because the word "accommodation", which stands before it, is a noun. Indeed, it functions as a D-Phrase of "a service" which becomes "a free accommodation finding service" by adding other three words: free, accommodation, and finding. The sentence below is similar with this[16]:

19) "You can get contact details of your nearest UK visa issuing office".

Again the reduced RC with "-ed" in the following example can cause problem for sentence processing from the psychological perspective:

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[15]From Website of Cambridge University, February 2010
[16]The UK Border Agency: 21.03.2010

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20) Contents data are machine generated based on pre-publication information provided by the publisher[17].

The elaboration in connection with this theme comes in the next section.

6.4. The Role of Commas in Distinguishing English RC from other Grammatical Elements

The important places where a comma is used in non-finite clauses (especially in academic writing) can be in: "non-finite –ing" and "-ed clauses". Non-finite clauses have no tense and most commonly contain a present participle (-ing). At the beginning of a sentence, non-finite clauses are similar to both introductory phrase and subordinate clauses both in that they all require a comma before the subject of the main clause. In the following this is illustrated:

One situation or event is occurring at the same time as another. An example for this situation is given below with the original one in the parenthesis.

21) <u>Brows**ing** through the journal *'Science'***,</u> John was surprised to see so many articles devoted to nanotechnology. (*While John was browsing through the journal 'Science', he was surprised to see so many articles devoted to nanotechnology.*)

A fact is relevant to another fact stated in the main clause. A sentence for that is in the following:

22) While there is some interest in materials recycling technology, most of the research efforts that address recycling appear to be at the design level**,** <u>with disassembly concerns receiving the highest priority.</u> (*While there is some interest in materials recycling technology, most of the research efforts that address recycling appear to be at the design level; of these, disassembly concerns have received the highest priority.*)

A comma is used to separate a *non-finite **-ing** clause* from the *matrix clause* of a sentence; both when it comes before and after the main clause, for each case the examples are below:

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[17]Home Page of Freie Univesität Berlin: 25.03.2010

23) <u>Originating in the high temperatures within the depths of the Earth,</u> geothermic energy is as old as the planet.

24) Geothermic energy is**,** <u>originating in the high temperatures within the depths of the Earth,</u> as old as the planet.

Furthermore, the non-finite -ed clauses have different functions with or without a comma. They typically modify the SUBJ of the sentence and therefore almost never occur after the main clause. Like infinitive clauses, 'past participle *–ed'* clauses need a comma to separate them from the main clause when occurring **before** the main clause, but not **after** it (-*ed* clause):

25) a. <u>Based on recent advances in engineering,</u> the molecular laser isotope separation process appears to be the most economical method for uranium enrichment.

b. The molecular laser isotope separation process appears to be the most economical method for uranium enrichment <u>based on recent advances in engineering.</u>

This is usually referred to as a reduced RC and can only be applied to SUBJ RCs and not OBJ RCs. The next section will be about where RCs are used in educational area.

7.0. Relative Clauses in the Area of Education

I am going to apply the tests to three groups, for the empirical study 2, in order to collect the data. As the acquisition of ENG RCs has been studied for GER L1, TUR L1 as FL and for TUR L3 FL I want to talk briefly about SLA. This chapter aims to give an overview about the discipline of SLA: the definition and discussion that are made for the SLA and the factors (both internal and external factors) that affect the acquisition of the SL together with the approaches to SLA will be explained. The interference, transfer and UG in SLA will be dealt with. New approaches to SLA, i.e. the emergenist approach and and the trilingual (L3) researches will be discussed.

The scholars use the name SL for describing any language whose acquisition takes place after early childhood. It might also mean TL or FL. SL can apply to the third, the

fourth, or any subsequent language learned. The term SL is also used for the language that is learned through communication by living in a community[18].

The word "acquisition" has often been used since Krashen (1981) contrasted it with "formal and non-constructive learning" (and it has been the choice of Chomsky, for example, in LAD). We see that this term, "learning of language" or "acquiring of language", is used by scholars interchangeably without directly addressing Krashen's notion (1981). We see later that the usage of "language acquisition" has had more favour among academics. It is said that learning is not so stable as it takes place later i.e. in the time after childhood (puberty) while acquisition is more stable on the grounds that it takes place in childhood and learned unconsciously.

The research of SL is a tremendous field. It is concerned with the study of language from the psychological and sociological aspect based on short-or longitudinal studies. These studies try to bring new ideas and new approaches to this academic branch. Sometimes these idea or hypotheses can be refuted, i.e. they disappear from academic discussions or remain as hypotheses in related fields. Information about hypotheses in the SLA which build the theoretical perspective of LL will be given briefly. Different theories have brought different approaches to SLA. Their important role was, given that they appeared as a result of research, to constitute knowledge about how the SLA processes work.

7.1.0. **The Theories in SLA**

With the exception to CA, which been discussed in chapter 2 above and is also one of the basic elements of this work, there are other hypotheses which are worth mentioning. The Identity Hypothesis, for example, is based on the well known theory of Chomsky. It states that every individual has got an innate Language Acquisition Device (LAD) (cf. 1965). According to this hypothesis, no differences between L1 and L2 exist in the underlying structure. The reason is that all languages are based on the same UG, which is deposited genetically in the individual. The people who are

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[18]Naturalistic learning=in German ungesteuerter Spracherwerb; Klein (1992) and for the language that is learned through instruction in the classroom context: Non-naturalistic learning=in German gesteuerter Spracherwerb.

learning an SL proceed as the children who are learning their FL. This is the important and interesting point: that the process of L2 is similar to the one of L1. This has also been supported by many researchers. One of them, I have encountered often in the literature of the linguistic area, is Clark (2003) who observed her own children and wrote a book.

Like L1, the learners of L2 reactivate the innate mental process. So the structure and the elements are acquired in the same order in accordance with the cognitive universal principles. The mental mechanism like a built-in syllabus (Corder, 1967) filters the input that the learner can work out in each development level. Then he constructs the hypotheses in order to know the rule systems of the L2. He proves this always on the basis of the linguistic materials that he has made before, give them up, if necessary, or confirm them by adding to the knowledge of the L2 that he constructed for him. Furthermore it is said that a L2 system built appears mostly in the direction of the real L2 systems.

It is said that a learner's errors provide evidence of the system of the language that he is using (i.e. has learned) at a particular point in the course (and it must be repeated that he is using some system, although it is not yet the right system). They are significant in three different ways. In a sense this is their most important aspect, they are indispensable to the learner himself, because we can regard the marking of errors as a device the learner uses in order to learn. It is a way the learner has of testing his hypotheses about the nature of the language he is learning" (VanPatten B., Williams J. 2008)

It is pointed out by him that the errors of imperfectness should be ascribed to this temporary competence.

One need not expect a learner to apply the transfer during the hypothesis building, on account of the fact that SLA follows only the process of the general linguistic structural discovery according to this hypothesis. The framework of the identity hypothesis is that the inquiries are usually made in order to bring to light the aspect of the difference between the acquired forms, not the similarities. The reason is that both cases of the

transfer do not exhibit the restrictions. Any basis of this hypothesis is that L1 and SLA show isomorphic traits. Accordingly L1 acquisition is parallel with L2 acquisition. However, the errors that occur are ascribed to L1 but not to L2. There are two versions of the identity hypothesis. The dominant version is about all of the types of language acquisition (Miscellaneous linguistic background and age, independent from sociolinguistic factors, etcetera). In contrast, the weak version of this hypothesis differentiates between naturalistic and non-naturalistic language acquisition. With naturalistic learning one should understand unconscious learning; non-naturalistic learning, conscious learning.

The interlanguage hypothesis is concerned with the acquisition of L2 (naturalistic or non-naturalistic) of adults and children. From this perspective, the hypothesis is to be considered one of the global hypotheses. The traits of L1 and L2 depict the independent linguistic features. These are flexible and follow their construction of the systematic principles. They are defined through a specific learning process, strategies and rules. It is recommended that L2 be introduced after the level of the mother tongue has reached stabilisation. If this principle is not taken into consideration some results would emerge; these are of the linguistic, general cognitive and psycho-social developments of the students who are exposed very early to bilingual education. The independence and swelling hypothesis was developed by the British linguists Cummins (Otten C, 1995). He made a hypothesis after he had conducted a study about the children of Finnish workers in Sweden. According to this hypothesis, the linguistic and general cognitive development of the children in L2 depends on the development of L1. A high level of L1 makes it possible for L2 to develop well. The opposite case, namely the insufficiency of L1 competence, would have negative effects L2 on development. L1 must exceed a specific level so that the L2 can develop successfully and the negative effects of the bilingualism on the general cognitive development can be prevented in a good way. The researchers point out that the level where a normal language development is reached is, usually, about at the age of ten.

Another significant hypothesis is The Monitor Theory of Krashen (1977). The hypotheses that I have introduced above deal with the relations between the L1 and SLA. However, the Monitor Theory of Krashen is concerned with the connection of naturalistic and non-naturalistic language acquisition. In his view, both types depict many significant differences. In both processes the unconscious process is more focused than the others.

Now we are going to learn if the achievement of individuals in the aquistion of L2 is the same in the next part.

7.1.1. The Factors Determining Different Success by Different Learning

There are many psychological and sociological factors (social attitudes, gender, group relationships, and the culture of community) that help people learn an L2. These can also hamper learning an L2. During the acquisition of an L2, as it is known, two factors play a role: external and internal factors. Because internal factors are much more relevant for my investigation of ENG RCs, the internal factors that affect the SLA will be explained. The following terms will be discussed in detail: Motivation and interference (inter-intralingual interferences). Then the trilingual studies will be dealt with; before that, though, some information about the TUR community in Germany.

7.1.2. The Turkish population in Germany

Some information about the migrations and population status will be explained. It has has been said that It has not been long that Germany considered itself to be a non-immigration-country, in spite of the fact that there have been enough indications about it (i.e. a monolingual country). As a result, official data are only available with respect to the non-German citizens living in Germany (Gogolin I & H. Reich 2001: 194). The ethnic background of the population in terms of nationality using the categories German and non-German have been shown by national (and regional) census

statistics. The situation prevailed until 2005. Consequently, a much undifferentiated impression of the ethnicity of the population appears.

The population of Germany is 82 465 300.[19] Nearly 9% of these are *non-Germans* - foreigners without a German passport. Many thousands of foreigners who have been naturalised are simply categorised as German, but the microcensus of 2005 shows that there are 15 332 900 persons with a background of migration. That is around 18.6 percent of the population, almost double the number of non-Germans. These new statistics were made possible by the introduction of the categories 'persons with background of migration' and 'persons without background of migration' in the 2005 microcensus[20]. The number of persons with current or previous TUR nationality who are living in Germany is 2 397 400[21]. In Germany this figure is just above double the number of non-Germans with a TUR passport (1 185 200 persons). The TUR people make 15.6% of all migrants and 2.9% of the entire population of Germany. It is said that the Turks are the largest migrant group from a single nation. After them, migrants from the Russian Federation with 1 012 400 persons come.

In the dissertation about the language of Turks in Berlin, Mrs. Hottmann (2008:61) has come to the conclusion that the provision of TUR in Berlin by the state is not in good condition. She defines it as "decorative" in terms of a provision of the TUR language by the state observing a range of institutions from the areas of health, education, public services and so on. The study observes a range of institutions from the areas of education, health, council offices and public services, examining what provisions are made in TUR and asking what policies, if any, motivate such provisions. The observations reveal a clear lack of any linguistic policy at the state or federal level other than that of ignoring languages other than GER.

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[19] Unless otherwise stated all national statistics in the section *Profile of the Turkish Population in Germany* are taken from the Federal Statistics Office (Statistisches Bundesamt Deutschland:2006)
[20] Heinrich Böll Stiftung, 2008, *Die verborgene Vielfalt Deutschlands Microcensus 2005:* See: http://www.migration-boell.de/web/migration/46_795.asp
[21] Amt für Statistik Berlin-Brandenburg (2008) *Atlas zur Regionalstatistik* http://www.statistik-berlin.de/framesets/berl_atlas.htm

Besides this language policy, other aspects of why the learning of GER has not been succeeded until now, consists of a spectrum of reasons: Cultural differences, educational level of the parents, and more. Gogolin (1995)/ Reich claim: *'It can be taken for granted that the TUR minority in Germany is a vital and viable linguistic community'* (2001:198). They base this conclusion on a variety of factors: the density of the linguistic community, a high birth rate (more than twice as high as the rest of the population), and a large number of religious and social institutions where TUR is regularly spoken and the higher-than-average language loyalty observed in TUR emigrant communities in other countries[22].

7.2.0. **The Internal Factors of SLA**

There is almost no study for confirmation that the **education level** of individuals plays an important role in acquiring of a SL. One of the major factors that affect the acquisition of SL is **age**. Though it has been the subject of much discussion, researchers have the idea that the age affects the learning of an SL no matter if taken in the naturalistic or in classroom context. This is generally accepted (Diana Larson-Freeman 1991), but to what extent and how is still disputed. Some think that SLA is the same process and just as successful if the SL learners begin as a child or an adult, or the adults learn actually better (Ellis 1985, Snow 1987). The others claim that the data is ambiguous or the adults are at a disadvantage only in a few areas, especially in phonology (McLaughlin 1987). There are also some scholars who suppose that young people have an advantage on the grounds that their last level of acquiring is much better i.e. so called accent-free performance (Selinker 1978; Krashen, Long and Scarcella 1979).

At the same time the argument about the critical or sensitive period has been put on the top stage of SLA literature. Despite many claims regarding the critical period, the existence of this phenomenon has not been rejected. So the critical period, changeable from study to study, ranges between two years under or over 12 years, has quite an important place in SLA research. No matter what it is, the tendency

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[22]Ibid.

towards an inferior state in SLA abilities recommends[23] that the foreign language programs be started in elementary school. The data on older versus younger children, in connection with this period, suggests that the optimal timing may be around age nine. The early or late evaluations by immersion programs bring a recommendation that starting at this age is efficient. This creates a useful foundation for the school achievement too (Cummins, J., 1979).

The psychological dimension of differences among people learning an SL is diverse. **Affective Factors**, for example, with respect to the personalities of the SL learners, for example the emotional situation, can have an impact on the **anxiety** of the learners (It is said that it is, to an extent, good when the individuals have some anxiety; it is, however, thought that too much anxiety influences the learning process negatively). Whether these people are ready to take risks while learning and producing the SL can affect their achievement degree (Ellis R., 1998). Apart from this, everybody has his own **strategies** (or styles) in learning that can affect their success in comparison to others. Another dimension to be focused on here is language aptitude. Language aptitude is the natural ability of an individual when learning an SL. It is supposed that **language aptitude** is both a part of general intelligence and a distinct part of general intelligence at the same time. The research involving language aptitude focused on whether it has effect on the success of learning an SL. Studies came to the conclusion that there is evidence that a connection exists. For example, it is asserted that people learning an SL who participated in the aptitude test[24] and received a high score showed a rapid achievement in SL learning too, more than those who showed a low score. The important argument related to the language aptitude still remains i.e. whether it is properly considered as an organic property of the brain or as a complex of factors such as motivation.

7.2.1. **Motivation**

Involving affective state and the attitudes, motivation can change the degree of effort learners make in the positive direction. If the learners are well motivated the level of

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[23]Ibid.

[24] The best known test with regard to aptitude is called "Modern Language Aptitude Test"

their proficiency in the SL can be high. If they are not well motivated this level can be low. So motivation has great influence on acquiring an SL. Some important kinds of motivation have been recorded by scholars such as instrumental, integrative, resultative and intrinsic. These are clarified briefly: The **instrumental motivation** is said to have been the most important factor in learning an SL. Because of many functional reasons the learning motivation of the individual can be very high and the progress in learning this language may be quite impressive: passing an exam, getting a job, getting a place at a university. In sum, it happened as a consequence of aiming at the target.

Integrative motivation is when the individuals make great effort to understand the people in a society or the culture of that society: the learners learn a language very fast and successfully in order to put themselves on level with important people, or the people with whom they are interested in living (also empathy with the SL's group is a factor). For instance it has been found that because of the integrative orientation the number of ENG speaking Canadians, who have the desire to learn French, is not low. This notion reminds us of Peirce's (1995) ideas about the role of social identity in SL learning. The other kind of motivation is defined as **resultative motivation**. It has been seen that this type of motivation could contribute positively to achievement in SLA. However the cause itself can be a result of learning. For example if the TUR people living in Berlin can manage learning the GER language, it may provide incentive to like the GER culture as well. The opposite case is also possible. That means, if some foreigners in Berlin have experienced discrimination after being successful in learning GER they may begin to dislike the culture of Germany.

The last sort of motivation in acquiring SL is **intrinsic motivation**. This is the case when learners have some curiosity or particular interest and find themselves involved in learning an FL without knowing it consciously. As can be seen here, the beginning of learning a language is not the result of like, dislike or having positive, negative thoughts concerning the language they learn. Taking all these kinds of motivation into consideration it can be said that they may not be separated from each other. One or a few factors together may cause learning to progress faster. Namely they can be

complementary or effective in a divergent and convergent way, because the learning process is not a static but a dynamic one.

7.2.2. **Interference**

As seen, when the transmission of the rules of L1 on the L2 facilitate the learning process, positive transfer emerges. When they hamper the learning process (Edmodson, W. / House 2000), negative transfer takes place. The latter is important because it is being put in the connection with error production. This is also the reason why this phenomenon is put in the centre of the contrastive investigation. We see that this transfer, which can be referred to as the differences between L1 and L2, is also called, in particular in the specialist literature, "interference" (Hufeisen, B./ Neuer, G, 1999).

Thus, from negative transfer many interference errors come, which is the important resource of the error in the production data of the L2. Therefore (see more in chapter 2) it is relevant to take a look at the kinds of interference, owing to the fact that the experience from FL teaching showed us that only a part of such errors can be classified as systematic errors.

Distinguishing between different forms of interference is possible. However, two of them can be considered as basic differences, namely interlingual interference and intralingual interference (Juhasz, J., 1970).

7.2.3. **Interlingual Interfences**

Interlingual interferences are the interferences that occur between the L1 and L2, because of the different rules of both language systems. Here interlingual interferences are mostly divided into two subcategories: **proactive interlingual interferences** and **retroactive interlingual interferences**. The former is when the transmission of the linguistic rules move from L1 (mother tongue) into the L2 (foreign language); the latter occurs when this wrong transmission, induced mostly by the different linguistic systems, results in the transfer of L2 into L1. The transmission

process that appears between two language systems (Hellinger, M., 1977) can usually be detected in every realm (such as morphologie, systax, phonology) of the language system. For example, the following sentence in ENG made by a GER speaker is incorrect transmission from the GER language.

"To stand in front of my mind's eye"

This is probably a wrong translation from GER „vor meinem geistigen Auge stehen". It has taken place consciously or unconsciously. However, the correct phrase should be: "to see something in my mind`s eye". From this example it is clear that the GER idiom is more complex than the ENG one which is the reason for the incorrect ENG translation.

The simple words can be subject to interlingual interferences. Such situation can be mentioned when the similarity between the words of two languages is great or when both words seems to be the same, but with different meanings. In this case "concord" or "agreement" is the result of this linguistic incidence which is also known as a false friend (for example, "bald" in ENG means somebody without hair but in GER it means "soon"; another example: the word "gift" in ENG means "present" but in GER it means "poison").

However, if a word in both languages has the same pronunciation and the same meaning we name it as **total equivalance,** for example, "to warn" in ENG and "warnen" in GER. But the correspondence of the structures or the elements need not be always the case, a **partial equivalence** can also occur. Therefore there are two other subcategories that are the subject of the condition: **convergent equivalence** (for example, there are three personal pronouns in ENG (he, she, and it) and GER (er, sie, and es) for the third person singular) and **divergent equivalence** (for example, the ENG speakers who are learning GER may pronounce "s" as in "Sohn" like "s" not "z")**.** This dichotomy corresponds because the covering does not take place totally. We

can speak about convergence when many structural, lexical, or phonological elements of L1 can be present in the L2; and vice versa we speak of divergence.

When the differences in L2 are larger than the differences in L1, the **overdifference phenomenon** (for example, the tense system in ENG is more differentiated than the one in GER) is possible. When the opposite is the case, the **underdifference phenomenon** (for example, the number system, or case system, of GER is more differentiated than the one in ENG) is present.

Again, if any of elements mentioned can not exist in L2 (no correspondance) then so called zero equivalence is the case. A good example for that is the number case in GER and Arabic. GER only distinguishes between the singular and plural forms, whereas in Arabic there is an additional "dual form". A group of two elements is defined with it.

Furthermore some grammatical elements can be transmitted from L2 in the L1 which can be called "**retroactive interlingual interference**" (Hellinger 1977). If in some situations the borrowed grammatical structures are seen normally by many speakers rather than the borrowed ones, without violating the rules further ("He became a minister" auf Deutsch „er wurde ein Minister" instead of „Er wurde Minister") they have retroactive interference in their origin, because the L1 speakers (or most L1 speakers in the community) do not see the imported elements or structure any more. Otomo, N., (1991:61) says: "It is possible that we usually see the origin of the borrowed structures or borrowed translations in retroactive interferences".

7.2.4. Intralingual Interferences

This type of interference occurs when the errors appear not because of the differences between two language systems, but rather, because of learning difficulties related to L2 internal rules during the language use or production by the learners.

According to Kleppin (1998) there are three kinds of intralingual interferences: overgeneralisation, regularisation, and simplification. **Overgeneralisation** is present when one learner uses a regular case form instead of an irregular one (for example, if

a learner of GER as FL conjugates the irregular verb "gehen"/go according to the third person singular in Präteritum/simple past tense as "er gehte" instead of "er ging").

Here the rule of adding "-te" to the regular verbs for the simple past tense in the case of third person singular has been extracted, except for irregular verbs. **Regularisation** is present when an irregular phenomenon in the L2 is made regular by the learners (for example, "er möchtet" instead of "er möchte". Here the conjugation of modal verbs is extended to the conjugation of regular verbs, namely "-t" is used wrongly). **Simplification** is available when the learner or user simplifies some rules which are complex. Sometimes one should bear in mind that the learner makes use of avoidance strategies (see chapter 3). In order to understand what actually passes in the mind of learner; I want to give an example from GER. The following sentence was produced by a student whose L2 is GER.

 "Wenn ohne Fahrschein fahren, dann muss zahlen"

In this example the learner has simplified the complex sentence, perhaps also showing his avoidance strategy. Thus the learner did not use a SUBJ. Maybe he did not know what kind of SUBJ should have been used: A personal pronoun for the third person singular or another form, "man/human being". The second mistake is that both verbs "fahren" and "zahlen" have not been conjugated. The correct one would be: Wenn *man* ohne Fahrschein *fährt*, muss *man* zahlen.

As a summary, everything described in sections 7.2.2; 7.2.3 and 7.2.4 can be shown in the following.
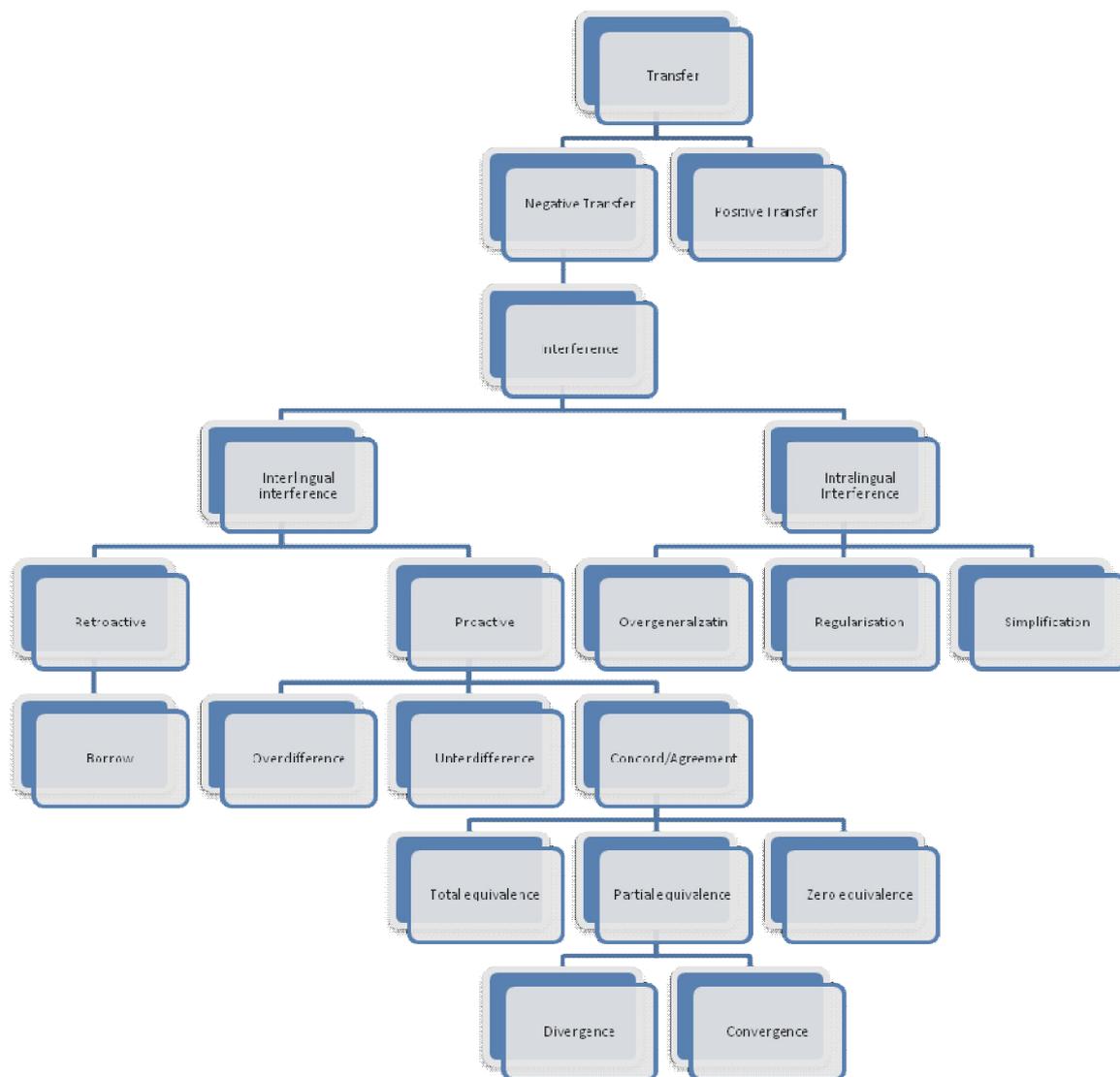
Diagram 1, A Summery of Transfer and Interference (Kleppin, 1998)

７.３. **Universal Grammar (UG) in SLA**

The knowledge of language is the grammar of the language, namely the set of rules which permit speakers of the language to communicate verbally. All of L1 acquirers of a certain language seem to reach nearly the same level of grammar. They can understand and produce sentences they might not even have heard before. There is an explanation for this phenomenon which is accepted among linguists. This is the "innateness hypothesis" that was introduced by Chomsky(1965:30-31), proposing that

all individuals dispose of an innate knowledge which determines underlying principles of grammar that all languages have in common. UG is the result of this mental system. Relating to this theme, White (2003) says that UG provides a genetic blueprint, determining in advance what a grammar can (or can not) be like. Nevertheless, it can not be said that all languages, to some extent, have the same grammar but rather that there are certain "principles" which allow children of any speech area to judge the accuracy of certain utterances and reach the complete knowledge of the respective grammar of their L1, even though they are exposed to less input than others. It is possible that UG is thought to be a "built in" mediator between the input data of a language and the final grammar representing the complete competence of the same language, as presented in following: (White 1989):

Input → | **UG** | → | **Grammar** |
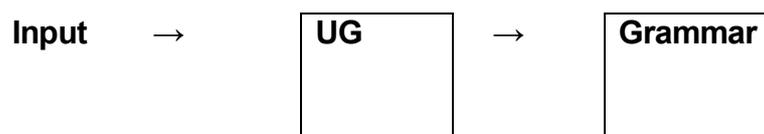
Regarding the information that has just been given, there is one question that is still not answered: Which role does input data play, and why it is considered to fail as the only force to bring out knowledge of grammar? Some effort has been made so that the divergence of the adult grammar from the actual input can be represented. There are three cases where it is possible to show that the grammar rules can not be derived from the input: **Underdetermination**, **degeneracy,** and **negative evidence** (White, 2003).

It is said that there are some features which are neither explicitly taught by parents nor abstracted from the data children are exposed to since the core of the features' relevance is outside the utterances the learners hear. If the learners made generalisations about language only on the basis of input, we would expect them not to succeed when expectations of the generalisations are made. A reflexive pronoun will serve as evidence for this case. The example follows:

The word in italics is shown to be coreferential.

a.	John saw *himself*
b.	**Himself* saw John
c.	Looking after *himself* bores *John*
d.	John said that *Fred* liked *himself*
e.	John told *Bill* to wash *himself*
f.	John showed *Bill* a picture of *himself*

Table 1 Reflexive Pronoun as Corefential (White 1989:9)

Reflexive pronouns always involve a noun phrase to which they refer (coreferential). So the table 1 is overly complex. It indicates apparently random possibilities of the coreferentiality of the constituents. This situation shows that it is rather implausible that children try to find out the rules at the time of applying for a certain type or not on a trial and error basis. Children do not make errors such a strategy would cause.

Degeneracy is another phenomenon showing difficulty with input. It is said that children are exposed to utterances which either do not have correct grammatical composition or lack completeness. It should be repeated that one would expect that a language learner is confused with respect to his aim of extracting generalisations from such obscure data, since he does not know when to separate grammatical from ungrammatical forms. Provided that UG principles are operational, the acquirer knows in advance which input is not convenient for the development of correct grammar. According to the psycholinguistic investigations that have been made, the supporters of the innateness hypothesis conclude that the occurrence of degenerate input is indeed not as common as accepted.

Sometimes negative evidence is used to bring its role of considering innate tools in language acquisition. It is thought that input contains negative evidence, as well as positive evidence. The significant question here is: How does a child know whether a produced utterance is grammatical or not grammatical? We know that parents do not

usually correct the children when they make errors. It is assumed that the children do not attempt false statements very often. In addition, the child sometimes does not/or will not receive a correction (Kunsmann 2001). A familiar example is the acquisition of "subject-auxiliary- conversion" from Brown (1973). It follows:

Mother: Where shall I put them?

Child: Where I shall put them.

Despite corrections by the parents the child in this sentence does not express the correct form of the syntax. Again, one example from the child who was observed by Kunsmann (2001) tells us something about that. It was about a negation form "wati" (water), "watiti" (no water). In the language environment of the child this is perceived incorrectly; not a negation but an order to bring water. Finally it can be said that children neither have access from the verbal expression nor from nonverbal expression to which statement is correct and which is not correct. One explanation of the fact that children acquire the correct form in its complexity can be made on the basis of UG. Consequently, such an idea can lead to the conclusion that UG guides the language acquirer on the way to an adult grammar. Furthermore, it could be accepted that certain types of errors are some kind of productive intermediate steps.

In spite of the fact that some principles (i.e. abstract rules or grammars) and parameters (such as head-initial and head final) of UG have developed and appropriate evidence has been found, it can be said that UG is merely one aspect of language acquisition. Certain properties of language must be learned, for example, the mental lexicon and its meaning, i.e. they are not affected by UG. Nevertheless, the learning process in the first language acquisition occurs on an unconscious level, i.e. in contrast with SLA (on a conscious level).

One question can be raised here: how accessible is the UG for L2 learners? And if UG is available in SLA, SL teaching should know it can refer to built-in components, in particular the role of parameters set for L1 and the possibility of resetting.

However the role of UG in L2 is not compelling like in L1. Certainly the learners of L2 experience more negative evidence than the learners of L1. In addition, teachers can interpret the production data at a glance.

Nevertheless, the problem of underdetermination for L2 remains. And it is the aspect, the learners of L2 are not exposed to the TL in so much as in their L1 during the acquisition (Selinker 1972).

In the following, L1 and L2 will be contrasted with respect to their commonalities and differences so that it can be proved whether the pro-UG claim for L1 can be claimed for L2 as well.

When L1 and L2 are compared an important difference between them can be found. This is the level of success that they may reach. The acquirers of L1 invariably end their acquisition process at a complete level. That is to say, the grammar that they reach and the grammar the native speakers have is not similar. In contrast, the conclusion that the L2 make can be diverse, i.e. in a wide range of possible competence stages. But there are some learners who are estimated to capture a native speaker-like grammar (fossilisation: recall that Selinker says that only 5% of L2 learners can reach the level that the L1 have). The disadvantages are in acquiring phonological and morphological items in particular the adaptation of an accurate accent. Even so, UG is not concerned with these aspects owing to the fact that inflection and proficiency in pronunciation must be learned through cognition. Another is the background that L2 learners have. But it is still discussed whether this serves or impedes the learning process. What role does age play in acquiring L2? There are some researchers like Newport (1989) who argue that the critical period forbids access to UG. The contra argument is that, even after the period mentioned, the UG can be reactivated and adult learners can progress to a more complex cognitive level.

It is clear from the discussion above regarding the differences between L1 and L2 that some differences exist. But parallels, especially the related projection problem, can appear because of the fact that underdetermination, degeneracy, and negative

evidence require an account for L2. There are three important positions concerning the accessibility of UG for the learners of L2.

1) UG is completely available in SLA

The proponents for this option assume that UG is still fully accessible for the L2 learners. It is helpful for them in building up a complex and subtle grammar of the L2. As in L1 acquisition, the problem of underdetermination is also valid for L2. The supporters of this position are White (2003), Flynn (1987) and Cook (1988). They think that UG has to be available for L2 learners. The reason is that the interlanguage grammar they attain can not have been derived from input only. In addition, it is assumed that L1 grammar does not have influence on L2 at all. The initial state the learner held before acquiring the L1 is there. Again, UG gives an idea of what is not acceptable in the respective language, helping the learner not to produce errors that would violate rules constrained by UG.

However not all of the learners of the same L2 reach the same final grammar result as native speakers. It is said that it is sensitive, too, considering that the final grammar of L2 learners is the same to a large degree. The idea of the full access hypothesis is that competence is emerging entirely, in spite of the fact that the problems of speaking are due to performance. I want to raise a question: Do the learners of the L1 and L2 have the same frequency of producing linguistic knowledge? The answer is probably "no". In my view neither the frequency of input nor of output is at the same rate, this can be called as "the asymmetry between input and output". This gives support to the idea of Selinker (1992) when she says that both types of learners (i.e. L1 and L2) do not have the same exposure ratio.

Because of the difficulty of researching competence and performance it does not lead to the verification of UG being accessible to the same extent as in L1. Nevertheless this can not be sufficient to put the hypothesis aside. There are investigations that show that L2 learners of ENG showed the same results as L1 speakers (methodology: grammaticality judgement task; made by White (2003). However, the scores of L2

speakers were worse that than those of L1 speakers in the studies mentioned. That creates doubts that UG operates in the same way as in L1.

2) UG is no longer available in SLA

Some proponents of this view are Clahsen (1986, 2006) and Schachter (1989). These and other supporters of this position have the belief that learning mechanisms of SLA differ from those of L1 acquisition in the way that primarily cognitive learning is involved rather than inborn principles.

Birdsong points out (1999:1): «*There is a limited developmental period during which it is possible to acquire a language, be it L1 or L2, to normal native like levels. Once this window of opportunity is passed, however, the ability to learn language declines.*»

The hypothesis testing model is also an alternative for SLA. It is said that the learners extract generalisations form the input they are exposed to as long as they are not proved wrong. Consider that this hypothesis is true: then another hypothesis is set up until the theory seems to hold true in every case. Taking a look at the large variation of SL learner achievement, this idea seems to be a convincing clarification. Owing to the neglect of the presence of underdetermination, this view has received criticism. Even though one supposes the steady state grammar of L2 learners not to be as complex and total as the adult grammar of L1 (which might be true in most cases), an explanation for the accuracy of some L2 learners' native-like performance is still missing. It might be that the supporters of this view argue that in those cases knowledge derives from L1 and UG can therefore not be considered as an active force that of SLA. Yet, there are studies that show that Asian L2 learners who attain native like proficiency in ENG adult grammar even though their L1 is set for parameter values other than those of L2. Some views recommend that the parameters of UG set for L1 are applied where possible to the parameter of L2. The learner will then have to reset some of those parameters (Sharwood S., 1994: 60f). There is also one study that brings to mind that the critical period fails: Birdsong (1999) conducted a study using a grammaticality judgement task. There were 20 ENG speakers as L1 who started off acquiring French. 15 out of 20 showed native-like results. Actually supposing that in no

case is UG available in L2 learning can be true to some extent but at the same time, it can be questioned for others. In the following section shall be the theory of the scholars who think that UG is partially available in SLA.

3) UG is partially available in SLA

Some scholars who are trying to explain accessibility of UG for SLA with general cognitive mechanisms are Bley-Vroman (1990), Larsen-Freeman, Long (1991) and Klein (1992).

The partial availability theory claims that neither of the above-mentioned theories is able to account for the role of UG in SLA. The reason is its binary nature that does not allow for exceptions and in-between approaches. There are two steps in this theory: The first one suggests that the notion that UG in SLA is accessed through L1 knowledge. The second one suggests a straight access via L2. The important question here is: if all possible principles can be activated or only some of them, which part of UG can be used to shape L2 knowledge? The partial access hypothesis obviously sustains most aspects of L2 learners ending up with enormously different levels of success. Nevertheless, it also definitely permits a high extent of vagueness.

Evaluating the role of UG in SLA, the following can be said: an evaluation can not be made straightforwardly. There is a majority of L2 learners who do not reach the grammar of L1 speakers and therefore it could be supposed that it is only guided by a cognitive learning mechanism. But there are some cases that depict the possibility to capture a native-like competence. This is the reason that the first view can be excluded. Considering the second view this can be said: if all acquirers of L2 can operate with UG components, then one would expect them to arrive at multifaceted adult grammar shapes. Actually several researches have illustrated that many L2 learners can not judge the grammaticality of the language learned. If it were so, it could be accepted that they have used UG principles. They have also shown that L2 learners can apparently work with principles already activated in their L1 in a number of cases. This brings to mind that the last and most responsive position is the third

view, partial accessibility. It seems to be that this position can be applicable. Because this view keeps aspects of SLA open, those are not yet cleared in a transparent way. It still offers potential variants of UG to be operational to some extent. More research, nevertheless, needs to be done, especially regarding the age of L2 learners, degree of achievement and potential differences between L1 and L2 input.

In the next part the new approach to SLA will be discussed.

7.4. A New Approach: The Emergentist Perspective on SLA

In recent years two new approaches, based on UG (O'Grady 2008), have come into the focus of SLA research. The first one is the new form of UG, Minimalist Program (Chomsky 2000, 2001). The elimination of construction-specific properties from linguistic theory for general operations such as merge and agree has been the target of the Minimalist Program. It has been together with a reconsideration of properties that are supposed to be innate because of conceptual necessity. Several of the properties that have been fundamental for hypotheses related to the availability of UG in L2 redevelopment seem to have vanished with the new conception of innate linguistic knowledge (O'Grady 2006). Chomsky (2001) says that the verb raising is a phenomenon that has to do with linearisation at the interface with the sensory-motor system, and not property of the "narrow" syntax. O'Grady (2006) pointed out that in the case of the truth of this consideration, ability or not to acquire differences in verb, appearing in an L2, would shed no light on the availability of innately-determined features and computations in this domain. The second one concerns the claims that innate linguistic knowledge is not necessary to explain how grammatical representations "emerge" from experience. In sum, the article of O'Grady expresses the approach that rejects the inborn grammatical principle in favour of more general mechanisms of cognition and learning.

So according to the framework of the emergentist[25] thesis for language, the phenomena of language are best explained by reference to more basic non-linguistic

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[25] There are several journals that publish special issues on the research area of emergentism: **1**. Applied Linguistics (N.Ellis and Diana Larsen-Freeman: 2006:27/4) **2.** Lingua (Roger Hawkins: 2008:118) **3.** The Modern Language Journal (Kees de Bot: 2008: 92/2)

(i.e. nongrammatical) factors and their interaction-physiology, perception, processing, working memory, pragmatics, social interaction properties of the input, the learning mechanism, and so on. Of basic importance here is the approach to the acquisition of language by Piaget (he wrote the well known work, The Genetic Epistemology and Cognitive Constructivism by observing his own child). Therefore it can be said that the foundation of the emergentist approach to language acquisition can be found in the work of Piaget (1954). In the following three points will be discussed, and the aims of the contemporary emergentist approach will become more obvious. Certain types of grammatical principles are not accepted by emergentism but grammatical properties are accepted. It has something to do with the condition of why all of properties such as the study of adjective-noun order by Dryer (1992) or the result of deep-seated principles such as agreement and binding are not accepted. One problem related to many analyses of linguistic phenomena will exist provided that the core linguistic properties are able to be illustrated from the operation and interaction of non-grammatical factors.

The technique of **connectionism** is supported by many emergentists. This view deals with the notion that seeks to model learning and cognition with respect to the networks of neuron-like units whose relationship to each other is commonly measured (Elman 1999, Palmer-Brown et al., 2002). Even though the symbolic representation is denied, some opponents of connectionism have the eliminitivist position. It is accepted to a great extent, or is possible to see in many works of emergentists such as Goldberg (1999), Tomasello (2003) and O'Grady (2005). It should be noted that the mentioned linguists do not deny that the properties of the symbolic representations ought to be referred to inborn grammatical principles. Apart from this symbolic/eliminativist argument, connectionist modelling seems to have the advantage of testing different predictions in connection with language acquisition, processing, change and evolution (see more about this discussion: in Elman, 2002). Thus far I have come to the conclusion that there is no generally accepted view among emergentists.

It should be clarified that there is also no debate between emergentism and nativisim because the brain is innately structured in various ways; this is no simple task. The question that linguistic emergentists focused on is how language acquisition takes place. Emergentists are unanimous in their rejection of the idea that innate linguistic constraints on the computational system for language exists. This was to be considered the centre of grammatical nativism.

There is opposition to "representational nativism," i.e. the view that there is direct innate structuring of particular grammatical principles and constraints (Elman et al.1996, Bates et al. 1998), as implied by many of the proposals associated with UG (O' Grandy, 2010).

Nowadays there are many emergentist studies which carry the idea that language acquisition is able to be reduced to the use of simple learning mechanisms to extract statistical regularities from the input. "Usage-based", for example, is the result of this new thought. According to this notion "develop – know" of language is made and strengthened in response to opportunities to interpret or form the utterances during the whole period of communication. But I think the form this resulting knowledge may receive is not clear. There are, indeed, some considerations such as local associations and memorised chunks (Ellis 2002), constructions (Goldberg 1999, Tomasello 2003), or computational routines (O'Grady 2001, 2005). There is no concensus regarding the emergentist model either.

It should be repeated that there is a strong idea in this approach which says that there is no special language acquisition device. Instead, the cognitive mechanism underlying acquisition is simply a processor which is responsible for interpreting and forming sentences in real time at the time of actual language use, i.e. language emerges in children through the repeated processing of sentences in verbal production of other people that they come in contact with. However, there are some questions here: What does this processor (which the children develop) look like and how does it operate? In the literature of emergentism, only a unique property of

mentioned processor has been the centre of discussion, its ability, and calculates distributional contingencies (for example, given x, there is a particular likelihood of having y) especially in the modelling of connectionism involving Simple Recurrent Networks (SRN: Elman 2005). Computational work within emergentism has also found great support of distributional contingencies and frequency. For example, Tomasello (2003), who is a researcher in the Max Planck Institute for Evolutionary Anthropology Department of Developmental and Comparative Psychology at the University of Leipzig, suggests that the process (by which language structure emerges from language use) depends significantly on "the type" and "token frequency" with which certain structures appear in the input. Relating to this subject Ellis (2006a:8) moves into a specific direction and says: "*Language learning is an intuitive statistical learning problem, one that involves the associative learning of representations that reflect the probability of occurrence of form-function mappings*".

On the one hand O'Grady (2005) has the idea that this processor is the engine that drives language acquisition. On the other hand he points out that the explanatory goal of linguistics will require reference to more than just transitional probabilities in order to have an answer to the question of how language is acquired.

It can be said that the emergentism has brought interesting conclusions but it also raises the question of why the particular statistical regularities by SRN should have priority. Why are there languages like ENG in which verbs agree only with subjects but no language in which verbs agree only with direct OBJ? SRN has no answer for this question. So the thesis of emergentism comes out with the features of quite general cognitive mechanisms and their interaction with each other and with experience. Nonetheless there is no comprehensive emergentism theory. But there are many works in this area that have been inspired by the investigations.

If we think about all these ideas discussed until now we can say that a person does not only receive language, he also shapes it. Even as many new approaches bring new perspectives about the human ability of acquiring a language, there is no clear

answer. Because picturing the cognitive process of human being is impossible, linguistics always needs new inquiries.

7.5. Trilingual Studies L3 /Multilingualism

SLA has been the centre of linguistic inquiries for a long time, but what about L3 research? Can we mean the acquisition of L3 when we are talking about the acquisition of L2? Of course the answer is "no". Since an important part of the questions in my study is about the transfer of L1 properties into L3 and one of the TUR group is trilingual, it is relevant to discuss something about the language transfer and then the theories and researches in this area.

Notably, since most of this language learning occurs in untutored, naturalistic settings and throughout the lifetime of an individual, our understanding of the language acquisition process, be it L1, L2, L3 . . . Ln, is very restricted (Chomsky in Mukherji et al., 2000: 19). S. Flynn et al., (2004) emphasise that L3 acquisition is cumulative, i.e. the prior language can be neutral or enhance subsequent language acquisition. Even though language transfer and cross linguistic influence are used interchangeably I prefer using the term language transfer. The factors that may have an impact on language transfer can be dived: **linguistic typology** of the languages, **recency** and **proficiency**. A brief explanation of these terms will follow. **Linguistic Typology:** Typological closeness of languages (another similar term is language distance) is generally considered to be one of the most important factors for cross-linguistic influence (Cenoz 2000; Sağın 2006; De Angelis 2007). The studies of Cenoz and Sağın indicated that typological closeness of languages played an important role for the L3 learners in cross-linguistic influence; this has been the case for TUR L2 learners of ENG as L3 in the second group of my study too. Therefore I want to speak briefly about them in the following.

Sağın (2006) researched the syntactic effects -word order- of TUR and GER on the learning of word order of ENG as L3. The informants in this study were TUR speakers in Germany as bilinguals and TUR in Turkey as L1. She investigated V2 property /topicalization, bracketing constructions, subordinate clauses, objects placement and

adverbial phrases. It has been verified in her study that TUR bilinguals are affected more by syntactic order of GER in the production of ENG. She found that TUR L2 speakers use more complex construction in GER than they do in TUR. Cenoz (2001) also examined the influence of language typology in transfer. She studied 90 elementary and secondary school students with Basque/or Spanish as their L1s and ENG as their L3. The focus of her research was to find the influence of Basque and Spanish on ENG (in Basque country there are two official languages and ENG is taught as L3). She concluded that Spanish is the base language for all the subjects in the study. They all showed a stronger influence from Spanish, which is an Indo-European language, than from Basque, which is a non-Indo European language. This accounts for cross-linguistic influence when their L2 is typological closer to their L3 than their L1. In this connection Sağın (2006) says that speakers of non-European languages, such as TUR or Chinese, who would like to learn a second European language, will most probably transfer from their first European language rather than from their non-European L1s. This is an important factor affecting L3 acquisition.

Recency is also called "recency of use" or "recency effect". This is an important notion in the literature of L3. How recently a language is used is important in the acquisition process of the language. On this point, Sağın (2006) points out that the learners can remember an actively used language more than the languages they know but do not actively use. According to Williams and Hammarberg (1998), a recently used language is more likely to have influence on the TL being learned. These scholars emphasise that in the most recently used language, words and grammar necessitate less activation for access than the non-recent languages, words or grammar. Schmidt and Frota (1986) approve the recency concept with proficiency level claiming specifically that their subject, who is a Portuguese learner, with L1 ENG transferred from his most fluent non-native language (Arabic), which is the most recent one.

Proficiency is a subject both in L2 acquisition and L3 acquisition. Cummins (in Ellis 1994) says that the high level of L1 proficiency may have a positive effect on L2. Odlin (1989) recommends that the types of transfer occurring at early or advanced stages of acquisition are most probably different, since learners' competence and needs are

different at different stages of acquisition. It has been said that transfer has been shown to equally occur from a NL with a high level of proficiency (Williams & Hammarberg 1998, Ringbom 1987) and from a non-native language with a low level of proficiency. It has been indicated that one or two years of formal instruction in an FL is sufficient to influence TL acquisition. In Ringbom's study (1987) it was claimed that proficiency in FL determines the type of transfer which occurs in TL. It was suggested that proficiency level in the source non-native language does not need to be very high for transfer of form. Such transfer is a superficial type of transfer.

It is considered that the research of the trilingual investigations has widely been the subject of investigation in recent years in the field of AL (Cenoz, Hufeisen & Jessner, 2001). The investigations tell us that there is a relevant difference between L2 and L3 acquisition and also there are special properties ascribed to the L3 learning process. The opinion of Jorda (2005) about L3 research is that it is the expansion of one's linguistic system qualitatively and quantitatively, even more. The different characteristics of the L3 such as non-linearity, language maintenance, individual variation, interdependence and quality change (therefore, diverse and complex) differentiate it from the L2, although there are properties which are the same.

(Cenoz 2000) points out that there are features which distinguish the acquisition of the L2 from the L3. These are the variations of order in which the languages are learnt, sociolinguistic factors, and the psycholinguistic processes involved. There are two options regarding the variation of order in acquisition: either L2 is acquired after L1 or both have been acquired at the same time. It should be noted that if more than two languages exist in the process mentioned, then more possibilities of variation for learning will come out. The learning process of one language - for example L3 - can be interrupted by another - for example L4 - because of internal and external reasons (Jorda, 2005).

Sociolinguistic factors referring to a set of contextual and linguistic factors influencing L3 competence and performance make another difference. The contexts in which the languages are learnt and used, linguistic typology, the socio-cultural status of related languages belong to linguistic factors that should be remembered here. Cenoz (2000)

underlined another difference, saying that psycholinguistic processes are important and pointing out that further research should be done in this area so that these could account for the differences between L2 and L3.

One of the most recent and important studies is Bardel and Falk (2007). They examined language transfer and L2 influence, which is proposed by Williams (1998) and Hammarberg (2001) to be an important factor in the acquisition of L3. They studied the placement of sentence negation in L3 through two groups of subjects with different L1s and L2s acquiring Swedish or Dutch as L3. In their conclusion, Bardel and Falk (2007) said that L2 is transferred into L3 in both groups they researched. Through their results it has been supported that the properties of L2 are transferred into the acquisition of L3. They found that the syntactic structures are transferred more easily from L2 into the acquisition of L3. They also emphasised in their conclusion that L2 behaves as a filter in the acquisition of L3, making L1 inaccessible. Another important study regarding the acquisition of L3 is that made by Leung (2005). She examined the acquisition of French DPs by comparing the acquisition of the initial state of L2 and L3 from the point of the generative linguistics. She pointed out that the generative view considers the L1 initial stage as UG in the meaning of "blueprint" (or set of principle/constrains) that are the universal leaders of the language acquisition process (Chomsky, 1881, 1986, 1995). It should be written here that one of the main questions of her investigation is "What constitutes the L3 initial state, whether it is UG (the L1 initial state) the L1 steady state, the L2 initial state or the L2 steady state?" She concludes strongly that L2 and L3 acquisition are different at least regarding the initial states and continues that transfer is not constant from L1 into the acquisition of L3 and that the acquisition of L3 is not a different version of the acquisition of L2, but more complex that that. The study of Sikogukira (1993) is about a case of transfer from L2 into the acquisition of L3. In this investigation which gives us other evidence for L2 influence on L3, it has been found out that there is the influence of L2 French on the acquisition of ENG lexical features by subjects with L1 Kirundi (Bantu language in Burundi). This study provides data that confirms the L2 transfer in L3 ENG.

8.0. Literature Review about Relative Clauses

This part consists of two main sections. In the first, a short review of RCs and in the second, all of the hypotheses (and the completed hypotheses for second empirical study) about RCs will be addressed. First the literature review of RCs will be dealt with.

8.1. Relative Clauses as a Field of Interest

For a long time RCs have been a field of interest in many domains in linguistics- in syntax, psycholinguistics (their acquisition), antropolinguistics (examining the acquisition by babies, etcetera), comparative linguistics (contrastive analysis), neorolinguistics (aphasic patients), computer linguistic (ATN grammar), typology (comparing RCs in two or more than two languages) and so forth. Hypotheses about its acquisition are numerous: NPAH, SDH, LDH, WOH, PDH, and SOHH, to name a few. In my research, I have encountered nobody who researched RCs in detail and from as many angles as Avery A. (Relative Clauses: 2004); Lehmann, C. (Der Relativsatz: 1984); De Vries, M. (The Syntax of Relativization: 2002).

As the acquisition of RCs is the foundation of this work, the scholars who have been working in the areas should be listed (the subject of research over the past 4 years): Slobin and Welch 1973, Smith 1974, Sheldon 1974, Flynn and Lust 1980, Tavakolian 1981, Lee&Zoh 1986, Keenan and Hawkins 1987, Hildebrand 1987, McKee& Emiliani 1990, McDanial & Snedeker, 1998, Schuele and Nicholls 2000, Diesel & Tomasello 2000, McKee and McDaniel 2001, Eisenberg 2002, Brandt, Diesel, Tomasello 2007.

Terminology: Different terms are used among the scholars: domain pronominal, head noun, coreferencial noun, antecedent; subject, agent; object, patient.

8.2. How is RC Treated Among the Scholars?

In the literature we find that RCs are treated in many special ways. Two features are commonly used to characterise the structure of RCs: 1. the syntactic role of the matrix clause element functioning as the head of the RC: 2. the syntactic role of the gap i.e.

the element that is relativised inside the RC. On the one side, head and gap can serve any syntactic role. On the other hand, the experimental literature on children's comprehension of RCs has been concerned with relative constructions in which head and gap function as core arguments. In particular, the four following types of RCs have been researched. 1. SS-Relatives, in which the matrix clause SUBJ is modified by a RC including a SUBJ gap; 2. SO-Relatives, in which the matric clause SUBJ is modified by a RC including an OBJ gap; 3. OS-Relatives, in which the matrix clause OBJ is modified by a RC including a SUBJ gap; 4. OO-Relatives, in which the matrix clause OBJ is modified by a RC including an OBJ gap. In the following there is an example for each category (Sheldon 1974:3).

1- The dog that _ jumps over the pig bumps into the lion (SS)
2- The lion that the horse bumps into_ jumps over the giraffe. (SO)
3- The pig bumps into the horse that _ jumps over the giraffe. (OS)
4- The dog stands on the horse that the giraffe jumps over_ (OO)

It is quite interesting how to note the types of RC above are acquired, first or later, by the deaf students. The results are mixed. Quigley, Smith, and Wilbur (1974) have found that deaf children and adolescents generally had greater knowledge of OS and OO-Relatives then SS and SO-Relatives. However, in another study made by de Villiers (1988) it was found that deaf children performed best on SS but not on other types. It was also found by Berent (2000) that the vast mojority of RCs produced by the students were OS and OO-Relatives. The suggestion that can be extracted from all these studies is that deaf students have greater knowledge of OS and OO RC sentences than SS and SO sentences. As has been seen, the focus of these studies was to investigate the position of the RC in a matrix sentence. This is relevant to the hypothesis of SOHH which will be tested.

Again, some special ways of the treatment of RCs are marking, movement, omission or reduction. In the following RCs in Augmented Transition Network (ATN), grammar,

then movement of RCs will be discussed. The omission or reduction of RCs has already been treated.

8.3. How is RC Treated in Augmented Transition Network (ATN) Grammar?

The problem of acquisition of RCs is well known. The question how RCs are processed in Augmented Transitional Network (ATN) should be elaborated. As the construction of RCs belongs to the phenomenon of complexity and is not an easy procedure, it would be quite impressive to learn how this problem of complexity is solved on a computer that is operated by ATN grammar. First all of: what is an ATN grammar? ATN was one of the most common methods of parsing natural language in computer systems during the 1980s. It was originally developed in 1970 by Woods (and in 1972 elaborated by Kaplan). The target was to show how natural language is processed by computer. The recursive transition-network grammar and a processor are two principles of ATN[26] (recall that for Chomsky the concept of "recursiveness" is an important factor in explaining how a natural language operates). Psycholinguistic theories and experiments were two important areas of investigation ATNs were favorable for (Winograd, T., 1983). This kind of grammar was used as a component of a lexically functioning grammar. ATN can make intermediate results available for complete syntactic analyses in contrast to the earlier model. Accordingly, ATN is yielding good results as a model of sentence comprehension. Consider that psycholinguistic research suggests that comprehension can make incomplete syntactic analysis for itself (Wanner and Maratsos 1978).

The system can be made to cope with garden-path type ambiguity by trying successive analyses of the problematic structure until one is found which the context allows. As the final word, an ATN is able to delay a decision to a later time about the grammatical function of a problematic item by tagging it with HOLD. Elements in the

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[26]The transitional network grammar stores representations of linguistic patterns and sets of context-sensitive operations which assign functions. The processor compares the stored patterns against current input and implements the function-assigning operations.

hold list can be retrieved and assigned a function later in the analysis. The HOLD list is especially useful at the time of RC processing. The reason is that it permits the ATN grammar to represent RC patterns as systematic deformations of declarative-clause patterns. This strategy receives a grammatical generalisation regarding the structural similarities between declarative clauses and RCs. It has been illustrated in the whole grammar of ATN how other types of RCs can be worked such as restrictive, unreduced, and nonextraposed RCs. Thus a clause that immediately comes after a head noun can attribute to restrictive; those which are introduced by a relative pronoun unreduced and those which are structurally identical to interdependent declarative clauses nonextraposed. It occurs with one exception when an element is missing. Here is an example (Malmkjaer C., 2003).

1) …**the girl** who_talked to the teacher about the problem…

2) …**the teacher** whom the girl talked to_about the problem…

3) …**the problem** that the girl talked to the teacher about_

The words in bold are head nouns and the gap is the place where an element is missing illustrated by (_). It is clear from the example above that the function fulfilled by the head noun is similar to the function which it would have fulfilled at the gap, in case the RC is an independent declarative clause, as follows.

4) **The girl** talked to the teacher about the problem

5) The girl talked to **the teacher** about the problem

6) The girl talked to the teacher about **the problem**.

This is the reason why a listener has to find the gap in the RC and decide what its function would have been in an independent declarative clause. The target is that he can decide what function the head noun serves.

On the other side in an ATN modelling the gap-finding process is shown by the addition of three arcs to the basic NP network. The first arc signals the presence of a relative pronoun at the end of the head noun phrase. In the case where a relative pronoun is available, the action associated with the arc places the head NP on the HOLD list. The second new arc which is demonstrated as "SEEK S" instructs the processor with the aim of going to the sentence network and tries to analyse RC as if it

were an independent declarative clause. If no noun phrase is found, it is understood that the gap is reached and no attempt is necessary. The third new arc is a bypass arc which is labelled as RETREIVE HOLD. It allows the processor to retrieve that item, when it is available in the HOLD list. If it is retrieved, the attempt to treat the RC as an independent clause will be finished[27]. The schematic demonstration of this procedure is illustrated below.
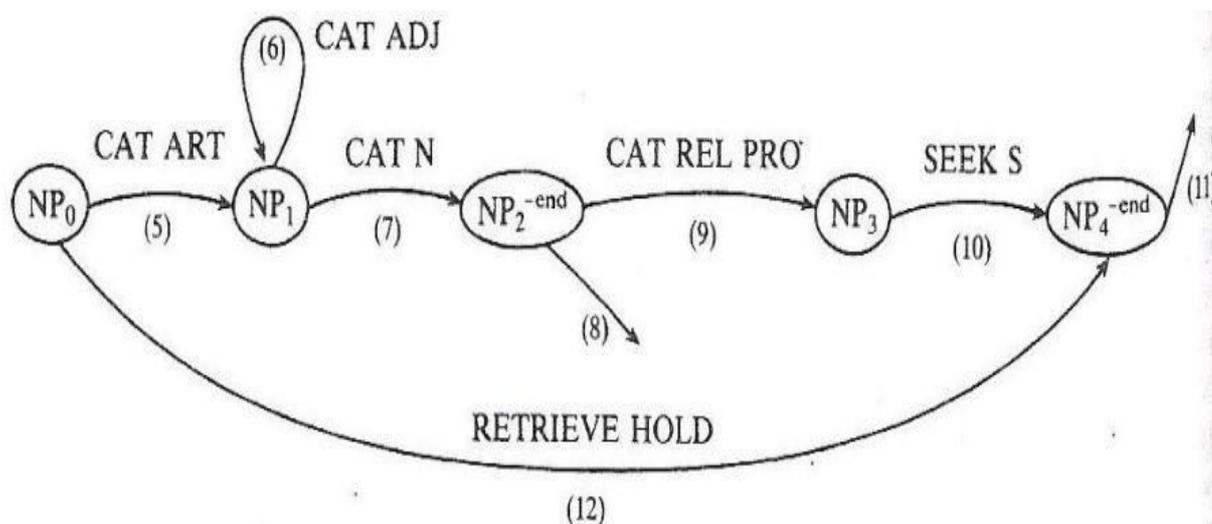
Arc	Action			
5	ASSIGN DET to current word		10	CHECK HOLD
6	ASSIGN MOD to current word			ASSIGN MOD to current clause
7	ASSIGN HEAD to current word		11	ASSEMBLE NOUN PHRASE
8	ASSIGN NOUN PHRASE			SEND current phrase
	SEND current phrase		12	(no action)
9	HOLD			

Diagram 1 A Relative Clause Procedure in Augmented Transition Network (ATN) Grammar (Malmkjaer C., 2003:49-53)

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[27] When the ATN reaches the gap in the RC and SEEKS a noun phrase, the head NP will be on the hold list. Accordingly the bypass arc will RETRIEVE it from HOLD and restore it to the working memory. The ordinary SEND action at the end of the noun phrase network will then return the head NP, and that arc will automatically assign the NP the same function label it would assign to a NP that occurred at that point in an independent declarative clause.

8.4. **Wh-movement and Relative Clauses**

Subjacency is a principle of UG. It is used to describe syntactic movement rules as they appear in some languages. For instance, in ENG a subcategory of this rule states (wh-movement) that a syntactic element such as a wh-element must not move over more than one bounding node, at least not in a operation. For example:

7) *Who$_i$ (do you believe (the claim (that John saw t$_i$)))?

The sentence above is ungrammatical, because the subjacency is violated, namely the wh-element crosses more than one bounding node. Consequently a native speaker of ENG would not be expected to produce such type of an ungrammatical sentence. During the time that he grew up in an ENG speaking area the principle of subjacency is activated. This allows for the correct interpretation of the sentence mentioned above.

But the principle of subjaceny is not activated in Japanese, if it is made the subject of inquiry. Consider the example below:

8) John-wa dare-o korosita ka (John, who/DO, killed, Q particle="who did John kill"?

As it is seen in this sentence, the Japanese language does not account for wh-movement as a subcategory of subjacency. But White (1998) pointed out that learners of Japanese revert to another principle. It can be stated as "the wh-element stays in its deep structure position". She says that the realisation of the subjacency principle depends on subcategories of subjacency which can be applied for the particular language. White is one of the opponents of UG which is accessible for L2 too.

It is important to see whether the wh-movement in GER and TUR exists or not. There is no wh-movement in TUR, because the construction of RCs is not made with a relative pronoun. If there is a relative pronoun rather than a gap it tends to stay in the original position (Kornfilt J., 1997). If it moves, it does so according to the same criteria that determines movement of any constituent in discourse, since TUR does not have a

special type of RC-movement. In the following, therefore, only the situation of wh-movement in GER in comparison with ENG will be discussed.

In GER, wh-movement can be made for both question words in argument position (different case form of "wer") and question words corresponding to adverbials (for example: wo, wann, warum. Let's take a look at the table below:

FF	Vfin	Middle Field				V.Nonfin
Wer	Hat		gestern	am Bahnhof	einen Freund	getroffen
Wann	hat	Karl		am Bahnhof	einen Freund	getroffen
Wo	hat	Karl	gestern	am Bahnhof	einen Freund	getroffen
Wen	hat	Karl	gestern	am Bahnhof		getroffen

Table 1 Wh-Movement in German (König E. / Gast V.:2007:190-199)

It is supposed that the base position of the moved element is located in the Middle Field as it is seen in the table. Wh-pronouns are always moved to the forefield in GER but not in echo-questions and in multiple wh-questions (König / Gast: 2007). It is also possible to see filler-gap dependencies for RCs. There is similarity between wh-movement and RC formation to a great extent when the relative pronoun is also a wh-element (in ENG who/which and in GER welcher/welche/welche). The relative elements are taken to the clause initial position similar to wh-movement. However there is no subject-auxiliary inversion in ENG and no verb-second ordering in GER.

9) a. The man [who $_i$ you saw t $_i$ in my house] is my uncle.

b. Der Mann, [welchen$_i$ du gerade t $_i$ erwähntest], ist Präsident dieses Landes.

It is asserted that restriction on intra-clausal wh-movement in both ENG and GER exists. GER does not allow relativisation out of either NPs or PPs and needs pied-

piping in both cases. Conversely, ENG allows relativisation of a PP-internal NP (preposition-stranding) but not of an NP-internal one.

Example: Relativisation out of NP

10) a. *The man [whose $_i$ you bought [NP t_i car]] is a crook.

   b. * Der Mann, [dessen $_i$ du [NP t_i Auto] gekauft hast]]…

      Relativisation out of PP

11) a. The man [who $_i$ you pointed at [t_i]] is my uncle.

   b. The man [at whom, $_i$ you pointed t_i is my uncle.

b.   *Der Mann, [welchen $_i$ du [auf t_i gezeigt hast], ist mein Onkel.

c.   Der Mann, [auf welchen $_i$] du t_i gezeigt hast]…

Another point is that movement out of finite complement clauses is possible in ENG, whereas it is not possible in (standard) GER.

12) a. The man [REL who $_i$ you think [FIN that you saw t_i]]

   b. * Der Mann, [REL welchen $_i$ du glaubst, [FIN dass du t_i sahst]] ..

Some generalisations are shown below, on the basis of a hierarchy of clause types which applies to wh-movement and relativisation at the same time.

movement..				
Within clause	across clause			
	complement clause		adverbial clause	
	non-finite	Finite	Non-finite	finite
German				
English				

Diagram 2 The Similarity and Difference of Wh-Movement in English and German (E. König / Gast 2007: 190-199)

8.5.0. **Six Hypothesis about Relative Clauses**

From all six hypotheses (NPAH, LDH, SDH, PDH, SOHH, WDH) there are three which I found relevant for my research. These are NPAH, PDH and SOHH. The reason that I excluded SDH and LDH from my research is that both only deal with the head noun and the gap. Both are concerned with the role of the head noun within RC but not with the function of RC within the matrix clause. SOHH works with the idea that not only contains the function of the head noun within RC but also the position of RC within the matrix clause. Therefore SOHH can work better in the place of both hypotheses, with even far more alternatives (12 difficulty levels of RCs). Finally I came to the conclusion that WDH postulates that SUBJ relative is easier to acquire than OBJ relative, due to the SVO word order of ENG (it is canonical word order of ENG). Because of the fact that the word order of SUBJ relative is similar with that one that ENG speakers (daily) use more frequently and regularly, the acquisition of SUBJ relative is easier to acquire than OBJ relative. So it is, also, not relevant for my second empirical research because the GER and TUR students do not acquire ENG as L1. In addition, they do not experience the ENG grammar very much like the ENG children, namely this does not occur much in their ENG input. Another motivation for me to choose only PHD, SOHH and NPAH is that these three hypotheses have been mostly tested and named as good predictors by scholars, such as Izumi (2003); Kuno (1974).

8.5.1. **Noun Phrase Accessibility Hypothesis (NPAH)**

Some fifty languages in the world were investigated by Keenan and Comrie (1977) and several linguistic universal constraints on RC formation were generalised. It can be said that several claims are important in this NPAH. The first claim is that the order of various grammatical functions that a noun phrase can, in RC, establish a hierarchy. The SUBJ takes the highest position and the OBJ comparative takes the lowest position. Thus, SUBJ is the easiest and OBJ of the comparison is the most difficult to be relativised. It should be noted that NPAH focuses on the grammatical function the

relative pronoun serves inside the RCs only, not involving the head NP in the matrix sentence. For instance, the noun phrase, "the teacher" in "John shows the teacher who brought a table for the school", functions as the SUBJ in the RC of "who brought a table for the school".

The second claim is an implication based on the order of this hierarchy. It means that if a language can relativise a noun phrase in a given grammatical function in the hierarchy, within the RCs, then it can relativise a noun phrase in any grammatical function higher in the hierarchy, but not conversely. Thus the generalisation made here accounts for the fact that there are languages that can relativise SUBJ and direct OBJ, indirect OBJ, OBJ of PREP, and genitive, but can not relativise OBJ of COMP. Keenan and Comrie (1977) gave the Chinese language as example. This also accounts for the fact that there are no languages that can relativise indirect OBJ but can not relativise direct OBJ or SUBJ.

Hierarchy: SU>DO>IO>PREP>GEN>OCOMP(>means more accessible than)		
Examples:		
SU	→	The dog that bit the child…
DO	→	The child that the dog bit…
IO	→	The friend that I wrote a letter to…
OPREP	→	The city that I talked to you about…
GEN	→	The woman whose son is Michael…
OCOMP	→	The student that I am taller than…

Table 2 Example for Noun Phrase Accessibility Hypothesis (NPAH)

The third claims the fact that the presence of one property implies the presence of another, but not conversely, imposes a markedness relationship within the NPAH. Hyltenstam (1987) says that: *Expressed at a very general level, one can say that linguistic phenomena that are common in the world's languages, that seem easier for linguistic processing, and that are more "natural" than others, are unmarked as opposed to their marked variants.*

The implicational markedness is another aspect of markedness in which the implied form is unmarked and the implying form is marked (Greenberg, 1996). Given such situation of NPAH, a language which allows relativisation of direct OBJ is more marked than a language that allows relativisation of SUBJ only, where the direct OBJ is the implying form and subjects the implied form. The notion of the markedness relationship says that learners tend to progress from a less marked form to a more marked form in the process of language acquisition (Braidi, S. M., 1999).

Another point that is important here is the use of resumptive pronoun i.e. the retaining or copying of the pronoun in RC. There is no resumptive pronoun in ENG. Therefore the following sentences are ungrammatical:

Examples for pronoun retention
SU   * The woman who he spoke to me…
DO   *The woman who the car hit her…
IO   *The boy who I gave the book to him…
OBL *The girl that I talked to you about her…
GEN *The girl that I am taller than her…

Table 3 Examples for Pronoun Retention

According to Keenan and Comrie (1977), the resumptive pronoun makes the acquisition of RC easier. It is more likely that the resumptive pronoun occurs in the lower position in the NPAH. In this hierarchy the semantic meanings are difficult to retain without pronoun retention. The relative pronoun in the NPAH can potentially appear as described in the following: The relationship between pronoun retention and markedness can be shown below (Hyltenstam, 1987, 1990):

Typological patterns for retention (+) or deletion (-) of pronominal copies in RCs:

SU	DO	IO	OBL	GEN	OCOMP	most marked
-	-	-	-	-	-	
-	-	-	-	-	+	
-	-	-	-	+	+	
-	-	-	+	+	+	
-	-	+	+	+	+	least marked
-	+	+	+	+	+	(from Hyltenstam, 1990)

Table 4 Markedness Hypothesis for relative pronoun by the NPAH

This table presents the relationship between pronoun retention and markedness. It shows that the less marked the form is, the more likely it is that the resumptive pronoun is retained. Gass and Selinker (2001) give the resumptive pronoun hierarchy as follows:

OCOMP>GEN>OPREP>IO>DO> SU

(>means resumptive pronoun is more likely to occur in this position than the preceding.)

8.5.2. **Perceptional Difficulty Hypothesis (PDH)**

According to this hypothesis, processing of sentences is influenced by the limitation of the human temporary memory (Kuno, 1974). It should be mentioned that what is discussed on the basis of the notion of PDH is that the centre-embedded syntactic construction is perceptually more difficult than the right - embedded construction on the grounds that a centre-embedded clause interrupts the flow of the sentence and taxes more on the short term memory. I want to give examples for each so that it can be understood better (Kuno 1974; Sheldon 1972).

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Centre-embedded:

13) The cheese that the rat [that the cat chased] ate] was rotten.

Right -embedded:

14) The cat chased the rat [that ate the cheese [that was rotten]].

So the centre-embedding of the first sentence "the cat chased" is centre-embedded in the clause "the rat...ate" that in turn is centre-embedded in the matrix sentence. It makes the sentence extremely hard to comprehend. An RC in the right-embedded constructions as shown in the second sentence is comparatively easy to understand.

In spite of the fact that Kuno did not intend to mention the order of difficulty in PDH, the order difficulty of the various RCs on the base of this hypothesis would be as illustrated below.

Bear in mind that the first letter is the grammatical function of the noun phrase in the matrix sentence, and the rest is the grammatical function of the noun phrase in the RC. Accordingly, RC "I know the girl who I am taller than" would be written as OOCOMP.

The prediction of the order of the difficulty by PDH
OS,OO, OOPREP, OGEN, OOCOMP> SS, SO, SIO, SOPREP, SGEN, SOCOMP
(> means is easier than)

Table 5 Prediction of the Order of Difficulty by PDH

This formulation is adapted here from Kuno (1993) who is a Japanese Linguist at Harvard University.

8.5.3. **Subject Object Hierarchy Hypothesis (SOHH)**

Motivated by NPAH, PDH and the notion of depth of embeddedness, as O'Grady (1993) says, Hamilton (1994) suggested the SO hierarchy on the basis of two main assumptions. (a) a processing discontinuity in the main clause is caused by centreembedding of the relative clause (b) a single discontinuous S is caused by relativised SUBJ, while two phrasal discontinuities within RC (S and VP) are caused by the relativised OBJ. I write this below, adopted from Hamilton (1994:135):

Relativised SUBJ:

    15) The man who $_i$ [S t $_i$ saw us].

Relativised OBJ:

    16) The man who $_i$ [S we [VP saw t $_i$].

As Hamilton (1994) states this hierarchy is of three levels in origin, OS < OO/SS< SO (< means is implicated). A counting method was utilised by many scholars, like O'Grady (Hamilton, R., L., 1994). So if the depth of embedding of the gap is counted, we should stretch forth and have six hierarchies. Each of them includes miscellaneous RCs as shown in the following:

Order of difficult by SO Hierarchy Hypothesis (SOHH)

Order:
OS/OGEN>OO/SS/SGEN>SO/OIO/OOPREP>SIO/SOPREP>OOCOMP>SOCOMP
1   2   3   4   5   6

Relative Clause Type	Example Sentences	Number of Discontinuities
SS	The man [who i [IP ti needed a job]] helped the woman	2
SO	The dog [that i [lp the woman [vp owns ti]]] bit the cat	3
SIO	The woman [who i [lp Bill [vp passed a not [pp to ti]]]]is a nurse	4
SOPREP	The candidate [who i [lp I [vp vote [pp for ti]]]] didn't win the election	4
SGEN	The man[[whose i wallet] j [IP tj was stolen]] called the police	2
SOCOMP	The person [who i [IP John [vp is taller [cp than[IP ti [vp e]]]]]] is Charles	6
OS	Jerry likes the teacher who i[IP ti explained the answers to the class]	1
OO	A man bought the clock that i [IP the woman [vp wanted ti]]	2
OIO	The teacher looked at the girl who i [IP I [vp explained the sentence[pp to ti]]]	3
OOPREP	I saw the woman who i [IP I [vp went to elementary school [pp with ti]]]	3
OGEN	I know the man [whose i bicycle] j [IP tj is new]	1
OOCOMP	I know the hotel which [IP Hilton [vp is cheaper[cp than[IP ti [vp e]]]]]	5
Note: The first letter showing the grammatical function of the NP in the main clause and the second one showing the function of the NP in RC.		

Table 6 Order of difficult by SO Hierarchy Hypothesis (SOHH)

If we compare all these hypotheses, which are based on different theoretical grounds, then we will reach a disparate conclusion. They give rise to dissimilarity respectively but show a complementary order of difficulty of RC, mentioned by Izumi (2003).

8.5.4. **Linear Distance Hypothesis (LDH)**

This hypothesis emerged on the recommendation of Tarollo and Myhill (1983). It claims that the prediction of the difficulty of RCs is possible through the linear distance between the head and the gap, say O'Grady et al. (1993), but its original form was the suggestion made by Tarollo and Myhill (1983) and Hawkins (1984). So as to put this notion into use we simple should count the number of intervening words between the head and the gap.

A further implementation was made later by Gibson (1998). According to this implementation only the elements introducing new discourse referents, namely noun phrase and main verbs, are calculated. Gibson says that there is both integration and a storage-cost component and named this as "Syntactic Prediction Locality Theory" (SPLT). The integration-cost component gives the idea that the integration of a new head into the structure is getting more difficult because of the fact that the distance between the head and the gap increases. The storage (memory)-cost component suggests that predictions that have been made earlier in the sentence become more difficult to save in memory because of the fact that the distance between the head and the gap increases. Even though Gibson didn't mention that this theory is a version of LDH, it is better to handle this under the LDH, because the two approaches in this area are not different from each other. An example is given below:

Subject RCs:

    17) The lion that [_ carries the cow]

So as suggested by LDH there is 1 word between the head and gap. On the other hand, according to SPLT, there is 0 word.

Object RCs:

    18) The lion that [the cow carries _]

And in the OBJ RCs, we see that there are 4 intervening words between the head noun "the lion" and the gap as suggested by LDH and 3 intervening words as suggested by SPLT.

No matter which version of LDH is used, the same result is reached, i.e. a shorter distance between the head and the gap in SUBJ RCs than direct OBJ RCs. This shows that subject RCs should be easier to acquire than direct OBJ RCs.

8.5.5. **Structural Distance Hypothesis (SDH)**

According to the claim made by this hypothesis, it is possible to predict the difficulty of RCs through differences in the depth of the embedding of the gap (Collins, 1994; Hamilton, 1995; Hawkins, 1999; O'Grady, 1997, 1999). For example, O'Grady says that the relative difficulty of SUBJ RCs and OBJ RCs can be regulated by the distance calculated with respect to intervention nodes between the gap and the head, i.e. we can decide the respective difficulty of subject and direct OBJ RCs in the way we count the number of nodes intervening between the gap and the head of the RCs.

Let's look at the following sentences where the ENG SUBJ and direct OBJ RCs are applied.

SUBJ relative:

    19) The lion [CP that[IP_ carries the cow]]   2 nodes (CP&IP)

OBJ relative:

    20) The lion [CP that [IP the cow [VP carries _]]] 3 nodes (CP, IP &VP)

It is clear that the structural distance between the head and the gap is shorter in a SUBJ RC than in a direct OBJ RCs which give the same prediction as LDH, i.e. SUBJ RCs should be comprehended easier than OBJ RCs.

8.5.6. **Word Order Difference Hypothesis (WDH)**

There were scholars who were searching for processing of complex structures like RCs in the area of cognitive psychology. Their emphasis was especially the impact of canonical against non-canonical word order on this process. Some of these scholars were such as MacDonald & Christiansen (2002) and Tabor, Juliano, & Tanenhaus (1997). In particular, MacDonald & Christiansen point out that SUBJ relatives are relatively regular in their word order, on the grounds that this structure has the same word order as simple active one-clause sentences. And these kinds of simple active one-clause sentences are very frequent in ENG (MacDonald, M. C., & Christiansen, M. H., 2002: 40).

Accordingly, these cognitive psychologists put forward that the acquisition processes for SUBJ relatives are helped by the comprehender's experience with simple sentences. They conclude that such help is not valid for OBJ relatives because they have a more irregular word order, i.e. a person's previous experience with simple sentences (namely those with canonical word order) is less relevant in the case of direct OBJ relatives than SUBJ relatives.

Example in the following shows the application of what WDH predicted for the SUBJ and OBJ relatives of ENG language, and the word order type is written thereafter.

 SUBJ relative:

21) The lion [CP that [IP__ carries the cow]]

This sentence is an S V O type, i.e. canonical as stated by MacDonald and Christiansen, which is very common in the ENG language.

OBJ relative:

22) The lion [CP that [IP the cow [VP carries __]]]

And this sentence is an O S V type, i.e. non-canonical, and contrary to the one above this type is not very common in the ENG language. Thus SUBJ RCs should be understood easier that direct OBJ RCs. It should be stressed here that this result converges with the result taken from two hypotheses that I have discussed before; namely LDH and SDH.

9.0.   Empirical Part 1: Corpus Analysis

Having finished the descriptive section of the dissertation in the last chapter, this part shall give the framework of my investigation related to the use of RCs in the different kinds of corpus. This ENG corpus consists of school books such as chemistry and history on the one hand, literature and press on the other hand. I chose the school books from 10th and 11th grades for this empirical analysis about ENG RCs as I wanted to know how ENG RCs are designed and placed in the school syllabus, and to know how difficult they can be for high school students of the tenth and eleventh grade, since they are the same level (three groups of 11th grade) where I will make my other investigation, i.e. collecting the data from the 10th and 11th grades. The tests I will apply to such grades' students are the high school students from the same level, so there is a connection between the 1st and 2nd empirical studies pertaining to the acquisition of the different types of ENG RCs; both are the same grammatical construction whose difficulties will be looked into in both studies. It is perhaps possible to find the syntactic differences of ENG RCs between the school context and the context of corpus (such as mass media). The other reason that the 1st empirical study of ENG RCs will be made is that relative pronouns (ENG relativisers) will also be a crucial subject in the 2nd empirical study i.e. all relativisers from all three tests in the 2nd empirical investigation will be collected, comparing GER and TUR groups with respect to the success in acquiring and using ENG relative pronouns (with the title: other research items). The question of this section is: What is the frequency of some ENG relative pronouns in different branches (also some types of RCs) and where are the ENG RCs more often used in the social sciences or in natural science?

One of the important factors of ENG RCs is that they contain a reduced type i.e.: reduced RCs inspired many scholars to accept the "garden path effect" by Frazier (1987). It has been discussed in "psychosyntatic part". I have discussed these reduced types in detail (see my research of the school books in this section). I am going to extract all types of ENG RCs from all of the fields mentioned and analyse them with respect to their frequency of use and a comparison of what difference and

changes between them exist, before the analysis of the findings from the corpus will be given.

9.1. **In the History Book of the 10th or 11th Class of High Schools**

Before I had begun with this investigation, my thought was that RCs would be used more often in history books than chemistry books, because in the social sciences we need to elaborate on a subject much more than in the natural sciences. In the natural sciences the construction must probably be short in order to be understood better or faster. Otherwise the data given might not be understood as quickly as necessary (perhaps the reason for this is the restriction of the short-time memory of human beings; the number of complex RCs I have found supports this idea: more complex RCs are found in the history book (100 out of 829) than in the chemistry book (15 out of 774).

As I have extracted the number of some kinds of the ENG RCs from the mentioned areas, this is also what maybe, to some extent, a quantified inquiry. I have elicited all types of RCs (even from such areas as questions, answers, distributions, tables, diagrams, photos; because they are also read by the reader) in a history book from the 10th or 11th grades of high school. The book (John A. Kerr 2006) contains 136 pages. My focus was especially on the frequency of three points: The first one was to know how many relative pronouns were used; the second and the third ones were how many zero (ϕ) RCs and reduced RCs were used. The reason is that these types may cause acquisition difficulties. The general question of corpus analysis here is: whether the number of RCs is higher in the social science (history book) or in the natural science (chemistry book).

Relative Clause Types	Human	Nonhuman	Total	Percentage
1.Who	141	-	141	17.00%
2.Which	8	153	161	19.42%
3.That	-	62	62	7.47%
4.What	-	23	23	5.77%
5.ɸ	3	32	35	4.22%
6. Reduced RCs (with):-ing	50	53	103	12.42%
7.Reduced RCs(others): -ed + passive(-V3);from these: 8(–being+V3)			176	21.23%
8.PREP.from these:1xunder;2xby;1xafter;2xover;2xthrough			40	4.82%
9. Others:			88	10.61%
Total:829				

Total of Complex RCs (Human+Nonhuman; 76x2RCs;18x 3RCs; 4x4RCs; 2x5RCs**)=** 100

Table 1 Frequency of Relative Pronouns and Relative Clause in the History Book: Britain and Scotland

Taking a look at the table above, it is seen that the pronoun "who" is used less than the pronoun "which" with a quota 17.00% to 19.42%. Even the "which" as non-human is higher than the human antecedent. The significant point in the table is that the total number of reduced RCs (number 6 and 7, in the table) together with the zero (ɸ) (number 5 in the table) is 314 (37.87%). This is higher than the total number of the pronouns "who, which" is 302 (36.42%). Therefore, while teaching the RCs in the school, such kinds of RC (reduced and zero) should be emphasised. Of course, first, the syllabus should be prepared in this respect. It is difficult to understand why, hitherto, the RCs with relative pronouns are intensively treated in schools.

In this context, the translation work (from ENG into GER) of the sentences containing such types of RCs is not so easy. In terms of the translation ENG-GER, a quotation from Gertrud Pannek (1988:77): "*Sieht man zudem einmal von der fehlenden syntaktischen Entsprechung für den englischen contact clause im Deutschen ab, müßte zero oder (ϕ) ebenfalls als Übersetzung des deutschen Relativpronomes herangezogen werden*". She points out that for translation one must add the GER pronouns on the grounds that zero RCs do not exist in GER. In addition, deciding whether the antecedent human or non-human is another point which plays an important role. Even in TUR there is no such type. But it could not probably be more difficult than GER during the translation (perhaps, due to negative transfer or interference problem) because as it has been shown (in the fifth chapter), the construction of RCs in TUR is not made through the relative pronouns but rather through the suffixes.

To return to the table, while "what" as a relative pronoun has the lowest frequency in this school book with 23 times (5.57%), reduced relative type (-ed, being V3) has the highest frequency in the book with 176 occurrences (21.23%). Another interesting point in this table is that although the subject of the book is human activities like history, the total number of occurrences of "who" is not bigger than "which": 141(17.00%) to 161(19.42%). After assessing the figures of the result of the history book, the data from the chemistry book will be presented.

9.2.   In the Chemistry Book of the 10th or 11th Class of High School

The same types of RCs were evaluated and the numbers of their distribution in the chemistry book were noted. The book (Allan Eric and Harris John, 2008) is used in the 10th and 11th grades. It contains 250 pages. The questions raised for the high school history book are also valid for chemistry: my attention was particularly on the frequency of three points: The first one was to know how many relative pronouns were used; the second and the third ones were how many zero (ϕ) RCs and reduced RCs

were used in this chemistry book. The question here is again: whether the number of occurrences is higher in the social science (history) book or in the natural science (chemistry) book.

The table is below, the comment will follow:

Relative Types	Human	Nonhuman	Total	Percentage
1.Who	4	-	4	0.51%
2.Which	-	128	128	16.53%
3.That	-	14	14	1.80%
4.What	-	7	7	0.90%
5.ϕ	-	4	4	0.51%
6. Reduced RCs:-ing	8	96	104	13.43%
7.Reduced=-ed,V3;From these:17x(-being+V3)			410	52.97%
8.PREPFrom these: During:5; Under:2 ;By: 4 ; After: 2			71	9.19%
9. Others:			32	4.13%
Total:774				

Total of Complex RCs (Human+Nonhuman; 11x 2 RCs&4x3RCs) = 15

Table 2 Frequency of Relative Pronouns and Relative Clauses in the book of Higher Chemistry

It is clear from the table that the number of occurrences of "which" is much bigger than of "who". This might be that the subject of the book is about chemical matters or materials because, as what is discussed is non-human, the pronoun chosen is probably "which". As seen, the seventh type i.e. reduced RCs (-ed, being+V3) has an outstanding frequency with 410 occurences (52.97%). Together with the sixth (reduced, with –ing) it adds up to 514 (66.4%). If the zero or (ϕ) type is added, the

distribution rises to 518(66.91%). As in the first analysis of the history book (social science) my attention in this analysis was on the RC types that were not used with relative pronouns. It is obvious that the RCs constructed with relative pronouns occur much less than those that not constructed with a relative pronoun. At the same time, the number of RCs with prepositions, at 71 occurrences, (9.19%) is not low.

The table of the history book and chemistry book can be compared as the last step. The number zero-type and relative pronoun with the preposition stands nearly the same; namely, the difference between their distributions is not so great. It is very important that figures of reduced types in both school books are quite high, even higher than those constructions introduced by "who, which". This brings a question to mind: Is the ENG language on the way to grammatical change regarding RCs?

I think, as known, like some constructions in GER Grammar, some constructions in ENG change over the course of time; this is in keeping with the general view in the theory of the grammar of human language. For example, the final position of the finite verb in a GER subordinate clause tends to move to second position as shown below:

1) a.Verb-Final-Position (subordiante clause-weil/da):

Ich konnte nicht rechtzeitig zu meinem Termin erscheinen, weil/da ich zu spät aufgestanden bin.

   b. Tendency (Verb-Second-Position): Ich konnte nicht rechtzeitig zu meinem Termin erscheinen, weil/da ich bin zu spät aufgestanden.

I have heard such sentences from GER TV and GER native speakers many times. It is also possible that the grammatical change takes place first in the verbal communication, then in the written context. So the same situation can be regarded for ENG. My opinion is that the RCs tend to be produced more with reduced forms than with pronouns. The evidence came from this corpus analysis. That is the percentage of the RCs types zero, -ing, -ed, -ed+V3, all together, in the table of history book is 37.87%. This is both bigger than the total distribution of "who" and "which" with 36.42% and not low in comparison with total number of RC types that have been

found in the complete book. Further evidence is that the percentage of reduced RC types in the chemistry book of the high school with 66.4 % (figure 6+7; table 2) comprises two third of all RCs found. Therefore it can be said that there is general tendency to use a reduced type together with a zero one. This change is likely to be much more in verbal communication (people like to shorten the linguistic elements when spoken) than in the written context and perhaps this will happen in the written context later.

Comparing both corpus studies, this can be said: the total number of RCs extracted in the history book is much higher than in the chemistry book: 829 to 774. Thus my corpus data has shown that RCs are used more in the social sciences than in the natural sciences.

Even the distribution of RC types per page (both books have the same size and the same character) shows a similar difference:

Social science: 829:136 pages= 6.09 RCs per page

Natural science: 774:250=3.06 RCs per page

In the reduced form there are some verbs which have been used with a high rate. I have extracted such verbs that were mostly helpful for the subordinate clause so that a reduced type could have been used. I write the ones which were constructed with "–ed" or "-ing" form. Their frequency is included here. Those which are listed first were used with a higher frequency than the others:

In the chemistry book:

 "*Needed › given ›shown › used › involved ›considered ›required ›concerned › consisting ›related ›described ›formed ›containing ›caused ›surrounded ›linked ›located ›obtained ›illustrated › listed › expressed ›found"*

In the history book:

"Included ›made ›involved › backed › supported ›called › led › needed › identified › facing ›based › held › defined ›"

9.3. In the Literature

The aim of the studying RCs in literature is to find whether they present the same factors as found in the previous fields, history and chemistry books. This area for the investigation of RCs is important because the novel gives a real context for everyday ENG. In other words, literature is a context where RCs are usually used so that a longer sentence can be constructed. Many RCs can be connected with the matrix sentence with the target of telling more. And the frequency of RCs I have found is also meaningful. So as to know how some types of RCs are distributed in such corpus, a novel has been analysed and all RCs have been noted. The novel (Doris Lessing, the Cleft, 2007) consists of 260 pages in the prose format. It was written by the Nobel Prize winner Lessing. It could have been better to choose a general work from ENG literature as such from James Joyce. This work, from Lessing, is also not bad, because her books are read by millions of native speakers of ENG and it reflects the ENG language today.

The questions for the high school history and chemistry books are valid for literature as well. My attention was especially on the frequency of three points: The first one was to know how many relative pronouns were used; the second and the third ones were how many zero (ϕ) RCs and the reduced RCs were used. The question here again is: How high is the frequency of RCs? The comment and the data are presented below:

THE CLEFT

Relative Types	Human	Nonhuman	Total	Percentage
1.Who	236	-	236	20.92%
2.Which	2	105	107	9.48%
3.That	-	11	11	0.97%
4.What	-	101	101	8.95%
5.φ	19	156	175	15.51%
6. Reduced RCs:-ing	37	22	59	5.23%
7.Reduced RCs:-ed,V3.From these:5x(-being+V3)			72	6.38%
8.PREP.:by:5,over:1, without:1			35	3.10%
9. Others:			332	29.43%
Total:1128				

Total of Complex RCs (Human+Nonhuman:

131x2RCs; 24x3RCs; 6x4RCs; 3x5RCs; 2x6RCs) =166

Table 3 The Frequency of Relative Pronouns and Relative Clauses in the Novel: The Cleft by Doris Lessing.

First, as it is seen from the table, the frequency of other types of RCs is highest with a percentage of 29.43%. While the number of "who" is much higher than "which" and also from all other types of RCs, the number of "that" has interestingly the lowest percentage, at 0.97%.

On the other side, the total percentage of reduced RCs is 11.61% (figure 6+7; table 3). This is quite interesting because it is much lower than both the history book and chemistry books. Another interesting point is that the percentage of zero (φ) with 15.51% is higher than that of both the history and chemistry books. I find it very important and interesting on account of the fact that a novel is real context for everyday ENG. This also supports the claim that has been made before, that ENG

speakers tend to construct RCs without relative pronouns (or omitting all other verbal elements, for example auxiliary verbs) especially in verbal communication. We should take it for granted that the content of the novel is nearer to spoken language.

Furthermore, the number of complex RCs in the novel is higher than in history and chemistry: Novel 166 >history 100 > chemistry15. This is significant, as in novels one may produce more complex RCs because one puts more information in a sentence, perhaps to tell more. And why is the number of such complex RCs in chemistry less than in both of the others? Because of the information processing in the brain, it is worth pointing out that, as the scholars state, the mental capacity of human beings is restricted.

Moreover, the number of RCs used in the novel book is 1 128; 1 128:260= 4.23 RCs for each page. So if a summery of these three areas, i.e. history, chemistry, and literature, are made with respect to the number of RC distribution for each page: History 6.09 > literature 4.23 > chemistry 3.06.

In the next section the usage of RCs in the press will be handled.

9.4.   In the Press and the Mass Media.

The frequency of the use of RCs in ENG in the press is also high. The reason may be that for forming long sentences, the subordinate clause is needed. In most cases this necessitates RCs. Of course, the language used for the media is different than the language used in school books. Imagine that in contrast with adults/teen-agers, elderly people who follow the mass media are the people who, in general, have already finished their education and have experience with language and life.

This case leads us to the following observation: It is claimed by the linguists that there are two codes when using a language, no matter which language it is. The first code is the language that is used in the street, at home, or with friends, whereas the second code is the language that is used in schools, and in the media. Both correspond to the education level of the addressees (in all likelihood, my parents belong to the first code, as both my mother and father have never gone to school). According to this idea, the

structure of each code is different: one uses short sentences, with simple structures, the other uses more long and complex sentences (cf. Also Bernstein B., 1971). According to the second code, more RCs are essential. We can assume that the frequency of RC use in the press is quite high, on the account of the fact that complex structures require more than one RC. In spite of the fact that this requires large corpus research a few sentences as evidence I collected can be helpful for clarification. Let's see the following sentence[28]:

2) "There was more good news <u>as</u> the US National Hurricane Centre in Miami said <u>that</u> tropical storm Alex, <u>which</u> has pounded parts of Central America and <u>is heading</u> towards Mexico's Caribbean coast, was likely to strike well away from the area <u>where</u> BP is trying to stop the oil leak".

As seen in the example above[29] there are five subordinates clauses, three of which are made with RCs. Two RCs are formed with the relative pronoun "which", whose head noun is "storm Alex" (it introduces a SUBJ Relative). The other RC is the Adverb RC constructed by the question word "where" which creates an OBJ Relative (where BP is trying to stop the oil leak).

Similar to the language of the press, the language of official letters belongs to the second code and needs concentration to understand, because the sentences are quite long, containing many subordinate clauses. They might cause perceptual difficulties, even for mother tongue speakers. Sometimes they might be read twice so that the confusion can be surmounted. Here is an example from GER official letters I received:

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[28] Newspaper: Guardian, BP oil spill: Tony Hayward set to step down, Russian official claims, 28. June.2010.

[29] For further examples see the sentences in appendix 5B at the end. For example one of the sentences that is very difficult to understand is number 19, has 5 RCs a few of which are built with reduced RCs: 2 reduced (-ed), one guestion word, 2 reduced (-ing)

3) "Bei den mit Pflichtzeitbeitragszeit gekennzeichneten Zeiten, zu denen keine Beitragsklassen angegeben sind, wurde anstelle des tatsächlich entrichteten Beitrages, der im Rahmen des Lohnabzugsverfahrens eingezogen wurde, das der Beitragsbemessung zugrunde liegende Entgelt abgegeben."

In this long sentence there are many subordinate clauses, all of which are RCs. There are two important ones: the first one, "Zu denen keine Beitragsklassen angegeben sind", makes a connection with the head noun „Bei den mit Pflichtzeitbeitragszeit gekennzeichneten Zeiten" which also consists of other RCs semantically: "die Zeiten, bei denen mit Pflichtzeitbeitragszeiten gekennzeichnet/worden/sind." The other RC is „der im Rahmen des Lohnabzugsverfahrens eingezogen wurde" which ties with the head noun „des tatsächlich entrichteten Beitrages", which contains other RCs in itself semantically, i.e. „Der Beitrag, der tatsächlich entrichtet/worden/ist."

Finally, the matrix sentence, which is built with a passive construction, can be rewritten so: „Bei den mit Pflichtzeitbeitragszeit gekennzeichneten Zeiten wurde das der Beitragsbemessung zugrunde liegende Entgelt abgegeben" it is clear from the matrix sentence that there is a participle one construction: "das Entgelt, das der Beitragsbemessung zugrunde liegt". In this long official sentence, two RCs are formed with the second type of GER RC whose adjectival construction as RC premodify the antecedent through "gekennzeichneten" and "entrichteten".

In particular, such constructions, which consist of many RCs, are chosen by people who are working as solicitor, bureaucrat, et cetera. This supposing is probably valid for GER, TUR and ENG. Nevertheless further inquiries into the corpus are needed.

I want to present the list of sentences of the reduced form of RC drawn from the history and chemistry books that may cause comprehension problems when read (The total number of RCs from these books was given before, with the results and discussion; here only the list of the sentences with RCs that are a little more difficult for the students of the aforementioned grades to understand will be given). The reader

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may not distinguish between a reduced RC and other functions of reduced parts. Accordingly, how can the students not confuse the following things? Such as with "-ing", present and past continuous tense "-ing" or nominal function and other functions of "-ing"; with "-ed", the verb with past perfect/simple past tense "-ed", the reduced type V3 (passive) which comes after the head noun.

The omission of the relative pronoun is often essential when there are many "that"s formed in a sentence, as "conjunctions" and "relative pronouns":

4) They said **that** the book **that** they had read was about the forest **that** has been burned down.

Repeatedly, the sentences containing "verb+ing" sometimes cause ambiguity or perception problems. One should ask a question to know if it is a reduced RC: "who", "which" "how", "what", etcetera, by rereading and looking at the antecedent or focusing on the sentence meaning in order to know if it is an RC.

The lists of extracted sentences are given at the end of this work, marked with two symbols (see Appendix 5). The symbol (-) means that there is no RCs with (-ing) in the sentence, the students may think there is. The symbol (+) means that there is an RC with (-ing) in the sentence. The target here is to show how difficult it is for the students learning ENG of the aforementioned grades in the 2nd empirical study (three tests) when reading a sentence and deciding if this sentence has an RC or not. I want to write below the examples for each from data so that it can be clarified better:

With(-); the sentence number 11 of history book in appendix 5B: *"After the war, for example, women were ejected from the "men's work" jobs **they had done** during the war years and in both government policy and commercial **advertising** the idea that a woman's place was in the home was as strong as it had ever been"*

In the example above there are two RC; it is that without relative pronoun: the "men's work" jobs they had done = the "men's work" jobs that/which they had done" and another is "idea that a woman's place was in the home" (but not reduced). The students may also perceive the word "advertising" as a reduced RC but it is not; it is a

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noun. The reason is that the reduced type with "-ing" sometimes makes perceptual problem.

With (+); the sentence number 5 of chemistry book in appendix 5A: "*The data **given** above were obtained by some pupils **using** apparatus similar to that **shown** in Figure 2.11*"

In the sentence above there are three RCs: the first and third ones are reduced forms of the passive construction, i.e. "the data given = the data which/that was given" and "that shown = was shown or has been shown"; the second one is reduced from the present continuous tense, "using = who are using". But if the students read it fast, they may think that the word "using" is a verb conjugation.

After the 1st empirical study had been done it was clear how often the types of ENG RCs, especially the reduced ones and zero types, are used in different contexts. The corpus analysis has a connection with the 2nd empirical study because it is also about the difficulty of ENG RCs. The history and chemistry books are taught to students in the same class as the subjects of the 2nd empirical study. Both empirical studies deal with the same grammatical category and its problems with acquisition.

In the next chapter, concerning the 2nd empirical study, the ENG RCs from an educational perspective will be investigated.

10.0. Empirical Part II: Questionnaire Study

This chapter is concerned with the main research. This quantitative empirical section is more comprehensive than the 1st empirical part. It was carried out at different high schools with the purpose of collecting and analysing the relevant data. The data was collected through three tests. The aim was to answer the cardinal questions of the dissertation.

The information regarding this empirical research will follow.

10.1.0. Methodology

In this section the basic research questions of my doctoral thesis will be given. The other points that will be presented are: The selection of items and subjects, the research design, three hypotheses that are tested, types of RCs for the research, and a brief on three measuring tests. At the end of this section it will be clarified how the second empirical results will be scored.

10.1.1. Research Questions

The main target of this empirical study is to know if the informants of GER L1 and TUR L1 and L2 transfer the structures of their languages into ENG when producing the ENG RCs, considering that these languages are typological different. For this purpose, NPAH, PDH, and SOHH will be tested. The research questions are the following:

1. **The main question:** to find out whether the acquisition of ENG RCs are more difficult in the acquisition and production for GER L1 or for TUR L1 and L2 learners, and whether typological differences of these languages are advantageous or disadvantageous.

2. Which types of RCs (SU, DO, IO, PREP, GEN, and COMP) are easier to acquire than the others: accuracy order of RCs?

3. Do the GER L1 TUR L1 and L2 follow the order of acquisition as predicted by NPAH?

4. Are centre-embedded RCs more difficult to understand than right-embedded Rcs, as predicted by PDH in the GER and TUR learners' acquisition of ENG RCs?

5. How difficult is sentence discontinuity in the main clause and RCs as predicted by SOHH of the GER and TUR learning ENG RCs?

6. Other items that will be analysed are: Preposition-stranding, Resumptive Pronouns, Relativiser Selection, Avoidance Phenomenon, Implications for UG, Interferences and transfer.

10.1.2. The Items Selection for the Study

The test items used in the first two tasks were adopted from Marianne Celce-Murcia and Diana Larsen-Freeman (1999), Chen (2004). The test items used in the third tasks, GER/TUR TRANS task, were developed by me.

It seems to be that most of the investigations concerning the six types of RC (SU, DO, OPREP, IO, GEN, and OCOMP) are in accordance with the NPAH. In the first and the third test in this study the task was to find out which types of RC (SU, DO, IO, PREP, GEN, COMP) are easier to acquire than the others. Regarding the position of the head noun, however, the types such as OS, OO, SS and SO have been mostly proven in the literature. Izumi (2003) referred to this issue and said that this is a limitation. Because of the fact that this need exists in the research, 12 types of RC have been included. As shown in the following table:

Matrix Sentence in Subject Positioning/centre-branching/embedded
1. SU   The dentist who is standing in the door is a good dentist.
2. DO   The artist who you saw yesterday is very famous.
3. IO   The man who(m) I have given the book to is my classmate.
4. OPREP The student who I worked for yesterday lives in Paris.
5. GEN   The student whose mother is a doctor got ill.
6. OCOMP The person who John is taller than is Michael.

Table 1 Matrix Sentence in Subject Positioning/centre-branching/embedded

Matrix Sentences in Object Positioning/left-branching/embedded
1. SU   I know a man who drives to Potsdam every day.
2. DO   Stefanie took the letter which Hans sent to Julia.
3. IO   I love the woman who(m) Markus helped in subway
4. OPREP I have seen the saleswomen with whom I went to school.
5. GEN.   The teacher has shown a student whose bicycle is red.
6. OCOMP I know the hotel Hilton is cheaper than.

Table 2 Matrix Sentences in Object Positioning/left-branching/embedded

According to Schachter, Tyson and Diffley (1976), two things must to be considered for an adequate description of SL learner interlanguage. One is the actual performance of the learners in the production and the other is their intuition about the TL during the production. We can talk about two different data. One is the data of the authentic linguistic production and another is the intuition data (during the production) which is based on learners' reactions to already produced sentences, such as whether a given sentence is grammatically correct or not. The study that will be done is based on three kinds of elicitation tasks:

1. Sentence Combination Tasks (SCT: learners' performance data in the production: Izumi; 2003).

2. Grammaticality Judgement Task (GJT: learners' performance data in the production: Ellis; 2005)

3. GER/TUR TRANS task (intuitional data of the learners while producing).

In the first test, the SCT (see appendix 1), 12 sentences were selected which contain 6 matrix sentence in SUBJ positioning/centre-branching and 6 matrix sentences in OBJ positioning /left-branching. Such sentences have been tested before (see Gass (1979) Izumi (2003) Eckman, Bell and Nelson (1988) and Hamilton (1994)). The students' task was to combine two sentences (B with A) using a proper relative pronoun. The aim was to prove whether the NPAH, PDH, and SOHH are valid for the GER and TUR students. Other things that will be analysed are the correct relative pronoun selection and avoidance behaviour of RC formation.

Example: (A) I know the man. (B) His bicycle is new. (When they combine this sentence GEN, matrix sentence in OBJ positioning, will be formed).

In the second test, the GJT (see appendix 2), 29 items were selected with the purpose of checking the proficiency of relative pronoun omission, incorrect use of the relative marker, and resumptive pronouns. There were 11 grammatically correct/true sentences and 18 grammatically incorrect/false sentences.

Examples: Almost all of the people appear on television wear makeup (relative marker omission); I met a girl who (m) Mary is shorter than her (resumptive pronoun); Bob admires the professor which John lives next to (use of relative marker is incorrect).

In spite of the fact that it has been declared in "scoring" that errors involving articles or tense are ignored, there was a mistake in test item number 11 in GJT. The word "all" was missed in the sentence: "Almost **all** of the people appear on television wear makeup". The problem here was whether without "all" (in bold) this sentence might have been a negative influence on data production of the students.

I decided to do two things to see whether a difference between the sentence with "all" and without "all" exists. The first step: I counted this sentence in all three groups from my data I collected two years ago. The results are: in first group 13 true, 3 false, in the second group 11 true, 5 false, in the third group 12 true, 4 false. The reason why all of the groups did nearly the same could be that there are two verbs, "appear" and "wear", but only one SUBJ and the verb of the main sentence is "wear". So it was perhaps not so difficult to realise this. The second step: In the additional section (under test 2B), "GER-ENG translation task", I also gave the task GJT with corrected form (with "all") to the new group of TUR students from Germany to compare with the old data (under test 2B). The result is: 12 true, 4 false.

With respect to this sentence such a result can be expected: Even though the sentence must be given as false the differences in the findings are not significant.

In the third test, a GER/TUR TRANS Task (appendix 3) there are two sections, A and B. In A, the students were asked to directly translate GER/TUR RCs into ENG. 10 sentences were selected containing 5 sentence matrix sentences in SUBJ positioning/centre-branching and 5 matrix sentences in OBJ positioning/left branching. In section B there are two sentences to be combined in order to have one sentence for OCOMP when the matrix sentence is in SUBJ positioning, and one sentence for OCOMP when the matrix sentence is in OBJ positioning. The reason that I made this selection is that both GER and TUR do not have relativisation of OCOMP in either positioning. The subjects were to combine the GER/TUR sentences before translating into ENG. The target was to show whether NPAH, PDH, and SOHH are valid for the GER and TUR students. The other things that will be analysed are the correct relative pronoun selection and avoidance behaviour of RC formation.

Example: A. Ich kenne das Hotel. B. Hilton ist billiger als dieses Hotel. (When they combine these GER sentences and translate them into ENG, OCOMP in OBJ position, which is the target, will be formed).

In all three tests the sentences were randomly distributed.

10.1.3. **The Subjects of the Study**

The subjects should respond to the questions intuitively. Previous researches by Gass; 1979, Izumi; 2003, Eckman, Bell and Nelson; 1988, Hamilton; 1994 have showed that a quantitative design is attainable for the present investigation. The important point is the time pressure. Nevertheless, in addition to this, the study contains also the qualitative analysis of the data. Three kinds of the controlled elicitation tasks (We have already described in selection of item) were used. There are two kinds of data analyses: One is the perceptive data analysis i.e. listening and reading; the other is productive data analysis i.e. writing and speaking (after comprehending). The study is based on the productive data analysis.

The subjects at the high schools from whom the data were collected were 16 (9 Ms; 7 Fs) GER students from 11th grade and 16 TUR students (9 Ms; 7 Fs) from 11th grades in Berlin and in Turkey. They have already learnt the formation of the ENG RC. The study was made in a time during the school term (ca. one month after the opening of the school). The subjects were between 16-18 years old. The reason why the participants at this age level were chosen is that the RC is a complex construction that is generally learnt late in schools. Thus three groups have been selected as follows:

1. Group: GER students; Monolinguals/Bilinguals

2. Group: TUR students from Germany; Bilinguals/Trilinguals

3. Group: TUR students from Turkey; Monolinguals

It was easy to find the subjects from the first group in Germany and from the third group in Turkey. But to find subject from the second group in Berlin/Germany was quite difficult. I could not find students who are able to read TUR. Indeed there are many schools in the districts in Berlin where the number of TUR students are quite high, in few high schools in Kreuzberg even at 80-90%. I went to high schools such as "HHO", "EKO", "LS" but I could not find the students for the criterion of my research. In fact, I went to the 11th class in "HHO" and conducted the test, but many of them were

not complete. Why could they not answer the tests? The response was that many of them had either grown up in Berlin or come at an early age.

Finally I administered the test in "BO". I gave the test to the whole class. The number of the students was 25. Then I excluded 9 tests: 3 were Arabic speakers, 1 was a Serbian speaker and 2 tests were incomplete as in one test the mother tongue was not written, in another test the gender was not written.

For the second group, TUR students from GER, there was an important concern of whether the GER-ENG TRANS task, in the place of TUR-ENG, should have been given to the students or both of them. Of course, we don't know if they received more input from the childhood until the age of high school in TUR or in GER (verbal and written) and if they are better in punctuation or in prosody in TUR or GER and if their GER-ENG (plausible) or TUR-ENG in TRANS is better. It seems logical that their GER-ENG is better as they had been schooled in GER from preschool/elementary school until 11grade of high school and have been successful in the GER school system I will try to explain this according to my data.

I could have repeated all three tests (SCT, GJT, and TUR-ENG TRANS tasks) including GER-ENG TRANS task for the second group of informants and compare if they showed more success in GER-ENG or TUR-ENG TRANS task. But since these subjects were not there, I did GER-ENG TRANS task with a new TUR group. Nevertheless it was difficult to find TUR students who grew up both with TUR and GER. I found them at HHO where I could not find enough of such students before, perhaps because the number of TUR students at the high school is increasing with the new generation. I gave them both the GER-ENG TRANS and GJT tests. I considered that translation from both GER and TUR into ENG at the same time could cause confusion for the pupils, so only GER-ENG TRANS test were given to them. I compared this data of GER-ENG TRANS test with the TUR-ENG TRANS test of the second group so that it can be made clear whether the difference between both TRANSs for the TUR students is large or not.

I would like to mention the problem with the informants of Kurdish origin. None of the students in my research declared his/her mother tongue (MT) as KUR. There may have been some KUR students in the groups. If this is true, then it would have been expected that the KUR informants (L3) in Turkey transferred more from KUR into ENG than from TUR into ENG. Because the KUR language is, like GER and ENG, an Indo-European language and is typologically like ENG, it has SOV word-order and postmodified RCs. Cenoz (2000) and Saĝın (2006) point out that typological closeness of languages play an important role for the L3 learners. Would this have been confirmed? However, ENG for the KUR informants in Germany is L4. In this case, there are three typologically close languages (KUR, GER, and ENG). It would be interesting to find an answer to one question at this point: "Would KUR L4 speakers transfer more from KUR or from GER into ENG?"

In this investigation the aim was to scrutinise the underlying knowledge of the students about RCs. Ellis (2003, 2005) pointed out that implicit knowledge, i.e. intuitive or unconscious knowledge, has advantages over explicit knowledge, i.e. metalingual and conscious knowledge. He states that time pressured tests necessitate that learners rely on their implicit knowledge but tests which do not have time constraints can cause the students to effectuate on their explicit knowledge. Thus a 30 minute time limit was given to the students for the completion of the three tasks so that they do not have spare time to look back and make use of explicit knowledge which is not the intention of this investigation of RCs.

10.1.4. **Scoring**

The scoring of the data in the present study follows Izumi (2003). Errors involving articles and tenses are ignored. When the omission of a relative pronoun in DO and OPREP occurs, it was counted as correct. In addition, one point was given for correct production of the form and zero points for incorrect production of the form in sentence combination and TRANS tasks. In the GJTs any items that were left blank were given zero points. For pronoun retention one point was given when used in the correct case, zero points when used incorrectly.

Other criterion for the data evaluation was that the subjects were required to answer fully all of the tests. In addition personal information like "age", "gender" and "mother tongue" were also required.

It has been pointed out that the subjects tend to avoidance behaviour when they deliberately and consciously prefer not to use the target form possibly because of the difficulty, or the partial mastery of the structure, as underlined by Kleinmann (1977). The students in the present study have learned the target structure i.e. RCs. Therefore the deviant forms that are formed by them should be the result of the structure complexity or lack of full knowledge rather than entire lack of knowledge of the structure mentioned. Schachter (1974) asserted that the total lack of use of the target form will be included in the data for investigation. Giving a point is based on the type of the strategies, or one point for each one.

Only the data from the first test, the SCT, and the second test, the TRANS Task, was used for the evaluation of the avoidance phenomenon, if the students tend to avoid relativisation on positions that are low on the NAPH.

Four types of avoidance have been taken into account that have been witnessed by Gass (1980). They will be listed in the following section. However, in the present study another type has been added. (Type 5 as shown below)

The categorised avoidance strategy adopted from Gass (1980)

1. Substitution of one lexical item for another. Example: A. I know the man B. Joseph is thinner than him→ I know the man who is fatter than Joseph. Here the OCOMP relative is avoided. Because of the syntactically more complex structure of the OBJ of comparative a lexical change occurs.

2. Switching the order of the two sentences so as to embed the sentence which was intended as the matrix. Example: A. The woman is a nurse. B. Bill passed a note to her→ Bill passes a note to the woman who is a nurse. Here centre-embedding is avoided. This type is the most avoided type that students made. It should be said here that at the time when the head NP functions, an OBJ of

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this type is less difficult, i.e. avoidance from the more difficult relativisation to the less difficult relativisation takes place.

3. Changing the identical NP. Example: A. He saw the woman. B. The man is older than the woman → He saw the man who is older than the woman. Here OCOMP relative is avoided. The more complex structure (OCOMP to SU) has been changed through a less complex structure.

4. Changing the syntactic structure of the second sentence. A. He saw the woman. B. The man kissed the woman →He saw the woman who was kissed by him. Here DO (or IO, OPREP and GEN) relatives are avoided in favour of SU

5. Changing the head NP. A. A man called the police B. His wallet was stolen →The man called the police whose wallet was stolen. This is similar to number 2 in the way that it is related to the centre-embeddeness which is avoided (processing of matrix sentence). Moreover this occurs in the situation where SUBJ matrix positioning is the SUBJ.

10.2.0. Findings and Discussion

In this chapter the results of all the tasks will statistically be presented, for all groups, in order to test the three hypotheses NPAH, PDH, and SOOHP. After giving the results in the tables and diagrams the related commentary will be made. The percentage of success by GER L1 (group 1), TUR L1 (group 3) and L2 (group 2) students will be given in both SUBJ and OBJ positioning in matrix sentences. In this percentage it will be clear which groups' correct responses are higher.

It must be noted that there is an additional section under 2B concerning TUR L2 (group2) speakers. In this section I have tried to find a solution to the problem point that, also, GER-ENG TRANS test should have been applied to this group. The main question here is whether the TUR students from Germany are better in TUR-ENG or GER-ENG TRANS. When students are bilingual (L1 and L2 speakers), does it hamper the third language or is helpful in being a learner of L3? The results from both TUR-ENG and GER-ENG TRANS are presented.

In the research of other items; such as resumptive pronoun, preposition-stranding, relativiser selection and avoidance strategy, including the transfer errors as a result of different language typology caused by the informant's mother languages (GER L1, TUR L1 and L2) will be explained, then the presentation of the difficulties of all groups during the production of ENG RCs in comparison will be given. The gender differences between all groups will also be shown. First the GER L1 speakers follow.

10.3.0. Group 1 German Students

This group is expected to be better than TUR groups since GER language is typologically closer to the ENG language. While GER and ENG belong to the same language family, TUR belongs to Ural-altaic languages. So the language structure of both languages (GER&TUR) is quite different, as has been clarified before. Even though the structures of the combined sentences and translation task with respect to word order typology (SVO and SOV) by GER students were generally correct (there were only 6 sentences which were structurally wrong, all of which were made in TRANS task) there were many errors in relativiser selection which support the strong version of CA. This will be discussed in the part "other research items" at the end of this chapter.

The examples from the test subjects will be given. The interferences in word order typology by this group is discussed below. They are made only in TRANS tests both by GER L1 speakers and a few by TUR L2 speakers in group 2, test 3B. Astonishingly such interferences by TUR L1 have not been found. First I want to discuss samples by the GER L1 speakers and the TUR L2 speakers' ones in the group2, test 3B. The reasons for each will be explained.

In the following example, the error is in the position of the main verb of RC in centre embedding. It must come after the relativiser "that". But it is put in the final position as in GER.

1. Question 3: The woman that in front of the door stands is a good dentist.

In the following example: the first error is that the main verb of matrix clause "shown" should come after its auxiliary verb "has". The second error is that the verb "is" of the RC must come after the SUBJ of the RC "bike"; this obviously is an interference with GER.

2. Question 10: The teacher has a pupil shown whose bike red is.

In the following example, the first error is relativiser selection. It must be "who" or "that", not "which", for human. The second is that the main verb of RC must come after its SUBJ because it is OBJ position of the matrix sentence.

3. Question 8: I love the woman which Markus in the underground helped.

The following example was made by two students: The first one is in example 3 above, and the second one is below. In the first, the relativiser is true, but the auxiliary "has" together with main verb "helped" of the RC must come after its SUBJ "Markus".

4. Question: I love the woman who Markus in the underground has helped.

In the following example the only error is that the main verb of RC "drives" must come after its SUBJ ("A man"). It is a result of GER word order typology.

5. Question 9: I know a man who every day to Potsdam drives.

In the following example the auxiliary ("is") verb of right embedded RC is placed incorrectly. It must be used before Michael. The position of "is" in main verb of RC is caused by word order typology of GER (verb-final-position) i.e. it stays at the end of the sentence which does not exist in ENG.

6. John is taller than the person whose name Michael is.

It seems to be that GER L1 transferred the rules of their MT, they built 6 sentences according to their GER word order. I have not found obviously if they transferred other rules from GER into ENG (these transfer errors found in the data bank are from TRANS task only). Since this study is based on production data in written context, they

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did not produce the RCs directly, rather combined or circled the correct responses. Maybe the transfer phenomenon has been applied by them not explicitly but implicitly. This may likely have had impact on their success rate too. I think that TRANS task is a better tool to see the transfer errors because these 6 transfer errors as a result of the typological difference have uniquely been found in TRANS task both from GER L1 and TUR L2 speakers.

From now on the statistical results of each test of this group will be presented.

10.3.1. Test 1, Sentence Combination Task (SCT)

Table 3 below gives the total correct responses and the percentage thereof for the six types of RC. They are placed in the two different matrix positions. The rightmost column depicts the total correct responses for matrix SUBJ position versus matrix OBJ position. The bottom row of the table shows the total results of each type of RC without distinguishing between the two types of matrix position.

We see from the bottom row of table 3 that the highest scores were obtained for GEN followed by SU and DO, PREP, IO, OCOMP. It is clear that the order nearly matches the universal markedness as predicted by NPAH, except GEN. It confirms the investigations carried out earlier in this study i.e. that this accuracy order has been confirmed before (cf. Izumi 2003). From the view of matrix positions, the score received for the matrix OBJ position is much higher than SUBJ position: 61 vs. 26. This conforms with PDH and also the research hypothesis.

Diagram 1 graphically demonstrates the result. The difficulty order obtained for type of RC SUBJ position is GEN›PREP›SU/DO/IO›COMP (> means gets more accurate responses than). The difficulty order obtained for type of RC OBJ position is SU/DO›GEN›IO/PREP›COMP.

The difficulty order obtained for each different type of RC is:

OSU/ODO›SGEN/OGEN›OIO/OPREP›SPREP›SSU/SDO/SIO/OOCOMP›SOCOMP

(› means gets more accurate responses than). This order is generally as predicted by SOHH, except OGEN.

Looking at the total responses together with matrix positioning in SUBJ and OBJ positioning it is seen that PREP and GEN are great obstacles to hamper NPAH. Apart from these two types of RC the GER students have shown the order of accuracy as predicted by NPAH. It is astonishing why SU and DO both in SUBJ positioning and OBJ positioning are the same. The table below shows the results from the first group.

Relative Clause Type							
Matrix Positioning	SU	DO	IO	PREP	GEN	OCOMP	TOTAL
SUBJECT	3 11.53%	3 11.53%	3 11.53%	6 23.07%	10 38.46%	1 3.86%	26 outof96) 27.03%
OBJECT	15 2.45%	15 2.45%	9 14.7%	9 14.7%	10 16.39%	3 4.91%	61(outof 96) 63.54%
TOTAL	18 20.68%	18 20.68%	12 13.7%	15 17.26%	20 22.98%	4 4.59%	87(outof192) 45.31%

Table 3 Total responses German students on sentence combination test by relative clause type and matrix positing type

It is very clear from this diagram below how successful the GER students are in producing the matrix OBJ positioning than the matrix SUBJ positioning. In particular, the columns of the matrix OBJ positionings in SU and DO are much higher.
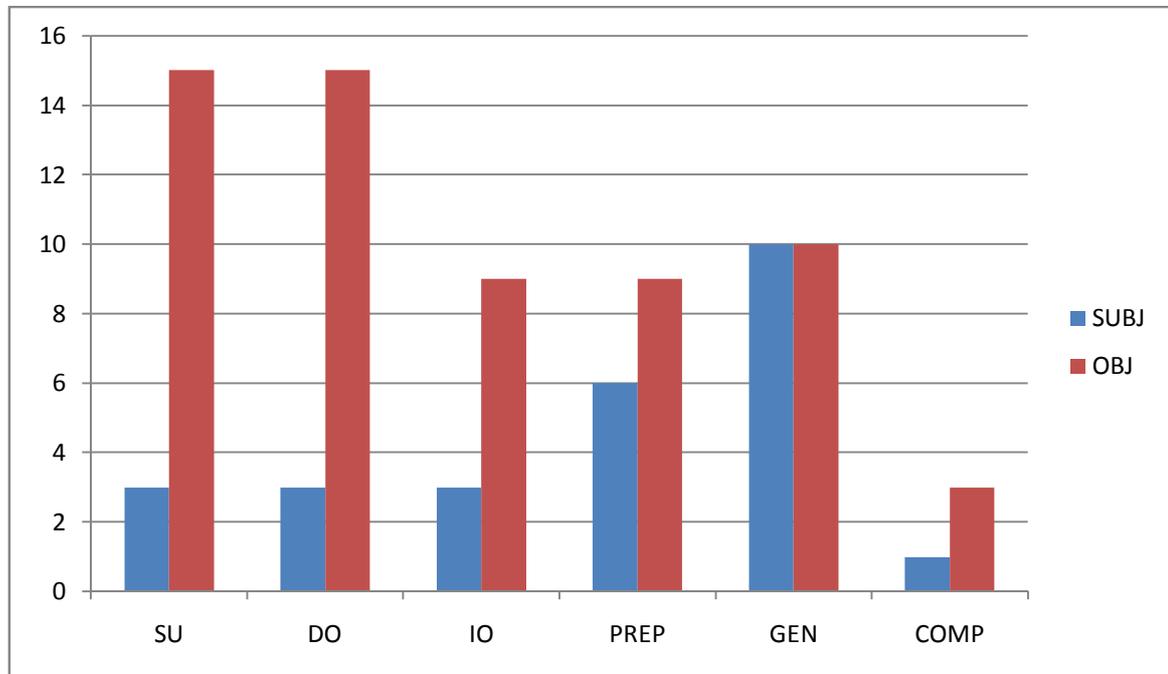
Diagram 1 Percentage of correct responses German Students on sentence combination test by RCs and matrix position type

Let's see how genders affected the responses. If we look at the total correct responses given by both gender we see that the M students both in matrix sentence in SUBJ and OBJ positioning are more successful than the F counterparts. Again, the M students had more total correct responses in both positioning with 50 (50:9=5.55) vs. 34 (34:7=4.85). The M students are more successful than the F students. They are 46.25% successful. The F students are 40.41% successful. So the difference is 5.84%.

Total Correct Responses Male (9 students) in Subject Position: 17 (17:9=1.88)

Total Correct Responses Male (9 Students) in Object Position: 33 (33:9=3.66)

Total: 50 (5.55)

Total Correct Responses Female (7 Students) in Subject Position: 9 (9:7=1.28)

Total Correct Responses Female (7 Students) in Object Position: 25 (25:7=3.57)

Total: 34 (4.85)

One of the important points here is that the total correct responses in OBJ position by both M and F students are also more than that of SUBJ position.

10.3.2. Test 2, Grammaticality Judgement Task (GJT)

The total correct responses given by GER students for the GJT are 261(56.25%) the total false responses are 203. It is seen from the Table 4 that the M students are more successful than the F students 179 (179:9=19.88) vs. 82 (82:7=11.71). Thus, the total correct responses that the M students produced are higher than the total correct responses that the F students produced. They are successful with 4.28% and the F students are successful with 2.52% regarding all of the questions. Even though the M students are more successful than the F students (with 1.76 % difference), the ratio of false that the M students have is important (156). Why the number of false response is much higher than the number of false response of F? It can be said that they thought, they could correctly produce RCs, but they could not. In contrast the false responses of the F students (47) are fewer than the M students. It is probably the result of avoidance phenomenon. The Fs avoided more than Ms. The reason may be because of the fact that the F students are more careful than their M counterparts during the formation of RCs.

	True	False
Male	179	156
Female	82	47
Total	261	203

Total: 464.

Table 4 Correct Responses of German Students in Grammaticality Judgement Test

10.3.3. Test 3, German-English Translation Task

Table 5 demonstrates the total correct responses and the percentage thereof for the GER-ENG translation test. Diagram 2 graphically shows the results.

From table 5, the rank order of six types of RC in matrix sentence SUBJ positioning SU/DO/GEN›IO›PREP›COMP (› means has a higher accuracy rate than). From the order hand the rank order of six types of RC in matrix sentence OBJ positioning SU›IO/GEN›DO›PREP›COMP (› means has a higher accuracy rate than).

Matrix sentence in SUBJ positioning has conformity with the NPAH, except GEN. Matrix sentence in OBJ positioning has conformity with the NPAH, except IO and GEN. Accuracy order for both positions is: SU› GEN› DO› IO› PREP› OCOMP (see the figures in section "total". This has conformity with NPAH except GEN.

The difficulty order in each type (12 types) of RC is OSU›SSU/SDO/OIO/SGEN/OGEN›ODO›SIO›SPREP›OPREP›OOCOMP›SOCOMP Translation test and combination test are similar in the order of GEN, because in both tests the order of GEN is an exception.

Regarding the matrix positions, the result stays in concordance with the prediction of PDH: the total scores obtained for the matrix OBJ position is higher than the matrix SUBJ position. The order of the RCs in the test seems to be primarily determined by the function of the relative pronoun irrespective of the faction of the head NP. This shows that SOHH has partial support here.

Relative Clause Type							
Matrix Positioning	SU	DO	IO	PREP	GEN	OCOMP	TOTAL
SUBJECT	12 21.42%	12 21.42%	10 17.85%	8 14.28%	12 21.42%	2 3.57%	56(outof96) 58.33%
OBJECT	14 24.56%	11 19.29%	12 21.05%	5 8.77%	12 21.05%	3 5.26%	57(outof96) 59.37%
TOTAL	26 23.00%	23 20.35%	22 19.46%	13 11.50%	24 21.23%	5 4.42%	113(outof192) 58.85%

Table 5 Correct Responses of German Students in German-English Translation Test

In the diagram shown below the outstanding result is from the SU. Again, the high score has been obtained for SU in OBJ position. The column of GEN is very high. It is much higher than PREP and OCOMP. In all columns OBJ is higher than SUBJ, only in GEN they are the same.
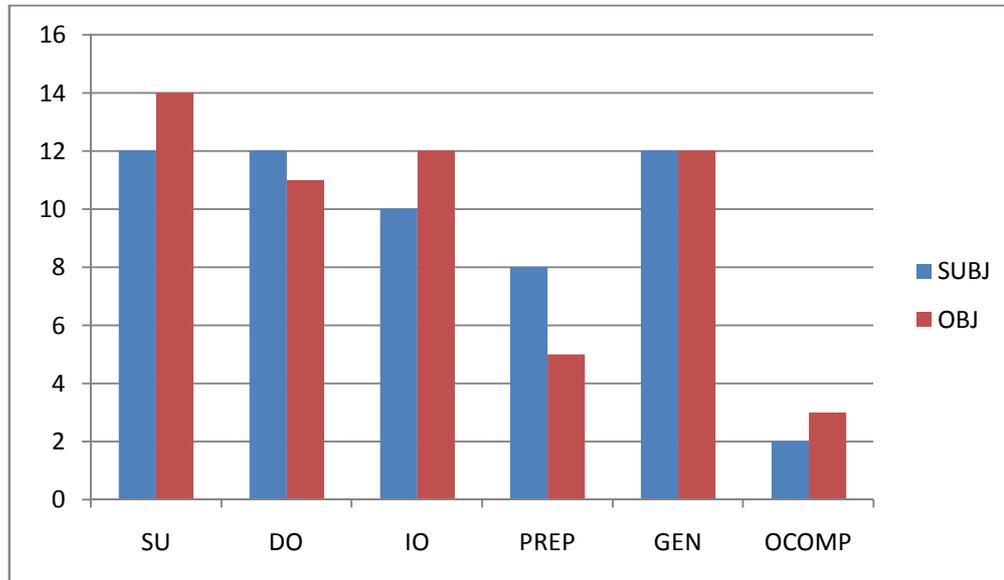
Diagram 2 Percentage of correct responses on German-English Translation test by relative clause type and matrix position type

The GER-ENG TRANS by this group is better than SCT. Looking at the diagram it is seen that the difference of the matrix OBJ position is more than the matrix SUBJ position. But the difference is not big (57 vs. 56). Nevertheless, the percentage of success by this group in GER-ENG TRANS is higher than the percentage of success in SCT 58.85% vs. 45.31%.

I want to write here the results of GER-ENG TRANS in view of gender differences. First they are given in number, and then the comment will follow:

Total Correct Responses Male (9 students) in Subject Position: 21 (21:9=2.33)

Total Correct Responses Male (9 Students) in Object Position: 27 (27:9=3.00)

Total: 48 (48:9=5.33)

Total Correct Responses Female (7 Students) in Subject Position: 11 (11:7=1.57)

Total Correct Responses Female (7 Students) in Object Position: 35 (35:7=5.00)

Total: 46 (46:7=6.57)

If we look at the total correct responses given by M and F GER students above we will see that the success of both genders is different. The F students (54.75%) are with 10.34% difference more successful than M students (44.41%).

On the other hand, from the point of the percentage of success by both genders, this can be said: The F students here on GER-ENG TRANS test are more successful than M students but are not, nevertheless, more successful than the M students (with 5.75% difference.) in Test 1 and Test 2 (with 1.76 % difference) of this group. I should raise a question here: Why are the F GER students in GER-ENG TRANS more successful then their M counterparts with a significant difference (10.34%)? This difference is interesting. I argue that the F informants are more careful during production of a sentence in TL; perhaps they are thinking twice and then producing an RC in ENG. For the argument, firstly one example from F and one example from M students in GER-ENG TRANS from the data is given to understand better where both genders have made errors. These are also good examples (see appendix 4) which show the typical errors. After that an explanation will follow.

Sample 1 (Female, age: 16, grade: 12, from Berlin: group 1 sample 1): This F student had 5 wrong sentences, the first error in question 1, the relative pronoun, where the answer should be "whom" i.e. indirect OBJ position of RC in matrix SUBJ positioning/centre-embedded. The second error is in question 6; again with the indirect OBJ case of relative pronoun in matrix OBJ position/right embedded (and the word "together" instead of preposition "with" is another error-avoided word. The third error is in question 8; it should be "whom" i.e. RC in OBJ position (indirect OBJ). And the last two errors are in question 11, and 12: she avoided the relative constructions in 11 and 12 like most of the students. In 11 her avoidance is centre-embedded RC; in 12 her avoidance is also in centre-embedded RC. Astonishingly both sentences would have correct construction, if there had not been avoidance.

Sample 2 (Male, age: 18, grade 13, from Berlin: group 1 sample 2): This M student had 7 wrong sentences. In sentences 2, 5, and 6, the relative pronoun of non

antecedent are used even the antecedents are human. In 7, the relative pronoun informal "whom" is used instead of formal "who". In 11 the centre-embedded RC is avoided and the structure of right-embedded is wrong because the auxiliary verb of the right-embedded RC must not be in second position, rather in first position, i.e. "is" must be used before "Michael". We see an interference caused by word order typology of the GER language. The avoidance phenomenon explains that difficult structures are not preferred by the learners. This case exists here. The reason that he avoided the centre-embedded RC and constructed a right-embedded RC is because he thought that centre-embedded RC is a difficult structure for him.

It is obvious from these two samples that the M informant made more serious mistakes (even more than the F in sample 1) such as in 2, 5, and 6. In these he chose the relative pronouns for non-human instead of human. More seriously, he made an error in word order which was caused by GER-ENG interference.

Next the results from the second group will be presented.

10.4.0. Group 2, Turkish Students from Germany

This group are trilingual pupils. They grew up with two languages, TUR and GER. The ENG language is the third language for them. One may think that the results might be mixed as they have L1 and L2 before beginning learning ENG. The question here is: Do they transfer more the language structure of TUR or GER into ENG during the formation of ENG sentences or do the structures of both languages have an impact on the production of ENG RCs? Is this group more advantageous than the first and third groups? (This group is divided into two: group 2A (SCT, GJT and TUR-ENG TRANS) from my old data and group 2B from my new data (GER-ENG TRANS). The method used here is the output in written context. An explanation regarding these questions will be written as much as the present data allow us.

10.4.1. Test 1, Sentence Combination Task (SCT)

Table 6 presents the total correct responses and the percentage of the six types of RC which are placed in the two different matrix positions. The rightmost column depicts the total correct responses for matrix SUBJ position versus matrix OBJ position and the bottom row of the table demonstrates the total results of each type of RC without distinguishing between the two types of matrix position. As it is clear from the bottom row of table 6 the highest scores were obtained for PREP and GEN, followed by DO, SU, OCOMP and IO.

The order of difficulty as predicted by NPAH does not match this group:

PREP/ GEN› DO› SU› OCOMP› IO

SUBJ positioning: PREP/GEN›DO/OCOMP›SU/IO

OBJ positioning: PREP/GEN›SU/DO›IO›OCOMP

As we see, there are mixed results received from the TUR students living in Germany. It is not clear whether it is because of the influence of GER or insufficient input. This is not in conformity with the research prediction made earlier in this study. In terms of the matrix positions, astonishingly, the score obtained for the matrix OBJ position is higher than the SUBJ position: 45 vs. 20. This matches the prediction by PDH, and also the research hypothesis.

Diagram 3 graphically shows the results. The difficulty order obtained for each different type of RC is:

OPREP/OGEN›OSU/ODO›SPREP/SGEN›SDO/SOCOMP/OIO›OOCOMP› SSU/SIO

 (› means gets more accurate responses than). This order is generally as predicted by SOHH, except OIO and OOCOMP.

Relative Clause Type							
Matrix Positioning	SU	DO	IO	PREP	GEN	OCOMP	TOTAL
SUBJECT	1 5%	4 20%	1 5%	5 25%	5 25%	4 20%	20(outof96) 20.83%
OBJECT	8 17.77%	8 17.77%	4 8.88%	11 24.44%	11 24.44%	3 6.66%	45(outof96) 46.87%
TOTAL	9 13.84%	12 18.46%	5 7.69%	16 24.61%	16 24.61%	7 10.76%	65(outof192) 33.85%

Table 6 Total responses Turkish Students from Germany on sentence combination test by RC type and matrix position type

We see from the diagram below that the difference between the success rate of this group in producing the matrix OBJ and SUBJ position is quite high. In particular the column of PREP and GEN in matrix OBJ position is nearly twice as high as that of matrix SUBJ position. But the total correct responses of this group are less than the total correct responses of the first group in SCT (87 vs. 65).
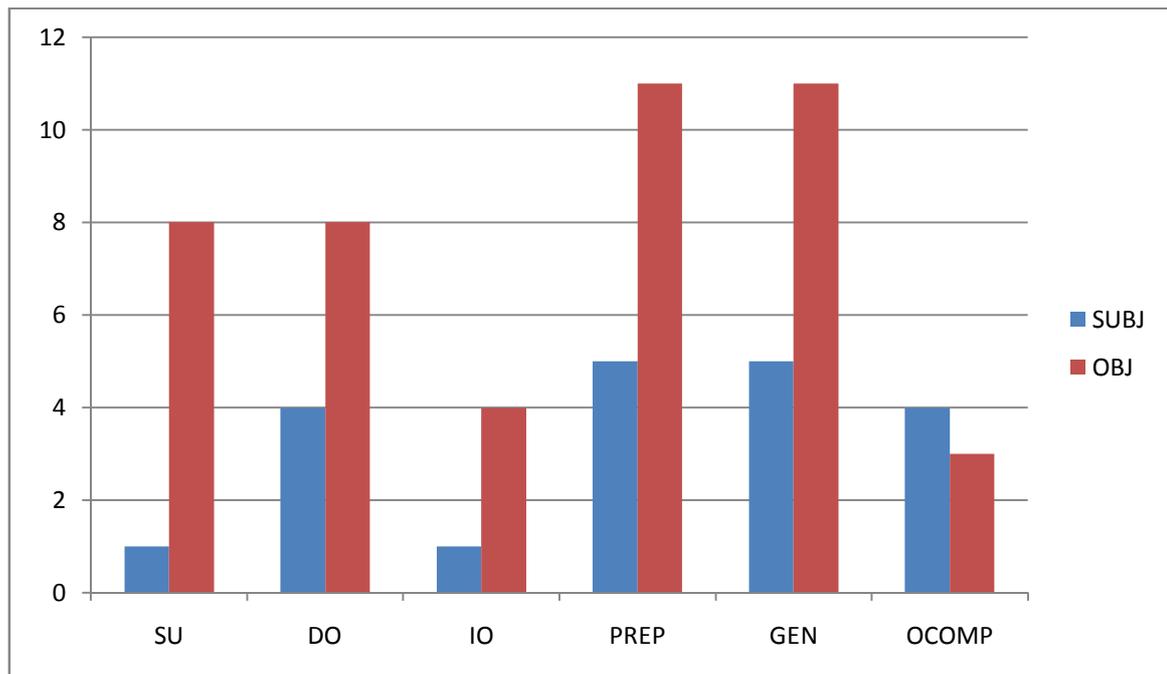
Diagram 3 Percentage of correct responses of Turkish students from Germany on sentence combination test by RC type and matrix type

Looking at the following results according to the M and F students, we see that the M students are more successful than the F students. This group is nearly the same as the first group in terms of the gender of the students, but it is more interesting, because, the total correct number for M is 41 (4.55), and for F 24 (3.42). The M students are more successful than the F students. They are successful with 37. 91%. The F students are successful with 28. 5%. So the difference is 9. 41%.

Total Correct Responses Male (9 students) in Subject Position: 11 (11:9=1.22)

Total Correct Responses Male (9 Students) in Object Position: 30 (30:9=3.33)

Total: 41 (41:9=4.55)

Total Correct Responses Female (7 Students) in Subject Position: 9 (9:7=1.28)

Total Correct Responses Female (7 Students) in Object Position: 15 (15:7=2.14)

Total: 24 (24:7=3.42)

Again, one of the important points here is that the total correct responses in matrix OBJ position by both M and F students are higher (30 vs. 15) than matrix SUBJ position.

10.4.2. Test 2, Grammaticality Judgement Task (GJT)

The total correct responses given by TUR students living in GER for GJT are 316 (68.10%), the total false responses is 148. It is seen from table 7 that the F students are more successful than the M students 162 (162:7=23.14) vs. 154 (154:9=17.11). This is in contrast to the first group.

The total correct responses that the F students produced are higher than the total correct responses that the M students produced. They are successful with 4.98% and M students are successful with 3.68%. So the difference is 1.3%. Here, the avoidance phenomena should be remembered. Looking at the false response given by F students, it is seen that they produced 18 fewer false responses in comparison with their M counterparts.

	True	False
Male	154	83
Female	162	65
Total	316	148

Total: 464.

Table 7 Correct responses of Turkish students from Germany on Grammaticality Judgement Test

This is important because the number of false responses by F informants in the GJT of the first group is also lower than those of their counterparts. It shows again, that the F informants are more careful then their counterparts. An explanation should be made in the part conclusion.

10.4.3. Test 3A, Turkish-English Translation Task

A related assessment will follow, after the results of GER-ENG have been given. There are interferences from both TUR L1 and GER L1 learners. To see how TUR L2 speakers did the errors in SCT, I analyse the papers of two students from this group; one is M another is F.

Group 2A, Sample 1 (see appendix 4); age: 16, gender: female, grade 10, from Berlin, mother tongue: TUR.

This informant has 7 wrong sentences: in 1, 6, 8, 9, 10, 11, and 12. She did 1, 11, 12 incorrectly because of the resumptive pronoun, as with many TUR L1 speakers. One example (sentence 12, in bold) follows:

7. The candidate who I vote for **him** did not win the election.

In 6 and 8 (here, also, the preposition "to" failed) she avoided centre-embedded RCs, like many of the informants. In 9 she avoided OCOMP RC. In 10 she changed NP in OCOMP.

Group 2A, Sample 2; age: 16, gender: male, from Berlin, mother tongue: TUR

This M informant has 7 wrong sentences (in 5, 6, 7, 8, 9, 10, and 12) like the F of sample 1 above. In 5 and 6 he avoided centre-embedded as many did including the F informant from sample 1. In 8 there is no PREP. In 7 he made two errors: he avoided centre-embedded and chose the wrong relative pronoun like the GER L1 speakers. I want to write his sentence below:

8. The author is well known which my mother mentioned (which for non-human).

In 9 he chose the wrong relative pronoun again (which is non-human). Furthermore, another error in the same sentence, he has the resumptive pronoun at the end of the sentence. Finally in 10 he avoided OCOMP RC.

Table 8 shows the total correct responses and the percentages (in brackets) thereof for the TUR-ENG TRANS. Diagram 4 graphically shows the results. From table 8, the rank order of the six types of RC is:

SU› GEN›DO› PREP› OCOMP› IO

Matrix sentence in SUBJ positioning: SU›GEN/DO›IO/OCOMP›PREP

Matrix sentence in OBJ positioning: PREP›GEN›SU›DO/IO ›OCOMP (› means has a higher accuracy rate than.

This does not match with the implicational universal as predicted by NPAH, because generally GEN and IO are problems for such an order. Considering the matrix positions, however, the results have conformity with the prediction made by PDH. It

means that the total scores obtained for the matrix OBJ position is higher than the SUBJ position.

Finally the accuracy order for the 12 types of RC is as follows:

SSU›OPREP›OGEN›SDO/SGEN/OSU›OOCOMP›ODO/OIO›SIO/SOCOMP›SPREP

(› means has a higher accuracy rate than). It seems that the function of the relative pronoun irrespective of the function of the head NP. In comparison to SOHH, there is a partial support here i.e. SSU, SDO, SGEN are exceptions.

Relative Clause Type							
Matrix Positionig	SU	DO	IO	PREP	GEN	OCOMP	TOTAL
SUBJECT	13 32.55%	8 20%	5 12.5%	1 2.5%	8 20%	5 12.5%	40(outof96)
OBJECT	8 16.32%	6 12.24%	6 12.24%	12 24.48%	10 20.40%	7 14.28%	49(outof 96)
TOTAL	21 23.59%	14 15.73%	11 12.35%	13 14.60%	18 20.22%	12 13.48%	89(outof192) 46.35%

Table 8 Total responses of Turkish students from Germany on Turkish-English translation test by RC type and matrix position type

In the graph below the most outstanding result is in PREP in matrix OBJ position. But difference between two types of matrix position is not as high as that in the first test by this group. Another important difference is in SU of the two types which is large.
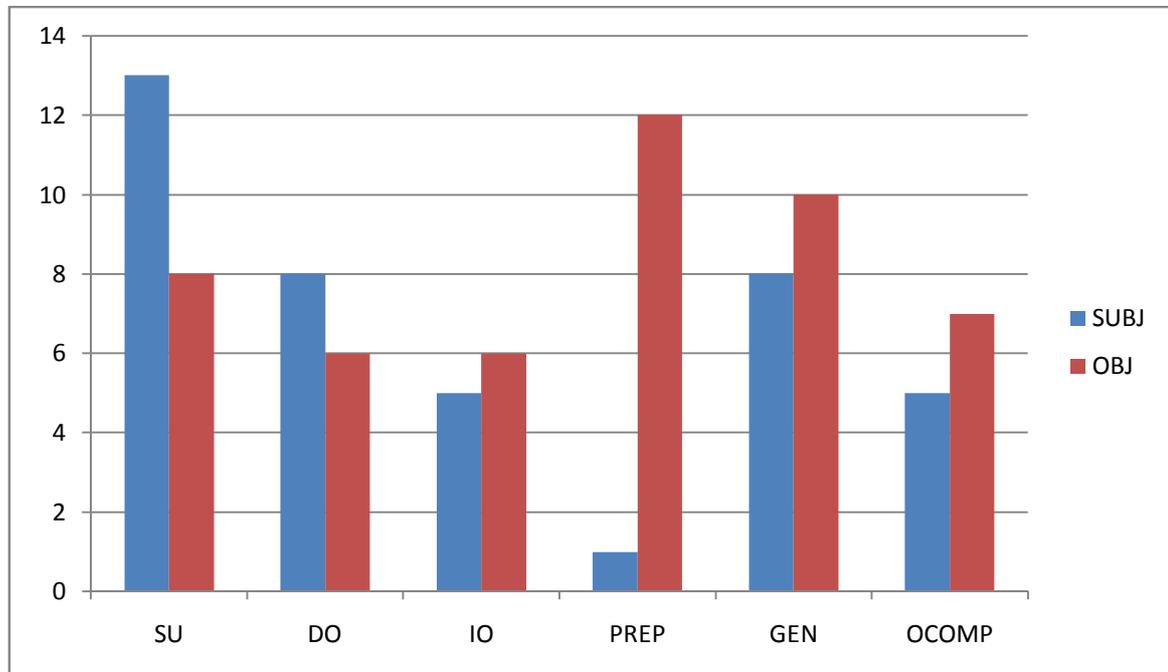
Diagram 4 Percentage of correct responses of Turkish students from Germany on Turkish-English translation test by RC type and matrix position type

In the following the results from the point of the view by gender will be given.

Total Correct Responses Male (9 students) in Subject Position: 15 (15:9=1.66)

Total Correct Responses Male (9 Students) in Object Position: 21 (21:9=2.33)

Total: 36 (36:9=4)

Total Correct Responses Female (7 Students) in Subject Position: 17 (17:7=2.42)

Total Correct Responses Female (7 Students) in Object Position: 24 (24:7=3.42)

 Total: 41 (41:7=5.85)

The success rate of the M students is 33.33% while the success rate of F students is 48.74%. So the F students are more successful than the M students (with 15.41% difference). But the M students inside this group in SCT are more successful than the F students. As in the TRANS task of the first group the F students are more successful than their M counterparts.

10.4.4. **Test 3B, German-English Translation Task**

I am going to present the data I have collected making comment with respect to the research questions. Then the results will be compared with TUR-ENG TRANS from the data I collected 2 years ago. The target here is to know how big the difference between both tasks is and to bring to light whether they could perform better in such a production data.

But first of all, it is important to discuss the interferences made by this group in GER-ENG TRANS and then the transfer errors as a result of word order typology of GER and its reasons as well follow.

I have found only 2 sentences which were incorrect structurally and are caused by GER word order typology. Interestingly, both are similar to the first group. I write all of them below.

In the following example there is only one error which is caused by GER word order in the main clause, i.e. the verb in second position. So the main verb of the matrix sentence "shown" must come after the auxiliary verb "has". Both belong to the subject of the matrix "the teacher". This example is similar to the interference the GER students made. This sentence is structurally the same as the one the GER students made (the second interference in word order typology: question 10, group 1, test 3). Only the auxiliary verb (is) has been put differently i.e. at the end of the sentence.

9. Question 10: The teacher has a pupil shown whose bicycle is red.

Typical errors that the GER L1 speakers make are also made by TUR L2 speakers as is shown in the sentence below. There are two errors. The first one: The word order of GER RCs is as in subordinate clauses SOV, in other words the verb is in second position, "given have". The second error in this sentence is the relativiser selection and its noun case, it should be "whom" i.e. IO position. This has been the frequent error that the GER L1 speakers made more than the TUR L1 in group 3, and L2 in group 2, test 3A.

10. Question 1: The man that I the book given have is my classmate.

In table 9 correct responses and the percentage (in brackets) of TUR students for GER-ENG TRANS are given. Again, the results is illustrated graphically in

In Diagram 5 the rightmost column shows the total correct responses for matrix SUBJ position versus matrix OBJ position and the bottom row of the table shows the total results of each type of RC without distinguishing between the two types of matrix position. We see that the highest scores are for SU followed by DO, GEN, IO, PREP, and OCOMP. The order of six types of RC in matrix sentences SUBJ positioning: DO›SU›GEN›IO›PREP/OCOMP (› means gets more accurate responses than) in OBJ positioning: SU›DO›GEN›PREP›IO›OCOMP. Matrix sentence in SUBJ positioning conforms with the prediction of NPAH except IO. Matrix sentence in OBJ position conforms with the NPAH except GEN and IO.

      The difficulty order of each type of RC in both positions is: OSU›SDO/ODO›SSU›OGEN›SGEN/OPREP›SIO›OIO›OOCOMP›SPREP/SOCOMP The percentage of matrix sentence in OBJ positioning is higher than that in SUBJ position, so it conforms to the prediction by PDH. The order of the RCs in the test seems to be primarily determined by the function of the relative pronoun irrespective of the faction of the head NP. This shows that SOHH has partial support here.

| Relative Clause Type | | | | | | | |
Matrix Positionig	SU	DO	IO	PREP	GEN	OCOMP	TOTAL
SUBJECT	12 24.48%	13 26.53%	8 16.32%	3 6.12%	10 20.40%	3 6.12%	49(outof96) 44.95%
OBJECT	15 25%	13 21.66%	7 11.66%	10 16.66%	11 18.33%	4 6.66%	60(outof 96) 55.04%
TOTAL	27 24.77%	26 23.85%	15 13.76%	13 11.92%	21 19.26%	7 6.42%	109(outof192) 56.77%

Table 9 Total responses of Turkish students from Germany on German-English translation test by RC type and matrix position type

Looking at the diagram below we see that the column of SU of matrix OBJ position in GER-ENG TRANS by TUR students from Germany is higher, but SU of matrix SUBJ position in TUR-ENG TRANS by TUR students from Germany is higher. Another important column is that of PREP, being not higher than that of TUR-ENG TRANS.
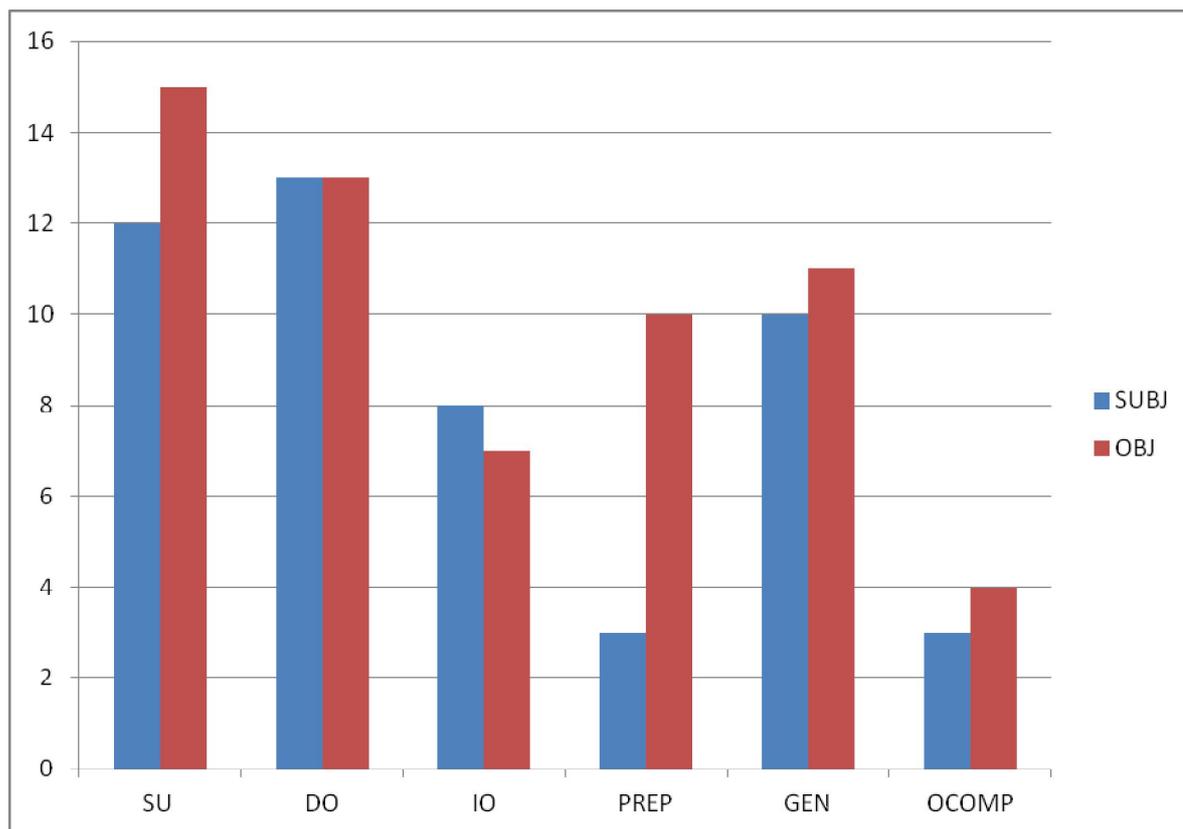
Diagram 5 Percentage of correct responses of Turkish students from Germany on German-English translation test by RC type and matrix position type

It should be noted that the total correct responses by TUR L2 speakers in GER-ENG TRANS is higher than the total correct responses by TUR L2 speakers in TUR-ENG TRANS 109 vs. 89 (TUR L1 speakers has 102). There are nearly as many correct responses as the GER L1 speakers had: 109 vs. 113. Thus, the answer to the question of whether the TUR Students from Germany are better at GER-ENG TRANS than TUR-ENG TRANS is: This finding indicates that TUR L2 speakers in GER-ENG TRANS are better than TUR L2 speakers in TUR-ENG TRANS. Despite this result, it should be noted that other investigations in this area must be carried out, because GER-ENG TRANS in the second group were not collected from the same informants owing to the fact that these informants were not there after 2 years. Another suggestion from my data points to the importance of trilingual research to be carried out. The interesting point is that the number of correct responses in GEN by this group and the first group is quite high. Is this a consequence that has been caused by GER and ENG?

Here, again, something should be said about the GEN and OCOMP by the first group and second group (GER-ENG TRANS) in TRANS test. It is nearly the same. Is this because of the fact that the dominant language of TUR pupils in Germany is GER, not TUR? Even though it is difficult to prove precisely, the data I collected gives evidence in two kinds of RC, i.e. GEN and OCOMP. Below the percentage of these types of RC in GEN and COMP by all groups is given.

First group: GER-ENG TRANS Test=   21.23% in GEN, 4.42% in OCOMP

Second group: a) TUR-ENG TRANS Test= 20.22% in GEN, 13.48% in OCOMP

                          b) GER-ENG TRANS Test= 19.26% in GEN, 6.42% in OCOMP

Third group: TUR-ENG TRANS Test= 12.74% in GEN, 10.78% in OCOMP

So it is clear from the percentage above that there is not a big difference between group 1 and group 2, test 3B, but the difference between group 1 and group 3 is large. In the following the results from the point of the view by gender in group 2, test 3B, will be given.

Total Correct Responses Male (9 students) in Subject Position: 15 (15:9=1.66)

Total Correct Responses Male (9 Students) in Object Position: 24 (24:9=2.66)

Total: 39 (39:9=4.33)

Total Correct Responses Female (7 Students) in Subject Position: 10 (10:7=1.42)

Total Correct Responses Female (7 Students) in Object Position: 19 (19:7=2.71)

Total: 31 (31:7=4.42)

The success rate of the F students is 36.83% and the success rate of M students is 36.08%. So the F students are more successful than the M students (with 0.75% difference). But the M students inside this group in SCT are more successful than the F students. What is interesting here is that the F students both in TUR-ENG and GER-ENG TRANS tests have higher success rate in comparison with their counterparts.

Regarding M/F differences I want to give two real examples from my data. In these examples the influence of GER language can be seen especially in relative pronoun

selection (see also Group 1 sample 2 male: there he incorrectly selected the relative pronoun in sentence 6 "with which" and F student here in Group 2B sample 1 made the same error in sentences 6 and 7).

First I take **Group 2B sample 1** (see appendix 4: age: 17, gender: female, birthplace: Berlin, Mother tongue: TUR) as an example and compare with an M student **Group 2B sample 2 (**see appendix 3B; age: 19, gender: male, birthplace: Berlin, mother tongue: TUR).

The errors she made are typical of the errors the GER students made. From sentences 6, 7, 8 we see that she selected the wrong relative pronoun; non-human "which" in the place of human "who". In 6 and 7 she formed it with the preposition "with" but selected a wrong relative pronoun. I write this sentence below:

11. I saw the seller, with which I have worked, lives in Paris.

One question here can be: is the reason for the incorrectly selected relative pronoun because of the preposition "with"? The answer is probably "no", because she also selected the wrong relative pronoun ("which" in stead of "whom") for 8 which is an indirect RC in matrix OBJ positioning. In 11 and 12 she avoided a centre embedded RC.

Her M counterpart made an error in relative pronoun selection, like GER L1 speakers. Opposite to her he made an error in sentence 6 where she should have made a preposition stranding by putting the preposition "with" to the end of the sentence or used an OBJ pronoun "whom" after "with". The relative pronouns he used are: in 1 "whom" is correct, in 11"who" is correct incorrectly. In 12 he avoided the centre-embedded RC like her (and many other students). Interestingly he combined B with A in 11 correctly and constructed the sentence with the RC correctly too.

It seems to be that TUR L2 subjects made more transfers from GER, which is not from their MT, into ENG. The evidence comes from 2 sentences in their answers with respect to word order typology. The transfer errors found explicitly were 2, all of which

were in TRANS task (GER-ENG). But they applied transfer unconsciously, which, again, may have impact on their success rate.

Next the third group will be handled.

10.5.0. Group 3, Turkish students from Turkey

This group, which is monolingual, should not be more successful, it is prediction of CA, than the first and second group on the grounds that the differences between ENG and TUR RC formation is quite different, as mentioned in chapter 5. Even the word order is different, i.e. ENG has SVO but TUR has SOV. Further, the structure of RCs is not the same: while ENG has postmodified RCs TUR has premodified ones. In sum, as the differences between ENG and TUR RCs are greater than the differences between ENG and GER it is expected that, according to CA, this group would not be more successful than the other groups. After the presentation of the results a comment will be made in connection with this point.

10.5.1. Test 1, Sentence Combination Task (SCT)

Table 10 below presents the total correct responses and the percentage thereof the six types of RCs, which are placed in the two different matrix positions. The rightmost column shows the total correct responses for matrix SUBJ position versus matrix OBJ position and the bottom row of the table demonstrates the total results of each type of RC without distinguishing between the two types of matrix positions. As we see from the bottom row of table 10 the highest scores were obtained for SU, followed by IO, DO/PREP/GEN, and OCOMP. Except IO, the order matches the universal markedness as predicted by NPAH. This is also in conformity with the research prediction made earlier in this study.

Regarding the matrix positions, the score obtained for the matrix OBJ position is higher than the SUBJ position: 67 vs. 35. This matches, at the same time, with PDH and also the research hypothesis. Table 10 shows the result.

The difficulty order obtained for each different type of RC is:

ODO› OSU›OIO/OPREP/OGEN›SSU/SIO›SPREP/SGEN›OOCOMP›SDO›SOCOMP

Matrix sentence in SUBJ positioning: SU/IO›PREP/GEN›DO›COMP.

Matrix sentence in OBJ positioning: DO›SU›GEN/IO/PREP›COMP

(› means gets more accurate than responses than)

This order is generally as predicted by SOHH, except OOCOMP.

Relative Clause Type							
Matrix Positioning	SU	DO	IO	PREP	GEN	OCOMP	TOTAL
SUBJECT	10	2	10	6	6	1	35outof96
	28.57%	5.71%	28.57%	17.14%	17.14%	2.85%	
OBJECT	14	15	11	11	11	5	67outof96)
	20.89%	22.38%	16.41%	16.41%	16.41%	7.46%	
TOTAL	24	17	21	17	17	6	102outof192
	26.41%	16.03%	19.81%	16.03%	16.03%	5.66%	55.20%

Table 10 Total correct responses Turkish students from Turkey on sentence combination test by RC type and matrix position type.

In the following the results are shown in a diagram. In this diagram the outstanding results are those with the matrix OBJ positioning. The success rate of matrix OBJ position is much higher than other groups. In all columns the success rate of matrix OBJ position is higher with no excepion.
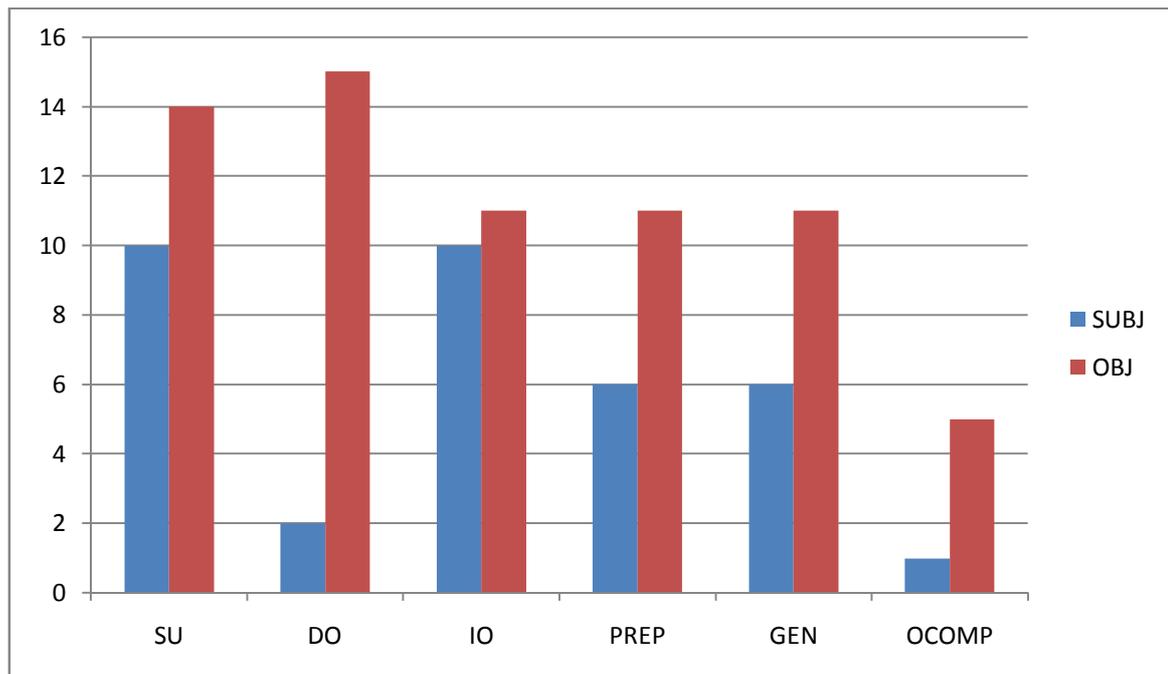
Diagram 6 Percentage of correct responses of Turkish students from Turkey on sentence combination test by RC type and matrix position type

If we look at the total correct responses given by both genders below, we see that the TUR M students in matrix sentence in SUBJ and OBJ position are more successful than the TUR F students: 48 (48:9= 5.33) vs. 30 (30:7= 4.28). They are successful with 44. 41% and F students are successful with 35.66%. The difference is 8.75%.

This group, regarding the gender of the students, has the similar results with the second group in SCT.

Total Correct Responses Male (9 students) in Subject Position: 20 (20:9=2.22)

Total Correct Responses Male (9 Students) in Object Position: 28 (28:9=3.11)

Total: 48 (48:9=5.33)

Total Correct Responses Female (7 Students) in Subject Position: 11(11:7=1.57)

Total Correct Responses Female (7 Students) in Object Position: 19 (19:7=2.71)

Total: 30: (30:7=4.28)

Another important point is that the percentage of total correct responses in matrix OBJ position is higher than the total correct responses in matrix SUBJ position regardless of gender.

10.5.2. Test 2, Grammaticality Judgement Task (GJT)

The total correct responses given by TUR students from Turkey for GJT are 375 (80.81%), the total false responses is 89. It is seen from the table 11 that the M students are more successful than the F students 219 (219:9=24.33) vs. 156 (156:7=22.28), i.e. the M students are 0.44% more successful than their F counterparts (5.24% vs. 4.80%). On the other hand, we see that the F students have more false responses than the M students. This is in contrast with the table 4 of the first group, because there the false responses of the M students are much higher than in this table. This raises the question whether the M students, here, avoided producing fewer sentences than in table 4 of the first group.

	True	False
Male	219	39
Female	156	50
Total	375	89

Total: 464

Table 11 Correct responses of Turkish students from Turkey on Grammaticality Judgement Test

10.5.3. Test 3, Turkish-English Translation Task

Table 12 below shows the total correct responses and the percentage thereof for the TUR-ENG TRANS. Diagram 7 graphically shows the results. From table 12, the rank order of the six types of RC is PREP› DO› SU› IO› GEN› OCOMP (› means has a higher accuracy rate than). This seems to be mixed result for the implicational universal as predicted by NPAH. PREP and DO do not match the order. Except for these two types it seems to be normal. This is the same as the second group, the TUR students from Germany. If we take the matrix positions into account we see that the results are as predicted by PDH. It means that the total scores obtained for the matrix OBJ position is higher than that of the SUBJ position: 55 vs. 47.

The accuracy order for the 12 types of RCs is as follows: OPREP›ODO›SDO/OSU›SIO/SPREP›SSU/SGEN/OIO›OGEN/OOCOMP›SOCOMP Matrix sentence in SUBJ positioning: DO›IO/PREP›SU/GEN›OCOMP, Matrix sentence in OBJ positioning: PREP›DO›SU›IO›GEN/OCOMP) (› means has a higher accuracy rate than)

It seems that the order of difficulty of the RCs in this test is primarily determined by the function of the relative pronoun irrespective of the function of the head NP. In comparison to SOHH, there is a partial support here. Exceptions are OIO and OGEN. The rate of DO, OCOMP in SUBJ and OBJ positions in matrix sentence is nearly the same.

Relative Clause Type							
Matrix Positioning	SU	DO	IO	PREP	GEN	OCOMP	TOTAL
SUBJECT	7	10	9	9	7	5	47(outof96)
	14.89%	21.27%	19.14%	19.14%	14.89%	10.63%	
OBJECT	10	12	7	14	6	6	55(outof96)
	18.18%	21.81%	12.72%	25.45%	10.90%	10.90%	
TOTAL	17	22	16	23	13	11	102(outof192)
	16.66%	21.56%	15.68%	22.54%	12.74%	10.78%	53.12%

Table 12 Total correct responses of Turkish students from Turkey on Turkish-English translation test by RC type and Matrix position type

In the diagram below the column of matrix SUBJ and OBJ positioning is shown. What is important to mention is that the rate of matrix OBJ positioning in all columns is

higher than matrix SUBJ positioning, except to GEN. The higher rate of matrix OBJ positioning is obtained in PREP.
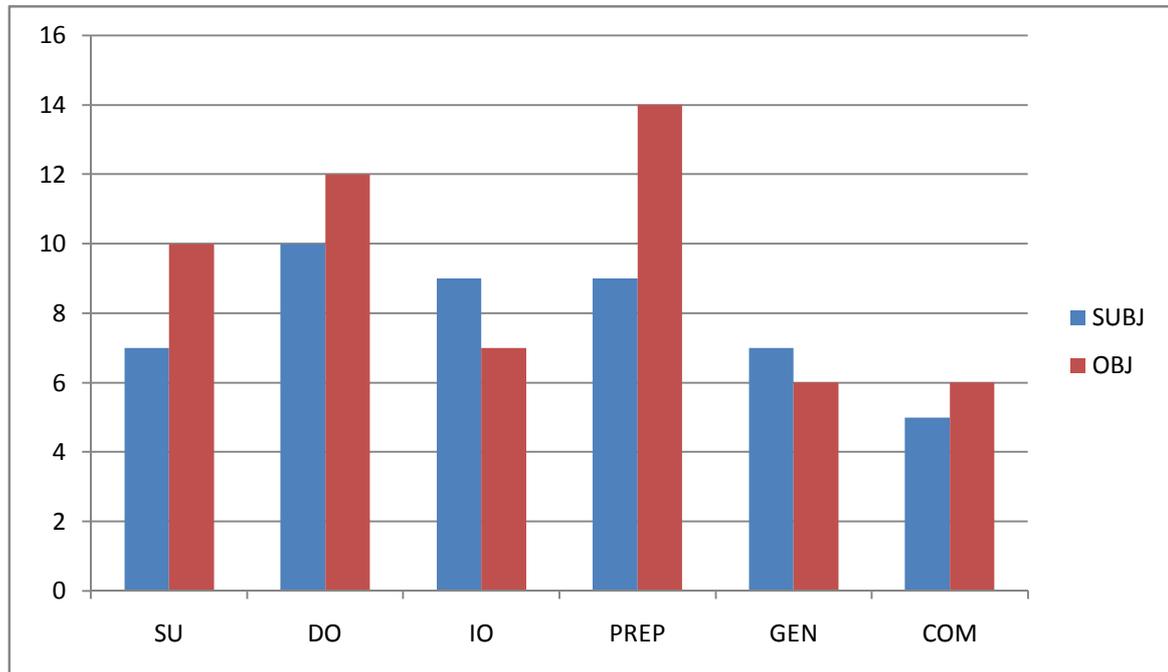
Diagram 7 Percentage of correct responses of Turkish students from Turkey on Turkish-English translation test by RC type and matrix position type

As it is seen from the figures taken from gender differences the F students are much more successful than M students: 46.41% vs. 29.58%. So the difference between both genders is 16.83%. The F students are more successful in translation task again.

Total Correct Responses Male (9 students) in Subject Position: 13 (13:9=1.44)

Total Correct Responses Male (9 Students) in Object Position: 19 (19:9=2.11)

Total: 32 (32:9= 3.55)

Total Correct Responses Female (7 Students) in Subject Position: 16(16:7=2.28)

Total Correct Responses Female (7 Students) in Object Position: 23 (23:7=3.28)

Total: 39 (39:7=5.57)

Taking all three tests in this group, it is clear that the F students are only more successful than the M counterparts in the TRANS task. It is worth discussing this point in the conclusion, because in nearly all TRANS tasks by all groups this difference in TRANS tasks with respect to genders is outstanding.

This group is the most successful group in SCT and GJT; even in the TRANS test this group is more successful. Whereas the prediction made by CA this group was expected to be less successful, as a result of differences in the language system of ENG and TUR. When I was talking about the interferences that I have found in my data concerning all groups I said that the interferences have been found only in group 1, and group 2. In group 3, no interferences (at least directly) have been found in word order typology. Perhaps the similarities, not differences cause more problems.

The transfer errors such as those in TUR L2 speakers have not been found explicitly. Perhaps they applied this phenomenon implicitly. Since the success rate of this group is higher than others, it seems to be that they transferred the rules of TUR less and so have been more successful. Probably it was because of the typological differences. Bilingual students of TUR transferred more rules into ENG than monolingual students of TUR. I believe that this transfer phenomenon had a role in their success rate too.

In the following the order of accuracy of RCs in the three groups according to SCT and TRANS tasks will be listed. These results will be commented in more detail in the conclusion.

THE ORDER OF ACCURACY OF RCs IN TREE GROUPS ACCORDING TO SCT AND TRANS TESTS

1. Group.

SCT: GEN, SU, DO, PREP, IO, OCOMP.

NPAH=largely match, PDH=match, SOHH= almost fully match

GER-ENG TRANS test: SU, GEN, DO, IO, PREP, OCOMP

NPAH= largely match, PDH=match, SOHH= partial match

Looking at these results we can conclude that GEN in GER interlanguage seems to be not suitable for the hypothesis of Keenan and Comrie, NPAH in sentence combination test however GEN and IO are not suitable.

2. Group

SCT: PREP/GEN, DO, SU, OCOMP, IO

NPAH= no match, PDH= fully match, SOHH= partially match

2. Test 3A: TUR-ENG TRANS test: SU› GEN›DO› PREP› OCOMP› IO

NPAH= No match, PDH= fully match, SOHH= partially match

2. Test 3B: GER-ENG TRANS test: SU › DO› GEN› IO› PREP› OCOMP

NPAH= largely match, PDH = fully match, SOHH= rarely match

3. Group

SCT: SU, IO, DO, PREP/ GEN, OCOMP

NPAH= fully match, PDH= fully match, SOHH= almost fully match

TUR-ENG TRANS test: PREP› DO› SU› IO› GEN› OCOMP

NPAH = partially match, PDH= fully match, SOHH= almost fully match

It is clear from the testing of all three hypotheses above that the PDH is the best device to predict the difficulty of RCs in ENG in all groups with no exception. NPAH can also predict the difficulty of RCs in ENG, but mixed results have been obtained from groups: it is a good predictor for the first and third groups, but it is not good predictor for the second groups. What is important for NPAH is that it actually predicts the difficulties in TRANS tasks, especially in GER-ENG TRANS tests. Finally,

SOHHP, whose predictions are not so good for the second group is the last good predictor.

For the order of accuracy of RCs, the togetherness of matrix SUBJ and OBJ positioning regarding the difficulty of relative construction will be shown.

THE ORDER OF ACCURACY OF RCs CONSIDERING THE MATRIX NP PRONOUN IN SCT AND TRANS TESTS: SUBJECT AND OBJECT:

Group 1 test 1

OSU/ODO›SGEN/OGEN›OIO/OPREP›SPREP› SSU/SDO/SIO/OOCOMP›SOCOMP

Group 1 test 2

OSU›SSU/SDO/OIO/SGEN/OGEN›ODO›SIO›SPREP›OPREP›OOCOMP›SOCOMP

Group 2 test 1

OPREP/OGEN›OSU/ODO›SPREP/SGEN›SDO/SOCOMP/OIO›OCOMP› SSU/SIO

Group 2 test 3A

SSU›OPREP›OGEN›SDO/SGEN/OSU›OOCOMP›ODO/OIO›SIO/SOCOOMP›SPRP

Group 2 test 3B

OSU›SDO/ODO›SSU›OGEN›SGEN/OPREP›SIO›OIO›OOCOMP›SPREP/SOCOMP

Group 3 test 1

ODO› OSU›OIO/OPREP/OGEN›SSU/SIO›SPREP/SGEN›OOCOMP›SDO›SOCOMP

Group 3 test 2

OPREP›ODO›SDO/OSU›SIO/SPREP›SSU/SGEN/OIO›OGEN/OOCOMP›SOCOMP

Now, the results from all tests by all groups have been presented. It is going to be useful if I draw a table in order to give a summary of statistics from my investigation. Then a short commentary for this purpose follows.

The success rate of all groups			
	Group 1	Group 2	Group 3
SCT	45.31%	33.85%	55.20%
GJT	56.25%	68.10%	80.81%
GER-ENG TRANS	58.85%	56.77%	---
TUR-ENG TRANS	---	46.35%	53.12%

Table 13 The success rate of all groups (above)

	Group1		**Group 2**		**Group 3**	
	M	F	M	F	M	F
SCT	46.25 %	40.41 %	37.91 %.	28. 5 %	44.41 %	35.66 %
	Diffrnc: 5.84% M(+)		**Diffrnc:** 9. 41% M(+)		**Diffrnc:** 8.75% M(+)	
GJT	4.28%	2.52%	3.68%	4.98%	5.24%	4.80%
	Diffrnc: 1.76 % M(+)		**Diffrnc:** 1.3% F(+)		**Diffrnc:** 0.44% M(+)	
GER-ENG TRANS	54.75 %	44.41 %	36.08 %	36.83%	---------	
	Diffrnc:10.34 % F(+)		**Diffrnc:** 0.75 % F(+)		-----	
TUR-ENG TRANS	---------		33.33%	48.74%	29.58 %	46.41 %
			Diffrnc:15.41 % (F+)		**Diffrnc:** 16.83 % F(+)	

M(+) means Ms are more successful; F(+) means Fs are more successful

Table 14 The success rate in male-female relation

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From the table above, which presents the statistical results from all tests by all groups, one can easily see which groups in which tests are successful. Another attached table which gives the statistical results by M/F adults reflects the difference in success is between M and F adults in the written production of ENG RCs.

If we take the approximate success rate of group 1 and group 3 in the three tests for comparison, we will see that group 3 is more successful than group 1: 63.04% vs. 53.47%.

The second group is special. I want to divide this group into two subgroups. Imagine what would be different if this group had two TRANS tasks: 2A (the first two tests plus TUR-ENG TRANS) and 2B (the first two tests plus GER-ENG TRANS). We have the number for approximate success at 52.90% in GER-ENG TRANS (2B) but 49.34% in TUR-ENG TRANS (2A) i.e., showing that the trilingual TUR students are more successful with GER-ENG TRANS. It also should be mentioned that the success rate of TUR students in GER-ENG TRANS is significantly higher (56.77% vs. 46.35%) than that of TUR-ENG TRANS. The order of the groups according to the success rate is: **group 3 > group 1 > group 2B group 2A** (> means more successful than)

One significant point is that the success rate of matrix OBJ positioning in all groups has been always higher than matrix SUBJ position.

The approximate success rate for genders is shown in the table below.

	Group 1	Group 2A	Group 2B	Group3
Male	35.09%	24.97%	25.89%	26.41%
Female	29.11%	27,40%	23.43%	28.95%

Table 15 Approximate success rate of males and females

The percentages from this table have shown up another point related to the question, "Are the M or F of the students more successful?" The data obtained shows that the difference between both genders is not significant. So, If we compare the approximate success of each gender in all groups (28.09% vs. 27.22%) the result shows that the F students are more successful than the M students. We also can understand from the table above that the F students from group 2A and group 3 are more successful than

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the M students. There is not a large difference between Ms and Fs in group 1 and group 2B.

One important thing in relation with the gender is that the TUR F students both from the second (2A) and third group are always more successful than their counterparts. In contrast, the GER F students are with 10.34% less successful than their counterparts.

The scores of the gender difference by TUR students are interesting. It has been indicated that the success rate of the TUR F students (TUR-ENG TRANS) both in the second (2A) and in third groups is higher than that of their M counterparts. (It seems that the F students avoided producing many RCs). This raises the question of whether the TUR F students in Germany and Turkey are more successful or more self-confident than Ms.

Another significant point is that the number of false responses by Fs in GJT from the first and second groups is lower than Ms. The results: Even in the third group the false responses of Ms are not much higher than the Fs (with 11 differences) If we accumulate all of the false responses of all three groups in GJT we see that Fs (47+65+50=162 vs.156+83+39= 278) produced 116 less false responses than Ms. It is an interesting tendency. Why did Fs produce fewer false sentences? I think that Fs were more careful than Ms and maybe they avoided making many relative constructions. This theme will be handled in detail under the title "avoidance phenomenon".

A study could be made to find out whether the women or men produce generally more RCs. My assumption is that the use of frequency of RCs depends more on personality not, perhaps, solely on gender. If gender does have an influence, then the M probably produces more RCs. The reason may be that they want to show that they are right or maybe strong. If RCs belong to the complex structures, then mostly long sentence are made. Because some people want to show that they speak correctly or they want to convince others; introverted or extroverted people might also produce more or less RCs too. This point also needs further investigation.

The first significant thing in the assessments was the avoidance phenomenon which will be talked about in detail in section 10.6.4. My focus in the evaluation of the data was especially on resumptive pronouns, relativiser selection, and preposition-stranding. These are the most important items, since they generally draw the frame of the RC constructions when produced. Each will be discussed next.

10.6.1. **Resumptive Pronoun**

According to CA, both GER and TUR adults would have difficulties with the resumptive pronoun, as both do not have such pronoun. However, TUR L1 and L2 speakers produced more resumptive pronouns in ENG than GER students.

The resumptive pronoun helps to facilitate the processing of an RC and its presence is more likely to occur with NPs at the lower end of the NPAH. The proximity of the head and its RC would also be suggestive of the presence of this overt pronoun. The further the relativisation sites from the head, the greater the need for resumptive pronouns (Tarollo & Myhill 1983). The TUR students had more difficulty with the resumptive pronoun than the GER students.

There is other proof for my data here. Also, in the work of Yumrutas (2009) a significant level of use of Resumptive Pronouns in the production by the TUR children between 3-8 years old was observed. This is ungrammatical in adult Turkish. She claims that the resumptive pronouns and HPs encountered in the child data can be considered a device that TUR speaking children resort to in order to disambiguate non-SUBJ RCs(-dik) from SUBJ RCs(-an).

Here is an example of a student from the sentence combination test.

A) I liked the competition **B)** You wrote it: I like the competition which you wrote **it**. ("it": resumptive pronoun). In this example the student combined the second sentence B with the first sentence A but he incorrectly added "it" to the end of the produced sentence.

Here is another example of a student from TUR-ENG TRANS test.

A. Kişi Michael'dir **B)** John ondan daha uzundur:

The person is Michael who John is taller than him. ("him": resumptive pronoun). Again, after he had combined the sentence B with the sentence A he also added "him" as resumptive pronoun to the end of produced sentence.

Results from GJT illustrate a high degree of acceptance of ungrammatical items using resumptive pronouns. Here are the examples from GJT.

1. * My wife and I are really enjoying the TV set that we bought **it** for ourselves last week.

2. *The student who (m) Johnson is stronger than **him** is Ray.

3. *The professor whose **his** last name is Goose is excellent.

4. *Emily wrote on a topic which she knew nothing about **it**.

5. *People who work in the hunger program **they** estimate that 35000 people in the world die from starvation every day of the year.

6. *I still remember the name who **he** taught me to play the violin when I was a boy.

7. *The car that the man drove **it** was very fast.

8. *I saw the boy whose **his** mother is a nurse.

9. *The woman that I gave a book to **her** is my sister.

10. *I met a girl who (m) Mary is shorter than **her**.

11. *The woman who (m) I was talking about **her** suddenly walked into the room. I hope she didn't hear me.

12. *The woman knows the boy who (m) Jerry gave a present to **him**.

As a further example, all sentences, built with resumptive pronouns, of one F and one M informant of TUR L1 speakers (see Appendix 4; **group 2A, Sample 1** and **Sample 2)** will be given now.

Our M has one sentence with resumptive pronoun. But our F informant has three sentences with resumptive pronoun. Interestingly both have it in different sentences. It

should be said that our F informant has two more sentences with resumptive pronoun than our M informant. All are written below:

Male: Mr. Smith looked at the girl which I gave a book to **her** (sentence 9)

Female: I like the competition which you wrote **it** (sentence 1)

I liked the girl whom I danced with **her** last night (sentence 11)

The candidate who I vote for **him** did not win the election (sentence 12)

Similarly, all sentences, produced with resumptive pronouns, of one M and one F informant of TUR L2 speakers (see Appendix 4; **group 3, sample 1 and sample 2**) as the evidences follow:

Male: a. The man who was shorter than **him** was Fritz (sentence 6).

b. The man who my mother mentioned **him** is well known (sentence 7)

c. The woman who Bill passed a note to **her** ……(sentence 8)

d. The candidate didn't win the election that I vote for him (sentence 12)

Female: a. Cathy was shorter than **him** who was Fritz (sentence 6)

b. The woman who Bill passed a note to **her** is a nurse (sentence 8)

c. I liked the woman whom I danced wih **her** last night (sentence 11)

d. The candidate who I vote for **him** didn't win the election (sentence 12)

It is seen from above that both M and F informants of TUR L1 speakers produced four sentences with the resumptive pronoun. The M and F student produced it in sentence 6, 8, 12. What caused the production of these sentences with the resumptive pronoun by M and F students of TUR L1? Were they produced for the same reason? These questions are interesting.

The following table shows the number of resumptive pronouns for all three groups i.e. that is why they have not been formed correctly.

	1. Group	2. Group	3. Group
SCT	48	53	47
GJT	86	105	96
TUR-ENG	----	43	39
GER-ENG	38	41	----
Total	172		182

Table 16 The number of resumptive pronouns for all groups

As can be seen, TUR students, no matter whether they belong to the second group test 3A or second group test 3B or in the third group, have difficulty with the resumptive pronoun. They produced few more resumptive pronouns than GER students. The reason can not be explained so easily on the basis that neither GER nor TUR have such pronoun in their language system within the RC formation; in SU, DO, IO, PREP, and GEN. The ENG equivalent in OCOMP, as in the following example, can be translated but it is ungrammatical. It means that RCs that contain OCOMP can not be translated both into GER and TUR.

OCOMP : The boy that John is taller than
*GER: Der Junge, der John grösser ist als er
*TUR: John'nun kendisinden daha büyük olduĝu erkek çocuk

It is not surprising that there are more resumptive pronouns produced in GJT than in other two tests. Because the number of resumptive pronoun that have designed before were more than the other two tests.

10.6.2. **Preposition-stranding**

According to CA, both ENG and TUR students would have difficulty in learning preposition-stranding in ENG RCs, since neither GER nor TUR has this kind of

position. But the GER students had more difficulties with this theme than the TUR counterparts.

This usage of prepositions in ENG does not exist; neither in GER nor TUR. It is worth mentioning that preposition stranding and deletion is another interlanguage feature found in our subjects. This problem is limited to the IO and PREP relatives in SCT. Results suggest that almost all of the subjects use stranded prepositions instead of initial prepositions in forming IO and PREP relatives. There are two possible explanations. The most obvious one is that a majority of them did not use the formal relative pronoun "whom" in IO relatives. Therefore, they formed the IO relatives with a stranded preposition instead of an initial one. Compare the following examples.

The woman **to whom** I can make my complaint is called Mrs. Leung.

The woman **who/that** I can make my complaint to is called Mrs. Leung.

*The woman **to who/that** I can make my complaint is called Mrs. Leung.

It means that stranded prepositions allow a choice of relativisers. On the other hand, phrasal verbs in PREP relatives favor preposition stranding. See the following examples.

The post **which** I applied **for** is being offered by an advertising firm.

The magazine **which** I am looking **for** is written in Japan.

First a table of all incorrect constructed preposition-stranding of all groups in SCT and TRANS task (The sentences 6, 7 in GER-ENG; 6, 7 in TUR-ENG and 11, 12 in SCT were set up for this target) will be given and the related comment will be made.

	1. Group		2. Group		3. Group	
SCT	M	F	M	F	M	F
	10	7	9	7	11	4
	17		16		15	
GER-ENG TRANS	11	8	8	9	----	
	19		17			
TUR-ENG TRANS	----		10	8	8	4
			18		12	

Tablo 17 Total incorrect responses of preposition-stranding by all groups in SCT and TRANS tasks

Looking at the 17 table above, it will be clear that GER L1 speakers did more incorrect sentences in preposition-stranding. Indeed, the position of preposition in GER and ENG is at the same place, they are put in front of relativisers. But in contrast to GER PREP in RC, preposition in ENG is stranded. Perhaps this is the reason why GER L1 speakers have the most errors, as it is demonstrated in the table. On the other hand, the third group is the most successful in the item preposition-stranding, they made the least errors. The other important figure in the table is that the relation between M and F students. The Fs in the third group made fewer errors, in comparison with Ms.

In addition to the notion of preposition stranding, it is interesting to investigate the deliberate deletion of preposition or comparative particle "than" during the course of embedding. In our subjects there is no significant trend to delete the preposition or the comparative particle. Nevertheless, prepositions are more likely to be deleted in IO relatives when compared to the other two positions. Such deletion is rare in PREP relatives. This is simply the result of the presence of the phrasal verbs in PREP relatives.

GER students produced more preposition-stranding than TUR students. Here is an example from the GER student in GER-ENG TRANS.

Der Meister, für den ich gestern gearbeitet habe, wohnt in Paris.
 *The master for who I worked yesterday lives in Paris.
As is seen in the answer there is no preposition-stranding, even though the student was expected to realise the preposition stranding.
And some GER students overstranded the preposition as it is seen in the answer below.

The master **who** I worked yesterday **for** is living in Paris. (Preposition is overstranded)
Other examples can be found in my data (see appendix 4). It is interesting because the student also avoided the word "with"; she used "together" instead. She is the only student who used such word in the place of preposition "with".

In order to see how high the rate of incorrect responses by GER L1 is, take a look at the table drawn in the next part, "Relativiser selection", for the distribution of incorrectly selected pronouns, especially the number of RCs with PREP.

10.6.3. Relativiser Selection

According to the strong version of CA, the L1 speakers of TUR would have more difficulty in relative pronoun selection, because there is no (overt) relative pronoun in TUR. The different relativisers in ENG and GER would also cause a GER L1 speaker to have difficulties in selection of relative pronouns and strategy. The predictions made by CA were: The position of the relative pronoun in ENG and GER is similar, i.e. both come after the head noun. As it is different in TUR, the GER L1 speakers would have fewer difficulties than the TUR speakers. There is an interesting point concerning relativiser selection for TUR L2 speakers.

If the samples from one M and one F form group 2A (see appendix 4: **group 2 sample 1 and 2**) are compared for this purpose, the following is seen: while our F student has never selected a wrong relative pronoun (with respect to human, non-human) our M student has used non-human for human antecedent three times (in sentences: 7, 9 and 12). This is a typical error

that GER L 1 speakers made. All these three sentences are written below:

a. The author is well known which my mother mentioned.

b. Mr. Smith looked at the girl which I gave book to her.

c. The candidate for which I vote didn't win the election

Problems with relativiser selection were found in this data. Nevertheless, the number of GER students that had difficulty in choosing the correct relative pronouns was much larger than TUR counterparts. Although TUR students did choose the wrong relative pronoun, this was not at as high a rate as among GER students. It is likely that the reason why TUR students are good at relativiser selection is the language structure of TUR. In TUR there is no overt pronoun. Instead, RCs are constructed with the help of some suffixes, as described earlier.

For further evidence, the number of incorrectly selected relative pronouns will be depicted next. But first it is necessary to know how the numbers of relative pronouns are distributed in the tests.

	SUBJ.		DO		IO		With PREP.		GEN	
	Hu.	Nonhu.	Hu.	Nonhu.	Hu.	Nonhu	Hu.	Nohu.	Hu.	Nonhu.
SCT	2	-	3	1	-	-	4	-	2	-
TRANS.	2	-	2	2	2	-	2	-	2	-

Table 18 The distribution of relative pronouns in SCT and TRANS tasks

I made a table containing all of the incorrect numbers of relative pronouns by all groups. It is in the following, and then a commentary follows.

		SUBJ		DO		IO		With PREP		GEN		Total	
Group1		Hu.	Non hu.	Hu	Non hu.	Hu	Non hu.	Hu	Hu	Hu	Non hu.		
	SCT	4		12		6		10		1		31	81
	TRANS	8		13		9		17		3		50	
Group2A	SCT	7		8		7		5		-		27	70
	TRANS	8		11		9		12		3		43	
Group2B	-- TRANS	7		10		8		6		4		35	
Group 3	SCT	4		7		3		6		-		20	58
	TRANS	5		9		9		12		3		38	

Table 19 The total number of incorrect responses in pronoun selection by GER L1, TUR L1 and L2 speakers in SCT and TRANS tasks

As seen in the table above, the total number of incorrect responses in pronoun selection by GER L1 speakers is higher than other groups. What is significant here is that the number of incorrect responses in relative pronoun selection is higher in "With PREP" in nearly all groups. However, GER L1 speakers made more. If the TRANS tasks of TUR L2 speakers are compared it will be seen that they are better in GER-ENG TRANS test (35 vs. 43). Generally "With PREP" seems to be the most difficult type.

Quite a lot of subjects shift the noun function in forming RCs. But it is interesting to note that the use of "whom" and "which" is always mixed up by a small number of learners in forming DO or PREP relatives. It is likely that they paid too much attention to case-marking instead of the nature of the head noun (human or non-human).

The sentence of the GER students were generally well constructed, however, because of incorrect pronoun selection they could not be more successful than their TUR counterparts from Turkey, though they were more successful than their TUR counterparts from Germany. This was particularly the case in GER – ENG TRANS.

In the following there is an example from a GER student. During the combination B with A he chose "that" for the head noun (human). In addition, the pronoun or relativiser "that" can not match here, because it comes after preposition "with".

A) I liked the woman **B)** I danced with her last night

I liked the woman with <u>that</u> I danced last night. In the following example a GER student selected an incorrect relativiser after he had combined the sentence B with the sentence A. and deleted the preposition "for".

A) The candidate did not win the election **B)** I vote for him: The candidate which I vote did not win the election.

Since in GER relativisers are mostly made with the article such as "die", "der", "das" and in some cases (official or old form) with the "welche", "welcher", "welches" the problem with relativiser selection or preposition deletion is probably due to interference from their mother tongue. That PREP relatives are formed incorrectly is also due to the GER language, because the place of the preposition (PREP relative) does not shift in GER (this statement applies to language TRANSFER). Sentence 6 of **Group 1 sample 1** provides good evidence for this case (see appendix 4). It is written below:
I saw the seller who I went to school together.

In this sentence the F informant replace "together" with the preposition "with" which stays at the end of her sentence. If we look at other examples from this candidate we see that she made the wrong selection of relative pronoun in sentence 1, in her seventh sentence the formal "who" instead of informal "whom" which is with a preposition. The M student from (see appendix 4) **Group 1 sample 2** also made the wrong relative pronoun selection. He selected incorrectly the relative pronoun in the sentences 2, 5, 6, and the "who" instead of formal "whom" in 7.

The incorrect responses in the selection of pronoun were produced nearly by all groups only when the antecedent was human. There was no incorrectly produced RC when the antecedent was non-human.

Apart from the things above, there is a notable tendency for subjects to avoid using the zero relative, which is allowed in ENG in a restricted number of occasions. This was, nearly, the case for all of the groups.

10.6.4. **Avoidance Strategy**

As is known, the avoidance strategy is used by learners when they think that one structure is more difficult than another. Do the L1, L2 of TUR or GER L1 speakers avoid more structures than the others?

Both the GER and TUR students avoided type 2 (cf. table 20) more frequently than other types at nearly the same rate, even though type 2 in the GER language exists and in TUR does not exist and the second most avoided type is the first type by both. (for the evidence, see the number of avoided types in the tables below).

The detailed information concerning the avoidance strategy of learners has been presented before. The examples for each type of learners' avoidance have been given under "The categorised avoidance strategy adopted by Gass (1980)" in the section "score" 10.1.4. Below the number of the avoidance types from all tests will be presented. Then the interpretations that can be made in terms of three groups will given.

The following example shows how the meaning changes when the OBJ not SUBJ is relativised:

A) The man called the police B) his wallet was stolen: The man called the police whose wallet was stolen.

1. Group, The total number of avoidance by avoidance type

Avoidance type	SCT		GER-ENG TRANS		
	Subject	Object	Subject	Object	Total
Type 1	5	7	16	17	45
Type 2	29	16	25	12	82
Type 3					0
Type 4	2	4	1	15	22
Type 5	32		13		45
Nonuse	2	3	6	11	22
Total	100		116		

Table 20 The total number of avoidance by avoidance type of the first group

We can clearly observe the frequency of avoidance against each other type. The table presents the number of avoidance made by GER students in SCT and GER-ENG TRANS. We understand from the table that the GER learners used the avoidance strategy more often in TRANS test than in SCT (116 versus 100).

The most frequently avoided type in this group is the second type. The second and the fifth type were avoided at the same rate. Type 3 has not been found in the production of GER students.

To prove this, we can look at the samples of the first group. In group 1, sample 1 (see appendix 4): the F student avoided the sentences 11 and 12. Both in 11 and 12 she avoided the centre embedded RC, in SUBJ position, which is the most frequently avoided type among from all informants (the 2nd type of avoidance; more come at the end of this section). In the following are her sentences:

11.   John is taller than the person whose name is Michael (sentence 11)

12.   Hilton is cheaper than the hotel I know (sentence 12)

In group 1, sample 1 (see appendix 4); the M student made the same avoidance as his F counterpart in 11. But, in contrast to her, in 12 he did not avoid centre-embedded RCs, rather the OCOMP relative, which is type 1 of avoidance. His sentences are below:

John is taller than the person whose name is Michael (sentence 11)

I know a hotel which is cheaper than the Hilton (sentence 12)

2. Group, The total number of avoidance by avoidance type

This group consist of two TRANS tasks; one is the TUR-ENG TRANS which I did with the data I collected two years ago, another is GER-ENG TRANS which is made of the results from the repeated part/new data.

	SCT		TUR-ENG TRANS (2A)		GER-ENG TRANS (2B)		
Avoidance type	Subject	Object	Subject	Object	Subject	Object	Total
Type 1	4	8	19	18	15	9	73
Type 2	31	18	24	14	29	11	127
Type 3							0
Type 4	4	3	2	13	5	13	31
Type 5	35		14		8		61
Nonuse					7	9	16
Total	103		104		106		

Table 21 The total number of avoidance by avoidance type of the second group

It is easy to observe the frequency of avoidance against each other type. The table presents the number of instances of avoidance produced by TUR students from Germany in SCT, TUR-ENG and GER-ENG TRANS tests. We understand from the table that the TUR learners avoided more often in the TRANS test/2A than in SCT

(however this difference is hardly significant: 104 versus 103). There is not a big different between the score of this group and the first group too, when the total number of avoidance sentences are taken into account. This group with TUR-ENG TRANS avoided type 2 more than the first group.

It would be better to make the comparison between both TRANS tests inside this group. Because one of the important points in this study was that perhaps the TUR students from Germany could perform better in GER-ENG TRANS test/2B not in TUR-ENG TRANS test/2A. So in avoidance both tasks should be dealt with. Let's see the total number of avoidance sentences in 2A and 2B. It is 104 vs. 106. Group 2B avoided type 2 more than group 2A, in spite of the fact that the difference between the total numbers of avoided sentences for both is not large. The other types that 2B avoided more are type 4 and non-use. The TUR students with 2B avoided less sentences than the GER students in the same task (106 vs. 116). And the type 1 is also avoided less by group 2B than by group 1. One question can be raised here: why did the learners of this group/2B avoid fewer sentences in the GER-ENG TRANS test than the GER students in the same task? The answer to this question is not easy. Interestingly, the F student of this group/2B sample 1 from our data in sentences 11 and 12 of GER-ENG TRANS avoided the centre-embedded RC as the F student of group 1 sample 1 in GER-ENG TRANS did. In contrast to this F student in this group, the M student of this group/ 2B sample 2 also avoided 12 in GER-ENG TRANS, but did not avoid sentence 11, which he did correctly, with the relative pronoun "whom" of formal ENG. In the following are the sentences mentioned.

Group 2B, Sample 1 (age: 17, gender: female, from Berlin, mother tongue: TUR)

13.   John is taller than the person who is named Michael (sentence 11)

14.   Hilton is not expensive as the hotel I know (sentence 12)

Group 2B Sample 2 (age: 19, gender: m, from Berlin, mother tongue: TUR)

The person whom John is taller than is calling Michael (sentence 11)

Hilton is cheaper than the hotel I know (sentence 12)

To see the difference between group 2A and group 2B, we should take a look at the two samples (see appendix 4) from group 2A. Again one is M and another is F (from SCT). The errors from these two samples are shown below.

Group 2A, Sample 1 (age: 16, gender: male, from Berlin, mother tongue: TUR)

In 5, 6, 7 and 9 he avoided centre-embedded RC (type 2) as in other samples. In 10 he avoided OCOMP RC (type 1).

Group 2A, Sample 1 (age: 16, gender: female, from Berlin, mother tongue: TUR)

She avoided centre-embedded in sentence 6, 8 and 9 (type 2). In sentence 10 she avoided producing OCOMP RC (type 1). As it is seen she produced the avoidance types, like him, in this group.

3. Group, The total number of avoidance by avoidance type

	SCT		TUR-ENG TRANS		
Avoidance type	Subject	Object	Subject	Object	Total
Type 1	5	9	17	9	40
Type 2	35	21	28	19	103
Type 3					0
Type 4	8	6	5	18	37
Type 5	41		12		53
Nonuse	1	2	5	8	16
Total	128		121		

Table 22 The total number of avoidance by avoidance type of the third group

We can see the frequency of avoidance against each other type in the table. The table presents the number of avoidances made by TUR student from Turkey in the SCT and TUR-ENG TRANS tests. We understand from the table that the TUR learners avoided more often in SCT than in TRANS test (128 versus 121). There is not a big different between the score of this group and the second group 2A and even the first

group, when the total number of avoidance sentences are taken into account. This group avoided sentences both in SCT and TRANSs more than the first group, GER students, and the second group, the TUR students living in Germany 2A.

From all three groups we can see that the highest avoidance frequency occurs in type 2. This type of avoidance allows learners to avoid centre-embedding in SUBJ matrix position in order to change to the less demanding construction of DO relatives rather than IO or OPREP relatives in OBJ matrix positioning sentence. Examples of sentences are provided in A. B. C. below for illustration. The fact is that learners tended to use type 2 (as in example B below) more frequently in SUBJ matrix position than in OBJ matrix position.

The learners also frequently used type 1 strategy in the formation of OCOMP RCs. This is nearly the second most frequently used strategy (as in example A below). Interestingly, both groups of TUR students (group 2A and group 3) used the fifth type of avoidance more than the first group and group 2A (this group avoided this type least): they changed the head NP as in the following example:

A. The woman spoke ENG B. She was nice (SS). Avoidance: The woman spoke ENG who was nice.

A. Use of type 1 to avoid OCOMP relative clauses

A. I met the girl   B. Jenny is prettier than her.

Correct combination: I met the girl who Jenny is thinner than.

Avoidance: I met the girl who is prettier than Jenny.

B. Use of type 2 to avoid centre-embedding

A.   The woman is nurse.   B. Bill passed a note to her.

Correct combination: The woman who Bill passed a note to is a nurse.

Avoidance: Bill passed a note to the woman who is a nurse.

C. Use of type 2 to change to the less marked relatives.

A. Mrs.Smith looked at the girl.   B. I gave a book to her.

Correct combination: Mrs. looked at the girl who I gave a book to.

Avoidance: I gave a book to the girl who Mrs. Smith looked at.

Regarding the avoidance one question can be made: is there any difference between all groups in attempting an avoidance strategy? All group except to group 3 used nearly the same type of avoidance. It should be pointed out here that the number of false responses also gives an idea about the avoidance reality. Therefore the total false responses by all groups in all tests are given below as a table. Not only in GJT is the number of false responses by F less than that of M, but also the number of false responses in all other tests i.e. SCT and TRANSs. This seems to be important in the assessment of gender results.

	Group 1		Group 2A		Group 2B		Group 3	
	M	F	M	F	M	F	M	F
SCT	58	50	57	50	-	-	60	27
GJT	156	47	83	65	-	-	39	50
TUR-TRANS2a	-	-	72	33	-	-	66	25
ENG- TRANS2b	54	29	-	-	53	33	-	-
TOTAL	268	126	212	148			165	102

Table 23 The total false responses by male/female students of all groups in all tests

Here we come up with a question: Do the M and F students avoid in the same way? To give an answer, let's see the total number of false responses produced by both genders in all three groups in the tests as illustrated in the table. In all groups the Fs produced less false responses than the Ms. It is clear from these scores that the F students avoided much more than their M counterparts (especially in GJT), i.e. they-I think- did not respond to the sentence when they were not sure, or they thought they were difficult for them. This is an interesting tendency the F students show.

However, it should be remembered here, as written before in chapter 3.1, that an intersection of linguistic and psychological factors exist in the aspect of avoidance. The

reason lies in the reality that the predictions mentioned can, in a better way, be made with additional knowledge regarding various affective variables, such as confidence, anxiety, and success-achievement orientation as investigated by Kleinmann et al. (1977)

10.6.5. Implication for UG

Regarding the poverty of stimulus argument, Chomsky (1965, 1980) goes back to the concept of UG. The degenerate input was the main argument in the discussion (spoken language that is full of false starts, slips of the tongue, etcetera) Children still create a mental representation of language which is not only much more complex than could be expected, but also strikingly similar to that of other native speakers of the same language. It means that input alone can not explain L1 acquisition. Therefore, the biologically endowed UG is likely to exist and makes the task facing the child much easier, by equipping it in advance with a clear set of expectations (principle and parameters) about the shape of the language they are to learn.

If this discussion is true about L1 acquisition, it is also true about SLA (Cook, 1988; Flynn, 1987). Cook (1988) claims that, like L1 learners, L2 learners have knowledge of the L2 that they could not have acquired from the input. This must have existed within their own minds. But the question is how accessible is the UG to the adults: Fully accessible, partly accessible, or not accessible?

Flynn (1987) believes that adult SL learners have continued access to UG just like L1 learners. She argues that in cases where the L1 and L2 parameter settings are the same, learning is facilitated because the L2 learners can consult the structural configuration set up for the L1 in the construction of the L2 grammar. Where the L1 and L2 parameter settings are different, the learners must assign new values and in spite of the fact that this is not problematic, it does add to the learning burden.

Do the learners of L1 and the L2 have the same frequency of producing linguistic knowledge? The answer is probably "no". In my view neither the frequency of input nor of output is at the same rate. This gives support to the idea of Selinker when he states

that both types of learners (i.e. L1 and L2) do not have the same exposure ratio. More research, nevertheless, needs to be done, especially regarding the age of L2 learners, degree of achievement, and potential differences between L1 and L2 input.

In this study I have analysed the acquisition of ENG as L2 for GER students, L2 for TUR students and L3 for TUR students whose L2 is GER. The logical problem of language acquisition for the first and second group may be the same. But the situation for the third group is not known since ENG for them is L3. Language input comes mainly from school instruction for all three groups. In terms of the achievement which we have seen, why is the third group (see the success of all group in the table 13) more successful than the first and second group? (Especially in GJT, with 80.81%) Is the reason negative transfer from GER or is it because of the school instructions, even though the TUR language is structurally different than the Indo-European languages? That all three groups are very successful at the GJT is, perhaps, because of the theoretical reasoning made by UG. The implication is perhaps: UG may still be operative in the minds of the GER and TUR adult foreign learners. Otherwise the task of acquiring ENG RC, a head initial construction, as opposed to the head-final construction of TUR RC (and for GER as head initial and head final constructions), would not be so successful. Another point is that all three groups would not have achieved, to a certain extent, the resumptive pronoun, a category which they do not have in their L1 because the subjects have received scarcely sufficient input in the context. Finally the access to UG could have been partially available for both GER and TUR adults in the study.

11.0. Conclusions and Implications

In this thesis two kinds of empirical studies about ENG RCs were made. RCs that belong to complex structures are important on the grounds that they can give us an idea about how SLA occurs. They can illuminate the way how sentence processing takes place.

In the first empirical analysis, the various fields of corpora i.e. all of the ENG RCs from a history and chemistry book which are currently taught in high schools; a book from ENG literature (a book by Lessing, Nobel Prize Winner), have been extracted and listed according to their types (they have also been researched in the mass media). Then an analysis with the target of finding out the frequency use of RCs and whether they are used much in social or natural sciences. It was expected, one of my working hypotheses that RCs are used more in social science (literature 1128; history 829) than natural science (chemistry 774), this was confirmed. One of the findings is quite significant; that is the rate of the reduced RCs from all researched areas, i.e. history, chemistry, together with the zero type are higher than those types used with relative pronoun. In the history book their percentage of RCs without pronouns is 37.87%; in contrast the percentage of RCs with relative pronoun "who and which" is 36.42%. In chemistry, RCs without pronouns are much higher than all of other kinds (with 66.91%: accumulate the percentage of 5, 6 and 7 in the chapter 9; table 2). We can raise a question here: Is ENG on the way to a grammatical change? I think "yes". ENG is on the way to a grammatical change, at least, as far as RC is concerned; data from the ENG corpus provides the evidence that there is a tendency that ENG speakers chose RCs construction without relative pronouns more than with relative pronouns. One of the other important findings is that the long sentences containing numerous RC types belong to the second code of language that make a sentence difficult to understand, even for NL/L1 speakers, as has been supported with this corpus analysis (see example 2 in chapter 9 -cf example 3- and the elicited samples in appendix 5A&5B)

In the second empirical study, I have tried to answer the question of whether ENG RCs are easier in the acquisition and production for GER L1 or TUR L1 and L2 students with respect to their typological specifications and the transfer errors from their L1; through this the development of RCs in the interlanguage of native GER and TUR speakers of ENG has also been explored, within the framework of Keenan and Comrie's Noun Phrase Accessibility Hierarchy (1977), which focuses on typological markedness; PDH of Kuno (1974), which focuses on the matrix clause and short term memory capacity and SOHH of Hamilton (1994), which focuses both on the matrix and RCs. Three kinds of tasks were used to elicit the data: SCT, GER-ENG TRANS test and GJT. Our statistical evidence and discussions lead to the following conclusions.

A general evaluation (overview) for the difficulty of ENG RCs predicted by the tools (SCT, GJT and TRANS task) can be made: Both GER and TUR students differ when compared on NPAH. The first group largely matches the order in NPAH except GEN and IO in SCT and GEN in GER TRANS test. The second group does not match the order in NPAH at all. The third group matches fully the order in NPAH in SCT except IO. In TUR-ENG TRANS test only GEN and OCOMP match the order in NPAH. The prediction made by PDH is that the centre-embedded RCs of ENG are more difficult to produce than the left-embedded RCs. This has been fully supported both in SCT and GER-TUR TRANS test (both GER and TUR students produced more mistakes in centre-embedded than left embedded RCs as predicted by PDH). SOHH has a complementary role. In SCT and TRANS tests the results obtained from the first and the third group matches the predictions made by SOHH almost fully and the second group matches them partially. It means that the role of SOHH is still important from the view of the acquisition of ENG RCs.

Despite the fact that the outcome in the GJT does not lend any support to the three hypotheses due to the exceptional nature of some of the test items, the overall outcome suggests that NPAH, PDH and SOHH are in a unification relationship.

Together they contribute to our understanding of the acquisition problems of RCs. The fact that the data in the other two tasks partially supports the universal markedness as predicted by NPAH, but fully supports PDH and almost fully supports SOHH, may imply that learners are acquiring the RCs through the path that is constrained by the linguistic universal of NPAH and universal human cognition as postulated by PDH. Briefly, hitherto, it has been confirmed that PDH is the best tool in comparison with NPAH and SOHH in the prediction of difficulty of the ENG RCs by GER and TUR adults in all three groups of 11th grade.

The centre-embedded RCs of ENG which were predicted to be more difficult both for GER and TUR monolingual and TUR bilingual/trilingual groups have been verified. Consequently, the GER and TUR learners of ENG avoided the centre-embedded RCs more than right embedded ones as has already been found by other researchers such as Gass (1980) and Izumi (2003).

One of the main research questions was: Does typological closeness make the acquisition and production of ENG RCs easier or more difficult? In other words; how determinative are the typological reasons in the acquisition and production of ENG RCs for the GER L1 and TUR L1 and L2 learners? To open the discussion it should be repeated here: TUR has SOV word order parameter and has premodified RCs, whereas GER has both SVO in main and SOV in subordinate clause and has pre-and postmodified RCs. According to CA GER students should be more successful in the acquisition and production of ENG RCs than TUR students because of the positive transfer as predicted by CA: There are more similarities between ENG and GER as a result of language typology.

I expected that this would be the case, but if we look at the success rate in the findings (group 3 > group1 > group2 (> means more successful than)) we see that the third group is more successful than the first and second groups. It is perhaps because of the fact that the RCs in TUR-ENG differ more than RCs in GER-ENG or because the third group is monolingual and the TUR language is completely different than GER and ENG: TUR is agglutinative, but GER and ENG are not. This brings us a question if

the typological crossedness does not play a role (or partly) when ENG RCs are acquired by GER and TUR speakers. This idea - I believe - is not always true, at least as far as the RCs are concerned. My position is: When two things (languages) are completely different from each other, it is better i.e. they will be learned more easily than when two things are semi-different as RCs in GER and ENG; the word order typology of ENG and GER (in ENG pre- in GER both pre-and postposition). Relativisers and their positions in the syntax of ENG and GER are also semi-different, but those (word-order typology and relativisers and their positions) of TUR and ENG are entirely different. More discussion follows: I argue, when typological differences in some of the grammatical categories are very big, i.e. completely different, the acquisition can be easier. It is, at least, the case involving ENG RCs, because monolingual TUR speakers (TUR is typological different than GER and ENG) are more successful than other groups. I believe, these are semi-similarities but not absolutely differences that sometimes cause interferences. Evidence is that GER L1 speakers were not more successful than TUR L1 speakers as a consequence of the typological closeness of GER-ENG. They are typologically closer to each other, but GER has two kinds in word order typology (It reminds us of difficulty hierarchy by Stockwell, Bowen and Martin (1965) who said that it is difficult when there are 2 elements (in this case: SVO and SOV) but only one in the target language: "coalesced") i.e. GER has pre-and post modified RCs but TUR has only postmodified ones. I think, GER L1 speakers could not be as successful as TUR L1 speakers owing to the interferences of GER with ENG. The other evidence in this subject is that the relative pronouns/relativisers of GER and ENG are semi-different but those of TUR and ENG are completely different, consequentially GER L1 speakers produced more errors than TUR L1 and L2 speakers (see the figures of "relativiser selection"). One of the important points of cross-linguistic influences this study tells us is that about the TUR L2 with GER-ENG TRANS. It is a good example since they were bilingual/trilingual and had less interference in GER-ENG TRANS test than GER students in the same test. It can be said that they were more advantageous than their

GER L1 counterparts on the ground that they have already acquired two language systems (GER&TUR) and had more experience in the acquisition of the languages.

However, we see other effects regarding the typological closeness i.e. the transfer in this research. This reality showed that language typology has an influence on (in language transfer) their acquisition of ENG as L2 (GER L1) or as L2/L3 (TUR L2). The data confirmed that GER L1 speakers applied language transfer more than TUR L2 and L1 speakers as a result of language typology in learning ENG as L2. As it has been expected, TUR L2 students transferred more from GER into ENG than from TUR which is a non-Indo European language, as GER has typological closeness with ENG. In other words, TUR students transferred more from their L2 than L1 in the learning of ENG as L3, because of the GER word order (2 sentences were found in this way; but no such interference was found by TUR L1 students); as has been expected. The reason probably is that their L2 (GER) is their environmental, dominant language and TUR is a minority language in Germany. My data, at this point, is consistent with the study made by Cenoz (2000) and Saĝın (2006), whose studies indicated that typological closeness of languages plays an important role for L3 learners in cross-linguistic influence. Their research is verified in my study.

The best test which can give us more evidence on interference is the TRANS test: I have found different kind of interferences both from GER L1 and TUR L2 only in TRANS task. The advantage here is that the informants do not have two prepared sentences for combining with each other and building a RC; rather they think about them and produce a RC with their own words and knowledge.

It has not been found directly whether they transferred other rules from GER or TUR into ENG (Transfer errors found are only from TRANS task). Since this study is based on production data in the written context, maybe they did not produce the RCs directly/ consciously. Instead, they combined or circled the correct responses. It is likely that the transfer phenomenon has been applied by the students of all groups not directly/ consciously but indirectly/unconsciously, and had impact on their success rate. Despite this, in my view TRANS task is a better tool in comparison with SCT and GJT to see the transfer errors. Because all of these 6 transfer errors of GER L1 attributed

to the ML of GER L1 speakers and 2 transfer errors attributed to TUR L2 speakers' interferences with their GER as L2 have uniquely been found in TRANS task. Furthermore I believe that transfer (positive or negative) had a role implicitly in the success of L2/ FL or L3 acquisition.

Now, the other researched items should be presented. Let's take a look at the results, obtained for each groups in the framework of research questions of the thesis, and evaluate them;

GER 1 had more difficulty in the selection of relativisers in SCT and TRANS tests (for example, incorrectly selected: GER L1: 81, TUR L1 58). CA predicted that TUR L1 speakers would have more difficulty in relativiser selection than GER L1 speakers because TUR does not have any relative pronouns (no overt relative pronoun). ENG and GER have similar position of relative pronouns; in addition GER has more different relativiser strategies than ENG, for example, the declination of the relative pronouns which are articles in accordance with numerus, genus, and casus. According to CA GER L1 speakers would also have difficulty in relativiser selection, but not as much as TUR L1 or L2 speakers. Conversely, it has been found that they had more difficulties than TUR L1 speakers. The reason that GER L1 speakers had more difficulties was probably because of the interference between GER and ENG, for they have semi-similarities. Also bilingual TUR students did poorly in the case of relativiser selection. However, they did not make as many mistakes as GER L1 speakers did: It is not disadvantageous, as claimed, to be bilingual when L3 is acquired.

CA predicted that both GER and TUR speakers would have difficulty with the resumptive pronoun because both do not have this in their language systems. However TUR L1 and L2 speakers did produce more resumptive pronoun in ENG than GER L1 students. Due to the fact that this finding supported the study made by Yumrutas (2009) who researched the production of TUR children between 3-6 years old and found a massive use of resumptive pronoun, this subject needs be investigated further.

CA predicted that both GER and TUR speakers would have difficulty in learning preposition-stranding in ENG RCs, since neither GER nor TUR has this kind of position of PREP. But the GER L1 students had more difficulties with this theme than the TUR L1 and L2 counterparts. In GER and ENG, relativisers which are made with PREP are positioned after the antecedent. But while sometimes the PREP in ENG is stranded, in GER it is not stranded but must stand before the relativiser. I think it is, again, because of these semi-similarities between GER and ENG that they had more difficulties. It occurs as a result of interferences as already been mentioned about the typological closeness.

TUR L1 avoided more frequently than TUR L2 and GER L1. Astonishingly, the most frequently avoided types by all groups were the same types i.e. the 1st and 2nd types, even at a similar value. Maybe the success rate, in general, measured in this research may change less or more in other ways, since there are other factors that might contribute or hamper the achievement of the students such as the psychological situation the students had during the test taking (as was found by Kleinmann:1977). Pedagogical and sociological factors also might play an important role in the success shown by all examined students. But our data showed valuable findings in view of this case.

It is necessary to talk about the gender difference. Do M and F students differ significantly in their achievement in the questionnaire study? Are the Ms or Fs of the researched students more successful? If the approximate success of each gender in all groups is compared, it will be seen that F students (28.09% vs. 27.22%) are more successful than the M students.

One interesting point regarding the gender differences is that F students of bilingual TUR students and monolingual TUR students are more successful than M students in TUR-ENG TRANS task. This raises the question whether maybe the F TUR students in Germany are more successful than those in Turkey or they are more self-confident. If the Fs of all three groups are better the Ms in TRANS than in SCT and GJT, what does it mean? I think, here, one reason is: The F students are more careful, and perhaps more susceptible (I associate this with traffic, consider the behaviour of the F

and M difference in driving: Fs make accidents less than Ms); maybe they think well and then try to construct the sentences, in contrast to M students. Another is that, maybe, they must have built the sentences in TRANS with their own words and knowledge in a careful way, whereas in SCT and GJT they must have combined and judged the sentences that had already been prepared. Again, why are the F GER students in GER-ENG TRANS test more successful than their M counterparts with a significant difference (10.34%)? However the M GER students in test 1 and test 2 are more successful than their F counterparts. Furthermore, in group 2 the F students both in TUR-ENG and GER-ENG translation tests have higher success rates in comparison with M students. As it is seen, it is the TRANS test that increases the success rate of F informants. According to my assumption, it is another sign that the TRANS test is more important and reliable than both SCT and GJT tests, especially in the investigation of gender studies.

One significant point is that the success rate of matrix OBJ positioning in all groups has always been higher than matrix SUBJ position, regardless of the gender differences.

Important evidence concerning avoidance by F and M informants has been found in GJT. The number of false sentences in GJT by the 1st, 2nd and 3rd groups the F students had is 116 less than those of their counterparts. This raises a question again: Are they thinking more before their output? Is their cognitive process operating differently? Or are they careful? The differences between both genders depicted in the findings signal that M/F probably avoided the sentences by the virtue of their psychological and social endowment (to be F or M); they, likely, did find them difficult to answer; as a result they produced less than the M students (this is a kind of confirmation related to the affective variable of Kleinmann (1977).

It must be noted that the avoidance types 1 and types 2 seem to be difficult both for GER and TUR speakers, regardless of gender differences. Accordingly they applied the avoidance phenomenon at a high rate (and it is a kind of verification related to the syntactic avoidance of Schachter's study (1974).

What emphases related to the educational perspectives from the second empirical study that can be made? It is expected that the findings may be conducive to more effective teaching and learning of ENG in Germany and Turkey as well as to provide a foundation for future research. Nevertheless, there is a controversial issue between SLA and pedagogy. The diverse views can be found on the issue concerning the implications of SLA research for classroom teaching, for example, Crookes 1994, Gass 1995, Ellis 1997, Pica (1994). In particular, Pica (1994) attempts to make the implication explicit by relating the SLA research with teachers' most frequently asked questions, namely, the role of students' L1 in their L2 learning or the need for correction, grammar instruction and so on. The results of different research vary with the various research design, sample and methodology, yet they provide teachers with invaluable insights and pedagogical reflections.

When it is accepted that the linguistic universal factor and human cognition mechanism play a role in GER and TUR adult learners' language acquisition, the role of L1 can not be ignored if we see the errors and the avoidance strategies the learners made in the formation of ENG RCs. But the influence of GER and TUR does not make the task of language learning totally impossible because the learners can reset the parameters to that of the TL by assigning new values to the existing L1 parameter setting.

The suggestions of this study are: It is significant to note that the features of the classroom situation of Germany and Turkey should be taken into consideration. Because of the fact that our results recommend that universal complexities of RCs overshadow the influence of learners' L1 during the course of acquisition, teachers should consider not only the features of their students' L1, the difference between L1 and L2, but also universal difficulties in language and language teaching, to support this statement consider the two types of word order typology, pre-post modified RCs, in GER. Teachers of TUR students should put more emphasis on the prohibited use of resumptive pronoun and avoidance phenomenon in ENG RCs and teacher of GER students should stress relativiser selection and preposition-stranding. Empty repetition of task/drills may not be an effective way for mastery of RCs. On account of the fact

that, when, class size is high (the class size in Turkey is much higher than that in Germany; the logical reason is the size of the young population of Turkey) and active participation and instruction in the classroom (Bodomo 2002) is lacking, explicit instruction of grammar rules and subsidiary issues would be preferred. In this connection Pica (1994) says that the sequential order of instruction on grammar rules can be determined by learnability and learners' readiness. Doughty (1991) supports this idea, as does Gass (1982), I argue that there is always a positive effect of grammar instruction on the most difficult type of RC instead of the simpler ones, taking the CA into account, especially its predictions regarding the difficulties.

It can not be claimed that the result and analysis of the second study are definitive and therefore applicable to students whose interlanguage of the ENG RCs have not been tested. Nevertheless such findings may be indicative and suggestive of some problematic area of ENG RCs for ESL learners. A number of issues that have never been addressed in the GER and TUR situations have also been examined. However, the results are not conclusive yet. More relevant investigations should be carried out in a similar context. In particular GEN in this study (in the data produced by GER students) shows an interesting point that was rarely mentioned before: this should be closely and extensively looked into so that language acquisition can be understood better. In addition, the existence of resumptive pronouns causes great difficulty both for GER and TUR learners. It should be examined well, since neither GER nor TUR have the resumptive pronoun within the RC formation. Similarly, OCOMP does not have GER and TUR equivalents. The case of OCOMP should also be mentioned. The fact is that participants of both GER and TUR in the study could produce OCOMP RC. It must be noted here that it is an intriguing issue as well, because this is not manifested in GER and TUR and it is hardly grammatical for native speakers of ENG. It is a question, at the same time, that needed to be subject of further studies to find out if it is a universal principle or not.

Since it was found in the first study that the reduced RC types are more frequently used and cause perceptual problems for high school students, especially those with

(-ing), attention should be on them in education and they should be included in the school syllabus. Not only the RCs used, as in traditional manner, with relative pronouns but also the other types which are used without relative pronouns (i.e. with reduced types), together with other types, should be taught in the classroom.

The following explanations concerning error treatment can be made. In our assessment, a number of interlanguage features and errors have been found. Assumptions about L2 learning are that errors indicate learners' hypotheses about the L2 and that overt correction can not change their natural path of acquisition, overt correction of errors should be recommended both for the GER and TUR students because both would not use ENG outside the classroom. As a result of such infrequent exposure and experience we would not expect them to correct their mistaken hypotheses on the TL features in an uninstructed way. The errors found here could serve as a source of teaching points during instruction on RC formation. At this point, the role of CA, for all these issues found in the second empirical study, should be taken into consideration. Because, when the problematic points reckoned in this study are explained by the teacher in the classroom, for example, difficulties of ENG RCs for both GER and TUR students, the number of errors can be reduced. My point of view is that it is better to do so instead of leaving such handicaps to the students to surmount. The reason is that we can not know how well the adults are able to solve them unconsciously.

Both the first and second studies in this thesis tell us that the ENG RCs are not easy to acquire and produce. In particular, the questionnaire study has ascertained this for GER L1, TUR L1 and L2 speakers. Whether the first, second, or the third group is more successful than the others should be a subject of new investigations. The data collected and analysed in the second empirical study show the differences among these three groups in terms of RC acquisition.

CA has still an important role, since EA, as stated before, can not explain the avoidance phenomenon. But if CA together with EA and the complementary of other tools such as avoidance phenomenon is applied (taking into account the considerations of Kleinmann (1977)), predictions for the areas of difficulties can be

made much better, because the number of avoidances found in all three groups of 11 grade's adults' acquisition and production of ENG RCs in the second empirical study, can not be disregarded. In this way the number of transfer errors can be reduced, which facilitates the teaching of L2 or the FL, as the present work supported.

12.0. Zusammenfassung

Thema meiner Dissertation ist „Der Erwerb der englischen Relativsätze durch deutsche (L1) und türkische (L1 & L2) Kinder". Neben der Hauptuntersuchung zum der Erwerb der Relativsätze enthält meine Arbeit im Hauptteil auch eine zweite Untersuchung, mit dem Ziel, herauszufinden, wie oft die englischen Relativsätze verwendet werden. Für meine Untersuchungen habe ich mehrere Schulbücher des Faches Geschichte und eines aus dem Fach Chemie aus der gleichen Klassenstufe, wo ich die Tests durchgeführt habe, (11. Klasse) ausgewählt. Damit wollte ich herausfinden, welche Schwierigkeiten für die Schüler/innen existieren, nebenbei sollte die Häufigkeitsverteilung der Relativsätze in den Büchern ermittelt werden.

Die Relativsätze im Englischen wurden mehrfach von Linguisten/innen untersucht, sowohl nach ihren syntaktischen als auch nach ihren semantischen Aspekten. Ich habe dieses Thema ausgewählt, weil es für mich ein sehr interessantes Thema ist. Es wurde in den vergangenen zwei bis drei Jahrzehnten sehr oft studiert und hat bereits einen wichtigen Platz in der Kontrastivlinguistik eingenommen. Die Untersuchung der Relativsätze ist dabei wichtig, da sich dadurch herausfinden lässt, wie sich der Zweitspracherwerb vollzieht. Des Weiteren möchte ich auf einige Aspekte meiner Magisterarbeit vertiefend eingehen, welche dort zu wenig studiert werden konnten. Da diese Dissertation eine Kontrastivarbeit ist, ob die englischen Relativsätze für die deutschen Schüler/innen leichter erlernbar sind als für die türkischen Schüler/innen, ist es relevant, in die theoretische Grundlage der Kontrastivanalyse bzw. der Kontrastivlinguistik einzuführen.

In der Einführung sind die wichtigsten Aspekte erwähnt, die ich im Laufe meiner Arbeit erklären möchte. Beginnend mit einem Überblick über die Kontrastivanalyse werden daran anschließend die syntaktischen Aspekte der englischen, deutschen und türkischen Relativsätze jeweils anhand eines Beispiels aufgeführt.

Im zweiten Teil der Arbeit zeige ich auf, welche Rolle die Kontrastivanalyse im Zweitspracherwerb hat und in welcher Form sie beispielsweise gestärkt werden kann. Danach wird die gegen sie erhobene Kritiken diskutiert und die Fehleranalyse erklärt.

Der dritte Teil beschäftigt sich mit dem Thema der Entwicklungen, die in der Kontrastivanalyse gemacht worden sind. Hier wird über die Vermeidungsrealität gesprochen, die die Lehrenden beim Erwerb einer Sprache verwenden. Des Weiteres werden einige Werkzeuge wie z.B. „Markedness Differential Hypothesis (MDH)" und „Empty Category Principle (ECP)" diskutiert, welche zur Verbesserung der Kontrastivanalyse beitragen. Damit werden die theoretischen Grundlagen der Kontrastivanalyse dargestellt, zusammen mit den Möglichkeiten ihrer Stärkung (wie z.B. MDH, ECP und „Avoidance Phenomenon (AP)") sowie der Durchführung der Fehleranalyse. Dieser Arbeitsabschnitt arbeitet die Bedeutung der Kontrastivanalyse sowie ihre Rolle für den Zweitspracherwerb heraus.

Der vierte Teil befasst sich mit der Definition und der Klassifikation von zu den Nebensätzen gehörenden Nominal-, Adjektiv- und Adverbial-Konstruktionen des Englischen sowie ihren Beschränkungen in der Linguistik. Solche syntaktischen Informationen ist für diese Arbeit von Bedeutung, da geklärt werden soll, wie sich Matrix und Nebensätze im Englischen semantisch und strukturell verbinden lassen. Für das Verständnis des Erwerbsprozesses der englischen Relativsätze für die deutschen und türkischen Schüler/innen sowie die türkischen Schüler/innen mit Deutsch als Zweitsprache ist dies sehr relevant.

Im fünften Teil wird gezeigt, wie die Relativkonstruktionen im Englischen als postmodifiziert, im Deutschen als prä- und postmodifiziert und im Türkischen als prämodifiziert angewandt werden. In diesem Zusammenhang werden die Unterteilungen der Relativkonstruktionen und ihre formale Charakteristika im Englischen, Deutschen und Türkischen definiert. Des Weiteren werden die

typologischen Merkmale der Relativsätze in der Grammatik sowie die letzen Studien über sie diskutiert.

Der sechste Teil informiert über die psycho-syntaktische Annäherung an die englischen Relativsätze, einschließlich von „Cognitive Modelling" und „Garten Path Effect".

Der siebente Teil widmet sich dem Zweitspracherwerb. Dieser wird aus unterschiedlichen Perspektiven betrachtet, wie z.B. interne und externe Faktoren, Transfer, Interferenz, Drittspracherwerb, die emergentistische Annährung und die Rolle der Universalgrammatik in dieser Disziplin. Ob die Universalgrammatik noch für die deutschen und die türkischen Schüler zwischen dem sechzehnten und achtzehnten Lebensjahr zugänglich ist, wird an dieser Stelle erörtert.

Der achte Teil befasst sich mit der Frage, wie die Behandlung der Relativkonstruktionen unter den Sprachwissenschaftlern erfolgt, beispielsweise bei „Augmented Transitional Network (ATN) Grammar" und „wh-movement" der Relativkonstruktionen. Ferner werden die sechs Hypothesen über den Erwerb der englischen Relativkonstruktionen präsentiert und begründet, warum hier nur drei davon ausgewählt wurden.

Im neunten Teil findet der Hauptteil der Untersuchung von Relativsätzen im Englischen statt. Hier werden die Resultate über die englischen Relativsätze präsentiert, die in verschiedenen Bereichen gesammelt wurden, wie z.B. in Literatur, Schulbüchern und Presse. Zur Klärung, ob Relativsätze mehr in den Sozialwissenschaften oder in den Naturwissenschaften Anwendung finden, werden die aus dem Hauptteil gezogenen Ergebnisse aus Literatur, Schulbüchern und Presse kommentiert. Es folgt die Bestätigung der Hypothese, dass Relativsätze im Englischen mehr in den Sozialwissenschaften benutzt werden als in den Naturwissenschaften.

Im zehnten Teil wird zuerst die Methodik der zweiten empirischen Untersuchung dargestellt. Die Daten dieser Untersuchung wurden an drei verschieden Schulen in Deutschland und der Türkei erhoben. Dabei wurden neun männliche und sieben weibliche Probanden (insgesamt 16) befragt. Die Ergebnisse aus diesen drei Tests an deutschen und türkischen Schulen werden hier mit Statistik aufgezeigt und diskutiert. Daneben werden die Ergebnisse weiterer Untersuchungselemente dargestellt, zu denen „Auswahl von Relativpronomen", „Resumptivpronomen", „Preposition-stranding", „Vermeidende Relativsätze" und „Implikationen für die Universalgrammatik" gehören. Es wird gezeigt, wie viele Fehler die deutschen (L1) und türkischen (L1 und L2) Schüler/innen in der Produktion und im Erwerb der englischen Relativsätze gemacht haben. Die Gründe dafür werden benannt und ferner diskutiert, ob diese Fehler ihren jeweiligen Muttersprachen zugeschrieben werden können (Transferfehler). Die Fokussierung liegt dabei auf dem Vergleich der Resultate zwischen den deutschen und türkischen Schüler/innen. Dies soll klären, ob die englischen Relativkonstruktionen für die deutschen (L1) oder für die türkischen (L1 und L2) Schülerinnen schwerer zu erlernen sind.

Im elften Teil werden die Zusammenfassung und die Schlussfolgerung gegeben.

In dieser Dissertation habe ich versucht, die Entwicklung der englischen Relativkonstruktionen in der Interimsprache (Interlanguage) der deutschen Schüler/innen als erste Sprache (L1) und der türkischen Schüler/innen als L1 und L2 zu entdecken.

Dies wurde auf Grundlage folgender Hypothesen implementiert: „Noun Phrase Accessibility Hierarchy" von Keenan and Comrie (1977), die auf „Typological Markedness" fokussiert, des Weiteren auf „Perceptual Difference Hypothesis" (PDH) von Kuno (1974), die auf die Matrixsätze und Kurzphase der Gedächtniskapazität des Menschen fokussiert sowie auf „Subject Object Hierarchy Hypothesis" (SOHH) von Hamilton (1994), die sowohl auf die Matrixsätze und die Relativkonstruktionen fokussiert ist.

Ich habe mir drei Testtypen ausgewählt: „Sentence Combining Task", „Grammaticality Judgment Task" und „German-English and Turkish-English Translation Task".

Ziel des ersten Tests ist es, zu ermitteln, wie die Schüler/innen zwei englische Sätze miteinander verbinden, je nachdem, ob das Ziel zur Relativierung ein Objekt (sechs Sätze) oder ein Subjekt (sechs Sätze) ist. Der zweite Test soll klären, ob die Schüler/innen wissen können, welche englische Sätze falsch und welche richtig sind. Damit will ich herausfinden, ob sie sich die „Resumptive Pronouns" merken können. Das lässt wiederum Rückschlüsse zu, ob Interferenzen zwischen jeweils ihrer ersten und zweiten Sprachen stattfinden. Im dritten Test soll der Schwierigkeitsgrad der englischen Relativsätze für die deutsche und türkische Schüler/innen ermittelt werden. Ist der Erwerb eines englischen Relativsatzes, der das Objekt relativiert hat, schwieriger als einer, der das Subjekt relativiert hat? Für jeden dieser Typen wurden sechs Sätze vorbereitet (jeweils in Deutsch und in Türkisch), die die Schüler/innen dann ins Englische übersetzen sollten. Dabei wird auch ersichtlich, welche Vermeidungsstrategien die Schüler/innen vorgenommen haben. Hier muss erwähnt werden, dass für die zweite Gruppe von den insgesamt drei Gruppen ein zusätzlicher Deutsch-Englisch Test durchgeführt wurde. Dies ist damit zu begründen, dass die Probanden dieser Gruppe in Deutschland aufgewaschen sind und ihre Unterrichtssprache Deutsch ist, nicht Türkisch. Es war anzunehmen, dass die türkischen Schüler/innen (L2) bei diesem Übersetzungstest besser abschneiden als bei der Übersetzung vom Türkischen ins Englische. Weiterhin sollte herausgefunden werden, wie die Zugänglichkeitshypothese (NPAH) für die deutschen Muttersprachler/innen und die türkischen Muttersprachler/innen anwendbar ist und bis zu welcher Stelle dieser Hypothese die Schüler/innen versuchen würden, zu relativieren.

„Noun Prase Accessibility Hypotesis" (NPAH) sieht dabei sechs Schwierigkeitsstufen bei den Relativsatzkonstruktionen vor, welche in folgender Reihe dargestellt werden:

Subject > Direct Object > Indirect Object > Object of Preposition > Genitive > Object of Comparison

Hier stellt sich die Frage auf, welche Typen der Relativkonstruktion (SU, DO, IO, PREP, GEN, COMP) leichter und welche schwerer erlernbar sind. Laut der Zugänglichkeitstheorie gibt es kein relativiertes "Object of Comparison", weder im Deutschen noch im Türkischen. In der deutschen Sprache sind außerdem die ersten drei Relativsatztypen problemlos relativierbar.

Im Türkischen gibt es bei dem Genitivtyp einige Einschränkungen sowie Diskussionen unter den Sprachwissenschaftler/innen. Bei der Auswahl der Beispielsätze wurde dies in Betracht gezogen.

Einen weiteren Untersuchungsgegenstand stellt die Rolle der ersten Sprache sowie Universal-Faktoren beim Zweitspracherwerb und der Entwicklung dar. Die durchgeführte statistische Auswertung der Ergebnisse und die anschließende Diskussion kommen zu folgenden Ergebnissen: Es werden die durch die Genauigkeitshypothese (accuracy hypothesis) nach NPAH gemachten Annahmen unterstützt, nach welcher der Erwerb umso schwieriger wird, je tiefer der Relativsatz in der Hierarchie steht. Ebenso können „Resumptive Pronoun", „Sprachtransfer" und die „Vermeidungshypothese" bestätigt werden. Beim Vergleich auf der Ebene der NPAH ergeben sich Unterschiede. Die erste Gruppe stimmt mit der Genauigkeitsanordnung überein, mit den Ausnahmen GEN und IO im „Sentence Combination Test" sowie GEN im „German Translation Test". Bei der zweiten Gruppe gibt es jedoch keine Übereinstimmungen. Bei der dritten Gruppe findet sich im „Sentence Combination Test" volle Übereinstimmung, mit Ausnahme von IO. Im „Turkish-English Translation Test" stimmten nur GEN und OCOMP mit der Genauigkeitsanordnung überein. Die durch die PDH erfolgte Annahme, dass im Satzzentrum stehende englische Relativkonstruktionen schwieriger zu erwerben sind als in Nebensätzen stehende, wird bestätigt. Sowohl im „Sentence Combination Test" als auch im „German-Turkish Translation Test" kommt es zu voller Übereinstimmung. Wie nach der Hypothese PDH angenommen wurde, machten sowohl die deutschen als auch die türkischen Schüler/innen mehr Fehler bei Sätzen, die im Satzzentrum stehen, als bei denen, die im Nebensatz stehen. Eine ergänzende Rolle kommt andererseits SOHH zu. In

„Sentence Combination" und „Translation Tests" stimmten die erste und die dritte Gruppen fast vollständig überein, die zweite Gruppe nur zum Teil. Daraus ergibt sich, dass die Rolle von SOHH im Hinblick des Erwerbes der englischen Relativkonstruktionen immer noch signifikant ist.

Weitere für die deutschen Schüler/innen schwierige Elemente waren „Preposition-stranding" und „Pronoun Selection". „Resumptive Pronoun" stellte für die türkischen Schüler/innen eine Schwierigkeit dar, entsprechend der Annahme durch NPAH. Zusätzlich verwendeten die türkischen Schüler/innen mehr Vermeidungsstrategien als die deutschen Schüler/innen. Sowohl die deutschen als auch die türkischen Schüler/innen tendierten verstärkt zur Vermeidung auf der tiefen Ebene von NPAH. Die zweite Gruppe türkischer Schüler/innen (L1 und L2) übertrugen die sprachlichen Elemente nicht aus dem Türkischen sondern aus dem Deutschen ins Englische. Es kann angenommen werden, dass dies aufgrund der Ähnlichkeiten in der Sprachtypologie des Deutschen und Englischen erfolgte, wie z.B. bei der „Word-Order-Typology". Die Unterrichtssprache dieser in Deutschland geborenen und aufgewachsenen Schüler/innen ist nicht Türkisch sondern Deutsch.

Ein anderer wichtigster Punkt ergibt sich bei der Unterscheidung nach den Geschlechtern. Bei der Korrelation aller Testergebnisse mit allen Gruppen wird erkenntlich, dass die weiblichen Schüler erfolgreicher sind als die männlichen Schüler. So ist vor allem im „Grammaticality Judgment Test" die Zahl der Fehler seitens der weiblichen Schüler niedriger als die der männlichen Schüler. Dies ist ein Zeichen dafür, dass die weiblichen Schüler die Vermeidungsstrategie häufiger angewandt haben als die männlichen Schüler.

Verallgemeinert kann gesagt werden, dass NPAH, PDH und SOHH eine Einheit bilden, sie alle leisten zusammen einen Beitrag zur Verständigung der Probleme englischer Relativkonstruktionen. Einerseits wird die "Universal Markedness" durch die Daten aus „Sentence Combination" und „German-Turkish Translation Tests" unterstützt, wie in der NPAH bereits angenommen wurde. Andererseits werden PDH

vollständig sowie SOHH nahezu vollständig unterstützt. Daraus kann geschlussfolgert werden, dass die Lernenden die Relativkonstruktionen durch die linguistischen Universalien („Linguistic Universal") von NPAH und die universale Kognition („Universal Cognition") des Menschen erwerben, wie durch PDH angenommen wird.

In der Hauptuntersuchung wird deutlich, dass die Relativsätze im Englischen mehr im sozialwissenschaftlichen Bereich verwendet werden als im naturwissenschaftlichen Bereich. Eines der interessantesten Ergebnisse dieser Studie ist, dass die Verwendungshäufigkeit der Relativsätze ohne Relativpronomen im Englischen viel höher ist als die mit Relativpronomen gebildeten. In diesem Zusammenhang wird diskutiert, ob die englische Sprache einer grammatikalischen Wandlung ausgesetzt ist. Im Rahmen der Ergebnisse sowohl der ersten als auch der zweiten empirischen Untersuchung werden Vorschläge für den Fremdsprachunterricht gemacht.

13.0. Bibliography

Allerton, D. J., Tschichhold C. and Wieser J., 2005, *Linguistics, Language Teaching and Language Learning,* Basel: Schwabe (21-39).

Allen, W. S., 1959, *Living English Structure,* London: Longmans, Green and Co. Ltd.

Alpert, R., Haber R. N., 1960, "*Anxiety in academic achievement situations*" in: Journal of Abnormal and Social Psychology, 61.

Altenberg, B. and Granger S., eds., 2002, *Lexis in Contrast: Corpus-based approaches*, John Benjamins Publishing Company, (p.337), Studies in Corpus Linguistics.

Anisfeld, M., and Klenbort I., 1973, *On the Function of Structural Paraphrase: „The View from the Passive Voice",* in Psychological Bulletin, Vol. 79. 2.

Arabski, J., 2006, *Crosslinguistic influence in the second language lexicon*, Clevedon, England: Multilingual Matters.

Arnold, D., 2005, *non-restrictives are not orphans*, University of Essex, Journal of Linguistics.

Asudeh, A., 2004, *Resumption as Resource Management,* Ph.D. thesis, Stanford University.

Avery D., A., 1985, *Studies in the Syntax of Relative and Comparative Clauses,* New York.

Avery D., A., 2007, Relative clauses, in Timothy Shopen (ed.), *Language Typology and Syntactic Description*, Volume 2, Cambridge: Cambridge University Press, (p.206-236)

Azar, B. S., 1999, *Understanding and using English grammar,* New York: Pearson Education.

Babear, S., I, 1988, *An investigation of the Avoidance Behavior in Adult second language acquisition,* PH., D. Thesis, Indiana University.

Babyonyshev, M. and Gibson E., 1999, *The complexity of nested structures in Japanese,* Language, 75(3), (p.423-450).

Baker, C., 1996, *Foundations of Bilingual Education and Bilingualism*, Clevedon, Multilingual Matters.

Banathy, B., Trager E., and Waddle C., 1966, *The use of contrastive data in foreign language course development,* in A. Valdman (Ed.), *Trends in Language Teaching,* New York: McGraw-Hill (p.55).

Bardel, C. and Falk, Y., 2007, "*The Role of the Second Language in Third Language Acquisition: The Case of Germanic syntax*" *Second Language Research, 23,* 4. (p. 459- 484)

Basilico, D., 1996, *Head positions and internally headed relative clauses*, Language 72 (p. 498–532).

Bates, E., Elman J., Mark J., Karmiloff-Smith A., Parisi D and Plunkett K., 1998, *Innateness and Emergentism, A Companion to Cognitive Science*, ed. W. Bechtel and G. Graham, Oxford, UK: Blackwell, (p.590-601).

Bates, E., and Devescovi A., D'Amico, S., 1999, *Processing complex sentences: a cross-linguistic study*, Language and Cognitive Processes, 14 (p.69-123).

Berent, G. P., 2000, *Deaf College Students' Production of English Relative Clauses,* Linguistic Explanations, Educational Implications.

Bernstein, B., 1971, *Class, codes and control volume 1:* Theoretical studies towards sociology of language, London: Routledge and Kegan Paul.

Bernstein, B., 1973b, *A brief account of the theory of codes, in Social relationships and language: Some aspects of the work of Basil Bernstein,* Educational Studies: A second level course Language and Learning Block 3, The Open University Press.

Bianchi, V., 2000b, *Some issues in the syntax of relative determiners*, in: Alexiadou, A. et al., (eds) The syntax of relative Clauses, John Benjamins, Amsterdam, (p.53-81)

Biber, D., Stig J., Conrad S., Finegan E., Quirk R., 2004, *Longman Grammar of Spoken and written English*.

Birdsong, D., 1999, *Second language acquisition and the critical hypothesis,* Mahwah, NJ: Lawrence Erlbaum Associates, (p.9).

Bley-Vroman, R., 1989, *What is the logical problem of foreign language learning?* In: S. M. Gass and J. Schachter (Eds.), *Linguistic perspectives on second language acquisition,* New York: Cambridge University Press, (p. 41 – 68).

Bley-Vroman, R., 1990, *The logical problem of foreign language learning,* Linguistic Analysis, 20, (p. 3 – 49).

Bloomfield, L. ,1933, *Language*, Henry Holt, New York.

Bodomo, A., 2002, *The syntax of serial verbs in Dagaare,* in: Felix Ameka and Kweku Osam, eds., New Directions in Ghanaian Linguistics, Accra, Ghana: Advent Press, (p.27–54).

Bowen, D., Madsen H., Hilferty A., 1985, TESOL – *Techniques and Procedures,* Rowley, MA: Newbury House Publishers.

Braidi, S. M., 1999, *The Acquisition of Second Language Syntax*, London, Arnold.

Brown, H. D., 1971, *Children's comprehension of relativized English sentences,* Child Development, 42, (p.1923-1926).

Brown, R., 1973, *A First Language: The Early Stages*, Cambridge, MA, Harvard University Press.

Brown, C., 2000, *The interrelation between speech perception and phonological acquisition from infant to adult,* in: *Second Language Acquisition and Linguistic Theory*, ed. J. Archibald, Oxford: Blackwell, (p.4-63).

Brown, D., 2000, *Principles of Language Learning and Teaching, 4th ed.* New York: Longman.

Buteau, M., 1971, *Students' errors in the learning of French as a second language,* International Review of Applied Linguistics, 7, (p.138).

Butler, C. S., 2003, *The dynamics of language use,* John Benjamins, Amsterdam/Philadelphia.

Carl J., *Crosslinguistic awarenesss (*Internet Version:)*,* A new role for constructive analysis, University of Wales.

Carl, J.,1971, *The exculpation of contrastive linguistics,* in Nickel, G. (ed.), Papers in Contrastive Linguistics, Cambridge: Cambridge University Press, (p.53-68).

Carl, J., 1980, *Contrastive analysis*, London: Longman.

Carl, J., 1988, Perspectives on transfer in translation, The Linguist, Vol. 27/1, (p.45-48)

Carl, J., 1998, *Errors in language learning and use,* Exploring error analysis, London [u.a.]: Longman. (– Nachdr., 2000)

Carl, J., 2005, *Contrastive analysis and the language learner,* in: David J. Allerton, Cornelia Tschichold, and Judith Wieser (eds.), *Linguistics, Language Teaching and Language Learning*, Basel: Schwabe, (p. 1-20)

Carter, R., Carthy, Mc. M., 2006, *Cambridge Grammar of English,* Cambridge University Press.

Celce- Murcia, M., Brinton, D., and Goodwin, J., 1996, *Teaching pronunciation*, Cambridge: Cambridge University Press.

Celce- Murcia, M., and Larsen-Freeman D., 1999, *The Grammar Book: An ESL/EFL Teacher's Course (2nd edition).*

Cenoz, J., Hufeisen, B. and Jessner, U., 2001, *Cross-linguistic Influence in Third Language Acquisition: Psycholinguistic perspectives,* Bilingual Education and Bilingualism 31, Multilingual Matters Ltd.

Cenoz, J., 2000, *Research in multilingual acquisition,* in Cenoz, J. Jessner, U. (eds.) English in Europe, The acquisition of a Third Language, Clevedon, Avon: Multilingual Matters, (p.39-53).

Chang, H. Y. and Claire Wu, 2006, *relative clauses*: An overview, Typology Research Group, Academia Sinica.

Chen J. J., 2004, *A Study on Relative Clauses in Taiwanese EFL Students' Writing, M.A. Thesis, National Kaohsing Normal University.*

Chen X. L., 2004, *A Analysis of College Students' Knowledge of English Relative Clauses,* Unpaplished Paper, NSYSU.

Chomsky, N., 1957, *Syntactic Structures,* Mouton, Den Haag, de Gruyter, Berlin/New York 1989.

Chomsky, N., 1965, Aspects *of the Theory of Syntax,* Cambridge, MA.

Chomsky, N., 1981, *Lectures on Government and Bindung,* Dordrecht.

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

Chomsky, N., 1998, *Minimalist inquiries: The framework, MIT Occasional Papers in Linguistics*, *15* (p.1 – 56).

Chomsky, N., in: Mukherji et al., 2000, *The Architecture of Language* (Mukherji, et al., eds.).

Chomsky, N., 2001, *Derivation by phase,* in: M. Kenstowicz (Ed.), *Ken Hale: A life in language,* Cambridge, MA: MIT Press, (p.1 – 52).

Chomsky, N., 2004, *Beyond explanatory adequacy,* in: A. Belleti (Ed.), *Structures and beyond: The cartography of syntactic structures,* Oxford: Oxford University Press, (Vol. 3), (p.104 –131).

Chomsky, N., 2005, *Three factors in language design,* Linguistic Inquiry, 36, (p.1 – 22).

Givon, T., 1984, Syntax: *A functional typological introduction,* Vol. 2, Amsterdam/Philadelphia: John Benjamins Publishing Company.

Clahsen, H., and Muysken, P., 1986, *The availability of UG to adult and child learners*: A study of the acquisition of German word order, Second Language Research, 2, (p.93-11).

Clahsen, H., and Felser, C., 2006, *Grammatical processing in language learners,* Applied Psycholinguistics , 27, (p.3 – 42).

Clark, E. V., 2003, *First Language Acquisition,* Cambridge University Press.

Cook, V. J., 1997, *Monolingual bias in second language acquisition research*, Revista Canaria de Estudios Ingleses 34, (p.35-49)

Cook, V. J., 1988, *Chomsky's Universal Grammar: an introduction*, Oxford: Basil Blackwell.

Cole, P., 1987, *The Structure of Internally Headed Relative Clauses,* Natural Language and Linguistic Theory, 5, (p.277-302).

Collins, C., 1994, Economy of Derivation and the Generalized Proper Binding Condition, Linguistic Inquiry 25, (p.45–61).

Comrie, B., 1989, *Language Universals and Linguistic Typology,* 2nd edn, Oxford, Basil Blackwell.

Comrie, B., 2002, Typology and language acquisition: The case of relative clauses, In: A. Giacalone Ramat Ed., Typology and second language acquisition Berlin: Mouton de Gruyter, (p.19-37)

Connor, U., 1996, *Contrastive Rhetoric: Cross-cultural aspects of second language writing,* Cambridge University Press.

Corder, S. P., 1971, *Idiosyncratic dialects and error analysis,* in International Review of Replied Linguistics 9.

Corder, S. P., 1976, *The Study of Interlanguage,* In: Nickel, Gerhard (ed.), *Proceedings of the Fourth International Congress of Applied Linguistics*, (p. 65-78), München: Hochschulverlag, (p. 9–34), Reprinted in: Corder, S.P. (ed.), *Error Analysis and Interlanguage*, Oxford: Oxford University Press.

Corder, S. P., 1967, *The significance of learners' errors,* International Review of Applied LInguistics 5.4, (p. 161-169).

Corder, S. P., 1982, *Introducing Applied Linguistics,* Hazell Watson and Viney Ltd., England.

Crookes, G., Gass G., S. M. (Eds.), 1993a, *Tasks and Language Learning,* Cleveland, UK: Multilingual Matters.

Crookes, G., Gass, S. M. (Eds.), 1993b, *Tasks in a Pedagogical Context*, Cleveland, UK: Multilingual Matters.

Crookes, G., 1994, *The meaning of innovation for ESL teachers,* (with L. DeLano and L. Riley), System (22),4, (p. 487-496).

Croft, W.,1990, *Typology and Universals,* Cambridge, Cambridge University Press.

Crystal, D.,1992, *An encyclopedic dictionary of language and languages,* Cambridge, MA: Blackwell,(p. 83)

Crystal, D., 1995, *The Cambridge Encyclopedia of the English Language*. Cambridge: Cambridge University Press, Cunninghan, C. W., Blackstone.

Crystal, D., 1985, *How many millions? The statistics of English today,* English Today.

Cummins, J., 1979, *Cognitive/academic language proficiency, linguistic independence, the optimal age question and some other matters,* Working Papers on Bilingualism 19.

Dagut, M. and Laufer B., 1985**,** *Avoidance of phrasal verbs: a case for contrastive analysis*, Studies in Second Language Acquisition7, (73 – 79).

De Angelis, G. and Selinker, L., 2001, *Interlanguage transfer and competing linguistic systems in the multilingual mind,* in: Cenoz, J., Hufeisen, B. and Jessner, U. (eds.), Cross-linguistic Influence in Third Language Acquisition, Clevedon: Multilingual Matters.

De Villiers, J. G., Tager-Flusberg H. B., Hakuta K. and Cohen M., 1979, *Children's Comprehension of Relative Clauses*, Journal of Psycholinguistic Research 8.

Diessel, H. and Tomasello M., 2000, *The development of relative clauses in spontaneous child speech,* Cognitive Linguistics 11, (131-151).

Diesel, H., 2004, *The acquisition of complex sentences,* Cambridge Studies in Linguistics 105.

Diessel, H., and Tomasello, M., 2005, *A new look at the acquisition of relative clauses,* Language 81, (p.1-25).

Di Pedro, R., 1971, *Language Structures in Contrast,* Georgetown University.

Doug, A., Arnold D. J. and Sadler L., 1991, *Transfer formalisms,* Machine Translation, 6, (p.193-200).

Doughty, C. J., 1991, *Second language instruction does make a difference: Evidence from an empirical study of SL relativization, Studies in Second Language Acquisition*, *13*.

Doughty, C. J. and Williams, J. (eds.), 1998, *Focus on Form in Classroom Second Language Acquisition,* Cambridge: Cambridge University Press.

Doughty, C. J., 2003, *Instructed SLA: Constraints, compensation, and enhancement,* in: C. J. Doughty and M. H. Long Eds., The handbook of second language acquisition Oxford: Blackwell.

Downing, B.T., 1977, *Typological regularities in postnominal relative clauses*, in: Eckman, F.R. (ed.) Current Themes in Linguistics, New York: Hemishpere Publishing Corp.

Downing, B.T., 1978, *Some universals of relative clause structure,* in: Greenberg, J.H. (ed.), Universals of Language, Stanford. CA: Stanford Univiversty Press, Vol., 4, (p375-418).

Dryer, M. S., 1992, *Adverbial Subordinators and Word Order Asymmetries,* in: Performance Principles of Word Order, edited by Hawkins J. A. and Anna Siewierska, EUROTYP Working Papers, European Science Foundation, (p.50-67).

Duskova, L., 1969, *On sources of Error Analysis in Foreign Language Learning*, in: IRAL Vol. vii, No.1

Dulay, H. C., and Burt M. K., 1973, *Should we teach children syntax?* Language Learning, *23,* (p.245-258).

Dulay, H. S., and Burt M. K., 1974, *Natural sequences in child second language Acquisition*, Language Learning, 24, 37-53.

Eckmann, F., 1977, *Markedness and the Contrastive Analysis Hypothesis,* in Language Learning Vol.27, Nr. 1.

Eckman, F., 1985, *The markedness differential hypothesis:* Theory and applications, in B. Wheatley, A. Hastings, F. Eckman, L. Bell, G. Krukar, and R. Rutkowski (Eds.), Current approaches to second language acquisition: Proceedings of the 1984 University of Wisconsin Milwaukee Linguistics Symposium, Bloomington: Indiana University Linguistics Club, (p.3-21).

Eckman F., Bell L., and Nelson D., 1988, *On the generalization of relative clause, instruction in the acquisition of English as Second Language,* University of Wisconsin, Milwaukee.

Ellis, R., 1996a, *The role of the first language*, in: Ellis R.(Ed), Understanding second language acquisition, Oxford University Press, (p.19-41).

Ellis, R., 1996b, *Interlanguage and the natural route of development,* in: Ellis R., (Ed), Understanding second language acquisition, Oxford University Press, (p.42-74).

Ellis, R., 1996c, *The universal hypothesis and second language acquisition*, in: Ellis R. (Ed), Understanding second language acquisition Oxford University Press, (p.190-214).

Ellis, R., 1997, *SLA and language pedagogy: An educational perspective*, Studies in Second Language Acquisition 20, (p.69-92).

Ellis, R., 1999, *Learning a second language through interaction*, Amsterdam [u.a.]: Benjamins (*FBL CK/200/494*).

Ellis, R., 2000, Se*cond language acquisition,* Oxford: Oxford University Press. – 4. Aufl.

Ellis, R., 2000, *Instructed second language acquisition,* Learning in the classroom, Oxford: Blackwell. – Reprint, (*FBL CK/200/4936*).

Ellis, R., 2000, *The study of second language acquisition,* Oxford: Oxford University Press. – 7, Aufl, (*FBL CI/440/5798*).

Ellis, R., 2001, *SLA research and language teaching,* Oxford: Oxford Univ. Press. – 2. (2. Auflage: FBL CI/440/3307).

Ellis, R., 2002, *Methodological options in grammar teaching materials,* in E. Hinkel and S. Fotos Eds, New perspectives on grammar teaching in second language classrooms, Mahwah, NJ: Erlbaum, (p.155-198).

Ellis, N., 2006a, *Language acquisition as rational contingency learning,* Applied Linguistics 27, (p.1–24).

Ellis, N., 2006b, *Selective attention and transfer phenomena in L2 acquisition: Contingency, cue competition, salience, interference, overshadowing, blocking, and perceptual learning,* Applied Linguistics 27, (p.164–194).

Eisenberg, S., 2002, *Interpretation of Relative Clauses by Young Children: another Look,* Journal of Child Language 29, (p.177-188).

Elman, J. L., 1993, *Learning and Development in Neural Networks: The Importance of Starting Small,* Cognition 48, A much cited and widely admired illustration of the value of computational modeling in the study of language acquisition, (p. 71-99).

Elman, J. L., Bates E., Mark J., Karmiloff-Smith A., Parisi P., and Plunkett K., 1996, *Rethinking Innateness,* A Connec-tionist Perspective on Development, Cambridge, MA: MIT Press (369ff).

Elman, J. L., 1998, *Generalization, simple recurrent networks, and the emergence of structure,* in: M. A., Gernsbacher and S. J. Derry (Eds.) Proceedings of the Twentieth Annual Conference of the Cognitive Science Society. Mahwah, NJ: Erlbaum.

Elman, J. L., 1999, The emergence of language: A conspiracy theory, in B. MacWhinney (Ed.), *The emergence of language.* Hillsdale, NJ: Lawrence Earlbaum Associates, (p.1-27).

Elman, J. L., 2004, *An Alternative View of the Mental Lexicon,* Trends in Cognitive Science 8, (p.301-06).

Elman, J. L., 2005, *Connectionist models of cognitive development: where next?* Trends in Cognitive Sciences 9, (p.111–117).

Ellyvan, G., 2002, *An introduction to the grammar of English: syntactic argumentative and socio-historical background,* Amsterdam.

Ferguson, C., 1971, *Language structure and language use,* in Essays by Charles A. Ferguson, Selected and introduced by Anwar, Dil. Stanford, CA: Stanford University press.

Flynn, S. and Lust L., 1980, *Acquisition of relative clauses: Developmental changes in their heads,* Cornell Working Papers in Linguistics 1, (p.33-45).

Flynn, S., 1983, *A study of the effects of principal branching direction in second language acquisition:* The generalization of a parameter of universal grammar from first to second language acquisition, Cornell University, Ithaca, NY.

Flynn, S., 1987, *A parameter-setting model of L2 acquisition*, Dordrecht, Netherlands: Reidel.

Flynn, S., and O'Neil W., (Eds.), 1988, *Linguistic theory and second language acquisition,* Dordrecht, Netherlands: Kluwer Academic.

Flynn, S. et al., 2004, *The International Journal of Multilingualism,* Vol. 1, No. 1.

Frauenfelder, U., Segui J., Mehler J., 1980, *Monitoring around the relative clause,* Journal of Verbal Learning and Verbal Behavior 19, (p.328-337).

Frawley, W. J., 2003, *International Encyclopedia of Linguistics*, 4. Volume, Oxford University Press.

Frazier, L., 1979, On *Comprehending Sentences: Syntactic parsing strategies*, Ph.D. Dissertation, University of Connecticut.

Frazier, L., Rayner, K., 1982, *Making and correcting errors during sentence comprehension: Eye movements in the analysis of structurally ambiguous sentences,* Cognitive Psychology, 14, (p.178-210).

Frazier, L., 1985, *Syntactic complexity,* in: D. R. Dowty, L. Kartunen, and A. M. Zwicky, editors, Natural language parsing: psychologica, computational, and theoretical perspectives, Cambridge University Press, Cambridge, (p.129-189).

Freier, C., 1977, *Comprehension of spoken sentences containing relative clauses by adults of varied ages,* City University of New York.

Fries, C. C., 1964, Teaching and learning English as a Foreign Language, University Michigan Press.

Fries, C. C., 1989, *His 'Oral Approach' for Teaching and Learning Foreign Languages, Washington,* D.C.: Georgetown University Press.

Fries, C. C., in "Fries, Peter H.(Editor),1985, *Toward an Understanding of Language,* Current Issues in Linguistic Theory 40". John Benjamins Publishing Company.

Gass, S., 1979, *Language transfer and universal grammatical relations*, Language Learning, 29 (2).

Gass, S., 1980, "*An Investigation of Syntactic Transfer in Adults Second Language Learners*" in Scarcella and Krashen (eds.) Research in Second Language Acquisition.

Gass, S., 1982, *From theory to practice,* in: M. Hines and W. Rutherford (Eds.), On TESOL, 81, Washington, DC: TESOL, (p. 129-139).

Gass, S., and Selinker, L., Eds, 1983, *Language transfer in language learning,* Rowley, MA: Newbury House.

Gass, S., and Schachter, J., Eds., 1989, *Linguistic perspectives on second language acquisition,* Cambridge: Cambridge University Press.

Gass, S., 1993, *Second language acquisition: Past, present and future, Second* Language Research, 9, (p.99-117).

Gass, S., 1995, *Universals, SLA, and language pedagogy,* in: The Current State of Interlanguage, 31.

Gass, S., and Selinker L., 2001, *Second language acquisition,* An introductory course, 2nd edition ed., Hillsdale, NJ: Lawrence Erlbaum (Chapter 2)

Gass, S. and Lee J., 2007, *Second language acquisition of relative clauses: A commentary,* Studies in Second Language Acquisition, Michigan State University.

Gass, S., 2008, *Second language acquisition,* An Introductory Course, Routledge.

Gelderen, E. van, 2002, *An introduction to the Grammar of English: Syntactic Arguments and socio-historical background,* Amsterdam/Philadelphia PA: Benjamins.

Gibson, E., 1987, *Garden-Path Effects in a Parser with Parallel Architectur,* Proceedings of the Fourth Eastern States Conference on Linguistics, OH. States Conference on Linguistics, The Ohio State University, Columbus, OH.

Gibson, E., Ko K., 1998, *Processing main and embedded clauses*.

Gibson, E., Warren T., 1998a, *Discourse reference and syntactic complexity*, Manuscript, MIT, Cambridge, MA.

Gibson, E., Warren T., 1998b, *The syntactic complexity of preposition stranding*, Manuscript, MIT, Cambridge, MA.

Gibson, E. and Pearlmutter, N. J., 2000, *Distinguishing serial and parallel parsing,* Journal of Psycholinguistic Research, 29.

Goldberg, A., 1995, *Constructions: A Construction Grammar Approach to Argument Structure,* Chicago: University of Chicago Press.

Goldberg, A., 1999c, *The Emergence of Argument Structure Semantics,* in: B. MacWhinney (ed.) The Emergence of Language, Lawrence Erlbaum Publications, (Translated into Polish, Volume, edited by Eva Debrowski, 2004)

Goldberg, A., 2003, *Constructions: A new theoretical approach to language,* Elsevier, USA.

Graeme T, Gisborne N., 2008, *Topics in English Linguistics, constructional approach to English Grammar,* Mounton de Gruyter, Berlin, New York.

Grandgent, C. H., 1892, *German and English Sounds*, Boston, USA.

Greenbaum, S., Quirk R., 1990, A Student's Grammar of the English Language, Longman Group UK, Limited.

Greenberg, J. H., 1966, *Universals of Language, 2nd,* Cambridge MA, and London, MIT press.

Greenberg, J. H., 1974, *Language Typology: A Historical and Analytic Overview,* Janua Linguarum, Serious Minor, (no. 184), The Hagua, Mouton.

Greenberg, J. H., 1996a, *The genesis of multilateral comparison,* Mother Tongue 2, (p.145-48).

Greenberg, J. H., 1996b, *Genes, languages and other things:* review of *History and geography of human genes* by Luca Luigi Cavalli-Sforza, Paolo Menozzi and Alberto Piazza, Review of Archaeology 16, (p.24-28).

Hakuta, K., 1976A, case study of a Japanese child learning English, Language Learning, 26, (p.231-351).

Hamburger, H., Crain S.,1982, *Relative Acquisition,* in Stan Kuczaj (ed.), Language Development, Vol. 1, Syntax and Semantics, Hillsdale, NY: Erlbaum, (p.245-274).

Hamilton, R. L., 1994, *Is Implicational generalization unidirected and maximal?* Language Learning, 44.

Hamilton, R. L., 1995, *The noun phrase accessibility hierarchy in SLA: Determining the basis for its developmental effects,* in: F. R. Eckman, D. Highland, P. W. Lee, J. Mileham, and R. Weber, Eds.

Hammarberg, B., 1974, *The insufficiency of Error Analysis,* in: IRAL Vol. xii, No: 3.

Hammarberg, B., 2001, *Roles of L1 and L2 in L3 Production and Acquisition,* in: Cenoz J., Hufeisen B. and Jessner U. (eds.) *Cross-linguistic Influence in Third Language Acquisition*, Clevedon: Multilingual Matters.

Hancock, A., (hrsg), 2006, *Building on language diversity with young children.*

Hansen, K., 1985, *Trends and problems in contrastive linguistics,* in: ZAA 33.

Hartmann, R. R. K., and F. C. Stork, 1972, *Dictionary of language and linguistics*, London: Applied Science.

Haugen, E., 1956, *Bilingualism in the Americas: A Bibliography and Research Guide, University* of Alabama: The American Dialect Society.

Hawkins, E., 1984, *Awareness of Language: An Introduction*, Cambridge University Press.

Hawkins, J., 1986, *The Comparative Typology of English and German: Unifying the Contrasts,* London and Sydney: Croom Helm.

Hawkins, J., 1990, A parsing theory of word order universals, Linguistic Inquiry 21, (p.223-261).

Hawkins, J., 1992, A performance approach to English/German contrasts, im Mair and Markus, (p.115-136).

Hawkins, J., 1994, *A Performance Theory of Order and Constituency*, Cambridge: Cambridge University Press.

Hawkins J., 1998, *Adjacency, linear precedence and the theory dependency strength*, ms., Los Angeles, University of Southern California.

Hawkins J., 1999, *Processing complexity and filler-gap dependencies across grammars, Language* 75, (p.244-85).

Hawkins, J., 2004, *Efficiency and complexity in grammars*, Oxford University Press.

Huebner, T.,1983, A Longitudinal Analysis of the Acquisition of English, Karoma Publishers.

Helgander, J., 1971, *The Relative Clause in English and other Germanic languages: A historical and analytic survey,* Dissertation, University of Gothenburg: Department of English.

Hellinger, M. and Ammon U., 1996, *Contrastive Sociolinguistics*, Berlin: Mouton de Gruyter.

Hendery, R., 2012, *Relative clauses in time and space,* Typological studies in: Language 101, John Benjamins Publishing, Amsterdam and Philadelphia.

Hildebrandt, N., Waters G.S., Kaplan D., 1987, *Working memory and written sentence comprehension,* Attention and Performance XII, (p. 531-555)**.**

Hoffman T., 2008, *English relative clause and construction grammar in:* "Constructional Approaches to English Grammar" by Graeme T. and Gisborne N., Mouton de Gruyter, Berlin, New York.

Houng, C., 1986, *The relative clause construction in Chinese: Noun Phrase Accessibility Hierarchy and Other Issue,* University of Texas at Austin

Huddleston, R. D., Pullman G., 2005, *The Cambridge Grammar of the English Language.*

Hulstijn, J. H., Marchena E., 1989, *Avoidance: Grammatical or semantical causes?* in: Studies in Second Language Acquisition, 11.

Hulstjin, J. H., 2005, special issue the theorical and empirical issues in the study of implicited and explicited second language learning.

Hyltenstam, K., 1977, *Implicational patterns in interlanguage syntax variation,* Language Learning 27, (p.383–411).

Hyltenstam, K., 1978, *Variation in interlanguage syntax,* Lund University: Department of Linguistics: *Working Papers* 18.

Hyltenstam, K., 1984, *The use of typological markedness conditions as predictors in second language acquisition: The case of pronominal copies in relative clauses,* in: R. Andersen (Ed.), Second language: A cross linguistic perspective, Rowley, MA: Newbury House, (p. 39-58).

Hyltenstam, K., 1987, *Markedness, language universal, language typology, and second language acquisition,* in Pfaff, C., (ed.) First and Second Language Process, Boston, Heinle and Heinle Publishers.

Hyltenstam, K., 1990, Typological Markedness as a research tool in the study of Second Language Acquisition. In Dechert, H. (ed), Current Trends in European Second Language Acquisition Research, Philadelphia, Multilungual Matters Ltd.

Hyltenstam, K., 1992, *Non-native features of near-native speakers, On the ultimate attainment of childhood L2 learners,* in: R. J. Harris (Ed.), Cognitive processing in bilinguals, Amsterdam: Elsevier Science, (p.351–368).

Ickenroth, J., 1975, *On the elusiveness of interlanguage,* Progress report, Utrecht, December.

Ivan, A. Sag, 1997, *English relative clause constructions,* Stanford University, Journal of Linguistics 33.

Izumi, S., 2003, *Processing difficulty in comprehension and production of RCs by learners of English as a second language,* Language Learning, 53(2).

Izumi, Y., and Izumi, S., 2004, *Investigating the effects of oral output on the learning of relative clauses in English:* Issues in the psycholinguistic requirements for effective output tasks+ Canadian Modern Language Review, 60, (p.587–609).

Izumi, S., 2007, *Universals, methodology and instructional intervension on RCs, SSLA 29, (*p.337-344).

Jackendoff, R., 1972, *Semantic Interpretation in Generative Grammar,* Cambridge, MA: MIT Press.

Jackendoff, R., 2002, Foundations of Language, Oxford University Press, Oxford, UK.

Jackson, K., Whitman, R., 1972, *The unpredictability of contrastive analysis. Language Learning* 22.

Jackson, J., 1974, *Language identity of the Colombian Vaupés Indians,* in: R. Bauman and J. Sherzer (Eds.), Explorations in the ethnography of speaking, Cambridge University Press, (p.50-64).

Jackson, H., 1981, *Contrastive analysis as a predictor of errors, with reference to Punjabi learners of English,* in *Contrastive linguistics and the language teacher*, J Fisiak (ed), Oxford: Pergamon.

Jeon, K. S., 1992, *Development of relativisation in Korean as foreign language, NPAH in head-interval and head external relative clauses,* Colombian State University.

Jespersen, O., 1940, A modern English Grammar, Copenhagen.

Jespersen, O., 1949, *A Modern English Grammar on Historical Principles,* Part III. Syntax, 3nd Volume.

Jia, G., 1998, *Beyond brain maturation: The critical period hypothesis in second language acquisition revisited*, New York University, New York.

Johansson, S., and Hofland K., 1994, *Towards an English-Norwegian parallel corpus,* in: U. Fries, G. Tottie and P. Schneider (eds.), Creating and using English language corpora, Amsterdam and Atlanta, GA: Rodopi, (p.25- 37).

Johansson, S., 2003, *Contrastive linguistics and corpora,* in Granger et al., (p.31–43).

Johansson, S., 2007, *Seeing through Multilingual Corpora: On the use of Corpora in Contrastive Studies*. Amsterdam: Rodopi.

Johnston, M., 1985, *Syntactic and morphological progressions in learner English* [Research report], Department of Immigration and Ethnic Affairs, Australia.

Jorda, M.P.S., 2005, *Third Language Learners: Pragmatic Function and Awareness*, Second Language Acquisition 12, Multilingual Matters Ltd.

Juffs, A., 1998, *Main Verb Versus Reduced Relative Clause Ambiguity Resolution in L2 Sentence Processing,* Language Learning 48 (1).

Kanno, K., 2001, *On-line processing of Japanese by English L2 learners,* Acquisition of Japanese as a Second Language 4, (p.23-38).

Kanno, K., 2007, *Factors of affecting the processing of Japanese Relative Clauses by L2 Learners,* University of Hawai'I Manoa, Studies in Second Language Acquisition, Volume 29 , Issue 02, (p.197-218).

Kaplan, R. M., 1972, *Augmented transition networks as psychological models of sentence comprehension,* Artificial Intelligence 3, (p.77-100).

Kaplan, R. M., 1975b, *Transient Processing Load in Relative Clauses,* Doctoral dissertation, Harvard University.

Keenan, E. and Comrie B., 1977, *Noun Phrase Accessibility and Universal Grammar,* in Linguistic Inquiry Vol. 8, No: 1.

Keenan, E. and Hawkins, S., 1987, *The psychological validity of the accessibility hierarchy,* in: E. Keenan (Ed.), *Universal Grammar:* Fifteen essays London: Routledge, (p.60–85).

Klein, W., and Perdue, C., 1992, *Utterance Structure: Developing Grammars Again,* John Benjamins, Amsterdam.

Klein, E., 1993, *Toward Second Language Acquisition,* Amsterdam: John Benjamins.

Kleinmann, H., 1977, *Avoidance behaviour in adult second language acquisition,* Language Learning 27.

Kleinmann, H. H., 1978, *The strategy of avoidance in adult second language acquisition,* in: W. C. Ritchie (Ed.), Second language acquisition research: *Issues* and implications, New York: Academic Press, (p. 157-174).

König, E., 1971, *Adjectival Constructions in English and German, A Contrastive Analysis*, Heidelberg: Julius Groos.

König, E., 1992, *Contrastive linguistics and language typology,* in Mair and Markus, (p.137–154).

König, E. and Gast V., 2007, *Understanding English-German Contrasts,* Berlin, Erich Schmidt Verlag.

Krashen, S., 1977, *Some issues relating to the monitor model,* in. H. Brown, C. Yorio, and R. Crymes (Eds.), On TESOL '77 , Washington, DC: TESOL, (p. 144-158).

Krashen, S., Long, M. H., and Scarcella, R., 1979, *Age, rate, and eventual attainment in second language acquisition,* TESOL Quarterly 13, (p.573-582).

Krashen, S., 1981, *Second Language Learning and Second Languag Acquisition,* Oxford.

Krashen, S., 1982, *Principles and Practice in Second Language Acquisition*, Oxford.

Krashen, S., Scarcella, R., and Long, M. H., (Eds.), 1982, *Child-adult differences in second language acquisition,* Rowley, MA: Newbury House, (p.344)

Krashen, S., 1985, *The input* hypothesis: Issues and, implications, New York: Longman.

Krzeszowski, T. P., *1971, Equivalence, congruence, and deep structure, in G. Nickel, ed.: Papers in Contrastive Linguistics, Cambridge University Press, (p.37 – 48).*

Krzeszowski T. P., *Contrastive Analysis in a new dimension,* University of Gdank.

Krzeszowski, T. P., 1974, *Contrastive Generative Grammar: Theoretical Foundations, Eodz* University Press,.

Krzeszowski, T. P., 1976, *Interlanguage and Contrastive Generative Grammar*, *ISB,* Utrecht, Vol. 1, No. 1, (p.58-78).

Krzeszowski, T. P., 1990, *Contrasting Languages: The Scope of Contrastive Linguistics,* Berlin: Mouton De Gruyter.

Kuno, S., 1974, *The Position of Relative Clauses and Conjunctions*, Linguistic Inquiry,

Kuno, S., 1993, *Grammar and discourse principles: functional syntax and GB theory,* Susumu Kuno and Ken-ichi Takami, Chicago [u.a.]: Univ. of Chicago Press, - IX.

Kupferberg, I. and Olshtain E., 1996, *Explicit contrastive instruction facilitates the acquisition of difficult L2 forms,* in: Carl James (ed.): Crosslinguistic Approaches to Language Awareness, Special issue of Language Awareness, (p.149-65).

Labelle, M., 1996, The acquisition of relative clauses: Movement or no movement? Language Acquisition 5, (p.65–82).

Lado, R., 1955, *Patterns of difficulty in vocabulary,* in Language Learning 6.

Lado, *R., 1957, Linguistics across Cultures, University of Michigan Press, Ann Arbor.*

Lakoff, G., 1970, *Irregularity in Syntax,* U.S.A, Holt, Rinehart and Winston inc.

Lakoff, R., 1971, *Passive Resistance,* in CLS.

Larsen-Freeman, D. and Long M. H., 1991, *An Introduction to Second Language Acquisition Research,* UK.

Larsen-Freeman, D., 2003, *Teaching language:* From grammar to grammaring. Boston: Thomson Heinle.

Laufer, B., Eliasson S., 1993, *What causes avoidance in second language learning: L1-L2 difference, L1-similarity or L2 complexity,* in studies in Second Language Acquisition 15.

Leaver, B. L., 2005, *Achieving succession in second language acquisition.*

Lee, H., Clancy J., and C. P., H. and Zoh M., 1986, *Processing strategies in the acquisition of RCs: Universal principles and language-specific relativizations,* Cognition, 14, (p.225–262).

Leicht, V. E., 1964, *Discovering English,* Prentice – Hall Inc- Englewood Cliffs, N.

Lenneberg, 1967, *Proposes, one needs additional types of evidence*, (see e.g. Bongaerts, 2003), caused by neurophysiological

Lenneberg, E., 1967, Biological foundations of language, New York: Wiley.

Leung, Yan-kit I., 2005, L2 vs. L3 initial state: A comparative study of the acquisition of French DPs by Vietnamese monolinguals and Cantonese-English bilinguals". *Bilingualism: Language and Cognition 8*(1).

Liao, Y. and Fukuya Y. J., 2004, *Avoidance of phrasal verbs: the case of Chinese learners of English,* Language Learning, 54.

Long, M. H., 1990, Task, group and task-group interactions, in Anivan S. (ed.), Language teaching methodology for the nineties, Singapore University Press.

Long, M. H., 1985, Input and second language acquisition theory, in S. Gass and C.

Madden (Eds.), Input in second language acquisition Rowley, MA: Newbury House, (p.377-393).

Long, M. H., 1990a, Maturational constraints on language development Studies in Second Language Acquisition, 12 (3), (p.251-285).

Long, M. H., 1990b, The least a second language acquisition theory needs to explain, TESOL Quarterly 24 (4), (p.649-666).

Long, M. H., 1996, *The role of linguistic environment in second language acquisition,* in W. C. Ritchie and T. K. Bhatia, (Eds.), Handbook of second language acquisition, San Diego: Academic Press, (p.413-468)

Long, M. H., (ed.), 2005, *Second language needs analysis,* Cambridge: Cambridge University Press.

Long, M. H. and Doughty, C. J. (eds.), 2009, *Handbook of language teaching*, Oxford: Blackwell.

Long, M. H. and Sato C. J., 1984, Methodological issues in interlanguage studies: An interactionist perspective, in A. Davies, C. Criper, & A. P. R. Howatt (Eds.), Interlanguage Edinburgh: Edinburgh University Press, (p. 253-279).

Loreley, M., Zabala H., 2002, B.A., Complex Nounphrase in ESL Natranties: Structural discourse property, Simon Fraser University, Canada.

Hottmann, L., 2008, *Turkish Language Provision in Berlin,* Dissertation at the Manchester University.

MacDonald, M. C., Pearlmutter N.J., Seidenberg M.S., 1994, *Lexical nature of syntactic ambiguity resolution,* Psychological Review, 101.

MacDonald, M. C., 1997, *Lexical representation and sentence processing*: An introduction, Language and Cognitive Processes, 12.

MacDonald, M. C., and Christiansen M. H., 2002, *Reassessing working memory*: A comment on Just and Carpenter (1992) and Waters and Caplan, 1996, Psychological Review, 109.

Malmkjaer, C., 2003, The linguistic encyclopedia, Routledge, Taylor and Francis group, London and New York.

Maria de los Angeles Gomes-Gonzales and Susana M. Doval-Suarez, *On constructive Linguistics, trends, challenges and problems.*

Matthews, S. and Virginia Y., 2003, *Relative clauses in early bilingual development: transfer and universals,* in Anna Giacalone Ramat (Ed.), Typology and Second Language Acquisition, Berlin: Mouton de Gruyter, (p.39-81).

Maxwell, D., 1979, *Strategies of relativization and NP and accessibility*, Language 55 (p.352-371).

Maxwell, D., 1979, Relative clauses in early bilingual development: Transfer and universals, in Giacalone (ed.), Typology and second language acquisition, Berlin, Mouton de Gruyter.

Mellow, J. Dean, 2007, the emergence of complex syntax: A longitudinal case study of the ESL development of dependency resolution, Lingua.

Nemser, W.,1971, *Approximative systems of foreign language learners*, IRAL, 9, (2), (p.115-124).

Newport, E. L., Johnson J. S., 1989, *Critical period effects in second language learning: the influence of maturational state on the acquisition of English as a second language,* Cognitive Psychology 21 (1), (p.60–99).

Newmeyer, F., 2003, *Review of On nature and language* by N. Chomsky, Language 79, (p.583–599.

Newbrook, M., 1998, Which way? That way? Variation and ongoing changes in English relative clause, World English, (p.43-59).

McDaniel, D., Snedeker J., McKee C., 1998, Relative children say, Journal of Psycholinguistic Research, 27(5), (p.573-596).

McKee, C., Emiliani M., Crain S., 1990, *Visiting relatives in Italy,* in J. de Villiers and L. Frazier (eds.), Language Processing and Language Acquisition, (p.335-356).

McKee, C., McDaniel D., 2001, Resumptive Pronouns in English Relative Clauses, Language Acquisition 9 (2), (p.113–156).

McLaughlin, B., 1987, Theories of second-language learning, London: Edward Arnold.

McLaughlin, B., 1990, Restructuring, Applied Linguistics, 11 (2), (113-128).

McNally, L., Similarities between amount relatives and relatives out of existential, University of Pompeu, Fabra.

Murray, W. S. and Kennedy, A., 1984, Inspection times for words in syntactically ambiguous sentence under three presentation conditions, Journal of Experimental Psychology: Human Perception and Performance, *10*, (p.833-849).

Odlin, T., 1989, *Language transfer:* Cross-linguistic influence in language learning, Cambridge University Press.

Odlin, T., 1996, *On the recognition of transfer errors,* Language Awareness 5. 3/4, (p.166-179)

O'Grady, W., 1997, *Syntactic Development*, Chicago: University of Chicago Press.

O'Grady, W., et al., 1999, *Contemporary Linguistics: An Introduction,* New York: St. Martin's Press.

O'Grady, W., Lee M. and Cho M., *2003, A subject –object asymmetry in the acquisition of relatives clauses in Korean as a second language,* Studies in "Second Language Acquisition.

O'Grady, W., 2005, *Syntactic Carpentry: An Emergentist Approach to Syntax,* Mahwah, NJ: Erlbaum.

O'Grady, W., 2008a, *Does emergentism have a chance?,* in: H. Chan, H. Jacob, E. Kapia (Eds.) Proceedings of 32nd Annual Boston University Conference on Language Development, Cascadilla Press, Somerville, MA., (p.16-35)

O'Grady, W., 2008b, *Innateness, Universal Grammar and Emergentism, Lingua* 118: (p.620-31).

O'Grady, W., 2008c, *Language without Grammar,* in P. Robinson and N. Ellis *(eds.), Handbook of Cognitive Linguistics and Second Language Acquisition, New York: Routledge, (p.139-67)*

O'Grady, W., 2008d, *The Emergentist Program,* Lingua 118, (p.447-64).

O'Grandy W., 2010, *Cambridge Encyclopedia of Language Sciences,* edited by Patrick Hogan and published by Cambridge University Press.

Oleksy, W., (ed), 1989, *Contrastive Pragmatics,* Amsterdam: John Benjamins.

Osgood, C. E., 1946, *Meaningful similarity and interference in learning*, exp. Psychol 36, (p.277-301).

Osgood, C. E., 1948, *An investigation into the causes of retroactive interference,* J. exp. Psychology 38, (p.132-154).

Osgood, C. E., 1967, *The measurement of meaning,* Urbana/Chicago/London.

Ozeki, H. and Shirai Y., 2004, *The consequences of variation in the acquisition of relative clauses: an analysis of longitudinal production data from five Japanese children,* Paper presented at the 'Conference on diversity and universals in language: the consequences of variation', Stanford University, (p.21-23)

Ozeki, H. and Shirai, Y., 2004, *Semantic bias in the acquisition of relative clauses in Japanese,* Proceedings of the 29th annual Boston University Conference on Language Development, ed. by Alejna Brugos, Manuella R. Clark-Cotton, and SeungwanHa, Somerville, MA: Cascadilla Press, (p.459–70).

Ozeki H., Shirai Y., 2007, *Does the NPAH predict the difficulty order in the acquisition of Japanes Relative Clauses?* University of Tokyo, University of Pittsburgh.

Palmer, F. R., 1965, *A linguistic Study of the English Verbs,* London: Longman Group Ltd.

Palmer-Brown, D., Tepper J., Powell H., 2002, *Connectionist natural language parsing,* Trends in Cognitive Science 6, (p.437–442).

Pasek, H.K., Golinkoff R.M., Reeves L., 1991, *Constructivist explorations for language acquisition may be insufficient: the case for language-specific principles,* in Willis F. Overton: David S. Palermo "the nature and ontogenesis of meaning, UK.

Pavesi, M., 1986, *Markedness, discoursal modes, and relative clause formation in a formal and an informal context,* Studies in Second Language Acquisition 8, (p.38-55).

Pearlmutter, N. J., and Gibson E., 2001, Recency in verb phrase attachment, Journal of Experimental Psychology: Learning, Memory, and Cognition 27, (p.574-590).

Peirce, B. N., 1995, Social identity, investment, and language learning, *TESOL* Quarterly 29, (p. 9–31).

Piaget, J., 1954, *The Construction of Reality in the Child,* New York NY, Basic Books.

Piaget, J. and Inhelder, B., 2000, *The Psychology of the Child,* New York NY, Basic Books.

Pica, T., 1985, The selective impact of classroom instruction on second language acquisition. Applied Linguistics 6 (3), (214-222).

Pica, T., 1994, *Questions from the language classroom: Research perspectives,* TESOL Quarterly, 28 (p.49-79).

Pica, T., 2003, *SLA Research and applied linguistics,* University of Pennsylvania.

Pinker, S., and Prince, A., 1988, On language and connectionism: Analysis of a parallel distributed processing model of language acquisition, Cognition 28, (1-2), [346], (p.73-193)

Pinker, S., 1999, *Words and Rules,* Basic Books, New York.

Pinker, S., Jackendoff, R., 2005, *The faculty of language: What's special about it?* Cognition 97, (p. 201–236).

Pfaff, C. W, 1987, *First language and second language acquisition process*, Freie Universität Berlin.

Pfaff C. W., 2009, *Parallel assessment of oral and written text production of multi-linguals: Methodological and analytical issues,* Freie Universität Berlin.

Praninskas, J., 1959, *Rapid Review of English Grammar,* University of illinois.

Pritchett, B. L., 1988, *Garden path phenomena and the grammatical basis of language processing,* Language 64, (p.539-576).

Postman, 1971, *Transfer, interference and forgetting,* in W. Kling and L. A. Riggs(Ads.), Woodworth and Schlosberg's experimental psychology. New York: Holt.

Quigley, S. P., Smith N. L., and Wilbur, R. B., 1974, Comprehension of relativized sentences by deaf students, Journal of Speech and Hearing Research 17.

Quirk, R. et. al., 1972, *A Grammar of Contemporary English,* London: Longman Group Ltd.

Quirk, R. et. al, 1985, *A Comprehensive Grammar of the English Language*, Longman, London.

Robert, P., 1962, English Sentence, Harcourt, Brace and World Inc. U.S.A.

Radford, A., 2004, *English Syntax, An introduction*.

Ramat, A. G., 2003, *Typology and Second Language Acquisition,* Mounton de Gruyter, Berlin, New York.

Rayner, K., and Frazier L, 1987, *Parsing temporarily ambiguous complements*, Quarterly Journal of Psychology 39A**.**

Reed, A. M., 1975, *The structure of English relative clause.*

Richards, J., Platt J., Platt H., 1992, *Longman Dictionary of Language Teaching and Applied Linguistics,* London: Longman.

Ringbom, H., 1987, *The role of first language in foreign language acquisition* Clevedon: Multilingual Matters.

Ringbom, H., 2001, *Lexical transfer in L3 production,* in Cenoz J, Hufeisen B. and Jessner U., (Eds.), Cross-linguistic influence in third language acquisition: Psycholinguistic perspectives Clevedon: Multilingual Matters, (p. 59-68).

Sauter, K., 2002, *Transfer and access to Universal Grammar in adult second language acquisition*.

Scarcella, R., 1990, *Review of Variation in second language acquisition* (Vols. 1 & 2)] Studies in Second Language Acquisition 12 (4), (p.458-460).

Schachter, J., 1974, *An error in error analysis*, Language Learning 24, (p.205-214)

Schachter, J., 1983, *A new account of language transfer,* in S. Gass and L. Selinker (Eds.), Language transfer in language learning, Rowley, MA: Newbury House, (p.98-111)

Schachter, J., 1988, *Second language acquisition and its relationship to universal grammar,* Applied Linguistics, 9 (3), (p.219-235)

Schachter, J., 1989, *Testing a proposed Universal,* in Gass, S. and Schachter (eds.), Linguistic Perspectives on Second Language Acquisition, Cambridge.

Schachter, J., and Celce-Murcia, M., 1977, *Some reservations concerning error analysis*, TESOL Quarterly 11 (4), (p.441-451)

Schachter, J., 1990, *On the issue of completeness in second language acquisition*, Second Language Research 6(2), (p.93-124).

Schachter, J., 1991, *Corrective feedback in historical perspective*, Second Language Research 7 (2), (p.89-102).

Schuele, C. M., and Nichols, L.M., 2000, *Relative clauses: evidence of continued linguistic vulnerability in children with specific language impairment,* Clinical Linguistics and Phonetics 14(8*), (p.563-585).

Schumann, J. H., 1978, *The acculturation model for second language acquisition,* in R.C. Gingras, Ed., *Second Language Acquisition and Foreign Language Learning.* Washington, D.C.: Center for Applied Linguistics.

Schumann, J. H., 1979, *The acquisition of English negation by speakers of Spanish*: A review of the literature, in R. Andersen (Ed.), The acquisition and use of Spanish and English as first and second languages, Washington, DC: TESOL, (p.3-32).

Schumann, J. H., 1980, *The acquisition of English relative clauses by second language learners*, in Scarcella and Krashen S., (Eds), Research in Second Language Acquisition Research Forum, Rowley, MA: Newbury House, (p.118-131).

Schumann, J. H., 1983, *Art and science in second language acquisition research*, in M. Clark and J. Handscombe (Eds.), On TESOL '82: Pacific perspectives on language learning and teaching, Washington DC: TESOL, (p. 107-124).

Schmidt R., and Frota S.N., 1986, Developing basic conversational ability in a second language: A case study of an adult learner of Portuguese. In R. R. Day (Ed.), Talking to learn: Conversation in second language acquisition (pp. 237-326). Rowley, MA: Newbury House.

Selinker, L., 1972, *Interlanguage,* International Review of Applied Linguistics (*IRAL)* 10 (3), (p.209-231).

Selinker, L., Swain M., and Dumas, G., 1975, *The interlanguage hypothesis extended to children,* Language Learning, 25, (1), (p.139-152).

Selinker, L. and J. Lamendella, 1978, Two perspectives on fossilization in interlanguage learning, Interlanguage Studies Bulletin 3.2, (p. 143–91).

Selinker, L., and Lamendella J. T., 1980, *Fossilization in interlanguage learning*, in K. Croft (Ed.), *Reading on English as a second language*, Boston. MA: Little, Brown and Company, (p.132-143).

Selinker, L., and Douglas D., 1985, *Wrestling with "context" in interlanguage theory,* Applied Linguistics 6 (2), (p.190-204).

Selinker, L., and Lakshamanan U., 1992, *Language transfer and fossilization: The "Multiple Effects Principle,* in S. M. Gass, and L. Selinker (Eds.), Language transfer in language learning 8, Amsterdam: John Benjamins, (p. 197-216),

Sharwood, S., M.A. 1994, Second language learning: Theoretical foundations, in C.N. Candlin (ed.) Applied linguistics and language study, London: Longman Group UK Limited.

Sheldon, A. L., 1974, *The acquisition of Relative Clause in English,* The university of Texas.

Sheldon, A. L., 1974, *The Role of Parallel Function in the Acquisition of Relative Clauses in English,* Journal of Verbal Learning and Verbal Behavior.

Sheldon, A. L., 1979, The acquisition of relative clauses in French and English: Implications for language-learning universals, Fred Eckman (ed.) Current Themes in Linguistics: Bilingualism, Experimental Linguistics, and Language Typologies, (p.49-70).

Shirai, Y., (hrsg), 2007, *The acquisition of RC and Noun Phrase Accessibility* Hierarchy: A universal in second language acquisition, in Studies in second language acquisition 29.

Sidman, M., 1960, *Tactics of scientific research: Evaluating experimental data in psychology,* New York, Basic Books.

Sikogukira, M., 1993, *Influence of Languages other than the L1 on a foreign language: A case of transfer from L2 to L3,* Edinburgh Working Papers in Applied Linguistics, number 4.

Sinclair, I. 1990, *Collins Cobuild English Grammar,* Harper Collins London.

Skinner, B. F., 1953, *Science and human behavior,* New York: Free Press.

Skinner, B. F., 1969, *The phylogeny and ontogeny of behavior*, Skinner B. F, editor. Contingencies of reinforcement: A theoretical analysis. New York: Appleton-Century-Crofts, (p.172–217).

Skinner, B.F., 1975, *The shaping of phylogenic behavior,* Journal of the Experimental Analysis of Behavior 24, (p.117–120).

Slobin, D., 1973, Cognitive prerequisites for the development of grammar, in C. Ferguson & D. Slobin (Eds.), Studies of child language development, New York: Appleton-Century-Crofts, (175-208).

Slobin, D., and Welsh, C. A., 1973, *Elicited imitation as a research tool in developmental psycholinguistics,* in C. A. Ferguson and D. I. Slobin (Eds.), *Studies in child language development,* New York: Holt, Rinehart and Winston Inc, (p.485–497)

Slobin, D., 1982, Universal and particular in the acquisition of language in L. R. Gleitman and E. Wanner (eds.) *Language Acquisition: State of the Art*, Cambridge: Cambridge University Press.

Slobin, D. I., 1996, *From 'thought and language' to 'thinking for speaking,* in J. J. Gumperz and S. C. Levinson, eds. (1996), Rethinking Linguistic Relativity Studies in the Social and Cultural Foundations of Language 1, Cambridge University Press, (p.70-96).

Slim, M., 2004, *Explore Good English Grammar,* A.D.R, London, Limited.

Smith, M. D., 1974, *Relative clause formation between 29-36 months: a preliminary report,* in *Papers and Reports on Child Language Development,* 8, Committee on Linguistics, Stanford University, (p.104-110).

Snow, C. E., 1987, *Why Routines Are Different: Toward a Multiple-Factors Model of the Relation between Input and Language Acquisition*, in Nelson, K. E. and van Kleck, A. (Eds.), Children's Language, Hillsdale, N.J.: Erlbaum, (pp. 65–97).

Snow, C. E., 1994, Beginning from baby talk: Twenty years of research on input and interaction, in Gallaway, C. and Richards, B.J. (Eds), Input and Interaction in Language Acquisition, Cambridge University Press, (p.3-12)

Stig, J., 2007, *Seeing through multilingual corpora, on the use of corpora in contrastive studies*, Amsterdam, Philadelphia.

Stockwell, R. P. and Bowen J. D., 1965, *The Sounds of English and Spanish*. Chicago: University of Chicago Press. Stockwell, R. P., J. D. Bowen and J. W. Martin (1965), *The Grammatical Structures of English and Spanish*. Chicago: University of Chicago Press.

Stockwell, R. P., Bowen J. and Martin J., 1965, *The grammatical structures of English and Spanish,* Chicago: University of Chicago Press.

Stockwell, R. P., 1968, *Contrastive analysis and lapsed time* in Alatis, (p.11-36).

Svartvik, J., 1966, *On Voice in the English Verbs*, The Hague: Mouton and Co.

Swain, M., 1975, *Changes in errors: random or systematic?* Paper presented at the Fourth International Congress of Applied Linguistics, Stuttgart.

Swain, M., 1985, *Communicative competence: Some roles of comprehensible input and comprehensible output in its development*, in Gass, S. and Madden, C. (Eds.), *Input in Second Language Acquisition*, New York: Newbury House, (p.235-256)

Swain, M., 1991, *Practical English Usage,* Oxford University Press.

Swierzbin, B., (hrsg), 2000, *Social and cognitive factors in second language acquisition*.

Tabor, W., Juliano C.J. and Tanenhaus, M.K., 1997, *Parsing in a dynamical system: An attractor-based account of the interaction of lexical and structural constraints in sentence processing*, Language and Cognitive Processes 12.

Tarollo, F. and Myhill J., 1983, *Interference and natural language processing in second language acquisition,* Language Learning.

Tarone, E., Frauenfelder U. and Selinker L., 1975, *Systematicity/variability and stability/instability in interlanguage system,* Papers presented at the Sixth Annual Conference on Applied Linguistics, Ann Arbor.

Tarone, E., 1983, Some thoughts on the notion of communication strategy, in Færch, C., and G. Kasper (Eds), strategies in language communication, England: Longman group limited.

Tarone, E., Cohen, A. und Dumas, G., 1983**,** A closer look at some interlanguage terminology, A framework for communication strategies, in Faerch/Kasper. (Hrsg.). (1983a), S. 4-14. Originalversion, 1976: *Working Papers on Bilingualism 9,* (p.76-90).

Tarone, E., 1988, *Variation in interlanguage,* London: Edward Arnold.

Tarone, E., 1990, *On variation in interlanguage: A response to Gregg,* Applied Linguistics 11 (4), (p.392-400).

Tavakolian, S. L., 1977, *Structural principles in the acquisition of complex sentences,* Amherst: University of Massachusetts dissertation.

Tavakolian, S. L., 1981, *The conjoined-clause analysis of relative clauses,* in Language acquisition and linguistic theory, Susan L. Tavakolian (ed.), Cambridge, Massachusetts: MIT Press, (p.67-87)

Taylor, B., 1975, *The use of overgeneralization and transfer learning strategies by elementary and intermediate students*, in ESL, Language Learning 25 (l), (p.73-107).

Taylor, J. R. and Laury M., Robert E. (eds), 1995, *Language and the Cognitive Construal of the World*. Berlin and New York: Mouton de Gruyter (TIL 82.)

Thume, K.,-H., 1972, Relative Clause.

Tomasello, M., 2003, *Constructing a Language: A Usage-Based Theory of Language Acquisition,* Harvard University Press, Cambridge, MA, (p. 329).

Trager, G. L., 1949, *The field of linguistics,* SIL Occasional papers, 1., Norman, Okla, Battenburg Press.

Troike, M. S., 2007, *Introducing Second Language Acquisition*, Cambridge University Press.

VanPatten B., 2003, *From input to output.*

VanPatten B., 2004, *Form meaning connection in second language acquisition.*

VanPatten B., Williams J., 2008, *Theories in Second Language Acquisition,* Routledge, New York, London.

Varadi, T., 1980, *Strategies of target language learner communication: Message-adjustment,* in IRAL 18.

Villiers, J., 1988, *Faith, doubt, and meaning,* in F. Kessel (Ed.), The development of language and language researchers: Essays in honor of Roger Brown, Hillsdale, NJ: Erlbaum, (p.51-63).

Vries, M. de, 1997, *The Syntax of Relative Clauses and Related Constructions*, HIL Project Description Paper, Universität van Amsterdam / Uni. Leiden

Vries, M. de, 2002, *The syntax of relativization,* PhD Dissertation, University of Amsterdam, Published by LOT, Utrecht.

Wanner, E., and Maratsos M.,1978, *An ATN approach to comprehension, Linguistic theory and psychological reality*, ed. by Morris Halle, Joan Bresnan, and George Miller, Cambridge: Cambridge University Press, (p.119–61)

Wardhaugh, R., 1970, *The contrastive analysis hypothesis, TESOL Quarterly* 4.2: (p.123–130).

Wardhaugh, R., 1983, *Language and Nationhood: The Canadian Experience*, New Star Books, Vancouver.

Wardhaugh, R., 1986, *An introduction to sociolinguistics,* Oxford: Basil Blackwell.

Warren, T. and Gibson E., 2002, *The influence of referential processing on sentence complexity,* Cognition 85, (p.79-112).

Warren, T., Gibson E., 2005, *Effects of NP type in reading cleft sentences in English*, Language and Cognitive Processes 20, (p.751-767).

Waters, G. S. and Caplan D., 1996, Processing resource capacity and the comprehension of garden path sentences, *Memory and Cognition* 24 (p.342-355).

Weinreich, U., 1953, *Languages in Contact*, The Hague: Mouton.

Weinreich, U., Labov, W. and Herzog, M. I., 1968, Empirical foundations for a theory of language change, in Lehmann and Malkiel, (p. 95–195).

White, L., 1988, *Island effects in second language acquisition,* in

S. Flynn and W. O'Neil (Eds.), Linguistic theory in second language acquisition, Dordrecht, Netherlands: Kluwer Academic, (p. 144-172).

White, L., and Juffs A., 1998, *Contrainsts on wh-movement in two different contexts non-native language acquisition: Competence and Processing,* in Flynn S., Martohardjono & O'Neil (ads.), The generative study of second language acquisition (pp 111-129), Lawrence Erlbaum.

White, L., 2003, *Second language acquisition and Universal Grammar*, Cambridge University Press.

Williams S. and Hammarberg B., 1998, *Language switches in L3 production: Implications for a polyglot speaking model,* Applied Linguistics 19.

Winograd, T., 1983, *Language as a cognitive process,* Vol. 1, Syntax, Addison-Wesley.

Wolfe-Quintero, K., 1992, *Learnability and the acquisition of extraction in relative clauses and wh questions,* Studies in Second Language Acquisition 14, (p.39–70).

Woods, W. A., 1970, *Transition Network Grammars for Natural Language Analysis,* Communications of the ACM 13, (p.591-606).

Zhang, Y., 2005, HKBU Papers in Applied Language Studies Vol. *9, "A Comprehensive Review of Studies on Avoidance Phenomenon"* in Second Language Acquisition Hong Kong Baptist University.

About German

Bausch, K.-R- and Kasper G., 1979, *Der Zweitspracherwerb: Möglichkeiten und Grenzen der "Grossen" Hypothesen,* in: Linguistische Berichte 64.

Bausewein, K., 1990, *Haben kopflose Relativsätze tatsächlich keine Köpfe?* in: G. Fanselow and S. W. Felix (Editors), *Strukturen und Merkmale syntaktischer Kategorien*, No. 39 in Studien zur deutschen Grammatik, Gunter Narr Verlag, Tübingen, (p.144–158).

Behaghel, O., 1932, *deutsche Syntax, eine geschichtliche Darstellung,* Band 4, Wordstellung , Periodenbau, Heidelberg: Winter.

Birkner, K., 2008, *Relativ (Satzkonstruktionen im gesprochen Deutsch; syntaktische, prosodische, semantische und pragmatische Aspekte,* Walter de Gruyter, Berlin, New York.

Brandt, S., 2004, *The Acquisition of Relative Clauses in German and English, The very first steps,* Leipzig: University of Leipzig master's thesis.

Brandt, S., Diessel H., and Tomasello M., 2007, *The acquisition of German relative clauses,* A case study, Journal of Child Language 34, (p.1-24).

Cummins, J., 1982, *Die Schwellenniveau-und Interdepenz-Hypothese: Erklärung zum Erfolg zweisprachiger Erziehung,* in Swift J., (Hg), Bilinguale und multikulturelle Erziehung, Würzburg: Könnighausen+Neumann, (p.34-43).

Dreyer, S., 2000, *Lern und Übungsbuch der deutschen Grammatik,* Max Hueber Verlag, Germany.

Dittman, J., 2002, Der Spracherwerb des Kindes: Verlauf und Störungen, C. H. Beck Wissen, München.

Edmodson, W., House, J., 2000, *Einführung in die Sprachlehrforschung,* Tübingen und Basel: A. France Verlag.

Eichner, H., 1982, *Zur hethitischen Etymologie* (1. ištark- und ištarnik-; 2. ark-; 3. šešd-), in investigationes philologicae et comparativae. Gedenkschr. Heinz Kronasser, ed., Erich Neu, Wiesbaden, (p.16–28).

Eichner, H., Neumann G., 1982–1983, *Zur Genese der hethitischen Vokative auf -i und -e. Zwei neue Vorschläge,* in: ZVS 96, (p.223–244).

Eisenberg, P., 2002, *Morphologie und Distribution - Zur Morphosyntax von Adjektiv und Adverb im Deutschen,* in: Schmöe, Friederike (Hg.): Das Adverb, Zentrum und Peripherie einer Wortklasse, Wien, (p.61-76).

Eisenberg, P.,2004, *Grundriß der deutschen Grammatik, Der Satz*, Bd 2, Stuttgart: Metzler.

Engel, U., 1983, *Wider den leichtfertigen Sprachvergleich, Zum Verhältnis von Grammatikmodell und kontrastiver Beschreibung:* Ansätze zur Problematisierung, in: Jahrbuch Deutsch als Fremdsprache München: Hueber, (p.85-95) (Jahrbuch Deutsch als Fremdsprache 9).

Engel, U., 2005, *deutsche Grammatik,* IU DICIUM Verlag, München.

Fleischhack, E., 1993, *Cornelsen English Grammar*, Ausgabe B, Cornelsen Verlag Berlin.

Gast, V. and Wiechmann D., 2011, *W(h)-clefts im Deutschen und Englischen,* Eine quantitative Untersuchung auf Grundlage des Europarl-Korpus, In Gunkel, L. and G. Zifonun (eds.) *Jahrbuch des IDS,* Berlin: de Gruyter Mouton

Gertrud P. G., 1988, in Dieter Mindt (Hrg), *Schule und Forschung in der Angewandten Linguistik,* Moritz Diesterweg Verlag, Frankfurt a.m.

Gogolin, I., 1995, *Sprache und Migration,* in C. Schmalz-Jacobsen and G. Hansen (eds.)

Gogolin, I. and H. Reich, 2001, *Immigrant Languages in Federal Germany.* In: G. Extra & D. Gorter (eds.)

Gogolin, I., Neumann U., und Reuter L., 2001, *Schulbildung für Kinder von Minderheiten in Deutschland 1989-1999, Schulrecht, Schulorganisation, curriculare Fragen, sprachliche Bildung,* Münster (Waxmann-Verlag)

Götz L., 1999, *Grammatik der deutschen Sprache*, Bersels Lexicon Verlag, München.

Harald, W., 2007, *Textgrammatik der deutschen Sprache,* George Olms Verlag, AG, Stuttgart.

Hellinger, M., 1977, *Kontrastive Grammatik Deutsch/Englisch,* Tübingen: Niemeyer S.11

Hentsched, E., Weydt H., 2003, *Handbuch der deutschen Grammatik,* Walter de Gruyter, Berlin.

Hufeisen, B., Neuer G., 1999, *Angewandte Linguistik für den fremdsprachlichen Deutschunterricht,* Eine Einführung, Berlin: Langenscheidt.

Juhasz, J., 1970, *Probleme der Interferenz,* München: Hübner.

Kleppin, K., 1998, Fehler und Fehlkorrektur, Berlin: Langenscheidt (p.33).

Kunsmann, P., 1993, *Zur starken Hypothese der Kontrastiveanalyse,* in Linguistische Akzente, Hamburg. Kovac (p.136)

Kunsmann, P., 2001, *Die Rolle der Universalgrammatik im Zweitspracherwerb,* in: Beiträge zu Sprache and Sprachen 3. Vorträge der 6. Münchner Linguistik-Tage. Hrsg. K. Pittner und Robert Pittner. München.

Kühlwein, W., 1990, *Angewandte Linguistik Heute,* Frankfurt am Main.

Lehmann, C., 1984, *Der Relativsatz, Typologie seiner Strukturen,* Theorie seiner Funktion, Compendium seiner Grammatik, Tübingen.

Liebsch, H., and Doring, 1976, *deutsche Grammatik,* VEB bibliographisches Institut, Leipzig.

Müller, H., G., MA, 2000, *Relativsätze,* Eberhard-Karls-University, Tübingen.

Müller, St., 1997/1998b, *An HPSG-Analysis for Free Relative Clauses in German,* Verbmobil Report 224, Deutsches Forschungszentrum für Künstliche Intelligenz, Saarbrücken, A shorter version appeared in Proceedings of Formal Grammar, Aix-en-Provence,

Müller, St., 1999, *Deutsche Syntax deklarativ, Head-Driven Phrase Structure Grammar für das Deutsche,* No:394 in Linguistische Arbeiten, Max Niemeyer Verlag, Tübingen.

Müller, A., 1997, *Das Lernen zweier Sprachen im Kinderalter,* in Deutsch Lernen 2, Zeitschrift für Sprachunterricht mit den ausländischen Arbeitsnehmen

Otfried, I., Bigler H. I., Sauerländer R. Achilles., 1987, *Unser Wortschatz, Schweizer Wörterbuch der deutschen Sprache,* Zürich: Verlagsinstitut für Lehrmittel.

Otomo, N., 1991, *Interlinguale Interferenzerscheinungen in Bereich der Aussprache bei ausländischen Studenten,* in:„Deutsch als Fremdsprache". Zeitschrift zur Theorie und Praxis des Deutschunterrichts für Ausländer 28.

Otten, C., 1995, *Die Debatte über, Semilingualism" in Nordamerika: Hintergrund, Darstellung und Kritik von Cummins',* Thesen über den Zusammenhang zwischen der Sprachbeherrschung bilingualer Kinder und ihren kognitiv-akademischen Fähigkeiten, John-F.-Kennedy-Institut FU Berlin.

Pittner K., Berman J., 2007, *deutsche Syntax,* Narr Verlag, Tübingen.

Schmidt, W., Langner H., 2000, *Geschichte der deutschen Sprache,* ein Lehrbuch für das germanistische Studium, Stuttgart/Leipzig: Hirzel.

Schulz, D., Griesbach H., 1960, *Grammatik der deutschen Sprache,* Max Hueber Verlag, München.

Sommerfeld, K.E., Starke G., 1992, *Einführung in die Grammatik der deutschen Gegenwartssprache,* Klett, Stuttgart.

Spitzer, M., 2007, *Lernen: Gehirnforschung and die Schule des Lebens*, Spektrum akademischer Verlag, München.

Starke, G., 1982, Weiterführende Nebensätze, eingeleitet mit pronominaladverbien, in DaF 19, (p.215-220).

Sternfeld, W., 2006, *Syntax,* Stauffernburg Verlag, Tübingen.

Szagun, G., 2000, *Die Sprachentwicklung beim Kind*, Beltz Taschenbuch 62, Weinheim und Basel.

Vietör, W., 1884, *Elemente der Phonetik und Orthoepie des Deutschen, Englischen und Französischen mit Rücksicht auf die Bedürfnisse der Lehrpraxis*, Heilbronn.

Vogel, K, 1989, Aspekte der Lernersprache als Forschungskonzept des Zweitsprachenerwerbs, Göttingen.

Wellmann H., 2008, *deutsche Grammatik,* Universität Verlag, Winter Heidelberg.

Weinrich, H., 2007, *Textgrammatik der deutschen Sprache,* George Olms Verlag, AG, Stuttgart, (s.779).

Zifonun, G., 2001, *Grammatik des Deutschen im europäischen Vergleich: Der Relativsatz,* Amedes Verlag, Mannheim, Deutschland.

About Turkish

Aarssen, J., 1996, *Relating events in two languages, Acquisition of cohesive devices by Turkish-Dutch bilingual children at school age Tilburg,* Netherlands, Tilburg University Press (Studies in Multilingualism).

Akıncı, M.-A., and Pfaff C, W., 2008, *Language Choice, Cultural and Literacy practices of Turkish bilingual adolescents in France and in Germany,* International Association for Applied Linguistics (AILA), Essen.

Akıncı, M.-A., Pfaff C. W., Dollnick M., 2010, *Orthographic and morphological aspects of written Turkish in France, Germany and Turkey,* in Ergenç, I. (ed.) Essays on Turkish Linguistics, Wiesbaden: Otto Harrassowitz Verlag, (s. 363-372).

Bangoĝlu, T., 2007, *Türkçenin Grammeri,* Türk Dil Kurumu Yayınları, Ankara.

Bayraktar, N., 2004, *Türkçede Fiilimsiler (participles in Turkish),* Türk Dil Kurumu Yayınları, Ankara, Turkey.

Bilgin, M., 2002, *Anlamdan Anlatıma Türkçemiz,* T.C Kütür Bakanliĝı, Ankara.

Buhur, İ., M., 2000, *Türk Dili Edebiyat Dizisi,* Ankara.

Can, C., 2000, *The accessibility of Universal Grammar in Turkish adult learning English as a second language: head-complement parameter setting,* Çukurova University, Insitute of Social Sciences, Adana.

Çagri, İ., M., 2005, *Minimality and Turkish Relative Clauses*, Ph. D. dissertation, UMCP.

Çagri, İ., M., 2009, *Arguing against subject incorporation in Turkish relative clauses,* in Lingua 119.

Dede, M., 1978, *Why should Turkisch relativization distinguish between Subject and non-subject head nouns?* BLS 4, (s.67-77).

Demir, T., 2004, *Türkçe Dilbilgisi,* Kurmay Yayınları.

Ediskun, H., 1992, *Türk Dilbilgisi,* Remzi Kitapevi, Istanbul, 4. Bakı.

Ekmekci, F. Ö., 1990, *Performance of Relativization by Turkish Children at the Imitation and Production Levels, Acquisition of Relativization in Turkish,* Fifth International Conference on Turkish Linguistics, SAOS London University, England.

Ergin, M., 1997, *Türk Dil Bilgisi,* Istanbul Türkiye.

Gencan, T. N., 1979, *Dilbilgisi,* Ankara Universitesi Basimevi Ankara.

Göĝüş, B., 1969, *Türkcede cümlemsinin kuruluşu ve temel cümleciĝe baĝlanma şekilleri,* in Türk Dili Araştırmaları Yıllıĝı, Belleten 1968, Istanbul, (s.89-142).

Göksel, A., and Kerslake C., 2005, *Türkish: A Comprehensinve Grammar,* New York.

Göksel, A., 2007, *Morphology and syntax inside the word: Pronominal participles of headless relative clauses in Turkish,* Boğaziçi University.

Güngördü, Z., 1996, *A Head-driven Phrase Structure Grammar (HPSG) Analysis of Turkish RCs,* Edinburg, UK.

Güngördü, Z., 1993, *A lexical-functional grammar for Turkish,* Master's thesis, Dept. of Comp. Eng., Bilkent University.

Hacieminoglu, N., 1991, *Türk Dilinde Yapı Bakımından Filler*, Kültür Bakanlıĝı Yayınları, Ankara.

Haig, G., 1998, *Relative Constructions in Turkish, Harrassowitz Verlag, Turkologica 33,* Wiesbaden, Deutschland.

Hengirmen, M., 2005, *Türkçe Dilbilgisi.*

Hepçilingiller, F., 2004, *Türk Dilibilgisi,* Remzi Kitap Evi, 2. Baskı.

Johanson, L., u.a. (Hg), 1998a, *The Mainz Meeting: Proceedings of the Seventh International Conference on Turkish Linguistics,* August 3-6 1994 (Turcologica 32), Wiesbaden.

Karadoğan, A., 2008, *Türkiye Türçesindeki „-dık" ve „-an" sıfat fiil eklerindeki sınır vurgulayışın rolü,* in Türk Dili (Dil ve Edebiyat Dergisi).

Kahramantürk, K., 1999, *Nominale Wortbildungen und Nominalisierungen im Deutschen und Türkischen,* Ein Beitrag zur deutsch-türkischen kontrastiven Linguistik (Deutsch im Kontrast 19, hrsg.v. Engel U. and Vorderwülbecke K.), Heidelberg.

Kennelly, S. D., 1987, *Turkish Gerunds,* in H. E. Boeschoten & L. Th. Verhoeven (eds.) Studies on Modern Turkish, Tilburg, Tilburg University Press, (s.136-149,).

Kennelly, S. D., 1993, *Relative Clauses in Turkish: Specificity and Locative Inversion,* Tercer Coloquio de Gramática Generativa, Madrid, Spain.

Knecht, L. 1979, *The role of the genitive suffix in relative clauses in Turkish: a reply to Dede,* in Proceedings of the Fifth Annual Meeting of the Berkeley Linguistic Society, Berkeley, (180-197).

Kornfilt, J., 1997, *Turkish,* London and New York.

Kornfild, J., 1997, *Turkish Descriptive Grammar,* UK.

Kornfilt, J., 2000a, *Locating Relative Agreement in Turkish and Turkic,* in C. Kerslake, and A. Göksel (Eds.), *Studies in Turkish and Turkic Languages*, Wiesbaden: Harrassowitz Verlag, (s.189-196).

Kornfilt, J., 2000b, Some syntactic and morphological properties of relative clauses in Turkish, in *The Syntax of Relative Clauses* (eds) Alexiadou, A, P. Law, A. Meinenger, C. Wilder, Amsterdam and Philadelphia: John Benjamins Publishing Company, (s. 121-159).

Kornfilt, J., 2008, *Topics in Turkish Syntax: Turkish Relative Clauses,* Leipzig Spring School on Linguistics Diversity.

Korkmaz, Z., 2003, *Türkiye Türkçesi Grammeri,* Ankara, Türkey.

Lewis, G., 2000, *Türkish Grammar,* Oxford Unversity Press, Newyork.

Margarete, I., E-R, 2001, *Türkische Grammatik,* Max Heuber Verlag, München.

Özcan, F. H., 1997, *Comprehension of relative clauses in the acquisition of Turkish,* in K. İmer and E. Uzun (Eds.), Proceedings of the 8th International Conference on Turkish Linguistics (p.149–155), Ankara.

Özçelik, Ö., 2004, *Processing relative clauses in Turkish as a second language,* Bogazici University.

Özgür, A., 2004, *The Comprehension of Turkish relative clauses in second language acquisition and agrammatism,* Ankara University.

Özge, D., 2007, *Regression in child language and aphasia: a comprehensive study on Turkish relative clauses,* Middle East Technical University, Ankara.

Özge, D., 2010, *Mechanisms and Strategies in the Processing and Acquisition of Relative Clauses in Turkish Monolingual and Turkish-English Bilingual Children*, PhD thesis, Middle East Technical University, Ankara-Turkey.

Özsoy, S. A., 1999, *Türkçe/ Turkish,* Boĝaziçi Üniversitesi, Istanbul/Turkey.

Pfaff, C. W., Akıncı, M.- A., and Dollnick M., 2009, Complex sentences in the written texts of Turkish trilingual adolescents in Germany and France Paper presented at the Seventh International Symposium on Bilingualism (ISB7) Utrecht.

Sağın, S. C., 2006, *Third Language Acquisition: Turkish – German Bilingual Students' Acquisition of English Word Order in a German Educational Setting*, Munster, New York: Waxmann.

Schönig, C., 1992, *Relativsatzbautypen in den sogenannten altaischen Sprachen,* Acta Orientalia Hungerica 46, (s.93/94)

Schönig, C., 1992, *Atributive Partizipialkonstruktionen im Türkishcen,* Materialia Turcica 16, Mainz, (s. (74-104).

Schönig, C., 1993, *Finitprädizierte Relativsätze in Sprachen des altaischen Types,* Mainz, Türk Dilleri Araştırmaları 3, Talat Tekin Arma/ani, Ankara,.

Seher, A., 1992, *Proficiency in English,* Tepe Yayinlari, Ankara.

Slobin, D. I., 1986, *The Acquisition and Use of Relative Clauses in Turkic and Indo-European Languages,* in Dan I. Slobin and Karl Zimmer (eds.) Typological Studies in Language Volume 8 Studies in Turkish Linguistics, Amsterdam/Philadelphia: John Benjamins.

Şehitoğlu, O. T., 1996, *A sign based phrase structure Grammar for Turkish,* Middle East Technical University, Ankara.

Underhill, R., 1972, *Turkisch participles,* L1 3, (s.87-100)

Underhill, R., 1990, *Turkish Grammar,* London, England and Massachusetts USA.

Yumrutas, N., 2009, *Acquisition of RC in TUR,* Bogazici Universitesi.

Zimmer, K., 1987, *Turkish relativization revisited,* in Boeschoten/Verhoeven(Hg), (s.57-61).

Other Sources:

- Current Issues in Turkish Linguistics, processing of the 5th international conference on Turkish Linguistics School of orient and African Studies 15-17 August 1990, volume 1, Hitit Yayınları.

- TESL Journal, Vol. II, No. 4, April 1996.

- Lingua 118, 2008, by Hawkins R.

- Current emergentist and nativist perspectives on SLA, 118/2008, Lingua.

- Estudios Ingleses de la Universidad Complutense 69, 2005, vol. 13 67-83.

- English as Second a Language: The Internet TESL Journal, Vol. II, No. 4, April 1996.

- Hueber, 1983. (Jahrbuch Deutsch als Fremdsprache 9).

- Zielsprach Deutsch, 1993, Zeitschrift für Unterrichtmethodik und angewandte Sprachwissenschaft, München, Hübner 2.

- Zeitschrift für Germanistische Linguistik, 2002, Band 16, Heft 3, Seiten 310–322.

- Duden, *Grammatik der deutschen Gegenwartssprache*, Vol. 4. Mannheim, Wien, Zürich: Dudenverlag, 5th edition, 1995.

- Türkçe Sözlük I, II. Dil Derneĝi Yayınları, 9. 1998, Ankara.

- Härtl H., Tishvorlage, professor of Linguistics, ws 2009-2010, HU-Berlin/Germany.

- Cambridge Advanced Learner's Dictionary**,** 2003, Cambridge University Press.

- Collins Cobuild Advanced Dictionary of English, 2009, Harper of Collins Publishers.

- Collins English Dictionary, 2003, Harper Collins Publishers, Great Britain.

- Cambridge International Dictionary of English, 1995, Cambridge University Press.

- **Kerr,** John A., 2006, *Scottish Higher History: Britain and Scotland 1850s-1979*, Hodder Gibson UK.

- **Allan,** Eric and John Harris, 2008, *Higher Chemistry,* Hodder Gibson an Imprint of Hodder Education, Hachette Livre UK company, England.
- **Lessing,** Doris, 2007, *The Cleft, Harper Perennial,* A Print of Harper Collins Publishers, London, England.

<u>Internet</u>

http://www.em-multi.eu

http://www.dfki.de/˜stefan/Pub/e_hpsg.html. 07.12.1999.

http://www.dfki.de/˜stefan/Pub/e_freeRel.html. 07.12.1999.

http://www.uni-koblenz.de/˜koch/stuarb.ps.gz. 07.01.1998.

http://englishteststore.net

http://esl.about.com/

www.wikipedia.com

www.kurtur.gov.tr

http://www.em-multi.eu

www.uni-jena.de

http://www3.interscience.wiley.com/journal/119111526/abstract?CRETRY=

www.waylink-english.co.uk/

www.turkishlanguage.co.uk

http://www.edebiyatogretmeni.net/

http://sana.tkk.fi/awe/punctuation/commas

http://www.tkk.fi/Yksikot/KieVie/KieCafe/en/dp/rclause

http://www.usingenglish.com/forum/ask-teacher/

http://wapedia.mobi/en/Reduced_relative_clause

http://www.youtube.com/watch?v=U5ZJKS7NqAE

http://www.odeo.com/episodes/25450226-CT-08-Grammar-%E2%80%93-Reduced-Relative-Clauses+reduced+relative+clauses+problems

https://lw.lsa.umich.edu/german/hmr/grammatik/Relativsaetze/relative.html

www.deutschseite.de/grammatik/pronomen/relativpronomen

http://www.turkceciler.com/fiiller/fiilimsiler.html

Questionnaire 1

(Sentence Combining Task)

Personal Information

Age: …Gender: ……Grade: ......The place of Birth……………Mother Tongue………….

Instructions

The information will be used for academic research only. You will have 30 minutes. Use your intuition to complete each item. Spelling and timing are not important facts in this study. We do not calculate this.

Combine the following sentences by attaching sentence (B) to sentence (A) using the appropriate pronoun **who**, **whom**, **whose**, **which** or **that**. (We will assume that all these sentences would be used in formal context).

Example

The person who plays the piano is a teacher.

(A) The person is a teacher.

(B) He plays the piano.

1. --

(A) I like the composition.

(B) You wrote it.

2. ---

(A) I know the man.

(B) His bicycle is new.

3. ---

(A) Jenny likes the teacher.

(B) He explained the answers to the class.

4. --

   (A) The man called the police.

   (B) His wallet was stolen.

5. --

   (A) The woman spoke English.

   (B) She was nice.

6. --

   (A) The man is Fritz.

   (B) Cathy was shorter than him.

7. --

   (A) The author is well known.

   (B) My mother mentioned him.

8. --

   (A) The woman is a nurse.

   (B) Bill passed a note to her.

9. --

   (A) Mr. Smith looked at the girl.

   (B) I gave a book to her.

10. --

   (A) I met the girl.

   (B) Jenny is prettier than her.

11. --

   (A) I liked the woman.

   (B) I danced with her last night.

12. --

   (A) The candidate didn't win the election.

   (B) I voted for him.

Questionnaire 2

(Grammaticality Judgement Test)

<u>Personal Information</u>

Age: …Gender: ……Grade: ......The place of Birth……….…Mother Tongue:……….

<u>Instructions</u>

Please decide which of the following sentences contains a correct Relative Clause and put a mark in the parentheses; if it is correct put (0); if it is not correct put (x) and write the correct sentence in the blank space below.

<u>Example</u>

    (1) The person plays the piano is a teacher (X)

    (2) The person **who** plays the piano is a teacher (O)

1. My wife and I are really enjoying the TV set that we bought it for ourselves last week. ( )

   ----

2. In our village, there were many people didn't have much money. ( )

   ----

3. The student who(m) Johnson is stronger than him is Ray. ( )

   ----

4. Bob admires the professor who(m) John lives next to. ( )

    ----

5. The professor whose his last name is Goose is excellent. ( )

    ----

6. The lady who(m) he is looking at is beautiful. ( )

    ----

7. I don't like the movie theater which Warner Village is bigger than. ( )

    ----

8. The woman knows the boy which Jenny handed the exam to. ( )

----

9. The girl whose hair is red came here last night. ( )

----

10. Emily wrote on a topic which she knew nothing about it. ( )

----

11. Almost all of the people appear on television wear makeup. ( )

....

12. I live in a dormitory which residents come from many countries. ( )

....

13. The man who(m) Mr. Smith offered a job to is my uncle. ( )

....

14. People who work in the hunger program they estimate that 3500 people in the world die from starvation every day of the year. ( )

....

15. I apologize to the woman whose husband is the president of the corporation. ( )

....

16. I still remember the man who he taught me to play the violin when I was a boy. ( )

....

17. The girl who (m) Ann is thinner than is standing over there. ( )

....

18. The professor talked to the student who (m) you lent your book to. ( )

....

19. The student whose house had burned down writes well. ( )

....

20. The car that the man drove it was very fast. ( )

....

21. I saw the boy whose his mother is nurse. ( )

....

22. The woman that I gave a book to her is my sister. ( )

....

23. The people who(m) we visited yesterday were very nice. ( )

....

24. I met a girl who(m) Mary is shorter than her. ( )

....

25. I know a man has traveled to many different countries. ( )

....

26. The woman who (m) I was talking about her suddenly walked into the room. I hope she didn't hear me. ( )

....

27. The woman knows the boy who (m) Jerry gave a present to him. ( )

....

28. Betty dropped the note that Bill wrote. ( )

....

29. Joan likes the professor which gives easy exams to the class. ( )

....

Questionnaire 3

(Turkish-English Translation Task)

<u>Instructions</u>

    A. Translate the following Turkish sentences into English. Each sentence must contain a relative pronoun such that a correct relative clause is constructed.

1. Kitabı verdiğim adam benim sınıf arkadaşımdır.

………………………………………………………………..

2. Annesi doktor olan öğrenci hastalandı.

………………………………………………………………….

3. Kapıda duran kadın bir diş doktorudur.

……………………………………………………………………

4. Stefanie Hans'ın Julia'ya gönderdiği mektubu aldı.

……………………………………………………………………

5. Gördüğün sanatçı çok ünlüdür.

…………………………………………………………………..

6. Beraber okula gittiğim kadın satıcıyı gördüm.

……………………………………………………………………

7. Dün kendisi için çalıştığım usta/padron Paris'te oturuyor.

…………………………………………………………………..

8. Markus'un metroda yardım ettiği kadını seviyorum.

……………………………………………………………………

9. Her gün Potsdam'a(arbayla) giden bir adamı tanıyorum.

……………………………………………………………………

10. Öğretmen bisikleti kırmızı olan bir öğrenciyi gösterdi.

…………………………………………………………………..

B. Please first combine the following two sentences (B with A) in Turkish and then translate it into English sentence that contains a relative clause.

11.   …….……………………….………

      A. Kişi Michael'dır.

      B. John ondan daha uzundur.

12.   ………………………………….………

      A. Bir otel tanıyorum.

      B. Hilton bu otelden daha ucuzdur.

Thank you very much for your participation

Questionnaire 3

(German-English Translation Task)

<u>Instructions</u>

A. Translate the following German sentences into English. Each sentence must contain a relative pronoun such that a correct relative clause is constructed.

1. Der Mann, dem ich das Buch gegeben habe, ist mein Klassenkamerad.

…………………………………………………………..

2. Die Schülerin, deren Mutter eine Ärztin ist, wurde krank.

…………………………………………………………..

3. Die Frau, die vor der Tür steht, ist eine gute Zahnärztin.

…………………………………………………………………

4. Stefanie nahm den Brief, den Hans an Julia geschickt hat.

…………………………………………………………………

5. Die Schauspielerin, die du gesehen hast, ist sehr berühmt.

…………………………………………………………..

6. Ich habe die Verkäuferin gesehen, mit der ich zur Schule gegangen bin.

…………………………………………………………………

7. Der Meister, für den ich gestern gearbeitet habe, wohnt in Paris.

…………………………………………………………..

8. Ich liebe die Frau, der Markus in der U-Bahn geholfen hat.

……………………………………………………………………

9. Ich kenne einen Mann, der jeden Tag nach Potsdam fährt.

……………………………………………………………………

10. Die Lehrerin hat einen Schüler angezeigt, dessen Fahrrad rot ist.

…………………………………………………………………..

B. Please first combine the following two sentences (B with A) in German and then translate it into an English sentence that contains a relative clause.

11. …….…………………………….………

    A. Die Person heißt Michael.

    B. John ist größer als er.

12. …………………………………………

    A. Ich kenne das Hotel.

    B. Hilton ist billiger als dieses Hotel.

Thank you very much for your participation

Group 1 Sample 1

relatin pronon
Selecher

Questionnaire 3   Appendix 3-A

(German-English Translation Task)

Age: 16 Gender: f ...Grade: 12. The place of Birth: Berlin Mother Tongue: German

Instructions

A. Translate the following German sentences into English. Each sentence must contain a relative pronoun such that a correct relative clause is constructed.

1. Der Mann, dem ich das Buch gegeben habe, ist mein Klassenkamerad.

The man who I gave the book is my classmate.

2. Die Schülerin, deren Mutter eine Ärztin ist, wurde krank.

The pupil whose mother is a doctor got sick.

3. Die Frau, die vor der Tür steht, ist eine gute Zahnärztin.

The woman who is standing befor the door is a dental doctor.

4. Stefanie nahm den Brief, den Hans an Julia geschickt hat.

Stefanie took the Letter which Hans sent to Julia

5. Die Schauspielerin, die du gesehen hast, ist sehr berühmt.

The actress who you saw is really famouse famose.

6. Ich habe die Verkäuferin gesehen, mit der ich zur Schule gegangen bin.

I saw the seller who I went to school together.

7. Der Meister, für den ich gestern gearbeitet habe, wohnt in Paris.

The master for who I worked yesterday lives in Paris

8. Ich liebe die Frau, der Markus in der U-Bahn geholfen hat.

I love the woman who Markus helped in the subwa

9. Ich kenne einen Mann, der jeden Tag nach Potsdam fährt.

I know a man who drives everyday to Potsdam.

10. Die Lehrerin hat einen Schüler angezeigt, dessen Fahrrad rot ist.

The teacher reported a student whose bike is red.

B. Please first combine the following two sentences (B with A) in German and then translate it into an English sentence that contains a relative clause.

11. John ist größer als die Person die Michael heißt

A. Die Person heißt Michael. John is taller than the person whose name is Michael.

B. John ist größer als er.

12. Hilton ist billiger als das Hotel das ich kenne.

A. Ich kenne das Hotel. Hilton which is cheaper than the hotel which I know,

B. Hilton ist billiger als dieses Hotel.

Thank you very much for your participation

Group 1, Sample 1

Questionnaire 3   A? 6ᵗ 6ᵈ   Appendix 3-A   pot

Grop 1 sample 2   18 – M – 13 _ Behn _ German   Group 1 Sample 2

(German-English Translation Task)

Instructions

A. Translate the following German sentences into English. Each sentence must contain a relative
   pronoun such that a correct relative clause is constructed.

1. Der Mann, dem ich das Buch gegeben habe, ist mein Klassenkamerad.

The man, whom I gave a book, is my classmate.

2. Die Schülerin, deren Mutter eine Ärztin ist, wurde krank.

The student which her mother is a nurse, is sik.

3. Die Frau, die vor der Tür steht, ist eine gute Zahnärztin.

The woman who stands in front of the door is a good   doctor.

4. Stefanie nahm den Brief, den Hans an Julia geschickt hat.

Stefanie took the letter which Hans has sent to Julia.

5. Die Schauspielerin, die du gesehen hast, ist sehr berühmt.

The actres which you saw is very famous.

6. Ich habe die Verkäuferin gesehen, mit der ich zur Schule gegangen bin.

I have seen a shopping assistend with which I went to school.

7. Der Meister, für den ich gestern gearbeitet habe, wohnt in Paris.

The master for whom I worked yesterday lived in Paris

8. Ich liebe die Frau, der Markus in der U-Bahn geholfen hat.

I love the woman who helped Markus in the underground.

9. Ich kenne einen Mann, der jeden Tag nach Potsdam fährt.

I know a man who drives every day to Potsdam.

10. Die Lehrerin hat einen Schüler angezeigt, dessen Fahrrad rot ist.

The teacher sued a student whose bicicle is red.

B. Please first combine the following two sentences (B with A) in German and then
   translate it into an English sentence that contains a relative clause.

11. John ist größer als die Person, die Michael heißt.

   A. Die Person heißt Michael.

   B. John ist größer als er.

12. John is taller than the person whose name Michael is.

   A. Ich kenne das Hotel.   Ich kenne das Hotel, das billiger
   B. Hilton ist billiger als dieses Hotel.   als das Hilton ist.

Thank you very much for your participation

I know a hotel which is cheaper
than the Hilton.

Group 1, sample 2

Questionnaire 1

(Sentence Combining Task)
Personal Information"
Age: **16** Gender: ...**f**... Grade: **10** The place of Birth...**Berlin**...Mother Tongue...**Turkish**
Instructions

The information will be used for academic research only. You will have 30 minutes. Use your intuition to complete each item. Spelling and timing are not important facts in this study. We do not calculate this.

Combine the following sentences by attaching sentence (B) to sentence (A) using the appropriate pronoun who, whom, whose, which or that. (We will assume that all these sentences would be used in formal context).

Example
The person who plays the piano is a teacher.
(A) The person is a teacher. (B) He plays the piano.

1. I like the composition, which you wrote it.
(A) I like the composition.
(B) You wrote it.

2. I know the man whose bicycle is new.
(A) I know the man.
(B) His bicycle is new.

3. Jenny likes the teacher who explained the answers to the class
(A) Jenny likes the teacher.
(B) He explained the answers to the class.

(A) The man called the police.
(B) His wallet was stolen.

4. The man whose wallet was stolen called the police
(A) The woman spoke English
(B) She was nice.

5. The woman who was nice spoke English
(A) The man was Fritz.
(B) Cathy was shorter than him.

6. The man who was longer than Cathy was Fritz
(A) The author is well known.
(B) My mother mentioned him.

7. The author who my mom mentioned ~~him~~ is well known.
(A) The woman is a nurse.
(B) Bill passed a note to her.

8. The woman who is a nurse passed Bill a note.
(A) Mr. Smith looked at the girl.
(B) I gave a book to her.

9. Mr. Smith looked at the girl whom I gave a book.
(A) I met the girl.
(B) Jenny is prettier than her.

10. I met the girl what is ~~prettier than~~ uglier than Jenny.
(A) I liked the woman.
(B) I danced with her last night.

11. I liked the woman whom I danced with her last night.
(A) The candidate didn't win the election.
(B) I vote for him.

12. The candidate who I vote for him didn't win the election.

Group 2A, Sample 1

Group 2A
Sample 2

Questionnaire 1

(Sentence Combining Task)
Personal Information
Age: 16 Gender: M. Grade: 10. The place of Birth: Berlin....Mother Tongue. turkish

Instructions

The information will be used for academic research only. You will have 30 minutes. Use your intuition to complete each item. Spelling and timing are not important facts in this study. We do not calculate this.

Combine the following sentences by attaching sentence (B) to sentence (A) using the appropriate pronoun who, whom, whose, which or that. (We will assume that all these sentences would be used in formal context).

Example

The person who plays the piano is a teacher.
(A) The person is a teacher. (B) He plays the piano.

1. I like the composition which you wrote.
(A) I like the composition.
(B) You wrote it.

2. I know the man whose bicycle is new.
(A) I know the man.
(B) His bicycle is new.

3. Jenny likes the teacher who explained the answers to the class
(A) Jenny likes the teacher.
(B) He explained the answers to the class.

4. The man whose wallet was stolen called the police.
(A) The man called the police.
(B) His wallet was stolen.

5. The woman who spoke English was nice.
(A) The woman spoke English
(B) She was nice.

6. The man was Fritz who was bigger than Cathy.
(A) The man was Fritz.
(B) Cathy was shorter than him.

7. The author is well known which my mother mentioned.
(A) The author is well known.
(B) My mother mentioned him.

8. The woman whom Bill passed a note is a nurse.
(A) The woman is a nurse.
(B) Bill passed a note to her.

9. Mr. Smith looked at the girl wich i gave a book to her.
(A) Mr. Smith looked at the girl.
(B) I gave a book to her.

10. I met the girl who is uglier than Jenny.
(A) I met the girl.
(B) Jenny is prettier than her.

11. I liked the girl with whom i danced last night.
(A) I liked the woman.
(B) I danced with her last night.

12. the candidate for which i vote didn't win the election.
(A) The candidate didn't win the election.
(B) I vote for him.

Group 2A, Sample 2

Questionnaire 3   Appendix 3-A

(German-English Translation Task)

Age: 17 Gender: F Grade: 12 The place of Birth: Berlin Mother Tongue: Turkish

Instructions

A. Translate the following German sentences into English. Each sentence must contain a relative pronoun such that a correct relative clause is constructed.

1. Der Mann, dem ich das Buch gegeben habe, ist mein Klassenkamerad.

The man, ~~whom~~ ~~that~~ I gave a book, is my classmate.

2. Die Schülerin, deren Mutter eine Ärztin ist, wurde krank.

The pupil, whose mother is a doctor, ~~is~~ got sick

3. Die Frau, die vor der Tür steht, ist eine gute Zahnärztin.

The woman, that is standing infront of the door, is a good teethdoc

4. Stefanie nahm den Brief, den Hans an Julia geschickt hat.

Stephanie took the letter, which Hans had sent to Julia

5. Die Schauspielerin, die du gesehen hast, ist sehr berühmt.

The actress, whome you have seen, is very famous.

6. Ich habe die Verkäuferin gesehen, mit der ich zur Schule gegangen bin.

I saw the seller, with wich I went to school.

7. Der Meister, für den ich gestern gearbeitet habe, wohnt in Paris.

The master, with which I have worked, lives in Paris.

8. Ich liebe die Frau, der Markus in der U-Bahn geholfen hat.

I love the woman, which Markus helped in the Undergrou

9. Ich kenne einen Mann, der jeden Tag nach Potsdam fährt.

I know a ~~woman~~ man, who drives to Potsdam each day.

10. Die Lehrerin hat einen Schüler angezeigt, dessen Fahrrad rot ist.

The teacher showed a pupil, whos biciele is red.

B. Please first combine the following two sentences (B with A) in German and then translate it into an English sentence that contains a relative clause.

11. John ist größer als die Person, die Michael heißt.

A. Die Person heißt Michael. John is taller than the person, who is named Michael.

B. John ist größer als er.

12. Hilton ist billiger als das Hotel, das ich kenne.

A. Ich kenne das Hotel. Hilton is not expensive as the hotel, that I know.

B. Hilton ist billiger als dieses Hotel.

Thank you very much for your participation

Group 2B sample 1

Appendix 3-A

(German-English Translation Task)

Instructions

A. Translate the following German sentences into English. Each sentence must contain a relative
   pronoun such that a correct relative clause is constructed.

1. Der Mann, dem ich das Buch gegeben habe, ist mein Klassenkamerad.

   The man who I have given the book, is my classmate.

2. Die Schülerin, deren Mutter eine Ärztin ist, wurde krank.

   The student whose mother is a doctor, becomes ill.

3. Die Frau, die vor der Tür steht, ist eine gute Zahnärztin.

   The woman who is standing in front of the door, is a goo doctor.

4. Stefanie nahm den Brief, den Hans an Julia geschickt hat.

   Stefanie took the letter, that Hans has sent to Julia.

5. Die Schauspielerin, die du gesehen hast, ist sehr berühmt.

   The artist, who you has seen, is very popular.

6. Ich habe die Verkäuferin gesehen, mit der ich zur Schule gegangen bin.

   I have seen the shopassistent, with who I am going to school.

7. Der Meister, für den ich gestern gearbeitet habe, wohnt in Paris.

   The man, for who I have worked yesterday, lives in Paris.

8. Ich liebe die Frau, der Markus in der U-Bahn geholfen hat.

   I love the woman, whom Markus helped in metro.

9. Ich kenne einen Mann, der jeden Tag nach Potsdam fährt.

   I know the man, who drives every day to Potsdam.

10. Die Lehrerin hat einen Schüler angezeigt, dessen Fahrrad rot ist.

    The teacher has show a student, whos bike is red.

B. Please first combine the following two sentences (B with A) in German and then
   translate it into an English sentence that contains a relative clause.

11.   _The person, whom John is taller than is calling Michael._

    A. Die Person heißt Michael.

    B. John ist größer als er.

12.   _Hilton is cheaper than the hotel I know._

    A. Ich kenne das Hotel.

    B. Hilton ist billiger als dieses Hotel.

Thank you very much for your participation

Group 2B sample 2

Group 3
Sample 1

Questionnaire 1

(Sentence Combining Task)

Personal Information

Age: 17. Gender: ..f.. Grade: 11. The place of Birth Kurtalan Mother Tongue Turkish

Instructions

The information will be used for academic research only. You will have 30 minutes. Use your intuition to complete each item. Spelling and timing are not important facts in this study. We do not calculate this.

Combine the following sentences by attaching sentence (B) to sentence (A) using the appropriate pronoun who, whom, whose, which or that. (We will assume that all these sentences would be used in formal context).

Example

The person who plays the piano is a teacher.
  (A) The person is a teacher. (B) He plays the piano.

1. I like the composition which you wrote
  (A) I like the composition.
  (B) You wrote it.

2. I know the man whose bicycle is new.
  (A) I know the man.
  (B) His bicycle is new.

3. Jenny likes the teacher who explained the answers to the class.
  (A) Jenny likes the teacher.
  (B) He explained the answers to the class.

4. The man whose wallet was stolen called the police.
  (A) The man called the police.
  (B) His wallet was stolen.

5. The woman who spoke English was nice.
  (A) The woman spoke English
  (B) She was nice.

6. Cathy was shorter than him, who was Fritz.
  The man who was shorther
  (A) The man was Fritz.
  (B) Cathy was shorter than him.

7. The author, who my mother mentioned is well known.
  (A) The author is well known.
  (B) My mother mentioned him.

8. The woman, who Bill passed a note to her is a nurse.
  (A) The woman is a nurse.
  (B) Bill passed a note to her.

9. Mr. Smith looked at the girl to whom I gave a book.
  (A) Mr. Smith looked at the girl.
  (B) I gave a book to her.

10. Jenny is prettier than the girl who I met.
  (A) I met the girl.
  (B) Jenny is prettier than her.

11. I liked the woman whom I danced with her last night.
  (A) I liked the woman.
  (B) I danced with her last night.

12. The candidate who I vote for him didn't win the election.
  (A) The candidate didn't win the election.
  (B) I vote for him.

Group 3 sample 1

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Group 3
Sample 2

(Sentence Combining Task)

Personal Information

Questionnaire 1

Age: 17 Gender: Male Grade: 12 The place of Birth: Kurtalan Mother Tongue: Turkish

Instructions

The information will be used for academic research only. You will have 30 minutes. Use your intuition to complete each item. Spelling and timing are not important facts in this study. We do not calculate this.

Combine the following sentences by attaching sentence (B) to sentence (A) using the appropriate pronoun who, whom, whose, which or that. (We will assume that all these sentences would be used in formal context).

Example

The person who plays the piano is a teacher.
(A) The person is a teacher. (B) He plays the piano.

1. I like the composition that you wrote
   (A) I like the composition.
   (B) You wrote it.

2. I know the man whose bicycle is new.
   (A) I know the man.
   (B) His bicycle is new.

3. Jenny likes the teacher who explained the answers to the class.
   (A) Jenny likes the teacher.
   (B) He explained the answers to the class.

4. The man called the police whose wallet was stolen
   (A) The man called the police.
   (B) His wallet was stolen.

5. The woman who spoke English was very nice.
   (A) The woman spoke English
   (B) She was nice.

6. The man who was shorter than him was Fritz.
   (A) The man was Fritz.
   (B) Cathy was shorter than him.

7. The author who my mother mentioned him is well-known
   (A) The author is well known.
   (B) My mother mentioned him.

8. The woman who Bill passed a note to her
   (A) The woman is a nurse.
   (B) Bill passed a note to her.

9. I gave a book to who Mr. smith looked
   (A) Mr. Smith looked at the girl.
   (B) I gave a book to her.

10. I met the girl who prettier than Jenny
    (A) I met the girl.
    (B) Jenny is prettier than her.

11. I liked the woman who danced with me last night
    (A) I liked the woman.
    (B) I danced with her last night.

12. The candidate didn't win the election that I vote for him
    (A) The candidate didn't win the election.
    (B) I vote for him.

Group 3 sample 2

Appendix 5A

HIGHER CHEMISTRY Problem with the reduced RCs with (-ing)

In the list below the symbol (-) means that the sentence does not contain a (-ing) - RC; the symbol (+) means the sentence contains such a RC. All of such RCs are written in bold, regardless of the fact that there are a few RCs constructed through other reduced types such as "-ed", "V3" or "being+V3" (passive).

1. (-) A useful reaction to study is that between marble chips (calcium carbonate) and hydrochloric acid **using** the apparatus shown in Figure 1.1.

2. (-) From the loss in mass it is also possible to carry out a mole calculation **using** the balanced equation to find the concentration of the acid at the various ties.

3. (-) In the contact process, Vanadium (V) oxide, in the form of solid pellets, is a heterogeneous catalyst in a reaction **involving** gaseous reactants, i.e. sulphur dioxide and oxygen.

4. (-) It can be said that in general catalysts provide alternative reaction pathways **involving** less energy.

5. (-) It is usually to write the equation **showing** one mole of substance that is usually burning.

6. (-) The enthalpy of combustion of a simple alcanol can be determined by experiment **using** apparatus like that shown in Figur 2.11.

7. (+) The data given above were obtained by some pupils **using** apparatus similar to that shown in Figure 2.11

8. (-) In the calculation above 0.04 moles of NaOH **producing** 0.04 moles of water.

9. (-) Calculate the enthalpy of neutralization of nitric acid by potassium hydroxide given that a temperature rise of 6.5 C was observed on **mixing** 10 cm.....

10. (+) The smallest is spherical and is named buckminsterfullerene after an architect who designed large geodesic dome structures **consisting** of 5-and 6 -sided panels.

11. (+) The spherical molecule, C60 has 5-and 6-membered rings of carbon atoms **producing** the overall shape.

12. (-) Branched-chain alkanoic acids can also be obtained and these are named as before with the functional group **taking** precedence.

13. (-) This equation can be rewritten **using** shortened structural formulae.

14. (+) Similarly, perfumes are often mixtures **containing** various natural and synthetic components including esters.

15. (-) Calculate the percentage yield **using** the equation:..........

16. (+) Part of a work card **outlining** the laboratory preparation of an ester is shown below. (p110)

17. (-) Draw the structure of poly (acrylonitrile) **showing** three linked monomer molecules (p114).

18. (+) When mixed with fillers and reinforcing materials they can be used in many engineering applications **requiring** specific properties (p. 116).

19. (+) In fact the electrons **forming** the carbon-carbon double condos are delocalized along the chain.

20. (+) this example is a noun construction. Fat and oil molecules are roughly "tuning-fork" shaped, with the three limbs **consisting** of hydrocarbon chains (p 125).

21. (-) if the protein is hydrolyzed **using** 50% hydrochloric acid, refluxing the mixture for several hours, then the protein breaks down into its constituents called amino acid (p130)

22. (-) To identify the resultant spots, the same process is repeated under identical conditions **using** each amino acid in turn on separate sheets of paper (p132)

23. (+) Noun: Generally enzyme names end in "-ase". They are grouped as "lipases"-fat **digesting** enzyme, and "proteinases"-protein digesting enzymes.

24. (-) Use Table 3.3 on page 34 to draw the structures of hydrogen sulphide, phosphorus hydride, hydrogen bromide and iodine monochloride showing polarities, where appropriate.

25. (+) some molecules **containing** such polar bonds end up with an overall polarity because....

26. (+) The product obtained on **reforming** naphtha, as well as those from the catalytic **cracking** of heavier fractions, is blended with the petrol fraction to give a more efficient fuel.

27. (-) The use of pure ethanol as a fuel is being encouraged in certain countries, such as Brazil, where it is economic to produce it by fermentation **using** surplus sucrose from sugar cane.

28. (-) The reverse process, i.e. dehydration of an alcohol, can easily be demonstrated in the laboratory **using** the apparatus illustrated in Figure 8.3.

29. (+) Some of these feed stocks and their products are illustrated in Figure 8.12 as a summary of synthetic routes **emanating** from benzene.

30. (+) This is the type of reaction **occurring** when ethanol is produced from ethane.

31. (+) Alcohols can be subdivided into three different types **depending** on the position of the hydroxyl group.

32. (+) When mixed with primary or secondary alcohol and heated in a water bath, the orange color due to dichromate ions changes to a blue-green color **showing** that chromium ions have been formed. A different smell may be detected **showing** that the alkanal has changed.

Appendix 5B

BRITIAN AND SCOTLAND Problem with the (-ing) and the long sentences contained many RCs

In the following list if there is a symbol (-) it means that the sentence does not contain (-ing)-RC, if there is a symbol (+) it means the sentence contains a (-ing)-RC, regardless of the reduced RCs (with (-ed), V3 or being+V3 (passive) although they are built with. Hitherto they have also been listed on the grounds that they, perhaps, represent the perceptual difficulties. Such sentences containing many RCs (one, two

or more than two) are too long. The number of RC in each example is given at the end of the sentences.

1- (-) With the spread of basic education and the development of new printing technology, cheap popular newspapers aimed at the working classes spread nation and local news, **2**; (p.5)

2- (-) One illustration of the argument that change was "approved" by established politicians came in the "Arlington Street compact" by which Gladstone, the Liberal leader and Prime Minister met with Salisbury, the Conservative leader, to "do a deal" over the Third Reform Act, **3**; (p.12)

3- (+) He believed a revolutionary spirit existed in 1860s Britain created by a great depression, which spread unemployment and a cholera epidemic which spread fear, **4**; (p.6)

4- (+) By giving the vote to men own property above a certain value and lodgers **paying** rent above £ 10 a year, the vote was extended to skilled working men who could afford to live in such property, **2**; (.p.8)

5- (-) While the growth of democracy in Britain is usually charted by an examination of laws passed to extend or assist the franchise, also bear in mind the developments which provided foundations on which to build a democratic society, **3**; (p.14)

6- (-) For example, the development of elementary (or primary) education for all in the 1870s provided a literate society who could read the increasing number of newspapers, themselves a result not only of the increasingly literate and interested market but also of technology which allowed the efficient production and distribution of information, **3**; (p.14)

7- (+) Finally, another important reason why the franchise was extended was the change in political ideology which moved from believing the right to vote should only belong to people who owned the land of Britain to believing that the vote should be the right of all adult British citizens, **3**; (p.19)

8- (-) Although membership remained relatively low at about 6000 until around 1909, a persuasive campaign of meetings, pamphlets, petitions and parliamentary bills regularly introduced by friendly backbench MPs had created a situation where many, if not most, MPs had accepted the principle of women's suffrage, **2**; (p.25)

9- (-) Further suffragette violence followed in 1913 when suffragettes tried to burn down the houses of two members of the government who opposed votes for women, while cricket pavilions, racecourse stands and golf clubhouses were set on fire, **1**; (p.27)

10- (-) Given the diminished scale of the WSPU by 1914, Martin Pugh seems correct in his assertion that the enduring perception that votes for women were achieved by the Suffragettes is more the result of the Pankhurst' talent for self publicity, even when the organization they led was losing support an alarming rate, rather than an effective campaign, **2**; (p.30)

11- (-) After the war, for example, women were ejected from the "men's work" jobs they had done during the war years and in both government policy and commercial advertising the idea that a woman's place was in the home was as strong as it had ever been, **1**; (p.31)

12- (-) We are driven into a shed, iron-barred from end to end, outside of which a foreman or contractor walks up and down picking and choosing from a crowd of men, who, in their eagerness to obtain employment, trample each other under foot, and where like beasts they fight for the chances of a day's work, **3**; (p.38)

13- (-) Marx and other socialists wanted the working classes to unite to carry out a revolution after which the profits which had previously gone into the pockets of capitalists would be shared among the workers, **2**; (p.38)

14- (-) The socialist organizations of importance in the 1890s were the Social Democratic Federation, who wanted genuine socialist revolution, the Fabian Society which was a small group of intellectuals and, more widely dispersed

over the whole country and more sympathetic to trade unionism, the independent Labour Party, **2**; (p.39)

15- (-) But for a time the Labour movement was seriously disadvantaged and the Osborne Judgment was not altered until 1913 although before that the Parliament Act had introduced payment for MPs, thereby easing the problems of the Labour Party MPs in Parliament who, unlike Conservative and Liberal MPs, had not private income, **2**; (p.45)

16- (-) While charitable organizations might temporarily help individuals, there was a recognition that such charities did little to reach long-tem solutions and rather harshly, one writer described charity as doing nothing more, "than maturing the ground in which these social weeds grow", **2**; (p.56)

17- (-) These investigations proved that poverty had causes, often beyond the control of the poor themselves, which restricted the ability of men, and especially of women, children and the elderly, to control their lives, **1**; (p.57)

18- (-) There were, of course, a large number of Liberals who were wary about reform, and some who were willing to swallow their doubts because of the party's evident need to capture more working class votes –the party had, after all, been out of power since 1886, **3**; (p.60)

19- (+) Building on concerns about the health of the nation exposed by the unfitness of army recruits, the 1906 Report of the Inter-Departmental Committee on Medical Inspection and Feeding of Children **attending** Public Elementary Schools stated that in cases where, 'the school medical officer inspected each child referred to him by teachers as suffering from defects likely to affect their education, e.g. defects of sight, uncleanliness, infectious disease, physical unfitness to attend, there have been special beneficial results regarding eyesight and infectious disease', **5**; .(p.62)

20- (+) A description of an old lady collecting her pension at the post office and saying, 'Thank goodness for that Lord George' (she naively thought only someone as great as a Lord could be so generous), taken from Lark Rise to

Candleford, is often used to support the claim that old-age pensions were a huge benefit to the poor, **4**; .(p.64)

21- (-) They asked why a party of the working-class, based on socialist principles, should impose benefit cuts which would cause serious poverty just to keep a capitalist system alive, **1**; (p.75)

22- (-) Throughout the 1920s there was a steady growth of structural unemployment, even before the impact of the World Economic Crisis after 1929, which added cyclical unemployment to the structural problems already faced by shipbuilding, iron and steel making, coal mining and textiles, **2**; (p.78)

23- (+) The system of unemployment insurance had changed slightly since the Liberal reforms of 1911 but it was still dependent on money **coming** in from insured workers **building** up a fund of money which would pay for those out of work, **3**; (p.82)

24- (-) It may be observed that the new orders required for defense purposes will undoubtedly bring a considerable volume of work and employment into some parts of the country which hitherto have been most hard hit by the heavy depression and most backward in feeling the general improvement which has been manifest (obvious) elsewhere, **3**; (p.85)

25- (-) The labour government, led by Clement Attlee, is often credited with establishing a welfare state 'from cradle to grave' in Britain where all citizens were provided with a 'safety net' of support through which none should fall into poverty, **3**; (p.88)

26- (-) The Beveridge Report provided a beacon of hope to war-weary people who wanted to believe that post-war Britain would be a land worth fighting for, and Labour's reforms went a long way to create a post-war Britain based on ideas of fairness and help for all who needed it, **3**; (p.99)

27- (-) Little attention was paid to the argument that it was tax income from the relatively prosperous south of England that helped pay for unemployment benefit and other government help programmes operated in Scotland, **3**; (p.103)

28-(+) Those who support the argument that the Kirk was losing its influence by the end of 19th century point to reports such as the Church of Scotland's life and Work Committee which reported in 1974 that less than 200.000 of its almost 700.000 members had been present at communion in that year and by the end of 19th century the Church of Scotland was openly referring to 'the lapsed masses'-those who, for whatever reason, had drifted away from the teachings, and the authority, of the Church of Scotland. This view of declining church influence **continuing** into the 20th century was summed up by AC Cheyne in The Transforming of Kirk(1983), **5**; (p.115)

29-(+) In the later 19th century there were criticisms of the Catholic Church **creating** a protective wall around its people, with its clergy warning of the dangers of mixing with Protestants and thereby losing their own district identity, **2**; (p.116)

30-(+) By 1914 the old tensions seemed to be fading and in the First World War Catholics and Protestants fought side-by –side, with six Catholic soldiers **winning** Victoria Crosses for bravery, **1**; p.117. .

31-(+) By 1930 sectarianism revived as hard times and unemployment provided an opportunity for some politicians to feed on old, buried prejudices. Edinburg, for example, witnessed anti-Catholic rioting provoked by John Cormack's Protestant Action, an organization which blamed Scotland's economic problems on foreigners and immigrants -especially Irish Catholics **living** in Scotland, **4**; (p118)

32-(-) Indeed, Paterson claims the schools system for the bulk of the population in Scotland was 'mass schooling so as to recruit talent to the leader class whilst, at the same time, placing (keeping quiet) and controlling the many, **0**, (p.123)

33-(+) In response to concerns that the masses would not flock to places **offering** 'high-brow' culture, the People's Palace on Glasgow Green offered a combination of culture and entertainment to those who might not have thought of the two things **going** together, **4**; (p.125)