

**A STUDY ON SIGN LANGUAGES
AND
TURKISH SIGN LANGUAGE**

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A Master's Thesis
Submitted to the
Department of English Linguistics
in Accordance with the Regulations of the Institute of Social Sciences

T 100382

Ankara
June, 2001

Sosyal Bilimler Enstitüsü Müdürlüğü'ne,

Bu çalışma, jürimiz tarafından İngiliz Dilbilimi Anabilim Dalında YÜKSEK LİSANS TEZİ olarak kabul edilmiştir.

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Yukarıdaki imzaların, adı geçen öğretim üyelerine ait olduğunu onaylarım.

26 / 9 / 2001

Prof. Dr. Nuran ÖZYER
Enstitü Müdürü

ACKNOWLEDGEMENTS

I wish to express my deep gratitude to all the members of the Department of Linguistics who have been very encouraging all through my studies.

My particular thanks go to Dr. Nalan Büyükkantarcioglu who accepted being my supervisor and generously devoted her time and considerable effort in every stage of this study. Her precious suggestions and meticulous criticisms have contributed a lot to my study. I could not have managed to prepare this thesis without her invaluable support.

I owe special thanks to Özlem Kurt for her generous efforts and affectionate support; to Semiha Kurt, Leman Özkara and Metin Önel, who accepted being my informants, for their kindness and sincerity; and to Okan Kurt and Volkan Kurt for their helpful interpretations and eager participation.

I also offer great thanks to Tolga Savaş for his friendliness and altruistic efforts and to Baran Budak, for all the technical and moral support he provided me.

Finally, I owe my grateful thanks to my parents Semra-Fatih Ačan and my sister Aslı Ačan for their invaluable existence and for everything worthy in my life.

ÖZET

İşaret dilleri, özellikle toplumun işiten kesimi için, genellikle bir merak konusu olmuştur. Buna rağmen, tüm dünyada, dilbilim açısından oldukça yeni bir çalışma alanı olduğu söylenebilir. İşaret dili çalışmalarının en fazla ve ayrıntılı yürütüldüğü Amerika Birleşik Devletleri'nde ve İngiltere'de dahi konuyla ilgili çalışmalar ancak 70'lerden sonra gelişmiş ve hız kazanmıştır. Türkiye'deki durum dikkate alındığında ise görülmektedir ki, T.C. Milli Eğitim Bakanlığı tarafından sözcük bazında hazırlanmış bir işaret dili kılavuzu dışında konuyla ilgili yayımlanmış herhangi bir dilbilimsel çalışma bulunmamaktadır.

Bu tez çalışması, dilbilimsel anlamda Türk İşaret Dili konusuna bir giriş olarak değerlendirilebilir. Çalışma dahilinde, Türk İşaret Diline ilişkin gerek işaret düzeyinde, gerekse daha ileri düzeylerde bazı dilbilimsel özelliklerin ortaya konması, bununla birlikte, Türk İşaret Dilinin “gerçek anlamda” bir dil olduğu anlayışının sağlanabilmesi amaçlanmıştır.

Bu amaçlar doğrultusunda gerekli verilerin elde edilebilmesi için dilbilimsel bir alan çalışması yürütülmüştür. Bunun için çok sayıda Türkçe tümce hazırlanmış ve Türk İşaret Diline çevrilmek üzere deneklere sunulmuştur. Denekler tümceleri Türk İşaret Dilinde gerçekleştirirken video kamera ile çekim yapılmış, kayıtlar ise, daha sonra, çevirmenlerin de katılımıyla değerlendirilmiştir.

Bu tez çalışması dört ana bölümden oluşmaktadır. Birinci bölüm çalışmanın “amaç”, “yöntem”, “araştırma konuları” ve “sınırlamalar” alt başlıkları çerçevesinde tanıtılmasını içermektedir. İkinci bölümde ise, çalışmanın kuramsal alt yapısını oluşturan “dil”, “iletişim”, “işaret dilleri” gibi konular ele alınmıştır. Bir pilot çalışma ile birlikte, ana alan çalışmasını içeren üçüncü bölümde bulgular sunulmuştur. Son olarak, dördüncü kısımda, çalışmanın genel değerlendirmesi yapılmıştır.

Bulgular göstermektedir ki, Türk İşaret Dili, doğal dillerle karşılaştırıldığında farklılıklar ve bazı dilbilgisel sınırlılıklar gösterse de, iletişimsel işlevini gerçekleştirmede yeterli görülmektedir.



ABSTRACT

Sign languages have often been a topic of interest, especially, for the hearing community. However, it appears to be a very new area of investigation for linguists in all over the world. Even in the United States and in Britain, where sign languages have been more extensively studied by linguists than in other countries, only after 70s has it begun to be progressed. When the situation in Turkey is considered, it has been noticed that no work has been done, or at least published, in terms of linguistics except for a practical sign language vocabulary guide prepared by the Ministry of Education, which can hardly be regarded as a “dictionary”.

This Master’s Thesis is intended to be an introduction to Turkish Sign Language (TSL) from a linguistic point of view. In particular, it aims at describing some linguistic properties of TSL both at the level of individual signs and beyond, as well as providing an insight so as to appreciate TSL as a “real language”.

On these grounds, a field work type of investigation has been conducted in order to obtain relevant data. A corpus of Turkish sentences was prepared and given to the informants to be translated in to TSL. Moreover, the informants were recorded by a video camera at the time they performed the Turkish sentences in TSL. Later, the recordings were evaluated with the participation of the interpreters.

The thesis comprises of four chapters. Chapter I offers a presentation for the thesis through the sub-headings such as “purpose”, “method”, “research questions” and “boundaries”. Chapter II supplies the theoretical information, which the study is based on and which involves sub-headings such as “language”, “communication” and “sign languages”. Chapter III, which includes a pilot study as well as the main field-work study, presents the findings obtained. Finally, chapter IV gives a conclusion in which an evaluation for the study is presented.

The findings indicate that although TSL differs from spoken languages in many ways and that it is limited in certain grammatical functions, it still appears to be adequate to fulfil its communicative role in most parts of life.



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CHAPTER I: INTRODUCTION

1.1. The Need for the Study

The simplest definition of language is that it is a means of communication. This definition applies not only to natural languages, but also to other systems of communication, including sign languages used by human beings. However, it would be misleading to claim that sign languages, just as other systems of communication developed by human beings, can fulfil all the functions of natural languages. On the other hand, though limited in certain functions, sign languages still perform their communicative role in most parts of life, especially in the daily communication of the speech and hearing impaired people.

The number of the deaf and mute people all over the world was estimated to be around 70 million in the year 1998 (see www.dww.deafworldweb.org/int/int). The development of various sign languages round the world indicates that a crucial need was felt for communication by such people. What particularly draws attention is that while some sign languages present comparatively more developed systems, some others still need development. This may also be related to the degree of importance attached to the impaired population in different societies. In Europe and USA, for example, sign languages are highly developed, representing almost all the features and functions of spoken English, including poetic (or aesthetic) function. Moreover, due to the growing interest in, and awareness of the deaf community, an increasing number of studies are being carried out in many areas such as education, linguistics, sociology, etc.

When the situation in Turkey is considered, it may not be proper to claim that the deaf community has received enough attention and their sign language has been regarded as an aspect of communication studies. Studies that have been carried out on the deaf people in Turkey concern mostly educational or medical issues.

A thorough linguistic description of the sign language used by the deaf people in Turkey appears to have been peripheral to the concerns of the natural language. This reveals that despite a good number of deaf and mute people in Turkey, the language they use has remained undescribed. While sign language studies in most other countries have revealed both micro and macro linguistic features of their systems, Turkish Sign Language lacks a linguistic description even of its basic features.

For this reason, this study is intended to be an introduction to Turkish Sign Language (TSL) from a linguistic point of view. It is expected to provide a preliminary attempt to enhance the awareness and attention concerning the studies on TSL. It must be stated that the findings represented here are still tentative and open to revision. It is hoped that the thesis will provide a basis for further research and arouse an interest in the field.

I.2. Presentation of the Thesis

1.2.1. Purpose

Having noted that there is a big gap in the field of linguistic research on “sign language” in Turkey, this study basically focuses on the investigation of Turkish Sign Language (TSL). In particular, it aims at describing some syntactic and semantic features of TSL.

This study is mainly a descriptive and partly a comparative one. It is comparative in that the sign language used in Turkey is analyzed with reference to the two most developed sign languages in the world; ASL and BSL, and also to spoken Turkish. As can be deduced, this study does not claim to be providing all the linguistic properties of TSL as such an attempt would definitely exceed the scope and the volume.

1.2.2. Basic Assumptions and Research Questions

Starting out from the assumptions that sign languages are rule governed, conventionalised systems that exhibit structural and functional similarities with spoken languages, and that basic principles of ASL and BSL are applicable to TSL, the following research questions are handled within the frame of the investigation:

1. What is the nature of individual signs in TSL? How are they structured?
2. Is there a one-to-one relationship between the concept and the sign in TSL?
3. Are TSL signs conventional?
4. Are there any inflections or any other linguistic markers in TSL for case, number, person, tense, mood, aspect, etc.?
5. How are personal pronouns expressed in TSL?
6. How is 'time' expressed in TSL? Is it possible to talk about tense and modality in TSL?
7. What are the major parts of speech in TSL?
8. Is it possible to talk about a syntactic order in TSL sentences?
9. How is 'meaning' expressed? Are there alternative ways or is semantic well-formedness closely related to syntactic well-formedness?
10. What is the basic sentence structure in TSL?
11. Does TSL allow only simple sentence structures or is it also possible to form complex sentences?
12. How do different sentence types (declarative, interrogative, negative, and imperative) apply in TSL?
13. Is TSL a language at all?

1.2.3. Boundaries of the Research

Due to the following facts, there are some restrictions on the content and the results of the thesis:

1. The research has been carried out in Ankara, and is restricted to the data collected from a limited number of subjects all of whom are hearing and speech impaired, and native speakers of TSL.

2. As the writer of this thesis is not a competent sign language user, all the communication with the hearing and speech impaired subjects has been carried out via interpreters who are competent both in TSL and natural spoken Turkish.

3. Though a corpus of TSL sentences have been recorded by a video camera, undoubtedly, any type of video recording representing all the actual manual communications in various situations of discourse would further contribute to the explanatory feature of the thesis.

4. Non-manual activities, which might also have a role in affecting meaning, have not been fully considered. Adequate data on non-manual activity would certainly contribute to the content of the study.

5. Due to lack of previous linguistic research and published material on the subject, the study is restricted to micro level of analysis; particularly to phonological, syntactic and semantic features of TSL.

6. The data have been collected and evaluated disregarding the sociolinguistic variables such as gender, age, educational, economic, ethnic backgrounds or social networks. Nor have idiolectic or supposedly existing dialectal differences (lexical consistency) been taken into consideration. Presently, as little linguistic information about TSL is available, it is considered that macro studies need some detailed scientific background.

7. That there is not a written notation system in TSL has made the study, in some measure, impractical to present and made the corpus restricted.

8. The corpus to be translated into TSL by the informants has been prepared in written Turkish. However, the reading comprehension skills of the informants have not been taken into consideration.

1.2.4. The Method: Means of Data Collection and Evaluation

This study is a fieldwork type of investigation in that the investigator conducted the study getting in face-to-face interactions with the informants in their daily environments so that she could obtain natural data.

Data collection involved the following steps:

1. Three subjects, who are native speakers of TSL, and two interpreters who are sufficient both in Turkish and TSL were selected.

2. The investigator prepared a written set of both simple and complex Turkish sentences for which TSL equivalences were expected from the informants. Both syntactically and semantically, a careful selection of such sentences was deemed to be of great importance, because only through their TSL equivalences could the research questions be answered.

3. Before such a corpus was prepared and used with the informants, interviews with some native speakers of TSL were arranged to get some general information about TSL. On the basis of this information, a pilot study was carried out. Finally, the exact corpus, which involved declarative, interrogative, negative and imperative sentences with varying tenses, modality, time expressions and personal pronouns, was prepared.

4. The TSL correspondences of the Turkish sentences in the corpus have been recorded by a video camera at the time the informants used TSL. Video camera recordings are thought to be necessary since TSL lacks a written notation system through which it can be represented.

5. The interpreters, one of whom is a student of linguistics, were given information about the purpose of the study. They were asked to observe the interview carefully and participate where necessary.

6. The investigator took notes as the informant “spoke”. The interpreters’ judgements and comments have been of great help.

7. The interviews with the informants were made at intervals on different days and each informant was given the same corpus, to be translated into TSL, to check if the ways of making TSL sentences showed individual differences on the syntactic level.

8. As the informants used TSL, the investigator carefully checked the accompanying facial and bodily gestures used. As lip reading is also of crucial importance in TSL communication, the investigator tried to reveal the functions of such non-linguistic counterparts of TSL.

The evaluation of the data followed the steps given below:

1. The mass of data needed to be organized so that it could be meaningful and operational for obtaining results. For this reason, first, simple sentence construction equivalents in TSL were sorted out and they were analyzed to obtain rules. Systematic regularities and differences in various simple sentence constructions have been specified.

2. The same procedure has been applied to the ways complex sentence structures are explained in TSL as well.

3. Depending on the notes taken during the interviews and the data, the nature of the signs in TSL has been specified. Moreover, necessary explanations for all other research questions have been supplied.

4. At the final stage, the validity of the rules devised in TSL has been tested by other sentences. The interpreters and their judgements have been important for the evaluation of the data as well.



CHAPTER II: LITERATURE SURVEY

2.1. Clearing the Grounds

2.1.1 Language and Communication

Linguistics is a science the subject matter of which is “language” and consequently, “communication”. The task of linguistics is to deal with language with all its aspects; therefore, several branches of the subject appear: phonology, morphology, syntax, semantics, pragmatics, sociolinguistics, etc. Besides, like many other social sciences, modern linguistics is interdisciplinary, that is, it cooperates with different disciplines that pertain to language such as anthropology, sociology, psychology, ethnology, semiotics, etc. Linguistics is a field which is concerned with discovering and describing the rules that govern the communication system we call language. (see Valli and Lucas, 1992:2) Furthermore, it formulates theories that specify how language proceeds as a communication system.

The terms “language” and “communication” need to be defined more clearly since they are the major theoretical domains that this whole study represented here is grounded on.

Due to its high range of applications, language involves several different senses, some of which are metaphorical, each emphasizing different aspects and characteristics of it. Additionally, since language has many perspectives, and is related to almost every kind of human behaviour, the term has been applied to many non-linguistic areas too, such as “the language of music”, “the language of colors”, “the language of hand-made Anatolian carpets, etc., and it is quite not possible to give only one definition involving all the properties and functions it performs at the same time.

David Crystal represents this diversity of the definitions of language as in the following:

“... some focus on the general concept of *language*; some on the more specific notion *a language*. Some draw attention to the features of phonology, grammar and semantics. Some emphasize the range of functions that language performs.” (Crystal, 1987:396)

While some definitions of language draw attention to its social aspect, some others prefer underlying its psychological connotations.

O’Grady and Dobrovolsky (1997: 1) reflect this wider perspective of language saying that;

“Language is many things –a system of communication, a medium for thought, a vehicle for literary expression, a social institution, a matter for political controversy, a catalyst for nation building...”

Here, a list of definitions, (cited in Crystal, 1987: 396) suggested by some linguists, may be presented to exemplify the diversity of views about language:

“Language is a purely human and non-instinctive method of communicating ideas, emotions and desires, by means of voluntarily produced symbols.” (Sapir, 1921)

“A language is a system of arbitrary vocal symbols by means of which the members of a society interact in terms of their total culture.” (Tragger, 194)

“Language is the institution whereby humans communicate and interact with each other by means of habitually used oral-auditory arbitrary symbols.” (Hall, 1964)

“Language is a systematic means of communicating ideas or feelings by the use of conventionalized signs, sounds, gestures, or marks having understood meanings.”

(Webster’s Third New International Dictionary, 1961)

All these definitions attempt to describe “language” stressing on some aspect of it. One takes it as a social institution, the other as a means of communication and another as a habit formation.

In fact, what is common in all of them is that they all consider language as a “system” which consists of conventionalized rules and as a set of “symbols”.

Chafe (1983:102) seems to combine these two aspects of language in his definition: “Language is a system which connects the world of meaning and the world of sound.” Here, language appears to be a symbolic system, representing ideas, thoughts, meanings, etc. through symbols.

There are systematic rules that govern language. This is how all the native speakers of a speech community, who share the knowledge of these rules and follow them while using language, are able to produce and interpret novel utterances and communicate with each other. Moreover, these conventionalized rules make it possible, also, to learn foreign languages. If there were no system of rules, in any language, it would not be possible to understand people and to be understood by them.

As human beings, we do not spend our lives in isolation, but rather in interaction within a community. We, humans, are social beings; therefore, communication is a crucial term in our lives, and the most developed way of communication is language.

Crystal states the relation between language and communication in these lines:

“Communication refers to the transmission of information (a “message”) between a source and receiver using a signalling system: In linguistic contexts, source and receiver are interpreted in human terms, the system involved is a language.” (Crystal, 1992:64)

Certain properties differentiate human language from other communication systems. These properties can be summarized as follows: (Yule 1985: 16,17)

1. Displacement

By using language, human beings are able to refer to different spaces and periods of time (past, present, future) and talk about events and things far from the immediate setting. This property of human language is known as “displacement”.

For example, we can produce such a sentence quite easily:

“*Dün gece onu parkta yürürken gördüm.*”

(Last night I saw him walking in the park.)

2. Arbitrariness

In language, there are linguistic forms which represent certain meanings. However, there is no natural connection between them. As Lucas and Valli (1992:6) claim, “*arbitrary* means that the actual form of the symbol does not reflect the form of the thing or activity it symbolizes.”

For example, when we look at the word “*el*” (hand), we can not guess from its shape that it is a part of the human body and has five fingers. This property of human language is called “arbitrariness”.

3. Creativity

We know that language, as a rule-governed system, consists of rules and elements which are limited in number. In fact, by using these elements and applying certain rules, human beings are able to produce indefinite number of sentences, even the ones that have never been heard before. No matter how illogical a sentence may sound, producing a sentence such as Chomsky's famous one: "*colorless green ideas sleep furiously*" (1975: 15) is still possible as long as linguistic rules are observed. The name of this property of language is "*creativity*".

4. Cultural transmission

Although humans are born with an innate capacity to acquire language, they are not born with the ability to perform a specific language. A language is not inherited through genes, but rather, is acquired, and is passed on from one generation to other, within a culture, a speech community. This property of language is described as "*cultural transmission*".

5. Discreteness

Language consists of sound elements that are distinct from one another. Consider "*p, b*" sounds in Turkish words "*bot*" (boot) and "*pot*" (pucker). The existence of one instead of the other is meaningful and causes a distinction of meaning. This is known as the "*discreteness*" property of language.

6. Duality

Duality refers to the organization of language at two levels. This property of language is also called "*double articulation*". At one level, we have individual sounds such as "*/k/, /p/, /a/*" ; when we use these sounds

in a combination as “*kap*” (pot), we have another level, (a level of meaning) in which the meaning of the word is different from another combination such as “*pak*” (clean). So, at one level we have distinct sounds, at the other, we have distinct meanings. This is the “*duality*” property of language.

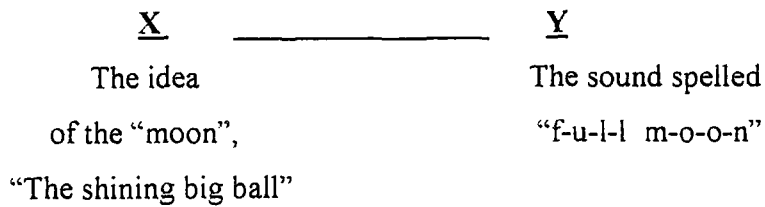
These six properties mentioned above are the basic properties of human language. Of course, human language has other properties, too. For example, “the use of vocal-auditory channel” is a property of human speech, but is not the only means for linguistic communication; writing and signing are the other modes of linguistic communication. Furthermore, this property is not only found in human communication; other animals such as dolphins and chimpanzees also use the vocal-auditory channel.

Similar points can be thought for the properties such as “*reciprocity*” (any speaker /sender of a communication signal can also be a listener/ receiver) and “*rapid fade*” (signals are produced and disappear quickly) too. Such properties describe human language, but not necessarily distinguish it from other communication systems. For further and extensive information see Hockett, C. F. in (Crystal 1987: 396-397).

2.1.2. Nature of Communication

Within a communication event, there are ideas (meanings) that are transformed, by the addresser, into sounds or into other forms of language, which are later transformed back into ideas by the addressee and language makes such transformations possible.

For example, there is a connection between the idea of “*the big ball shining in the sky tonight*” and the sound “*m-o-o-n*” (or “*f-u-l-l m-o-o-n*”).



This connection represented by the figure, is a sort of symbolization which also shows that the linguistic unit is a double entity, as Saussure emphasizes using the terms “signifier” and “signified”.

“ The linguistic sign unites not a thing and a name, but a concept and a sound image...” (Saussure, 1959: 65, 66)

He uses the term “signified” for the “concept” and “signifier” for the “sound image”, the connection between the two being arbitrary. Accordingly, human language is a system of arbitrary symbols, rather than a system of non-arbitrary signs of meaning.

With a simple definition, communication refers to the interchange of information, that is, transmission of non-physical thoughts, ideas, emotions, feelings, moods, etc. (as they appear in the mind of the addresser) to the addressee. Since these “messages” are non-physical, they can not be transmitted to the receiver directly, but by means of a signalling system, “a series of sound patterns or hand gestures” as Isenhath (1990: 23) suggests.

Communication is a kind of activity that all living beings do perform. Being similar to the role of “language” in distinguishing human and non-human species, the ability of communicating distinguishes living from what is non-living in nature. In other words, although language is unique to human species and only human beings have the capacity for speech, all creatures are able to communicate.

Here, it is once again clarified that “language” and “communication” do not mean the same thing. In order to be qualified as “language” a system of communication is required to fulfill some basic properties. (see, p. 11,12,13) Consequently, as Deuchar points out, “a definition of language such as *a system of communication* is not sufficient, because we presumably want to distinguish language from traffic signals or bee dancing.” (Deuchar, 1984:18)

So, as it comes out here, there is a distinction between linguistic and non-linguistic communication.

For example, animals communicate by means of scent, colour, posture, gesture, and even by means of light and electricity as well as sounds. (see O’Grady and Dobrovolsky, 1997:588)

Human beings, also make use of gestures, posture, facial expressions and some other audio-visual non-linguistic means of communicating ideas, emotions, moods, etc. Waving hands, lifting eyebrows, nodding the head; communicating by means of tom-tom drums among Africans, or by means of smoke, among Indians are only some of the other examples. (see Başkan, 1988:18)

It is still possible to express our feelings and ideas through other means such as painting or music. However, these are types of non-linguistic communication since they do not rely on natural language. In linguistic communication, on the other hand, as Finegan and Besnier (1989: 23) state, “language is the primary vehicle through which meaning is conveyed” and three basic modes of linguistic communication can be determined:

1. Oral Communication (provided by the use of speech and hearing organs.)
2. Writing (a visual representation.)
3. Signing (another visual representation used to communicate with and by hearing and speech impaired people.)

Başkan (1988:17) defines communication as “transmission of a message by an addresser, to an addressee, by means of meaningful units which are called “signs”, in order to create an effect (on the addressee).”

Therefore, communication consists of some basic components: First, there must be a *sender* (source, encoder, addresser, speaker) and a *receiver* (addressee, decoder, listener/reader); then a *message* (information, idea, emotion...) and a *channel* (speaking, writing, signing, gesturing, drumming, etc.) is necessary.

Furthermore, the message must be sent to the receiver by means of some *meaningful units* we call “signs”. These signs are supposed to be known by everyone employed in a communication event and this is another requirement for communication, at least for a successful one. What is sent by the addresser must be interpreted by the addressee in the same way. In terms of speech, even if the speaker does not reflect his/her thoughts, ideas, feelings, demands, etc. directly, the listener is able to decode the speaker’s intention truly, by means of meaningful linguistic units plus linguistic convention.

While we are talking to our friends using our native language, we unconsciously assume that we all have the tacit linguistic knowledge of that language, we know the rules of forming and interpreting sentences, and we have the necessary linguistic convention, so that, what we say makes sense to them. In such a condition, the signs are said to be meaningful.

However, for successful communication, more than a common language is necessary. In order to grasp the intention of the addresser depending on his utterances, that is, the meaningful units he performs “a shared system of beliefs and inferences must be operating”. Akmajian et.al.(1995: 351) mention that:

“Linguistic communication is successful if the hearer receives the speaker’s message. It works because messages have been conventionalized as the meaning of expressions; and by sharing knowledge of the meaning of an expression, the hearer can recognize a speaker’s message – the speaker’s communicative intention.”

Moreover, they emphasize “context”, which is another crucial dimension of communication: “Our contributions to conversations both reflect and affect the linguistic and non-linguistic context of utterance.” (1995:370)

So, there are two different types of “context” we can talk about: One type is the *linguistic context* and the other is the *physical context*.

As Yule (1985: 98, 99) states, “the linguistic context of a word is the set of other words used in the same phrase or sentence.” On the other hand, physical context refers to the physical settings in which meaningful units, such as words, are used. For example, if we see an announcement such as “BAYANDA İNDİRİM!” on a shopwindow, we automatically interpret it as “*women clothings for sale!*” but not as “*women at a discount!*”.

Finally, one other thing to mention is the cultural aspect of communication. Gumperz and Hymes (1986: 466), giving place to Bernstein’s views, put forward the fact that “language is very important because it serves to transmit culture.” Thus, every language transmits its own culture. So, we can not expect communication to get unaffected by this fact. In that respect, both cross-cultural and inter-cultural communication can be considered.

While communicating, we use gestures, intonation, verbal metaphors to express respect, familiarity, etc. toward addressees or to indicate attitude toward a message. These signs can be fully understood only by those who share the speaker’s

cultural background. As Gumperz and Hymes (1986: 467,473) state, “different forms of social relation can generate very different speech systems or communication codes.”

Communication is a process in which we use something to stand for something else; (for example, we use words to indicate objects) and in general we tend to use the term “sign” to name each of the things that stand for others.

“Sign” and “symbol” are such terms whose meanings remain implicit due to their usage within a high range of contexts. Moreover, we use these terms in our daily lives in many situations, and usually with overlapping meanings. In fact, both associate a pair of items with a sort of connection in between, but depending on the manner of the connection, they are distinguished.

Finegan and Besnier (1989: 3) define “signs” as “*non-arbitrary* indicators of the things they signal, the things they are signs of” and “symbols” as “*arbitrary* indicators of something”. For example, smoke is a sign of fire, where as traffic lights are symbols.

As for language, it is composed of arbitrary indicators rather than non-arbitrary ones.

“An important fact about linguistic sign is that, in the typical instance in a language, the connection between form and meaning is arbitrary.” (Valli and Lucas, 1992: 43).

Dobrovolsky (1997: 591) states that there are three basic types of signs. This categorization depends on:

1. whether the signifier naturally resembles its referent,
2. whether the signifier is directly linked with the referent in a physical or mechanical sense and;
3. whether signifier and referent are arbitrarily associated.

Iconic Signs

Iconic signs are those that resemble their referents. Some semioticians call such signs as “iconic symbols” since they are not totally non-arbitrary; that is, there is no inherent connection between the sign and the referent. As Finegan and Besnier (1989:3) exemplify, the below symbols are basically arbitrary, but partly related symbols, and they are called “*iconic*” or “*representational*”.



Fig.1 (representing “the sun”)

Fig.2 (representing “danger”)

Fig.3 (representing “number 3”)

Moreover, onomatopoeic words can also be considered within this group of signs.

e.g : splash, crash, click, etc.

Indexical Signs

These are non-arbitrary type of signs; they directly point out their referent. In other words, their occurrence are due to their referents.

(see Dobrovolsky, 1997:592)

For example,	animal tracks -----	animal
	(sign)	(referent)
	smoke -----	fire
	(sign)	(referent)

Dobrovolsky (1997: 592) mentions another special type of signs within the Indexical group and names it “*symptomatic signs*” or “*symptom*”. These signs are said to convey the internal state of the sender.

e.g;	the rise of the body temperature -----	illness
	someone’s stepping on our foot -----	to cry out
	yawning -----	sleepiness

Symbolic Signs

This is another group of signs which are arbitrary in terms of their connection to their referents. Symbolic signs, as Dobrovolsky (1997: 592) names them, are considered as “symbols” by some other semioticians due to their arbitrary nature. For example, traffic lights and human language are considered as symbolic signs.

Furthermore, according to their structure signs can be grouped into two other categories; “*graded*” or “*discrete*”.

“Graded signs convey their meaning by changes in degree, (e.g voice volume; the more you want to be heard, the louder you speak) and discrete signs are distinguished from each other by categorial differences, there is no gradual transition from one sign to the next. (e.g traffic lights; there is no gradual shifting from red to yellow to green, also human language; there is no intermediate stage between words “stop” and “go”.)”

(Dobrovolsky, 1997:593,594)

After all these categorizations, it is worth mentioning that there are also “mixed signs” which bear properties of more than one type of signs. For example, a sign may be symptomatic, having also iconic properties. However, in terms of structure, a sign can either be graded or discrete, but can not bear properties of each at the same time.

The study of all these signs, which concerns with all meaning exchange processes where signs are involved, is known to be “semiotics”.

The two most leading traditions within semiotics are C.S. Pierce, an American logician, and F. de Saussure, a French linguist.

“Saussure’s recognition that the relation of words to things is not natural but arbitrary and that a language is essentially a self-contained system of signs, wherein each element is meaningless by itself and meaningful only by its differentiation from the other elements, was key to the development of modern semiotics.”
(<http://www.yahoo.com>., “semiotics”

As mentioned before, in human communication it is possible to use different modes available (as in writing, signing, etc.) including the vocal-auditory mode of communication (the most common of which is speech) as well.

According to Crystal (1983:119-120), the study of language may be placed in a broader intellectual perspective by showing how language relates to other modes of communication, within the more general heading of semiotics; semiotics being assigned the study of these differentiating modes, as used in the communication activity. Consequently, his definition of “semiotics” appears to be “the study of the way in which human beings communicate using all the communication devices known to them.”

Similarly, Lyons (1981: 17) claims that: “ Semiotics has been variously described as the science of signs, of symbolic behaviour or of communication systems.”

“For a well understanding of how messages are transmitted, an understanding of signs is essential.” (Dobrovolsky, 1997:591)

If we consider communication as the transformation of any information (message) between an addresser and an addressee, we must not ignore the fact that this information may involve a mixture of several means of communication, that is, during a single act of communication we may speak, hear, touch, gesture... etc. at the same time, and as Crystal (1983:119,120) claims

“Only by studying all of these actions, semiotics claims, can the meaning of the whole event be known. The object of semiotic study is thus to analyze and compare the various patterns of bodily activity which a community systematically and conventionally makes use of in order to communicate.”

Semiotics, being the study of signs, however, is not restricted to language and communication, but covers any aspect of a culture (gesture, clothing, toy...etc.) and even far beyond than that involves animal interaction, metabolism of organisms and information processes by machines; therefore it is a field that relates to many separate disciplines such as linguistics, anthropology, philosophy, zoology, genetics, computer science, literary science, musicology, art history, political science, religious studies and many more.(see www.yahoo.com “semiotics”and Dobrovolsky,1997:591)

Here, it may be deduced that linguistics is only part of the general term “semiotics”, concerning itself with “language” (as a system of signs) and “linguistic sign.”

“A science that studies the life of signs within society is conceivable; it would be a part of social psychology and consequently of general psychology; I shall call it semiology. Semiology would show what constitutes signs, what laws govern them... Linguistics is only a part of the general science of semiology; the laws discovered by semiology will be applicable to linguistics,... The task of the linguist is to find out what makes language a special system within the mass of semiological data...” (F.de Saussure,1959:16)

On the other hand, there are some other semioticians (such as R. Barthes) who treated semiotics as a branch of linguistics, in opposition to Saussure, due to the fact that semiotics relies to a great extend on linguistic concepts:

“ Semiotics draws heavily on linguistic concepts, partly because of the influence of Saussure and because linguistics is a more established discipline than the study of other sign systems, and perhaps also because as noted by Emmile Benveniste (in Innis 1986:239), language is the interpreting system of all other systems linguistic and non-linguistic.” (www.yahoo.com, “semiotics”)

2.1.3 What Do We Know When We Know a Language?

As native speakers of our language, Turkish, we have a good knowledge of it; we are able to produce and understand very long (theoretically indefinite in length) novel sentences and are able to use our language for every purpose.

However, this knowledge is a *tacit* one, that is to say, when we are asked to tell the rules we use while speaking, we find out that we are not consciously aware of that knowledge. This unconscious knowledge of language is called *linguistic competence*, and involves all that we know when we know a language.

As Clayton Valli and Ceil Lucas (1992:36) explain;

“You can think of *linguistic competence* as being a person’s potential to speak a language, and his or her *linguistic performance* as the realization of that potential.”

Therefore, by observing speakers’ linguistic performance, we deduce some facts on their linguistic competence, the underlying linguistic knowledge.

So, there is a difference between having the knowledge to produce and understand sentences of a language (competence) and the usage of this knowledge, the actual behaviour (performance). (see Rodman and Fromkin, 1983 :10-11)

Another fact Rodman and Fromkin (1983: 11) point out is that;

“When we speak we have a certain message to put forth... we have our thoughts organized into strings words. But we all produce speech errors, or slips of tongue; such errors show the difference between our linguistic knowledge and the way we use that knowledge in performance.”

In fact, such speech errors that are mentioned, do not indicate that we are not competent speakers.

As Valli and Lucas (1992:36) state, “speech usually contains lots of mistakes and hesitations, but that does not mean that the competence underlying that speech is flawed.”

Such errors usually occur due to some external factors such as being tired, drunk, sick, etc.

Now let us consider some of the things we know about our language in a bit more detail. Our linguistic competence consists of some basic levels.

One of the major parts of the linguistic competence involves the knowledge of the sounds of the language. We have the knowledge of producing sounds to form meaningful utterances. (see Valli and Lucas, 1992:36)

“In using language to speak or understand, sounds produced or heard are related by the language system to certain meanings. Any one who knows a language knows what sounds are in the language how they are “strung” together, and what these different sound sequences mean. (Rodman and Fromkin, 1983:35)

When we encounter with foreign languages, we may notice that they contain some sounds which do not exist in our language. For example, French “*r*”, Spanish “*p*”, English “*th*” and the *clicks* of some African languages such as Zulu and Xhosa.

We can define phonetics as “the study of the sounds made in the production of human languages” (Finegan and Besnier, 1989:37) or, “the study of speech sounds utilized by all human languages to represent meanings.” (Rodman and Fromkin, 1983:35)

As Valli and Lucas (1992: 37) claim, not only can we produce and perceive the sounds of our language, but we also know how these sounds work together as a system.

Here, phonology comes to the stage, and it refers to “a description of the sounds of a particular language and the rules governing the distribution of these sounds.” (Akmajian et.al.1997:99)

For example, we have an inherent knowledge of possible sound sequences of our language, Turkish, and thus, we are able to eliminate possibilities such as “*tg*”, “*gn*” or “*tn*”, etc.

Beside the knowledge of sound production and possible sound sequences, we have the knowledge of breaking streams of sounds down into meaningful units that are marked by some pauses produced within certain periods. For example, we can analyze a sound sequence such as “*Busabaherkenkalktım*” as consisting of words “*Bu*”, “*sabah*”, “*erken*”, “*kalktım*”.

Further more, we have the knowledge of breaking individual words (morphemes) down into smaller other parts (smaller morphemes and suffixes) that have some specific meanings or functions. By combining these small units we may produce different other words. (see: Valli and Lucas, 1992:37) In other words, morphemes, smallest units of language having meanings or functions, come together and form new words, or morphemes.

For example, Ben + im > “Benim” (my)
 Lexical Bound Word
 morpheme morpheme
 (1st person
 possessive suffix)

Similarly,

Araba + m > Arabam (my car)

Dükkan + ım > Dükkanım (my shop)

“O dükkan-lar henüz aç-ıl-ma-dı.”

(These shops are not opened yet)

“O yeni bir dükkan aç-tı.”

(He opened a new shop)

With such combinations new words and sentences are formed.

In addition, as native speakers of Turkish, we know which combinations are possible and which are not.

For example,

Kedi (the cat) > kedi-ler (the cats)

yazmak (to write) > *yazmak-lar (*to writes)

güzel (beautiful), > en güzel (the most beautiful)

kitap (book), > *en kitap (*the most book)

Knowledge of “morphology”, in a general sense, the knowledge of “word formation” is part of our linguistic competence.

So far, it has been stated that we are able to decide which sound sequences are possible or not, also able to make judgements about which units may be brought together to form individual words and which may not. Similarly, as fluent speakers, we are able to make judgements about possible combinations of words, that is, which words may come together and in which order. This means, we are able to distinguish well-formed (grammatical) and ill-formed (ungrammatical) sentences.

For example, “*Sen erken yarın kalktım.*” is an ungrammatical sentence where as the following are grammatical:

“*Sen yarın erken kalkacaksın.*” (You will get up early tomorrow.)

“*Sen dün erken kalktın.*” (You got up early yesterday.)

“*Ben yarın erken kalkacağım.*” (I will get up early tomorrow.)

“*Ben dün erken kalktım.*” (I got up early yesterday.)

An other term which is needed to be introduced here is “*acceptability*”, which has to do with whether a sentence makes sense or not.

As an example, consider the sentence: “ **Ne Ali ne de Deniz gelemez.*”

(*Neither Ali, nor Deniz can not come.)

Although, grammatically, “*Ne Ali ne de Deniz gelebilir*” (Neither Ali, nor Deniz can come) is more proper, the former sentence also makes sense. On the other hand, although a sentence such as: “*Katı akışkan konuşmalar ayakta oturur*” (Solid, fluid conversations sit down on foot.) is structurally quite grammatical, it makes no sense, it is *semantically odd, unacceptable*.

Another part of our linguistic competence is that we are able to attach meanings to sentences, find out what does a sentence mean even if it has more than one meaning. Additionally, we can determine which different sentences mean the same thing.

For example, when we hear a sentence like “*Bir çok uçan balon ve çocuk vardı.*” (There were a lot of flying balloons and children.) we interpret it as; “*Bir çok uçan balon ve bir çok çocuk vardı.*” (There were a lot of flying balloons and a lot of children.) but not as; “*Bir çok uçan balon ve uçan çocuk vardı*”. (There were a lot of flying balloons and flying children.). Similarly, when we hear a pair of sentences like; “ *Neden soruma cevap vermiyorsun?*” (Why don't you answer my question?) and “*Niye sorumu yanıtlamıyorsun?*” (Why don't you answer my question?), we can immediately decide that they are same in meaning.

While we are interpreting sentences and deciding on their meanings, we consider the *context* in which sentences are uttered. In that way the meaning of utterances may appear to be quite different than their structural meanings, that is, they may gain some *intended meaning*. Our pragmatic competence makes us identify such intended meanings.

Imagine such a conversation between a teacher and a student:

Teacher: “*Ödevin nerde!*” (Where’s your homework?)

Student: “*Dün gece elektrikler kesikti.*” (The lights went off last night.)

In that case, the student’s reply is not for informing the teacher about the electricity problem but rather, it indicates an excuse for not doing the homework.

As Klavans (1997:653) suggests, pragmatics is the study of how language is used in communication and it is concerned with the encoding of information structure.

If we consider another, similar conversation:

A: “*Saatin var mı?*” (Have you got a watch?)

B: “*Evet, var.*” (Yes, I have.)

We notice that B disobeys some conversational principles in that, although the question is a request for information semantically, and the answer to the question should be either “yes” or “no” syntactically, A is not asking a literal question, but rather, expecting to learn what time is it. Our pragmatic competence enables us to distinguish such situations during conversations.

2.2. Introducing “Sign Language”

2.2.1. What is a Sign Language?

So far, it has been clarified that language is a system of symbols which are organised in terms of conventionalized rules, and a tool for communication beside many other functions it provides. To be more simple, it is a conventionalized system of signs. When language is considered, it is generally used in a sense to mean “the specialized sound signalling system which seems to be genetically programmed to develop in humans.” (Aitchison, 1992:11) However, there are many other ways of human communication, and language can be revealed through some other media one of which is “sign language”. As Asher and Simpson (1994: 3887) claim:

“A system of forms allowing for structural articulations that map onto articulated, propositional thoughts in regular ways is a (natural or artificial) language. For a language to bring about a regular correspondence between forms and thoughts it must have well-defined “building blocks” (lexical words, that is), which can be combined into full signs (sentences) and correspond regularly with structural thoughts,....”

Sign language of hearing and speech impaired people is truly a means of communication consisting of rules similar to natural human languages, deserving its place within the scope of linguistics. However, since it was not treated as “worth studying” until late 60s and 70s, the notion “sign language” has been exposed to many misconceptions and prejudices: it has been considered as a primitive and underrated way of communication.

It is often thought erroneously that sign languages are not real languages, but little more than systems of sophisticated gesturing; they are the reduced, simpler forms of natural language (see Crystal, 1987:220).

In fact, as a result of recent investigations, there is evidence to claim that sign languages are rule governed systems of communication and have a structure of comparable complexity to spoken and written language, performing similar range of functions.

Yule (1985:164) claims that;

“It has become very clear that any feature which is characteristically found in spoken languages has a counterpart in sign languages. All the defining properties of human languages are present in ASL; there are equivalent levels of phonology, morphology and syntax, children acquiring ASL go through many of the recognized stages of children learning spoken languages... ASL is used for a wide range of jokes and sign-play, there are different ASL dialects in different regions and historical changes in the form of signs can be traced since the beginning of the century... In short, ASL is a natural language which is quite remarkable for its endurance in the face of decades of prejudice and misunderstanding.”

These claims of Yule are probably valid not only for ASL (American Sign Language), but also for many other sign languages, excluding perhaps, the ones that are not fully developed.

Some other common misconceptions about sign languages appear to be proclaiming that there is just one sign language which can be understood all over the world, that signs are simply pictorial representations of external reality being “iconic”, and that signing is equal to gesturing (see Crystal, 1987: 220).

Crystal (1992: 353) defines sign language as “a system of gestures, made with the hands and other body parts, used to replace speech as a mode of communication on all occasion of interaction.” However, this type of gesturing is totally different than the one used among people who do not share a common spoken language, or the one used to accompany speech, or the one used by specific groups such as “military sign system” as Asher and Simpson (1994: 3890) state.

Here, the distinction between signing and gesturing is worth mentioning: Signing is much more systematic than gesturing and it means “to use hands in a conscious way to indicate a high range of meanings”, being similar to speech. (see Crystal, 1987: 220)

Asher and Simpson (1994: 3890) consider sign language as;

“... a class of languages found amongst deaf communities throughout the world: languages which parallel spoken languages in complexity and structural features.”

They also emphasize that sign languages occur in communities with their own recognizable culture, and appear to be the first languages of deaf children of deaf families.

2. 2.2. Basic Properties of Sign Languages: A Comparison between Spoken Languages and Sign Languages in Reference to American Sign Language (ASL) and British Sign Language (BSL)

A sign language can be defined as a visual-gestural language used by hearing and speech impaired people. It is described as “visual- gestural” since it is perceived visually and produced by hand and body gestures including the face.

As Deuchar (1984: 1) states, the term manual has also been used to describe sign language, however, the term excludes the role played by body stance and facial expression which are very significant in sign language production.

The study of “Sign Languages”, especially from a linguistic point of view, is a recent phenomenon due to some factors. First, deaf community constitutes a minority within the whole society. Secondly, sign language of speech-hearing impaired has been treated as an improper, and a primitive language which is not worth studying. A significant progress has been made only after the late 60s and 70s, the first instances being restricted to deaf education. Thirdly, the data required for the studies on the topic were not easy and practical to collect technologically, in earlier times. Still, we haven’t achieved contentive studies on several sign languages (except some very popular ones such as American, British and French Sign Languages) in order to clarify their basic properties in detail. In fact, depending on the previous studies on sign languages, we can deduce some basic properties that all sign languages seem to exhibit.

The first thing we can say about “Sign Language” is that opposing the popular view of hearing people, it is not universal; that is, there is not only one sign language used throughout the whole world. Furthermore, sign languages also differ from spoken languages.

“For the moment, sign languages appear to differ from country to country in a similar way to spoken languages, and to have grown up in separate communities.”

(Deuchar, 1984:3)

In other words, although sign languages may have certain similarities with spoken languages and with one another, they are distinct languages.

Another misconception about “sign language” is that it is usually associated with body-language or non-verbal communication. In fact, such gestures rely on immediate context (i.e. pointing out objects) and are able to convey limited number of messages. On the contrary, sign languages are not restricted to immediate context and to limited number of messages, thus, they are systems of communication that need to be learned in order to be displayed or be understood.

All sign languages exhibit several language-like properties as listed below:

Arbitrariness:

Although arbitrariness is a defining property of languages, as Bolinger (in Deuchar, 1984:19) suggests “language has both arbitrary and non-arbitrary aspects.” As for sign languages, they usually make use of both arbitrariness and iconicity, that is, they are composed of arbitrary signs beside some iconic ones. Here, a more crucial point concerning with arbitrariness is the “conventionality” in language (in opposition to “naturalness”). “The iconicity in sign languages does not result in a complete freedom, iconic signs too, are determined culturally” (Deuchar, 1984:20). Thus, the important thing is that, sign languages are “conventionalized systems”, no matter the extent of arbitrariness or iconicity.

Duality:

As mentioned before, language can be considered of having two levels of structure, namely, the “primary level” and the “secondary level”. The units of the primary level contains elements in the secondary level, in other words, secondary level elements come together and comprise a unit of the primary level. For example, the word “cat” has a meaning in primary level but the sounds *c,a,t* that make it up do not, individually. Similarly, as Lucas and Valli (1992:11) claim, signs have internal structure, that is, they are composed of a hand shape, a location, a palm orientation and movement; all the parts have one meaning together, but the hand shape alone, for example, conveys no meaning.

To exemplify, the sign “up straight index finger touching the chin, with a certain hand movement” has the similar meaning with the Turkish word “mum” (see T.C. M.E.B İşaret Dili Klavuzu, 1995: 50), on the primary level, but the parts that make it up, “the up straight index finger” or “the chin that is touched” do not have meanings individually; therefore, sign languages can be thought of exhibiting “duality”.

Discreteness:

As it is stated previously, language consists of sound elements that are distinct from one another. (see Yule, 1985: 17) For example, when the English words “big” and “pig” are considered, it is obvious that the occurrence of /b/ instead of /p/ (and /p/ instead of /b/) causes a distinction of meaning. Similarly, although they do not have vocal signals, sign languages too, are said to have this property. Deuchar (1984:21) represents this giving the following example of Brennan et.al. for BSL:

“...the signer’s chest and his or her lower trunk are spatially contiguous, but the signs for “sorry” and “delicious” are differentiated by the fact that the first is made on the chest, and the other on the lower trunk. (Brennan, Colville and Lawson, 1980:71). Both signs are made with a flat hand in circular motion.”

Productivity:

Productivity, the ability of producing indefinite number of utterances, including novel ones, by using finite number of elements and units with the application of certain grammatical rules which are language specific, is a characteristic of spoken languages. The significant thing, to repeat here, is that, languages are rule governed systems, so that productivity is possible. As the previous studies clarify, sign language users are able to produce new utterances continually, and there is no limit on the things and topics they can talk about. This seems to prove that, sign languages are rule governed systems and they have the property of “productivity”.

Displacement:

Displacement is a property of language which means that language users are able to refer to all time periods like past, present and future; therefore, language is not necessarily restricted to immediate time or place. This property of human languages seems to be valid for sign languages as well. Lucas and Valli (1992:13) exemplify this with the following ASL sentence:

“Yesterday Pro-3 Told-me go will Pro-3.”

“Yesterday she told me she will go.”

In this sentence, the person referred by “Pro-3” (“she”) is not present during the time of utterance, furthermore, “yesterday” refers to an action that happened in the past.

Cultural Transmission:

It is mentioned previously that a language is not inherited through genes, but rather passed on one generation to other within a culture, a speech community. (see Yule, 1985:17) What is inherited is the capacity to acquire language. The fact that it is possible for deaf children (from deaf parents) to acquire sign language (by birth), makes us think that “cultural transmission” is possible for sign languages. However, this depends on several other factors such as whether the child has been exposed to signing (since birth) or has the “oralism” method been preferred during his growth.

Apart from all these structural properties, language exhibits some functional properties (communicative functions) too. As Jakobson (1973: 53-55) lists:

1. *Referential function*, which has to do with conveying information
2. *Conative function*, which has to do with getting other people to do things
3. *Emotive function*, which has to do with conveying feelings
4. *Phatic function*, which has to do with signalling contact between people
5. *Metalinguistic function*, which has to do with talking about language itself
6. *Poetic function*, which has to do with using language for aesthetic or literary purposes

All these communicative functions seem to be fulfilled by sign languages, as far as researches have proved. However, the study on “poetic function” is quite restricted. Still, it is known that BSL is used for story-telling and jokes (see Deuchar, 1984: 23); there is a BSL poet, Dorothy Miles, whose poetry has been signed on television. Besides, as Klima and Bellugi (in Deuchar, 1984:23) report, ASL is used for wit and poetry. Moreover, as stated in “Sign Writing Site” (in www.signwriting.org), poems are “sign-written” as well as signed. This puts forward, at the same time, the fact that “medium transferability”, a property of spoken languages, is in question for sign languages too.

Furthermore, some sign languages are said to exhibit some processes like language change, language variation, borrowing, pidginization and creolization, being similar to spoken languages.

It has to be mentioned that not all sign languages in the world have been investigated to claim they all exhibit the above-mentioned properties. There may be sign languages lacking some of these properties, but at least, we can say that all sign languages have the potential to fulfil these properties.

2.3. Sign Language Studies in the World

Although there has not been sufficient technology or technical support to collect data for the study of sign languages until recently, the use of sign language has a long history dating back at least 2000 years in the Western World and perhaps more, according to Chinese writings (See Asher and Simpson 1994: 3890). Today it is known that Plato mentions special head, hand and body movements of “deaf and dumb” in *Cratylus*. However, there is no information available concerning the nature of signing at the early times, nor is there any description of “sign” since it is not possible to achieve written records.

Because of the common curiosity about the origin of language, on the basis of the belief that “before verbal communication there were physical actions” it had been speculated that signing was an earlier means of communication than speech.

“ A common speculation throughout the nineteenth was that humans had relied upon some form of sign language before they had turned to spoken language. The idea seems to have originated with the French philosopher Etienne Bonnot de Condillac in the mid eighteenth century.” (Baynton, 1996:38)

On the other hand, there were some contradicting views too, depending on the belief that speech is derived from non-verbal cries.

“ Veditz believed, as was customary in his time, that signed languages are derived from spoken languages and have been invented by individuals such as Epée.”

(Padden and Humphries, 1988: 57)

During the early times, (and perhaps still) the most widespread and dominant views about sign language were that:

- Signs were equal to gestures
- Like gestures, sign languages were universal
- Sign language was a language of low status, primitive and underrated. (A view which is popular especially in Europe, as a result of Milan Convention and ‘oralism method’ in deaf education.)

Sign language studies, which are quite limited and perhaps biased, were carried out under the influence of these views. These studies resulted not from linguistic expectations but from curiosity alone. Only in the past 30 years, the attitudes have changed. (see Crystal, 1987: 219-220)

2.3.1. Sign Language Studies in Europe and America

The history and development of “sign language” in Europe can be best summarized mentioning a few names with contradicting views, and one dominating event.

“Most modern accounts see the systematic education of deaf people as having started in the 16th century (Savage, Evans and Savage, 1981) and as becoming a subject for discussion at least in England during the 17th century. Digby (1644) mentions lip-reading and Bulwer in the same year describes gesture as an international communication. John Bulwer and George Dalgarno are the two writers of the 17th century who show the greatest understanding of the basis of sign language.” (Kyle and Woll 1985:37)

Besides, Wallis and Holder were known as the first two teachers of the deaf; they adopted speech in education. At the early 18th century, Baker too, was famed as a teacher under the influence of Wallis but only after 1760 a great progress had been achieved. Thomas Braidwood was teaching deaf students in Scotland and de L’Epée was teaching, by using signs, in Paris. (Kyle and Woll 1985:38)

As Asher and Simpson (1994: 3910, 3923) claim, de L'Épée adopted teaching deaf to read and write in French forgoing speech and using their signs as a natural means in education. On the other hand, in Leipzig (Germany) Samuel Heinicke, with an opposing view, took speech and speech reading as the most important educational goal adopting a strict oral approach in education.

During 19th and 20th centuries these views (manualism vs. oralism) comprised a controversy concerning the education of the deaf and spread into France through Paris, into Germany and Austria through Leipzig, also into Switzerland, United Kingdom, Scandinavia, parts of Spain, Portugal, Italy and into United States. A resolution came at the Milan Convention (1880) in Italy where 53 per cent of the members were from Italy, 34 from France, 7 from England and America and only one representative from Germany. Majority of the participants preferred speech over sign and this resolution affected the education system in Europe. There was an increasing opposition to “signing”; it appeared to be underrated and treated with ignorance and “oralism” in education became dominant. (see Asher and Simpson, 1994:3923)

In the United States of America, oralism and Darwinism supported one another. As Baynton (1996: 37) claim, “evolutionary thinking pervaded American culture in the years that oralism became dominant in deaf education...” Baynton (1996: 40) continues as follows:

“Linguists of the late 19th century commonly applied to language theory what has been called “linguistic Darwinism”: Inferior languages died out, they argued, and were replaced by superior languages in the ‘struggle for existence’.”

However, the situation of deaf education in the United States was still a bit different than Europe. Some oralists like Condillac, as Baynton (1996: 39) claim, revised their views, and come to believe that:

“ language of action was not necessarily inferior to speech in what it could communicate, and could be extended sufficiently to render all the ideas of the human mind.”

As Asher and Simpson (1994: 3923) state, “at least most state schools favoured a combined, simultaneous use of speech and signs accepting signing as a natural means of communication outside the classroom.” Besides, in the United States there had been more progress in sign language research during 60s and 70s due to the higher social status of signing deaf adults and their organizations in USA. In fact, in Britain too, it was discovered with the Lewis Report (1968) that although a strict oralism had been preferred in British schools, this was not the actual case. As Kyle and Woll (1985: 46) claim, “ Of 45 schools for the deaf, three-quarters used manual communication in some context...”

During 70s and 80s sign language research began and progressed in some parts in Europe, following the United States. Nowadays, in Europe sign language research is being carried out in almost all areas of linguistics such as phonology (chirology), morphology, syntax, semantics, psycholinguistics, sociolinguistics, lexicology, etc. and the following areas among them, lexicography, acquisition in relation to the education of the deaf child, non-manual features, gained more specific attention in Europe in comparison to American sign language research (see Asher and Simpson, 1994:3924).

2.3.2. Sign Language Studies in Asia

Although Asia contains a great deaf population, the studies on Asian sign languages are very limited, not more than some preliminary ones concerning sign language of China, Japan, Taiwan, Hong Kong, India and Thailand. Besides, schools for deaf that provide the standardization, development and spread of sign languages are very limited too, and are highly affected by the “oralist approach” of the West.

Actually, as Asher and Simpson (1994: 3921) claim, when the development of sign language in Asia is considered, it comes out that, it has much to do with the Western missionary activities and colonialism. Moreover, due to the economic supremacy of America, American Sign Language has had a great influence on Asian Sign Languages.

“The first school for the deaf in Vietnam was set up by Father Azéma of the French Foreign Missions in 1886. In China the first school was established by the two American Presbyterian missionaries, Anetta Thompson Mills and her husband C.R.Mills.” (Asher and Simpson, 1994: 3921)

The studies on sign language in Asia has been to a great extend lexical, mostly preparations of dictionaries some of which involve syntactic observation within their introductions. Apart from these, a few sociolinguistic studies that are later published outside Asia, Yau and He (1989) and Peng (1974), have carried out revealing dialectal differences.

In Asia, Indian, Pakistani, Bangladeshi, Sri Lankan and Nepalese sign languages are said to be of the same language family; besides, Hong Kong, Singapore and Chinese sign languages are of another. (see Asher and Simpson, 1994:3921, 3922)

2.3.3. Sign Language Studies in Australia

As stated in Asher and Simpson (1994: 3922):

“ Australia has two signing traditions: the alternate sign languages of Aboriginal Australians which are gestural codes used to represent spoken languages, and the primary sign language of deaf Australians which is an autonomous language in its own right.”

The Australian Sign Language, namely “Auslan”, has developed out of British and Irish Sign Languages (British signs being more dominant) that were brought to Australia in the 19th century. Recently, the cultural and linguistic impact of ASL is also of question. British deaf immigrants established the first Australian schools for the deaf, besides, Irish signs and the one-handed alphabet which had been borrowed by Irish deaf community from French Sign Language were also brought to Australia by Irish Catholics. (see Asher and Simpson, 1994: 3922)

So far, a good many of lexical and morphosyntactic studies, that is, dictionary studies and research on grammatical organization, have been handled concerning Auslan. Accordingly, it has been noted that Auslan exhibits some complex grammatical processes and markings, which are nonexistent in the corresponding spoken language of the society. As Asher and Simpson (1994: 3923) reports, “the possible articulation of signs with reference to various loci in the signing space for pronominal reference and verb agreement, and the articulation of verb signs with various spatial and movement contours to convey aspectual information” are a few examples.

Evidence prove that Auslan appears to be adequate for daily issues, everyday conversation, and further, for abstract talk, linguistic art and humour; being rich in terms of vocabulary.

In fact, Auslan itself does not have a written form and lacks some functional varieties, for example, those associating with literacy. English (both written and signed) is the language for literacy for Australian signers.

Due to close cultural as well as historical relationship between Australia and New Zealand, there are strong similarities between the sign languages of both countries (Asher and Simpson 1994: 3922,3923).

2.3.4. Sign Language Studies in South America

As a result of previous research, it has been discovered that in South America, there are several autonomous sign language systems, that is, sign languages are not 'dialects' deriving from one source. However, some languages bear linguistic similarities due to language contact. For example, as Asher and Simpson (1994: 3926) state:

“ The Brazilian Sign Language (LSCB) used in Southern Brazil has imported some lexical items from Uruguay and Argentina. By the same token, linguistic interference from Brazil and Argentina can be noted in Uruguay.”

Apart from sign language, finger spelling is also wide spread in the continent.

Studies on sign language in most countries in South America have begun and developed recently; studies in Argentina, Brazil, Uruguay, Chile, Puerto Rico and Venezuela are published as well. Among them, Brazillian is the most studied sign language (see Asher and Simpson, 1994: 3926).

2.4 Studies on the Micro and Macro Features of Sign Languages

When previous research concerning deaf community is considered, it appears that the point of focus on this area has been “education”, since it has been given the major role within the recognition of the deaf community. Moreover, under the general heading of education, the major concern has been the question “which system is more effective in education (whether manualism or oralism)?”; a question which bears many contradictions in its resolution and has been a matter of conflict by itself. There are several reasons for this concentration on education.

First of all, as demonstrated by studies on disabled community, education has constituted a significant requirement for the deaf, and a constraint on their social development. Secondly, as Asher and Simpson (1994:3924) mentions, among the professional groups, it was educators who were mostly engaged with the deaf. Furthermore, the most important role on the standardization and development of sign languages was performed by the schools for the deaf.

As Winzer (in Davis, 1997: 100) claims, the attempts concerning the education of the disabled have flourished with Renaissance; and the aim was to achieve the history of human thinking.

“ The gathering humanistic and philosophical spirit of the Renaissance flowered into genuine educational attempts that, though nascent and primitive, that demonstrated that disabled persons could learn and achieve... Teachers, writers and philosophers based their interventions on the belief that discovering the manner in which deaf persons learned, especially the way in which they acquired language would provide a key to the history of thought and of humankind in general.”

As mentioned before, with the spread of “oralism” in deaf education, sign language has been ignored; therefore, research on sign languages, especially from a linguistic perspective, has not been carried out for a long time.

However, signing was widespread and functionally used within deaf community so that as Woll (1985: 44) states, “ the outspoken advocacy of oralism produced opposition among deaf people.” Consequently, there was a growing claim for signing, and signing, which is not a methodology in education but the means of communication for the deaf, has gained importance and received more attention.

Moreover, with the changing attitudes towards “language” in modern linguistics, it has been favoured that “all languages meet the social and psychological needs of their speakers, are equally deserving of scientific study and can provide us with valuable information about human nature and society.” (Crystal, 1987: 7)

Eventually, in terms of linguistics, sign language studies began to be handled and with the support of developing technology in data collection, gained progressed.

As Asher and Simpson (1994: 3919) proclaim,

“ Sign Language research almost began in 1880, with the first report to the Smithsonian Institution from the Bureau of Ethnology (Mallery 1881); but in that year, educators of the deaf in a world congress at Milan, declared that “sign language has no legitimate place in the education or the lives of deaf people (Elliott 1882).”

However, during the mid 50s, sign language research reappeared with the focus on the question whether sign languages are real languages according to the structuralists' definitions of language. With this perspective, American Sign Language was examined and it was found out that at the word, phrase and sentence levels, ASL has had a structure similar to other languages. After all, sign languages began to be appreciated as true languages. On the other hand, as an outgrowth of the mentioned focus, there arose a necessity in sign language research to represent in what ways the sign language in question resembles the structure of the corresponding spoken language of the society and spoken languages in general. According to Asher and Simpson (1994: 3920), this had much to do with the rise of a new linguistic theory: that "the abstract rules of language generally are in the human brain from birth and that social interaction has only the slightest interest for the study of language so conceived."

Apart from that, another tendency in sign language research reported by Asher and Simpson (1994: 3920), was the necessity of formalizing notations to enable the work on 'how signs are constituted and organized'. This was due to "standardization", and before the growing interest in variation studies in linguistics. Consequently, dictionary studies gained importance. Besides, they continue by saying that;

"A major priority for sign language research is what new information about language it can disclose. Already it has made clear that hearing and speech are separate systems, neither essential to language itself. It has thus disclosed that language is a deeper, more cerebral system than hearing and speech. to a limited degree, this information has been applied to show educators that intensive training in audiology and speech therapy may be less useful for the children's teachers than knowledge and communication and cognition." (1994: 3920)

Today, there is evidence to claim that sign language studies are being carried out in almost all areas of linguistics such as phonology, morphology, syntax, semantics, lexicography, psycholinguistics, sociolinguistics, neurolinguistics, etc, especially in America and Europe.

“ A promising area for future research will join sign language research with research in cognitive psychology, especially that focused on the perception of gestures, whether of vocal or other systems, memory, cognitive maps, and the interaction of information. To this end, researchers have begun comparing myographic recordings made of speakers’ and signers’ relevant musculature (Wilcox 1992).”
(Asher and Simpson, 1994: 3920)

2.4.1. Studies on Phonetic and Phonological Features of Sign Languages

At first sight, it does not seem to be suitable to use the terms phonology, phonetics and other “sound associating” ones to refer to a language which is based on non-vocal elements. However, what is meant, as Deuchar (1984: 47) explains, is “the system of visual components making up signs”.

“Despite the normal association of the word “phonology” with sound, we saw how BSL could be said to have a phonology in that one can postulate units below the level of the sign. These units can be compared to phonemes of spoken language in that they can be shown to function contrastively, distinguishing one sign from another.” (Deuchar, 1984: 196, 197)

Therefore, it is possible to claim that the elements that make up sign languages can be compared to the auditory elements of spoken languages. The 'phonemes' of spoken languages are parallel to those of sign languages that are called 'cheremes' in that they have a similar contrastive function. For sign languages, "phonology" refers to "the study of how signs are structured and organized" (Valli and Lucas, 1992: 50), and as Deuchar (1984: 48), puts forward the elements of signs can be isolated and combined with one another in various ways to form words. In fact, there is a difference between spoken and signed modes of linguistic communication. In spoken languages sounds are produced from the mouth and appear as sequential units, for example, to form the word "cat" the phonemes /c/, /a/ and /t/ come together within a sequential order. On the other hand, the phonemic units of sign languages combine simultaneously since the linguistic activity is not restricted to one part of the body. For example, if one moves his hand from left to right with a certain hand shape to indicate a word, it is difficult to talk about the hand shape following the movement or vice versa. Consequently, signs can not exhibit sequential contrast, whereas in spoken languages the order of phonemes can (see Asher and Simpson, 1994: 3916) If we consider the words "nib" (pen point) and "bin", (storing box), it is obvious that the replacement of /b/ and /n/ phonemes distinguishes meaning.

According to Deuchar (1984: 47), for the phonological analysis of spoken languages three things are required: the inventory of the possible sound elements, specification of the rules or constraints governing their combinations, and the study of processes that can be undergone by those elements.

During the performance of sign languages, we recognize distinct types of activity as well as different parts of the body which will be perceived simultaneously.

“... it seems that the inventory of elements for BSL must include elements which act... as well as elements of activity... Elements which act might include the following: head, eyes, eyebrows, mouth, and hands in various shapes... Elements of activity might then include, for example, nodding or shaking (for the head), widening or narrowing (for the eyes), ... and movement away from and towards the signer (for the hands).” (Deuchar, 1984: 48, 49)

As for the constraints, one on hand activity can be observed (in ASL and BSL) which is known as ‘Symmetry Condition’ that is, as Deuchar (1984: 49) puts forward, “if both hands move in a two-handed sign, they must both have the same hand shape and the same movement”.

Finally, to exemplify phonological processes that the elements of signs can undergo, Deuchar (1984: 49) states that; “a hand shape can be modified according to the preceding or following signs, and one hand may be deleted in two handed signs”.

The first significant attempts in the field, phonetics and phonology, were proceeded during 60s and became a major concern in linguistic research since then. As Isenhath (1990: 5) reports;

“The first real insight into the phonemic framework of an ASL sign occurred in 1960, when William Stokoe published a monograph that analyzed the structure of a sign in linguistic terms... Later, Stokoe and his colleagues published the first ASL dictionary constructed in accordance with linguistic structure (1965).”

By Stokoe's work (see Isenhath, 1990: 6; Valli and Lucas, 1992: 123), a new terminology for sign languages was introduced and he posited terms such as "chereme" (deriving from Greek, meaning "hand") to indicate sign parameters, and "cherology" for the study of sign language phonology.

In his work, Stokoe puts forward that signs are composed of three parts, which combine simultaneously: " the tab, '*tabula*' (location of the sign), the dez, '*designator*' (handshape), and the sig, '*signation*' (the movement)" which altogether are referred to as "cheremes".

"The fact that all spoken languages combine meaningless elements to form meaningful symbols is regarded as one of the defining features of human language... Stokoe regarded cheremes as meaningless elements which combined to form all the signs in the language, in a manner analogous to that of spoken language phonemes." (Valli and Lucas, 1992: 117)

Besides, Woodward and Klima and Bellugi (in Isenhath, 1990: 6), suggest that signs are organized in terms of four basic parameters, namely, hand configuration, palm direction, hand position or place of articulation, and hand movement.

On the other hand, Valli and Lucas claim that signs consist of five basic parts, or parameters: hand-shape, movement, location, orientation, and non-manual signals (facial expression), and that different signs can share one or more of the same parameters. They exemplify this as in the following:

“ ... the sign FEEL has the same hand-shape as the sign SICK, the same movement as the sign HAPPY, and the same location as the sign POLICE. SUMMER and DRY differ in location, RED and CUTE in hand-shape, SHORT and TRAIN in palm orientation, and SIT and CHAIR in movement. ... It is the difference in one parameter that is responsible for the difference in meaning. (Valli and Lucas, 1992: 50)

Stokoe, with his work, proved that (ASL) signs are compositional and analyzable with a level similar to the phonological level, and that, they are unlike gestures. By this way sign language studies gained progress.

Apart from these, Asher and Simpson (1994: 3892) report that:

“More recent research has sought to apply approaches to phonological theory in spoken languages, such as autosegmental phonology, to sign structure.”

2.4.2. Studies on Morphological and Syntactic Features of Sign Languages

Since sign languages have not been traditionally regarded as proper languages but rather as a simple collection of gestures, it has often been thought that sign languages have no grammars. However, as Kyle and Woll (1988: 27) claim, sign languages have grammars that are quite different from those of the corresponding spoken languages although they have many features in common.

According to Asher and Simpson (1994: 3897):

“The function of grammar in a spoken language may be regarded as organizing non-linear meanings into a linear order, and the function of grammar in a sign language as organizing non-linear meanings into both spatial and linear order.”

As Kyle and Woll (1988: 131) suggest, for sign languages, the term “morphology” refers to “the constructions and changes which affect single signs” and the term “syntax” refers to “the way signs are combined in sentence structure”.

O’Grady, Guzman, and Aronoff (1997: 117) indicate that, “the system of categories and rules involved in word formation and interpretation makes up a language’s morphology”. With a similar description, Valli and Lucas (1992: 162) define morphology as “the study of the smallest meaningful units in language and of how those meaningful units are used to build new words or signs.”

As mentioned before, in sign language studies the first attempts were focused on providing evidence to prove that sign languages reveal language-like properties, with a structuralist attitude. Indeed, the studies put forward that many sign languages are quite similar to spoken languages in terms of structure, content and processes. It has been established that, signs involve an internal composition of morphemes and that there are internal variations in the form of a single sign stem, therefore several grammatical functions, as in the case of morphologically complex spoken languages, are in question for many sign languages. For example, it has been proved that many sign languages exhibit complex inflections for person and number agreement. Asher and Simson (1994:3918) report that:

“The ASL sign usually translated as *ask* or *ask a question* is depicted in Klima and Bellugi(1979: 278) as having a differing direction of motion and initial and final location of the moving hand to signal the meanings of ‘I asked you’, ‘I asked him’ and ‘You asked me’.”

Similarly, it has been observed that sign languages mark distributional and temporal aspects too, through inflections accomplished by cyclic patterns of repeated motions in signing.

“Klima and Bellugi (1979: 293) depict various forms of the ASL sign translated as look at inflected as protractive, durational, incessant, continuative, etc. In each case, a distinct physiological path and manner of repeated movement, or lack of movement, which differs from the punctual form, consistently signals a particular meaning related to temporal aspect.” (Asher and Simpson, 1994:3918)

Apart from these, previous research has put forward that in sign languages some other morphological processes proceed too, for the creation of new signs to expand the lexicon, such as “derivation” (to form different items from the same lexical base) and “compounding” (restructuring of two or more signs to form one) (see Asher and Simpson, 1994: 3918; Isenhath, 1990: 62).

As reported in Asher and Simpson (1994: 3918), Supalla and Newport (1978) studied on related noun-verb pairs in ASL. As an example, they considered the verb translated as “fly” or “go by plane”. The sign, as they describe, is produced with a “fluid continuous manner and a single movement”. When the related noun, translated as “airplane” is considered it is found out that “it exhibits a tense, restrained manner and a repeated movement with the hand shape and general location remaining constant.”

As for compounding, Isenhath (1990: 65) suggests that “ a compound sign acquires its own defined meaning and its own specific parameters, which are distinguishable from the root signs that are joined to create it”. Therefore, compounds are to be treated as single semantic entities that took place as separate lexical signs in dictionaries, e.g., “ THINK // SAME ” is the sign for the compound “AGREE ”.

Apart from all these, we have sentences as the basic means of communication. Isenhath (1990: 102) defines *sentence* as “a relationship among components in which the meanings of individual units interact with one another in such a way as to convey a whole thought” and *syntax* as “the relationship of signs within a sentential framework and the linguistic strategies that these relationships express” Furthermore, he emphasizes that “a sentence represents something more than just the sum total of the meanings of its lexical units (words or signs)”

Studies carried out so far have proved that it is possible to talk about different sentence types for sign languages, such as declaratives, questions, negations, commands, etc. and the type of sentences are determined by non-manual signals rather than the signs or the order of the signs (Valli and Lucas, 1992: 282; Kyle and Woll, 1988: 158).

As for the sign order in ASL and BSL, it has been claimed that subjects verbs and objects can be arranged in several possible ways in these languages, however, being influenced by the spoken English, SVO structure is more frequently used. (Isenhath, 1990: 103; Kyle and Woll, 1988: 156).

Besides, Isenhath (1988: 102) claims:

“Sign order in ASL is constrained by two major principles: first, by how the signs are arranged within the sentence; and second, by the delivery of that sentence. Sign order provides a means to determine who the subject is and what the action is. It offers a way to know *who* is doing *what* and *to whom*.”

So far, ASL and BSL have been the two most studied sign languages in terms of morphology and syntax as well as of other levels in linguistics. It has been proved that BSL has a very complex morphological structure, and is “heavily inflected” (Kyle and Woll, 1988: 131) and “ASL has morphological processes that allow a signer to combine individual units of meaning (morphemes) to form new signs. Thus, ASL is a fully expressive language containing its own strategies for modifying its internal signs” (Isenhath, 1990: 62). It has also been noted that ASL has a very rich vocabulary that grows rapidly.

2.4.3. Studies on Semantic Features of Sign Languages

The simplest definition of semantics is known as ‘the study of meaning’. Furthermore, as Valli and Lucas (1992:3) explain, semantics describes “how words and sentences are related to the (real or imaginary) objects they refer to and the situations they describe”. In that respect, the semantic component appears to lie embedded within other components of grammar; that is, all parts of grammar (phonology, morphology, syntax, and semantics) are actually integrated.

The smaller units of languages are put together to form larger units which represent certain meanings. Similarly, as Deuchar (1984: 81) suggests, “individual signs are put together to form meaningful utterances”. Valli and Lucas (1992:117) also state that “the fact that all spoken languages combine meaningless elements to form meaningful symbols is regarded as one of the defining features of human language”.

Moreover, Lyons (1981: 105) mentions “ a close and essential connection between at least some part of the grammaticality of sentences and the meaningfulness of actual or potential utterances”. He (1981: 156) continues as follows:

“The meaning of a sentence is the product of both lexical and grammatical meaning: i.e. of the meaning of the consistent lexemes and of the grammatical constructions that relate one lexeme, syntagmatically, to another.”

In sign languages, non-manual signals have a significant role in determining the meaning of sentences as well as in determining the structural function, therefore, non-manuals in sign languages have been of great significance for semantic and pragmatic concerns.

As Valli and Lucas (1992: 282) report, “non-manual signals, and not the signs, often determine the sentence type in ASL”. Yes/No questions, Wh questions, Relative clauses, Negative sentences, etc. are all accomplished by the use of non-manual activity. (see also Crystal, 1987: 223 and Asher and Simpson, 1994: 3906, 3907, 3925)

According to Asher and Simpson (1994: 3925), non-manual activities, especially eye-gaze mime and facial expressions “not only exert the usual psychological functions -seeking or avoiding contact, questioning, doubting or negating what is being communicated, as well as expressing joy, fear, sadness, anger- but can also be part of the language in a conventionalized, arbitrarily rule-governed way”.

Isenhath (1990: 220) reports that;

“Alteration of facial expression can create different semantic shadings of a given sign or key phrase. Depending on the semantic effect the signer wishes to convey, they might accompany sign delivery with such nonmanual behaviour as sucking in the breath through tightened lips, clenching the teeth tightly, puffing out the cheeks, or opening the eyes and mouth widely while maintaining direct eye contact with the reader (Hoemann, 1978)”

Furthermore, he (1990: 220) mentions that altering the size and the manner of a delivery in ASL may function as altering the tone of voice in English, to assign different meanings to statements. His example is that when the command ‘WAIT HERE’ signed ordinarily, it means ‘just wait here a minute’. However, when the movement of hands producing ‘WAIT ’ is extended further with a higher position, the same sentence means ‘wait right here!’

Investigations on other functions of non-manual activity have put forward that the functions of non-manuals include; lexical identification, adding adverbial information, showing syntactic domain, marking informational focus, etc. (Wilbur and Patschke, in *Sign Languages and Linguistics*, 1999: 3) (For the details of specific investigations see Asher and Simpson 1994: 3907 and *Sign Languages and Linguistics* Vol.2 nb.1, 1999)

2.4.4. Studies on Sign Language Lexicography

Lexicography, as Crystal (1992: 227) defines, is “the art and science of dictionary making and a dictionary is “a reference book which lists the words of one or more languages, usually in alphabetical order, along with information about their spelling, pronunciation, grammatical status, meaning, history, and use.” In addition, we call the vocabulary of a language “lexicon” which, as Kyle and Woll (1988:106) suggest, “ may be thought of as consisting of all the words or signs and their variants which occur in that language.”

Lexicography studies have been very important and deserve a specific attention within sign language research since it can be said that, beginning sign language research requires an inventory of the lexicon as an initial step.

Why is a dictionary so important? Valli and Lucas (1992: 65) mention that several different kinds of information is available in dictionaries and explain the point as follows:

“For each lexical entry (separate word or sign), it gives: a coded physical description, telling us how to physically reproduce (pronounce) the word or sign; the meaning of that word or sign, including special nuances; the grammatical functions and properties of that word or sign, telling us how we might use it in a sentence and what variations we might expect depending upon its grammatical form; something of the history of that word or sign, especially a history that relates to other words or items in the language.”

It stands for these reasons that the dictionary Stokoe prepared (1965) was a great success. His dictionary included all the above mentioned information. He described more than 2000 different signs in ASL.

On the other hand, as Asher and Simpson (1994: 3924) report, in Europe there were no such dictionaries available due to the fact that Europe had many spoken languages instead of one, a fact that affects historical sign inventories. Besides, the existing ones, if any, were to be suppressed in the past.

It has been reported that Paul Jouison from Bordeaux School for the Deaf developed a notation system referring to all aspects of deaf-to-deaf communication. Besides, in Hamburg University Centre and in the Dutch Foundation for the Deaf and Hard of Hearing Child in collaboration with the General Linguistics Institute of the University of Amsterdam, significant lexicology studies with reference to different contexts (the use of sign in schools, home training programs, performance in various situations, etc.) are being carried out since the late twentieth century (see Asher and Simpson, 1994: 3924)

2.4.5. Studies on Sociolinguistic Features of Sign Languages

As human beings, we use language for many reason, in very different contexts. Besides its communicative function, language has a social function. By using language, we express our social and cultural identity, our group relationships, personality, etc.

Sociolinguistics, with a very simple definition, is known as “the study of language in relation to society” (Hudson, 1980 in Lyons, 1981: 267). Valli and Lucas (1992: 3, 286), with a similar view, describe sociolinguistics as “the study of the interrelation of language and social structure” and include following study topics into the domain of sociolinguistics: linguistic variation, language contact, language planning and policy, language attitudes, and the relationship between social interaction and language.

'Variation' has been one of the most significant and most studied subjects within sociolinguistics. However, as Valli and Lucas (1992: 287) claim, the early studies concerning linguistic variation were often restricted to regional (geographical) variation. In fact, it is possible to talk about other kinds of variation too, such as ethnic variation, social variation, gender variation, age variation, etc.

The research, so far, have been proved that sign languages, at least ASL and BSL, exhibit the same kind of variations, at the same kind of levels of the language depending on the same kind of social factors (Deuchar, 1984: 130; Valli and Lucas, 1992: 287). As Kyle and Woll (1988: 9-10) suggest, "the community of deaf people is unusual in many respects, since it does not form a geographical nucleus. Deaf people do not live in the same street or area of town. They do not all work in the same places."

Regional variation is quite common in ASL because of the facts that in the past, deaf students attended schools in their region and contact with other deaf people from other regions were restricted and ASL was not taught formally at schools. Indeed, this is a matter of "standardization" as well as of linguistic variation. For Italian Sign Language (LIS), it has been reported that it exhibits much more regional variation than ASL for the same kind of reasons.

Moreover, ASL is reported (Valli and Lucas, 1992: 289) to show variation in terms of ethnicity, gender and age, too. The work of A. Aramburo puts forward that there are systematic differences between the way black and white signers' signing SCHOOL, BOSS and FLIRT due to isolation of black and white signers in social life and in education. Similar results are expected to be achieved for the study of Davis and Supalla (1991) on the sign language used by Navajo Indians of Arizona.

A related issue with variation, especially with age variation, is the "historical change". Valli and Lucas (1992: 288) explain historical change as follows:

“...variation means a different way of saying the same thing. Often, the same person will have different ways of saying the same thing and will make a choice depending on the situation. And often the different forms will stay in the language indefinitely. But many times, a change in an existing form will be introduced or a whole new form will appear. The old form and the new form may coexist for a while, and then the old form may disappear.”

Many studies on the historical change in sign languages have been carried out by researchers. Frishberg, Woodward, Erting and De Santis (in Valli and Lucas 1992: 288) examined historical changes in ASL; it has been found out that many of the ASL signs resembles the signs in French Sign Language. Evidence support that ASL has undergone historical change under the influence of French Sign Language.

Historical change has been known to occur mostly in the lexicon (vocabulary) and in the phonology. Some changes also happen in the grammar.

Deuchar (1984: 131) reports that “hand deletion in two handed signs” is a kind of phonological variation process in BSL and emphasizes that “the likelihood of hand deletion is affected not only by phonological factors... but also by the social factor of formality, since hand deletion is more common in informal settings.”

Apart from these, bilingualism and contact between languages are the two other important areas of sociolinguistics, which recently have become significant issues in sign language research. (Valli and Lucas, 1992: 346)

2.4.6. Studies on Psycholinguistic and Neurolinguistic Features of Sign Languages

Sign language has been an interesting field for psychologists and neurologists, too. The main focus in neurological studies has been the fundamental difference between sign languages and spoken languages:

“ All spoken languages have a left hemisphere localization and damage to areas of this side of the brain create major difficulties in language use; sign language, on the other hand, appeared to have all the hallmarks of right hemisphere functioning - it was visual, spatial, and appeared to require the manipulation of hands and body in space.”
(Asher and Simpson, 1994: 3907)

Consequently, what was questioned most has been: ‘Do sign languages have localization in the right hemisphere, as opposed to spoken languages?’ It has been reported (Asher and Simpson, 1994: 3907) that early research, based on static sign pictures, seemed to confirm this divergence in function and localization. However, when moving sign stimuli were used, it has been observed that deaf people’s identification of signs presented to the left hemisphere was better as it is the case with words.

Further investigation subjected deaf patients with various forms of brain damages in right and left hemispheres. Those with left hemisphere damages were proved to exhibit sign language aphasia affecting sign production, sign syntax, length of utterance and parameters of sign formation. On the other hand, those with right hemisphere damages showed little effect on these factors and proved not to be sign aphasic cases. However, they exhibit clear difficulties in spatial processing (see Asher and Simpson, 1994. 3907).

Besides, other investigations which concern facial expressions for affect and for linguistic functions put forward that “the linguistic functions of visual stimulation are localized in the left hemisphere and affect perception is localized in the right” (see Asher and Simpson, 1994: 3910).

As a conclusion of all these investigation, Asher and Simpson (1994: 3910) report that “... speech processing is not necessary for the development of hemisphere specialization and sign language follows a similar pattern to that of spoken language”.

Today, ‘deaf people and their sign languages’ has been a developing scientific area and many comprehensive and detailed studies are being carried out in the fields phonetics, phonology, morphology, syntax, semantics, lexicography, sociolinguistics, psycholinguistics, neurolinguistics, etc. There is an International Conference on “Theoretical Issues in Sign Language Research” the fifth of which was held in 1996 as an organization of “Université du Québec à Montréal” and “McGill University”. The conference includes lectures from international speakers, panel discussions, plenary presentations and poster sessions concerning the above mentioned fields. (For further information and the topics of the papers and posters, see : <http://www.er.ugam.ca/nobel/d12644/TISLRProgramme.html>)

2.5. The Deaf Population and TSL Studies in Turkey

In all over the world, deaf people comprise minority groups within corresponding larger communities that control social life and thus, encounter with many difficulties. In Turkey, where a lesser degree of importance is attached to the impaired population, and where there is not enough awareness and sensitivity concerning the deaf community, the situations are even harder for the deaf. They lack many opportunities of social life.

For example, they do not usually have direct access to the media and other means of audio-oral communication. They have limited chances for telecommunication in that they can not use telephones, listen to the radio or follow TV programs except for the 'news for hearing impaired' on TRT 2, unless they are really good at lip-reading. They are usually unable to benefit from socio-cultural activities such as visiting movies, theatres, etc. and for the most important of all, they do not have the chance to get a complete education. There are limited number of schools in Turkey that provide education for the deaf, almost all of which are in big cities and are all at primary school level. Besides, it is difficult to claim that education in these schools has been adequately developed according to the needs of the deaf. Most of the educators working in these schools are not enough qualified since the education of disabled children, including the deaf, requires special training which those educators usually lack.

As reported by the Ministry of Education (M.E.B. Özel Eğitim ve Rehberlik Dairesi Başkanlığı, 1991:10), in Turkey, hearing-impaired children are educated in three different ways:

1. At special Schools for Deaf (33, in number)
2. In special classes at ordinary schools (68, in number)
3. By 'integration', (with normal children, at ordinary schools)

In all of these schools, oral education is favoured for the integration of deaf students into the larger community. For that reason, the students are practising lip-reading and are given voice training within Turkish lessons (M.E.B. Özel Eğitim ve Rehberlik Dairesi Başkanlığı, 1991: 35, 37). Unfortunately, these practices seem to remain inadequate for the students; they prefer using TSL among each other. As for the teachers, most of them are not competent in TSL since it is not possible for hearing people to learn it unless they make an effort to do so. The only possible way of learning this language seems to be acquiring it from deaf people by spending a considerable time among them. TSL has remained undescribed and not been 'planned' as a language, being regarded as 'inferior' over speech.

The most well-known school for deaf in Turkey is the one in Eskişehir which belongs to the University of Anadolu, where again speech is preferred for education. However, the education there is being supported by academic researches too, as well as speech therapies and voice training that are more intensive and systematic.

Unfortunately, deaf students in Turkey are not capable of receiving special high school and further education unless there is significant progress in their oral and auidial skills. Among the total population in Turkey, there are few students who can manage to attend universities. Consequently, employment is another problem for the deaf people.

All these absences bring about the opinion that hearing - and speech-impaired people are being isolated from the society. Actually they are not given the chance of socialization. Most of their social activities are restricted to those organized by their social clubs.

Kyle and Woll (1988: 5) claim that;

“ Since one of the primary concerns of all education has been the acquisition of spoken communication as the most acceptable means of interaction, people who are unable to communicate through speech are regarded in some measure as inferior... Deaf people are such one group, set apart from the hearing community.”

'Sign language' is a very new field of investigation for linguists in all over the world. Even in the United States and in Britain, only after 70s has it begun to be progressed. In Turkey no work has been done and published in terms of linguistics except a practical vocabulary guide prepared by the Ministry of Education, which can hardly be regarded as a 'dictionary'. The dictionaries prepared in United States and in Britain are more comprehensive and practical to use since visual signs are represented via a written notation system (see Valli and Lucas 1992: 57, 58, 104-107). However, in Turkey there has been a good many research and theses on medical issues, on the improvement of language skills such as comprehensive reading, writing, etc. and on deaf education in general, the focus being on the issue "which method for the education of the deaf is more efficient".

(For the research topics and further details, see <http://kybele.anadolu.edu.tr/kybele.cgi?...&KTLG=TP&SIRA=128&NUM=85892>).

CHAPTER III: LINGUISTIC FIELD WORK ANALYSIS

Following the general information on the structural and functional aspects of sign languages, this chapter presents an experimental study carried out in some of the linguistic features of Turkish Sign Language.

The chapter is composed of two sections: The first section presents the findings of a pilot study carried out prior to the main study and the tested methodology of which paved the way to the main research. The second section is where the basic features of TSL are investigated within the framework mentioned in “introduction”.

3.1. Pilot Study

3.1.1. Aim and Scope

As no linguistic investigation on the formal properties of TSL was available, before proceeding with the main field study, a pilot study was deemed to be necessary in order to get some ideas about the syntactic features of TSL, to have some insights about conducting the interviews and to see how the method foreseen would apply.

For this study, a pilot corpus of only 60 simple sentences including declarative, imperative, negative and interrogative structures were prepared and applied to only one informant who is a female, primary school graduate, 43-year-old and a fluent native speaker of TSL. The informant was recorded by a video camera as she translated the written Turkish sentences into TSL.

3.1.2. TSL Features Investigated:

Within the framework of the pilot study, the following features of TSL were taken into consideration:

1. The personal pronouns (BEN, SEN, O, BİZ, SİZ, ONLAR) and some other lexical items such as OKUL, EV, GİT-, OL-
2. Case endings (particularly “dative” case marker)
3. Personal affixes that are realized within verbs
4. Markers of tense, mood and aspect
5. Declarative, imperative, negative, and interrogative simple sentences
6. The word order in simple TSL sentences
7. The internal structure of TSL signs in terms of “tab”, “dez”, and “sig”
8. Iconicity and arbitrariness of TSL signs
9. The signing space
10. Use of different spatial areas within the sign space

3.1.3. Method and Materials

For the pilot study, the researcher prepared a set of 60 Turkish sentences of simple structures. The sentences followed a logical order so that the research topics could be traced easily and the TSL equivalents could provide insights into the basic properties of this language. It was thought that once the basic sentence structure was revealed, the complex sentence structure could be more easily determined in the following steps.

The informant in the pilot study was a 43-year-old, primary school graduate female, who was asked to translate the given sentences into TSL. As she was reading and performing the sentences, she was recorded by a video camera. Then, the video tape was transferred into a CD rom so that the performance of the informant could be easily evaluated with the interpreters' participation.

3.1.4. Pilot Study Corpus

1. Ben okula gidiyorum.
2. Ben eve gidiyorum.
3. Okula git!
4. Sen okula gittin.
5. Ben okula gittim.
6. Ben okula gideceğim.
7. O, okula gidecek.
8. Biz okula gitmiştik.
9. Okula biz gitmiştik.
10. Gitmiştik biz okula.
11. Git!
12. Sen git!
13. Siz okula gideceksiniz!
14. Siz okula gidecektiniz.
15. Onlar eve giderdi.
16. Onlar okula giderdi.
17. Biz okula gidiyorduk.
18. Biz okula gidiyoruz.
19. Biz okula gittik.
20. O, okula gidiyor olacak.
21. O, okula gitmiş olacak.
22. O, okula gitmiş.
23. Sen okula gidersin.
24. Sen okula git!
25. O, okula gitsin!
26. Ben okula gideyim.
27. Biz okula gidelim.
28. Siz okula gidin!
29. Okula gidin!
30. Onlar okula gitsin!

31. Ben okula gitmem.
32. Ben okula gitmiyorum.
33. Sen okula gitmedin.
34. Biz okula gitmedik
35. Ben okula gitmeyeceğim.
36. Onlar okula gitmeyecek.
37. Biz okula gitmemiştik.
38. Siz okula gitmeyecektiniz.
39. Onlar eve gitmezdi.
40. O, okula gitmiyor olacak.
41. O, okula gidiyor olmayacak
42. O değil.
43. Ben okula gidecek değilim.
44. O, okula gitmiş değil.
45. Sen okula gittin mi?
46. Onlar okula gider mi?
47. O, okula gitmiş mi?
48. Ben eve gidiyor muyum?
49. Ben eve mi gidiyorum?
50. Ben mi eve gidiyorum?
51. Gitme!
52. Okula gitmesin!
53. Onlar okula gitmesin!
54. Onlar okula gitmesin mi?
55. “Gitme” mi?
56. Gideyim mi?
57. Gider miyim?
58. O, okula gidecek mi?
59. O, okula gitmeyecek mi?
60. O, okula gitsin mi?

3.1.5. The Pilot Study Results

The pilot study revealed some findings concerning the research topics. It also revealed some noteworthy facts which led us to further assumptions about TSL. Apart from these, as a result of the pilot study, some new research questions appeared. Throughout the stages of analysis and evaluation of the pilot study, the interpreters' views and judgements were of great value.

- **Findings, New Questions and New Assumptions**

1. The lexical units such as “EV” (HOUSE), “OKUL” (SCHOOL), “GİT” (GO), and “OL” (BE) could be easily identified. As for the personal pronouns, they exhibited some inconsistencies and partly remained inexplicit. However, the following points could be more precisely determined.
2. The individual sign in TSL could more or less be considered as equivalent to the “word” in spoken Turkish. They had an internal structure and could be broken down into smaller units. As ASL and BSL also do (see p. 37), TSL signs consisted of three major parts; namely, “tab” (the location), “dez” (the hand shape), and “sig” (the movement).

Eg; For the personal pronoun “BEN” (I), “tab” is the chest, “dez” is the flat hand with fingers touching each other and “sig” is the contact with “tab”, the chest.

3. It was noted that the sign space in TSL, vertically, consisted of the distance from below the waist up to the top of the head. All signs were formed within this area.

4. TSL consisted of signs that were produced either with one hand or with both hands. Besides, during a conversation it was noted that the deletion of one of the hands was sometimes possible (unless this deletion caused an ambiguous situation).

For one-handed signs it is permissible to use either the left or the right hand. However, one hand had to be selected previously, and during all the speech activity only that selected hand had to be used (Alteration of the hands, between left and right, during speech is not allowed).

Eg; The sign for “EV” (HOUSE) in TSL was a two-handed sign composed with two flat hands intersecting at the finger tips. However, the informant represented it with only one hand, giving the same hand shape.

5. TSL had both iconic and arbitrary signs with differentiating degrees of iconicity arbitrariness. TSL signs could be considered iconic in that some characteristic features of the corresponding referents were revealed through manual signs. However, without knowing TSL, it seems not possible to deduce the meanings of signs.

Eg; The personal pronoun “BEN” (I) seemed to be iconic in that it is represented directly by pointing the speaker him-/herself. The sign for “EV” (HOUSE) was also iconic to some extent; it resembled the roof of a house made by hands. Similarly, the sign for “GIT” (GO) was iconic in that it clearly showed direction.

6. Personal pronouns seemed to be distinguished within the use of different spatial areas, being similar to ASL and BSL.

Eg; “BEN” (I) and “SEN” (YOU) were produced at the front chest, whereas, “O” (HE/SHE) was produced further from the front chest, near to the head.

Still, this needed further clarification since personal pronouns were not identified exactly. On the other hand, in ASL and BSL time relationships (time adverbs and/or other time markers) were also expressed in terms of different spatial areas, by dividing the sign space in a similar way as it was for the personal pronouns. TSL had to be observed also to see whether it had this property or not.

7. It was noted that TSL did not seem to be displaying any inflections, affixes or markers for distinguishing tense, mood, aspect, case, person, plurality, negation, or interrogation. Such meanings seemed to be deduced via context, by separate lexical expressions (signs). Some more instances of case and plurality needed to be included into the exact corpus, to check this finding.
8. It was observed that TSL made use of three major parts of speech; namely, subject, object, and verb. The regular word order in (simple) TSL sentences appeared to be “S O V” structure. Still, TSL’s syntactic structure seemed to allow several other ways, too, to arrange subjects, objects and verbs.

Here, a question appeared: If there were no explicit linguistic inflections or markers in TSL, at least for case and person, how could a NOUN- TRANSITIVE VERB- NOUN sequence be expressed by different word order patterns? How is it possible to identify the subject and the object in such a sentence?

Eg; Turkish: Ben seni seviyorum. (i LOVE you)

Seni ben seviyorum. (I love you)

TSL : BEN SEN SEV

SEN BEN SEV

The change in the position of “BEN” and “SEN” in TSL, would result in the change of meaning as: “Sen beni seviyorsun”.

Therefore, sentence initial noun in TSL could be expected to be always the subject of the sentence. Consequently, no other order seemed to be possible. TSL could not allow object initial sentences such as “Beni sen seviyorsun” (YOU love me), or “Ayşe’yi Ali seviyor” (ALI loves Ayşe).

However, this was not a proved finding. It had to be tested in the main study to see whether there was a “semantically fixed case” in TSL, as Isenhath (1990:103) suggests the term, that did not allow any other sentence pattern than “S O V”.

9. In Turkish, sentence initial subject does not need to be necessarily indicated, it can be deduced from the personal suffix at the end of the verb.

Eg; “Ben okula gidiyorum”. (I am going to school.)

“ Okula gidiyorum”. (/-um/ implies 1st person singular, “ben”)

On the contrary, if there were no personal suffixes or any other person indicating markers in TSL, to be realized within verbs, sentence initial subjects (personal pronouns) could not expected to be omissible.

Eg; TSL: “BEN OKUL GİT”

“SEN OKUL GİT”

If the underlined personal pronouns in the above TSL sentences were deleted, the actors of the action “okula git-” remained inexplicit.

This assumption needed to be checked through representative sentences in the main corpus.

10. TSL seemed to be exhibiting linguistic variation in that the verb “GĪT” (GO), for example, was performed in (at least) two different ways quite randomly.

11. In ASL and BSL, signs with one tab are considered to be simple signs whereas, those with more than one are considered to be complex. TSL could also be assumed to have signs of both types. This assumption also needed to be further tested.

12. TSL seemed to be exhibiting declarative, interrogative, negative and imperative sentences. In fact, as it was observed from the data, there were no explicit linguistic markers (or some transformations) for each. As the interpreters also suggested, such sentence types were marked either with lexical items or by facial expressions.

3.1.6. Comments on the Pilot Study

Together with the partnership of the interpreters, this pilot study, the scope of which was quite restricted, came to be very useful in that it resulted in some findings, some new questions and assumptions that have been previously mentioned. They had to be appreciated during the preparation of the main corpus of the main study. Besides, the pilot study pointed out the necessity for further revisions concerning the application of the method and materials.

For instance, for the main study it was decided that it would be better if the informants were not given a list of sentences (the corpus as a whole); otherwise it would be hard for them to use both of their hands. Moreover, it would be difficult to recognize the facial expressions while they were looking at the list to read the sentences.

In the light of this pilot study, the exact work was believed to be handled more easily and practically. Consequently, the results were supposed to be more dependable.

3.2. The Main Field-work Study

3.2.1. The Main Study Corpus

1. Ben eve gidiyorum.
2. Eve gidiyorum.
3. Sen eve gidiyorsun.
4. Eve gidiyorsun.
5. Ev
6. Eve
7. Evde
8. Evden
9. Evi
10. Evim
11. Evin
12. Benim evim
13. Ev güzel.
14. Sen eve git.
15. Ben evdeyim.
16. O, evden mi geliyor?

17. Evin çok güzel.
18. Senin evin çok güzel.
19. Benim evim güzel değil.
20. Ben
21. Sen
22. O
23. Biz
24. Siz
25. Onlar
26. Ali ve Ayşe gidiyor.
27. Onlar eve gidiyor.
28. Özlem ve Zeynep gitmiyor.
29. Onlar gitmiyor.
30. Benim kardeşim subay.
31. Benim kardeşim gidiyor.
32. Kardeşim subay.
33. Kardeşin subay.
34. Senin kardeşin subay.
35. Benim kardeşim Cumartesi gidiyor.
36. Benim kardeşim Adana'ya gidiyor.
37. Benim kardeşim Cumartesi Adana'ya gidiyor.
38. Benim annem Cuma gidiyor.
39. Benim annem Cuma günü gidecek.
40. O benim annem.
41. Benim annem işitme engelli.
42. Benim annem işitme engelli değil.
43. Kız gidiyor.
44. Kız Cuma gidiyor.
45. Kız tuvalete gidiyor.
46. Subay tuvalete gitti.
47. Ben bugün gidiyorum.
48. Ben şimdi gidiyorum.

49. Ben sonra gideceğim.
50. Ben yarın gideceğim.
51. O dün gitti.
52. O az önce gitti.
53. Benim kardeşim var.
54. Benim kardeşlerim var.
55. Benim üç kardeşim var.
56. Benim bir kardeşim var.
57. Subay gidiyor.
58. Subaylar gidiyor.
59. Çok subay var.
60. Ev güzel.
61. Evler güzel.
62. Birçok ev güzel.
63. Ben seviyorum.
64. Ben seni seviyorum.
65. Beni sen seviyorsun.
66. Sen beni seviyorsun.
67. Ali Ayşe'yi seviyor.
68. Ayşe Ali'yi seviyor.
69. Ayşe'yi Ali seviyor.
70. Ali'yi Ayşe seviyor.
71. Bu gün yağmur var.
72. Bu gün yağmur yağıyor.
73. Ben yağmuru severim.
74. Yağmur severim ben.
75. Biz okula gidiyoruz.
76. Biz okula gidiyor muyuz?
77. Biz okula mı gidiyoruz?
78. Biz okula gitmiyoruz.
79. Siz eve gidersiniz.
80. Siz eve gittiniz.

81. Siz eve gittiniz mi?
82. Siz eve gider misiniz?
83. Siz eve gitmediniz.
84. Siz eve gitmezsiniz.
85. Siz derhal eve gidin.
86. Siz çabuk eve gidin.
87. Siz eve gidin.
88. Siz eve gelmez misiniz?
89. Siz eve gelir misiniz?
90. Ben gittim, o gelmedi.
91. Ben çok gittim, o hiç gelmedi.
92. Hep ben gittim, o asla gelmedi.
93. Ben söylüyorum, o anlamıyor.
94. Ben söylüyorum, söylüyorum, o anlamıyor.
95. O anlamıyor.
96. O anlıyor.
97. O, okula gider.
98. Biz eve geliriz.
99. O, okula gidince biz eve geliriz.
100. O, okula giderken biz eve geliyoruz.
101. Ben okula gidiyorum.
102. O, sonra geliyor.
103. Ben okula gittikten sonra o geliyor
104. Ben okula gitmeden o geliyor.
105. Ben okula gitmeden önce o geliyor.
106. Ben okula gittim.
107. Ben bir kız gördüm.
108. Ben okula giderken bir kız gördüm.
109. (Ben) okula giderken gördüğüm kız çok güzel.
110. Sen okula giderken bir kız gördün mü?
111. Ben okula giderken bir kız görmedim.
112. Sen okula giderken bir kız görmedin mi?

113. Ben söyledim.
114. O anlamadı.
115. Söylememe rağmen anlamadı.
116. Söylememe rağmen o anlamadı.
117. (Ben) söylememe rağmen o anlamadı.
118. O geldi, ben gittim.
119. O gelir gelmez ben gittim.
120. O gelmez.
121. O gelir.
122. O gelmez çünkü ben gittim.
123. Eğer o gelmezse, ben giderim.
124. O gelmezse, ben giderim.
125. O gelene kadar ben gitmeyeceğim.
126. Ben eve gelinceye kadar kardeşimi görmedim.
127. Ben eve gelene kadar kardeşim yoktu.
128. Ben eve geldim, kardeşim yoktu.
129. (Ben) eve geldim, kardeşim yok.
130. (Ben) eve geldiğimden beri kardeşim yok.
131. Ben kardeşimin okula gittiğini gördüm.
132. Annem ilçe konuşan kız benim kardeşim.
133. Ben okula gittim ve güzel bir kız gördüm.
134. Ben okula gitim ama güzel bir kız görmedim.
135. Ben eve geldiğimde kardeşim yoktu.

3.2.2. The Main Study Findings

3.2.2.1. The Structure of TSL Signs

It can be stated that the visual elements of TSL are quite comparable to the sound elements of spoken languages, more specifically, to those of Turkish. Thus, the “individual sign” in TSL can be considered being parallel to the “word” in Turkish. Being similar to words, TSL signs seem to be structured out of some components which are combined with one another in various ways to form words.

However, one major difference is that words are often analysed as being composed of sequential entities. For example, the Turkish word “ben” is analysed as a sequence of the phonemes [b], [e] and [n]; any alteration in this sequence results in a meaningless remainder. On the other hand, for the TSL sign “BEN”, a sequential analysis does not seem to be possible since the sign is rather perceived as a simultaneous combination of some components such as the body part acting (the dominant hand or both hands, as well as some other probable parts such as eye brows, the head, fingers, etc), the shape of the body part acting (flat or bended, horizontal or vertical hand), and the type of activity performed (the type of the movements of the hand).

Consequently, TSL signs can be said to be consisting of three major simultaneous components:

1. Tab: It refers to the location where sign activity occurs.
Eg; Neutral space in front of the body, the face area, the mouth, the shoulder, upper arm, etc

2. Dez: It refers to the configuration or the shape of the body part acting.
Eg; Flat hand, horizontal or vertical flat hand, bended hand, horizontal or vertical bended hand, index finger extended from closed fist, thumb extended from closed fist, etc.

3. Sig: It refers to the type of the movement of the body part acting in terms direction and manner.
Eg; moving the acting body part up or down, left to right or right to left, towards or away from singer, with a circular or twisting manner, etc.

It should be noted that in the identification of the above parameters the scope has been limited to deal mainly with the activity of the hands; the role of non-manual activity can further be dealt with. Still, all TSL signs have been observed to be composed of these three simultaneous components. Some examples are as follows:

TSL sign : BEN

Tab : chest

Dez : horizontal flat hand with fingers together and palm towards signer.

Sig : contact with tab (with chest) with a direct movement towards signer.

TSL sign : GIT

Tab : upper part of the dominant (generally right) hand side

Dez : vertical flat hand with fingers together, little finger being on the external side.

Sig : movement from wrist, away from signer.

TSL sign : VAR

Tab : chest

Dez : thumb horizontal flat hand with fingers separated, thumb towards signer

Sig : thumb's contact with the tab a few times

TSL sign : KIZ

Tab : chin

Dez : index and middle finger extended from closed fist, back of the hand being against signer.

Sig : contact with tab (with chin)

The above examples involve the use of only one hand. However, there are also two-handed signs, of two types: (1) where both hands move and (2) where the left or non-dominant hand remains stationary, and the dominant hand acts upon it. In type (1) both hands are considered to form a double dez; and in type (2) the stationary, non-dominant hand is considered to be the tab while the other is dez. Examples of both types, with analysis of their components are the following:

(1)

TSL sign : EV

Tab : neutral space in front of signer.

Dez : vertical flat hands with fingers together touching each other at finger tips

Sig : dezes contact one another

TSL sign : GÜN

Tab : neutral space in front of signer

Dez : palms against signer, the tips of thumbs and index fingers touching each other forming circles.

Sig : movements of dezes towards and against signer (slightly)

TSL sign : CUMARTESI

Tab : neutral space in front of signer

Dez : sphered hands facing each other with fingers separated.

Sig : movement of the fingers up and down

TSL sign : KARDEŞ

Tab : neutral space in front of signer

Dez : little fingers extended upwards from closed fist, (fists and little fingers touch each other), the back of the hands facing listener(s)

Sig : dezes contact one another, little fingers rub each other with up and down movements

TSL sign : ÇOK

Tab : neutral space in front of signer

Dez : fingertips (of each hand) touching each other, upwards

Sig : opening and closing fingertips

(2)

TSL sign: YARIN

Tab : non-dominant rounded (open) fist

Dez : dominant hand passing through

Sig : dez passing through the tab fingers being gradually extended upwards

TSL sign: ÖZLEM

Tab : non-dominant closed fist

Dez : thumb and index finger extended from closed fist

Sig : the tips of thumb and index finger touches each other and then departs twice (at either side of the tab)

Just as there may be more than one dez, as seen in examples (1), there may be more than one sig:

TSL sign: GÖR

Tab : high part of the check

Dez : index finger from closed fist

Sig : contact with tab than movement away.

Moreover, there are cases where a sign has more than one tab:

TSL sign : CUMA

Tab1: chin

Tab2: forehead

Dez : index and middle fingers joined together, extended from closed fist

Sig : contact with tabs (first tab1, then tab2)

Signs with more than one tab can sometimes be considered as compound signs due to the facts that (1) their notations, actually, involve the combination of the two separate signs, (2) the change of tab often involves a change of dez also.

The above examples have been demonstrated to explain how TSL signs can be analyzed into tab, dez and sig. Furthermore, contrasts among these components are also possible which imply minimal pairs:

TSL sign: SUBAY

Tab : the shoulder of the dominant hand

Dez: bended and separated index and middle fingers, extended from closed fist

Sig: contact with tab (with the shoulder)

TSL sign: TUALET

Tab : the shoulder of the dominant hand

Dez : flat, separated index and middle fingers extended from the closed fist

Sig : contact with the tab (with shoulder)

The signs “SUBAY” and “TUALET” can be considered as a minimal pair because they only contrast in dez.

The above demonstrations may be said to reveal how TSL signs are structured. However, without some drawings they may remain inadequate to provide an exact vision of the signs. This is because the notation for tab, dez and sig does not give all the details necessary to form signs, such as the angular position of the hands, since many signs are quite more complex to be expressed in words. Besides, TSL signs can not be transcribed using an existing phonetic notation system and devising one is a task beyond a preliminary research; for rough and rapid transcription using Turkish glosses in capitals are preferred, following the American and British practices.

Apart from these elements of TSL sign structure, we may put forward a few constraints on the structure and performance of TSL signs. First of all, we may point out the sign space:

In TSL, the sign space, vertically, consists of the distance from below the waist up to the top of the head. All signs are performed within this area; however one may find some probable exceptions (eg; pointing the knee for the sign "DİZ"). This limitation in the sign space may be considered to be due to practicality. The signs must be visible for "listeners" (or audience) in order to be perceived explicitly and clearly.

As for the use of the hands we can state that alteration of the hands, between left and right, during speech is not allowed. TSL consists of signs that are produced either with one hand or with both hands. For one-handed signs, it is possible to use either the left or the right hand just in case, it is decided previously. During all the speech activity only that selected hand (either right or left) must be used. As for two-handed signs, the dominant (active) hand must be, again, the one which was selected; the other operates as the "non-dominant" (passive or stationary) hand.

Another obvious constraint on the structure of TSL signs (as well as of the signs of other manual languages) is that they all have the three simultaneous components: “tab”, “dez”, and “sig”. However, in the case of the combination of sigs, the movements involved can not be simultaneous but, necessarily, be sequential. For example, one can not display a movement towards or away from the signer simultaneously; it is only possible sequentially.

The final constraint to be mentioned here is the one on the structure of TSL signs, which is called “symmetry condition”. According to this condition (see Deuchar 1994:49), “If both hands move in a two-handed sign, they must both have the same hand shape and the same movement.” This condition, the examples of which can be observed in TSL signs (“EV”, “ADANA”, “CUMARTESİ”, “KARDEŞ”, “GÜN” and “ÇOK”), is said to be apparent in ASL and BSL, too (1994:78).

Finally, it will be worth mentioning here that the process of “hand deletion” is also observed in TSL. This process has been observed in signs where both hands are used. One of the hands can be deleted unless this deletion causes ambiguity.

Eg: “EV”

Actually this TSL sign is a two-handed sign with two flat hands touching each other at finger tips. However, an informant represented it with only one hand with the same shape (this was observed in the pilot study data)

Eg. "ÇOK"

This TSL sign is also a two handed sign (all fingers of the hands, in a vertical shape with fingertips, towards upwards, opening and closing at fingertips) as it has been noticed in the sentences "Evin çok güzel" (17), "Senin evin çok güzel" (18), "Çok subay var" (59), and "Ben çok gittim, o hiç gelmedi" (91). However, in the sentence "(Ben) okula giderken gördüğüm kız çok güzel" (109), the word can also be displayed using one hand, to give the same meaning.

3.2.2.2. Is TSL Iconic or Arbitrary?

This is one of the mostly asked questions about sign languages. Indeed, this is a crucial question in that the presence of iconicity seems to imply the lack of arbitrariness.

It may be assumed that a language that is realized through a visual medium tends to exhibit more iconicity than any other language which is performed through an auditory medium, because the visual associations of the objects in the external world may be more representative than the auditory associations. Accordingly, as it has been observed through data, TSL makes use of iconicity in many of the signs. Some visual characteristics of the objects in the external world are revealed through corresponding manual TSL signs. Associating examples go as follows:

TSL sign: "BEN"

(Hand directly points signer)

TSL sign: "EV"

(Flat hands with closed fingers touching one another at the fingertips
outline roof and walls of a house)

TSL sign: "SUBAY"

(Index and middle fingers(from closed fist) point shoulder as if to visualize the epaulets)

TSL sign: "ADANA"

(sphered hands move together so as to represent a mass of cotton, which specifically grows in Adana, being picked)

Another point to mention here is that the degree of iconicity in TSL signs has been observed to be on a gradual slope. That is some of them are more iconic than some others. In the above listed examples, the degree of iconicity inclines respectively. Therefore, two categories among TSL signs can be postulated associating with Dobrovolsky's criteria for specifying types of signs (see page 18,19).

- (i) Iconic Signs: Iconic signs are those which resemble some visual characteristics of the referents they represent.

Eg; "EV", "SUBAY", "ADANA", "ANNE", "SABAH", etc.

- (ii) Indexic signs: Indexic signs are those through which their referents are directly pointed.

Eg; Personal pronouns such as "BEN", "SEN", etc. and supposingly the signs indicating some parts of the body such as head, ear, nose, etc. (see also Deuchar, 1984: 13-15)

Besides, it would be misleading to assume that because TSL makes use of iconicity this is its only resource, and that TSL fails in representing non-visual meanings. Such an assumption would result in the conclusion that TSL is limited in what it can communicate. However, abstract concepts, also, can well be expressed through TSL. The data represents many arbitrary TSL signs as well:

TSL sign : “KIZ”

(Fixed index and middle fingers, extended from closed fist, touch the chin)

TSL sign : “CUMA”

(Fixed index and middle fingers, extended from closed fist, touch the chin first then the forehead)

TSL sign : “TUVALET”

(Separate index and middle fingers, extended from closed fist, touch the shoulder.)

A final point, here, is that iconicity must not be perceived to be equal to transparency. There may be an iconic relationship between a sign and its referent but this does not mean that the sign can be understood without a previous knowledge of its meaning. The above mentioned “indexic signs” can be considered as being transparent since their meanings can be guessed without a prior knowledge, however the so called “iconic signs” can not be.

3.2.2.3.Aspects on Morpho-Syntactic Structure of TSL

So far we have looked at TSL at the level of individual sign and observed that signs are analysable in terms of certain simultaneously occurring components. However, our analysis must now be extended beyond the limits of the individual signs in order to see what happens when signs are put together to produce meaningful utterances.

At this point, our task appears to be “discovering” some grammatical aspects of a language that has not yet been described, and on which no research at all,so far, has been done. Here we have a few possibilities to start with: One is to choose a familiar spoken language like Turkish to search for some equivalences of it in TSL grammar. The other is to apply some previous studies on some other languages like ASL and BSL, to TSL. Another one is to search for links between linguistic structure (form) and grammatical function. Within this preliminary study, these three approaches have been tried, as applying only one of them did not seem to be adequate to find out the grammatical features of an undiscovered language.

Generally speaking, the term “morphology” is used to refer to both derivation, relating words of different grammatical categories such as “produce”, “production”, “productive” and inflection, relating forms of the same grammatical category such as “produce”, “produces”, “produced”. In spoken languages like Turkish, inflection and derivation operate through affixes which are added to the base. Eg; “yapı” (Structure), (N), “yapı+sal” (Structural) (Adj), “Ev”(House), “Ev+ler” (Houses), “ev+de” (at the house), ev+ler+de (at the houses). As for TSL, such sequentially added affixes are obviously not found. On the other hand, as our initial findings revealed, signs might be formed simultaneously. The simultaneous components of TSL (tab, dez and sig) have been checked through as well, to see if there are some alterations in their use, to imply such derivations and/or inflections, or not.

However, as far as the available data are concerned, no such finding was available either. Accordingly, what has been noted is that TSL does not seem to have inflections, affixes or linguistic markers for distinguishing tense, mood, aspect, person, case or number and such meanings seem to be deduced via context or through independent lexical items or expressions (signs) as the following data from the pilot study corpus demonstrate:

Tense and Aspect

Turkish sentence: Ben okula gidiyorum (1)

TSL correspondence : BEN OKUL GİT.

TR: Ben okula gittim. (5)

TSL: BEN OKUL GİT

TR: Ben okula gideceğim (6)

TSL: BEN OKUL GİT

TR: Sen okula gittin.(4)

TSL: SEN OKUL GİT

TR: Biz okula gidiyoruz. (18)

TSL: BİZ OKUL GİT

TR: Biz okula gittik (19)

TSL: BİZ OKUL GİT

TR: Biz okula gitmiştik (8)

TSL: BİZ OKUL GİT

TR: Biz okula gidiyorduk (17)

TSL: BİZ OKUL GİT

TR: O, okula gitmiş (22)

TSL: O OKULA GİT

TR: O, okula gidecek (7)

TSL: O OKUL GİT

TR: O, okula gidiyor olacak (20)

TSL: O OKUL GİT

TR: O, okula gitmiş olacak (21)

TSL: O OKUL GİT

TR: Siz okula gideceksiniz (13)

TSL: SİZ OKUL GİT

TR: Siz okula gidecektiniz (14)

TSL: SİZ OKUL GİT

All these Turkish sentences with differing tenses (mood, aspect) that are marked differently within verbs, correspond to the same TSL sign (verb) GİT- in which no tense marker is observed.

On the other hand, the following sentences from the main corpus involve some lexical expressions, in the form of independent signs to indicate time. These lexical expressions can be said to form a linguistic context through which time references can be deduced.

TR: Ben şimdi gidiyorum (48)

TSL: BEN ŞİMDİ GİT

TR: Ben sonra gideceğim (49)

TSL :BEN SONRA GİT

TR: Ben bugün gidiyorum (47)

TSL: BEN BUGÜN/ŞİMDİ GİT.

TR: Ben yarın gideceğim (50)

TSL: BEN YARIN/SABAH GİT

TR: O dün gitti (51)

TSL: O DÜN GİT

TR: O az önce gitti (52)

TSL: O AZ ÖNCE GİT

Moreover in TSL, we may observe some aspectual use of adverbs or other expressions related to time as it also appears in Turkish:

TR: Ben çok gittim, o hiç gelmedi. (91)

TSL: BEN ÇOK GİT O HİÇ GEL DEĞİL

TR: Hep ben gittim, o asla gelmedi. (92)

TSL: HEP BEN GİT O ASLA/HİÇ GEL DEĞİL

The underlined lexical items, in both languages, attach habitual meanings to sentences rather than “past” meanings.

One other thing which is observed here is that in TSL time expressions seem to be limited in number in comparison with Turkish; that is, only one TSL sign is assigned for each of the following couples “bugün/şimdi”. “yarın/sabah” and “çabuk/derhal”.

Person

In spoken languages like Turkish, ‘person’ is another notion which is indicated within verbs through some linguistic markers in the form of affixes. However, as we previously emphasized, TSL seems to lack such markers, too. These are the examples chosen from the main corpus:

TR: Ben eve gidiyorum. (1) (1st person sing.)

TSL: BEN EV GİT

TR: Sen eve gidiyorsun. (3) (2nd person sing.)

TSL: SEN EV GİT

TR: Onlar eve gidiyorlar. (27) (3rd person, plural)

TSL: ONLAR EV GİT

TR: Biz okula gidiyoruz (75) (1st person, plural)

TSL: BİZ OKUL GİT

TR: Siz eve gittiniz (80) (2nd person plural)

TSL: SİZ EV GİT

TR: Siz eve gidersiniz. (79) (2nd person plural)

TSL: SİZ EV GİT.

The sentences (2) and (4) represent a more crucial point:

TR: Eve gidiyorum (2)

TSL: EV GİT

TR: Eve gidiyorsun (4)

TSL: EV GİT

In Turkish, as we know, sentence initial subjects need not be necessarily indicated, they can be deduced from corresponding personal suffixes attached to verbs. The Turkish sentences (2) and (4) above, represent this quite well.

On the contrary, since TSL does not involve personal inflection of any kind, sentence initial subjects can not be expected to be omissable in TSL unless they are available in the context. Otherwise, as the TSL equivalents of the Turkish sentences (2) and (4) imply, the actors of the actions remain inexplicit.

Case

Spoken languages like Turkish often involve inflections for case, as well as for some other devices, as we have just mentioned above, by which the relationship between participants in a sentence is made explicit. The inflections for case in Turkish involve namely, the “nominative”, “accusative”, “dative”, “locative”, “ablative” and “progressive” cases. Thus, for the noun “ev”, for example, Turkish has the following case paradigm:

- i) ev (nominal)
- ii) evi (accusative)
- iii) eve (dative)
- iv) evde (locative)
- v) evden (ablative)

However, TSL seems to exhibit no such inflections either, as it is observed in the following examples:

Turkish	TSL
Ev(5)	
Evi(9)	
Eve(6)	
Evde(7)	“EV”
Evden(8)	
Evim(10)	
Evin(11)	

TR: Ev güzel (13)

TSL: EV GÜZEL

TR: Sen eve git (14)

TSL: SEN EV GİT

TR: Ben evdeyim (15)

TSL: BEN EV

TR: O evden mi geliyor? (16)

TSL: O EV GEL ?

TR: Senin evin çok güzel (18)

TSL: SEN EV ÇOK GÜZEL

TR: Benim evim (12)

TSL: BEN EV

Since TSL lacks such inflections, the relationship between the participants of sentences are supposed to be deduced out of context or perhaps by some non-manual features such as facial mimics or gestures. For example, the above Turkish sentences (12) and (15) are represented identically in TSL, although they refer to different meanings (non-manual components in TSL is a topic which should be dealt with on its own through another corpus of relevant and adequate data, which seems beyond the scope and limits of this study).

Number

Number is another grammatical issue found in most languages. Spoken languages like Turkish and English involve “number” in plural vs. singular marking of nouns as well as through the use of lexical number expressions. As for TSL, it seems to make use of the latter only. In other words, it has no inflections to mark singularity or plurality, instead, it makes use of lexical signs indicating number. We have the following examples from the corpus:

TR: Subay gidiyor. (57)

TSL: SUBAY GİT

TR: Subaylar gidiyor (58)

TSL: SUBAY GİT

TR: Ev güzel (13) (60)

TSL: EV GÜZEL

TR: Evler güzel. (61)

TSL: EV GÜZEL

TR: Benim kardeşim var (53)

TSL: BEN KARDEŞ VAR

TR: Benim kardeşlerim var (54)

TSL: BEN KARDEŞ VAR

The singular and plural forms of the above mentioned nouns “subay”, “ev” and “kardeş” are the same in TSL. Rather, TSL has such utterances:

TR: Benim üç kardeşim var (55)

TSL: BEN ÜÇ KARDEŞ VAR

TR: Benim bir kardeşim var (56)

TSL: BEN BİR KARDEŞ VAR

TR: Çok subay var (59)

TSL: ÇOK SUBAY VAR

TR: Birçok ev güzel (62)

TSL: BİRÇOK EV GÜZEL

Having looked at some grammatical notions as they are realized in TSL, we shall now mention grammatical categories, which might be termed as ‘parts of speech’. One of the linguistic universals on natural languages is the assumption that they have at least two syntactic categories, namely, noun and verb, depending on their basic functions in a sentence as the former constituting the subject and the latter, the predicate. Although it may be arguable whether there is a distinction of form between nouns and verbs and between objects and subjects (consider the sentence (15) of the main corpus: “Ben evdeyim” which is realized in TSL as “BEN EV”), it has been observed that, TSL makes use of three major parts of speech: subject, object and verb, depending on their functions in TSL sentences.

TR: Ben eve gidiyorum. (1)

TSL: BEN EV GİT
S O V

TR: Benim kardeşim Adana'ya gidiyor. (36)

TSL: BEN KARDEŞ ADANA GİT.

S O V

TR: Kız tuvalete gidiyor. (45)

TSL: KIZ TUVALET GİT
S O V

The parts of speech found in TSL, other than noun and verb, are adjectives, adverbs, pronouns, conjunctions and the adjective (adverb) qualifier “çok” as they are exemplified below:

Adjectives:

TR: Benim üç kardeşim var. (55)

TSL: BEN ÜÇ KARDEŞ VAR.

TR: Ben okula gittim ve güzel bir kız gördüm. (133)

TSL: BEN OKUL GİT VE GÜZEL BİR KIZ GÖR.

Besides, being similar to Turkish, TSL seems to use pre-modification: “Adj. + Noun”.

Qualifiers:

TR: (Ben) okula giderken gördüğüm kız çok güzel. (109)

TSL: BEN OKUL GİT GÖR KIZ ÇOK GÜZEL.

TR: Senin evin çok güzel. (18)

TSL: SEN EV ÇOK GÜZEL.

Adverbs

TR: Ben çok gittim o hiç gelmedi. (91)

TSL: BEN ÇOK GİT O HİÇ GEL DEĞİL.

TR: O dün gitti. (51)

TSL: O DÜN GİT.

TR: Ben şimdi gidiyorum. (48)

TSL: BEN ŞİMDİ GİT.

TR: Siz çabuk eve gidin. (86)

TSL: SİZ ÇABUK EV GİT.

Conjunctions

TR: Özlem ve Zeynep gitmiyor. (28)

TSL: ÖZLEM VE ZEYNEP GİT DEĞİL.

TR: Ben okula gittim ve güzel bir kız gördüm (133)

TSL: BEN OKUL GİT VE GÜZEL BİR KIZ GÖR.

TR: O gelmez, çünkü ben gittim. (122)

TSL: O GEL DEĞİL ÇÜNKÜ BEN GİT.

Personal pronouns

It has been observed that TSL has lexical items to stand for personal pronouns “ben”, “sen”, “o”, “biz”, “siz”, “onlar” as all the informants presented. One common point that has been noticed in all of them is that they all involve a sort of indexing, mostly with the index finger. Besides, TSL may be said to have a tendency to use different spatial areas for the personal pronouns. For example, the distance between the area and the signer increases gradually for the signs “BEN”, “SEN” and “O” (respectively). However, the use of personal pronouns exhibits some inconsistencies both among and within signers, especially depending on whether they are used alone or within utterances. Still, they tend to have similarities. Let us consider them in detail:

“BEN”: Two forms of “BEN” have been noted within data obtained from 3 informants within sentences (1), (12), (15), (19), (20)

1) Tab: chest

Dez: horizontal, flat hand with fingers joined together

Sig: contact with tab, with a direct movement

2) Tab: chest

Dez: bended fingers of the active (right) hand

Sig: contact with tab, with a direct movement

“SEN”: This pronoun has been performed the same way by all the informants. Consider the sentences (3), (14), (18), (34), (21)

Tab: neutral space in front of signer

Dez: index finger extended from closed fist

Sig: dez points (somewhere) across signer a few times, intermitently

“O”: This personal pronoun also exhibits variations: See, sentences (16), (22), (40), (51), (52)

1) Tab: upper part of the neutral space

Dez: index finger extended from closed fist

Sig: dez points somewhere far, against the active (right) hand

2) Used as being similar to the pronoun “SEN”, by the second informant in the sentences (51), (52), (40)

3) Tab: upper part of the neutral space

Dez: index finger extended from closed fist

Sig: dez points, a few times, somewhere away from signer on the side of the active hand

“BIZ”: Consider especially the sentences (23), (75), (76), (77), (78)

1) Tab1: a little upper part of the neutral space

Tab2: chest

Dez: index finger extended from closed fist

Sig1: dez moves as if to draw a circle around tab1

Sig2: contact with tab2 with a direct movement

2) Tab: neutral space in front of signer

Double dez: index fingers extended from closed fists

Sig: dezes move so as to form a circular shape together.

- 3) Tab1: chest
 Tab2: neutral space in front of signer
 Dez1: horizontal flat hand with fingers joined together
 Dez2: index finger extended from closed fist
 Sig1: dez1 directly touches tab1
 Sig2: dez2 moves with a circular movement around tab2

“SİZ”: Consider the sentences (24) and (79-90)

- 1) Approximately same as “SEN”
- 2) Tab: neutral space in front of signer
 Dez: index finger extended from closed fist
 Sig: dez moves around tab1 with a circular motion
- 3) Similar to above mentioned second “BİZ”, but sometimes with only one hand

“ONLAR”: The informants have presented this pronoun mostly in an identical manner with “O” and sometimes, with “SİZ”. It is hard to specify how it is actually performed. The inconsistencies on the use of this pronoun may be due to the fact that the pronoun has a plural implication. (In Turkish it may be thought as being composed of the morphemes {O} and {-lAr})

The findings obtained so far have put forward that TSL does not make use of inflections within its grammar, resembling the so called isolating languages, the typical instance of which is known as to be Chinese. However, in such languages that do not have inflections, word order often functions so as to provide relationships between the participants that make up a sentence.

When the word order in TSL is considered, it is observed that despite TSL has its own structure, Turkish has some influences on TSL syntax as well as it has on TSL vocabulary. To exemplify the influence of Turkish on TSL vocabulary, we may consider the use of some proper names in TSL, as the data provide:

TR: Ali ve Ayşe gidiyor. (26)

TSL: A VE A GİT.

TR: Özlem ve Zeynep gitmiyor. (28)

TSL: Ö ve Z GİT DEĞİL

For the above proper names, fingerspellings were used through handshapes resembling Turkish letters (“Ö” for “Özlem”, “Z” for “ZEYNEP” and “A” for “ALİ” and “AYŞE”).

As for Turkish influence on TSL syntax, it has been noticed that the order of signs tends to approximate to that of Turkish words. Consequently, the regular word order in TSL sentences appears to be “S O V” and again being similar to Turkish, TSL’s syntactic structure still seems to allow several other ways too, to arrange subjects, objects and verbs. The following is a group of examples:

TR: Ben eve gidiyorum. (1)

TSL: BEN EVE GİT.

TR: Benim annem cuma günü gidecek. (39)

TSL: BEN ANNE CUMA GÜN GİT.

TR: Ben okula giderken bir kız gördüm. (108)

TSL: BEN OKUL GİT BİR KIZ GÖR

TR: (Ben) okula giderken gördüğüm kız çok güzel. (109)

TSL: BEN OKUL GİT GÖR KIZ ÇOK GÜZEL

TR: Ben yağmuru severim. (73)

TSL: BEN YAĞMUR SEV.

TR: Yağmur severim ben. (74)

TSL: YAĞMUR SEV BEN.

TR: Biz okula gitmiştik. (8) (pilot study corpus)

TSL: BİZ OKUL GİT.

TR: Okula biz gitmiştik. (9) (pilot study corpus)

TSL: OKUL BİZ GİT

TR: Gitmiştik biz okula (10) (pilot study corpus)

TSL: GİT BİZ OKUL

Here a question appears: If TSL does not make use of inflections to indicate the relation of the participants of sentences, how can it allow its word order to be freely organized, especially for such sequences as “NOUN-TRANSITIVE VERB-NOUN” ? Let us consider the relevant examples from the main corpus:

TR: Sen beni seviyorsun. (66)

S O V

TSL: SEN BEN SEV

TR: Beni sen seviyorsun. (65)

O S V

TSL: BEN SEN SEV

TR: Ben seni seviyorum (64)

S O V

TSL: BEN SEN SEV

For the Turkish sentences, the change in the position of subject and object does not result in an inexplicity or any ambiguity since the object “beni”, in the sentence “beni sen seviyorsun”, is marked by the accusative case ending. However, when we check through the corresponding TSL sentence, we clearly notice that the change in the position of “BEN” (the object) and “SEN”(the subject), results in an ambiguity, or in a totally meaningless utterance.

The explanation for such a situation can be twofold: On one hand, we may assume that there is a “semantically fixed case” in TSL, as Isenhath (1990:103) suggests the term, that does not allow any other sentence pattern than “S O V”, indicating that for at least such sequences as “NOUN-TRANSITIVE VERB-NOUN”, “syntactic well formedness” is closely related to “semantic well formedness”. On the other hand, given the facts that spoken language of the hearing majority (Turkish) is more prestigious and that the attitudes towards signing are generally negative on the part of the hearing (see Deuchar 1984:183,184) the informants, despite all the instruction, might have performed the signs following the Turkish word order as they read from the corpus, with the aim and effort of providing a TSL equivalent for each and every Turkish sentence.

Now we shall move our attention from word order to sentence types and say that, as far as the data is concerned, TSL seems to be able to provide equivalents for declarative, interrogative, negative and imperative types of Turkish sentences, as well as simple and complex ones. On the basis of spoken languages, we may suppose that there are three ways by which interrogative, negative and imperative sentence types can be distinguished in TSL:

- i. transformations in word order
- ii. the insertion of some linguistic particles, or lexical items (signs)
- iii. intonation (non-manual activity)

As we have discussed before, since subject and object in TSL are marked by word order, transformations may result in changes in meaning, rather than distinguishing sentence types. Therefore, we may not expect sentence types in TSL to be marked in this way as our data also seem to be supporting. Consequently, as the interpreters have also suggested, such sentence types appear to be distinguished either with lexical items inserted, or by facial expressions, or both. The examples are as follows:

Interrogative Utterances

Considering the interrogative sentences, we have observed that a sign in the shape of question mark (“?”) is added to the end of the corresponding TSL utterances, as in (76), (77), (110) as well as some others. However, there are also interrogative TSL utterances in the data that are not marked with the “question mark sign”. This has led us to assume that non-manual expressions may also be operating for interrogation, just as intonation is used in spoken languages like Turkish and English (Tr. Geliyosun?, Eng. You are coming?) Unfortunately, the use of non-manual activity is beyond the scope of our study. Still, interpreters have approved our assumption on the use of non-manual activity.

Negative Utterances

By observing the data, it is possible to claim that negative TSL utterances are being marked with an addition of a specific sign to the end (see sentences (78), (83), (84),(90),(111)). This sign may be considered to have the Turkish meaning “değil”; in fact, the two are not completely identical since TSL makes use of another sign to mean “değil”. (see sentence (9) “Benim evim güzel değil”) Another point is that in TSL it does not seem to be possible to create stress differentions as in the Turkish sentences “Biz okula gidiyor muyuz?” (76) and “Biz okula mı gidiyoruz?” (77). The negation sign in TSL seems to appear only at the end of utterances.

Imperative Utterances

It seems that in TSL the imperative meanings are attached to utterances by the use of separate lexical items such as “derhal/çabuk”. No inflections that imply imperatives have been observed (see sentences (85), (86) and (14), (87)). Besides, possible use of non-manual activity may also be operating.

Moreover, combinations of these sentence types are also possible with the use of the above mentioned markers one after the other.

Eg;

TR: “Sen okula giderken bir kız görmedin mi?”

TSL: SEN OKUL GİT BİR KIZ GÖR DEĞİL ?

In such cases, as in the order in Turkish, the question sign is preceded by the negative sign.

As for complex sentences, what we have observed is that they are formed by the performance of the underlying simple sentences one after the other, or by the arrangement of the lexical items one by one, as they are ordered in the Turkish equivalents.

TR: Ben okula gidiyorum. (101)

TSL: BEN OKUL GİT

TR: O sonra geliyor. (102)

TSL: O SONRA GEL

TR: Ben okula gittikten sonra o geliyor. (103)

TSL: BEN OKUL GİT SONRA O GEL

TR: Ben okula gittim. (106)

TSL: BEN OKUL GİT

TR: Ben bir kız gördüm. (107)

TSL: BEN BİR KIZ GÖR

TR: Ben okula giderken bir kız gördüm. (108)

TSL: BEN OKUL GİT BİR KIZ GÖR

TR: Ben kardeşimin okula gittiğini gördüm. (131)

TSL: BEN KARDEŞ OKUL GİT GÖR

For the sentence (131), the TSL equivalent does not involve the articulation of the underlying simple sentences “Kardeşim okula gitti” and “Ben gördüm”. Instead, all the lexical items in the Turkish sentence are presented one by one through TSL signs, the relation among them being inexplicit unless the sentence is used within proper context.

To conclude, our major findings concerning the sentence types and formation in TSL might appear to be that TSL tends to use rather simple sentences and that deep structures of the sentences are represented as surface structures.

3.2.2.4. Is TSL a Language?

This is a very common question which might often be asked about all sign languages. Besides, it may be difficult to answer this question since it requires a definition for “language” and accordingly an agreement on the defining characteristics of it.

As we have discussed in previous chapters, a definition of language as “a systematic means of communication” is not adequate since it includes systems like traffic signals, too. What we have to do is to consider some other functions as well, such as “arbitrariness”, “duality”, “discreteness”, “productivity” and “displacement”.

Arbitrariness in TSL

As mentioned before, in modern linguistics arbitrariness, which may briefly be taken as “non-iconicity”, is considered to be a defining property of language, especially on the basis of the work of de Saussure’s.

On the other hand, as Deuchar (1984: 19) puts forward;

“ We may make several observations about this view of arbitrariness: first, it was not designed to encompass sign languages, whose medium, as has been pointed out, may lend itself more to non-arbitrary representation; second, linguists before the time of Saussure were divided as to whether language was governed by nature or convention. (Robins,1967:17), the latter now usually being associated with arbitrariness; third, arbitrariness was discussed by Saussure with reference to the relationship between words and their meanings and not, for example, with reference to syntax.”

Besides, we have seen that although TSL appears to be more iconic than spoken languages like Turkish, it has also proved to have many arbitrary signs. So, we may perhaps suggest that these two properties “arbitrariness” and “iconicity” can occur together in a language, within a balance, as long as “conventionality” is maintained. Thus, conventionality may be considered to be more important than arbitrariness (see Deuchar,1984: 193). Iconicity in TSL does not lead to a sort of freedom preventing conventionality even those iconic signs are said to be culturally determined.

Duality and Discreteness in TSL

Just as spoken languages like Turkish, TSL can also be considered to be organized within two levels of structure (primary and the secondary levels), the units of the primary level being composed of the elements of the secondary level. For example, the TSL sign “BEN” has a particular *meaning* on the *primary level*, and has the parts which compose this particular meaning, *the flat hand touching the chest with a direct movement*, on the *secondary level*. Such elements of the secondary level do not have meanings on their own, however, they, altogether, form particular meanings at the primary level.

All the individual signs in TSL can be analysed as being organized out of these levels. This property of TSL shows it exhibits “duality”.

Moreover, “discreteness” can also be observed in TSL as it lies at the secondary level mentioned. Different uses of the visual elements of the secondary level, the shape of the dominant body part acting, its location, and the type of movement involved, may result in distinctive meanings. For example, the only difference in the articulation of the signs “SUBAY” and “TUVALET” is in the shape of the fingers where they are bent in “SUBAY” and not for “TUVALET”. Such contrasts, as illustrated above, represent that TSL has the property of “discreteness”.

Displacement in TSL

Another defining property of language which TSL seems to exhibit is “displacement”. Our data provide many examples so as to prove that TSL signers are able, through TSL, to refer to events, objects, and persons away from the immediate setting:

TR: Benim kardeşim Cumartesi Adana'ya gidiyor. (37)

TSL: BEN KARDEŞ CUMARTESİ ADANA GİT

TR: Ben yarın gideceğim. (50)

TSL: BEN YARIN/SABAH GİT

TR: Ben okula giderken bir kız gördüm. (108)

TSL: BEN OKUL GİT BİR KIZ GÖR

Productivity in TSL

We know that languages have the potential to produce indefinite number of new utterances through finite number of elements and rules and that, this property is called “productivity”

So far, we have tried to identify some grammatical rules concerning TSL and supposingly we have managed to do so, at least to an extent to enable ourselves to proclaim: “TSL is a system and it is rule-governed”. As it has been observed, the rules are being used by TSL signers “productively” to form new utterances and there seems to be no limit to what they can talk about. Thus, TSL explicitly has the property of “productivity”.

CHAPTER IV: CONCLUDING REMARKS

Whatever its definition be, it is obvious that language plays a central part in our social lives enabling us, first of all, fully communicate with others; and there seems to be no limits on what we can communicate and on how we do so through language. Apart from “communication”, language provides us with “personal identities” as well and perhaps as a consequence, we come to judge people by and for the language they speak.

On these grounds, it may not be wrong to consider Turkish Sign Language (TSL) as the native language of a group of Turkish people who share at least one common identity: “deafness”. However, it may not be wrong as well, to talk about a common ignorance and confusion on TSL, generally on the part of the hearing majority. TSL might often be judged as being a “totally iconic, imitative and primitive language”, unlike Turkish, or even further, unlike standard Turkish; or it may not be judged at all, since it has not yet been described .

Although it may be misleading to claim that Turkish Sign Language can fulfil all the functions of Turkish, one of the goals of this thesis has been to serve as a guide to understand Turkish Sign Language as a communication system.

In the first part of the thesis, the notions “language” and “communication” have been discussed from a linguistic point of view; in the second, the term sign language has been introduced in terms of its basic properties and sign language studies in the world have been considered. Finally, in the third part, the technical aspects of Turkish Sign Language has been planned to be presented. It will be noticed that throughout the thesis there is considerable reference to ASL and BSL. The reason for this is that these sign languages have been more extensively studied by linguists than other sign languages have been and that certain comparisons have been expected to be useful.

Because of the focus on the linguistic structure of TSL, information about deaf culture or deaf community is not included in the thesis. Studies on such topics as well as on some other macro levels may further be suggested. However, without an explanatory and descriptive introduction to the subject, studies on macro levels would not be fruitful.

This study on sign languages and particularly on Turkish Sign Language is certainly accepted to be far away from being a complete grammatical analysis. Rather, it must be viewed as a preliminary attempt, the primary aim of which is provide a basis for a possible complete analysis. The list of the considered issues has been provided in the first chapter under the heading “research topics”.

Further research on the topic may prove some of our findings to be inadequate or even incorrect. Still, we hope this study to be helpful for answering some questions and for conducting further research.

BIBLIOGRAPHY

- AITCHISON, Jean. *Teach Yourself: Linguistics*, Hodder & Stoughton, London, 1992.
- AKMAJIAN, Adrian et al. *Linguistics: An Introduction to Language and Communication*, The MIT Press, Massachusetts, 1995.
- ASHER, R. E. and J. M. Y. SIMPSON (eds.), *The Encyclopedia of Language and Linguistics: Vol. 7*, Pergamon Press, Oxford, 1994.
- BAŞKAN, Özcan . *Bildirişim: İnsan-dili ve Ötesi*, Altın Kitaplar, İstanbul, 1988.
- BAYNTON, Douglas. *Forbidden Signs: American Culture and the Campaign Against Sign Language*, The University of Chicago Press Ltd., Chicago, 1996.
- CHAFE, L. Wallace. "The Use of Symbols" Raja T. Nasr (ed.), *The Essentials of Linguistic Science*, Longman Group Limited, Great Britain ,1983.
- CHOMSKY, Noam . *Syntactic Structures*, Mouton Publishers, New York, 1975.
- CRYSTAL, David. "Semiotics" Raja T. Nasr (ed.), *The Essentials of Linguistic Science*, Longman Group Limited, Great Britain , 1983.
- CRYSTAL, David. *The Cambridge Encyclopedia of Language*, Cambridge Univ. Press, Cambridge,1987.
- CRYSTAL, David. *An Encyclopedic Dictionary of Language and Languages*, Blackwell Publishers, Oxford. 1992.

DAVIS, Lennard (ed.). *The Disability Studies Reader*, Routledge, New York, 1997.

DEUCHAR, Margret. *British Sign Language*, Routledge & Kegan Paul, London, 1984.

FINEGAN, E. and N. BESNIER. *Language Its Structure and Use*, Harcourt Brace Jovanovich Publishers, USA, 1989.

FROMKIN, V. and R. RODMAN. *Linguistic Science*, Holt, Rinehart and Winston, Inc., Orlando, Florida, 1983.

GUMPERZ J. John and HYMES DELL, (eds.). *Directions in Sociolinguistics; The Ethnography of Communication*, Basil Blackwell, Oxford, 1986.

<http://kybele.anadolu.edu.tr/kybele.cgi?...&KTLG=TP&SIRA=128&NUM=85892>

<http://www.signwriting.org>

<http://www.dww.deafworldweb.org/int/int>

<http://www.yahoo.com>. "semiotics"

ISENHATH, J.O. *The Linguistics of American Sign Language*, McFarland & Company, Inc. Publishers, North Carolina, USA, 1990.

JACOBSON, Roman (1973) "Functions of Language" Allen J. P. B. and S. P. Corder (eds.), *The Edinburgh Course in Applied Linguistics; Vol. 1: Readings for Applied Linguistics*, Oxford University Press, Oxford, 1973.

KLAVANS, Judith. "Computational Linguistics" O'Grady W. and M. Dobrovolsky (eds.), *Contemporary Linguistics, An Introduction: 3rd Edition*, S.T. Martin's Press, New York, 1997.

- KYLE, J. G. and B. WOLL . *Sign Language: The Study of Deaf People and Their Language*, Cambridge University Press, Cambridge, 1988.
- LYONS, John. *Language and Linguistics*, Cambridge University Press, Cambridge, 1981.
- O'GRADY, William and Michael DOBROVOLOSKY, (eds.). *Contemporary Linguistics, An Introduction: 3rd Edition*, S.T. Martin's Press, New York, 1997.
- PADDEN, Carol and Tom HUMPHRIES (1988) *Deaf in America: Voices from a Culture*, Harvard University Press, Cambridge, 1988.
- SAUSSURE, de Ferdinand. *Course in General Linguistics*, McGraw-Hill Book Company, New York, 1959.
- T.C. M.E.B. Özel Eğitim ve Rehberlik Dairesi Başkanlığı, *Özel Eğitim Kurumları Tanıtıcı El Kitabı: 1. Özel Eğitim Konseyi*, Milli Eğitim Basımevi, Ankara, 1991.
- T.C. M.E.B. Özel Eğitim Rehberlik ve Danışma Hizmetleri Genel Müdürlüğü, *Yetişkinler İçin İşaret Dili Kılavuzu*, Film Radyo Televizyonla Eğitim Başkanlığı Matbaası, Ankara, 1995.
- VALLI, Clayton and Ceil LUCAS *Linguistics of American Sign Language, A Resource Text for ASL users*, Gallaudet Univ. Pres, Washington D.C., 1992.
- WILBUR, B. Ronnie. *Sign Language and Linguistics: Vol. 2, number 1*, John Benjamins Publishing Company, Amsterdam, 1999.
- YULE, George. *The Study of Language: Second Edition*, Cambridge University Press, New York, 1985.