

## Sign Languages and Aspects of Turkish Sign Language (TİD)\*

İşaret Dilleri: Türk İşaret Dilinin Dilbilgisel Özellikleri

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### **Abstract**

Having noted that sign languages have often been misconceived and regarded as underrated and impoverished means of communication and that there is still a gap in the linguistic literature on Turkish Sign Language (TİD)\*\*\*, this study is intended as a contribution to the description of TİD grammar accounting certain aspects of it. Moreover, it aims at providing some background information on sign languages in general with reference to certain misconceptions they have been exposed to. It is expected to provide a basis for further, rather more complete research on TİD grammar. The data and part of the content of the study presented here is based on a PhD study conducted on TİD sentence types (Açan, 2007). Although that study was designed for the elicitation of declarative, interrogative, negative, and imperative TİD sentences, its data has also brought in some general findings concerning various other aspects of TİD grammar. The data have been gathered getting in face-to-face interactions with the informants in their daily environments. Four informants, who are native speakers of TİD, and three interpreters who are competent both in Turkish and in TİD were selected after interviews with some signers. The informants have been presented a set of pictures specifically designed for the elicitation of declarative, negative interrogative and imperative TİD sentences and they have been asked to produce as many statements and questions as possible concerning the people, the situations and places (context), and the events taking place in the pictures. The informants were video-recorded at the time they performed TİD utterances. For the elicitation of the non-manual

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\* The data and part of the content of the study presented here is based on a PhD study conducted on TİD sentence types with the title "A Linguistic Analysis on Basic Sentence Types in Turkish Sign Language (TİD) with Reference to Non-manual Activity", Ankara, Hacettepe University, Graduate School of Social Sciences, Department of English Linguistics (Açan, 2007).

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\*\*\* 'TİD' is an acronym representing the initial letters of each word in 'Türk İşaret Dili'. Using acronyms as this one is a widespread convention and points out that the sign language in question is a somewhat standard code being different from both the language of the hearing majority in the same society and also from 'home signs' or 'contact codes' used among smaller deaf groups.

activity of the face, two video cameras were deemed to be necessary, one for the recording of the whole bodies of the signers and the other for the recording of their faces only. During the recording process, one of the interpreters was translating the TİD utterances of native signers into Turkish and the Turkish instructions of the investigator into TİD. The interpreters were given information about the purpose of the study previously. They were asked to observe the interviews carefully and participate where necessary. After the recording procedure, TİD utterances gathered were transformed into Turkish glosses and then transcribed for linguistic analysis and evaluation by the help of other interpreters. The findings are expected to contribute to the description of certain aspects of TİD grammar as well as providing information on certain aspects of sign languages in general.

**Key Words:** Sign languages, Nature of sign languages, Turkish Sign Language (TİD), Aspects of TİD grammar

## **Öz**

İşitme engelli bireyler tarafından iletişim amacıyla kullanılan işaret dilleri özellikle toplumun işiten çoğunluğu tarafından sıklıkla merak edilen bir konu olmuştur. Bununla birlikte, işaret dillerinin dilbilimsel olarak incelenmesi nispeten yeni bir çalışma alanıdır ve işaret dilleri zaman zaman yanlış kanılara ve bazı önyargılara maruz kalmıştır. Türkiye’deki durum dikkate alındığında ise toplumun işitme engelli nüfusunun kullandığı dile ilişkin henüz yeterli sayıda dilbilimsel çalışmanın olmadığı görülmektedir. Bu çalışmanın temel amacı TİD’in dilbilgisel betimlemesine katkıda bulunmak ve işaret dillerine ilişkin genel bir takım yanlış görüşlere açıklık getirmektir. Söz konusu çalışmanın veri tabanı TİD’deki farklı tümce türlerini (bildirim, soru, olumsuz ve emir cümleleri) betimlemeye yönelik olarak planlanmışsa da, elde edilmiş veriler TİD’in çeşitli dilbilgisel özelliklerine ilişkin önemli bulgular ortaya koymaktadır. Çalışmanın veri tabanını oluşturmak amacıyla TİD’i anadili olarak kullanan dört işitme engelli katılımcı ve katılımcılarla iletişimi sağlamaları ve verilerin çevriyazımına katkıda bulunmaları amacıyla TİD ve Türkçede yetkin olan üç çevirmen seçilmiştir. Katılımcılara bir dizi resim sunulmuş ve kendilerinden resimlerde gördükleri kişiler, yerler, durumlar ve olaylara ilişkin üretebildikleri kadar soru ve sözce üretmeleri istenmiştir. Katılımcılar, sözce ve soruları ürettikleri sırada iki video kamera ile kaydedilmiştir. Kameralardan biri TİD’deki el işaretlerine eşlik eden kaş, göz işaretleri ve yüz mimikleri gibi el-dışı göstergeleri yakından görebilmek amacıyla katılımcıların sadece yüzlerini kaydetmiştir. Daha sonra video kamera ile kaydedilmiş verilerin Türkçe çevriyazımı gerçekleştirilmiş ve böylece veri değerlendirilebilir hale gelmiştir. Bulgular, TİD’in bazı dilbilgisel özelliklerinin yanısıra genel olarak işaret dillerine ilişkin sonuçlar ortaya koymaktadır.

**Anahtar Sözcükler:** İşaret dilleri, İşaret dillerinin doğası, Türk İşaret Dili (TİD), TİD Dilbilgisi

## **1. Introduction**

With a very broad definition “linguistics” is known to be the scientific discipline the subject matter of which is language and the primary concern of which is to discover and describe the rules that govern languages. “Language”, on the other hand, is generally defined as a system of signs consisting of conventionalized rules and a means of

communication. When language is considered, it is generally used in a sense to mean “the specialized sound signaling system which seems to be genetically programmed to develop in humans” (Aitchison, 1992, p. 11). However, the study of sign languages since 1960s has shown that languages are not necessarily oral mediums and the above given definition of language applies not only to spoken languages but also to “sign languages”, systems consisting rules similar to that of natural human languages, through which hearing and speech impaired people communicate. What follows is that, any scientific study on sign languages deserves its place within the scope of linguistics. However, sign languages have only recently been receiving serious linguistic attention. “Even in the United States and in Britain, where sign languages have been more extensively studied by linguists than in other countries, only after the 70s has it begun to be progressed” (Açan, 2001, iv).

When studies on the Deaf speech community in Turkey and on Turkish Sign Language (TİD) are considered, it may not be proper to claim that they have received enough attention. Studies that have been carried out concern mostly educational or medical issues and a thorough linguistic description of the sign language used by the Deaf in Turkey appears to have been peripheral to the concerns of the natural language. This reveals that despite a good number of hearing impaired people in Turkey, the Deaf community along with the native language of its members has remained somehow undocumented for the most part. Having noted this gap in the linguistic literature on Turkish Sign Language (TİD), this study is intended as a contribution to the linguistic description of TİD grammar accounting certain aspects of it. Moreover, it aims at providing some background information on sign languages in general with reference to certain misconceptions they have been exposed to. It is expected to provide a basis for further, rather more complete research on TİD grammar.

This study exerts a descriptive approach in the analysis of TİD and obviously it is far from achieving a complete account of the whole grammatical structure of TİD. Specifically, it intends to take into consideration particular issues such as sign structure, number and time reference, sign space and body orientation, classifiers and sentence types and their grammatical marking with reference to non-manual activity. The findings represented here will surely be tentative and open to revision in the light of further data.

## **2. Certain Misconceptions Concerning Sign Languages**

Because of the fact that they have not been considered as full-fledged, natural languages until late 60s, sign languages have been exposed to many misconceptions and biases and have been treated as primitive, impoverished means of communication (see also Dikyuva and Zeshan, 2008). These misconceptions include such popular views as:

- Sign languages are not real, full-fledged languages!
- They are the reduced and simpler forms of the coexisting spoken languages of the majority in the same community!
- Sign languages are invented by the hearing majority in the society!
- Signing is equal to gesturing!

- There is just one sign language which can be understood all over the world!
- Signs are not arbitrary but iconic, being simply the pictorial representations of external reality!
- Sign Languages are performed merely by means of the activity of the hands!

The following pages will give a brief discussion of these misconceptions:

### ***2.1. Sign Languages as Real Languages***

Sign languages have often been the subject matter of the debate of whether they are to be considered as full-fledged languages or not. The facts underlying this debate are mainly that, these languages are often later-developed when compared to the coexisting spoken language of the majority within the same community, and that they are inevitably associated with 'lack of something', with an impairment, imposing on them a sort of deficiency or impoverishment.

In fact, recent investigations (Kyle and Woll, 1998; Valli and Lucas, 1992; Asher and Simpson, 1994; Deuchar, 1984; Isenath, 1990; Liddell, 2003) have already clearly demonstrated that sign languages are rule governed systems of communication and have a structure of comparable complexity to spoken human languages, consisting of similar rules and performing similar range of functions. Being similar to oral natural languages, they have grammatical levels of phonology, morphology, syntax, and semantics as well as a rich lexicon. Besides, sign languages seem to exhibit all the defining properties of natural human languages -such as arbitrariness, duality, discreteness, productivity, displacement and cultural transmission- and perform similar range of communicative functions offered by Jakobson (1973, pp. 53-55) -such as referential, conative, emotive, phatic, metalinguistic, and poetic- (see Deuchar, 1984, pp. 18-23). Moreover, they 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 (see Asher and Simpson, 1994, p. 3890).

As Yule (1985, p. 164) claims for ASL (American Sign Language):

- ASL is used for a wide range of jokes and sign-play
- there are different ASL dialects in different regions
- Historical changes in the form of signs can be traced since the beginning of the century.
- Children acquire ASL as their mother tongue and go through many of the recognized stages of children learning spoken languages.

These claims of Yule are probably valid not only for ASL but also for many other sign languages, excluding perhaps, the ones that are not fully -or equally- developed (i.e., home signs or contact signed codes within a sort of creolization process). Still, it seems obvious that even these home signs and contact codes have the potential of establishing into full-fledged languages wherever it is possible to talk about a Deaf speech community, and as long as there is considerable contact between the members of the community in question.

### **2.1. Sign Languages and other Means of Manual Communication**

Apart from sign languages having their own grammatical structure and lexicon, it is possible to talk about some other manual communication systems such as gestures, contact (pidgin-like) signed codes, signed languages and home signs which can be used by both deaf and hearing people in a single community for some purposes. These manual systems differ from fully fledged sign languages in that they are rather restricted communicative codes lacking conventional grammatical rules peculiar to them.

#### *2.1.1. Signed Languages*

The fact that sign languages such as ASL (American Sign Language), BSL (British Sign Language) and TID are confused with signed versions of coexisting spoken languages of the majority is not an uncommon situation. However, sign languages have been observed to develop wherever one can talk about the existence of a Deaf community, a group of deaf people not in isolation but in social contact with one another within certain contexts such as education or other similar situations. Furthermore, as a Deaf community becomes established through social institutions, sign languages have also been observed to develop:

- i. Spontaneously* –that is to say, they develop naturally within the Deaf community, and are not invented by the hearing majority-,
- ii. Independently* –which means they are by no means derived from coexisting spoken languages, being merely their ‘manual’ representations-, and
- iii. Gradually* –out of ‘home signs’ which are relatively simple and grammatically ‘impoverished’ being restricted to small groups of deaf people such as family members (Deuchar, 1984, pp. 2-7; Liddell, 2003, pp. 1-2; Armstrong and Wilcox, 2003, pp. 312-313).

Although it is possible to see instances of signed versions of spoken languages for some specific purposes in certain contexts such as education and media, sign languages are completely different than coexisting spoken languages in the same community and they have distinctive grammars of their own. The signed version of a spoken language usually lacks the grammatical features peculiar to the sign language used within that community. For example, certain morphological processes found in the sign language are omitted, the word order is arranged as it is in the spoken language, new lexical items and morphemes are introduced, which originally do not exist in the sign language in question, in order to express corresponding meanings in the spoken language directly and literally.

#### *2.1.1. Gestures*

Another common misconception dominating the attitude towards sign languages has been the habitual confusion between signs and gestures, probably, as a result of another confusion between ‘sign language’ and ‘non-verbal communication’ –*non linguistic and often visual elements accompanying speech*- and ‘body language’, *a sort of “ad hoc gesture system used to communicate with people whose language one does not speak”* (Deuchar, 1984, pp. 3-4). In fact, gestures such as body language or non-verbal communication

are manual or bodily actions which only accompany language having limited expressive and communicative functions and rely mostly on immediate context (i.e., pointing out objects). Since these gestures do not have any grammatical function, they accompany speech optionally conveying either some information on the lexical level (i.e., waving hand to say “hello” or “good bye”) or some emotive or affective content (i.e., knitting the brows to express dislike or disapproval).

On the contrary, sign languages are not restricted to immediate context and to limited number of messages; there seems to be no limits to what signers can communicate through sign language. Although it may not be wrong to define sign languages as “systems of gestures made with the hands and other body parts, used to replace speech as a mode of communication on all occasion of interaction” (Crystal 1992, p. 353), this type of gesturing is totally different than the one used among people who do not share a common language, or the one used to accompany speech. Signing is much more systematic than gesturing and, as Asher and Simpson (1994, p. 3890) state, “signs are distinguished from gestures by having an internal structure composed of elements which form a system of contrasts, and whose usage is rule-governed”.

#### *2.1.2. Contact Signed Codes (Pidgin-like Sign Languages)*

In contact situations where deaf people who have some command of spoken language structure and the hearing people who have some command of sign language happen to communicate with each other, it is not an uncommon situation that they develop a contact code resembling pidgins. Being similar to pidgins, these contact codes are grammatically less complex, lacking many of the morpho-syntactic features of both languages. Besides, such codes usually seem to involve more iconic signs derived from the gestures that accompany the spoken language and also lack the non-manual activity which play a large and crucial part in the actual sign language of the Deaf.

#### *2.1.3. Home Signs*

As it has been put forward, deafness is not necessarily transmitted genetically. That is, it is quite possible to encounter with deaf parents having hearing children or hearing parents having deaf children. Many of the deaf children who are born into hearing families do not have any other deaf family members too. Moreover, it is also possible to find situations in which deaf children even who have deaf parents or elder deaf family members live in isolation from Deaf community. Such an isolation is rather observed in rural areas where deaf people do not have the opportunity to attend to deaf schools or deaf associations, at least until they reach to a certain age. In such circumstances, deaf people often develop an idiosyncratic code of signing within the family domain which is far from being a fully developed, rule governed language. However, when deaf people having their own home sign systems come together regularly, out of their home signs they can gradually develop a full-fledged sign language through a process similar to creolization which can later be nativized as the first language for the next generation. In other words, the first contact communication is indeed something less than a language, but the full-

blown nativized version is a fully fledged language, with all of the characteristics one would possibly look for.

### ***2.2. Is Sign Language Universal?***

People usually consider sign language to be ‘universal’ as if there is only one single sign language which is intelligible all over the world. What underlies this misconception seems to be another one, that is, people often view sign languages as lacking a grammar as well as lacking some other fundamental properties of natural languages. In fact, studies (Jordan and Battison, 1976; Siple, 1978; Klima and Bellugi, 1979; Wilbur, 1979; Tanokami, Peng, Maeda and Mori, 1976; Ahlgren and Bergman, 1980) have clearly put forward that sign languages of the world differ from each other in terms of both vocabulary and grammar. It is quite noticeable that although American and British communities speak the same language, namely English, disregarding the dialectal variation, the language of American and British Deaf speech communities -ASL and BSL, respectively- are quite distinctive codes which are mutually unintelligible (see Deuchar, 1984, p. 106). Although sign languages have certain grammatical and lexical features in common, along with some linguistic characteristics common to various spoken languages, it seems to be that sign languages differ from one Deaf community to another, just as spoken languages do, unless there is considerable contact between different Deaf speech communities for specific purposes such as education. Even in such situations, it has been suggested that the languages of separate Deaf communities are ‘similar’ to some extent but not totally ‘identical’.

### ***2.3. Arbitrariness and Iconicity in Sign Languages***

The degree of iconicity and/or arbitrariness in sign languages has often been an important matter of discussion since arbitrariness is suggested to be a defining property of human languages which sign languages are often thought to be lacking. However, it has been evident that all languages have both arbitrary and non-arbitrary aspects (see Bolinger, 1975; 1980). Consequently, languages involve iconic elements as well as arbitrary ones, as seen in cases of onomatopoeia in spoken languages. Here, a more crucial point pertaining to arbitrariness appears to be ‘conventionality’ in languages. As Deuchar (1984, p. 16, 20) puts forward: “it is important to realize that while iconicity means non-arbitrariness, it does not necessarily mean non-conventionality. The iconicity in sign languages does not result in a complete freedom; iconic signs too, are determined culturally”.

Sign languages seem to display three types of signs, namely, (i) symbolic –which are arbitrary in terms of their connection to their referents; (ii) indexical –which directly point out their referents; and (iii) iconic –which resemble, or depict their referents (see Dobrovolsky, 1997, pp. 591-592; Deuchar, 1984, pp. 13-15).

A final point which is also worth mentioning here is that ‘iconicity’ and ‘transparency’ are not identical terms, either. Although there are considerable amounts of iconic or indexical signs in sign languages, many of them cannot be interpreted unless one knows their meanings beforehand. Moreover, although it is true that sign languages do contain

some iconic gestures, what is often observed is that once such gestures enter in the sign language, they become linguistic signs of that sign language but not non-linguistic gestures any longer. Thus, they undergo certain morpho-syntactic processes such as inflection, derivation, interrogation, negation, etc. and are exposed to the grammatical rules of that sign language.

#### ***2.4. Non-manual Markers in Sign Languages***

In addition to all these above mentioned misconceptions, it has also been thought erroneously, by the hearing majority, that in sign languages the message is conveyed only through the movement of the hands. Consequently, in describing and defining such visual-gestural systems, the term ‘manual’ has sometimes been used to refer to sign languages, a term which explicitly ignores the contribution of other parts of the body. Consequently, early sign language research disregarded the grammatical role of non-manual activity and dealt with the structure of individual signs and the grammar of sign languages only in terms of the activity of the hands.

In fact, as it has been put forward by researchers (Kyle and Woll, 1998; Valli and Lucas, 1992; Asher and Simpson, 1994; Deuchar, 1984; Isenhath, 1990; Liddell, 2003), non-manual activity accompanying manual signs that is, the use of facial mimics, body movements, (i.e. movement of shoulders and upper torso) movement of the head, lips/mouth, eyes, and the eyebrows and even some non-linguistic sounds produced by vocal organs display critical and essential functions in the production and the processing of linguistic messages. This contribution of non-manuals in question may either be at the level of individual signs –signs either entirely non-manual, or signs which have an important non-manual component distinguishing them from other signs– or at the level of syntax determining the sentence types, marking some grammatical features such as topicalization or tense, or even at some other levels of linguistic analysis. As Aarons (1994, p. 41) explains, “a string of manual signs can mean different things depending on the non-manual marking that accompanies it” or “sometimes a string of signs is regarded by native signers as ungrammatical, but would be considered grammatical with the addition of a certain non-manual marking”.

Baker-Shenk (1983) as cited in Aarons (1994, p. 63) distinguishes two functions of facial expressions in sign languages:

- i. Stylistic/affective use (optional): Expression of universal human emotions like fear, laughter, surprise, and anger –being similar to their function in spoken languages-
- ii. Grammatical use: Expression and marking of linguistic phenomena.

Moreover, some neuro-linguistic research concerning both language processing and language production have also provided further evidence supporting this two-fold distinction between the stylistic and grammatical functions of non-manual activity in terms of hemisphere specialization. It has been put forward that while right hemisphere functions in the production and processing of general, stylistic facial expressions, left hemisphere operates during the processing and production of linguistic facial expressions

(Poizner, Klima and Bellugi, 1987; Corina, 1989; Bellugi, Corina, Norman, Klima, and Reilly, 1989).

### 3. Aspects of TİD Grammar

#### 3.1. Sign Structure

When the data is observed, it is obvious that the visual elements that constitute TİD are quite parallel to the sound elements of spoken languages, and to those of Turkish. As linguistic units, individual signs in TİD and words in Turkish can be thought of as being equivalent to each other. Both can be considered as ‘meaningful/functional free forms’ having an internal structure, being composed of smaller units which are combined in various rule governed ways. Just as Turkish words consist of ‘phonemes’ -a series of meaning distinguishing speech sounds-, TİD signs are made up of three major specific components in terms of their internal structure, namely the ‘shape (configuration)’, ‘movement’, and the ‘location’ of the hand, altogether referred to as parameters. All TİD signs are made up of these components which are limited in number, just as words in Turkish are made up of phonemes the number of which is definite. Thus, in order to form a specific TİD sign, the appropriate selection of parameters is required.

To give one example, the Turkish word ‘kitap (book)’ consists of the phonemes [k], [i], [t], [a] and [p] respectively; a change in the selection and order of these phonemes results either in meaningless remainders –such as, ‘akipt’ ‘pikat’ or ‘fitap’ or in totally different words such as ‘patik’ (bootee) or bitap (worn out, tired). Similarly, each sign in TİD requires a specific combination of a hand shape, a location and a movement as seen in the analysis of the TİD sign ‘BEN’ (1<sup>st</sup> person singular pronoun ‘I’):

i. Location: chest

Hand shape: (I-hand shape) index finger extended from closed fist

Movement: movement towards signer (ends up at the location mentioned)

A change in the selection of any of these components results in either meaningless hand gestures or different lexical signs such as ‘BEYAZ’ (white) and ‘KENDİ’ (self/own) which can be analyzed as follows:

ii. TİD sign: ‘BEYAZ’ (white)

Location: *fore tooth*

Hand shape: (I-hand shape) index finger extended from closed fist

Movement: movement towards signer (to the location)

iii. TİD sign: ‘KENDİ’ (one’s self, one’s own)

Location: chest

Hand shape: (*hooked hand shape*) *horizontal rounded hand (fingers separated)*

Movement: movement towards signer (to the location)

Consequently, as it is also seen in the above given examples, the signs ‘BEN’ (I) and ‘BEYAZ’ (white) differ only in terms of location and the signs ‘BEN’ (I) and ‘KENDİ’ (self/own) differ only in terms of hand shape. Therefore, contrasts in terms of these parameters can be said to result in minimal pairs -signs that have different meanings and

that differ in terms of only one component- Thus, each of these components (location, hand shape and movement) seems to have a meaning distinguishing function just as phonemes have in spoken languages.

In TİD, it has been observed that while some signs involve the use of only one hand (as in the above mentioned signs ‘BEN’ ‘BEYAZ’ and ‘KENDİ’), some other signs require the use of both hands. The two-handed signs in TİD can be considered to be of two types: (1) signs during the production of which both hands move at the same time and (2) signs during the production of which one of the hands (non-dominant hand) remains stationary while the other (dominant hand) acts upon it. Two-handed signs of type (1) seem to display a certain constraint concerning the configuration and movement of the hands. This constraint is called ‘symmetry condition’ (see Deuchar, 1994, p. 49) according to which both hands must have the same shape and must perform the same movement, although they can move in exactly opposite directions, displaying again a sort of symmetry. In two-handed signs of type (2) the stationary (non-dominant) hand can be considered to be the location up on which the dominant hand moves with a certain direction and configuration.

Besides, there are some one-handed signs found in the data exhibiting (1) more than one component of movement (not frequent) such as ‘GENÇ’ (young), (2) more than one location such as CUMA (Friday), (3) more than one hand shape (not frequent) such as ZONGULDAK (the name of a city in Turkey) and (4) no movement at all such as TÜRKİYE (Turkey).

(1) TİD Sign: ‘GENÇ’ (young)

Location: chin

Hand shape: fingers extended straight, thumb almost touching the other fingers (hand positioned vertically, the back side facing towards addressee)

Movement 1: straight movement towards addressee (departing away from the location)

Movement 2: wiggling of the hand slightly

(2) TİD Sign: ‘CUMA’ (Friday)

Location 1: chin

Location 2: forehead

Hand shape: extended index and middle fingers touching each other with a horizontal hand (back of the hand facing the addressee)

Movement: upward movement from location 1 to location 2

(3) TİD Sign: ‘ZONGULDAK’ (city name)

Location: forehead

Hand shape 1: vertical closed fist (fingers towards addressee)

Hand shape 2: (hooked hand shape) vertical (slightly) rounded hand (fingers extended and separate)

Movement: movement towards addressee (departing from the location)

- (4) TİD Sign: ‘TÜRKIYE/TÜRK’ (Turkey/Turkish)  
 Location: Forehead  
 Hand shape: C-hand shape (Extended thumb and index fingers from closed fist)

Although they may represent how signs are structured, the analyses of TİD signs in terms of location, hand shape and movement can hardly reveal the exact vision of the TİD signs, since they lack some necessary details, such as the angular position of the hand(s) or movement(s) in question.

Besides, it should be noted that in the identification of the above analyses of TİD signs in terms of their internal components of location, hand shape and movement the scope has been limited to deal mainly with the activity of the hands; the role of non-manual activity being disregarded.

Just as spoken languages and Turkish, it is also possible to talk about three different morphological categories of signs in TİD as ‘simple’, complex and ‘compound’, depending on the number and type of morphemes per sign. Simple signs are made up of a single free morpheme whereas complex and compound signs are made up of at least two. Complex signs involve the combination of a free morpheme and at least one bound morpheme. For example, when a movement away from the signer’s body towards the addressee is attached to the sign ‘LÜTFEN’ (please) the sign becomes the verb ‘TEŞEKKÜR (ET-) + (2<sup>nd</sup> p. + Dat.)’ meaning ‘thank you’. There are many signs in TİD, such as this one, including a movement to indicate the subject and the object of transitive verbs. This property of TİD is quite similar to the verb agreement phenomenon in spoken languages which either use word order or some inflections such as case marking and pronominal affixation on the verb to indicate the subject and the object of a transitive verb. Some examples from the data are: VER- (to give), BAK- (to look at) and ÖĞRET- (to teach). The direction of the movement changes depending on the subject and the object of such verbs. The movement begins at the location (in the signing space) associated with the subject and is directed to the location associated with the location of the object. Another group of complex signs involves the process of repetition. Repetition of a noun (or reduplicating its movement component) can indicate plurality, that is, that there is more than one of the entity which is referred to by that noun. Examples from the data go as follows:

- TİD Sign: ‘EL’ (hand)  
 Location: non-dominant flat hand (palm down, fingers not separated)  
 Hand shape: dominant flat hand (palm down, fingers not separated)  
 Movement: dominant hand contacts with non-dominant hand

- TİD Sign ‘EL-pl.’ (hands)  
 Location (double): back of each hand respectively (shift in dominant and non-dominant hands)  
 Hand shape: flat hands (palms down, fingers not separated)

Movement: hands contact one another respectively (repeating the movement)

TİD Sign 'KİTAP' (book)

Location: neutral space in front of the signer

Hand shape: horizontal flat hands touching each other's palm (fingers closed)

Movement: hands open with sides touching each other

TİD Sign 'KİTAP-pl.' (books)

Location: neutral space in front of the signer

Hand shape: horizontal flat hands touching each other's palm (fingers closed)

Movement: repetition of the movement (in the singular form) several times

Similarly, the repetition of a verb sign indicates that the action is carried out either more than once or continuously. Such repetitions of the verb signs can be regarded as an aspect marker.

There are also compound signs in TİD which are formed by the combination of two or more free morphemes with a rather distinct meaning than that of each separate sign. Some examples are:

'YAŞ/SENE (year/age) + 'EĞLENCE/OYUN' (entertainment/fun/game) > YILBAŞI (New Year's Eve)

'ÇİÇEK' (flower) + 'ZEMİN' (ground) > 'BAHÇE' (garden)

'KIZ' (girl) + ARKA/GEÇMİŞ (back/past) > KADIN (woman)

Here, it is important to note that such parallels between Turkish words and TİD signs must not lead to such a conclusion as considering them to be identical. Although we have represented TİD signs through Turkish glosses within the study, TİD signs do not necessarily carry the exact meaning represented by the Turkish glosses; those glosses in Turkish capitals are merely for practical purposes and they represent the closest correspondences of TİD signs in Turkish.

Apart from the structure of TİD signs, it is worth mentioning two other constraints TİD has in terms of the production of TİD signs: The first one has to do with the use of the sign space. The sign space in TİD vertically covers the distance from below the waist, up to the top of the head. All signs are performed within this area, except indexing an object nearby instead of using the TİD sign for it, or pointing the knee for the sign 'DİZ' (knee), for example. This limitation in the use of the sign space seems to provide signers practicality and economy in effort as well as making the signs visible and explicit for the addressee.

The other constraint seems to restrict the use of the hands during speech. As it is observed during the analysis of the data, the shifting of the dominant and non-dominant hands within two-handed signs is avoided during the signing activity. Similarly, during the production of one-handed signs, signers have not been observed to change their preferences on the selection of the hand to be used throughout the whole signing activity.

### 3.1. Number and Time Reference Incorporation

One of the most interesting features of TİD and some other sign languages is the numerical incorporation in which numbers are directly incorporated into signs referring to countable nouns. In TİD, numerical incorporation is widely observed in the expression of certain units of time such as hour, week, month, year, etc. For a number to be incorporated into a sign in order to attach it an additional meaning of quantity, certain alterations often take place in terms of the hand shape and movement of the sign in question. For example, in order to say ‘two months’, instead of showing the number ‘İKİ (two)’ and then signing the sign ‘AY (month)’, you can change the hand shape of the sign ‘AY (month)’ simply incorporating into it the hand shape for the number ‘two’.

Furthermore, it is also possible to note even some more complex signs including both a numerical and a time reference incorporated into a single sign. For example, in order to say ‘three weeks ago’, instead of signing the morphemes ‘ÜÇ (three)’, ‘HAFTA (week)’ and ‘ÖNCE (ago)’ respectively, you simply alter the hand shape of the sign ‘HAFTA (week)’ incorporating it with the number sign ‘three’ in order to attach the sign a numerical value. In order to incorporate the time reference ‘ago’, on the other hand, you simply reverse the direction of movement in the sign ‘HAFTA (week)’ to refer to the past.

### 3.2. Sign Space and Body Orientation

A former study (Açan, 2001, pp. 105-107) have suggested that personal pronouns in TİD are realized through indexing with the index finger and that, like many other sign languages, TİD uses spatial indexing to indicate personal pronouns. Besides it has been noted that the distance between the location of the indexing sign and the signer increases gradually for 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> persons. The examination of the data of this study has also put forward that ‘sign space’ –the area which has been defined vertically as covering the distance from below the waist, up to the top of the signer’s head- does not simply indicate the medium (environment) where the linguistic activity takes place, but also acts as a grammatical component of TİD. Spatial variations as well as the variations in the orientation of the signers’ bodies during the realization of TİD signs seem to reveal information on some grammatical phenomena such as time reference (relating to past, present and future) and subject/object nouns and pronouns. Following examples can be given for the clarification of the grammatical use of sign space and body orientation:

TİD utterance (1):

---

KENDİ ARKADAŞ TELEFON KONUŞ- İSTE- ZOR YAP- SAKLAN TELEFON  
 (self) (friend) (telephone) (talk) (want) (hard) (do) (hide) (telephone)

---

KONUŞ-  
 (talk)

*(She wants to talk to her friend on the phone. She can hardly do it. She hides and talks to her friend on the phone.)*

That the sign for the verb ‘KONUŞ-’ (talk) is realized not in the neutral signing space but away from the signer’s body where the 3<sup>rd</sup> person pronoun takes place and that the sign is performed with the body oriented to that direction and tilted forward in a bended position indicates that the person in question is talking to a third person (who is away from her location) confidentially (hiding herself, probably underneath something). Similarly, in the following example from the data, that the sign ‘GELECEK’ (future) is realized in a further location from the signer –almost outside of the sign space- displays the use of sign space for time reference.

TİD utterance (2):

---

KIZ KEMAN\_(ÇAL-) KENDİ DÜŞÜN- BİR\_NUMARA DÜŞÜN- ... ŞARKI  
GELECEK  
(girl) (violin\_(play)) (self) (think) (one\_number) (think) .... (song)  
(future)

---

ÜNLÜ OL- HAYAL  
(famous) (be) (dream)

*The girl playing the violin dreams that she will be famous and number one in the future.*

Furthermore, in the following example, the two signs ‘ÖNCE’ (before/ago) and ‘ŞİMDİ’ (now) also indicate the use of sign space for time reference. The signer uses the space at the back of her shoulder for the sign ‘ÖNCE’ (before/ago) and the neutral sign space for the sign ‘ŞİMDİ’ (now).

TİD utterance (3):

sing.-nod. sing.-nod..... -nod  
INDEX-1 det. sg. DEDE TORUN ÖNCE SÖZ\_(VER-)..... ŞİMDİ HEDİYE\_VER  
(This) (grandfather) (grandchild) (before) (promise) (now) (present) (give)  
*This grandfather promised (his) grandchild earlier (and) now (he) is giving (his grandchild) (a) present.*

### 3.3. Classifiers

Classifiers can be described as elements that are used to specify general categories of things. A classifier can be used to represent a certain class of entities, as well as to describe some characteristics of entities such as shape, size, way of movement and appearance. Extensive use of classifiers is a typical feature of sign languages. The movement or shape of certain signs in sign languages can be modified in such a way as to include information about a referent’s type, size, shape, movement or extent, etc. Moreover, once an object or a person is indicated, a classifier can be replaced with that object or the person afterwards, to show how it moves, what it looks like, where it is located, etc. (see; <http://www.jalc.edu/ipp/Classifiers/>).

Classifiers can be categorized into Entity/Class Classifiers, Handle Classifiers, and Size and Shape Classifiers (Sandler and Lillo-Martin, 2006 cited in Kubuş, 2008, p. 90). As Kubuş (2008, p. 90) explains “in class (entity) classifiers the hand shape is the classifying morpheme”, that is, for example, the classifier for persons which is marked by a certain hand shape is used when referring to a person. “Handle classifiers represent how an entity is handled or manipulated”. Hand shape is modified so as to give the visual image of how one holds a particular type of object (i.e. a cylindrical object like glass, a tiny object like a pin, etc.). “Size and shape classifiers express the form of an entity”, whether it is thin or thick, narrow or wide, flat or round, etc.

The data involve the use of certain classifiers in TİD. Accordingly, it is possible to say that TİD makes use of these three types of classifiers mentioned above. However, the data is not sufficient to argue about the grammatical categories and/or functions of these classifiers.

i. Entity Classifiers in TİD:

A major and extensively used classifier in TİD seems to be the classifier for humans. To indicate humans, one can either use an index hand shape to indicate the whole body of the person or can use the leg hand shape to refer to the legs only (see Zeshan, 2002, p. 264-265). Once the person is indicated, further information about the person’s location and movement or about what he/she is doing to whom can be revealed through the use of person classifiers.

ii. Handle classifiers:

The data revealed some use of handle classifiers too. For example, for the sign ‘ÜTÜ’ (iron) and ‘PENCERE’ (window) the hand shape is modified so as to visualize the image of holding a thin cylindrical object or a handle. In both of the signs the same hand shape is realized. The orientation of the hand, however, differs in the articulation of these two signs being parallel to the way how one holds the handle of the relevant entity.

iii. Shape and Size Classifiers

TİD also seems to be involving classifiers of shape and size. In the data, we see examples of flat and round object classifiers. The flat hand shape is used as a classifier to indicate objects with a flat surface, such as book, table, cupboard and carpet and the round hand shape is used to sign round shaped objects such as apple and orange.

***3.1. Basic Sentence Types and Their Grammatical Marking***

A thorough examination of the data has demonstrated that TİD involves different sentence types such as declaratives, imperatives, negatives and interrogatives and that such types of sentences are grammatically, and regularly, marked by certain non-manual activities, together with the rather optional use of some lexical and/or functional words and particles. Moreover, it has been noticed that TİD also distinguishes between content (yes-no) and polar (wh-) questions by assigning a similar range of non-manual and manual operators.

### 3.1.1. Declarative Sentences

The data has revealed that TİD declaratives are made up of a predicate and zero or more noun phrase adjunct. However, in the presence of more than one noun phrases, it has been observed that TİD does not grammatically mark the syntactic functions of nominals (i.e. subject and object distinction) and that it relies on the word order in the identification of such functions. Besides, the word order in declaratives seems to be the unmarked word order, unless there is topicalization. It has also been observed that during they perform declaratives signers often nod their heads either continuously or only once. This activity of the head seems to function either to mark the end of a sentence or a clause or to strengthen the affirmation in declarative sentences or to stress the focus in the sentence (see Açı, 2007). Examples from the data are as follows:

TİD utterance (4):

voc. lex.(yes)  
-----  
-nod -nod  
YAP- YARAMAZ YAP-  
(do) (naughty) (do)  
*Yes (he/she) does. (He/she) acts up.*

TİD utterance (5):

-nod sing.-nod -nod  
EVET MÜZİK/ŞARKI KEMAN\_(ÇAL-) ÇOCUK ÖĞRENCİ/EVLAT VAR  
(Yes) (music/song) (violin) (to play) (child) (student/offspring) (there is)  
*Yes, there are school children who are playing music and violins.*

### 3.1.2. Interrogative Sentences

#### 3.1.2.1. Yes/No Questions

Examining our data of TİD questions, we have found out that TİD distinguishes yes-no questions from declaratives and wh- questions grammatically, by the use of non-manual activity, specifically by the face and special orientations of the body. This function of the face and the body can well be compared to that of intonation in spoken languages. In asking a yes-no question, the eyebrows are raised, the eyes are widened and the head and the upper part of the body are tilted forward, as a regular pattern. The total of this non-manual behaviour is represented with the 'y/n-q' symbol in the transcription of the data. However, no syntactic change in the order of signs has been detected as a distinctive feature of yes-no questions. On the other hand, it has been observed that sometimes, a 'question mark wiggle' is also attached to the end of the yes-no question sentences or clauses, a sign realized by either one or rarely two hands, resembling the orthographical question mark. As the data reveals, this question mark sign can be used together with the non-manual marker, or there occurs either the question mark sign or the non-manual marking (see Açı, 2007).

TİD utterance (6):

y/n-q

---

INDEX-1 det. sg. EV      RENK    Q-mark  
 (This)                    (house)    (colour)  
*Is this house coloured?*

TİD utterance (7):

y/n-q

---

ANNE    BAHÇE(short.)    ÇALIŞ-(ref. kürek)    ZEVK    (AL- )  
 (mother) (garden)                    (work)                    (enjoy)  
*Does the mother enjoy working in the garden? / Does the mother enjoy garden work?*

### 3.1.2.2. Wh Questions

Wh-questions in TİD also seem to exhibit a regular, distinctive pattern just as yes-no questions do. Similar to those in spoken languages like Turkish and English, TİD makes use of a set of signs in wh-questions such as ‘NE’ (what), ‘HANGİ (which)’ ‘NEDEN’ (why), ‘KAÇ’ (how many), etc. However, it has been observed from the data that the range of wh-question signs in TİD are not as wide as it is in Turkish; the sign for ‘NE’ (what) is sometimes generalized to cover a variety of meanings such as ‘ne zaman’ (when), ‘nasıl’ (how) or ‘nere(ye)’ (where).

It is also important to notice that some wh-questions without manual wh-question signs, in which ‘wh-’ meaning is provided through non-manual activity only. In such cases, the content of information that is asked –whether it is place, or time, or number- is inferred via the context. One interesting example from the data shows that when wh-question non-manual is performed with the sign ‘İSİM’(name) the sign gets the meaning ‘kim’ (who).

The wh-questions in the data have revealed that, the specific non-manual pattern assigned regularly in TİD wh-questions is the wagging of the head quickly and repeatedly to left and right, raising the eyebrows a little, and tilting the head slightly forward (see Ačan, 2007). Here are some examples of utterances with wh- question particles from the data:

TİD utterance (8):

wh-q

---

TOPRAK    ÇALIŞ-(ref. kürek)    NE  
 (soil)                    (work)                    (what)  
*What does (he/she) do with the soil? /What work is (he/she) doing with the soil?*

TİD utterance (9):

wh-q                    sing.-nod(ref.one side)    (ref. other side)

---

ELBİSE    İSİM    AL-    ANNE                    BABA  
 (dress)    (name)    (buy)    (mother)                    (father)  
*Who has bought the dress? Mother or father?*

### 3.1.3. Negative Sentences

As far as the data is concerned, it seems to be that TİD also has a regular way of negating sentences. Firstly, it has three basic manual signs for negation. These signs seem to approximate Turkish ‘değil’(not), ‘yok’(there + to be + not) and ‘hayır’ (no). Secondly, these signs are accompanied by some regular non-manual activity. The non-manual activity in question is three-fold, that is, there seems to be three different ways of non-manual negation, two of which are somehow similar. In the transcription of the data, these non-manual signals have been represented as ‘neg<sup>1</sup>’, ‘neg<sup>2</sup>’, and ‘neg<sup>3</sup>’. In ‘neg<sup>1</sup>’ the head is shaken from side to side repeatedly, sometimes with frowning or with the raising of the eyebrows. In ‘neg<sup>2</sup>’ we have observed the raising of the chin, head being tilted backwards; also eyebrows are raised as a consequence, and sometimes, eyes widened too. ‘Neg<sup>3</sup>’ seems to be similar to ‘neg<sup>2</sup>’ during which the head moves backwards slightly and returns back to the neutral position, with the slight raising of the eyebrows. The difference between neg<sup>2</sup> and neg<sup>3</sup> can be assumed to be a matter of emphasis on the negation, where neg<sup>2</sup> seems to be the more stressed pattern.

Another observation concerning with the data has been that, particular non-manual signals for negation tend to accompany particular manual negation signs. For example, ‘neg<sup>1</sup>’ is usually used together with the sign for ‘hayır’ (no). Here, there seems to be a sort of agreement between the movements of the index finger from side to side together with the movement of the head. Besides, ‘neg<sup>2</sup>’ tends to go with the sign for ‘değil’(not) and ‘yok’ (there + be + not), where again, there seems to be a sort of agreement between the movements of the head and face. Besides, there are also sentences in which no manual negation occurs, the negative meaning being attached only by the use of non-manual activity (see Açıkan, 2007). Below are some relevant examples from the data:

TİD utterance (10):

.....-neg<sup>2</sup>  
 INDEX-3 p. pr. sg. ARABA YIKA-/TEMİZLE- DEĞİL  
 (He/she) (car) (to wash/to clean) (not)  
*He/she does not clean/wash the car.*

TİD utterance (11):

-neg<sup>1</sup> -neg<sup>2</sup>.....  
 HAYIR BİN- DEĞİL  
 (No) (ride on) (not)  
*No, (he/she) is not riding on the horse.*

TİD utterance (12):

neg<sup>3</sup> neg<sup>1</sup> neg<sup>2</sup> neg<sup>2</sup>  
 KOŞ- YOK YOK HAYIR ÇOCUK KOŞ DEĞİL  
 (to run) (there is not) (there is not) (no) (child) (to run) (not)  
*(He/she) is not running. No, the child is not running.*

### 3.1.4. Imperative Sentences

Imperatives generally address second person subjects therefore subjects are often deleted through transformational rule(s) unless they are needed to be mentioned specifically. In TİD the subject is also usually omitted. Except three sentences out of twenty eight, subject nominals or pronouns do not exist in the data. Whether TİD has certain non-manual components for imperatives, or not, is not quite explicit when the data is considered, since the data has been elicited through certain techniques, but not through natural recording of the signers' communication. Imperatives bear affective features and are spontaneous inherently. The data, however, seems not to be fully adequate to reveal all such features, if there are any. Still, During TİD imperatives, signers seem to lean forward and raise eyebrows. Imperatives also seem to require direct eye contact (see Açan, 2007). Examples from the data go as follows:

TİD utterance (13):

<u>imp.....</u>				
<u>voc. lex.('ma')</u>		<u>voc. lex.('ma')</u>		
<u>neg<sup>2</sup></u>		<u>neg<sup>2</sup></u>		
SES	DEĞİL	SUS	SES	DEĞİL
(voice)	(not)	(be quiet)	(voice)	(not)

*Do not make noise! Be quiet! Do not make noise!*

TİD utterance (14):

<u>imp.....</u>				
<u>voc. lex.(don't talk)</u>				
<u>-neg<sup>2</sup></u>				
İŞ	VAR	KONUŞ-	DEĞİL	
(work)	(there is)	(to talk)	(not)	

*There is work (to do). Don't talk!*

## 4. Conclusion

Whatever its definition be, it is obvious that language plays a central part in our lives enabling us 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 being a means of communication, language provides us with identities such that we usually appraise people for the language they speak. Consequently, from the part of the hearing majority, Deaf community has often been identified with the lack of something requisite, the ability to 'speak', and 'deafness' is perceived merely as a 'disability' which must be treated. In fact, when deafness is perceived as a cultural and socio-linguistic variable, as a determiner of one's "identity" rather than one's "hearing loss", it is obvious that "the status of a

deaf community is quite comparable to the status of any minority culture, and the status of any sign language is comparable to the status of any minority language” (Zeshan, 2002, p. 235). It is for this reason that here in this paper, following the recent world-wide convention in the literature, the term ‘Deaf’ with a capital D indicating a distinct cultural/speech community is distinguished from ‘deaf’ with a small d, referring merely to physiological hearing loss.

Sign language of the deaf people is truly a means of communication consisting of rules similar to natural human languages, deserving its place within the scope of linguistics. However, the study of sign languages, especially from a linguistic point of view, is a recent phenomenon mainly due to the fact that sign languages has until recently been treated as improper and primitive ways of communication which can hardly be regarded as language, not worthy of any scientific consideration. Besides, the data required for studies on sign languages were not easy and practical to elicit technologically in earlier times. On these grounds, no scientific attention has been paid to Deaf culture and the language of the Deaf speech community until late 60s. With the changing of attitudes towards “language” in modern linguistics, it has been accepted that “all languages that 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, p. 7). Eventually, linguistic studies on sign languages began to be carried out and with the support of developing technology in data collection, gained progress after 70s. Today, the developing literature in the field of sign linguistics has revealed that comprehensive studies on sign languages are being carried out in almost all levels of linguistics, with an increasing interdisciplinary attention.

The study presented here aimed at providing information on sign languages in general with reference to certain misconceptions they have been exposed to and intended as a brief description of some aspects of TİD grammar and a consideration of relevant grammatical phenomena such as sign structure, number and time reference, sign space and body orientation, classifiers, sentence types and their grammatical marking with reference to non-manual activity. As far as the data has made it possible, this study has brought in some general findings concerning relevant grammatical phenomena. The findings seem to support that Turkish Sign Language (TİD) has rather a complex grammar -on the contrary to what has often been thought- and that it must be considered as a natural language and as the native language of the Deaf community in Turkey.

Further grammatical analyses and studies on some other macro levels including information about the Deaf culture or the Deaf speech community in Turkey would no doubt be of great significance for a complementary understanding of TİD as a natural language.

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## **Appendix**

The data collected through video recordings were transcribed into Turkish glosses with additional notes on non-manual components, diacritics and discursive features. The following items present some necessary information and a list of the symbols and abbreviations used:

1. Turkish glosses given in capital letters represent the signs in TİD.
2. Non-manual signals are represented on a line indicating the scope of the signal, that is, the line is used for the whole sentence and the abbreviations for the non-manual signals are placed on the corresponding manual signs.

3. Possible Turkish or English translations are given under the transcription of TİD utterances.
4. Single sign glosses consisting of more than one Turkish word are indicated with underscores (e.g. ÇEK\_GETİR- [*PULL\_BRING*], ÜST\_ÇIK- [*ON(TO)\_STEP UP*], AT\_BİN [*HORSE\_GET ON*]).
5. Complex signs are shown in the transcription with a plus symbol (e.g. YIL+EĞLENCE [*YEAR + ENTERTAINMENT*], UYU- + KALK [*SLEEP + WAKE UP*]).
6. The hyphens at the end of Turkish glosses represent that the category of the sign is a verb.
7. Parentheses within transcription and in Turkish/English translations indicate linguistic elements which are not expressed overtly or separately by TİD signs (e.g. ÜST(ÜNE)\_ÇIK- [*ON(TO)\_STEP UP*], MERAK\_(ET-), [*CURIOSITY\_(light verb)*], ‘Orada ne var (diye) merak (ediyorlar) [*They are wondering what is over there*]).
8. Parentheses that were placed after the symbol ‘ref.’ represent that the TİD sign – either manual or non-manual) is realized with the reference mentioned. Signers can use certain orientations of their body or head to refer to certain locations (e.g. BAK-(ref. other side) [*LOOK (AT) (ref. other side)*] or they can point to real word objects, as long as they are available during the talk exchange, instead of articulating the corresponding TİD sign (e.g. SANDALYE (ref. signer’s seat) [*CHAIR (ref. signer’s seat)*]).
9. The symbol ‘(short)’ after the glosses indicate that the TİD sign is reduced either in location, or movement (e.g. ANNE(short.) [*MOTHER(short)*]).
10. Slash sign ‘/’ is used to indicate two or more alternative glosses or homophonous signs. (e.g. YIKA-/TEMİZLE- [*WASH/CLEAN*], EĞLENCE/OYUN [*ENTERTAINMENT/ GAME*]).
11. ‘Q-mark.’ indicate the manual question mark wiggle
12. ‘S-end.’ represents a manual sign indicating the end of clauses or sentences.
13. ‘y/n-q’ symbol is used to represent the non-manual activity for yes-no questions.
14. ‘wh-q’ symbol is used to represent the non-manual activity for wh- questions.
15. ‘neg<sup>1</sup>’, ‘neg<sup>2</sup>’ and ‘neg<sup>3</sup>’ symbols are used to represent corresponding non-manual type of negation.
16. ‘imp.’ symbol is used to represent the non-manual activity for imperative constructions.
17. The symbol ‘nod-’ is used to represent nodding of the signer’s whereas ‘sing.-nod’ represents that signers do not continuously nod but perform a single nod.
18. The symbols representing non-manual activity are written in italic form to indicate that the investigator has some doubts about their presence.

19. The abbreviation ‘voc. lex.(...)’ is used to indicate that a vocal linguistic/lexical word or particle is performed by the signer approximating the Turkish one represented in the following parenthesis (e.g. voc. lex. (‘hayır’) [‘no’]).
20. The continuous dots are used to represent that a non-manual signal is performed continuously by the signer; that a signal continues as long as the dots continue.
21. Moreover, the following symbols are used to represent various indexing signs of the informants:

INDEX-1 p. pr. sg. :	BEN (I)
INDEX-1 p. pr. pl. :	BİZ (we)
INDEX-2 p. pr. sg. :	SEN (you)
INDEX-2 p. pr. pl. :	SİZ (you, plural.)
INDEX-3 p. pr. sg. :	O (he/she/it)
INDEX-3 p. pr. pl. :	ONLAR (they)
INDEX-1 dem. pr. sg. (place):	BURASI, BURA (here)
INDEX-2 dem. pr. sg. (place):	ŞURASI, ŞURA (there)
INDEX-3 dem. pr. sg. (place):	ORASI, ORA (there)
INDEX-1 dem. pr. sg. (person):	BU (this)
INDEX-2 dem. pr. sg. (person):	ŞU (that)
INDEX-1 det. sg. :	BU (this)
INDEX-2 det. sg. :	ŞU (that)
INDEX-3 det. sg. :	O (that)
INDEX-1 det. pl. :	BU (this)
INDEX-2 det.pl. :	ŞU (that)
INDEX-3 det. pl. :	O (that)
INDEX-neutr:	It is used when indexing points no specific direction but the neutral sign space.