

A Grammar of Turkish Sign Language (TİD)

Edited by
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The book is published with open access at <https://www3.thesignhub.eu/grammar/tid>

We recommend that you cite the entire grammar or sub-parts of it as in the following examples.

The entire grammar:

Branchini, Chiara and Lara Mantovan (eds.). 2020. A Grammar of Italian Sign Language (LIS). 1st ed. (SIGN-HUB Sign Language Grammar Series). (<http://sign-hub.eu/grammars/...>) (Accessed 31-10-2021)

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Smith, Mary. 2020. Phonology: 1.1.1.2. Finger configuration. In Mary, Smith, Ben Smith and Carlo Smith (eds.), A Grammar of Catalan Sign Language (LSC). 1st ed. (SIGN-HUB Sign Language Grammar Series), 230-237. (<http://sign-hub.eu/grammars/...>) (Accessed 31-10-2021)

Smith, Mary. 2020. Syntax: 3.1.2.1.3. Manual markers in disjunctive coordination. In Mary, Smith, Ben Smith and Carlo Smith (eds.), A Grammar of Catalan Sign Language (LSC). 1st edn. (SIGN-HUB Sign Language Grammar Series), 230-237. ([http://sign-hub.eu/grammars/...](http://sign-hub.eu/grammars/)) (Accessed 31-10-2021)

SIGN-HUB Sign Language Grammars

Sign language grammars are available for these languages:

- Topics in the Grammar of Spanish Sign Language (LSE)
- A Grammar of German Sign Language (DGS)
- A Test Grammar of a Hypothetical Sign Language (HYP)
- Topics in the Grammar of French Sign Language (LSF)
- A Grammar of Sign Language of the Netherlands (NGT)
- A Grammar of Turkish Sign Language (TİD)
- A Grammar of Catalan Sign Language (LSC)
- A Grammar of Italian Sign Language (LIS)

TABLE OF CONTENT

List of authors

Acknowledgements

Introduction

List of abbreviations

List of notational conventions

PART 1 Socio-Historical Background

Chapter 1. History

Information on data and consultants

References

Authorship information

Chapter 2. The sign language community

2.1. Community characteristics

2.2. Sign language users

2.3. Deaf culture

2.4. Deaf education

Information on data and consultants

References

Authorship information

Chapter 3. Status

3.1. Current legislation

3.2. Language policy

3.3. Language attitudes

Information on data and consultants

References

Authorship information

Chapter 4. Linguistic study

4.1. Grammatical description

4.2. Lexicographic work

4.3. Corpora

4.4. Sociolinguistic variation

Information on data and consultants

References

Authorship information

PART 2 Phonology

Chapter 1. Sublexical structure

- 1.1. Active articulators
 - 1.1.1. Contrastive handshapes
 - 1.1.1.1. Selected fingers
 - 1.1.1.2. Finger configuration
 - 1.1.2. Orientation
 - 1.1.3. The manual alphabet & number signs
 - 1.1.4. Other active articulators
- 1.2. Location
- 1.3. Movement
 - 1.3.1. Path movement
 - 1.3.2. Secondary movement
- 1.4. Two-handed signs
 - 1.4.1. Symmetrical signs
 - 1.4.2. Asymmetrical signs
- 1.5. Non-manuals
 - 1.5.1. Mouth gestures
 - 1.5.2. Mouthings
 - 1.5.3. Other non-manuals

Information on data and consultants

References

Authorship information

Chapter 2. Prosody

- 2.1. The lexical level
 - 2.1.1. Syllable
 - 2.1.2. Foot
- 2.2. Above the lexical level
 - 2.2.1. Prosodic word
 - 2.2.2. Phonological phrase
 - 2.2.3. Intonational phrase
 - 2.2.4. Phonological utterance
- 2.3. Intonation
- 2.4. Interaction
 - 2.4.1. Turn regulation
 - 2.4.2. Back-channeling

Information on data and consultants

References

Authorship information

Chapter 3. Phonological processes

- 3.1. Processes affecting the phonemic level
 - 3.1.1. Assimilation

- 3.1.2. Coalescence
- 3.1.3. Movement reduction and extension
 - 3.1.3.1. Without joint shift
 - 3.1.3.2. With joint shift
- 3.1.4. Weak hand drop
- 3.1.5. Handshape drop
- 3.1.6. Nativization
- 3.1.7. Metathesis
- 3.2. Processes affecting the syllable
 - 3.2.1. Epenthesis
 - 3.2.2. Syllable reduction
 - 3.2.3. Syllable reanalysis
- 3.3. Processes affecting the prosodic word
 - 3.3.1. Reduplication
 - 3.3.2. Phonological effects of cliticization and compounding
- 3.4. Processes affecting higher prosodic units
 - 3.4.1. Organization of the signing space
 - 3.4.2. Differences in “loudness”: Whispering and shouting mode
- Information on data and consultants
- References
- Authorship information

PART 3 Lexicon

Chapter 1. The native lexicon

- 1.1. Core lexicon
- 1.2. Non-core lexicon
 - 1.2.1. Classifier constructions
 - 1.2.2. Pointing
 - 1.2.3. Buoys
- 1.3. Interaction between core and non-core lexicon
 - 1.3.1. Lexicalization processes
 - 1.3.2. Modification of core lexicon signs
 - 1.3.3. Simultaneous constructions and use of the non-dominant hand
- Information on data and consultants
- References
- Authorship information

Chapter 2. The non-native lexicon

- 2.1. Borrowings from other sign languages
- 2.2. Borrowings from (neighboring) spoken language
 - 2.2.1. Calques
 - 2.2.2. Lexicalization of fingerspelling
 - 2.2.2.1. Initialization

- 2.2.2.2. Multiple-letter signs
- 2.2.3. Mouthing
 - 2.2.3.1. Full forms
 - 2.2.3.2. Reduced forms
 - 2.2.3.3. Mouthing and fingerspelling
- 2.2.4. Other marginal types of borrowing
- 2.3. Borrowings from conventionalized gestures
 - 2.3.1. Lexical functions
 - 2.3.2. Grammatical functions
- Information on data and consultants
- References
- Authorship information

Chapter 3. Parts of speech

- 3.1. Nouns
 - 3.1.1. Common nouns
 - 3.1.2. Proper nouns and name signs
- 3.2. Verbs
 - 3.2.1. Plain verbs
 - 3.2.2. Agreement verbs
 - 3.2.3. Spatial verbs
- 3.3. Lexical expressions of inflectional categories
 - 3.3.1. Tense markers
 - 3.3.2. Aspectual markers
 - 3.3.3. Modality markers
 - 3.3.3.1. Deontic modality
 - 3.3.3.2. Epistemic modality
 - 3.3.4. Agreement markers
- 3.4. Adjectives
 - 3.4.1. Attributive adjectives
 - 3.4.2. Predicative adjectives
- 3.5. Adverbials
 - 3.5.1. Verb-oriented adverbials
 - 3.5.2. Sentence adverbials
- 3.6. Determiners
 - 3.6.1. Definite determiners
 - 3.6.2. Indefinite determiners
- 3.7. Pronouns
 - 3.7.1. Locative and demonstrative pronouns
 - 3.7.2. Personal pronouns
 - 3.7.2.1. Person
 - 3.7.2.2. Number
 - 3.7.2.3. Clusivity
 - 3.7.2.4. Case
 - 3.7.2.5. Gender

- 3.7.2.6. Honorific pronouns
- 3.7.2.7. Logophoric pronouns
- 3.7.3. Possessive pronouns
- 3.7.4. Reflexive and reciprocal pronouns
- 3.7.5. Interrogative pronouns
- 3.7.6. Relative pronouns
- 3.7.7. Indefinite pronouns
- 3.8. Adpositions
 - 3.8.1. Manual adpositions
 - 3.8.2. Adpositions and spatial relations
- 3.9. Conjunctions
 - 3.9.1. Coordinating conjunctions
 - 3.9.2. Subordinating conjunctions
 - 3.9.3. Correlative conjunctions
- 3.10. Numerals and quantifiers
 - 3.10.1. Numerals
 - 3.10.1.1. Cardinal numerals
 - 3.10.1.2. Ordinal numerals
 - 3.10.1.3. Distributive numerals
 - 3.10.2. Quantifiers
- 3.11. Particles
 - 3.11.1. Negative particles
 - 3.11.2. Question particles
 - 3.11.3. Discourse particles
- 3.12. Interjections
- Information on data and consultants
- References
- Authorship information

PART 4 Morphology

Chapter 1. Compounding

- 1.1. Native compounds
 - 1.1.1. Sequential compounds
 - 1.1.1.1. Semantic structure
 - 1.1.1.1.1. Endocentric compounds
 - 1.1.1.1.2. Exocentric compounds
 - 1.1.1.2. Syntactic structure
 - 1.1.1.2.1. Subordinate compounds
 - 1.1.1.2.2. Coordinate compounds
 - 1.1.1.3. Compounds involving Size-and-Shape Specifiers (SASS)
 - 1.1.2. Simultaneous and semi-simultaneous compounds
 - 1.1.2.1. Simultaneous compounds
 - 1.1.2.2. Semi-simultaneous compounds

- 1.2. Loan compounds
 - 1.2.1. Faithful loans
 - 1.2.2. Modified loans
- 1.3. Compounds with fingerspelled components
 - 1.3.1. Sequential
 - 1.3.1.1. Native-like
 - 1.3.1.2. Loan-like
 - 1.3.2. Simultaneous
- 1.4. Phonological and prosodic characteristics of compounds
 - 1.4.1. Phonological characteristics
 - 1.4.2. Prosodic characteristics

Information on data and consultants

References

Authorship information

Chapter 2. Derivation

- 2.1. Manual markers of derivation
 - 2.1.1. Sequential derivation
 - 2.1.1.1. Agentive
 - 2.1.1.2. Negative
 - 2.1.1.3. Attenuative
 - 2.1.2. Simultaneous derivation
 - 2.1.2.1. Noun-verb pairs
 - 2.1.2.2. Attenuative
- 2.2. Non-manual markers of derivation
 - 2.2.1. Diminutive and augmentative
 - 2.2.2. Intensive
 - 2.2.3. Proximity
 - 2.2.4. Noun-verb pairs: mouthing
 - 2.2.5. Attenuative

Information on data and consultants

References

Authorship information

Chapter 3. Verbal inflection

- 3.1. Agreement
 - 3.1.1. Person and locative markers
 - 3.1.1.1. Subject markers
 - 3.1.1.2. Object markers
 - 3.1.1.3. Locative markers
 - 3.1.2. Number markers
 - 3.1.2.1. Dual
 - 3.1.2.2. Multiple
 - 3.1.2.3. Exhaustive
 - 3.1.3. Reciprocal markers
- 3.2. Tense

- 3.2.1. Time lines
- 3.2.2. Tense inflection
- 3.3. Aspect
 - 3.3.1. Imperfective
 - 3.3.1.1. Habitual
 - 3.3.1.2. Continuative/durative
 - 3.3.1.3. Conative
 - 3.3.2. Perfective
 - 3.3.2.1. Iterative
 - 3.3.2.2. Inceptive/inchoative
 - 3.3.2.3. Completive
- 3.4. Modality
 - 3.4.1. Deontic modality
 - 3.4.2. Epistemic modality
- 3.5. Negation
 - 3.5.1. Regular negation
 - 3.5.1.1. Manual markers
 - 3.5.1.2. Non-manual markers
 - 3.5.2. Irregular negation
- Information on data and consultants
- References
- Authorship information

Chapter 4. Nominal inflection

- 4.1. Number
 - 4.1.1. Manual marking
 - 4.1.2. Non-manual marking
- 4.2. Localization and distribution
- Information on data and consultants
- References
- Authorship information

Chapter 5. Classifiers

- 5.1. Predicate classifiers
 - 5.1.1. Entity classifiers
 - 5.1.2. Bodypart classifiers
 - 5.1.3. Handle classifiers
- 5.2. Size-and-Shape Specifiers (SASS)
- Information on data and consultants
- References
- Authorship information

PART 5 Syntax

Chapter 1. Sentence types

1.1. Declaratives

1.2. Interrogatives

1.2.1. Polar interrogatives

1.2.1.1. Non-manual markers in polar interrogatives

1.2.1.2. Word order changes between declaratives and polar interrogatives

1.2.1.3. Interrogative particles

1.2.2. Alternative interrogatives

1.2.3. Content interrogatives

1.2.3.1. Non-manual markers in content interrogatives

1.2.3.2. List of wh-signs

1.2.3.3. Content interrogatives without wh-signs

1.2.3.4. Non-interrogative uses of wh-signs

1.2.3.5. Position of wh-signs

1.2.3.6. Split between the wh-sign and its restriction

1.2.3.7. Doubling of the wh-sign

1.2.3.8. Multiple wh-signs in interrogatives

1.2.3.9. Interrogative particles

1.3. Imperatives

1.3.1. Subtypes of imperatives

1.3.1.1. Orders

1.3.1.2. Invitations

1.3.1.3. Suggestions/advice

1.3.1.4. Permissions

1.3.1.5. Instructions

1.3.1.6. Recommendations

1.3.2. Imperative markers

1.3.2.1. Manual signs

1.3.2.2. Non-manual markers

1.3.3. Imperatives and verb classes

1.3.4. Word order in imperatives

1.3.5. Attention callers

1.3.6. Negation in imperatives

1.3.6.1. Manual negation

1.3.6.2. Non-manual negation

1.3.7. Subjects in imperatives

1.3.7.1. Null and/or overt subject

1.3.7.2. The person of the subject

1.3.7.3. Anaphoric properties

1.3.8. Embedding imperatives

1.3.9. Special constructions: imperative-and-declaratives (IaD)

1.3.10. Exhortative constructions

1.4. Exclamatives

1.4.1. Total exclamatives

1.4.1.1. Non-manual marking

1.4.1.2. Manual signs

1.4.2. Partial exclamatives

1.4.2.1. Non-manual marking

1.4.2.2. Wh-signs

1.4.2.3. Other structures

1.4.3. Negation in exclamatives

1.5. Negatives

1.5.1. Manual marking of negation

1.5.1.1. Manual negative elements

1.5.1.1.1. Negative particles

1.5.1.1.2. Irregular negatives

1.5.1.1.3. Negative determiners and adverbials

1.5.1.2. Syntax of negative clauses

1.5.1.2.1. Position of negative elements

1.5.1.2.2. Doubling

1.5.1.2.3. Negative concord

1.5.2. Non-manual marking of negation

1.5.2.1. Head movements

1.5.2.2. Facial expressions

1.5.2.3. Body posture

1.5.2.4. Spreading domain

Information on data and consultants

References

Authorship information

Chapter 2. Clause structure

2.1. The syntactic realization of argument structure

2.1.1 Types of predicates

2.1.1.1. Transitive and ditransitive predicates

2.1.1.2. Intransitive predicates: unergatives and unaccusatives

2.1.1.3. Psychological predicates

2.1.1.4. Meteorological predicates

2.1.1.5. Argument structure alternations

2.1.2. Argument realization

2.1.2.1. Overt noun phrases

2.1.2.2. Pronouns

2.1.2.3. Verb agreement

2.1.2.3.1. Manual verb agreement

2.1.2.3.2. Non-manual verb agreement

2.1.2.4. Classifier handshape

2.1.2.5. Argument clauses

2.1.3. Argument structure changes

2.1.3.1. Extension of argument structures

2.1.3.2. Passive

2.1.3.3. Reflexivity

2.1.3.4. Reciprocity

2.1.4. Non-verbal predication

2.1.4.1. Copular constructions

2.1.4.2. Secondary predication

2.1.5. Existentials and possessives

2.1.5.1. Possessives

2.1.5.2. Existentials

2.2. Grammatical functions

2.2.1. Subject and object identification

2.2.1.1. Specific position(s) for subject and object

2.2.1.2. Special anaphoric properties for subject and object

2.2.1.3. Strategies of pronoun copying for subject and object

2.2.1.4. Null arguments for subject and object

2.2.2. Other grammatical functions: arguments vs. adjuncts

2.2.3. Types of adjuncts

2.3. Word order

2.3.1. Identification of the basic order of constituents in the main declarative clause

2.3.1.1. Order of subject, object and verb

2.3.1.2. Order of auxiliaries (i.e. agreement, tense and aspectual markers) with respect to the

verb

2.3.1.3. Order of modals with respect to the verb

2.3.1.4. Order of negation with respect to verb, modals and auxiliaries

2.3.1.5. Order of arguments of ditransitive verbs

2.3.1.6. Position for different types of adverbs and adjuncts

2.3.2. Basic order of constituents in other clauses

2.3.2.1. Basic order in the different types of sentence

2.3.2.2. Basic order in the different types of subordinate clauses

2.3.3. Deviations from the basic order of constituents

2.3.3.1. List of attested and unattested permutations

2.3.3.2. Non-manuals accompanying the deviations from the basic word order

2.3.3.3. Specific order for topicalized elements

2.3.3.4. Specific order for focused elements

2.3.3.5. Word order variations according to the different types of verbs (plain, agreeing)

2.3.3.6. Word order variations according to the different types of predicates

(reversible/irreversible)

2.4. Null arguments

2.4.1. Subject and object null arguments

2.4.1.1. Null subjects

2.4.1.2. Null objects

2.4.2. Types of verbs that can license null subjects

2.4.3. Null subjects in main clauses

2.4.4. Null arguments in embedded clauses

2.4.5. Pragmatic and semantic conditions licensing null arguments

2.4.6. Referential properties of null arguments

2.5. Clausal ellipsis

2.6. Pronoun copying

- 2.6.1. Personal Pronoun copying
- 2.6.2. Syntactic properties of pronoun copying
 - 2.6.2.1. Possible subject-object asymmetry in pronoun copying
 - 2.6.2.2. Position of the copying pronoun
- 2.6.3. Prosodic features of pronoun copying
- 2.6.4. Functions of pronoun copying

Information on data and consultants

References

Authorship information

Chapter 3. Coordination and subordination

- 3.1. Coordination of clauses
 - 3.1.1 Types of clausal coordination
 - 3.1.2 Coordination by manual markers
 - 3.1.2.1. Manual markers of coordination
 - 3.1.2.1.1. Manual markers in conjoined coordination
 - 3.1.2.1.2. Manual markers in adversative coordination
 - 3.1.2.1.3. Manual markers in disjunctive coordination
 - 3.1.2.2. Position of manual markers of coordination
 - 3.1.2.2.1. Position of manual markers in conjoined coordination
 - 3.1.2.2.2. Position of manual markers in adversative coordination
 - 3.1.2.2.3. Position of manual markers in disjunctive coordination
 - 3.1.2.3. Optionality or obligatoriness of manual markers of coordination
 - 3.1.2.3.1. Optionality/obligatoriness of manual markers in conjoined conjunctions
 - 3.1.2.3.2. Optionality/obligatoriness of manual markers in adversative conjunctions
 - 3.1.2.3.3. Optionality/obligatoriness of manual markers in disjunctive conjunctions
 - 3.1.3 Coordination by non-manual markers
 - 3.1.3.1 List of non-manual markers of coordination
 - 3.1.3.1.1. Non-manual markers in conjunctive coordination
 - 3.1.3.1.2. Non-manual markers in disjunctive coordination
 - 3.1.3.1.3. Non-manual markers in adversative coordination
 - 3.1.3.2. The spreading domain of non-manual markers of coordination
 - 3.1.3.2.1. Spreading domain of non-manual markers in conjunctive coordination
 - 3.1.3.2.2. Spreading domain of non-manual markers in disjunctive coordination
 - 3.1.3.2.3. Spreading domain of non-manual markers in adversative coordination
 - 3.1.4 Properties of coordination
 - 3.1.4.1. Extraction
 - 3.1.4.2. Gapping
 - 3.1.4.3. Scope
 - 3.1.4.3.1. Scope of negation
 - 3.1.4.3.2. Scope of yes/no questions
- 3.2. Subordination: distinctive properties
 - 3.2.1. Subject pronoun copy
 - 3.2.2. Position of question signs
 - 3.2.3. Spreading of non-manual markers

3.2.4. Interpretation of embedded negation in the matrix clause

3.3. Argument clauses

3.3.1. Subject clauses

3.3.1.1. Position(s) within the matrix clause

3.3.1.2. Special non-manual markers

3.3.1.3. Tense and aspectual marking

3.3.1.4. Anaphoric relations

3.3.1.5. Null arguments

3.3.2. Object clauses

3.3.2.1. Verbs taking object clauses

3.3.2.2. Position(s) within the matrix clause

3.3.2.3. Factivity

3.3.2.4. Special non-manual markers

3.3.2.5. Tense and aspectual marking

3.3.2.6. Anaphoric relations with the main clauses arguments

3.3.2.7. Occurrences of null arguments

3.3.3. Role shift

3.3.3.1. Markers of role shift

3.3.3.2. Integration of the role shifted clause into the main clause

3.3.3.3. Syntactic contexts introducing attitude role shift

3.3.3.4. Special signs introducing action role shift

3.3.3.5. Syntactic differences between action role shift and attitude role shift

3.4. Relative clauses

3.4.1. Types of relative clause

3.4.2. Presence or absence of a relativization sign

3.4.2.1. List of relativization signs

3.4.2.1.1. Human/non-human specificity of the relativization sign

3.4.2.1.2. Singular/plural specificity of the relativization sign

3.4.2.2. Position of the relativization sign

3.4.2.3. Optionality or obligatoriness of the relativization sign

3.4.3. Position of the noun phrase with the relative clause within the matrix clause

3.4.4. Subject vs. object relativization

3.4.5. Displacement of relative clauses

3.4.6. Special non-manual marking

3.4.6.1. List of non-manual markers

3.4.6.2. The spreading domain of each non-manual marker

3.4.7. Restrictive vs. non-restrictive relative clauses

3.5. Adverbial clauses

3.5.1. Conditional clauses

3.5.1.1. The role of non-manual markers in conditional sentences

3.5.1.2. Factual conditionals

3.5.1.2.1. Non-manual markers and their properties in factual clauses

3.5.1.2.2. Manual conditional signs in factual conditionals

3.5.1.2.3. Order of the components of the factual conditional clauses

3.5.1.3. Counterfactual conditionals

- 3.5.1.3.1. Non-manual markers and their properties in counterfactual conditionals
- 3.5.1.3.2. Manual conditional signs in counterfactual conditionals
- 3.5.1.3.3. Order of the components of the counterfactual conditional clause
- 3.5.1.4. Concessive conditionals
 - 3.5.1.4.1. Non-manual markers and their properties in concessive clauses
 - 3.5.1.4.2. Manual conditional signs in concessive conditionals
 - 3.5.1.4.3. Order of the components of the concessive conditional clause
- 3.5.1.5. Non-predictive/peripheral conditionals
 - 3.5.1.5.1. Non-manual markers and their properties in non-predictive/peripheral conditionals
 - 3.5.1.5.2. Manual conditional signs in non- predictive/peripheral conditionals
 - 3.5.1.5.3. Order of the components of the non- predictive/peripheral conditional clause
- 3.5.1.6. Other conditional constructions
- 3.5.2. Temporal clauses
 - 3.5.2.1. Internal structure of temporal clauses
 - 3.5.2.2. Manual signs marking subordination in temporal clauses
 - 3.5.2.3. Other markers of subordination in temporal clauses
 - 3.5.2.4. Non-manual markers in temporal clauses
 - 3.5.2.5. Position of the temporal clause with respect to the main clause
 - 3.5.2.6. Simultaneous expression of the main event and the adverbial clause
- 3.5.3. Locative clauses
 - 3.5.3.1. Internal structure of locative clauses
 - 3.5.3.2. Manual signs marking subordination in locative clauses
 - 3.5.3.3. Other markers of subordination in locative clauses
 - 3.5.3.4. Non-manual markers in locative clauses
 - 3.5.3.5. Position of the locative clause with respect to the main clause
 - 3.5.3.6. Simultaneous expression of the main event and the adverbial clause
- 3.5.4. Manner clauses
 - 3.5.4.1. Internal structure of manner clauses
 - 3.5.4.2. Manual signs marking subordination in manner clauses
 - 3.5.4.3. Other markers of subordination in manner clauses
 - 3.5.4.4. Non-manual markers in manner clauses
 - 3.5.4.5. Position of the manner clause with respect to the main clause
 - 3.5.4.6. Simultaneous expression of the main event and the adverbial clause
- 3.5.5. Reason clauses
 - 3.5.5.1. Internal structure of reason clauses
 - 3.5.5.2. Manual signs marking subordination in reason clauses
 - 3.5.5.3. Other markers of subordination in reason clauses
 - 3.5.5.4. Non-manual markers in reason clauses
 - 3.5.5.5. Position of the reason clause with respect to the main clause
 - 3.5.5.6. Simultaneous expression of the main event and the adverbial clause
- 3.5.6. Purpose clauses
 - 3.5.6.1. Internal structure of purpose clauses
 - 3.5.6.2. Manual signs marking subordination in purpose clauses
 - 3.5.6.3. Other markers of subordination in purpose clauses
 - 3.5.6.4. Non-manual markers in purpose clauses

3.5.6.5. Position of the purpose clause with respect to the main clause

3.5.6.6. Simultaneous expression of the main event and the adverbial clause

3.5.7. Concessive clauses

3.5.7.1. Internal structure of concessive clauses

3.5.7.2. Manual signs marking subordination in concessive clauses

3.5.7.3. Other markers of subordination in concessive clauses

3.5.7.4. Non-manual markers in concessive clauses

3.5.7.5. Position of the concessive clause with respect to the main clause

3.5.7.6. Simultaneous expression of the main event and the adverbial clause

3.5.8. Substitutive clauses

3.5.8.1. Internal structure of substitutive clauses

3.5.8.2. Manual signs marking subordination in substitutive clauses

3.5.8.3. Other markers of subordination in substitutive clauses

3.5.8.4. Non-manual markers in substitutive clauses

3.5.8.5. Position of the substitutive clause with respect to the main clauses

3.5.8.6. Simultaneous expression of the main event and the adverbial clause

3.5.9. Additive clauses

3.5.9.1. Internal structure of additive clauses

3.5.9.2. Manual signs marking subordination in additive clauses

3.5.9.3. Other markers of subordination in additive clauses

3.5.9.4. Non-manual markers in additive clauses

3.5.9.5. Position of the additive clause with respect to the main clause

3.5.9.6. Simultaneous expression of the main event and the adverbial clause

3.5.10. Absolute clauses

3.5.10.1. Markers of subordination in absolute clauses

3.5.10.2. Non-manual markers in absolute clauses

3.5.10.3. Position of the absolute clause with respect to the main clause

3.5.10.4. Simultaneous expression of the main event and the adverbial clause

3.6. Comparative clauses

3.7. Comparative correlatives

Information on data and consultants

References

Authorship information

Chapter 4. The noun phrase

4.1. Determiners

4.1.1. Articles

4.1.1.1. The position of the article

4.1.1.2. Simultaneous manual articulation

4.1.1.3. Non-manual marking

4.1.1.4. Articles expressed by non-manual marking only

4.1.2. Demonstratives

4.1.2.1. The position of the demonstrative

4.1.2.2. Demonstrative reinforcer construction

4.1.2.3. Non-manual marking

4.1.2.4. Anaphoric usage

4.2. Possessive phrases

4.2.1. Ways of expressing the possessive relation in the noun phrase

4.2.1.1. Attributive possessive pronouns

4.2.1.2. Possessive markers

4.2.1.3. Juxtaposition

4.2.2. The position of the possessive pronoun

4.2.3. Agreement with the possessor

4.2.4. Agreement with the possessed

4.2.5. Possessive phrases with the possessed elided

4.3. Numerals

4.3.1. The position of the numeral

4.3.2. Floating numerals

4.3.3. Definite and indefinite reading

4.3.4. Numeral incorporation

4.3.5. Measure phrases

4.4. Quantifiers

4.4.1 The position of the quantifier

4.4.2. Floating quantifiers

4.5. Adjectives

4.5.1. Prenominal vs. postnominal adjectives

4.5.2. Symmetric adjectives

4.5.3. Reduplicated adjectives

4.5.4. Ordering restrictions among adjectives

4.6. Multiple noun phrase constituents

4.6.1. Prenominal modifiers

4.6.2. Postnominal modifiers

Information on data and consultants

References

Authorship information

Chapter 5. The structure of adjectival phrase

5.1. Intensifiers and other modifiers

5.1.1 Manual modifiers

5.1.2. Modifications of manual signs and non-manual modifiers

5.1.3. Iteration and stacking

5.1.4. Degree comparatives

5.1.5. Superlatives

5.2. Arguments

5.3. Adjuncts

Information on data and consultants

References

Authorship information

Chapter 6. The structure of adverbial phrase

6.1. Independent manual signs

- 6.2. Modification of manual signs
 - 6.3. Non-manual adverbs
 - 6.4. Classes of adverbs
 - 6.4.1. Sentential adverbs
 - 6.4.2. VP-adverbs
 - 6.4.2.1. Temporal adverbs
 - 6.4.2.2. Manner adverbs
 - 6.4.2.3. Locative adverbs
 - 6.4.2.4. Adverbs conveying aspectual information
 - 6.4.2.5. Adverbs conveying deontic modality
 - 6.4.2.6. Adverbs conveying epistemic modality
 - 6.4.2.7. Adverbs of degree
 - 6.4.2.8. Adverbs of frequency
 - 6.5. Adverbial phrase modifiers
 - 6.5.1. Adverbs modified by degree words expressing intensity
 - 6.5.2. Adverbs modified by degree words expressing comparison
- Information on data and consultants
- References
- Authorship information

PART 6 Pragmatics

Chapter 1. Reference

- 1.1. Deixis
 - 1.1.1. Pointing
 - 1.1.2. Social deixis
 - 1.1.3. Lack of deixis
 - 1.2. Definiteness
 - 1.2.1. Manual marking
 - 1.2.2. Non-manual marking
 - 1.3. Indefiniteness
 - 1.3.1. Manual marking
 - 1.3.2. Non-manual marking
 - 1.4. Specificity
 - 1.4.1. Manual marking
 - 1.4.2. Non-manual marking
 - 1.5. Impersonal reference
- Information on data and consultants
- References
- Authorship information

Chapter 2. Reference tracking

- 2.1. Pronouns
- 2.2. Other means

- 2.2.1. Agreement
- 2.2.2. Classifier handshapes
- 2.2.3. Buoys

Information on data and consultants

References

Authorship information

Chapter 3. Speech acts

- 3.1. Assertions
- 3.2. Questions
- 3.3. Commands and requests
- 3.4. Exclamatives

Information on data and consultants

References

Authorship information

Chapter 4. Information structure

- 4.1. Focus
 - 4.1.1. All-new focus
 - 4.1.2. New information focus
 - 4.1.3. Contrastive focus
 - 4.1.4. Emphatic focus
 - 4.1.5. Focus doublings
- 4.2. Topic
- 4.3. Morphological and prosodic markers of topic and focus
 - 4.3.1. Focus
 - 4.3.2. Topic

Information on data and consultants

References

Authorship information

Chapter 5. Discourse structure

- 5.1. Coherence and discourse markers
 - 5.1.1. Manual discourse markers
 - 5.1.2. Non-manual discourse markers
 - 5.1.3. Strategies using signing space
- 5.2. Cohesion
 - 5.2.1. Manual strategies
 - 5.2.2. Non-manual strategies
 - 5.2.3. Strategies using signing space
- 5.3. Foregrounding and backgrounding

Information on data and consultants

References

Authorship information

Chapter 6. Reporting and role shift

6.1. Attitude role shift and (in)direct speech

6.2. Action role shift

Information on data and consultants

References

Authorship information

Chapter 7. Expressive meaning

7.1. Conversational implicature

7.2. Conventional implicature

7.3. Presupposition

Information on data and consultants

References

Authorship information

Chapter 8. Signing space

8.1. Uses of signing space

8.1.1. Abstract use

8.1.2. Topographic use

8.2. Temporal expressions

8.3. Perspective

Information on data and consultants

References

Authorship information

Chapter 9. Figurative meaning

9.1. Metaphor

9.1.1. Cognitive basis of metaphors

9.1.2. Types and combinations of metaphors

9.1.3. Metaphors in grammar

9.2. Metonymy

9.2.1. Metonymy vs. metaphor

9.2.2. Body as metonymy

Information on data and consultants

References

Authorship information

Chapter 10. Communicative interaction

10.1. Discourse markers

10.2. Turn taking

10.2.1. Types of turn taking constructions

10.2.1.1. Smooth turn taking

10.2.1.2. Turn taking with pause

10.2.1.3. Overlapping turns

10.2.2. Turn taking signals

10.2.2.1. Different turn taking signals

10.2.2.2. Turn-yielding signals

10.2.2.3. Turn taking signals

10.3. Back-channeling

10.4. Repairs

Information on data and consultants

References

Authorship information

Chapter 11. Register and politeness

11.1. Register

11.2. Politeness

Information on data and consultants

References

Authorship information

Appendices

Complete list of references

Glossary of grammatical terms

List of authors

List of authors

(in alphabetical order)

Kadir Gökgöz (Boğaziçi University):

PHONOLOGY, Chapters 2 & 3

SYNTAX Chapter 1: Section 1.5

Chapter 2: Section 2.1 (co-authored with Demet Kayabaşı & Hande Sevgi)

Chapter 3: Section 3.4 (co-authored with Okan Kubus)

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Introduction

A Grammar of Turkish Sign Language (TİD) is a comprehensive presentation of grammatical properties of Turkish Sign Language (Türk İşaret Dili, TİD). Its goal is to provide a resource for TİD signers, students, interpreters, linguists and other researchers, and all those interested in the study of TİD. Reference grammars are necessary for many different scientific and applied goals, ranging from teaching materials to language assessment, and this grammar tries to address this need in a substantial way. As a digital and on-line product, *A Grammar of Turkish Sign Language (TİD)* radically differs from other, more traditional grammars, since it provides hundreds of visual examples, making sign language grammar description much more accessible to the readers.

This grammar, together with the other sign language grammars produced during the SIGN-HUB Horizon 2020 project and made available on the SIGN-HUB platform, has been written with an online grammar writing tool developed during the SIGN-HUB project and provided on the SIGN-HUB platform in open access. This tool provides an embedded, detailed Table of Contents for sign language grammars, which was adopted from *SignGram Blueprint*. *SignGram Blueprint* is the first resource that provides detailed guidelines for grammar descriptions at all levels of a sign language reference grammar and for an introduction to the socio-historical background of the language.

A Grammar of Turkish Sign Language (TİD) follows the *SignGram Blueprint* not only in structure but also in style. Following the *Blueprint's Manual* as well as the guidelines developed during the SIGN-HUB project, it intends to be mostly descriptive, informed by basic insights of well-established theories in sign language linguistics, but not theory-loaded. Benefitting from this grammar requires general knowledge about grammar and grammatical terminology, but the explanations of basic concepts in the text and in the glossary are intended to facilitate comprehension. Therefore, this grammar is intended to be accessible to a general reader, in particular through the extensive use of visual examples (videos and still photos). Moreover, since the table of contents of the grammar is identical to that of the *Blueprint*, the reader can consult corresponding chapters in the *Blueprint* if s/he would like to find out more detailed and cross-linguistic information about a grammar point. The grammar descriptions in this online book are based both on the literature that was available at the time of writing and on the findings of new research conducted during the project. A substantial number of linguistic generalizations have been drawn from existing research publications in TİD linguistics as well as from the first grammar of TİD, Dikyüva *et al.'s Turkish Sign Language Grammar*. Needless to say, errors of interpretation, if there are any, belong to us. In those cases in which different studies reported different or contradicting observations regarding the linguistic point in question, the authors opted for neutrality, and all reported observations have been described in the grammar as possibilities or variations. Note also that, in accordance with the style of a reference grammar, references to the works from which the descriptions and generalizations were drawn have not been provided in the text but under the *References* section at the end of each chapter.

The team of senior and junior researchers who conducted new research to uncover hitherto uninvestigated linguistic phenomena of TİD and who developed this online grammar was coordinated by the Department of Linguistics, Boğaziçi University over a duration of four years, thanks to the Horizon 2020 SIGN-HUB project.

This first edition of *A Grammar of Turkish Sign Language (TİD)* is by no means a complete reference grammar of TİD. Rather, it intends to provide the foundation of a comprehensive grammar with its detailed Table of Contents and its state-of-the-art tools that enable the readers to have easy access to the visual examples. It invites researchers and language professionals to take up the challenge of extending and improving it in a collective effort. Future research will contribute to the widening of knowledge about TİD, and new findings will be integrated in future versions of this grammar.

Structure of the grammar

The grammar is divided into six parts, each one organized into chapters. The first part is devoted to introducing

the social and historical background in which Turkish Sign Language has developed, and the remaining five parts describe the properties of the main grammatical components of the language, namely, its phonology, lexicon, morphology, syntax, and pragmatics. The grammar does not contain the seventh part of the *SignGram Blueprint*, namely Semantics. The semantic concepts are explained throughout the grammar where necessary, and the reader is encouraged to consult the relevant sections in this part of the *Blueprint* for more detailed discussion of the concepts.

Each chapter is organized into sections and subsections. It is also followed by three informative sections that are not numbered: "Information on data and consultants", "Authorship information," and "References". The first of these sections provides information about the data gathered in order to produce the grammar descriptions in that chapter. This also includes information about the language consultants and the models of the visual examples, where relevant. This is important because it might give information about the particular variety represented in the description. Variation within the TİD community is well-known, but not studied comprehensively for all linguistic phenomena, so this piece of information might help identify from which variety certain generalizations have been drawn. Future TİD corpus research will help complete the picture.

Since writing this grammar involved producing content for the sections that were already provided in the Table of Contents of the SIGN-HUB grammar writing tool, the reader will also find that many (sub-)sections lack content, or that the descriptions provided are not exhaustive. The absence of content may be due to the lack of available research results or the absence of the linguistic phenomenon in TİD. In these cases, the headings of the sections are still visible due to the structure of the grammar tool. However, in order to remain faithful to the style of a reference grammar book, sections whose content is absent or incomplete are not marked as such. In some cases, this is explicitly mentioned under the section at the end of the chapter where information on data and consultants is provided.

Many linguistic phenomena have properties related to different domains of the grammar, that is, they can have phonological, morphological, syntactic, and other properties. Therefore, in many cases, the reader will find that the same grammar point is described in different parts of the grammar. These connections are established via cross-references to related sections. Needless to say, the search function and the detailed structure of the Table of Contents serve as the basic navigation tools.

After the Introduction, the reader can find a list of the abbreviations of the grammatical terms and the non-manual markers used in the examples, and an (adapted) list of notational conventions compiled during the SIGN-HUB project and followed throughout this grammar. The grammar is followed by a complete list of references and a glossary of grammatical terms for basic concepts that are taken for granted in the text and not explained there.

A Grammar of Turkish Sign Language (TİD) is currently offered only in English, but versions in TİD and Turkish are also planned for the future.

The SIGN-HUB project

SIGN-HUB was carried out by a European research consortium to provide an innovative and inclusive resource hub for the linguistic, historical and cultural documentation of the heritage of European Deaf communities and for sign language assessment in clinical intervention and school settings.

To this end, we created an open, state-of-the-art digital platform with customized accessible interfaces. The project initially fed that platform with core content in the following domains, expandable in the future to other sign languages: (i) digital grammar descriptions of seven sign languages, produced with a new online grammar writing tool; (ii) an interactive digital atlas of linguistic structures of the world's sign languages; (iii) online sign language assessment instruments for education and clinical intervention, and (iv) the first digital archive of life narratives by elderly signers, subtitled and partially annotated for linguistic properties.

These components, made available for the first time through a centralized platform to specialists and to the general public, should (a) help explore and value the identity and the cultural, historical and linguistic assets of Deaf signing communities, (b) advance linguistic knowledge on the natural languages of the Deaf, and (c) impact on the diagnosis of language deficits within these minorities.

The project involved participation of 10 teams from 7 countries: France, Germany, Italy, Israel, The Netherlands, Turkey, and Spain.

Website of the platform: sign-hub.eu

List of abbreviations

Abbreviations of functional morphemes

ATEL	atelic
AUX	auxiliary
BEN	benefactive
CAUS	causative
COM	comitative
COMP	complementizer
COMPL	completive
COND	conditional
CONT	continuous
COP	copula
DECL	declarative
DEF	definite
DEM	demonstrative
DET	determiner
DISTR	distributive
DUR	durative
EXCL	exclusive
FOC	focus
FUT	future
IMP	imperative
INCL	inclusive
IND	indicative
INDEF	indefinite
INF	infinitive
INS	instrumental
IMPFV	imperfective
IRR	irrealis
LOC	locative
NEG	negation, negative
NMLZ	nominalizer
PFV	perfective
PL	plural
POSS	possessive
PRF	perfect
PRS	present
PROG	progressive
PST	past
Q_PRT	question particle/marker
QUOT	quotative
RECP	reciprocal

REFL	reflexive
REL	relative
RES	resultative
SG	singular
TEL	telic
TOP	topic
VOC	vocative

Abbreviations of non-manual markers

<u>-b</u>	backward
<u>-f</u>	forward
<u>-l</u>	left
<u>-r</u>	right
<u>-t</u>	tensed
<u>+</u>	repetitive or more
<u>af</u>	air flow
<u>av.eg</u>	averted eye gaze
<u>bl</u>	body lean
<u>bsh</u>	body shift
<u>cd</u>	chin-down
<u>ce</u>	closed eyes
<u>cond</u>	condition marker
<u>cu</u>	chin-up
<u>eb</u>	eye blink
<u>eg</u>	eye gaze
<u>fe</u>	furrowed eyebrows
<u>foc</u>	focus marker
<u>h-th</u>	head thrust
<u>h-trn</u>	head turn
<u>hn</u>	head nod
<u>hp</u>	head position
<u>hs</u>	headshake
<u>ht</u>	head tilt
<u>le</u>	lowered eyebrows
<u>mc</u>	mouth closed
<u>mcd</u>	mouth corners down
<u>mo</u>	mouth open
<u>modm</u>	modality marking
<u>n-nbp</u>	non-neutral brow position
<u>nbp</u>	neutral brow position
<u>neg</u>	negation

<u>non-sp</u>	non-specific
<u>_p.ch</u>	prosodic change
<u>__pc</u>	puffed cheeks
<u>__pl</u>	pursed lips
<u>__re</u>	raised eyebrows
<u>__rel</u>	relative clause marker
<u>__rs</u>	roleshift
<u>__sc</u>	sucked-in cheeks
<u>__sp</u>	specific
<u>__spb</u>	static body posture
<u>__sq</u>	squint
<u>__top</u>	topic marker
<u>__tp</u>	tongue protrusion
<u>__we</u>	widened eyes
<u>__wh</u>	wh-question marker
<u>__wrn</u>	wrinkled nose
<u>__y/n</u>	polar question

List of notational conventions

EXAMPLE OF CONVENTION	FUNCTION/MEANING
s-i-g-n	fingerspelling
sign++	reduplication
₁ sign ₃ ₂ sign ₁ _{3a} sign _{3b}	verb agreement
ix ₁	1st person singular, 'I'
ix _{1pl}	1st person plural, 'we'
ix _{1+2pl}	'two of us'
ix _{1+2pl-incl}	'two of us' (inclusive)
ix _{1+2pl-excl}	'two of us' (exclusive)
IX _a	pointing sign referring to a location
ix(loc) _a	pointing sign referring to a location
IX _{a(here)}	'here'
ix(def) _a	definite determiner
ix(dem) _a	demonstrative determiner
IX _{a[distal]} , IX _{a[proximal]}	index sign, pointing towards a distal or proximal location in signing space
ix _{3pl-arc}	3rd person plural with arc movement

ix(b) ₁ , ix(₁) ₁	first person singular pointing sign with the depicted handshape
IX _a [ipsi_down]	index sign pointing to the lower ipsilateral area
ix(poss) ₁	index sign, 1st person possessive
poss ₁	not an index sign, 1st person possessive
show_off, there_is_not, doesn't_have	one sign translated into English with more than one word
aux_1, aux_2, not_1, not_2	a functional sign with more than one alternative form
q_prt	question particle
who^some	a sign consisting of more than one morpheme
car-pl	plural marker suffixed to a noun
eat^place	a compound consisting of two roots
phone(h1)^type(h2) 'minicom'	a simultaneous compound. h1 represents the dominant hand and h2 represents the non-dominant hand
Pðhead 'psychology'	a compound. The dominant hand represents a letter and touches a part of the body such as the head
exist.not, have.not	a suppletive form with two morphemes
go.impfv	a sign internally modified to express an grammatical function

PART 1 Socio-Historical Background

The socio-historical background of a sign language involves the history of the emergence of a sign language, the varieties of the sign language, information about the cultural aspects of the signers as a community, as well as the status of the sign language as regarded by state policies, educational institutions, and the attitudes of the non-signer community.

The organization of this part is in four chapters. The first chapter outlines the emergence of Turkish Sign Language in the Ottoman

cl(6): 'head_bowing'	classifier with this handshape with this meaning	era by the late 19th century, and its spreading through Turkey through educational institutions in the Turkish Republic, 1923 onwards. The second chapter describes the community characteristics of sign language users such as the number of users, Deaf culture, and Deaf education. The third chapter elucidates the international legislations about sign languages as well as the developments of legislations and projects by the state institutions of Turkey. The last chapter portrays the scientific studies on TİD and the geographical variation in TİD.
cl(fist): 'head_bowing'	classifier with this handshape with this meaning	
cl(s) : 'head_bowing'	classifier with this handshape with this meaning	
[...]	mouthing, the representation of the actual phonetic production	
/.../	mouthing, the phonological representation of the mouthed word	
[pa]	mouth gesture	
'pa'	mouth gesture	
rs:3a	role-shift into the role of the person represented as 3a	Chapter 1. History

The first records of deaf individuals or deaf communities in Anatolia date back three millennia to the time of the Hittites. It is known that at a later time, starting in the 15th century and continuing until the mid 19th century, there was a sign language used in the Ottoman court by 'mutes', which even became popular among the hearing people in the Royal Palace, most notably among the Sultans. Whether this sign language was an earlier form of contemporary TİD, or, for that matter, of any other sign language of a deaf community is unknown.

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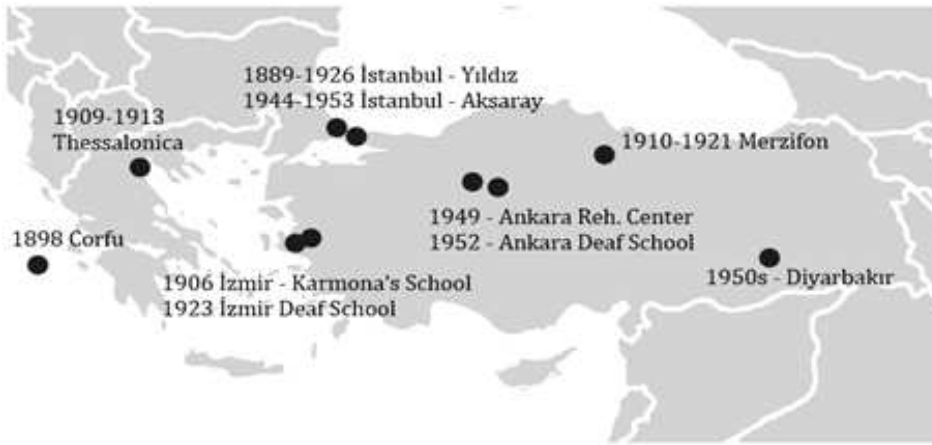


Fingerspelling of “Long live the Sultan!” by students of the School for the Mute and the Blind.
Original image from Servet-i Fünun Journal; August 19, 1893, In Deringil, 2002, p.249.

As the school had a ‘manual’ department and an ‘oral’ department, there was probably bilingual education in sign language and Turkish. A letter of complaint indicates that sign language may have been used. This was a letter sent by a student to the Ministry of Education of the time for the lack of knowledge on the part of the instructors, of the language of the mutes.

The other important figure at the school was Pascal Pekmezian from İstanbul, a highly informed deaf educator and fund-raiser who was educated at the Paris School for the Deaf. However, the efforts to form a system with long lasting consequences were to be short-lived. There were various setbacks resulting from the political turmoil and uncertainty of the late nineteenth, early twentieth centuries, and even by 1893 there were only 22 students and five teachers left at the İstanbul School for the Mute and the Blind. It was eventually closed down in 1926, six years after the Ottoman Empire dissolved, and the remaining students were moved to the İzmir Institution for the Deaf-Mute and the Blind (*Sağır Dilsiz ve Körler Müessesesi*). It is not known whether TİD was used in this school as a medium of education, but it would be unlikely due to the oralist agenda of Necati Kemal, the head of the school. Still the teachers presumably had some autonomy, and they may have learned sign language from the students and used it. Teachers learning sign language (sometimes even the oralist teachers) is a recurrent theme in interviews with elderly deaf signers and current teachers in deaf schools. It is certain that TİD still existed as a language at the time among the students. One of Necati Kemal’s books published in 1926 describes the signs of a few students and these match contemporary TİD signs.

The İzmir School for the Mute was established by another former pupil from the Paris School for the Deaf, Albert Carmona. This school seems to be privately funded and established in 1906 or 1910, but in 1923 or in 1926 - the dates vary from one source to another - it was taken over by the Ministry of Public Health. In 1909, another short-lived school was founded in Thessaloniki by yet another former pupil of the Paris School for the Deaf, Edgard Farragi. This school had around 50 students, but closed down in 1913 at the time of the Balkan wars.



Deaf Schools in the late Ottoman period and the Republic of Turkey (Adapted from İlkbaşaran & Taşçı, 2012).

Another school, the Martha King Memorial School for the Deaf (King School for the Deaf) was founded in 1910 in Merzifon, a predominantly Armenian and Greek town, as an annex to the Anatolia College and American Girls' School run by the American Board of Commissioners for Foreign Missions. It was the first 'Christian School for the Deaf in the Ottoman Empire' and the only school for the Deaf in central Anatolia. It was established through the funds provided by Clarke School for the Deaf in Northampton, Massachusetts and American Associations for the Promotion of Speech among the Deaf. The school was named after Martha King, a missionary in Merzifon after her premature death from smallpox in 1895. Her name was associated with the school as a tribute to the care she provided for underprivileged children, especially for those who were living in the area where the first deaf student of the school, Theodorus, lived. The director of the school was Charlotte R. Willard, a prominent missionary who was trained as a mathematics and astronomy teacher.

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The stories of these three children and of a later student, Kevork who was Armenian are reported in detail in the sources.

Method of teaching: A photograph shows eight children learning how to produce sounds. The method is reported to be based on the training of the deaf in America. The teacher Galene Philadelphes, the daughter of a Greek pastor in Merzifon was sent to be trained in the Clarke School for the Deaf (specifically after Theodorus was brought to the mission by his mother Annitza), and the school was officially opened in 1910 after her return. Although some signing was used in the beginning between Philadelphes and the three students, the training was centered around oralism, teaching children who already signed, to replace signing with speech and lip reading in the heritage (spoken) languages used at their homes (Armenian, Greek, or Turkish). Through training, the children could identify the strings on a guitar, eyes closed, by the vibration the strings made. They were taught how to read and write, sewing, weaving, carpentry, and housework. The donations to the school made it possible to admit nine students in 1912-1913. By 1915 there were 17 children, 14 Armenian and 3 Turkish.



Students of the Martha King Memorial School for the Deaf are learning to produce speech sounds. *Image taken from Platt (1933, p. 60).*

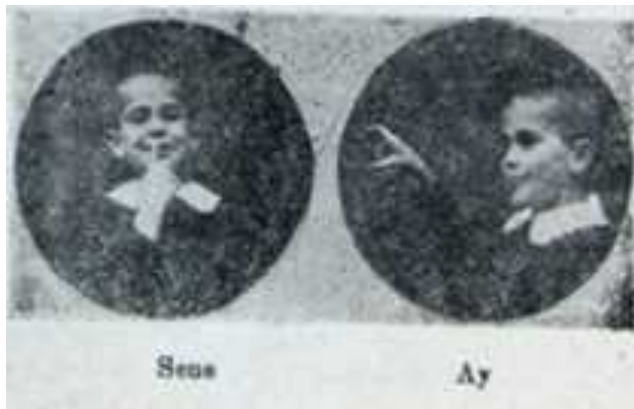
In October 1914, the school moved to its new premises in the Old Hospital building. Helen Keller was among the donators towards buying the furniture. There is mention of four deaf girls in the diary of another missionary, Bertha Morley. According to this diary, on August 2nd 1915 the Martha King Memorial School children were promised leave to remain, yet despite this promise they were barely spared deportation on two occasions (together with two servants and a few other staff), the first on August 10, 2015, the date when all 15 of

the professors of the Anatolia College were deported, at least nine of them later known to be killed, and the second on August 12th 1915, when 55 girls together with servants and their families from the American Girls' School were deported (48 of them later returning through the efforts of the director Charlotte R. Willard). The plans of the Turkish officials to move the children from the Martha King Memorial School to an orphanage partly succeeded: the deaf girls, together with the Armenian and Greek teachers were let to remain, but the boys were taken to the orphanage in the town. Several months later, the missionaries managed to move the boys back, this time to a building that belonged to the Protestant community. The school was kept open throughout World War I and up to 1920. After this date, the exchange of populations took place and very few Christians were left in Merzifon. Anatolia College and American Girls' School, of which the Martha King Memorial School was an annex, were closed in 1921 by Turkish authorities. The American Girls' School reopened in 1923 but closed permanently in 1924. Some of the teachers moved to the mission in Thessaloniki.

In short, the school was kept open for eleven years. It functioned during one of the most tumultuous and catastrophic times in Turkish history, the Balkan wars, World War I, the Armenian genocide, deportations, and the Turkish War of Independence, later leading to the exchange of populations, in which Christians were expunged from Anatolia (Asia Minor). The last mention of the Martha King School for the Deaf in the memoirs of Bertha Morley is 6 September 1915. The school was relocated after 1915 to a house where one of the floors was a French School in Merzifon and survived until the end of World War I.

In 1920, the Republic of Turkey was founded on the remains of the Ottoman Empire. The 1930s is marked by the rise of nationalism and the efforts to create a uniform and ideal Turkish citizen. The underlying factors in the policies concerning deaf (and other disabled) individuals were eugenic ideals, with disabled people being considered degenerates. Though, there was no eugenic policy per se, it was one of the prominent topics among the medical scientific community. It was in this climate that one of the most influential figures in deaf education, Süleyman Gök, took center stage, a pioneer in deaf education and in the rights of the Deaf. Gök, himself deaf since 6 years of age, was educated at the İstanbul School for the Mute and the Blind. He could both sign and speak. Gök, in his books, reconciles the discourse concerning 'the strong body' with his inclusive vision of the educational rights of the Deaf: "It is the community that is at fault, since deaf children are suitably intelligent for learning". He gives examples of various 'healthy' Deaf families having healthy children and Deaf craftsmen, stating that Deaf people are valuable human resources for the economy and he further expresses that Deaf people can go into any profession including medicine, philosophy, and diplomacy. As another attempt to counter the eugenic climate, Gök, in his books, includes interviews with medical professionals who support his views.

Gök established in 1930 a deaf association which was annulled within a few years, and in 1944 another one. In the same year, he opened a school for the Deaf with 38 students. In one of his books, *Dilsizliğin Telafisi: Sağır dilsizlerin tedris usulleri ve konuşma tarzları* (Compensation of muteness: Instruction and communication methods for deaf-mutes) published in 1940, he introduces TİD as an excellent means for communication among the deaf. In this book there are, for the first time, photographs of signs and a sentence in TİD.



Year - Month. Image taken from Gök (1940, p. 13).

This book, together with the other two published in 1939 and 1958 (*Dilsizliğin Telafisi: Türkiye’de ve Avrupa’da Dilsizler* (Compensation of Muteness: Mutes in Turkey and Europe) and *Dünyada ve Türkiye’de Sağır, Dilsiz Okulları Tarihçesi ve Eğitim Sistemi* (The History of Deaf-Mute Schools in the World and in Turkey and the Education System)) are the first books written by a deaf person about deafness and the Deaf.

The use of sign language was unofficially forbidden in Turkey in 1951, and Gök’s school was taken over by the state in 1953. According to the memories of elderly signers, Süleyman Gök was a fervent activist for sign language, yet his 1958 book reflects a change of heart. Here he does not talk about sign language but instead refers to ‘mimics and movements’ and advocates the replacement of sign language during instruction by lip-reading. One reason for this change of heart could be that he might not have wanted to undermine his own fund-raising activities by antagonizing sponsors in an oralist atmosphere. Because oralism had been getting increasingly popular since the 1880 Milan Conference and since Necati Kemal’s administration of the İzmir Institution for the Deaf-Mute and the Blind in the 1920s, oralism was regarded to be the only existing method of education in the 1950s, yet it is not clear whether teachers at the time totally gave up instruction and practice in signing.

Information on data and consultants

Aslı Göksel, Süleyman Taşçı

References

- Akalın, Şükrü H. 2013. Türk İşaret Dili. *Yeni Türkiye* 55. 1496-1502.
- Alemdaroğlu, Ayça. 2005. Politics of the body and eugenic discourse in early Republican Turkey. *Body & Society* 11(3). 61-76.
- Arıkanlı, Oğuz. 1973. *Tarihimizde ilk'ler* [Premieres in our history]. İstanbul: Milliyet Yayınları.
- Armen T. Marsoobian, Kırkor Sahakoğlu & Anna Turay. 2013. *Dildilian kardeşlerin objektifinden bir Ermeni ailesinin yitik geçmişine tanıklıklar*. [Bearing witness to the lost (bygone) history of an Armenian family through the lense of the Dildilian brothers]. (Exhibition brochure, Depo (Tütün Deposu), 26 April – 8 June 2013.)
- Aslan Demir, Sema. 2010. Sessizliğin dili: Türk İşaret Diline dair gözlemler. *Bilig* 54. 1-20.
- Aslan Demir, Sema. 2016. Sessizliğin Dili: Türk İşaret Dili’ne dair gözlemler. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 141-156. İstanbul: Koç Üniversitesi Yayınları.
- Atabay, Efe. 2009. Eugenics, modernity and the rationalization of morality in early Republican Turkey. Montreal, Canada: McGill University thesis.
- Batır, Betül. 2008. An historical overview of development of the education of deaf, mute, and blind children in Turkey. *International Review of Turkology* 1(2). 17-24.
- De Grati, Ferdinand. 1898. [Report from] Turkey. In Bureau (ed.), *International reports of schools for the Deaf*, 27. Washington City: Volta Bureau.
- Demirtaş, Bahattin. 2008. Atatürk döneminde eğitim alanında yaşanan gelişmeler. *Akademik Bakış* 1(2). 157-176.
- Deringil, Selim. 2002. *İktidarın sembolleri ve ideoloji*. İstanbul: Yapı Kredi Yayınları.
- Ergin, Osman Nuri. 1939. Dilsizler ve körler mektebi [Mutes and blinds school]. *Türk Maarif Tarihi* 3, 1165-1172. İstanbul: Osmanbey Matbaası.
- Faraggi, Jacques & Boudeville. 1886. [Devoirs d'élèves (non corrigés)] 'Compte-rendu de la journée.' *Revue internationale de l'Enseignement des Sourds-Muets* (deuxième année) 1, 343-345.
- Fisher, Carol G. & Fisher, A.W. 1987. *Topkapı Sarayı in the mid-seventeenth century: Bobovi's description, Archivum Ottomanicum*, 5-81.

Gaillard, H. 1911. "The Failure of the Oral Method" translated from French by F.R.Gray. *The Silent Worker* (March, 1911) 23(6), 15.

Gök, Süleyman. 1939. Dilsizliğin telâfisi: Türkiyede ve Avrupada dilsizler [Compensation for muteness: Mutes in Turkey and Europe] *Dilsiz Neşriyat Yurdu* 1. İstanbul: Resimli Ay Matbaası.

Gök, Süleyman. 1940. Dilsizliğin telâfisi: Sağır dilsizlerin tedris usulleri ve konuşma tarzları [Compensation for muteness: Educational methods for Deaf-Mutes and ways of speaking]. *Dilsiz Neşriyat Yurdu* 2, 1-32. İstanbul: Aydınlık Basımevi.

Gök, Süleyman. 1958. Dünyada ve Türkiye’de sağır, dilsiz okulları tarihçesi ve eğitim sistemi [The history and education systems of deaf, mute schools in the World and Turkey]. *Türkiye Sağır, Dilsiz ve Körler Tescil Cemiyeti Neşriyatı* 1. İstanbul: Hüsnütabiat Matbaası.

Haydar, Ali. 1925. Sağırlar ve dilsizler [Deafs and mutes]. *Muallimler Mecmuası*, 29. 1237-1260. Available from: Hakkı Tarık Us Osmanlıca Süreli Yayınları, <http://www.tufts.ac.jp/common/fs/asw/tur/htu/data/HTU1558-03/index.djvu>

İlkbaşaran, Deniz & Süleyman S. Taşçı. 2012. Ideology and language in the early republic: A history of deaf education in Turkey. *Proceedings of the International Symposium on Language and Communication: Research trends and challenges (ISLC)*, 1767-1777. Erzurum: Mega Press.

İlkbaşaran, Deniz. 2015. *Literacies, mobilities and agencies of deaf youth in Turkey: Constraints and opportunities in the 21st century*. San Diego, CA: University of California, San Diego PhD Dissertation. [2.2] [2.3] [2.4]

Kaiser, Hilma (ed.). 2000. *Marsovan 1915; The Diaries of Bertha Morley*, 38-39, 46, 59. Reading: Taderon Press.

Karakaş, İzi. 2007. *An analysis of policies towards the born disabled, victims of work accidents and natural disasters during the Hamidian Era (1876-1909)*. İstanbul, Turkey: Boğaziçi University MA Thesis.

Kemaloğlu, Yusuf K. & Pınar Y. Kemaloğlu. 2012. The history of sign language and deaf education in Turkey. *Kulak Burun Bogaz İhtisas Dergisi* 22(2), 65-76. doi: 10.5606/kbbihtisas.2012.013.

Kemaloğlu, Yusuf K. 2016. Türkiye’de sağır ve dilsizlerin görünürlüğü ve toplumsal ve eğitimsel sorunları üzerine demografik bir inceleme. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 51 - 85. İstanbul: Koç Üniversitesi Yayınları.

Miles, M. 2000. Signing in the Seraglio: mutes, dwarfs and jestures at the Ottoman court 1500-1700. *Disability & Society* 15(1). 115-134 .

Miles, M. 2009a. Deaf people, sign language and communication, in Ottoman and Modern Turkey: Observations and excerpts from 1300 to 2009. URL:www.independentliving.org/miles200907.html

Miles, M. 2009b. Hittite Deaf men in the 13th century BC: Introductory notes with annotated bibliography. URL:<http://www.independentliving.org/docs7/miles200809.html>

Özyürek, Aslı, Inge Zwitterlood & Pamela M. Perniss. 2010. Locative expressions in signed languages: A view from Turkish Sign Language (TİD). *Linguistics* 48(5), 1111-1145.

Platt, Claribel. 1933. The Martha King Memorial School, in Ernest Pye (ed.) *Charlotte R. Willard of Merzifon, her life and times*, 55-64. New York: Fleming H. Revell Company.

Roe, William R. 1917. *Peeps into the Deaf World*. Derby: Bemrose.

Schalenghe, Sara. 2005. The Deaf in Ottoman Syria, 16th - 18th centuries. *Arab Studies Journal* 12 (2) - 13 (1), 10-25.

Selim, Kumur. B. 2006. Deaf people at the Ottoman Court. In: G. L. Albrecht, S. L. Snyder, J. Bickenbach, D. T. Mitchell & W. O. Schalick III (eds.) *Encyclopedia of disability I*, 353. Thousand Oaks, CA.: Sage.

Turgut, Kadir & Süleyman S. Taşçı. 2011. A historical perspective on first deaf schools, education methods and deafness in Turkey. (Paper presented at the Conference of International Sign Language Users, Gazi University,

Ankara, 21-23 October 2011.)

Uğraşkan, Muzaffer. 1962. Rehabilitasyon hakkında etüdlerimiz. *Ankara Sağır, Dilsiz ve Körler Derneği* 2. Ankara: Özel Matbaası.

White, George E. 1933. Arrival and work in Merzifon, in Ernest Pye (Ed.) *Charlotte R. Willard of Merzifon, her life and times*, 35-42. New York: Fleming H. Revell Company.

Yıldırım, Nuran. 1997. İstanbul'da sağır-dilsiz ve âmâların eğitimi. *İstanbul Armağanı* 3, 305-330. İstanbul: Büyükşehir Belediyesi Yayınları

Zeshan, Ulrike. 2002. Sign Language in Turkey: The story of a hidden language. *Turkic Languages* 6 (2). 229-274.

Zeshan, Ulrike. 2003. Aspects of Türk Isaret Dili (Turkish Sign Language). *Sign Language & Linguistics* 6. 43- 75.

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Chapter 2. The sign language community

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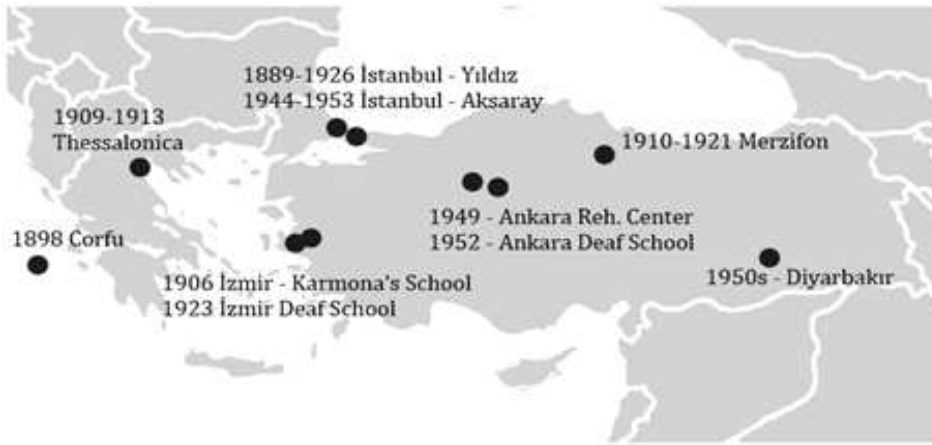


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Method of teaching: A photograph shows eight children learning how to produce sounds. The method is reported to be based on the training of the deaf in America. The teacher Galene Philadelphes, the daughter of a Greek pastor in Merzifon was sent to be trained in the Clarke School for the Deaf (specifically after Theodorus was brought to the mission by his mother Annitza), and the school was officially opened in 1910 after her return. Although some signing was used in the beginning between Philadelphes and the three students, the training was centered around oralism, teaching children who already signed, to replace signing with speech and lip reading in the heritage (spoken) languages used at their homes (Armenian, Greek, or Turkish). Through training, the children could identify the strings on a guitar, eyes closed, by the vibration the strings made. They were taught how to read and write, sewing, weaving, carpentry, and housework. The donations to the school made it possible to admit nine students in 1912-1913. By 1915 there were 17 children, 14 Armenian and 3 Turkish.



Students of the Martha King Memorial School for the Deaf are learning to produce speech sounds. *Image taken from Platt (1933, p. 60).*

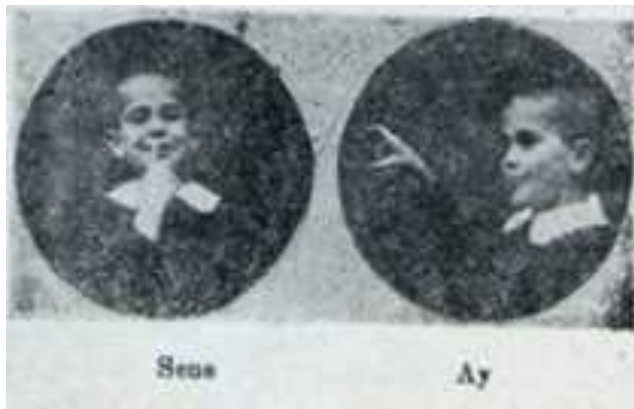
In October 1914, the school moved to its new premises in the Old Hospital building. Helen Keller was among the donators towards buying the furniture. There is mention of four deaf girls in the diary of another missionary, Bertha Morley. According to this diary, on August 2nd 1915 the Martha King Memorial School children were promised leave to remain, yet despite this promise they were barely spared deportation on two occasions (together with two servants and a few other staff), the first on August 10, 2015, the date when all 15 of

the professors of the Anatolia College were deported, at least nine of them later known to be killed, and the second on August 12th 1915, when 55 girls together with servants and their families from the American Girls' School were deported (48 of them later returning through the efforts of the director Charlotte R. Willard). The plans of the Turkish officials to move the children from the Martha King Memorial School to an orphanage partly succeeded: the deaf girls, together with the Armenian and Greek teachers were let to remain, but the boys were taken to the orphanage in the town. Several months later, the missionaries managed to move the boys back, this time to a building that belonged to the Protestant community. The school was kept open throughout World War I and up to 1920. After this date, the exchange of populations took place and very few Christians were left in Merzifon. Anatolia College and American Girls' School, of which the Martha King Memorial School was an annex, were closed in 1921 by Turkish authorities. The American Girls' School reopened in 1923 but closed permanently in 1924. Some of the teachers moved to the mission in Thessaloniki.

In short, the school was kept open for eleven years. It functioned during one of the most tumultuous and catastrophic times in Turkish history, the Balkan wars, World War I, the Armenian genocide, deportations, and the Turkish War of Independence, later leading to the exchange of populations, in which Christians were expunged from Anatolia (Asia Minor). The last mention of the Martha King School for the Deaf in the memoirs of Bertha Morley is 6 September 1915. The school was relocated after 1915 to a house where one of the floors was a French School in Merzifon and survived until the end of World War I.

In 1920, the Republic of Turkey was founded on the remains of the Ottoman Empire. The 1930s is marked by the rise of nationalism and the efforts to create a uniform and ideal Turkish citizen. The underlying factors in the policies concerning deaf (and other disabled) individuals were eugenic ideals, with disabled people being considered degenerates. Though, there was no eugenic policy per se, it was one of the prominent topics among the medical scientific community. It was in this climate that one of the most influential figures in deaf education, Süleyman Gök, took center stage, a pioneer in deaf education and in the rights of the Deaf. Gök, himself deaf since 6 years of age, was educated at the İstanbul School for the Mute and the Blind. He could both sign and speak. Gök, in his books, reconciles the discourse concerning 'the strong body' with his inclusive vision of the educational rights of the Deaf: "It is the community that is at fault, since deaf children are suitably intelligent for learning". He gives examples of various 'healthy' Deaf families having healthy children and Deaf craftsmen, stating that Deaf people are valuable human resources for the economy and he further expresses that Deaf people can go into any profession including medicine, philosophy, and diplomacy. As another attempt to counter the eugenic climate, Gök, in his books, includes interviews with medical professionals who support his views.

Gök established in 1930 a deaf association which was annulled within a few years, and in 1944 another one. In the same year, he opened a school for the Deaf with 38 students. In one of his books, *Dilsizliğin Telafisi: Sağır dilsizlerin tedris usulleri ve konuşma tarzları* (Compensation of muteness: Instruction and communication methods for deaf-mutes) published in 1940, he introduces TİD as an excellent means for communication among the deaf. In this book there are, for the first time, photographs of signs and a sentence in TİD.



Year - Month. Image taken from Gök (1940, p. 13).

This book, together with the other two published in 1939 and 1958 (*Dilsizliğin Telafisi: Türkiye’de ve Avrupa’da Dilsizler* (Compensation of Muteness: Mutes in Turkey and Europe) and *Dünyada ve Türkiye’de Sağır, Dilsiz Okulları Tarihçesi ve Eğitim Sistemi* (The History of Deaf-Mute Schools in the World and in Turkey and the Education System)) are the first books written by a deaf person about deafness and the Deaf.

The use of sign language was unofficially forbidden in Turkey in 1951, and Gök’s school was taken over by the state in 1953. According to the memories of elderly signers, Süleyman Gök was a fervent activist for sign language, yet his 1958 book reflects a change of heart. Here he does not talk about sign language but instead refers to ‘mimics and movements’ and advocates the replacement of sign language during instruction by lip-reading. One reason for this change of heart could be that he might not have wanted to undermine his own fund-raising activities by antagonizing sponsors in an oralist atmosphere. Because oralism had been getting increasingly popular since the 1880 Milan Conference and since Necati Kemal’s administration of the İzmir Institution for the Deaf-Mute and the Blind in the 1920s, oralism was regarded to be the only existing method of education in the 1950s, yet it is not clear whether teachers at the time totally gave up instruction and practice in signing.

2.1. Community characteristics

The unifying features of deaf communities are the mediums and settings of communication, i.e. the usage of sign language, and interaction in Deaf schools and Deaf associations. Since the majority of deaf children are born to hearing parents, Deaf individuals remain isolated in an urban context without an institutional convention platform such as Deaf schools or Deaf organizations. Thus, we can trace the formation of the present day Deaf community in Turkey to the opening of deaf schools (earliest 1889 [Socio-Historical Background - 1]), and to the Deaf organisations, the first of which was established in 1923 in İstanbul.

Other than the TiD community that is widespread across Turkey, to our knowledge there are two rural village sign language communities which have their own sign languages. The two sign languages were born through generations as a result of the high density of Deaf population in a small area due to hereditary deafness. One of them is Central Taurus Sign Language (CTSL), which is currently used in a village in the province of Mersin in the eastern Mediterranean (southern part of Turkey) and the other is Mardin Sign Language which is used in a town in southeastern Turkey. These languages are different from TiD. While CTSL still exists today with 30 deaf members, Mardin Sign Language is about to be extinct due to the migration of the young deaf members of the community to urban areas.

2.2. Sign language users

The reports on the deaf population in Turkey give disparate numbers. Moreover, the nature of the questions is influenced by different purposes which do not allow a coherent estimation of the sign language community. For example, the categories of hearing loss, and language-speech disorders include non-signer individuals as well, which complicates estimations. According to the Turkey Disability Survey that was carried out by the Prime Ministerial office in 2002, the occurrence of ‘hearing disability’ is 250.000 in the general population of 70 million. Taking into account the population increase reported and the prevalence of deafness at 0.37 percent, İlkbaşaran estimates the figure to be 284.000 deaf people in 2013 (among 77 million).

Another estimate comes from a screening of newborns which indicates a 0.2% prevalence of deafness. If better healthcare leads to an increase in identifying hearing loss, the prevalence could be 0.5-0.6

percent. Based on this, İlkbaşıran's alternative estimate of deaf population for 2013 is between 380.000 and 450.000. As for the number of sign language users, the only evidence comes from Gürboğa and Kargın's study with 100 deaf participants from Ankara above the age of 25. This study has found that 75% of deaf individuals identify TİD as their first language. Though this small sample collected from a single region is not representative of Turkey, we can roughly reckon that the number of sign language users in Turkey is between 187.500 to 337.500.

2.3. Deaf culture

Shared experiences among individuals create shared values and practices that maintain communication networks of values and people. Since there has been a continuous interaction among the Deaf community in Turkey for over a century in Deaf schools and organisations, it is most natural that Deaf signers as a linguistic minority group have specific values that are different from the hearing majority.

Cultural values and traditions

Deaf community members, deaf individuals or hearing members of the deaf community, have both a signed and a spoken name. The spoken name is given by the parents, which is not different from the naming custom in hearing individuals. Every individual has also a sign name (the word in TİD is homophonous with SIGN; in Turkish *lakap* 'nickname' as translated by CODAs). The sign name usually refers to a salient visual feature in the face or head (such as pointing to a birth scar) or a typical gesture made by that person. When two members of the community meet each other for the first time they do not immediately introduce themselves, rather, exchanging of the names happens at the end of the conversation if further communication is anticipated. Moreover, it seems that changing one's sign name is relatively more acceptable in the Deaf community than in the hearing community.

For drawing the attention of a signer, one waves their hand or hits forcefully on the ground or on a table. One could also ask a third party to draw the attention of the person. When there is a big group of signers, one holds up hands and wiggles (which is the same sign for applause). Then, the other members of the group do the same until everyone stops signing and focuses their attention on the person. Another way to get attention is to switch the lights on and off a few times, when available. Breaking eye-contact is considered rude during conversation.

Cultural Activities

Across Turkey there are approximately 55 Deaf associations. The bulk of cultural activities in the Deaf community (theatre, folklore dancing, photography, storytelling, cinema) are carried out in Deaf associations which are run by Deaf individuals and a few CODAs. Moreover, deaf clubs organize occupational training such as tailoring, cookery, hairdressing, electricity, and wood painting.

Sports is a prominent aspect of the social life in the Deaf community. As of 2010, Turkey National Sports Federation of the Deaf (Türkiye İşitme Engelliler Spor Federasyonu) was active in 14 branches: soccer, basketball, volleyball, handball, table tennis, chess, wrestling, skiing, swimming, athletics, bowling, badminton, folklore, and tennis. There are leagues with local teams in Turkey, and national teams who actively attend the World-Wide sports activities such as Deaflympics.

The majority of Deaf associations are connected to Turkey National Federation of the Deaf (Türkiye İşitme Engelliler Milli Federasyonu) that is recognized by the state. Two other opponent federations exist. In addition, there is The Confederation of the Deaf (Sağırklar Konfederasyonu - turkdeafconf.com) which has three other federations under its umbrella.

2.4. Deaf education

Deaf schools are the main habitats of sign language and Deaf culture, alongside Deaf associations. The

majority of Deaf children have non-signer hearing parents, thus Deaf schools accommodate children's needs for socialization with other Deaf peers. Though bringing together Deaf children spontaneously meets the need of communication, since 1950's oralism has been the dominant method of education for Deaf children. However, from interviews with elderly signers and teachers we know that there have been sporadic autonomous and pro-sign teachers who learn sign language from the children and use it in instruction, some even at near-native fluency.

Sign language had no place in the curriculum until recent attempts starting around 2005. The Disability Law put pressure on the state to implement new language and education rights. Before the 2000s when scientific TİD research began, signing was regarded by most educationalists and medical professionals to be a primitive and simple means of communication, hardly at the expressive level of spoken languages.

Before being placed at an educational institution, Deaf and hard of hearing children go into an assessment procedure in Counseling and Research Centers (Rehberlik ve Araştırma Merkezi - RAM) and are accordingly placed at a Deaf school or a regular school with mainstreaming methods. In its current problematic implementation of mainstreaming, a few Deaf students study in classes with hearing peers. Besides school education, the students can get financial support from the state for additional language and speech therapy or other individualized education programs (Bireyselleştirilmiş Eğitim Programı – BEP) in private rehabilitation centers. Unfortunately, most private rehabilitation centers prioritize commercial values rather than good quality education. Moreover, the teachers working in rehabilitation centers generally do not have a background in special education specialized for different disability groups. The formal education in its current form does not bring Deaf students even close to their hearing peers in literacy and higher education.

The belated prestige of sign language has had a positive effect on the inclusion of sign language in classes. Although, to our knowledge, there are currently no schools that aim at bilingual (TİD and Turkish) education for children, in 2015 the Ministry of Education published a TİD education program and in 2017, an expanded version for 1st, 2nd, and 3rd grades in Deaf elementary schools, entitled “Türk İşaret Dili Dersi Etkinlik Kitabı (1, 2, 3. Sınıflar)” (Turkish Sign Language Course Activity Book (1st, 2nd, and 3rd Grades)) to be implemented two hours a week in Deaf schools. Although this indicates a respect for language rights to a certain extent, the program advises a method that is reminiscent of ‘total communication’ rather than bilingual education. According to the program’s advice, TİD and spoken Turkish should be used at the same time, yet each language should be produced in its own natural grammar rules, which is an almost impossible cognitive challenge even for experienced interpreters. Thus, the program that is prepared with good intentions is not realistic for implementation considering the lack of TİD education for teachers and interpreters.

According to the reports of the Ministry of Education in 2015, there are 45 Deaf elementary schools (3003 students) and 19 Deaf vocational high schools (2066 students). The participation rate is estimated to be only 10% among Deaf students at schooling age. The reports of the Ministry of Education in 2005-2006 on the distribution of students in Deaf elementary schools and Deaf vocational schools according to cities is presented below:



The numbers of Deaf students in Deaf elementary and vocational schools by city (2005-2006)

(with the courtesy of Deniz İlkbařaran, 2013: 30)

References

- Altınkurt, Nimet. 2008. *Özel eğitim ve rehabilitasyon merkezlerinde yaşanan sorunlar ve çözüm önerileri* [Problems in special education and rehabilitation centers, and suggestions for solution]. İzmir, Turkey: Dokuz Eylül University MA thesis.
- Demir, Ömer & Mehmet Aysoy. 2002. *Turkey disability survey*. Ankara: State institute of statistics. [2.2]
- Dikyuva, Hasan. 2011. *Grammatical non-manual expressions in Turkish Sign Language (TİD)*. Preston, Lancashire, England: University of Central Lancashire (UCLan) MA thesis. [2.3]
- Dikyuva, Hasan. 2012. Mardin Sign Language: signing in a “deaf family”. *Sign Languages in Village Communities: Anthropological and Linguistic Insights* 4. 395-399. [2.1]
- Ergin, Rabia. 2017. *Central Taurus Sign Language: A unique vantage point into language emergence*. Medford, MA: Tufts University dissertation. [2.1]
- Genç, G. Aydan, Figen Başar, Maviş E. Kayıkçı, Didem Türkyılmaz, Zerrin Fırat, Öznur Duran, Özlem Ulusoy, Erol Belgin, Bilgehan Budak, Gülsevin Tekinalp, Murat Yurdakök, Şule Yiğit, & Ayşe Korkmaz. 2005. Newborn hearing screening outcomes in Hacettepe University. *Çocuk Sağlığı ve Hastalıkları Dergisi* 48. 119-124. [2.2]
- Gürboğa, Coşgun & Tevhide Kargın. 2013. İşitme engelli yetişkinlerin farklı ortamlarda kullandıkları iletişim yöntemlerinin/becerilerinin incelenmesi [An investigation of hearing impaired adult’s communication methods and skills in various settings]. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi* 36(1-2). 51-64. [2.2]
- İlkbařaran, Deniz. 2015. *Literacies, mobilities and agencies of deaf youth in Turkey: Constraints and opportunities in the 21st century*. San Diego, CA: University of California, San Diego PhD Dissertation. [2.2] [2.3] [2.4]
- İlkbařaran, Deniz. 2016. Türkiye’deki sağır gençlerin iletişim alışkanlıkları ve Türk İşaret Dili’nin toplumsal dilbilimi açısından incelenmesi. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili arařtırmaları*, 411-444. İstanbul: Koç Üniversitesi Yayınları. [2.4]
- Kemaloğlu, Yusuf K. 2016. Türkiye’de sağırların görünürlüğü ve toplumsal ve eğitimsel sorunları üzerine demografik bir inceleme. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili arařtırmaları*, 51 - 85. İstanbul: Koç Üniversitesi Yayınları.
- Kubus, Okan. 2016. *Relative Clause Constructions in Turkish Sign Language*. Hamburg, Germany: University of

Hamburg PhD Dissertation. [2.3]

Kubus, Okan, Deniz İlkbařaran & Shane K. Gilchrist. 2016. Türkiye’de iřaret dili planlaması ve Türk İřaret Dili’nin yasal durumu. In E. Arık (ed.), *Ellerle konuşmak: Türk İřaret Dili arařtırmaları*, 23-50. İstanbul: Koç Üniversitesi Yayınları. [2.4]

Makaroğlu, Bahtiyar & Hasan Dikyuva. 2016. *Yabancı dil olarak Türk İřaret Dili eğitim seti* [Turkish Sign Language education package as second language]. Ankara University. tidegitim.com (last access March 8, 2018). [2.3]

Milli Eğitim Bakanlığı [Ministry of Education]. 2015. *Türk İřaret Dili dersi etkinlik kitabı (1, 2, 3. Sınıflar* [Turkish Sign Language course activity book (1st, 2nd, and 3rd Grades). URL: http://orgm.meb.gov.tr/dosyalar/Turk_Isaret_Dili_188SFa.pdf (last access March 8, 2018) [2.4]

Milli Eğitim Bakanlığı [Ministry of Education]. 2016. *Türk İřaret Dili dersi öğretim programı yürürlükte* [Turkish Sign Language course education program is in operation]. URL: <http://orgm.meb.gov.tr/www/turk-isaret-dili-dersi-ogretim-programi-yuru...> (Last access March 8, 2018 [2.4]

Morton, Cynthia C., & Walter E. Nance. 2006. Newborn hearing screening - a silent revolution. *New England Journal of Medicine* 354(20). 2151-2164. [2.2]

Tekin, Mustafa & Z. Serap Arıcı. 2007. Genetic epidemiology of congenital/prelingual deafness and mating type. *American Journal of Medical Genetics Part A* 143(14), 1583- 1591.

Yaprak Kemaloğlu, P. 2012. *Türkiye’de Sağır sporunun toplumsal analizi* [Social analysis of Deaf sports in Turkey]. İstanbul, Turkey: Marmara University PhD dissertation. [2.3]

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Chapter 3. Status

The prestige and recognition of a sign language by a state or other institution, the signers of this language, and the ambient communities, all together characterize the status of a sign language. The policies and regulations about sign language is linked to the status of the language, that is, higher prestige means more extensive recognition in legislations and regulations. In addition, the attitudes of the Deaf and the hearing communities towards a sign language are connected to the status of that sign language.

This chapter is organized in three sections. First, the current legislation about Turkish Sign Language in Turkey, and about sign languages in the international treaties and agreements that Turkey is a signatory to are presented. In the second section, sign language policies, that is, the specific objectives put forward by state institutions and regulations are explicated. The last section outlines the language attitudes towards Turkish Sign Language in Turkey.

3.1. Current legislation

The most reputable form of recognition of a language by legislation is recognition of the language as an official language by constitutional law. According to Reagan, by 2010 the countries which recognized sign languages in their constitutions were Austria, the Czech Republic, Ecuador, Finland, Portugal,

Slovakia, and New Zealand. In Article 42 of the Constitution of Turkey, languages other than Turkish can be taught at schools (subject to other regulations) as long as they are not taught as the mother tongue:

"(...) No language other than Turkish shall be taught as a mother tongue to Turkish citizens at any institution of education. Foreign languages to be taught in institutions of education and the rules to be followed by schools conducting education in a foreign language shall be determined by law. The provisions of international treaties are reserved"

(Taken from https://global.tbmm.gov.tr/docs/constitution_en.pdf)

Considering that sign language education is crucial in early childhood, Skutnabb-Kangas notes two important international documents about linguistic human rights concerning instruction in native language. The first one is the UN 'Declaration on the Rights of Persons Belonging to National or Ethnic, Religious and Linguistic Minorities' (1992, Article 4.3) which was adopted unanimously by UN member states:

"States should take appropriate measures so that, wherever possible, persons belonging to minorities have adequate opportunities to learn their mother tongue or to have instruction in their mother tongue"

The other document is the European Council's 'Framework Convention on the Protection of National Minorities' (1998, Article 10.2). Turkey neither signed nor ratified this convention, Andorra, Monaco, and France likewise.

"In areas inhabited by persons belonging to national minorities traditionally or in substantial numbers, if there is sufficient demand, the parties shall endeavour to ensure, as far as possible and within the framework of their education systems, that persons belonging to those minorities have adequate opportunities for being taught in the minority language or for receiving instruction in this language".

In 2009, Turkey signed the UN 'Convention on the Rights of People with Disabilities'. The items 3b and 3c of Article 21 do not have the wording 'mother tongue', yet demand the following measures:

"(b) Facilitating the learning of sign language and the promotion of the linguistic identity of the deaf community; (c) Ensuring that the education of persons, and in particular children, who are blind, deaf or deafblind, is delivered in the most appropriate languages and modes and means of communication for the individual, and in environments which maximize academic and social development."

Other than constitutional law and international law, countries can recognize minority languages by other laws. In Turkey, the issues related to human rights during the EU harmonization process, and the pressures from the Deaf community lead to a series of legislations about TİD. The first legislation that has the wording 'Türk İşaret Dili' is the Disabilities Act in 2005. This bill recognizes Turkish Sign Language and requires its documentation by the Article 15: "To provide the education and communication of the hearing disabled, Turkish sign language system is created by the directorate of Turkish Language Association.". In addition, the bill enforces interpretation services, and training of interpreting to be supplied in state institutions in every province. Later regulations came out in the following years (2006, 2011, 2012) related to arrangements about TİD grammar books, interpreter training, and appointment of interpreters.

3.2. Language policy

In this section, policy is used in the sense that the concrete courses of actions are implemented by state and non-state agencies about the requirements by laws and regulations. Policies regarding sign language acquisition and education are explicated in the section about Deaf education [Socio-historical Background - 2.4.].

As the first solid attempt to fulfill the promises in legislations, Turkish Sign Language Science Council (TİDBO) was founded by the Turkish Language Association (TDK) in 2005. The organization was commissioned by the government for the preparation of a dictionary, a grammar book, and bilingual educational materials. However, TDK underwent some organizational changes, which protracted further steps to be taken. Scientifically informed actions came in 2015, when The Ministry of Family and Social Policies published a TİD grammar book prepared by an expert research team of three linguists, Bahtiyar Makaroğlu, Engin Arık and the deaf linguist Hasan Dikyuva. This book was based on a nation-wide corpus collected from 27 Provinces (about half of the provinces). Again sponsored by the ministry, Makaroğlu and Dikyuva published an online TİD dictionary in 2017 (tidsozluk.net), the only TİD dictionary based on lexicographic methodology.

TİD interpreting was first recognized in 2005, in the Supplementary Item 8 of Social Service Law (2828) that was added according to Article 30 of the 2005 Disability Law. In 2006, a regulation was published in the Official Gazette 26264 about the training and working principles of TİD interpreters. The interpreting education (certificate) programs have been far from sufficient in duration and scope. Accordingly, the regulation was reviewed in 2011 and 2012. In order to prevent the repercussions of inadequate interpreting certificates, Turkish Sign Language Science Council (TİDBO) conducted a 'certificate approval exams' in 2007, two exams in 2013, and finally in 2015. The number of interpreters who succeeded in the exams was 10% or less of the applicants.

3.3. Language attitudes

Loss of hearing leads to common obstacles for the members of the Deaf community. These obstacles arise from the systematic or disorderly exclusive practices of social institutions or individuals of the surrounding majority group. In terms of legislative discourse, sign language is not yet regarded to be a linguistic human right of the Deaf community that are composed of autonomous agents, but rather as a service for dependent citizens. Considering the legal documents, the shift of responsibility from Turkish Language Association (TDK) to the Ministry of Family and Social Policies, and that TİD interpreting was first under a Social Service Law (5799) which states its aim in Article 1 as related to social services supplied to people who are in need of care and help.

Kemaloğlu, an otorhinolaryngologist and researcher in Deaf studies, notes that 'hearing impaired' is defined only by medical criteria regarding hearing tests to get disability reports (specifically the regulation about medical disability reports in 2010) given. However, the communication problems in social settings are not necessarily direct reflections of medical tests. Kemaloğlu cites various social variables that needs to be considered as suggested by American Speech-Language-Hearing Association such as the reaction of the individual and other individuals. In addition, that there is not a single reference to sign language in this regulation and state statistics about disability (but rather to language

and speech disorders) reflects an attitude that totally ignores the linguistic culture and even implies it to be a disorder. A similar uninformed statement exists in Article 15 of the 2005 Disability Law: “To provide the education and communication of the hearing disabled, Turkish sign language system is created by the directorate of Turkish Language Association.” (emphasis added by the author). Though it turned out that documentation or standardization is meant by the ‘creation’ of Turkish Sign Language ‘system’, the literal meaning is that TİD is to be created by an institution as if it is not a natural language with its own history.

TİD first appeared on television in the program News for the Hearing Impaired in 1993 by the state channel Türkiye Radyo ve Televizyonları TRT-1 narrated by Nermin Merdanoğlu. In recent years, TİD interpreting was included in certain popular TV shows and news programs in private news channels. Moreover, TRT and two other private TV channels Star and Kanal-D provide TİD interpreting. While TRT arranges interpreting for the news, the private channels have interpretation in soap operas.

References

- İlkbaşaran, Deniz. 2015. *Literacies, mobilities and agencies of deaf youth in Turkey: Constraints and opportunities in the 21st century*. San Diego, CA: University of California, San Diego PhD Dissertation. [2.2] [2.3] [2.4]
- İlkbaşaran, Deniz. 2016. Türkiye’deki sağır gençlerin iletişim alışkanlıkları ve Türk İşaret Dili’nin toplumsal dilbilimi açısından incelenmesi. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 411-444. İstanbul: Koç Üniversitesi Yayınları. [2.4]
- Kemaloğlu, Yusuf K. 2016. Türkiye’de sağır insanların görünürlüğü ve toplumsal ve eğitimsel sorunları üzerine demografik bir inceleme. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 51 - 85. İstanbul: Koç Üniversitesi Yayınları.
- Kubus, Okan, Deniz İlkbaşaran & Shane K. Gilchrist. 2016. Türkiye’de işaret dili planlaması ve Türk İşaret Dili’nin yasal durumu. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 23-50. İstanbul: Koç Üniversitesi Yayınları.
- Tove Skutnabb-Kangas. 2000. Bilingual education and sign language as the mother tongue of deaf children. In Cynthia J. Kellett Bidoli & Elana Ochse (eds.), *English in international deaf communication*. 75-94. Bern: Peter Lang.

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Chapter 4. Linguistic study

Sign language studies began in the 2000s and the academic interest has been growing in linguistics, as well as other humanities and engineering areas. According to Engin Arık’s compilation of TİD studies, there are a few publications per year between 2000-2004 as journal articles, book chapters, proceedings, theses, dissertations, and conference presentations. With a steady increase through the years, there have been 12 to 15 scientific works per year between 2011-2013 on TİD. This chapter will give brief information about grammatical description (4.1), lexicographic work (4.2), and corpora (4.3). Finally, the current state of knowledge about sociolinguistic variation of TİD will be summarized in section 4.4.

Besides linguistic studies, there is a growing interest in computer science and engineering studies about

Turkish Sign Language. There were 19 scientific studies by 2016 about automatic translation, education incorporating human-computer/robot interaction, and various other subjects. This line of research might open up new application possibilities of technology for society in the long-term (e.g. Aran, Santemiz, Arı, Kindiroğlu, & Akarun, 2016; Eryiğit, Köse, Keleşir, & Eryiğit, 2016; Köse, Uluer, & Akalın, 2016; Santemiz et al., 2009).

4.1. Grammatical description

The first linguistic work on TİD was conducted by Ulrike Zeshan with observations about the pronominal system, numerals, tense and aspect, non-manual markers, sentence types and classifiers in 2002. Later years saw the flourishing of TİD studies. The main topics studied are listed in the table below:

Topic	Example Study
Basic grammar	Açan (2001, 2007), Sevinç (2006)
Phonetics, phonology, and morphology	Kubuş (2008), Özkul (2013), Taşçı (2012), Sevinç (2015), Gökgöz (2018), Makaroğlu & İşsever (2018), Taşçı & Göksel (2018)
Non-manuals and sentence types	Zeshan (2006), Gökgöz & Arık (2011), Gökgöz (2011), Makaroğlu (2012), Göksel & Keleşir (2013), Özsoy et al. (2015), Özsoy & Kaşıkara (2018b), Özsoy et al. (2018c)
Syntax	Gökgöz (2009), Göksel & Keleşir (2016)
Semantics and pragmatics	Keleşir et al. (2018), Karabüklü (2018), Makaroğlu et al. (2018), Özkul (2019), Nuhbalaoğlu (2019), Saral (2019)
Signing Space	Arık (2013b), Özyürek et al. (2010)
Language acquisition	Sümer and Özyürek (2016), Sümer (2015a, 2015b), Sümer et al. (2017), Sevgi (2019), Sümer & Özyürek (2020)

(Adapted from Arık, 2013c: 3)

The first comprehensive TİD grammar book was prepared by Hasan Dikyuva, Bahtiyar Makaroğlu, and Engin Arık in 2015, by the support of the Ministry of Family and Social Policies. An English version of the book was published in 2017. The book is based on a 104 hours-long video database, out of which approximately 20% has been annotated (165.000 signs) with ELAN software. The sample is composed of 113 participants above the age of 12, who are native or near-native signers from 26 provinces. There are four to eight participants from each town, and four to five towns each from Western, North-Western, Central, Northern, Eastern, and Southern regions. The project team is composed of seven academic members and eight Deaf members specialized in various technical aspects.

4.2. Lexicographic work

There are two types of lexicographic work on TİD. One type is similar to standard spoken language dictionaries that are prepared according to lexicographic and linguistic methodologies. The only TİD dictionary of this kind is ‘The Current Dictionary of TİD’ (Güncel Türk İşaret Dili Sözlüğü) which has been online since 2017 (tidsozluk.net). The dictionary was prepared by a team led by Bahtiyar Makaroğlu and Hasan Dikyuva, sponsored by the Ministry of Family and Social Policies. The dictionary is based on the corpus described in the previous section [Socio-historical Background - 4.1.] with 165.000 annotated signs. The online dictionary consists of 2000 lexical entries that have the highest frequency of occurrence in the corpus. Different from other dictionaries, search options are two-ways between TİD and Turkish. In other words, a sign can be searched by entering its handshape and location properties, or alternatively writing the Turkish translation. Each lexical entry consists of variants, other senses of the word, and sample sentences for each sense of the word. The ordering of the multiple senses is also based on the frequency of occurrence.

The other type of lexicographic work is semi-lexicographic in the sense that most of them are prepared by presenting Turkish words to a Deaf model and asking her/him to produce the signs for the words. By 2015, the following Turkish-to-TİD word translation lists were published online or in press as cited in Dikyuva et al.’s grammar book:

‘Sign Language Guide for Adults’ *Yetişkinler için İşaret Dili Kılavuzu* (Ministry of Education Special Education, Guidance and Counseling Services General Management, 1995); updated and published in 2012 as *Turkish Sign Language Dictionary* “ Türk İşaret Dili Sözlüğü”

‘Turkish Sign Language Word List’ *Türk İşaret Dili Kelime Listesi* (Özyürek, İlkbaşıran, & Arık, 2004; 750-word, Koç University)

‘Turkish Sign Language Resource Website’ *Türk İşaret Dili Kaynak Sitesi* (published online in 2008 and updated several times by İsmail Arı, Pınar Santemiz, and Lale Akarun. Boğaziçi University, Artificial Intelligence Lab in Computer Engineering)

TİD vocabulary list published within the scope of the project *İki Elin Sesi* ‘The Voice of Two Hands’ (The Association of Persons with Disabilities in Turkey, 2008)

‘Turkish Sign Language Education Material’ *Türk İşaret Dili Eğitim Materyali* (İstanbul Metropolitan Municipality, 2012)

‘Turkish Sign Language Manual’ *Türk İşaret Dili Kılavuzu* (Barışık, 2012; Yargı Yayınevi, Ankara).

‘Smart Sign Language’ *Akıllı İşaret Dili* published by ‘Ankara Çankaya Deaf International Sign Language Research Education Instruction and Sports Association’ *Ankara Çankaya Sağırlar Uluslararası İşaret Dili Araştırma Eğitim Öğretim ve Spor Kulübü Derneği* in 2013.

‘Turkish Sign Language’ *Türk İşaret Dili* translation dictionary published online by Anatolian University Open Education Faculty (Akalin, Cavkaytar, Oral 2014).

‘Turkish Sign Language Dictionary of Religious Concepts’ *Türk İşaret Dili Dini Kavramlar Sözlüğü* published by the Turkish Directorate of Religious Affairs in 2014. A positive aspect of the dictionary is that the neologisms are akin to native TİD words in phonological shape, and fingerspelling use is very minimal.

‘Spreadthesign.com’ prepared by European Sign Language Center (2010) that aims to include vocational technical terms in several sign languages together with TİD. However the technical signs heavily rely on fingerspelling rather than native word-formation. Co-ordinator: Thomas Lydell-Olsen. Turkish Sign Language signs from Mert Öztüre İşitme Engelliler Lisesi, İzmir. Co-ordinator: Gökhan Kaya, Teachers: Cevriye Kaya, İlker Şimşek.

A more recent semi-lexicographic Turkish-TİD dictionary (<http://www.tid.itu.edu.tr/TidGlossary>) is part of 'TiDLaR', a language resource which was developed by a team of linguists from Boğaziçi University and a team of computer engineers from İstanbul Technical University. This online dictionary contains 1530 TİD signs, collected under 990 Turkish lexical entries. The Turkish lexical entries are based on the words and expressions found in 1st grade elementary school coursebooks, published and distributed by the Ministry of Education. Each TİD sign is annotated based on a detailed annotation scheme. The description of the second component of the TiDLaR language resource, namely the Turkish-TİD parallel corpus treebank, can be found in [Socio-historical background - 4.3](#). The detailed descriptions of these two components can be found in Eryiğit et al. (2016) and Eryiğit et al. (2019). The development of this language resource was funded by TÜBİTAK (project no 114E263).

4.3. Corpora

A regionally representative corpus of TİD was sponsored by the Ministry of Family and Social Policies. The corpus consists of 104 hours of video recording, out of which approximately 20 hours have been annotated according to its description in 2015 [[Socio-historical Background - 4.1.](#)].

Boğaziçi University Sign Language Corpus is still under construction. This corpus was started in 2012. The first set of recordings was conducted between 2012 and 2015 under the umbrella of the [TİDBİL Project](#) (TÜBİTAK 111K314) and [SignGramProject](#) (COST Action IS1006). By 2015, the corpus had video recordings of TİD signers based on structured as well as semi-structured tasks, and some of these recordings were annotated/glossed using the annotation tool [ELAN](#). There are 55 participants who contributed to the corpus and who are native or near-native signers, and most of them are from İstanbul. The corpus has had additional recordings and ELAN annotations since April 2016 with the support of the [SIGN-HUB Project](#) (Horizon 2020 693349). By the end of May 2020, there were approximately 23 hours of glossed/annotated video recordings.

Another language resource, *TiDLaR*, which consists of an online dictionary and a Turkish-TİD parallel corpus treebank was developed by a collaboration between linguists at Boğaziçi University and computer engineers at İstanbul Technical University. For a description of the online dictionary, see [Socio-historical Background - 4.2](#). The parallel corpus comprises 420 annotated Turkish-TİD utterance pairs. These utterances are based on 306 sentences from 1st grade elementary school coursebooks published and distributed by the Ministry of Education. See Eryiğit et al. (2016) and Eryiğit et al. (2019) for a detailed description of the annotation schemes of the signs and the treebank. The development of this language resource was funded by TÜBİTAK (project no 114E263).

4.4. Sociolinguistic variation

The anecdotal evidence from Deaf signers and CODAs indicate that there is no communication problem due to regional variation of TİD. Dikyuva, Makaroğlu, and Arık's grammar book, which is based on a representative sample of the whole of Turkey [[Socio-Historical Background - 4.1.](#)], states that the regional variation is observed only in terms of lexical items between Eastern and Western regions (e.g. some signs for the days of the week), but not in grammatical structure.

Other than regional variation, there can be lexical variation in smaller scale regions, that is variation between Deaf schools, Deaf associations, and families. Moreover, there can be variation between younger and older generations. For example, hour is produced by pointing to the wrist, thus this sign is

iconically related to wristwatch. Older generations articulate hour with a C-handshape on the chest, which is iconically related to pocket watches that lost their popularity gradually after World War I.

References

- Açan, Zeynep. 2001. *A study on sign languages and Turkish Sign Language*. Ankara, Turkey: Hacettepe University MA thesis.
- Açan, Zeynep. 2007. *A linguistic analysis on basic sentence types in Turkish Sign Language (TİD) with reference to non-manual activity*. Ankara, Turkey: Hacettepe University PhD dissertation.
- Aran, Oya, Pınar Santemiz, İsmail Ari, Ahmet A. Kındıroğlu & Lale Akarun. 2016. Otomatik işaret dili tanıma ve Türk İşaret Dili için bilgisayar uygulamaları. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 471-498. İstanbul: Koç Üniversitesi Yayınları.
- Arık, Engin. 2013b. Expressions of space in Turkish Sign Language. In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 219-242. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.
- Arık, Engin. 2013c. Introduction: Previous and Current Research on Turkish Sign Language (TİD). In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 1-17. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.
- Arık, Engin. 2016a. Geçmişten geleceğe Türk İşaret Dili araştırmaları. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 7-22. İstanbul: Koç Üniversitesi Yayınları.
- Dikyuva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2015. *Türk İşaret Dili dilbilgisi kitabı* [Turkish Sign Language grammar book]. Ankara: TC Aile ve Sosyal Politikalar Bakanlığı.
- Dikyuva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2017. *Turkish Sign Language grammar*. Ankara: The Republic of Turkey Ministry of Family and Social Policies.
- ELAN (Version 5.2). 2018. Nijmegen: Max Planck Institute for Psycholinguistics. (<https://tla.mpi.nl/tools/tla-tools/elan/>) (Computer software.)
- Eryiğit, Cihat, Hatice Köse, Meltem Keleşir & Gülşen Eryiğit. 2016. Building machine-readable knowledge representations for Turkish Sign Language generation. *Knowledge-Based Systems* 108, 179-194.
- Eryiğit, Gülşen, Cihat Eryiğit, Serpil Karabüklü, Meltem Keleşir, Aslı Özkul, Tuğba Pamay, Dilara Torunoğlu-Selamet, & Hatice Köse. 2019. Building the First Comprehensive Machine-Readable Turkish Sign Language Resource: Methods, Challenges and Solutions. *Language Resources and Evaluation* (54). 97-121. Berlin: Springer. <https://doi.org/10.1007/s10579-019-09465-5>
- Gökgöz, Kadir. 2009. *Topics in Turkish Sign Language (Türk İşaret Dili – TİD) Syntax: Verb movement, negation, and clausal structure*. İstanbul, Turkey: Boğaziçi University MA thesis.
- Gökgöz, Kadir. 2011. Negation in Turkish Sign Language: The syntax of nonmanual markers. *Sign Language & Linguistics* 14(1). 49-75.
- Gökgöz, Kadir & Engin Arık. 2011. Distributional and syntactic characteristics of nonmanual markers in Turkish Sign Language (Türk İşaret Dili, TİD). *MIT working papers in Linguistics* 62: *Proceedings of the 7th Workshop on Altaic Formal Linguistics*, 63-78.
- Gökgöz, Kadir. 2018. Syllables in TİD. *Dilbilim Araştırmaları Dergisi* 29(1), 29-49.
- İlkbaşaran, Deniz. 2015. *Literacies, mobilities and agencies of deaf youth in Turkey: Constraints and opportunities in the 21st century*. San Diego, CA: University of California, San Diego PhD Dissertation.

- İlkbaşaran, Deniz. 2016. Türkiye'deki sağır gençlerin iletişim alışkanlıkları ve Türk İşaret Dili'nin toplumsal dilbilimi açısından incelenmesi. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 411-444. İstanbul: Koç Üniversitesi Yayınları.
- Karabüklü, Serpil. 2018. Strategies to express time in a tenseless language: Turkish Sign Language (TİD). *Dilbilim Araştırmaları Dergisi* 29(1). 87-118.
- Kelepir, Meltem, Aslı Özkul, & Elvan T. Özparlak. 2018. Agent-backgrounding in Turkish Sign Language (TİD). *Sign Language & Linguistics* 21(2), 257-283.
- Kemaloğlu, Yusuf K. 2016. Türkiye'de sağır insanların görünürlüğü ve toplumsal ve eğitimsel sorunları üzerine demografik bir inceleme. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 51 - 85. İstanbul: Koç Üniversitesi Yayınları.
- Köse, Hatice, Gülşen Cebiroğlu Eryiğit, Meltem Kelepir & Cihat Eryiğit. 2016. Türkçe'den - Türk İşaret Diline Otomatik Çeviri Sistemi ve Avatar Animasyonu. 114E263 nolu TÜBİTAK projesi. URL: <https://web.itu.edu.tr/tid>
- Köse, Hatice, Pınar Uluer & Neziha Akalın. 2016. İnsansı robot destekli interaktif Türk İşaret Dili eğitimi. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 499-528. İstanbul: Koç Üniversitesi Yayınları.
- Kubus, Okan. 2008. *An analysis of Turkish Sign Language (TID) phonology and morphology*. Ankara, Turkey: Middle East Technical University MA thesis.
- Kubus, Okan, Deniz İlkbaşaran & Shane K. Gilchrist. 2016. Türkiye'de işaret dili planlaması ve Türk İşaret Dili'nin yasal durumu. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 23-50. İstanbul: Koç Üniversitesi Yayınları.
- Makaroğlu, Bahtiyar, & Hasan Dikyuya (eds.). 2017. *Güncel Türk İşaret Dili sözlüğü* [The contemporary Turkish Sign Language dictionary]. Ankara: Aile ve Sosyal Politikalar Bakanlığı. URL: <http://tidsozluk.net>.
- Makaroğlu, Bahtiyar, Elif A. Akkök, & Yeşim Aksan. 2018. Verbs in Turkish Sign Language: A cognitive linguistic approach. *Dilbilim Araştırmaları Dergisi* 29(1), 119-137.
- Makaroğlu, Bahtiyar, & Selçuk İşsever. 2018. Agreement verbs in Turkish Sign Language (TİD) from the perspective of templatic morphology. *Dilbilim Araştırmaları Dergisi* 29(1), 51-86.
- Nuhbalaoğlu, Derya. 2019. Comprehension and production of referential expressions in German Sign Language (DGS) and Turkish Sign Language (TİD): An empirical approach. *Sign Language & Linguistics* 22(2), 282-290.
- Özkul, Aslı. 2013. *A phonological and morphological analysis of instrumental noun-verb pairs in Turkish Sign Language*. İstanbul, Turkey: Bogazici University MA thesis.
- Özkul, Aslı. 2019. Deontic and epistemic necessity in Turkish sign language (TİD). *Poznan Studies in Contemporary Linguistics* 55(3), 543-577.
- Özsoy, A. Sumru, Aslı Göksel, Meltem Kelepir & Engin Arık. 2015. İşaret dilleri kaynak dilbilgisi modeli: Türk İşaret Dili ışığında işaret dizgelerini betimleme ve çözümleme yöntemleri [A model for reference grammars of sign languages: Methods of analysis and description of sign systems in the light of Turkish Sign Language]. TÜBİTAK project no 111K314
- Özsoy, A. Sumru, Meltem Kelepir, Derya Nuhbalaoğlu & Emre Hakküder. 2015. Commands in Turkish Sign Language [Türk İşaret Dili'nde emir yapısı]. *Journal of Japanese Linguistics Society* 146, 13-30. Gengo Kenkyu.
- Özsoy, A. Sumru, & Hüner Kaşıkara. 2018b. Comparatives in Turkish Sign Language (TİD). *Linguistic Discovery* 16(1), 47-63.

- Özsoy, A. Sumru, Meltem Kelepir, Derya Nuhbalaoğlu, & Emre Hakküder. 2018c. Properties of command constructions in TİD. *Dilbilim Araştırmaları Dergisi* 29(1), 161-178.
- Özyürek, Aslı, Inge Zwitterlood & Pamela M. Perniss. 2010. Locative expressions in signed languages: A view from Turkish Sign Language (TID). *Linguistics* 48(5), 1111-1145.
- Santemiz, Pınar, Oya Aran, Murat Saraclar & Lale Akarun. 2009. İşaret dili videolarından hizalama ile ayrık işaret çıkarımı [Alignment based extraction of isolated signs from sign language videos]. IEEE Conference Publications.
- Saral, Burcu. 2019. *The Universal Quantifier 'All' in Turkish Sign Language*. İstanbul, Turkey: Boğaziçi University MA Thesis.
- Sevgi, Hande. 2019. *Effects of age of acquisition on morphosyntactic structures in Turkish Sign Language: Evidence from classifiers*. İstanbul, Turkey: Boğaziçi University MA thesis.
- Sevinç, A. Müge. 2006. *Grammatical relations and word order in Turkish Sign Language TİD*. Ankara, Turkey: Middle East Technical University MA thesis.
- Sevinç, A. Müge. 2015. *Finite-state sign language morphophonology*. Ankara, Turkey: Middle East Technical University PhD thesis.
- Sümer, Beyza. 2015a. *Acquisition of spatial language by signing and speaking children: A comparison of Turkish Sign Language (TİD) and Turkish*. Nijmegen, Netherlands: Radboud University Nijmegen PhD dissertation.
- Sümer, Beyza. 2015b. *Scene-setting and referent introduction in Turkish and Turkish Sign Language (Türk İşaret Dili, TİD): What does modality tell us?*. İstanbul, Turkey: Boğaziçi University MA Thesis.
- Sümer, Beyza & Aslı Özyürek. 2016. İşitme engelli çocukların dil edinimi [Sign language acquisition by deaf children]. In C. Aydın, T. Goksun, A. Kuntay, & D. Tahiroğlu (eds.), *Aklın çocuk hali: Zihin gelişimi araştırmaları* [Research on Cognitive Development], 365-388. İstanbul: Koc University Press.
- Sümer, Beyza, Pamela M. Perniss, & Aslı Özyürek. 2017. A first study on the development of spatial viewpoint in sign language acquisition: The case of Turkish Sign Language. In F.N. Ketrez, A.C. Kuntay, Ş. Özçalışkan, & A. Özyürek (Eds.) *Social environment and cognition in language development: Studies in honor of Ayhan Aksu-Koc*, 223-240. John Benjamins.
- Sümer, Beyza, & Aslı Özyürek. 2020. No effects of modality in development of locative expressions of space in signing and speaking children. *Journal of Child Language*, 1-31.
- Taşçı, Süleyman S. 2012. *Phonological and morphological aspects of lexicalized fingerspelling in Turkish Sign Language (TID)*. İstanbul, Turkey: Boğaziçi University MA Thesis.
- Taşçı, Süleyman S., & Aslı Göksel. 2018. Native compounds in TİD: A classification based on headedness. *Dilbilim Araştırmaları Dergisi* 29(1), 1-28.
- Zeshan, Ulrike. 2002. Sign Language in Turkey: The story of a hidden language. *Turkic Languages* 6 (2). 229-274.
- Zeshan, Ulrike. 2006. Negative and interrogative structures in Türk İşaret Dili (Turkish Sign Language). In U. Zeshan (ed.), *Interrogative and negative constructions in sign languages*, 128-164. Nijmegen: Ishara Press.

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PART 2 Phonology

The phonology of a sign language is described in terms of the properties of the discrete and distinctive subcomponents of its signs, the properties of its prosodic constituents, and the processes by which

different subcomponents interact with each other.





This part of the grammar is organized into three chapters, each of which focuses on one of these three components of TiD phonology. The first chapter describes the sublexical structure of TiD signs in terms of handshape, location, orientation, and movement, as well as mouth gestures and mouthings. The second chapter describes the prosody of TiD in terms of both the smaller prosodic units (syllable and foot), and of larger prosodic units (prosodic word, phonological phrase, and intonational phrase). The last chapter is on phonological processes. The content matter of this chapter is embedded into Chapter 2, since the phonological processes detected for TiD are helpful in defining prosodic groups. These processes include assimilation, coalescence, epenthesis, reduplication, cliticization, and phonological processes in compounding.

Chapter 1. Sublexical structure

The sublexical structure involves features of sign articulation which are handshape, movement, location, and orientation. These *phonological* features are not about all precise details in articulation i.e. phonetics, but about recurrent properties across various signs regardless of meaning.

Certain iconic signs have a dramatically different sublexical structure than other signs, such as the manual alphabet [Lexicon - 2.2.2.] or lexicalizations of classifier constructions [Lexicon - 1.2.1].

1.1.1. Contrastive handshapes

Contrastive handshapes are handshapes that can distinguish at least two signs that have the same location and movement. See below two pairs of signs where such a meaning distinction is made by different handshapes. In the first pair, LUCK and WINE, -handshape and -handshape are distinctive. In the second pair, CHICKEN and PUNISHMENT, the distinctive handshapes are -handshape and -handshape.



LUCK



WINE

(adapted from Dikyuva, Makaroğlu, & Arık, 2015: 105)



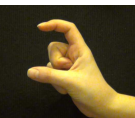



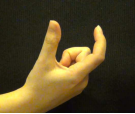
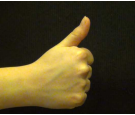

CHICKEN

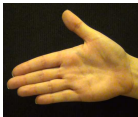


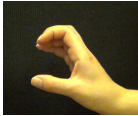




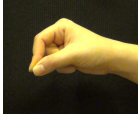






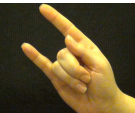
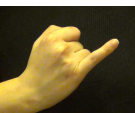
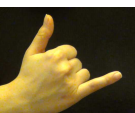
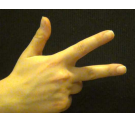
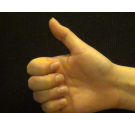
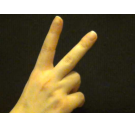
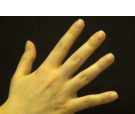

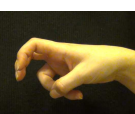
PUNISHMENT

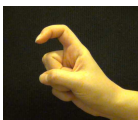

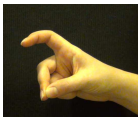
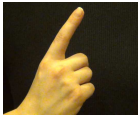
(adapted from Kubus 2008: 19)

Distinctive handshapes and example signs with the respective handshapes are listed below. Handshape names are given according to the selected fingers or similarity of the handshape to a fingerspelled letter, number, or a lexical sign in TİD.








	Handshape Picture	Handshape Name	Example Signs
1		C-Handshape	MOON, COFFEE, DEVIL, TURKEY
2		L-Handshape	FESTIVAL, SHOUT, WEDNESDAY, THURSDAY, VILLAGE
3		Closed-O-Handshape	GREEN, SILVER, PLEASE, GOLD, NONE, ORGANIZATION
4		P-Handshape	FRAUD, EMPTY, FIGHT
5		U-Handshape	THROAT, THICK, URFA (city name)
6		Thumb-Handshape	PRESIDENT, SPORTS, APPOINTING
7		Closed-4-Handshape	ISTANBUL, MOUSE, MIRROR, EQUAL, CLOSED, KARATE

8		Flat-Handshape	STOP, HELP, HIT, FRIEND, IGNORANT
9		Claw-Handshape	CLAW, SELF, MOTHER, OWN, MAD
10		Bent-Flat-Handshape	SUPPORT, FUNNY, GRANNY, CHEESE
11		Cup-Handshape	CUP, BINOCULARS, GLASS, GROUP
12		Bent-Flat+Thumb-Handshape	SOFT, VIDEO, VOTE, FILE
13		Small-Handshape	SMALL, SUSPICION, WHISTLE, THIN, GRAPES
14		Middle-Selected-Handshape	PUNISHMENT, GOAL, CONSCIENCE, FORGIVE
15		Wide-O-Handshape	PIPE, TELESCOPE, LABORATORY, VERTEBRA
16		Narrowed-O-Handshape	MATCHES, PERMISSION, FEW, STRING, EASY
17		Good-Handshape	GOOD, CHILD, EAT, PROBLEM, GUILT, EGG
18		Middle+Thumb-Handshape	TAKE_OUT, FIRE_SOMEBODY, DIET



19		12-Handshape	REPORT, NOT_RECOGNIZE, TWELVE
20		Covered-T-Handshape	DO/MAKE, DIFFICULT, OFFER, PAYMENT
21		Horn-Handshape	HORN, WANDER, BED, SAVING
22		Little-Finger-Handshape	GUEST, BAD, TUESDAY, FAVORITISM, RIDICULE
23		Little+Thumb-Handshape	SAME, HEAVY, GAME, AIRPLANE
24		3-Handshape	THREE, AGRICULTURE, DE-JURE, ALAWITE
25		4-Flexed-Handshape	FAMILY, PRISON, PUSH, DEFENCE
26		V-Handshape	SEE, FASHION, POLICE, THEATRE, NORMAL
27		5-Handshape	FIVE, EXIST, WANT, BLACK, KNOW, DUMB, QUEUE
28		7-Handshape	SEVEN, GIRL, FRIDAY, STAR, QUICK, WINE, TRAINING
29		8-handshape	EIGHT, SIT, BLUE, LOVE

30		9-Handshape	NINE, YEAR, WRONG, UNCLE, KING, GOSSIP, HOT, INVESTIGATION, FIND
31		Fist-Handshape	GET_BORED, GET_ANGRY, ACCIDENT, PRESS
32		Fingersnapping	FORGET, RUN_AWAY, FAST
33		1-Handshape	ONE, COMMAND, RED, NO, LUCK, SUNDAY

(adapted from Kubus 2008:39-42 and Dikyuva, Makaroğlu, & Arik 2015:103)

Lexical items usually involve one of the following frequent handshapes: -handshape and , and Good-Handshape. Besides, , , , -handshapes constitute a considerable part of the lexicon. Other handshapes such as -handshape are less frequent.

Handshape includes phonological features of *selected fingers* and *finger configuration*. Selected fingers in a sign are the fingers that can be flexed, that can have movement in fingers, or that can contact a location on the body.

The pair of signs LUCK and WINE below have the -handshape and -handshape respectively. The former has the index finger, whereas the latter has the index and the middle fingers as the selected fingers.

Finger configuration refers to the flexion properties of selected fingers. The flexion can be in finger joints, that is the first two joints in fingers. The signs LUCK and HOT are distinguished based on finger joints.



LUCK



WINE



HOT

(adapted from Makaroğlu, Bekar, & Arık 2014: p.214)

Alternatively, the base joints (the third joints from fingertips) can be flexed. This feature is distinctive as the pair FULL and FUNNY shows.



FULL



FUNNY

1.1.1.1. Selected fingers

Selected fingers are described in [Phonology 1.1.1.]

1.1.1.2. Finger configuration

Finger configuration is described in [Phonology 1.1.1.].

1.1.2. Orientation

Orientation of the hand is another feature that distinguishes meaning. Orientation refers to the direction that the hand is facing. For example, in the sign EARTHQUAKE, the palms are facing down whereas in ISLAMIC_MEMORIAL_CEREMONY the hands are facing up as exemplified below:



EARTHQUAKE



1.1.3. The manual alphabet & number signs

Exceptional handshapes can be found in the manual alphabet, number signs, and borrowed signs. For example, P-handshape in lexical forms such as FRAUD and EMPTY is different from the fingerspelled letter. While index finger is flexed in the lexical form, middle finger is flexed in the fingerspelled form.



P-handshape in lexical forms



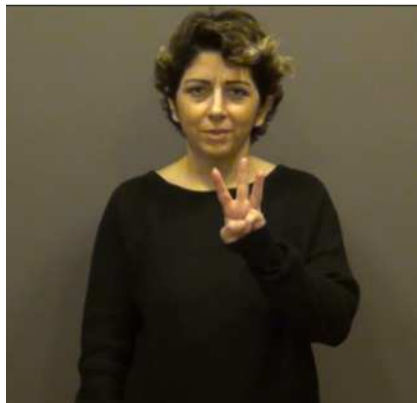
P-handshape in fingerspelling

(adapted and r.f. from Kubus 2008: 50)

A handshape where index, middle, and ring fingers are open occurs only in fingerspelled letter E, W (as lexicalized in WHATSAPP), and also for the numeral THREE. The handshape is exemplified below with the fingerspelled letters E and W:



The letter E



The letter W

Numeral signs can contain handshapes that have certain selected fingers that do not occur in lexical signs. Such an example is TWENTY_FIVE where the ring finger and thumb are selected. This is a selected finger combination that only occurs in number signs.



TWENTY_FIVE

Apart from the manual alphabet and number signs, exceptional handshapes can also occur in name signs and loan words [[Lexicon - 2](#)]

1.2. Location

The major locations for the articulation of signs are head, torso, arm, and non-dominant hand (h2). *Setting* further specifies a major location as either being ipsilateral (right side of a right-handed signer), contralateral (left side of a right-handed signer), low, high, contact, proximal, and distal. Moreover, each location can be specified with an exact setting unique to the major location (e.g. *eyes* is an exact setting of the major location *head*). Below, a table with all locations and all exact settings are presented with examples.

Major Loc	Setting	Exact Setting	Example Sign
Arm	Contact	Whole arm	STREET
Arm	Contact	Elbow	BLUE_JEANS
Arm	High	Upper Arm	YELLOW
Arm	Low, contact	Lower Arm	HOMETOWN
h2	Contact	Dorsal Hand	LATE
h2	Contact	Fingers	RIDE
h2	Contact	Whole hand	ORANGE
h2	Contact	Palm	INVESTIGATE
h2	Contact	Radial and Ulnar Lateral Border of the Hand	INSIDE
h2	Contact	Wrist	DOCTOR
Head	Contact	Cheeks	LOOK
Head	Contact	Ear	WEDNESDAY
Head	Contact/ Proximal	Eyes	DECEMBER
Head	Contact	Whole head	POOR
Head	Contact	Mouth	RED
Head	Contact	Nose	EASY
Head	Contact	Upper Head	HOT
Head	Proximal	Proximal Face	MIRROR
Torso	Contact	Whole body	CLOTH
Torso	Contact	Neck	PLEASE
Torso	Contact	Shoulders	NEW
Torso	High, Contact	Chest	LAW
Torso	Low	Hips	SHORT
Torso	Low	Pelvis	SWIMSUIT
Torso	Low, Contact	Abdomen	ACCUSATION
Torso	Proximal	Proximal Torso	KEY

(adapted and expanded from Makaroğlu & Dikyüva 2017)

Often the lexical items involve the torso as the major location, and for some signs the location of articulation is the head. Occasionally locations are the non-dominant hand and the arm. The non-dominant hand rarely serves as the major location while the arm is extremely exceptional.

There are other exact settings that are also used very rarely. These are predominantly iconically motivated signs. For example, the exact setting of eyes appear in eye-related words such as EYE, EYEGLASSES, TEARDROP, BROW, and EYELASHES (with the exception of DECEMBER). Other such rarely occurring exact settings that serve as the setting for iconic signs are the body (e.g. CLOTH, SHIRT), the pelvis (e.g. SWIMSUIT), and the hips (e.g. SHORTS).

1.3. Movement

Movement is one of the main parameters of a sign's sublexical structure besides hand configuration and location. Two main types of movement are path movement and hand-internal/secondary movement. Path movements are realized by flexions in the wrist, elbow, and shoulder joints; while hand-internal movements are produced by flexion of finger joints or rotation of forearm which leads to change in hand-orientation. The exact setting of a sign is necessarily changed by path movement but not by hand-internal movement. Additionally, if a sign has neither path nor hand-internal movement; it may have one of the following types of movement: (i) short back-and-forth repetitive movements that generally last shorter than two hundred milliseconds (see [Phonology - 2] for the prosodic function of this type of movement); (ii) non-manual movements (movement of head or torso) with no movement in hands [Phonology - 1.5.3.].

1.3.1. Path movement

Path movements are movements that move the hand(s) in space. The shape of a path movement can be straight (e.g. AIRPLANE), arc (e.g. PARTY), circular (e.g. ENGINE), or complex (e.g. GRASS). See the examples below:



AIRPLANE



PARTY



ENGINE



The most frequent movement shape is straight. Less frequent movement shapes are arc and circular. Complex path shapes are the least frequent.

1.3.2. Secondary movement

Secondary movements or internal movements are of three types: orientation change that involves rotation of the forearm (e.g. SUN), aperture change that is realized by the movements of the fingers (e.g. CAKE), and wiggle which is a set of very rapid movements of fingers (e.g. COMPUTER) or forearm (e.g. GOLD). Wiggle is seen more rarely than other hand-internal movements.



SUN



CAKE



COMPUTER



GOLD

As for the tendencies in signs that have a combination of an internal movement with a path movement, often the signs that have aperture or orientation change also have a path movement. Orientation change mostly co-occurs with straight movements (e.g. BRIGHT), and less frequently with arc movements (e.g. SOCKS).



BRIGHT



SOCKS

Aperture change generally combines with a straight movement (e.g. SYRINGE), and sometimes with an arc movement (e.g. CATCH), or a circular path movement (e.g. DREAM). Wiggling is occasionally combined with a straight path movement (e.g. BRIGHT).



SYRINGE



CATCH



DREAM



BRIGHT

In terms of combinations of hand-internal movements, orientation change mostly co-occurs with wiggling (e.g. BRIGHT), and sporadically with aperture change (e.g. CHAIN). Aperture change is very rarely combined with wiggle (e.g. COMPUTER) and orientation change (e.g. CHAIN). Wiggling usually appears with orientation change (e.g. BRIGHT), and rarely with aperture change (e.g. COMPUTER). See the example CHAIN below.



CHAIN

1.4. Two-handed signs

Many signs in the TiD lexicon are two-handed signs. These signs are grouped under two categories,

symmetrical, and asymmetrical signs, according to hand arrangement, that is, the relative complexity of handshape and movement features of the two hands. Symmetrical signs have the same handshape and similar movement in both hands, whereas in asymmetrical signs the dominant hand has movement but the second hand is the major location of the sign. Many of the two-handed signs are symmetrical.

1.4.1. Symmetrical signs

In a symmetrical sign both hands have the same handshape and the movements of the two hands can be either the exact mirror image of each other along a body plane (e.g. PARTY), or the initial and final settings of the movements might alternate between the two hands at a given time (e.g. TREE). The plane of symmetry can be sagittal as in PARTY and TREE, transverse as in TURTLE, or coronal as in CINEMA.



PARTY



TREE



TURTLE



CINEMA

Rarely, the hands have different handshapes, yet move symmetrically (e.g. BUS_STOP, SHISH_KEBAB). In this rare group, the hands are generally in contact or are very close to each other.



BUS_STOP



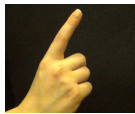
1.4.2. Asymmetrical signs

In asymmetrical signs, the dominant hand is phonologically more complex than the non-dominant hand, specifically, the non-dominant hand is the major place of articulation with no movement feature, whereas the dominant hand has movement and its handshape is equally complex or more complex than the handshape of the non-dominant hand.

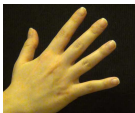
The asymmetrical signs are classified into two groups based on whether the two hands have identical handshapes. In one group, the handshapes are the same and they are generally among the handshapes listed below:

Handshape

Example sign



KNIFE



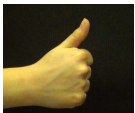
PARSLEY



URGENT



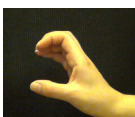
WEDDING



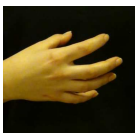
ASSISTANT



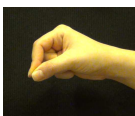
ROCK



BOTTLE



BE_LOST

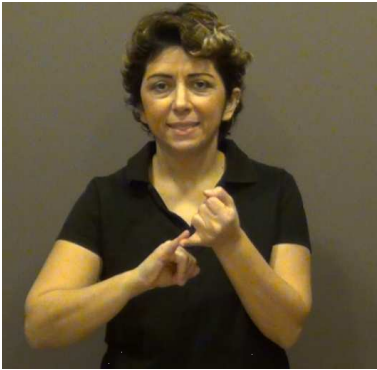


MATCHES



TAILOR

However, exceptions exist such as the -handshape in TUESDAY as shown below:



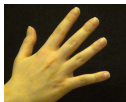
TUESDAY

Asymmetrical signs that have different handshapes is another class of signs where the handshape of the non-dominant hand can only be one of the most frequent and least complex handshapes. These non-dominant hand handshapes are listed below with example lexical items.

<i>Handshape</i>	<i>Example Sign</i>
------------------	---------------------



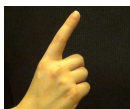
ASSIGNATION




CHICKEN



OPPRESSION



FLAG

Exceptions to this pattern almost always appear in iconically motivated signs. Such an exception is TUNNEL with respect to the handshape of the non-dominant hand, since -handshape is not among the frequent handshapes listed above.



TUNNEL

Another exception is CINEMA with respect to the non-dominant hand location. The dominant hand is not close to the non-dominant hand, yet the non-dominant hand iconically represents the shape of a bigger object than the hand,

namely an old-style camera. Similarly in WATERMELON, the non-dominant hand represents only a fragment of the watermelon's contours. The examples are presented below.



CINEMA



WATERMELON

1.5. Non-manuals

Lexical non-manual features are organized in three categories: mouth gestures, mouthings, and other non-manuals such as facial expressions, and movements of torso or head. The non-manuals described in this section are obligatory properties of lexical items, probably except mouthings. So, their function is purely phonological, in other words, the sign's production is incomplete without the particular non-manual. Thus, these lexical non-manuals are unlike the non-manuals required by prosody (such as the slight head nod that occurs in many citation forms) [Phonology - 2] or non-manuals that determine sentence types [Syntax - 1].

1.5.1. Mouth gestures

Mouth gestures are actions performed by tongue, cheeks, and lips. For example, the cheeks are puffed in the sign HAVE_DIFFICULTY, lips are pursed with airflow in PAPER and WIND, and the tongue is protruded in DEAD:



HAVE_DIFFICULTY

(adapted and r.f. from Dikyuva et al. 2015: 118)



PAPER

(adapted and r.f. from Dikyuva et al. 2015: 117)



DEAD

(adapted and r.f. from Dikyuva et al. 2015: 118)

As very exceptional cases, proper nouns can be composed of solely non-manuals. ALSANCAK, a district in İzmir, is signed by a movement of lips to the ipsilateral side.



ALSANCAK

(adapted and r.f. from Dikyuva et al. 2015: 122)

1.5.2. Mouthings

Mouthing copies the articulation of a sign's Turkish translation. In other words, during the manual production of a sign, the lips, and the tongue in some cases, silently perform the movements of a spoken word's production [Lexicon - 2]. Though citation forms are almost always accompanied by mouthing, in natural signing, the mouthing component might be lost if the referent of a sign is well-established in discourse [Pragmatics - 2].

Mouthing can disambiguate signs that are homophones otherwise. For example, the sign MUNICIPALITY and MUNICIPALITY_BUS have the same manual component, yet they are differentiated by mouthing. The former has *belediye* 'municipality' as mouthing, whereas the latter has *otobüs* 'bus'.



/belediye/

MUNICIPALITY



/OTOBÜS/

 /otobüs/

MUNICIPALITY_BUS

Mouthing can also disambiguate otherwise homophonous nouns and verbs such as IRON (noun) and TO_IRON (verb). The mouthings for these signs are /ütü/ and /ütüleme/. Nouns display mouthing more frequently than verbs. See the examples below.



 /ütü/

 /ütü/

IRON



 /ütüleme/

TO_IRON

1.5.3. Other non-manuals

Lexical non-manuals besides mouth gestures can be movements of body, head, eyebrows, eyes, and eyegaze. To exemplify, LUCK and MAYBE have the same manual features, yet MAYBE has raised eyebrows in its phonological specification while LUCK doesn't.



LUCK



MAYBE

(adapted and r.f. from Dikyuva et al., 2015: 116)

As for body movement, the sign KONYA, a city name, has no manual movement but only repetitive headshake. Contrasting in movement feature, SELF has only manual movement.



KONYA



SELF

(adapted and r.f. from Makaroğlu, Bekar, & Arık, 2014: 224)

Information on data and consultants

The descriptions in this chapter are partially based on the references below and partially on research done by the author during the development of this chapter. Please see the data and consultant information in the references.

A certain portion of the descriptions in Section [1.1] and the majority of descriptions in Sections [1.2], [1.3], and [1.4] are based on original research by the author. The data that contributed to this research have been provided by two near-native fluent signers. The analyses are based on 899 signs from Boğaziçi University TiD Resource Website (cmpe.boun.edu.tr/tid). The signs in the website were revised by a near-native fluent signer who was born and raised in Istanbul.

Additionally, the linguistic data in images and video clips that were produced or reproduced for this chapter were provided by a near-native fluent signing consultant who was born and raised in Istanbul.

References

- Dikyuva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2015. *Türk İşaret Dili dilbilgisi kitabı* [Turkish Sign Language grammar book]. Ankara: TC Aile ve Sosyal Politikalar Bakanlığı. [1]
- Kubus, Okan. 2008. *An analysis of Turkish Sign Language (TİD) phonology and morphology*. Ankara, Turkey: Middle East Technical University MA thesis. [1.2], [1.3], [1.4]
- Kubus, Okan & Annette Hohenberger. 2011. The phonetics and phonology of TİD (Turkish Sign Language) bimanual alphabet. In R. Channon & H. van der Hulst (eds.), *Formational units in sign languages*, 43-63. Berlin: Walter de Gruyter. [1.1.3]
- Makaroglu, Bahtiyar & İpek P. Bekar & Engin Arık. 2014. Evidence for minimal pairs in Turkish Sign Language. *Poznań Studies in Contemporary Linguistics* 50(3), 207-230. doi: 10.1515/psicl-2014-0015 [1]
- Makaroğlu, Bahtiyar, & Hasan Dikyuva (eds.). 2017. *Güncel Türk İşaret Dili sözlüğü* [The contemporary Turkish Sign Language dictionary]. Ankara: Aile ve Sosyal Politikalar Bakanlığı. URL: <http://tidsozluk.net>. [1.2]
- Özkul, Aslı. 2013. *A phonological and morphological analysis of instrumental noun-verb pairs in Turkish Sign Language*. İstanbul, Turkey: Bogazici University MA thesis. [1.3]
- Özkul, Aslı. 2016. Türk İşaret Dili'nde araç bildiren isim ve fiil çiftlerine birimbilimsel bir bakış. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 211-232. İstanbul: Koç Üniversitesi Yayınları. [1.5]
- Taşçı, Süleyman S. 2012. *Phonological and morphological aspects of lexicalized fingerspelling in Turkish Sign Language (TİD)*. İstanbul, Turkey: Boğaziçi University MA Thesis. [1.1.3]
- Taşçı, Süleyman S. 2013. Hand reversal and assimilation in TİD lexicalized fingerspelling. In E. Arık (Ed.), *Current directions in Turkish Sign Language research*, 71-100. Newcastle upon Tyne, UK: Cambridge Scholars Publishing. [1.1.3]
- Taşçı, Süleyman S. 2016. TİD el alfabesi'nin sözlükselleşmesi ve biçimlenişsel yapılandırılması: El değişimi ve benzeşme olguları. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 183-210. İstanbul: Koç Üniversitesi Yayınları. [1.1.3]
- Zeshan, Ulrike. 2002. Sign Language in Turkey: The story of a hidden language. *Turkic Languages* 6 (2). 229-274. [1.3.3.]

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Chapter 2. Prosody

Prosody is the phonological structure of utterances above the phonemic level [Phonology - 1.]. Prosody has two functions. It groups utterances into the prosodic constituents Intonational Phrase, Phonological Phrase, Prosodic Word, Foot, Clitic, and Syllable. In addition, prosody contributes to meaning, for instance, it can differentiate a statement [Syntax - 1.1.] from a question [Syntax - 1.2.].

Prosodic markers can either mark a domain, or, they can mark the boundaries of a prosodic constituent. Domain markers such as the non-dominant hand, eyebrow position and head position span over the entire prosodic domain they mark. Boundary markers, on the other hand, such as hand movements, eye blinks, and single head-nods typically occur at one or both boundaries (left or right ends) of a prosodic constituent.

In this chapter, the prosodic organization of TİD is described from the smaller prosodic units, syllable and foot to larger prosodic units, prosodic word, phonological phrase, and intonational phrase.

2.1. The lexical level

This section includes descriptions of the syllable [Phonology – Section 2.1.1] and the foot [Phonology – Section 2.1.2].

2.1.1. Syllable

The movement within a lexical sign [Phonology - 1.3.] forms a syllable and there are three such movement types.

In TİD, the signs MANY, MATERNAL_AUNT and FORGIVE are all single syllable signs. MANY is a single syllable sign with aperture changing movement [Phonology - 1.3.2]: the hand moves from one handshape configuration [Phonology - 1.1.1.] to another.



MANY

In contrast, in MATERNAL_AUNT there is a setting change: the hand moves from one setting to another in a major location [Phonology - 1.2.].



MATERNAL_AUNT

Finally, in FORGIVE, there is orientation change [Phonology - 1.3.2]. The hands move from one position of the palm and fingertips to another [Phonology - 1.1.2.].



FORGIVE

How many syllables there are in a sign is counted by counting the lexical movements [Phonology - 1.3.] in that sign. All of the syllables above are single syllables, also known as monosyllables. There are also signs which include two syllables such as BABY. Such signs are called bisyllabic signs.



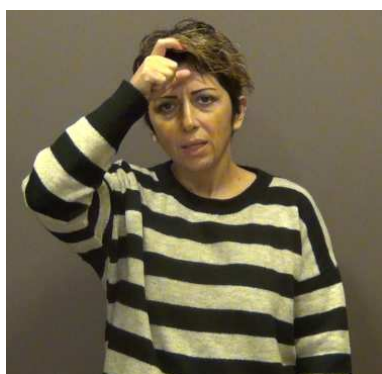
Bisyllabic sign BABY, two movements—two syllables

Syllables can differ in another way. They can be light or heavy. If a syllable has only one movement type, it is a light syllable. MANY, MATERNAL_AUNT, and BABY above are light syllables. In contrast FORGIVE (above) is a heavy syllable. It has two changes, a path movement [Phonology - 1.3.1.] and an orientation changing wrist movement [Phonology - 1.3.2.]. LOSE (below) is an example of another sign with a heavy syllable. It is articulated with a path movement where the two hands start together in the neutral space in front of the signer's torso and move away from each other to a distance parallel to the shoulders. During this path movement, a simultaneous secondary movement occurs and this time it is a handshape change from an open hand configuration where the corresponding fingertips of the two hands touch each other to a closed handshape.



LOSE, heavy syllable, path movement and handshape change

As mentioned above, some signs in TID contain one syllable, which is illustrated by MATERNAL_AUNT above. TID also has signs with two syllables such as BABY. On the other hand, a sign can be smaller than a syllable. An example of such a sign is TURKEY (the country). This sign is static. It doesn't have a defining movement. In this and other such signs, movement is added to the sign. In the case of TURKEY, this added movement, called epenthetic movement, takes the sign to the forehead from any other position from where a preceding sign ends.



TURKEY, a sign without lexical movement

Sometimes a syllable and a morpheme overlap. MATERNAL_AUNT is a single syllable sign and it is a single

morpheme because it has a meaning. But this is not always the case. BABY is also a single morpheme but it has two-syllables. LOOK_AT (below), is composed of two morphemes although it is a single syllable word. The two morphemes on this verb are the verb root and the end point of the movement used for object agreement [Morphology - 3.1]. Finally, the sign TURKEY (above) is smaller than a syllable but it still has a single meaning and therefore it is a morpheme.



LOOK_AT, one syllable but two morphemes

Some compounds [Morphology - 1] may be reduced to a single syllable while having two morphemes. Below SHAMPOO has a [squeeze] morpheme and a [hand-for-hand] morpheme.



SHAMPOO, a compound with a single syllable but two morphemes

Initialized signs [Lexicon – 2.2.2.1.] also have syllable structure. In initialization, a movementless/static letter from the manual alphabet [Phonology - 1.1.3.] becomes a sign with a lexical movement [Phonology - 1.3.]. HIGH_SCHOOL is an initialized sign. Although it is not defined for a movement when it serves as a letter of the manual alphabet [Phonology - 1.1.3.], the letter L acquires a circular path movement [Phonology - 1.3.1.] when it is used as an initialization in HIGH_SCHOOL. The resulting sign has two syllables because it has two circular movements.



HIGH_SCHOOL, example of an initialized sign, only the first syllable is shown

The agentive and the associative suffixes, -C-I and -L-I respectively, [Morphology - 2.1.1.1.], are heavy single-syllable items. In these, a path movement and a handshape change occur during the articulation from the first letter to the second.



Fingerspelled suffix -C-I, path movement and handshape change



Fingerspelled suffix -L-I, path movement and handshape change

Although the handshape change from the first letter to the second is articulated during a path movement, and thus a syllable is formed, the borrowed suffixes -C-I and -L-I/-L-U still violate a phonological constraint. This constraint is the selected finger constraint which forbids the independent movement of fingers within a single syllable.

Compounds [Morphology - 1] may also be monosyllabic or bisyllabic. For instance, the compound JACKET (*ceket*) is formed with a letter C combined with the sign COAT. The C-Handshape is imposed on the lexical path movement [Phonology - 1.3.1.] of COAT, which is from the shoulder setting to the mid torso setting of the body major location [Phonology - 1.2.]. The resulting compound is a monosyllabic sign.



The letter C



COAT



JACKET

2.1.2. Foot

Foot is the prosodic unit that is above the syllable and below the prosodic word. In this level, syllables are organized into rhythmically strong and weak syllables. A foot is a rhythmic unit and it is made up of one or two syllables. Below we mention some instances for foot in TİD. These are some two-digit numbers, the negative affix -LESS, the agentive and associative suffixes, and the sign PERSON.

TİD groups some of its two digit numbers into foot. SIXTEEN is such a number. Each digit is a single syllable resulting from an epenthetic movement. Together they form a two-syllable unit.



SIXTEEN

The negative suffix [[Morphology - Section 2.1.1.2.](#)] -LESS forms a foot with a sign it attaches to. When a lexical item has more than one movement in its citation form, the movement of the lexical item is reduced to one so that the lexical item and the negative suffix form a prosodic foot together.



BOOK



BOOK-LESS

The derivational morphemes agentive suffix -C-I and associative suffix -L-I/-L-U also form a foot with the lexical

sign they attach to. These borrowed suffixes have a single path movement that implements the handshape change from the first letter to the second. If a lexical item with more than one lexical movement is attached to one of these morphemes, the movement of the lexical item reduces to one. So, the lexical item and the suffix form a prosodic foot.



CACAO-L-U 'with cacao'

The -PERSON suffix also forms a foot with the sign that it attaches to. FOOTBALL has more than one syllable in its citation form. When the -PERSON suffix is attached to it, the number of syllables on FOOTBALL reduce to one. So, the lexical item and the suffix form a prosodic foot in FOOTBALL-PERSON.



FOOTBALL



FOOTBALL-PERSON

2.2. Above the lexical level

In this section, Prosodic Word, Phonological Phrase, and Intonational Phrase are described. These prosodic domains are marked by domain markers [Phonology - 2] which are present from the beginning until the end of the marker and/or edge markers [Phonology - 2] which are present at the edges of these domains.

2.2.1. Prosodic word

Prosodic word refers to a prosodic unit where the minimum and maximum size of a phonologically free standing simple or complex word can be defined. It can consist of a bare word that is phonologically free or it can include suffixes or clitics attached to a base. Furthermore, a compound can form a single prosodic word where, phonologically, the parts of a compound fit into a single prosodic word without a pause in between.

Prosodic word is the prosodic domain which is higher than Foot and lower than the Phonological Phrase. A prosodic word can consist of a monosyllabic sign. Also, a monosyllabic sign can be reduplicated which can still be a prosodic word when non-manual markers on the lower face, which work as domain markers [Phonology - 2.], spread over the root of the sign and the reduplications on this root.

An example is provided below. The signs STAND_FACING_EACH_OTHER (first still photo below) and ONE (fourth still photo below) precede and follow SWING_DANCE which is repeated twice (middle still photos below). This reduplicated sign forms a single Prosodic Word. The preceding and the following signs each forms a Prosodic Word, as well. The domain of the Prosodic Word is marked by the change of the position of the mouth gesture [Phonology - 1.5.1.] and the head. The mouth becomes more open from the end of the preceding Prosodic Word and it is kept in that position until the next Prosodic Word starts. Also the head position changes from a head tilt for the first Prosodic Word to a neutral head position during the reduplicated Prosodic Word in the middle to a head turn in the last Prosodic Word.



_____ht
_____mo

STAND_FACING_EA
(Prosodic Word)

'Two upright entities dance.'

_____mo +

SWING_DANCE++
(Prosodic Word)

_____h-trn
_____mc

ONE
(Prosodic Word)

A Prosodic Word can also include more than one sign. For instance, functional words tend to be phonologically weak and often cliticize to lexical hosts. So, a weak pointing sign can cliticize to a lexical host. In such a case, the prosodic word includes more than one sign. Cliticization and spreading of mouthing over both signs indicate a single Prosodic Word. In the example below, the pointing sign is articulated starting in the middle of the movement of the sign LIKE. So, it is cliticized to this sign, and as such it ends the Prosodic Word by being present until the end of the movement. A single mouthing [Phonology - 1.5.2.] which is mimicking the oral articulatory gestures of the corresponding Turkish word *beğendim* 'I like (it)' /be:ndim/ spans over the entire Prosodic Word. So mouthing works as a domain marker [Phonology - 2] here.



/be:ndim/

LIKE
(Prosodic Word)
'(I) liked it.'

IX_{3i}

The negative marker NOT [Morphology - 3.5] also forms a single Prosodic Word with the predicate it attaches to. Being in the same Prosodic Word, the negative marker is articulated in the same location with the lexical sign it attaches to as we show below. Also there is continuity between the lexical sign and the negative marker with respect to non-manual markers. The backward-head-tilt tends to spread regressively from negation to the predicate. In this use, the backward head tilt functions as a domain marker [Phonology - 2]. It is present in the entire domain of the Prosodic Word.



ht-b
 HEAR_OF^NOT
 (Prosodic Word)
 'I didn't hear of it.'

Coalescence is the reduction of two phonetic units into a single one. An example is provided by the cliticization of negation below, where the dominant hand of the symmetrical [Phonology - 1.4.1.] two handed-sign START becomes the host of negation. In its citation form, the sign START is realized as a symmetrical two-handed sign as we show below.



START

As a symmetrical two-handed sign, START satisfies the phonological requirement for coalescence to appear. The example below shows how coalescence is realized. At the beginning of the cliticized form, START^NOT, the sign START is produced by the two hands in the same configuration (as in the citation form). During the downward movement between the two locations of START, the dominant hand changes its shape producing the handshape of negation, thus realizing the fused form START^NOT in a single Prosodic Word. Also, backward head tilt spreads regressively from negation to the host START marking the domain [Phonology - 2] of the Prosodic Word. There is also no mouth gesture [Phonology - 1.5.1.] change between the host and the negative marker. Thus, three elements are marking the domain of the prosodic word: non-dominant hand, stability in mouth gesture, and backward head tilt.



Coalescence of the verb START and Negation

ht-b
 START^NOT
 (Prosodic Word)

2.2.2. Phonological phrase

Phonological Phrase is the level where prosodic words are organized into a larger prosodic domain. We see in the section for Prosodic Word [Phonology - 2.2.1.] that the mouth or the position of the head is relevant for marking the domain [Phonology - 2] of a Prosodic Word. The Phonological Phrase, on the other hand, is marked by the spread of the non-dominant hand, represented as (h2) below, across two or more lexical signs. An example is provided below.



(h1) LATER
 EGG

ONE

LATER

ONE

(h2) LATER

WEEK..... EGG

(Phonological Phrase)

‘One week later, an egg (hatches) ...’

The non-dominant hand of the incorporated sign [Lexicon – 3.10.1.1.] ONE^WEEK is held in place until the right edge of the phonological phrase which coincides with the end of ONE, while the other hand (h1) keeps on articulating the signs LATER and ONE.

The spread of the non-dominant hand within the Phonological Phrase can be regressive as well. Below, the non-dominant hand for the sign FOR starts with CHILD which is a case of regressive spread. Also notice that mouthings are different between the two constituents of the Phonological Phrase, which contrasts with the mouthing distribution in a Prosodic Word [Phonology - 2.2.1.].



/çocuk/ /için/
(h1) CHILD FOR
(h2) FOR.....
(Phonological Phr.)
‘For the child’

We see above that negation forms a single Prosodic Word [Phonology - 2.2.1.] with the lexical item it attaches to. The same location and the same non-manual marker are used on the lexical item and negation in such cases.

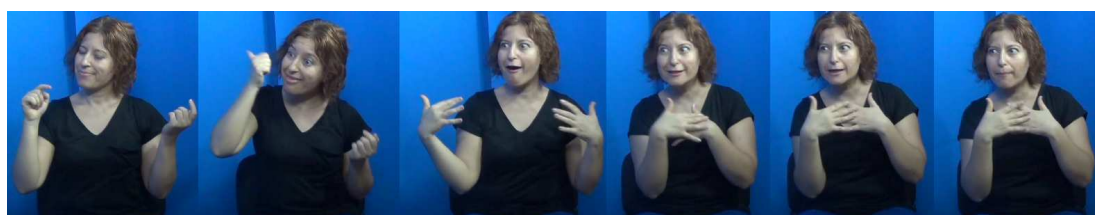
In contrast to negation, another functional sign, the modal marker [Lexicon - 3.3.3.] NECESSARY creates a Phonological Phrase. Although the modal marker is signed in the same location with the lexical item that it follows, namely SHOOT, there is a position change in the mouth [Phonology - 1.5.1.] and a change in eye gaze. Also each sign keeps its movement intact. The non-dominant hand functions as a domain marker [Phonology - 2.] of the Phonological Phrase since it is part of the first sign and is held during the articulation of the second sign.



eg:object eg:addr
mc mo
(h1) SHOOT NECESSARY
(h2) SHOOT.....
(Phonological Phrase.....)
‘(The hunter) needs to shoot.’

In addition to domain markers, there is also an edge marker [Phonology - 2.] for a Phonological Phrase. This edge marker is lengthening by means of repetition. In the example below, EVENING is reduplicated, lengthening the duration of the sign.

When this happens, this marks the end of the Phonological Phrase.

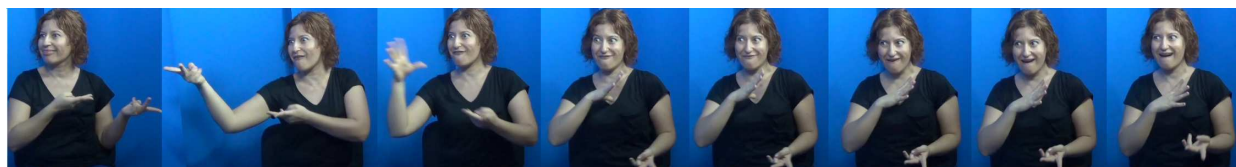


/yarın/ /akşam/

(h1) WELL TOMORROW EVENING++

(h2) WELL..... EVENING++

(Phonological Phrase.....)



/davet/ /var/

(h1) INVITATION THERE_IS+++

(h2) INVITATION.....

(Phonological Phrase.....)

‘There is an invitation for tomorrow evening.’

In the example above, there are two Phonological Phrases. The domain of the first Phonological Phrase is marked by mouthing change from the first sign to the second. The repeated movement which gives an effect of bouncing on the sign EVENING marks the edge of this Phonological Phrase. The second Phonological Phrase is marked by the spread of the non-dominant hand as well as mouthing change from the first sign INVITATION to the second sign THERE_IS in this Phonological Phrase. There are also 3 repetitions on the second sign, THERE_IS, which marks the right edge of this second Phonological Phrase.

Prosodic Words affect each other if they are in the same Phonological Phrase. In the example below, there is regressive handshape assimilation between the signs LIKE and IX₁.



mouth-closed

/be:ndim/

IX₁

LIKE

IX_{3a}

handshape assimilation <--

(Prosodic Word.....) (Prosodic Word.....)

(Phonological Phrase.....)

‘(I) liked it.’

Here the handshape of the pointing sign to self, IX₁, becomes the same handshape as the one on the next sign LIKE. As we state in the section for Prosodic Word [Phonology - 2.2.1.], LIKE forms a Prosodic Word with the following pointing sign. The single mouthing which articulates the Turkish word *beğendim* ‘I liked it’ marks this Prosodic Word. The pointing sign to self in the beginning forms another Prosodic Word because here the mouth is closed whereas mouthing starts with the next Prosodic Word.

2.2.3. Intonational phrase

The Intonational Phrase is the prosodic constituent which interacts with the meaning of a sentence. Yes-no questions and wh-questions form an Intonational Phrase. There is a common non-manual marker responsible for the question type. This common non-manual marker is the Head (Tilt) Position which is used as a head forward (ht-f) in yes-no questions and head backward (ht-b) in wh-questions [Syntax 1.2.]

_____ ht-f
 _____ hn-s
 REMEMBER
 (Int. Phra.)
 'Do you remember?'

(adapted from Göksel and Kelepir 2013a: 12)

_____ ht-b
 _____ hs
 LAW LAW WHAT THERE _ IS WHAT
 (Intonational Phrase _____)
 What kind of legislation is there?

(adaptee from Göksel and Kelepir 2013a: 12)

A chin-down (or head nod) is used in a polar question to indicate a focused [Pragmatics - 4.1.] constituent. The combination of a yes/no question marker and focus marker provides, in a combinatorial manner, the narrow focus, what the question is about, in a polar question as below. The position of eyebrows is a domain marker [Phonology - 2], while the chin-down is an edge marker [Phonology - 2] occurring at the end of the intonational phrase.

_____ cd
 _____ re
 SCORE AS TAKE/CONSIDER
 (Intonational Phrase _____)
 'Do you consider it a score?'

(Gökgöz and Arık 2011: 70)

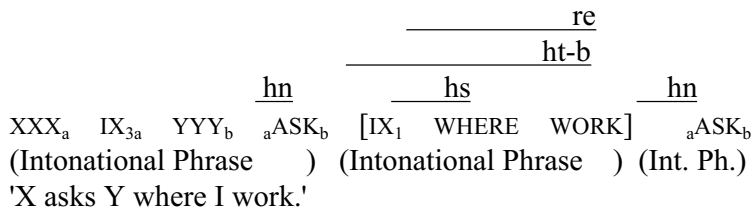
The right edge of a declarative sentence [Syntax - 1.1.] is prosodically marked, too. In the following example, a combination of the edge markers eye-blink and single head nod occur at the right edge of the declarative sentence which here corresponds to an Intonational Phrase in prosody.



_____ eb _____ eb
 _____ hn-s
 PALM-UP UGLY DUCK BABY FOR PALM-UP
 (Intonational Phrase.....)
 '(It is) about the ugly duckling.'

Above, the right edge of the Intonational Phrase is more heavily marked with a blink and a single head nod than the left edge which only includes a blink as an edge marker [Phonology - 2.].

The type of an embedded sentence, which forms a distinct Intonational Phrase, is marked by non-manual markers depending on the type of the embedding verb. For example, the ASK-type verbs require the question intonation in the embedded clause [Syntax - 3.3.]. There are three Intonational Phrases below. The edges of the first and the third intonational phrases are marked with head nod and the entire domain of the Intonational Phrase in-between is marked by head-backward (ht-b) which accompanies ASK-type verbs.



(adapted from Hakgüder 2015a: 94)

2.3. Intonation

Intonation is described in [Phonology - 2.2.3.].

2.4.2. Back-channeling

Null subjects can be licensed by plain, spatial and agreement verbs. In the following, the transitive plain verb LOVE licenses a null subject, which is understood to refer to the signer.

GO_OUT+++ Ø₁ MUCH LOVE ONE MONTH AFTER Ø₁ MARRY
 'After going out for a month, I loved a lot, and got married.'

(<http://tidsozluk.net/tr/Sevmek?d=00>)

A spatial verb can license a null subject. The following example is from the following large discourse.

"The man borrowed a lot of money, did not pay the installments. They took everything away by force. The man protested and wanted to jump off the bridge. He got on the bridge. The police were ready. They talked to him for a long time. Everything was straightened out. He started to work again and after working for a long time, he slowly paid back his debt."


(<http://tidsozluk.net/tr/Atlamak?d=0724>)

The null subject in the following example refers to "the man"/"he" in the story.

Ø_a BRIDGE GET_ON
 'He got on the bridge.'

Agreement verbs can license a null subject. In the following example, the backward agreement verb BUY and forward agreement verb GIVE have null subjects. Both of the null subjects refer to the signer. 3a in the example represents the locus of the source of BUY in the signing space.

			_____	eg:3a	
			_____	ht:3a to 3b	

IX₁ SIBLING_b PENCIL LOSE Ø₁ CL(

(<http://tidsozluk.net/tr/Vermek?d=0018>)

Information on data and consultants

The descriptions in this chapter are based on the references that are provided underneath the examples. If no such reference is found underneath the example, this reflects new research. Those descriptions are based on corpus searches in Boğaziçi University TİDBİL database.

References

- Dikyuva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2015. *Türk İşaret Dili dilbilgisi kitabı* [Turkish Sign Language grammar book]. Ankara: TC Aile ve Sosyal Politikalar Bakanlığı.
- Göksel, Aslı & Meltem Kelepir. 2013a. The phonological and semantic bifurcation of the functions of an articulator: HEAD in questions in Turkish Sign Language. *Sign Language and Linguistics* 16(1). 1-30.
- Gökgöz, Kadir & Engin Arık. 2010. Distributional and syntactic characteristics of nonmanual markers in Turkish Sign Language (Türk İşaret Dili, TİD). (Paper presented at the 7th Workshop on Altaic Formal Languages (WAFL7), LA, CA. 29-31 October 2010.)
- Gökgöz, Kadir & Engin Arık. 2011. Distributional and syntactic characteristics of nonmanual markers in Turkish Sign Language (Türk İşaret Dili, TİD). *MIT working papers in Linguistics 62: Proceedings of the 7th Workshop on Altaic Formal Linguistics*, 63-78.
- Hakgüder, Emre. 2015a. *Complex clauses with embedded constituent interrogatives in Turkish Sign Language (TİD)*. Istanbul, Turkey: Boğaziçi University MA thesis.
- Makaroglu, Bahtiyar & İpek P. Bekar & Engin Arık. 2014. Evidence for minimal pairs in Turkish Sign Language. *Poznań Studies in Contemporary Linguistics* 50(3), 207-230. doi: 10.1515/psicl-2014-0015 [1]
- Taşçı, Süleyman S. 2012. *Phonological and morphological aspects of lexicalized fingerspelling in Turkish Sign Language (TİD)*. İstanbul, Turkey: Boğaziçi University MA Thesis.
- Zwitserslood, Inge, Pamela Perniss & Aslı Özyürek. 2013. Expression of multiple entities in Turkish Sign Language (TİD). In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 273-302. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.

Authorship information

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Chapter 3. Phonological processes

The content matter of this chapter is embedded into [Phonology - Chapter 2] since the phonological processes detected for TİD are helpful in defining prosodic groups. These processes include Assimilation described in [Phonology - Section 2.2.2.], Coalescence described in [Phonology - Section 2.2.1], Epenthesis described in [Phonology - Section 2.1.1.], Reduplication described in [Phonology - Section 2.2.1.], Cliticization described in [Phonology - Section 2.2.1.], and phonological processes in compounding described in [Phonology - Section 2.2.1].

3.1.1. Assimilation

Assimilation is described in [Phonology - 2.2.2.].

3.1.2. Coalescence

Coalescence is described in [Phonology - 2.2.1].

3.2.1. Epenthesis

Epenthesis is described in [Phonology - 2.1.1.].

3.3.1. Reduplication

Reduplication is described in [Phonology - 2.2.1.].

3.3.2. Phonological effects of cliticization and compounding

Phonological effects of cliticization are described in [Phonology - 2.2.1.].

Phonological effects of compounding are described in [Phonology - 2.2.1.].

PART 3 Lexicon

The lexicon of a sign language is the collection of the signs that the signers of that language know. It includes information about how the signs are articulated, what they mean, and what their morpho-syntactic properties are.

This part of the grammar describes these properties of the TİD signs, and is organized in three chapters. The first chapter focuses on the signs in the native lexicon, while the second chapter focuses on the signs in the non-native lexicon. The last chapter provides examples and describes specific properties of each part of speech observed in TİD.

Chapter 1. The native lexicon

The native lexicon is a subpart of the lexicon and contains all of the signs that have been developed through the natural communicative needs within a sign language community. It is divided into the core lexicon of all established signs found in dictionaries, and the non-core lexicon in which signs exploit the visual nature of sign languages and are interpreted in context.

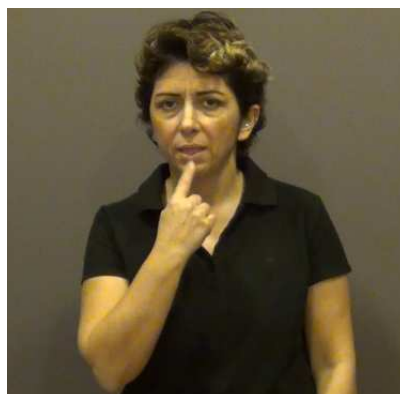
1.1. Core lexicon

The core lexicon of TİD contains the established signs and it forms the basis of the vocabulary items found in dictionaries such as *Güncel Türk İşaret Dili Sözlüğü* (Updated Turkish Sign Language Dictionary). These are the words that every signer uses in their daily interactions. The vocabulary items in the lexicon are called lexical items. All the lexical items in the TİD core lexicon are invariably formed with one of the handshapes described in [Phonology – 1.1.1.].

Many lexical items are not dependent on the context that they are used in. They can be interpreted when signed on their own. Some examples are below:



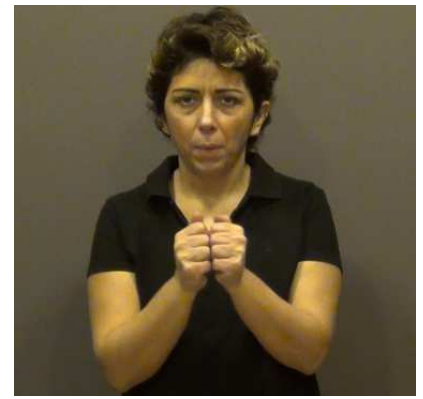
WEDNESDAY



RED

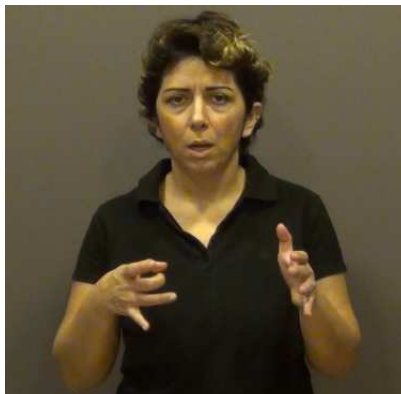


BREAK

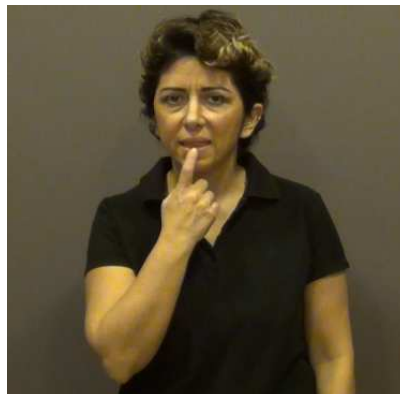


TOGETHER

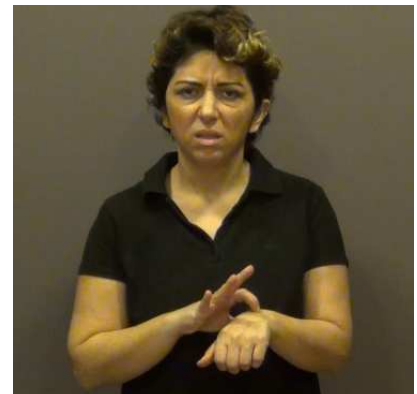
Homonyms: In contrast to the above where signs have meaning independent of the linguistic context they are used in, there are some signs that need to be put into context for their interpretation. These are homonyms, which are signs that have more than one meaning, for example place names and the entities that are typical of those places, or concepts where the name of an entity is used as a substitution for another entity that is related to it (metonymy) [Pragmatics – 9.2.]. Examples for these are given below:



WATERMELON
DIYARBAKIR (a town)

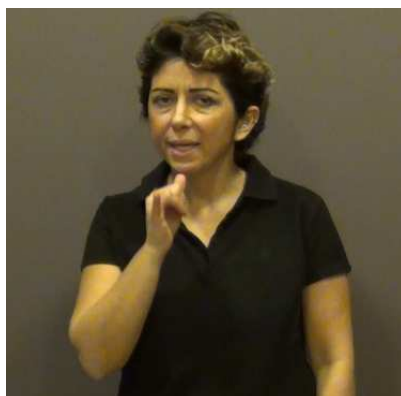


TONGUE
LANGUAGE



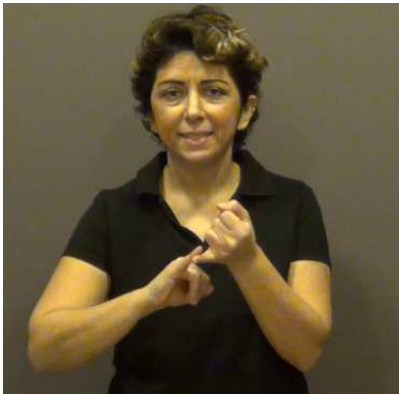
PATIENT
DOCTOR

As another case, there are some lexical items that are accidentally homophonous, with no semantic, visual, or other associative relation between them:

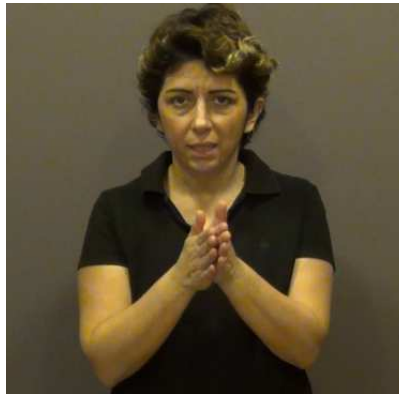


AUGUST – GRAY

Synonyms: Another aspect of the lexicon is that a concept can have more than one word to express it. These are called synonyms. Some synonyms occur because of the usage conventions in different regions. For example, the name of a day, Tuesday, has different signs in Ankara and in Istanbul:



TUESDAY (Ankara)



TUESDAY (Istanbul)

Lexical items within the same semantic field: Some signs have meanings that have similar associations, in other words, the concepts that they denote have some kind of affinity. Parallel to this, in some such cases, the semantic affinity carries over to their shapes and the signs denoting these concepts may also contain an element of this affinity. For example, the signs that have to do with cognitive faculties such as ‘remember’ and ‘understand’ and the noun ‘psychology’ are all associated with the mind. This is reflected in the phonological properties of the lexical items that denote these signs, in that they are all signed close to the head.



REMEMBER

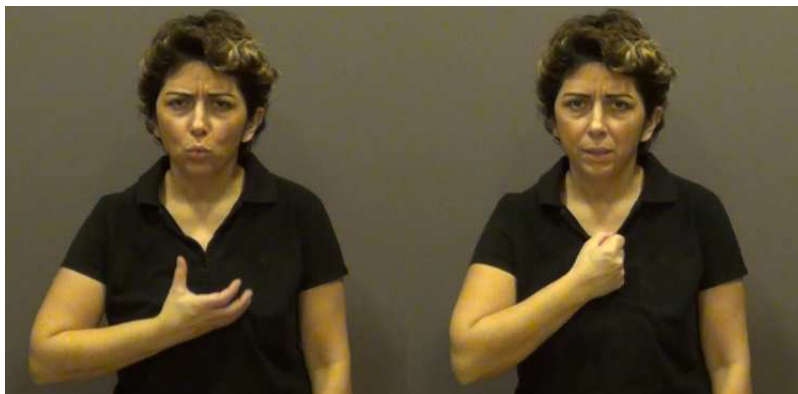


UNDERSTAND

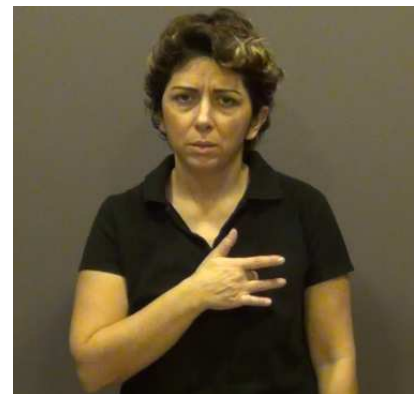


PSYCHOLOGY

Similarly, the signs that have to do with emotions tend to be signed with body contact on the torso, sometimes close to the heart, as the emotions that they denote are associated with the heart:



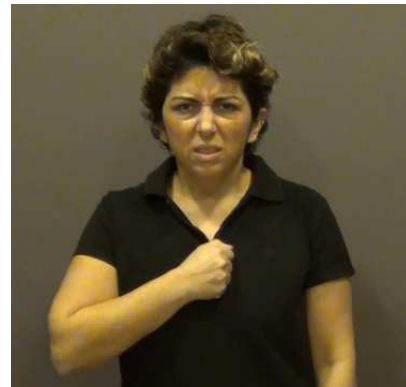
BE_SAD



BE_SORRY_FOR

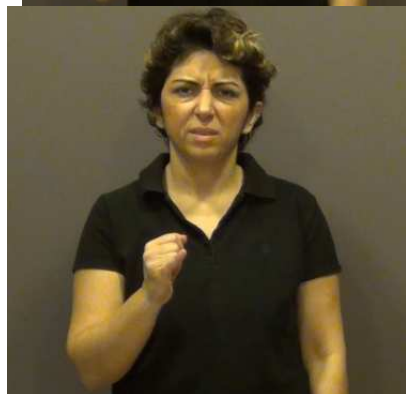
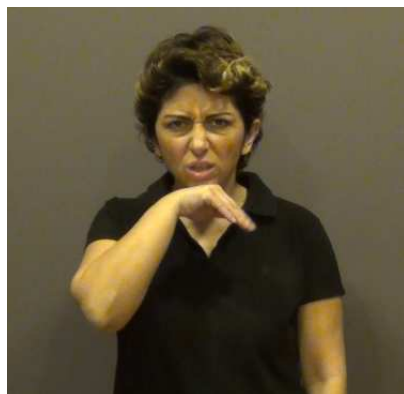
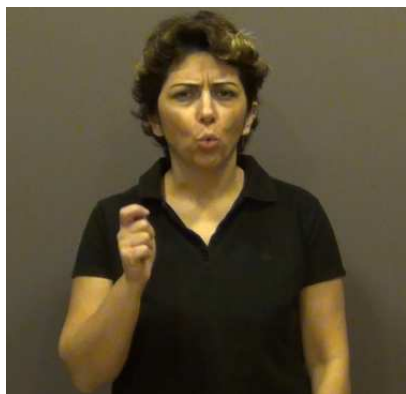


LOVE/LIKE



ANGER

As a final example, some lexical items with socially set negative connotations tend to occur with a squint:

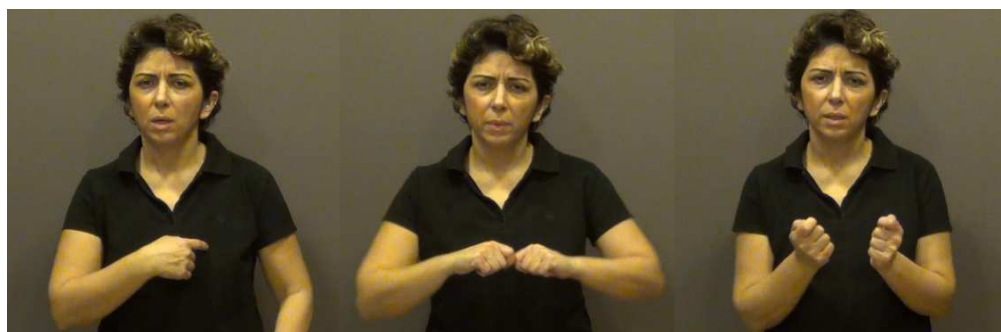


DIFFICULT

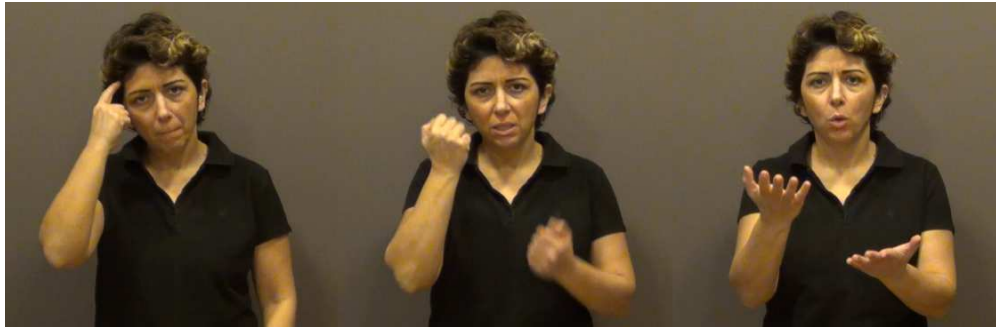
OLD (person)

DIRTY

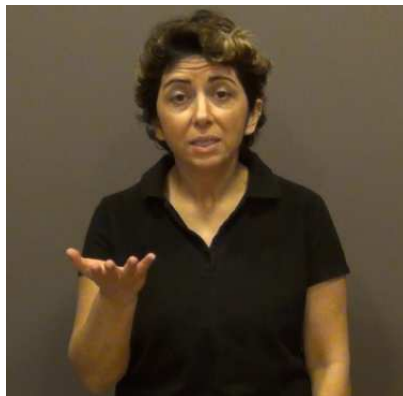
Idioms and metaphoric expressions: The lexicon contains more than simple words, as the ones we have given above. Some lexical items whose meanings cannot be deduced from the parts, everyday greetings, or terms of social interaction fall into this class:



HEART^BREAK
'be hurt'



HEAD^HEALTH^BE
'my condolences'



HOW _ARE_ YOU

1.2. Non-core lexicon

The non-core lexicon contains items that exploit the visual nature of sign languages. These are classifier constructions [Morphology – 5.], buoys, pointing [Lexicon – 3.7., Syntax – 2.1.2.2., Pragmatics – 2.1.], and simultaneous expressions [Morphology- 1.3.2.].

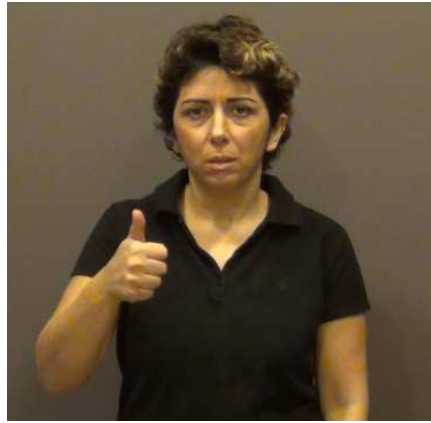
1.2.1. Classifier constructions

The classifiers used in TìD, including those that are lexicalized, are discussed in [Morphology – 5.]. Here we want to mention a few cases where a classifier occurs as part of a lexical item, in particular, the honorific classifier that is not only a lexical item on its own but appears as one of the components in a number of lexical items.

The honorific classifier in TìD that denotes persons who are held in high esteem, e.g. directors, heads of companies, states, etc. and distinguishes such persons from those who have no particular status within a given context, is expressed with the handshape where the thumb is in vertical position, and uses an upward movement:



Honorific Classifier in TĪD



CHIEF/PRESIDENT

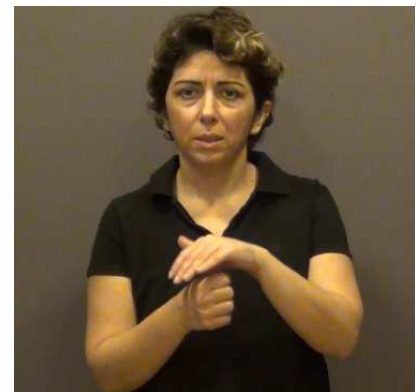
The handshape of the honorific classifier can also be one of the components in other signs, where the honorific classifiers denote not only a person in a high position, but also the more specific lexical items DIRECTOR and PRIME MINISTER, or a place which stands out among other places as in CAPITAL (of a country). In the case of DIRECTOR and PRIME MINISTER, the location of the sign is assimilated to the previous sign, and in CAPITAL, only the handshape and the movement are retained.



DIRECTOR



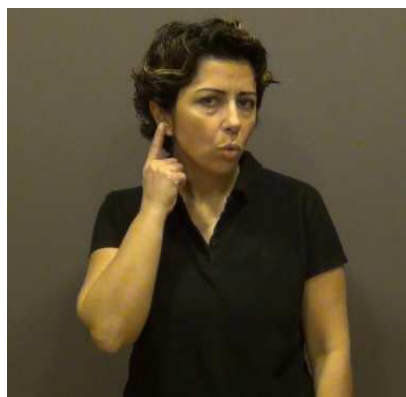
PRIME MINISTER



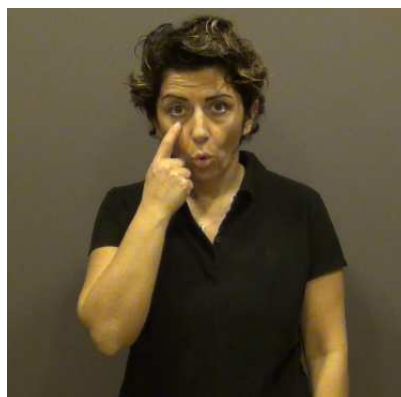
CAPITAL (of a country)

1.2.2. Pointing

The form of some lexical items, such as the body parts denoting ‘eye’ and ‘ear’ include pointing to the relevant organ:



EAR



EYE

1.2.3. Buoy

Buoys are elements that are employed for keeping track of the referents in discourse as reminders of the ongoing topic, or for backtracking information [Pragmatics - 2.2.3.]. In such cases, the non-dominant hand is used and is kept in a stationary configuration.

When a number of different individuals is discussed, list buoys can be used. In such cases, the index finger of the dominant hand is used in TİD for referring to particular individuals articulated on the non-dominant hand.

Another type of buoy that is used is the verb SAY. This is a buoy that is sometimes used in reported speech and it marks the continuation of the reported discourse. The word SAY is retained on the non-dominant hand for some part of the utterance(s) [Syntax – 3.3.3.3.]. This buoy has the discourse function as a reminder. Its function is to remind the speech participant that a particular segment of what is being signed is, in fact, a reported utterance.

1.3.3. Simultaneous constructions and use of the non-dominant hand

See [Morphology – 1.3.2.].

Information on data and consultants

The descriptions in this chapter are based on the references below. Please see the data and consultant information in these references. The linguistic data in images and video clips that were produced or reproduced for this chapter were provided by a near-native fluent signing consultant who was born and raised in Istanbul.

References

Açan, Zeynep. 2007. *A linguistic analysis on basic sentence types in Turkish Sign Language (TİD) with reference to non-manual activity*. Ankara, Turkey: Hacettepe University PhD dissertation.

Dikyuva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2017. *Turkish Sign Language grammar*. Ankara: The Republic of Turkey Ministry of Family and Social Policies.

Kelepir, Meltem & Aslı Göksel. 2013. Aspects of reported utterances in Turkish Sign Language. In E. Arık

(ed.), *Current directions in Turkish Sign Language research*, 191-218. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.

Kubus, Okan. 2008. *An analysis of Turkish Sign Language (TİD) phonology and morphology*. Ankara, Turkey: Middle East Technical University MA thesis.

Makaroğlu, Bahtiyar, & Hasan Dikyuva (eds.). 2017. *Güncel Türk İşaret Dili sözlüğü* [The contemporary Turkish Sign Language dictionary]. Ankara: Aile ve Sosyal Politikalar Bakanlığı. URL: <http://tidsozluk.net>.

Zeshan, Ulrike. 2003. Aspects of Türk İşaret Dili (Turkish Sign Language). *Sign Language & Linguistics* 6. 43- 75.

Authorship information

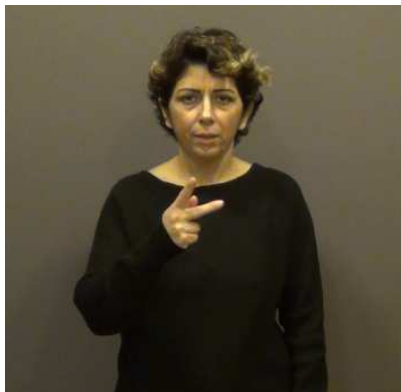
Aslı Göksel

Chapter 2. The non-native lexicon

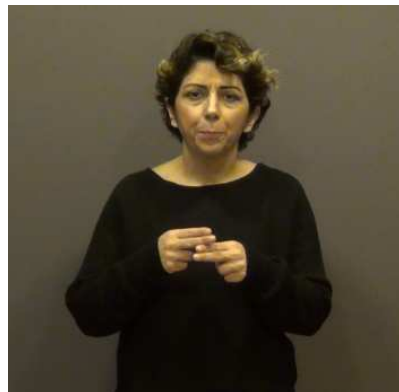
The non-native lexicon contains vocabulary items that have been borrowed from other languages. The languages from which signs have been taken into TİD are mainly ASL, ISL, DGS, NGT and other sign languages, and Turkish.

2.1. Borrowings from other sign languages

TİD has borrowed a small number of items from other sign languages. OKEY is borrowed from ASL and NAME is borrowed from International Sign Language.



OK



NAME

Foreign town names are typically integrated into TİD from the sign language of the country in which that town is located. For example, the signs for AMSTERDAM and BERLIN are the same of those in NGT and DGS, respectively:





BERLIN (DGS)

2.2. Borrowings from (neighboring) spoken language

Although various languages are spoken in Turkey, the language that TİD has mostly borrowed from is Turkish, the dominant language. Some of the words and phrases in Turkish are already loans borrowed from Arabic, Persian, French, and other languages, and therefore these words also appear in TİD. Borrowings from Turkish (and the languages Turkish has borrowed from) have taken many forms, the most prevalent of which are calques, fingerspelling, and mouthing. Apart from these, there are a few marginal or untypical forms, which we mention below.

2.2.1. Calques

Calques are complex lexical items, such as exocentric compounds [Morphology - 1.1.1.1.2.], which are translated verbatim into TİD. In the examples below, HEAD is combined with HIT and ATTACH to produce the compounds that mean ‘(put in an) application’ and ‘be obsessed with’, respectively. The term for ‘put in an application’ in Turkish is *başvur*, a noun-verb compound made up of the words *baş* ‘head’ and *vur* ‘hit’. Similarly, the term for ‘be obsessed with’ in Turkish is *kafaya tak*, a noun-verb compound made up of the words *kafaya* ‘head-DAT’ and *tak* ‘attach’.



HEAD

[^]HIT

‘(put in an) application’



HEAD

^ATTACH

'be obsessed with'

Another example is SUN^HOLD 'solar eclipse', which is, again, a direct translation from Turkish:



SUN^

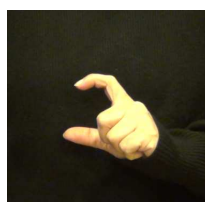
-----HOLD-----

'solar eclipse'

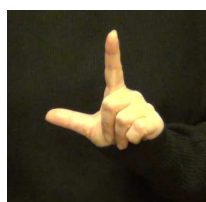
2.2.2. Lexicalization of fingerspelling

The manual (finger-spelled) alphabet in TİD is two-handed and is made up of 32 letters: the 29 letters of the Turkish alphabet and the three letters common in European languages, Q, W, and X. There is a close visual resemblance between the letters in the TİD manual alphabet and the written alphabetical symbols.

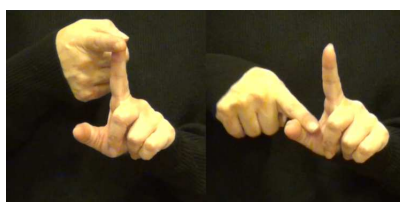
In the TİD manual alphabet, C, I, L, O, P, U, V, of which the first two are depicted below, are one-handed, and the rest are two-handed. Of the two-handed letters, J and Y are traced on the hand to depict the letters:



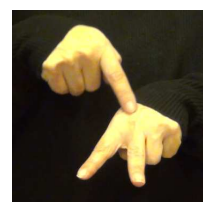
C



L

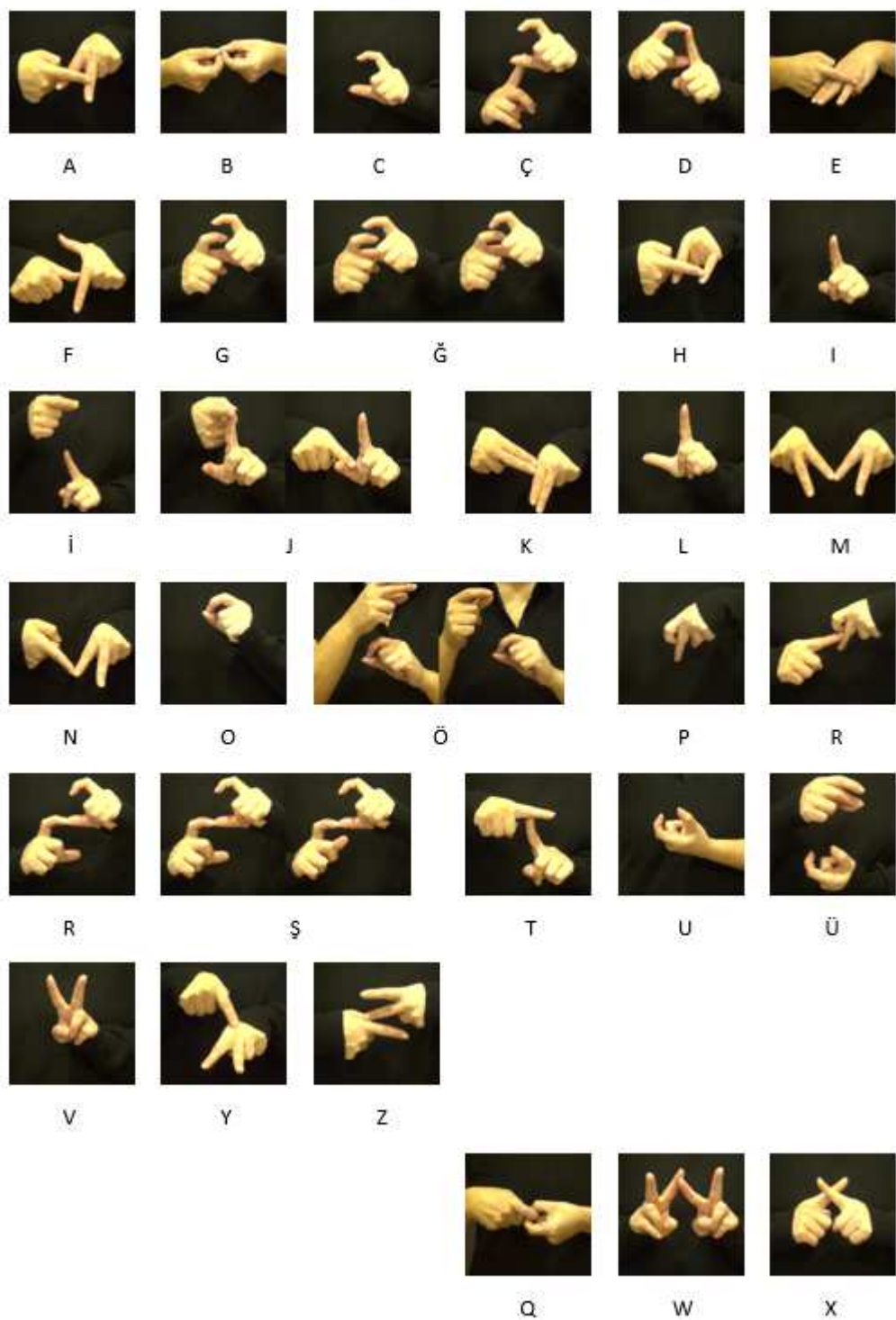


J

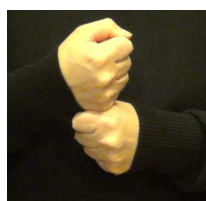


Y

Inventory of the finger spelled letters in TİD:



The letter G has a different sign in the Ankara dialect:



Letter G (Ankara)

The single-handed letters C, I, L, O, P, U, V are articulated on the non-dominant hand. In the letters I, Ö, Ü, the larger part of the letters (I, O, U, respectively) is formed on the non-dominant hand, while the dots and umlauts (two dots) are signed on the dominant hand by finger snapping. The Turkish alphabet contains some diacritics: the cedilla and the brève, and these are also signed in TİD. The cedilla in Ç is signed on the dominant hand either by finger snapping or by the index finger. The cedilla on Ş is indicated by finger snapping or finger wiggling. The brève in Ğ is signed by finger wiggling. In the remaining letters, if one of the components is depicted by the index finger, it occurs on the dominant hand (except in the cases of D and Z). Some two-handed letters are symmetrical; the selected fingers on both hands are the same, e.g. B, M, and T. Others are asymmetrical, e.g. E, N and Z.

Using letters during signing can have many functions: For spelling out a proper noun that lacks a sign, to enhance a sign (for example the name of an object or a place that is used infrequently), to avoid an ambiguity or to aide the perception of a particular sign. But the grammatical functions of finger spelling come about when the manual alphabet is used to form lexical items, e.g. as in initialization where the formation of lexical items is sensitive to the phonological constraints of TİD.

2.2.2.1. Initialization

Initialization is the process of using one of the letters of the manual alphabet (together with movement and location) to form a lexical item. 6% of the TİD vocabulary contains a finger spelled letter, and the vast majority of these, around 91%, are letters that either stand on their own or are used in combination with signs to produce a lexical item. A very small number of words contain all the letters in a word, e.g. B-O-N-O 'bond' below. In most cases, where the initialized sign is only a single letter, it switches to the dominant hand. If it is made up of two (asymmetric) parts, the dominant and non-dominant hand may be swapped.



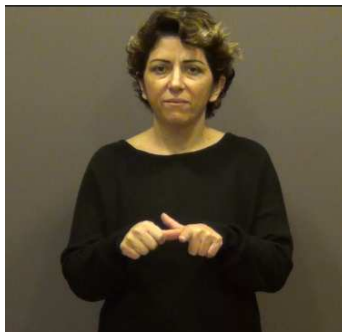
HIGH_SCHOOL (Turkish: *lise*)



BE_NECESSARY (Turkish: *lazım*)



NAVY_BLUE (Turkish: *lacivert*)



PHYSICS (Turkish: *fizik*)

When a finger-spelled form is used together with a sign, it can precede or follow that sign, or it can be articulated simultaneously with it. An example of a finger-spelled form preceding a sign is O^CAR 'Opel', which can also be signed in the reverse order:



O^CAR 'Opel'

CAR^O 'Opel'

2.2.2.2. Multiple-letter signs

A letter can also combine with other letters to form a lexical item. In such lexical items the letters of a word can be fully spelled out as in the case of B-O-N-O and V-A-N, or partially spelled out, as in the case of A(-L)^SOUND ('alarm'):



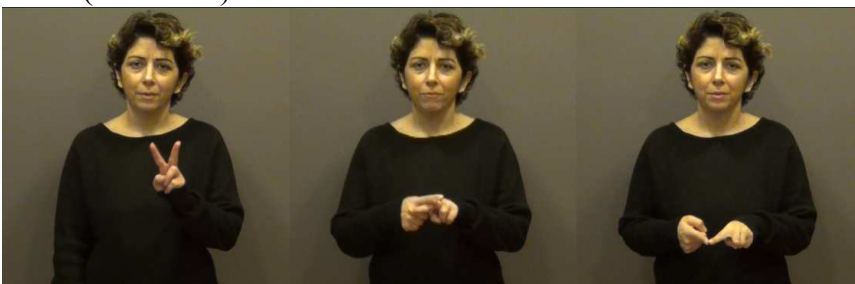
B

O

N

O

BOND (in finance)



V

A

N

A(-L)



SOUND

VAN (a town in Turkey)

ALARM

Alphabetisms, as the name suggests, are also cases where letters are signed one by one. In these examples, the letters are the initial letters of the words that make up the name of an organization or institution, as in NATO (North Atlantic Treaty Organization):



N

A

T

O

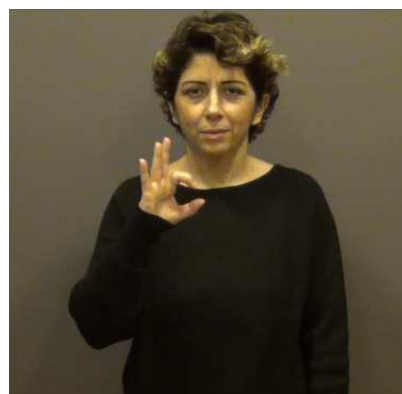
NATO (North Atlantic Treaty Organization)

A highly infrequent type of initialization is seen in one of the signs for ‘toilet’. This involves the mimicking of the letters w and c together on the same hand.



W

C



WC

Finally, borrowed multiple-letter fingerspelled forms are not confined to words, compounds, and alphabetisms, but suffixes have been borrowed from Turkish as well, see [[Morphology - 2.1.2.](#)].

2.2.3. Mouthing

The term mouthing refers to the mouth patterns that are derived from spoken languages [[Phonology - 1.5.2.](#)]. Mouthing is the silent articulation of a spoken language word, or part of it, simultaneously with the sign. In some cases, mouthing is part of the sign and in other cases it may sporadically be used for disambiguating otherwise identical forms.

2.2.3.1. Full forms

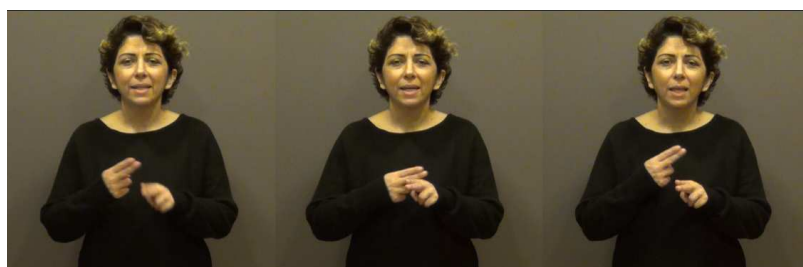
In the Istanbul dialect, the manual signs of the terms for ‘public bus’ and ‘municipality’ are the same but they differ in mouthing. In the first set of pictures below, the manual sign for ‘municipality’ is accompanied by the mouthing of the Turkish word *belediye* ‘municipality’. In the second set of pictures, the same manual sign is accompanied by the mouthing of the Turkish word *otobüs* ‘public bus’.



/belediye/
MUNICIPALITY
'municipality'

/otobüs/
MUNICIPALITY
'public bus'

Another example for mouthing of the full form is illustrated below. In these examples, mouthing is used for disambiguating the words TEST (*deneme* in Turkish) and EXAMPLE (*örnek* in Turkish).



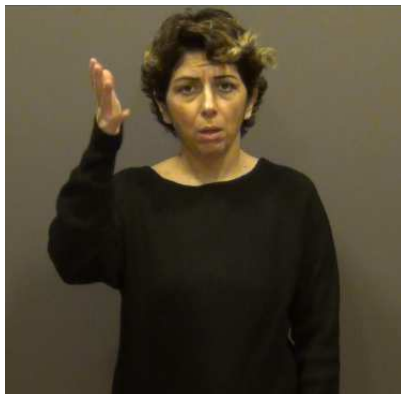
/deneme/
TEST



/örnek/

2.2.3.2. Reduced forms

Sometimes only a part of a word is mouthed. In these cases, the mouthed part is always in the beginning of the word:

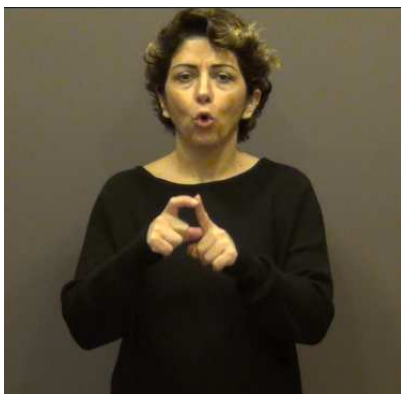


— [paa]
EXPENSIVE

In this example, [paa], which is part of *pahalı*, the word for ‘expensive’ in Turkish, is mouthed, accompanying the manual sign.

2.2.3.3. Mouthing and fingerspelling

Mouthing can accompany fingerspelling, sometimes to disambiguate otherwise identical lexical items. PUBLIC_CAR is an example of fingerspelling accompanied by mouthing. While signing PUBLIC_CAR, D, the first letter of the Turkish word *dolmuş* 'public car' is accompanied by the mouthing /dolmuş/.



/dolmuş/

2.2.4. Other marginal types of borrowing

In TİD, a new sign may be derived from another sign simply by mimicking the arbitrary similarity between two words in Turkish. This is a marginal type of borrowing that involves a derivational process based on iconic etymology. Here, two orthographically similar words in Turkish form the basis for the creation of a new sign in TİD, derived from an existing sign. For example, the words for ‘punishment’ and ‘Algeria’ are *ceza* and *Cezayir*, respectively, in Turkish. This similarity has carried over to TİD where the sign ALGERIA is based on a modification of the sign PUNISHMENT.

ALGERIA (Turkish: *Cezayir*)</ PUNISHMENT (Turkish: *ceza*)

The same process is observed in other pairs, exemplified below:

STRENGTH (Turkish: *kuvvet*)KUWAIT (Turkish: *Kuveyt*)

The first example, the sign for ‘strength’ has an iconic component that mimics a strong person. This iconicity is carried over to the sign for KUWAIT, the country, which is unrelated to physical strength. The iconicity is carried over simply because the two words in Turkish, *kuvvet* and *Kuveyt* are orthographically similar.

Another example is the word *yüz* in Turkish, which can mean ‘face’ or ‘(one) hundred’. The form for ‘(one) hundred’ in TİD is the index finger traversing the face, and this is possibly based on the fact that these concepts are expressed by two homophonous words in Turkish.



FACE (Turkish: yüz)

HUNDRED (Turkish: yüz)

Information on data and consultants

The descriptions in this chapter are based on the references below. Please see the data and consultant information in these references. The linguistic data in images and video clips that were produced or reproduced for this chapter were provided by a near-native fluent signing consultant who was born and raised in Istanbul.

References

- Dikyuva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2017. *Turkish Sign Language grammar*. Ankara: The Republic of Turkey Ministry of Family and Social Policies.
- Göksel, Aslı, & Süleyman S. Taşçı. 2016. Türk İşaret Dili'nde ödünçlemeler. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 361-388. İstanbul: Koç Üniversitesi Yayınları.
- Kubus, Okan. 2008. *An analysis of Turkish Sign Language (TİD) phonology and morphology*. Ankara, Turkey: Middle East Technical University MA thesis.
- Kubus, Okan & Annette Hohenberger. 2011. The phonetics and phonology of TİD (Turkish Sign Language) bimanual alphabet. In R. Channon & H. van der Hulst (eds.), *Formational units in sign languages*, 43-63. Berlin: Walter de Gruyter.
- Özyürek, Aslı, Deniz İlkbaşaran & Engin Arık. 2004. *Türk İşaret Dili* [Turkish Sign Language]. Koç University. <http://turkisaretdili.ku.edu.tr> (last accessed December 2013)
- Taşçı, Süleyman S. 2012. *Phonological and morphological aspects of lexicalized fingerspelling in Turkish Sign Language (TİD)*. İstanbul, Turkey: Boğaziçi University MA Thesis.
- Taşçı, Süleyman S. 2013. Hand reversal and assimilation in TİD lexicalized fingerspelling. In E. Arık (Ed.), *Current directions in Turkish Sign Language research*, 71-100. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.
- Taşçı, Süleyman S. & Aslı Göksel. 2014. The morphological categorization of polymorphemic lexemes: A study based on lexicalized fingerspelled forms in TİD. *Dilbilim Araştırmaları Dergisi, Special Issue in*

Honor of Prof. A. Sumru Özsoy, 165-180.

Zeshan, Ulrike. 2003. Aspects of Türk Isaret Dili (Turkish Sign Language). *Sign Language & Linguistics* 6. 43- 75.

Authorship information

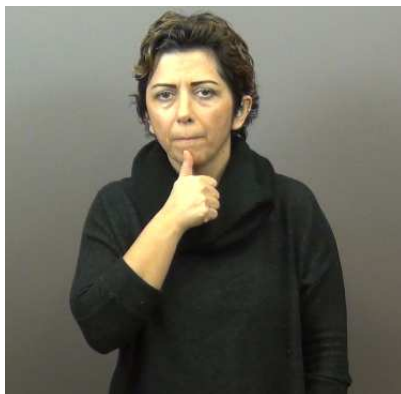
Aslı Göksel

Chapter 3. Parts of speech

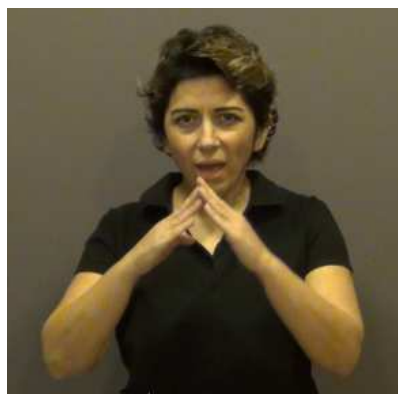
The term 'parts of speech' refers to the syntactic categories that lexical items belong to. This chapter provides a brief definition and description of each part of speech category in TİD, with its sub-categories if there is any, and with representative examples.

3.1. Nouns

Nouns denote entities such as persons, places, animals, and objects, or abstract ideas or concepts. Some examples are given below:



MAN



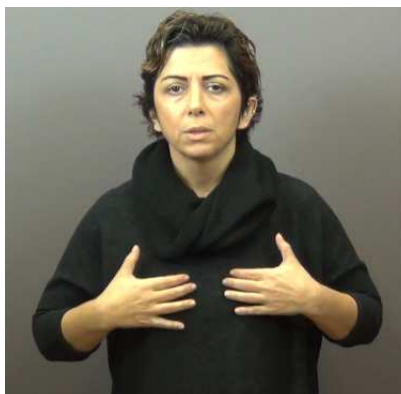
HOUSE



SALAD



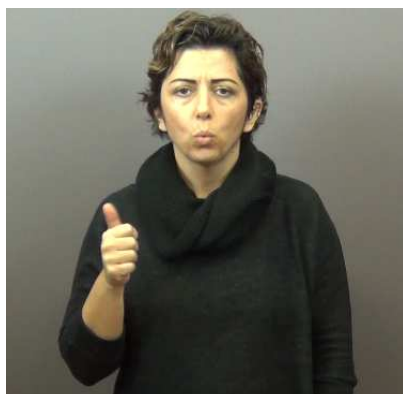
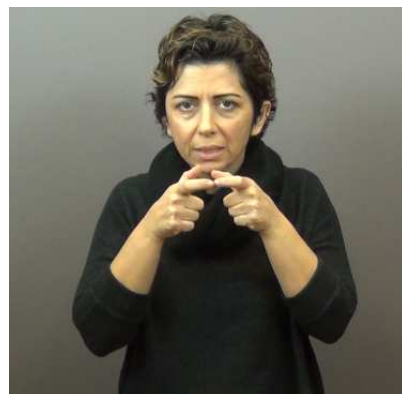
BACK



HEALTH



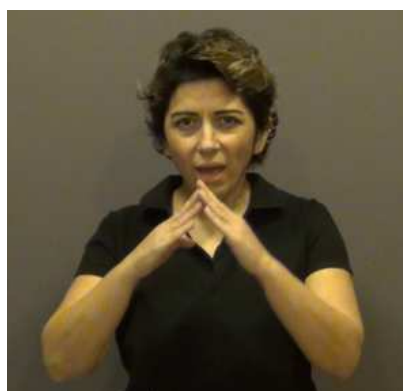
BAGEL



DAY

3.1.1. Common nouns

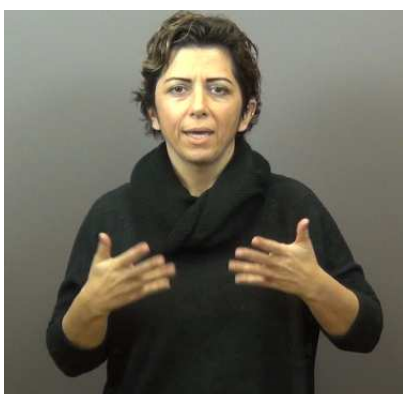
Common nouns describe classes of entities, which can be concrete or abstract. Concrete nouns can be identified through one of the five senses: taste, touch, sight, hearing, and smell. They are tangible. In contrast, abstract nouns cannot be perceived using one of these five senses. They refer to actions, feelings, ideas, concepts, and qualities, all of which are intangible. Below, we give examples of common nouns:



HOUSE (concrete)



TABLE (concrete)



JOY (abstract)

LOVE/LIKE (abstract)



INFORMATION (abstract)

3.1.2. Proper nouns and name signs

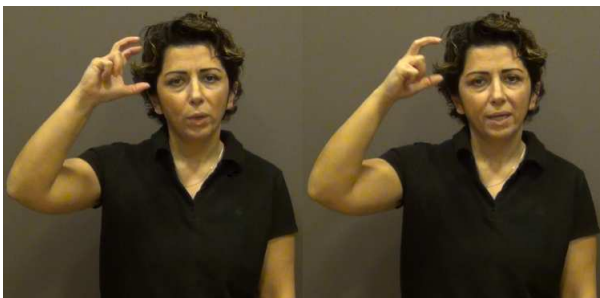
In contrast to common nouns, proper nouns describe specific entities rather than classes of entities. Such nouns can be country names, names of unique objects such as planets or famous monuments, people's names, or brand names. There are some proper noun examples below:



MICHAEL_JACKSON



ENGLAND



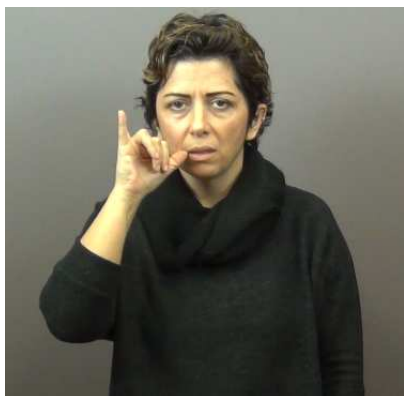
SUN



EIFFEL_TOWER

In the Deaf Culture, every deaf person has a name sign which is determined by the Deaf community and this name sign reflects a character trait or physical feature of that person. For instance, a name sign indicating eyes can be given to a person with big eyes or a name sign emphasizing joy or happiness can be given to a person who always smiles. For some toponyms (place names, such as countries and cities) TİD has its own indigenous signs. Some of these signs are in the native core lexicon [[Lexicon – 1.1.](#)] or they have a degree of non-nativeness. Below, some indigenous place signs in TİD are shown:

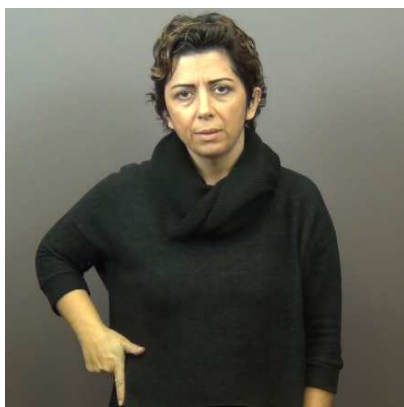
Indigenous place signs:



ITALY



ERZURUM



IZMIR

Some of the non-native signs [Lexicon – 2] involve fingerspelling [Lexicon – 2.2.2] which is based on the Turkish orthography of the place name. Some other place names are borrowed from other sign languages.

Borrowed place signs:



AMSTERDAM



BERLIN

Fingerspelled place name:



V

A
VAN

N

Many city name signs iconically represent the entities that the cities are known for [Lexicon - 1.1. & Pragmatics - 9.2.1.]. For instance, Antalya, a town in southern Turkey, is famous for its oranges and the name of the town has the same sign as the one used for the fruit, orange.



ANTALYA (/ ORANGE)

3.2. Verbs

A verb describes an action, a state, or an occurrence. Verbs are categorized into three: plain verbs, agreement verbs, and spatial verbs [Morphology - Chapter 3.]. These categories are defined and explained in detail below.

3.2.1. Plain verbs

Plain verbs have fixed, unchangeable forms; they are not inflected for number or person. They can be transitive [Syntax – 2.1.1.1.] or intransitive [Syntax – 2.1.1.2.].

Transitive plain verbs:

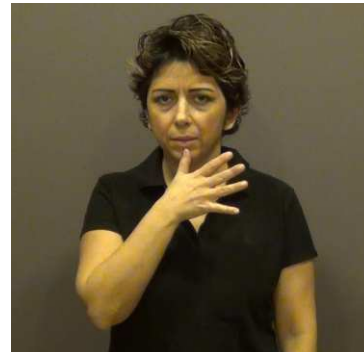


UNDERSTAND

WANT

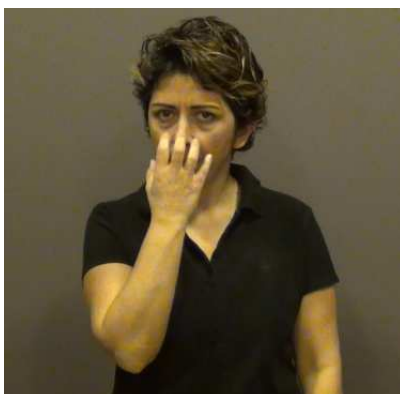


LOVE



KNOW

Intransitive plain verbs:



WAIT



RUN



BE_ANGRY

3.2.2. Agreement verbs

There is a group of verbs that show agreement with the person and number of their arguments. Some of these verbs are ASK, TELL, SUPPORT, GIVE, INFORM, ANSWER, OFFER, SEE, LOOK, EXPLAIN, SHOW, PERSUADE, FOLLOW, PICK, and ADVICE. See [Morphology – 3.1.1.] for details.

3.2.3. Spatial verbs

Spatial verbs use the signing space to show the loci of the locative arguments. For instance, the spatial verb WALK marks where the walking action begins and ends in the signing space, as can be seen from the example below:



WALK

See [[Morphology – 3.1.1.3.](#)] for details.

3.3. Lexical expressions of inflectional categories

TiD does not have rich inflectional morphology expressing tense, aspect, or modality. Instead, it makes use of a number of free lexical items (markers) that express these inflectional notions. Some sign languages also have agreement markers (or agreement auxiliaries). However, this category has not been observed in TiD.

For inflectional morphemes expressing tense, aspect, modality, and agreement, see [Morphology - 3].

3.3.1. Tense markers

In TiD, there is no morphological tense inflection on verbs [[Morphology – 3.2.2.](#)]. Rather, the time of the

event or state is generally expressed by temporal adverbials such as YESTERDAY, TOMORROW, TODAY, NOW, LATER, or by tense markers. IN_THE_PAST and IN_THE_FUTURE can be considered as tense markers.



IN_THE_PAST

IN_THE_FUTURE

(Karabüklü 2016: 45-46)

These two markers are not articulated in the central signing space but on the basic *time line* which is an imaginary line along the saggital axis [Pragmatics – 8.2.]. On this timeline, the shoulder or neutral position represents present, frontal signing area future, and back of the body past. Moreover, in the articulation of these signs, an arc movement is used rather than pointing to an exact point in the back or front in the horizontal plane.

Signs expressing the temporal notions "far future", "near future", "near past", and "far past" also exist. The mapping between the meaning of the sign and its articulation is iconic in that the distance in the signed time line corresponds to distance in time [Pragmatics – 8.2.].



FAR_FUTURE



NEAR_FUTURE



NEAR_PAST



FAR_PAST

3.3.2. Aspectual markers

Aspect shows the internal arrangement of the events, for example whether an event is completed or ongoing. TİD has both manual and non-manual aspectual markers. Here we describe only the free aspectual markers. See [[Morphology – 3.3.](#)] for aspectual inflection and non-manual markers.

The manual aspectual markers OKAY and FINISH express perfective aspect and they are shown below:



OKAY

FINISH

3.3.3. Modality markers

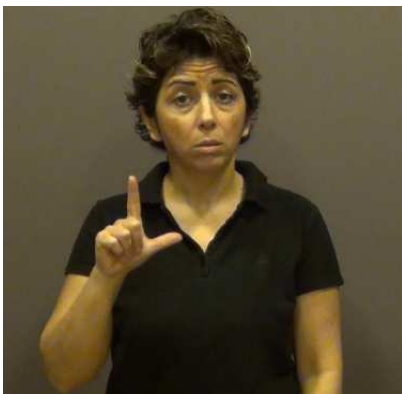
Modality is the expression of information about the attitude of a language user towards the validity of the content of a proposition. Possibility, probability, obligation, permission, prohibition, necessity, and ability are examples of notions of modality. Modality markers are used to express these notions. The typical modals in TİD are: HAVE_TO, MAYBE, OBLIGED_TO, NECESSARY, FORBIDDEN and PERMITTED. These are used predicatively in TİD.

Modality is categorized into two: deontic and epistemic modality.

3.3.3.1. Deontic modality

Some modals express deontic modality which indicates the attitude of the language user towards an act or event such as necessity/obligation, recommendation, ability, permission and intention/volition. In the following, the Turkish glosses are also provided in parantheses since the English glosses may not accurately reflect the subtle differences between the modal meanings expressed by the Turkish names given to these signs by TİD signers.

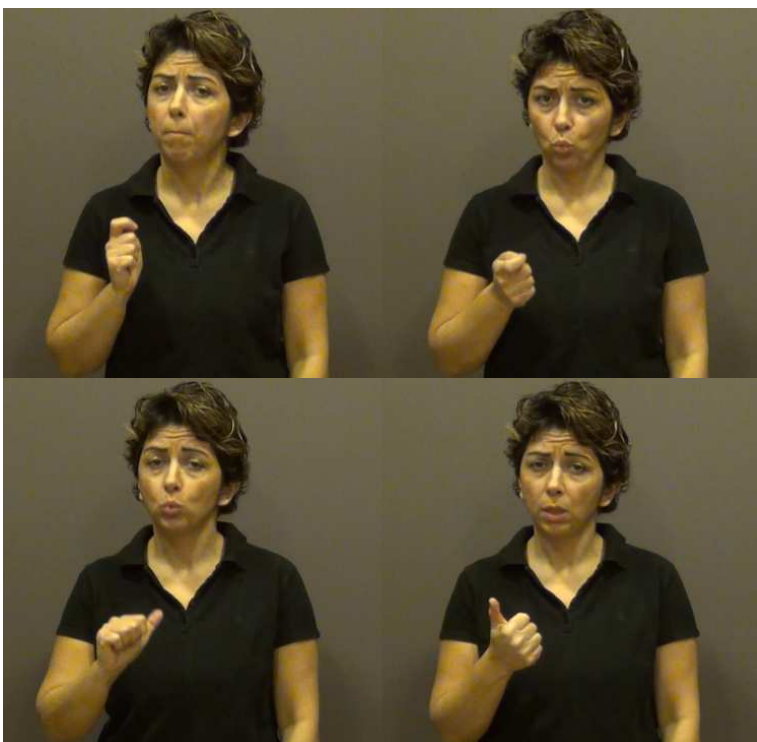
NECESSARY (LAZIM), OBLIGED_TO (MECBUR), HAVE_TO (ZORUNDA), PERMITTED (SERBEST), PERMISSION (IZIN), POSITIVE (OLUMLU), FORBIDDEN (YASAK), WANT (ISTEMEK), NOT_RIGHT (OLMAZ), and MAYBE (BELKI) are some of the signs that express deontic modality.



NECESSARY



MAYBE



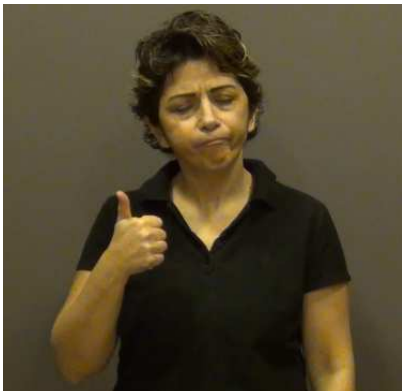
OBLIGED_TO

HAVE_TO



PERMITTED

PERMISSION



POSITIVE



FORBIDDEN



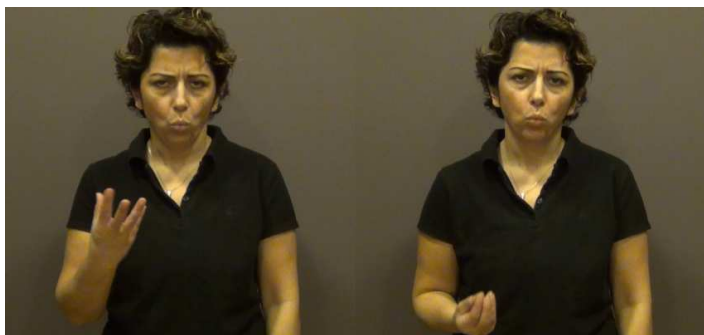
WANT



NOT_RIGHT

3.3.3.2. Epistemic modality

Epistemic modality expresses the language user's opinion towards the evaluation of the truth of the proposition and the possibility of the event expressed in the utterance. Therefore, it is much like an estimation of the probability of an event in a certain situation. IS_POSSIBLE (OLUR/OLABILIR) is an example.



IS_POSSIBLE

3.3.4. Agreement markers

No agreement marker (i.e. agreement auxiliary) as a free lexical item has been observed in TİD. For inflectional agreement, see [Morphology – 3.1] and [Syntax – 4.2.1.1].

3.4. Adjectives

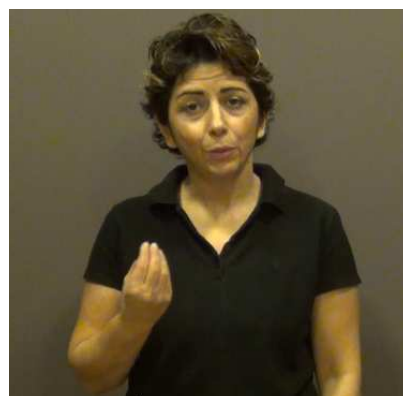
Adjectives generally qualify and specify a nominal element. They can function as attributive adjectives and qualify a noun (*the beautiful boy*), or they can be used as predicates (*The boy is beautiful*).

3.4.1. Attributive adjectives

Attributive adjectives modify nouns. Some examples of attributive adjectives are given below:



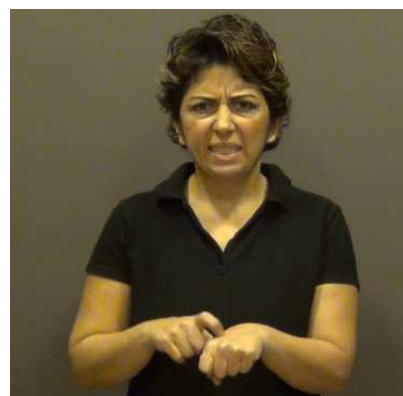
INTERESTING



NICE



UGLY



ANGRY

For adjectival meanings which may be realized by non-manual markers that combine simultaneously with the noun they modify, see [Syntax – 5.1.].

3.4.2. Predicative adjectives

Predicative adjectives are not part of the noun phrase. They describe the subject and function as the predicate of the sentence.

IX_a HOUSE SMALL.
'This house is small.'

IX_a TREE LONG.
'This three is long.'

3.5. Adverbials

Adverbials can modify adjectives, verbs, sentences, or other adverbials in terms of manner, time, frequency, or degree. Below, verb-oriented adverbials and sentence adverbials are defined and explained in detail.

3.5.1. Verb-oriented adverbials

Verb-oriented adverbials can be expressed by manually, applying internal modification to the verb or co-articulating a verb with a non-manual marker.

Below is an example of a manual expression of a verb-oriented adverbial. The meaning "writing quickly" is expressed by signing "quick" and "writing" separately.

COMPETITION EXAM IX₁ TAKE WRITE SLOW ALL FAST QUICK WRITE FINISH GO IX₁ ALONE LEAVE.

"I took an exam. While I was writing slowly, everybody wrote quickly and went. I was left alone."

(http://tidsozluk.net/vidz_proc/0294/ornek/294-03_cr_0.2.mp4)

The following example shows the verb WALK without adverbial modification.



WALK

However, to express the meaning 'walking quickly', the verb WALK is articulated with a quicker movement, pursed lips, and lowered eyebrows as can be seen below:



WALKING_QUICKLY

The following shows the verb WORK without adverbial modification.



WORK

In the following example, the verb WORK is articulated with a slower movement and a non-manual marker, puffed cheeks, to express 'working slowly'.



WORKING_SLOWLY

(r.f. Dikyuva et. al. 2017: 179)

Other non-manuals used with adverbial function are lip bite and pursed lips with raised eyebrows. When the verb WORK is co-articulated with lip bite, it means ‘working willingly’.



WORKING_WILLINGLY

(r.f. Dikyuva et. al. 2017: 179)

When it is co-articulated with pursed lips and raised eyebrows, it means ‘working diligently’.



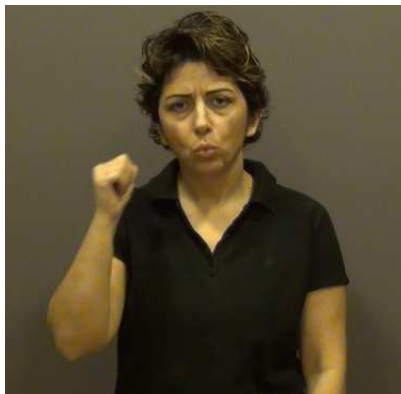
3.5.2. Sentence adverbials

Sentence adverbials modify the entire proposition, not just the verb. They may express modality or temporality.

Some of the sentence adverbials are modal adverbials since they contribute deontic or epistemic modal meaning. For example, the adverbial PROBABLY in the examples below conveys the attitude of the signer towards the content of the sentence and it expresses epistemic modality.

NOT SURE IX_J. IX_a DRESS LIKE. PROBABLY BUY.
'I am not sure. I like that dress. I will probably buy it.'
 PROBABLY ASLI COME NOT.
'Aslı will probably not come.'

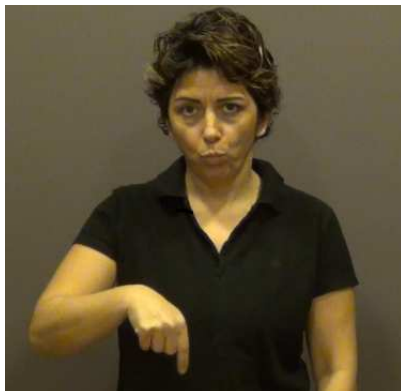
Temporal adverbials are a sub-category of sentence adverbials. Common temporal adverbs are YESTERDAY, TODAY, and SOON. The tense marker IN_THE_PAST [Lexicon 3.3.1] can also be considered a temporal adverbial. These point to the back, front or other sides of the signer depending on the time reference as can be seen in the examples below:



YESTERDAY



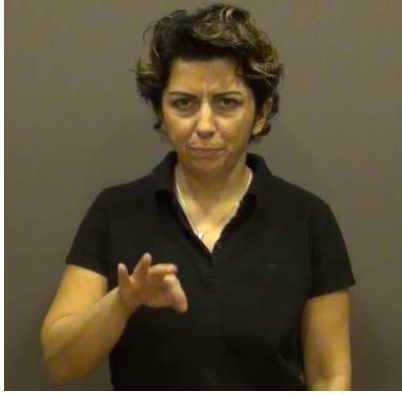
TOMORROW



TODAY



LATER



NOW



IN_THE_PAST

3.6. Determiners

Determiners express the definiteness or the indefiniteness of the noun they co-occur with.

3.6.2. Indefinite determiners

Common indefinite determiners are ONE, SOME_1, SOME_2, ONE_[ipsi_up], and OTHER. ONE is articulated with the index finger pointing upwards.



ONE

SOME_1 is a two-handed sign with the 1-handshape. It is articulated with asymmetric movement of the hands on the frontal plane.



SOME_1

SOME_2 is a two-handed sign with the V-handshape. The finger tips face each other and the hands move asymmetrically on the frontal plane. Since SOME_2 is homophonous with the frequency adverb

SOMETIMES, it may be optionally accompanied by the mouthing of the Turkish word *bazen* ‘sometimes’.



SOME_2

ONE_[ipsi_up] has the same handshape as ONE but it is articulated by pointing the index finger towards the higher region of the (ipsi-)lateral signing space and with a slight tremor.



ONE_[ipsi_up]

OTHER is articulated with the movement of the forearm towards the lateral signing space and changing the orientation of the hand from palm-down to palm-up.



OTHER

For the ordering of determiners and nouns, see [\[Syntax 4.1\]](#)

3.7. Pronouns

TiD uses sign space to refer to present and non-present referents by either pointing towards the actual referent or towards abstract locations in the signing space that represent the referents that have been established earlier in the discourse (loci). This section describes locative, demonstrative, personal, possessive, reflexive, reciprocal, interrogative, relative, and indefinite pronouns. See also [\[Syntax – 2.1.2.2\]](#) and [\[Pragmatics – 2.1.\]](#).

3.7.1. Locative and demonstrative pronouns

Locative pronouns are pointing signs [\[Syntax – 4.1.1\]](#) that refer to locations. The signer may point to an

actual location present in the conversational setting. Generally, when the location of the locative sign is close to the signer's body, it means 'here' and when it is away from the signer's body it means 'there'.

The signer may also establish a locus in the signing space that refers to a location that is not present in the conversational setting. The subscripts in the examples below represent different locations (or loci of the locations) in the signing space.



HOUSE IX_a SCHOOL IX_b a WALK_b

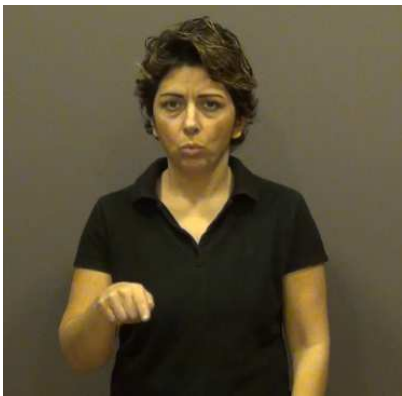
'I walked school from home.'

Demonstrative pronouns are also pointing signs and they substitute noun phrases [Syntax – 4.1.2.].

IX_a NEW.

'That (pencil) is new.'

Singular demonstrative pronouns ('this/that') are articulated with a -handshape whereas plural demonstrative pronouns ('these/those') are articulated with -handshape.



THIS

THOSE

3.7.2. Personal pronouns

Personal pronouns are used to refer to individuals. They encode person and number, such as first, second and third for person and singular, plural, and dual for number. They can also express distinctions in clusivity.

Personal pronouns in TiD are not inflected for case and there is no gender distinction, either.

3.7.2.1. Person

In TiD, referential expressions of person are expressed by signing towards or away from one's own

chest. The first person is signed towards the chest, and the second and third persons are signed in an outward direction from the chest. For first person, 1-handshape, Flat-handshape, and Bent-Flat handshape are used. For the second and third persons, 1-Handshape and Flat-handshape are used. These handshapes are indicated on the table in [Lexicon – 3.7.2.2].

3.7.2.2. Number

There are three types of number: singular, plural, and a numerically indicated group of persons from dual up to five persons.

The expression of dual (two of us/you/them), involves either V-handshape (or V-handshape with base joint of the middle finger flexed) with straight movement between the loci of the antecedents of the pronouns in the signing space.

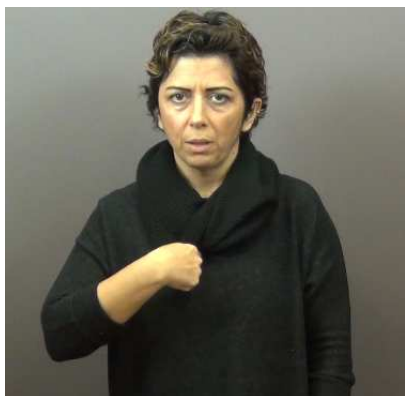
The expression of persons between three and five is done by 3-handshape (three of us/you/them), Open-4-handshape (four of us/you/them), and 5-handshape (five of us/you/them) respectively, and all three have a circular movement. These are cases of numeral incorporation [Syntax – 4.3.4.]. These numeric pronouns are homonyms of (have the same shape as) one set of reciprocal pronouns [Lexicon – 3.7.4.]

The person paradigm with different numbers is shown in the following table:

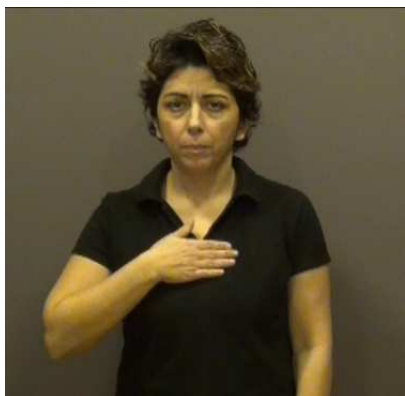
Person paradigm of pronouns


	Singular	Plural	Numerically indicated group of persons (two to five) (examples below are given from dual)
First	1-handshape, Flat-handshape and Bent-Flat-handshape)	1-handshape with circular movement	V-handshape with straight movement (expresses ‘two of us’)
Second	1-handshape and Flat-handshape	1-handshape with arc movement	V-handshape with straight movement (expresses ‘two of you’)
Third	1-handshape and Flat-handshape	1-handshape with circular movement	+ V-handshape with straight movement (expresses ‘two of them’)

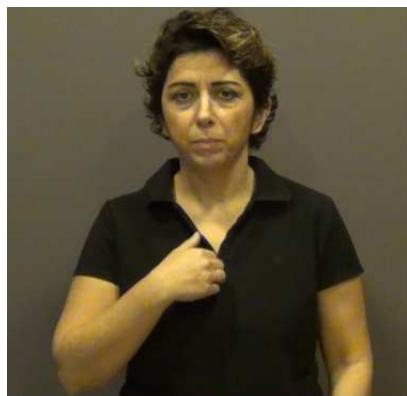
The variations of personal pronouns are shown below:



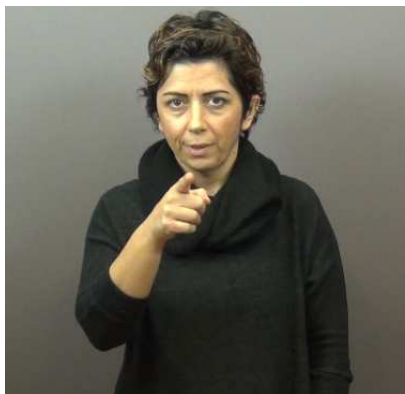
IX(₁



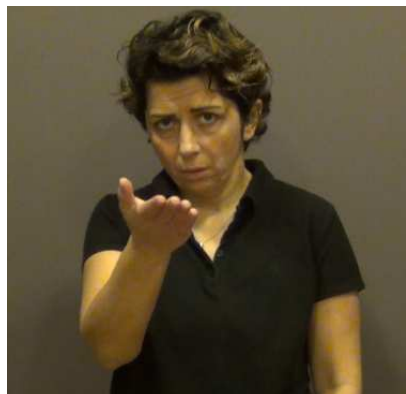
IX (₁



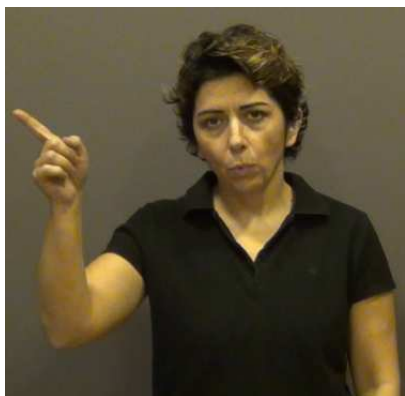
IX (₁



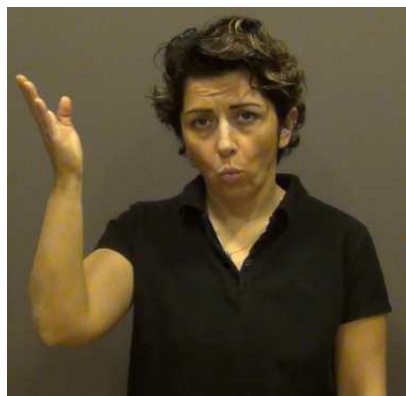
IX(₂



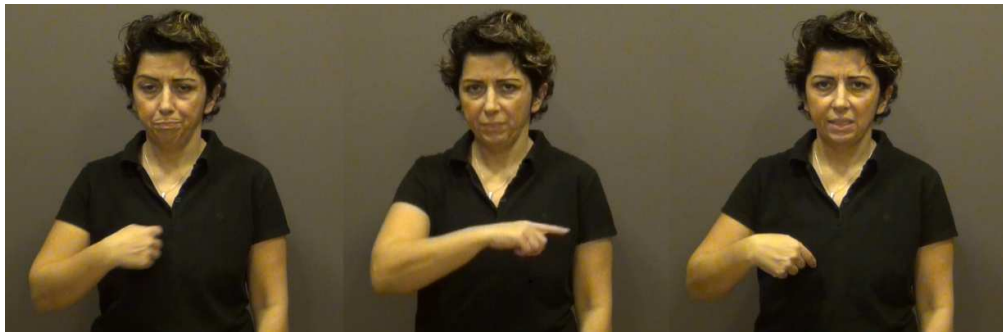
IX (₂



IX(₃



IX (₃



IX_{1pl}



IX_{2pl}



IX_{3pl}



TWO_OF_US



TWO_OF_YOU



TWO_OF_THEM

3.7.2.3. Clusivity

TiD distinguishes between inclusive and exclusive 1st person plural pronouns: ‘we’ and ‘two of us’. Usually, this distinction is based on whether the addressee is included or not. In some contexts, someone other than the addressee but salient for the discourse may also be interpreted as included or excluded.

The examples given in 3.7.2.2 are in fact examples of inclusive 1st person plural pronouns. Inclusive usage is considered to be the unmarked usage. As can be seen in the visual examples, the signs are articulated in the central signing space. The articulation of (inclusive) ‘we’ starts near the chest of the signer, representing the 1st person, and continues in the shape of an arc, getting away from the signer but closer to the addressee. Likewise, in the articulation of the (inclusive) ‘two of us’, the dominant hand moves between the chest of the signer and the location of the addressee.

When the exclusive plural personal pronouns are signed, however, they are articulated slightly on the (ipsilateral) side of the signer, outside of the central signing space, excluding the area representing the addressee.

Examples of both types are given below for comparison:



IX_{1pl-incl}
‘We, including you’



IX_{1pl-excl}
‘We, excluding you’



IX_{1+2pl-incl}
'Two of us, including you'



IX_{1+2pl-excl}
'Two of us, excluding you'

3.7.2.4. Case

There is no accusative, dative etc. case marking on personal pronouns.

3.7.2.5. Gender

There is no gender marking (feminine, masculine, neuter) for personal pronouns.

3.7.2.6. Honorific pronouns

This is marked by the honorific classifier which is articulated by the thumb in a vertical position with an upward movement. See [Lexicon – 1.2.1. and Morphology – 5.1.1.].

3.7.3. Possessive pronouns

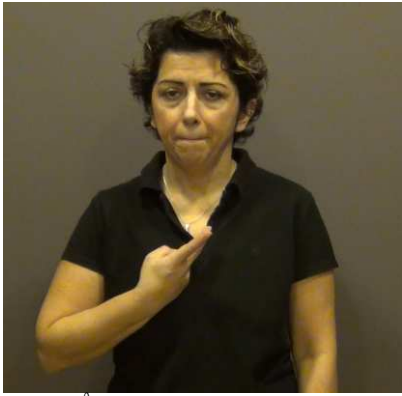
Possessive pronouns [Syntax – 4.2.1.1.] are pronouns indicating possession and ownership (such as 'my', 'your', etc.). There are different forms for singular and plural possessive pronouns in TĪD. The possessive pronoun paradigm of TĪD is shown in the following table:

Possessive pronoun paradigm

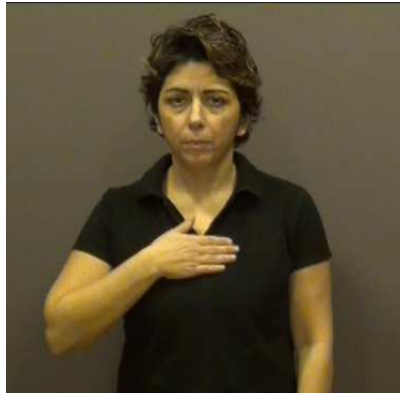
	Singular	Plural
First	V-handshape with base joint of the middle finger flexed or Flat-handshape	V-handshape and 1-handshape with circular movement
Second	V-handshape with base joint of the middle finger flexed or Flat-handshape	V-handshape and 1-handshape with circular movement
Third	V-handshape with base joint of the middle finger flexed or Flat-handshape	V-handshape and 1-handshape with circular movement

Below different realizations of first and non-first singular and plural possessive pronouns are given [Syntax

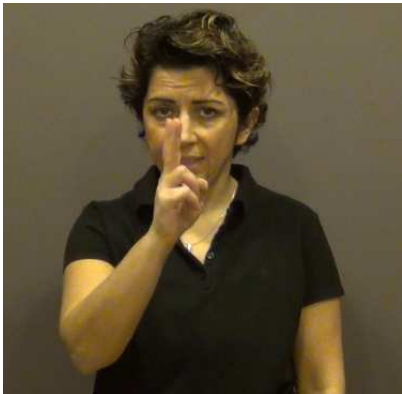
–4.2.1.1.]:



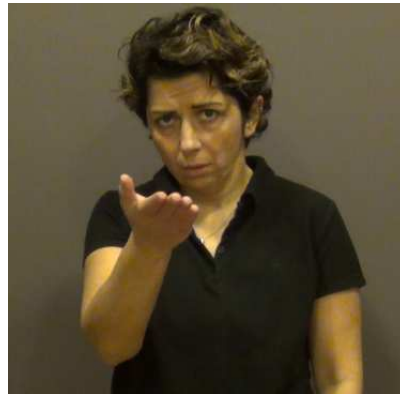
POSS()₁



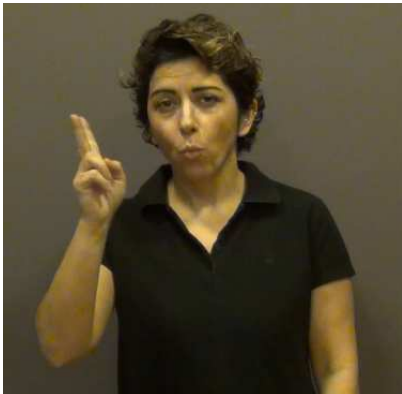
POSS()₁



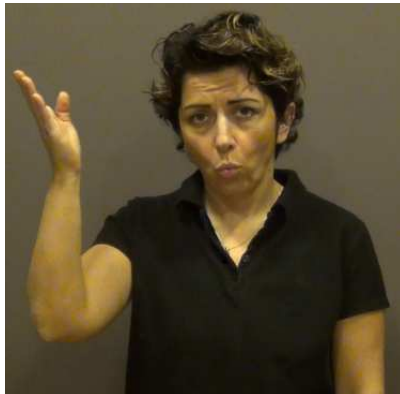
POSS()₂



POSS()₂



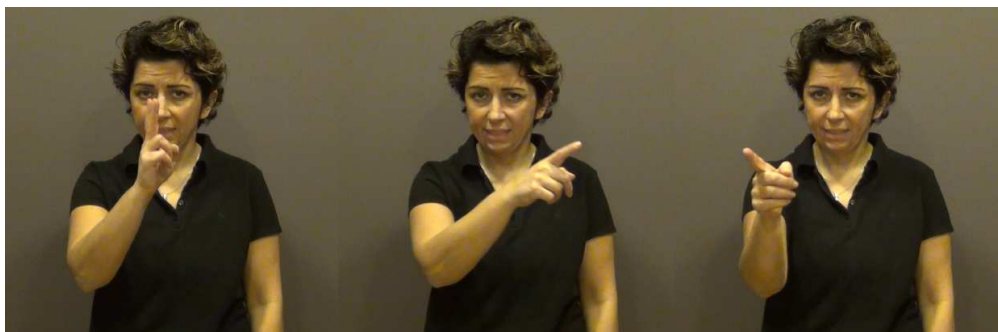
POSS()₃



POSS()₃



POSS_{1pl}



POSS_{2pl}



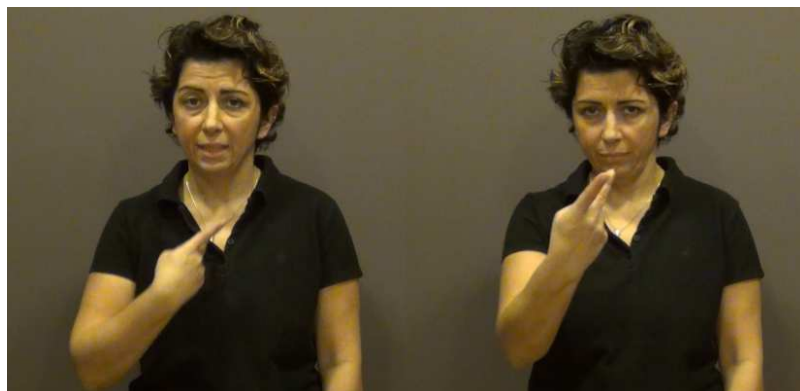
POSS_{3pl}

3.7.4. Reflexive and reciprocal pronouns

Reciprocal pronouns are used with transitive verbs such as ARGUE, KISS, HUG, or MEET, verbs whose argument structure involves more than one person and express the meaning 'each other' as in the sentence *They kissed each other*.

In TiD, there are two sets of reciprocal pronouns. One set of reciprocal pronouns [Morphology – 3.1.3.] is produced using a single hand and the other with both hands. In both sets, the pronouns are articulated with a repetitive movement between the loci of the two referents. The loci of the referents involved in the action determine the direction of the movement. For example, if one of the two referents is the signer himself/herself, the direction of the movement is from the signer to the addressee whereas if the referents are non-first person referents, the direction of the movement is between the loci of those referents in the signing space.

The first set with single-handed pronouns has V-handshape. These pronouns are derived from the numerals two, three, four, and five (i.e. V-handshape, 3-handshape, Open-4-handshape, and 5-handshape) which are homonyms of (have the same shape as) pronouns indicating numerically specified groups of persons [Lexicon – 3.7.2.2.].



TWO_OF_US (meaning each other)

Another set of reciprocal pronouns used in TİD is produced by both hands, each of which has index finger handshape. There is an asymmetrical straight path movement from proximal to distal in the vertical plane to express the referents. However, the orientation changes according to the referents in the context. If first person is included in the reciprocal pronoun, the hands face towards the signer. In other cases, they face each other.



Reciprocal pronoun including first and second person

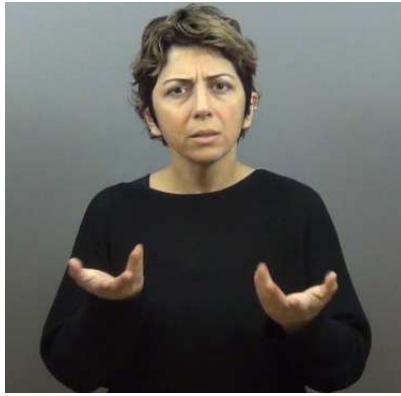


Reciprocal pronoun without first person

see [Morphology - 3.1.3.] for a description of verbs inflected with reciprocal markers.

3.7.5. Interrogative pronouns

Interrogative pronouns [Syntax – 1.2.3.2.] are proforms used in wh-questions. Below is a list of question words in TİD:



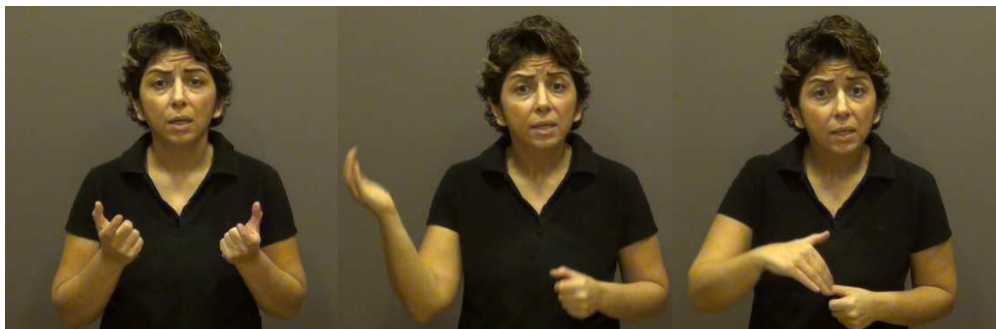
WHAT - HOW – WHICH



WHERE



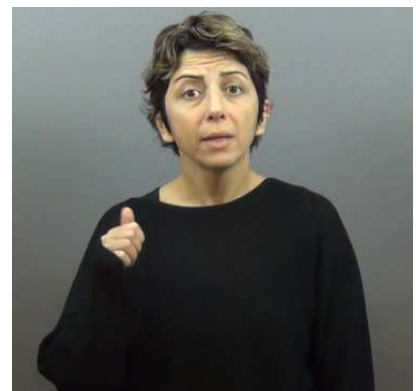
TO_ WHERE



FROM WHERE



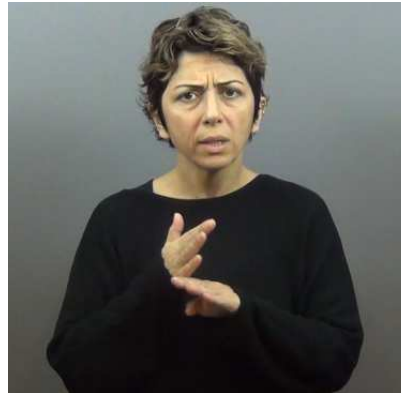
HOW_ MANY



WHEN



WHO



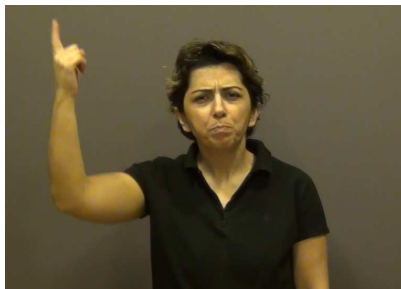
WHY

3.7.7. Indefinite pronouns

Indefinite pronouns are those that can be translated as ‘someone’ or ‘somebody’. See [[Pragmatics - 1.3.](#)] for an explanation of indefiniteness.

In TİD, a number of simple and complex signs are used as indefinite pronouns. They are usually accompanied by a certain set of non-manual markers: brow furrowing, lowered mouth corners, and averted eye gaze.

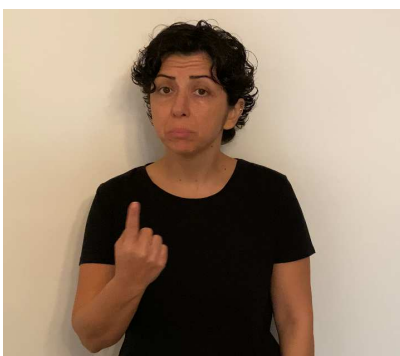
Some of the simple signs are ONE_[ipsi_up], ONE_[centre_low] and OTHER. These are homophonous with some of the indefinite determiners. Thus, they can also be analyzed as noun phrases formed with an indefinite determiner and an unpronounced noun with the meaning ‘person’. For the description of the articulation of these signs, see [[Lexicon - 3.6.2.](#)].



ONE_[ipsi_up]
'someone'

(r.f. Kelepir et al. 2018a: 270)

ONE_[centre_low] has the 1-handshape and is signed in the lower part of the central space. See [[Pragmatics - 1.3.](#)] for possible contexts where this indefinite pronoun is used.



ONE_[centre_low]

‘someone’



OTHER

‘someone’



BOOK IX₁ TAKE^NOT OTHER TAKE.

'I didn't take the book. Someone else took.'

There are also some complex signs that are formed with more than one sign and can contain ONE, OTHER, ONE_[ipsi_up], PERSON, or C_PERSON. Visual examples of ONE, PERSON and C_PERSON are given below:



ONE

PERSON has the Narrowed-O-handshape and is articulated on the cheek on the ipsilateral side with one quick movement.



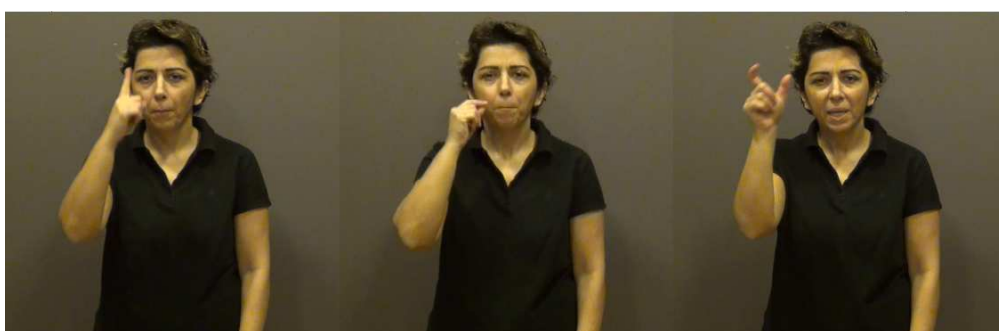
PERSON

C_PERSON, has the C-handshape and is articulated with a downward movement in the frontal plane.



C_PERSON

The following illustrate some possible forms. They all have the meaning ‘someone’:



ONE^ PERSON^ C_PERSON



OTHER

^ONE

^C_PERSON

‘someone’

ONE_[ipsi_up]^PERSON^C_PERSON

PERSON^C_PERSON ‘someone’

ONE^PERSON ‘someone’

ONE^C_PERSON ‘someone’

ONE^OTHER ‘someone’

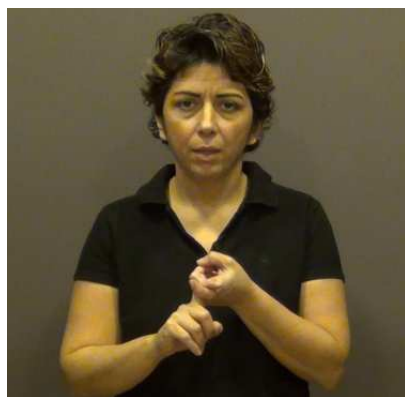
The most prominent interpretation of the pronominal forms with ONE_[ipsi_up] and OTHER is non-specific indefinite. See [[Pragmatics - 1.4.](#)] for a description of specific vs. non-specific indefinites.

3.9. Conjunctions

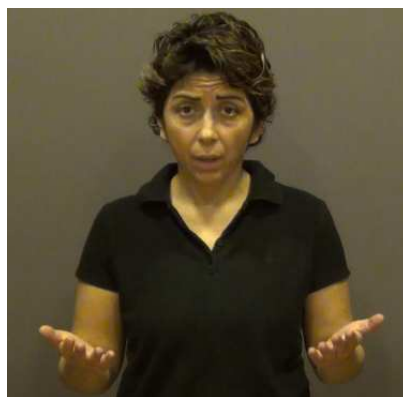
Conjunctions are parts of speech that connect two or more items such as words, phrases, and clauses.

3.9.1. Coordinating conjunctions

There are two coordinating conjunctions used in TİD: AND and BUT. However, these are not obligatory when coordinating sentences. Below, AND and BUT are shown:



AND



BUT

3.10. Numerals and quantifiers

Numerals and quantifiers indicate the quantity or the exact/relative number of the set denoted by the noun that they modify.

3.10.1. Numerals

Numerals identify the number of the entities which are referred to in the nominal domain. They can be categorized as cardinal numerals, ordinal numerals, and distributive numerals. See [Syntax 4.3.1] for the ordering of numerals and nouns.

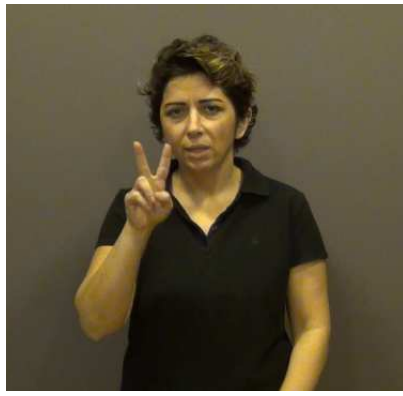
3.10.1.1. Cardinal numerals

Cardinal numerals are number signs indicating the number of the set denoted by the noun they modify.

The cardinal numerals in TİD show variance in terms of their etymology. Numerals 1-5 are represented by the number of opened fingers.




ONE



TWO

Numerals 6-7-8, on the other hand, resemble the corresponding written Arabic numerals, seen from the perspective of the signer.

SIX		٦
SEVEN		٧

EIGHT		八
-------	---	---

3.10.1.2. Ordinal numerals

Ordinal numerals are numbers showing the order of the entities with respect to each other. These numerals indicate the sequence of the referents and they are expressed with list buoys [[Lexicon - 1.2.3](#) & [Pragmatics 2.2.3](#)]. In the following example, the signer touches the second and fifth fingers on her non-dominant hand to express SECOND and FIFTH entities in a list of entities given in the discourse.



SECOND ... FIFTH

3.10.1.3. Distributive numerals

Distributive numerals express the number of entities that are distributed to each referent or location in a proposition. There are no distinct lexical signs for distributive numerals, instead, distributivity is expressed by using morpho-syntactic spatial strategies such as reduplicating a cardinal numeral in different loci (which refer to different entities or locations) in the signing space. Below is an example of distributive numeral use. First, three different loci are assigned to three tables in the signing space by signing TABLE in different locations. Then, the entity, PERSON, is introduced. After that the (distributive) numeral THREE is signed on the same three locations which are assigned to the tables to express the meaning “Each (of the three) table(s) has three people sitting at it.”



TABLE_a TABLE_b TABLE_c THREE_a THREE_b THREE_c
 'Each (of the three) table(s) has three people sitting at it.'

3.10.2. Quantifiers

Quantifiers express the quantity of the set denoted by the noun that they modify. They are generally classified together with determiners [Syntax – 4.1.] They may also be called "quantificational determiners".

Typical universal quantifiers are *all*, *every*, and *each*. There are two universal quantificational determiners in TİD. One of them is the manually signed ALL, which is a two-handed sign. The dominant hand has the Thumb-Handshape (👉) and the weak hand has the Flat-Handshape (👏). The dominant hand's orientation is towards the weak hand while the weak hand is facing upwards. The dominant hand touches the palm of the weak hand and moves outwards with a straight movement. Also, ALL has mouthing, which is the Turkish word *hepsi* 'all' /hepsi/.

The manually signed ALL is shown below:



The other universal quantificational determiner is in the form of mouthing. It is the mouthing of the Turkish word *hepsi* 'all' /hepsi/.

Typical existential quantifiers are *some*, *many*, and *a few*. In TİD MANY, SOME_1 and SOME_2 function as existential quantifiers.



SOME_1



SOME_2

(Sara, 2019: 29)

SOME_2 is homophonous with the sign SOMETIMES 'sometimes'.



MANY

For numeral quantifiers see [Lexicon - 3.10.1]. For the ordering of quantifiers and nouns, see [Syntax 4.4.]

3.11.1. Negative particles

NOT is the most frequently used negation particle and generally supported by a non-manual element, namely a backward head tilt and raised eyebrows.

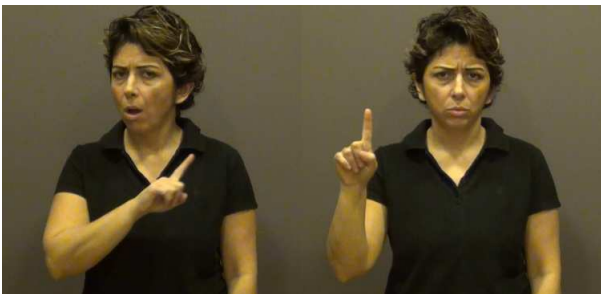


NOT

The other lexical items that are associated with negation are the following: NOT, THERE_IS_NOT, NO, NO_NO, NOT_RIGHT, NOT_AT_ALL, and the PALM_UP gesture. These signs are shown below. For more information, see [Syntax – 1.5.1.].



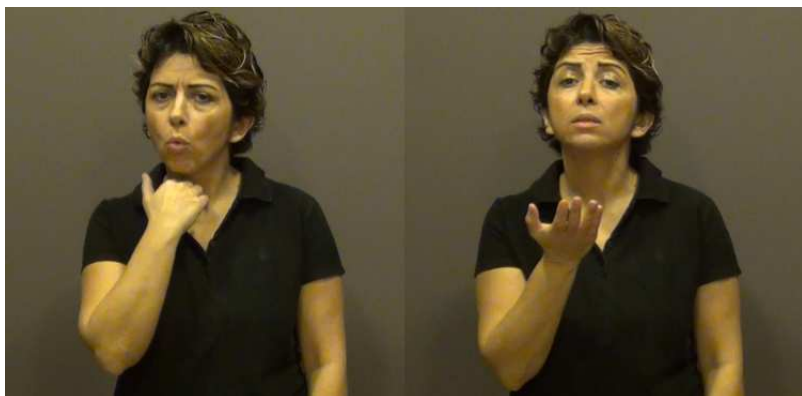
THERE_IS_NOT



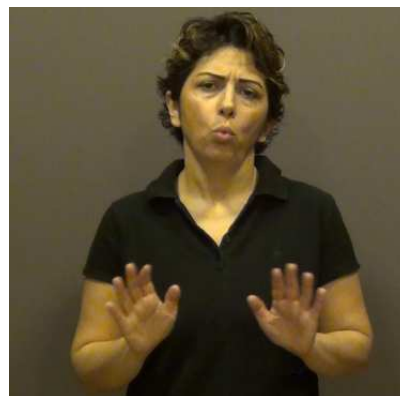
NO



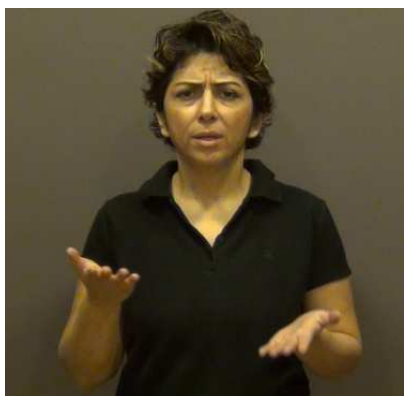
NOT_AT_ALL



NOT_RIGHT



NO_NO



PALM_UP

NO is the most common negation word because it is simply used as a negative answer to a question in a conversation. It is generally accompanied by head shake. Also, NOT_AT_ALL (HIÇ) and NO_NO are accompanied by head shake but NOT, THERE_IS_NOT and NOT_RIGHT (OLMAZ) are accompanied by backward head tilt.

3.11.2. Question particles

One of the ways of marking a polar question is to use a question particle [[Syntax – 1.2.1.3.](#)] This question particle is called Q_PART and is articulated by the index finger and has a trajectory in the shape of a question mark. Also, mouthing of the Turkish question particle *-mi* can accompany the Q_PART.



Q_PART

3.11.3. Discourse particles

Discourse particles do not add to the meaning of the sentence but affect its communicative intent. These particles serve a discourse organizational function to help to organize and connect different elements of the discourse, or to express the signer's attitude towards the state or event expressed in the sentence (or the previous sentences in the discourse). ABSOLUTELY, ANN, and FUU are three discourse particles that have been

observed in TİD.

When ABSOLUTELY is used in a discourse, it expresses the agreement of the signer with his/her interlocutor. Another discourse particle is ANN, glossed as the sounds the signer produces. It can function as a hesitation marker or it can have a commentary function. FUU is also glossed as the sounds the signer produces and is used to show that the message the signer carries has importance and needs further attention.

3.12. Interjections

Interjections are exclamative items expressing the speaker's/signer's emotions, sentiments, or judgements. The following interjections have been observed in TİD: NAF, AVVA, TÜH, VAH, UUU, AVV_NOT_EXIST, UIIS, VIVIVI, ALLAVE, BIT, WAOW, PUPU, and ŞEEY.

Many of these signs consist of a manual articulation accompanied by a mouth gesture or the mouthing of a Turkish interjection.

TÜH, VAH and ŞEEY have been borrowed from Turkish and thus articulated with the mouthing of the corresponding Turkish interjections. However, the others are native to TİD.

The glosses do not represent the English translations of the meanings of these signs but rather they represent the way the signers refer to them in Turkish, which is based on the mouth gestures and the mouthings that are a part of the articulation of these signs. Below we explain the uses of some of these interjections.

NAF is used when the signer wishes to diminish the significance of the event or state expressed in the discourse.



NAF

AVVA is used for expressing an advantage of something and can be related to the interjection used in Turkish 'oh, oh'.



AVVA

UUU expresses the meaning 'too bad'. It is more like an emphasis on the result.



UUU

Information on data and consultants

The descriptions in this chapter are partially based on the references below and partially on research done by the authors during the development of this chapter [3.12.]. Please see the data and consultant information in the references. The linguistic data in images and video clips that were produced or reproduced for this chapter were provided by a near-native fluent signing consultant who was born and raised in Istanbul.

References

- Açan, Zeynep. 2001. *A study on sign languages and Turkish Sign Language*. Ankara, Turkey: Hacettepe University MA thesis.
- Açan, Zeynep. 2007. *A linguistic analysis on basic sentence types in Turkish Sign Language (TİD) with reference to non-manual activity*. Ankara, Turkey: Hacettepe University PhD dissertation.
- Arık, Engin. 2013c. Introduction: Previous and Current Research on Turkish Sign Language (TİD). In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 1-17. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.
- Arık, Engin. 2016b. Türk İşaret Dili'nde mekânsal dil. In E. Arık, *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 315-336. İstanbul: Koç Üniversitesi Yayınları.
- Aslan Demir, Sema. 2010. Sessizliğin dili: Türk İşaret Diline dair gözlemler. *Bilig* 54. 1-20.
- Aslan Demir, Sema. 2016. Sessizliğin Dili: Türk İşaret Dili'ne dair gözlemler. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 141-156. İstanbul: Koç Üniversitesi Yayınları.
- Aslan, Erhan, Gülşen Danacı & Neşe Arslan. 2007. The colour signaling process in Turkish Sign Language. *Dil Dergisi* 138. 34-42.
- Dikyuva, Hasan. & Ulrike Zeshan. 2008. *Türk İşaret Dili - birinci düzey*. [Turkish Sign Language - level one]. Nijmegen: Ishara Press.
- Dikyuva, Hasan. 2011. *Grammatical non-manual expressions in Turkish Sign Language (TİD)*. Preston, Lancashire, England: University of Central Lancashire (UCLan) MA thesis.
- Dikyuva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2015. *Türk İşaret Dili dilbilgisi kitabı* [Turkish Sign Language grammar book]. Ankara: TC Aile ve Sosyal Politikalar Bakanlığı.

- Ergenç, İclal, Selçuk İşsever, Bahtiyar Makaroğlu & Hasan Dikyüva. 2014. Agreement verbs in Turkish Sign Language (TİD) –Turkish bimodal bilingualism. (2nd International Conference on Linguistic Rights of the Deaf, Moscow, May 2014.)
- Gökgöz, Kadir. 2009. *Topics in Turkish Sign Language (Türk İşaret Dili – TID) Syntax: Verb movement, negation, and clausal structure*. Istanbul, Turkey: Boğaziçi University MA thesis.
- Gökgöz, Kadir & Engin Arık. 2010. Distributional and syntactic characteristics of nonmanual markers in Turkish Sign Language (Türk İşaret Dili, TID). (Paper presented at the 7th Workshop on Altaic Formal Languages (WAFL7), LA, CA. 29-31 October 2010.)
- Gökgöz, Kadir. 2011. Negation in Turkish Sign Language: The syntax of nonmanual markers. *Sign Language & Linguistics* 14(1). 49-75.
- Gökgöz, Kadir. 2013. Negation in Turkish Sign Language: The syntax of nonmanual markers in A. Herrmann & M. Steinback (eds.), *Nonmanuals in Sign Language*. John Benjamins Publishing.
- Göksel, Aslı & Meltem Kelepir. 2011a. Issues in complexity: Sentential complementation in Turkish Sign Language. (Paper presented at the Complex sentences and beyond in sign and spoken languages, University of Göttingen, 13-14 October 2011.)
- Göksel, Aslı & Meltem Kelepir. 2013a. The phonological and semantic bifurcation of the functions of an articulator: HEAD in questions in Turkish Sign Language. *Sign Language and Linguistics* 16(1). 1-30.
- Göksel, Aslı & Meltem Kelepir. 2016. Observations on clausal complementation in Turkish Sign Language. In R. Pfau, M. Steinbach & A. Hermann (eds), *A matter of complexity: Subordination in sign languages*, 65–94. Berlin: De Gruyter. <https://doi.org/10.1515/9781501503238-005>
- Sevinç, A. Müge. 2006. *Grammatical relations and word order in Turkish Sign Language TİD*. Ankara, Turkey: Middle East Technical University MA thesis.
- Karabüklü, Serpil. 2015. Description of a perfective marker in Turkish Sign Language (TİD). (Poster presented at Formal and Experimental Advances in Sign Languages Theory (FEAST), University of Pompeu Fabra, May 2015.)
- Karabüklü, Serpil. 2016a. A semantic analysis of perfective markers in TİD. (Paper presented at Workshop on Altaic Formal Linguistics 12 (WAFL 12), Central Connecticut State University, May 2016.)
- Karabüklü, Serpil. 2016b. *Time and aspect in Turkish Sign Language (TID: Manual and nonmanual realizations of 'Finish'*. Istanbul, Turkey: Boğaziçi University MA thesis.
- Kelepir, Meltem & Aslı Göksel. 2013. Aspects of reported utterances in Turkish Sign Language. In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 191-218. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.
- Kelepir, Meltem & Aslı Göksel. 2016. Türk İşaret Dili'nde aktarılmış anlatımın özellikleri. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 337-360. İstanbul: Koç Üniversitesi Yayınları.
- Kelepir, Meltem, Aslı Özkul & Elvan T. Özparlak. 2018a. Agent-backgrounding in Turkish Sign Language (TİD). In G. Barberà & P. Cabredo Hofherr (eds.), *R-Impersonals in sign languages. Special issue. Sign Language and Linguistics* 21(2), 257-283.
- Kubus, Okan & Annette Hohenberger. 2013. Phonology and phonetics of reciprocals in Turkish Sign Language (TİD). In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 101-142. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.
- Kubus, Okan. 2016. *Relative Clause Constructions in Turkish Sign Language*, 178-179. Hamburg, Germany: University of Hamburg PhD Dissertation.

- Makaroğlu, Bahtiyar. 2013. Interrogatives in Turkish Sign Language (TİD): The role of eyebrows. In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 143-165. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.
- Makaroğlu, Bahtiyar. 2016. Türk İşaret Dili'nde soru tümcelerinin görünümü: Kaş hareketlerinin rolü. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 233-252. İstanbul: Koç Üniversitesi Yayınları.
- Nuhbalaoğlu, Derya. 2013. Determining the paradigm of personal pronouns in Turkish Sign Language. Boğaziçi University. (Unpublished manuscript)
- Özsoy, A. Sumru, Meltem Kelepir, Derya Nuhbalaoğlu & Emre Hakgüder. 2015. Commands in Turkish Sign Language [Türk İşaret Dili'nde emir yapısı]. *Journal of Japanese Linguistics Society* 146, 13-30. Gengo Kenkyu.
- Özsoy, A. Sumru & Hüner Kaşıkara. 2018a. Comparatives in Turkish Sign Language (TİD). In K. Wojtylak, Y. Treis & L. de Vries (eds.), *Comparative Constructions*. Free University of Amsterdam.
- Sevinç, A. Müge & Cem Bozşahin. 2006. Verbal categories in Turkish Sign Language TİD. *The 13th International Conference on Turkish Linguistics*.
- Wilkinson, E. L. 2009. *Typology of signed languages: Differentiation through kinship terminology*. Albuquerque, New Mexico: The University of New Mexico PhD Dissertation.
- Zeshan, Ulrike. 2002. Sign Language in Turkey: The story of a hidden language. *Turkic Languages* 6 (2). 229-274.
- Zeshan, Ulrike. 2003. Aspects of Türk İşaret Dili (Turkish Sign Language). *Sign Language & Linguistics* 6. 43- 75.

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PART 4 Morphology

Morphemes are the meaningful components of signs. A sign may consist of a single morpheme (simplex sign) or of more than one morpheme (complex sign). Thus, morphemes are the crucial constituents in word formation processes. The morpheme(s) that make(s) up a sign can have lexical or grammatical functions, and they can be articulated manually or non-manually. The morphology of a sign language is described in terms of the properties of the different types of its morphemes and of the word formation processes.

This part of the grammar is organized into five chapters. The first two chapters focus on two major word/sign formation processes: compounding and derivation. The third and the fourth chapters describe the two major inflectional processes, namely verbal inflection (agreement, tense, aspect, modality, and negation) and nominal inflection (number marking, localization, and distribution). The last chapter is devoted to the description of the morphological category classifiers, which denote entities by depicting some salient aspects of these entities as handshape morphemes and obligatorily combine with verbal roots to form stems.

Chapter 1. Compounding

Compounding is a highly productive word formation process in TİD. In compounding, two signs are combined as a new unit that is realized as a single lexical item. The signs that make up a compound can appear in an utterance on their own. When inside a compound, these can be reduced or they can be expressed in full form. The various categories of compounding in TİD are further explained below in terms of the phonological, syntactic, and semantic relations of the parts.

1.1. Native compounds

TİD native compounds are composed without any interaction with Turkish or any other signed or spoken language. The disparity between native and non-native compounds is illustrated by the following compounds: LUNAR^ECLIPSE and SOLAR^ECLIPSE. Notice that while the former derives its second element as a translation of the Turkish word *tut-ul-ma* ‘to be held’ which is the word used for referring to an eclipse, the latter is formed by sign-language-internal (in this case visual and iconic) means.



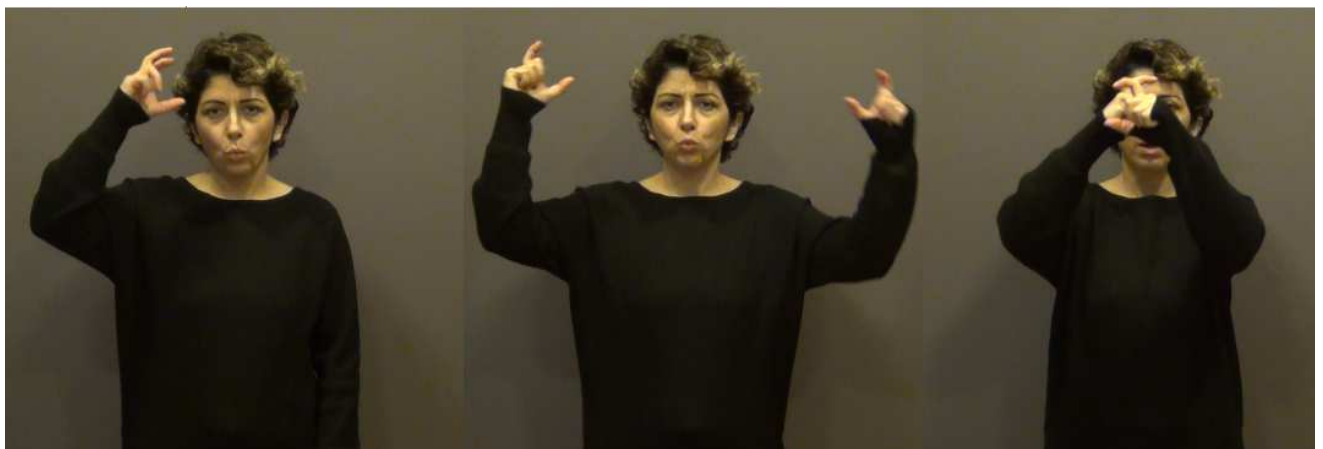
MOON^HOLD

ay tut-ul-ma-sı (Turkish)

moon hold-PASS-NM-POSS3.S

‘lunar eclipse’

(r.f. Göksel & Taşçı 2016:376)




SUN^ECLIPSE

güneş tut-ul-ma-sı (Turkish)

sun hold-PASS-NM-POSS.3S

‘solar eclipse’

(r.f. Göksel & Taşçı 2016: 376)

Many TİD compounds have a single word translation in Turkish, which identifies them as native. Some examples are RED^CL(

Within the group of native compounds, sequential [Morphology – 1.1.1.] and simultaneous compounds [Morphology – 1.1.2.] are two subcategories. Within both groups, there are semantic and syntactic differences.

1.1.1. Sequential compounds

In sequential compounds, the parts are signed one after another. In some of these, there are phonological reduction and assimilation processes [Phonology – 3.1.] and semi-simultaneous compounds [Morphology – 1.1.2.2.]).

1.1.1.1. Semantic structure

Certain compounds are transparent in meaning (endocentric compounds), while in others, the meaning is not discernible from the words that make up the compound (exocentric compounds).

1.1.1.1.1. Endocentric compounds

In endocentric compounds, the meaning of the compound can be deduced from the meanings of the parts. This category of compounding is productive and the compounds in this group are not always lexicalized, that is, new forms can be created by signers during conversation, such as ICE^GROUND ('frozen ground').

Endocentric compounds usually specify a subset within a category. The sign that indicates this category (the head) seldom has a free, unspecified position within the compound, which means that the components of compounds are usually fixed in their position. The most frequent pattern is the head-final one, but there are also head-initial endocentric compounds.

The compounds SLEEP^CLOTHING 'pajamas' and GOLD^STORE ('jewelry store') are head-final compounds. Pajamas are a type of clothing that are worn for sleeping (i.e. a subset within the category of clothing), and a jewelry store is a type of *store* where jewelry is sold.



SLEEP^CLOTHING
'pajamas'

In contrast, the next two are head-initial: a mosquito is a type of *fly* that is an offspring, and minced meat is *meat* that comes out of mincer.



HOUSEFLY^BITE

'mosquito'



MEAT^OPERATE_MINCER^COME_OUT_OF_MINCER

'minced meat'

In another type of endocentric compound, 'descriptive compounds' which are akin to epithets, the meaning of one of the words in the compound is also the meaning that the whole compound denotes. For example, in PURPLE^EGGPLANT/CABBAGE ('eggplant'), EGGPLANT, which is one of the words within the compound is also what the whole compound means. FOOD/KITCHEN^FAMILY/KITCHEN('kitchen') is a similar example.

The compound elements that can refer to the whole compound tend to be polysemous when compared to elements in other compounds. The first word in the compound, FOOD/KITCHEN^FAMILY/KITCHEN ('kitchen'), refers to both 'food' and 'kitchen'. The second word refers to both 'family' and 'kitchen'. The combination of the two elements gives rise to an unambiguous lexical item, 'kitchen'. In PURPLE^EGGPLANT/CABBAGE ('eggplant'), the word following PURPLE means eggplant or cabbage in isolation, but the compound means 'eggplant'.

1.1.1.1.2. Exocentric compounds

The meaning of exocentric compounds is not transparent, as seen in the following example:



MAN^TALL

'elder brother'

(adapted from Kubus 2008: 80)

MAN^TALL does not literally mean 'a tall man' but 'elder brother'. Some other examples are:



BIG_STEERING_WHEEL^BUS

'big rig'



NECK[^]LONG

'giraffe'



HEAD[^]STRONG

'stubborn'

In these examples, the meaning, again, is not literal. A big rig is not a type of bus, a giraffe is not a kind of neck, and a pickle is not a type of jar.

As for head order, generally TID exocentric compounds are headless (e.g. BOOK[^]ARTICLE 'law'). One-headed exocentric compounds are usually head-initial (e.g. NECK[^]LONG 'giraffe').

1.1.1.2. Syntactic structure

Compounds have internal structure and in many compounds, one of the items is the head. Other compounds are non-headed or double-headed. Headedness is a property which is independent of whether a compound is exocentric or endocentric. The parts of a compound form either a subordination relation (subordinate compounds) or a coordination relation (coordinate compounds).

1.1.1.2.1. Subordinate compounds

Compounds in which one of the items is a head are called subordinate compounds. Subordinate compounds have a head that marks the category of the compound. In the exocentric compound LONG[^]NECK('giraffe'), the head of the compound is NECK, modified by LONG. Other examples of subordinate TID compounds are below:



SLEEP[^]CLOTHING

'pajamas'



MAN[^]TALL

'elder brother'

1.1.1.2.2. Coordinate compounds

In coordinate (or coordinated) compounds, the signs are in a structurally symmetrical relation. In the compound FATHER^MOTHER ‘parents’, the signs for two sub-types of parents are combined. Other examples are below.



GOLD^SILVER
‘jewellery store’



THINK^PUT
‘remember’

1.1.1.3. Compounds involving Size-and-Shape Specifiers (SASS)

In compounds involving a Size-and-Shape-Specifier [[Morphology– 5.2.](#)], the head of the compound may not be identifiable, as the SASS might represent an entity, but also alternatively a feature of the entity. In TlD, the SASS usually follows the lexical sign. Examples are presented below:



SOUND^CL (👉): ‘two_vertical_objects’
‘loudspeakers’



RED^CL (👉): ‘round_object’
‘tomato’



BINDI^CL (👉): ‘round_object’
‘coconut’



$SWIM^{CL}(\text{round_object})$

'swimming pool'

In contrast to SASSes that modify nouns in a phrase as adjectives [Lexicon – 3.4.], the SASSes in compounds are lexicalized. For instance, even when referring to a cubic tomato, roundness SASS in the compound is still obligatory when the compound is modified by another shape feature:



$RED^{CL}(\text{round_object})^{CUBE}$

'a cubic tomato'


1.1.2. Simultaneous and semi-simultaneous compounds

Unlike sequential compounds, certain compounds are composed of two stems whose articulation times overlap totally or partially. Total overlap of stems gives rise to simultaneous compounds whereas partial overlap gives rise to semi-simultaneous compounds. (Semi-simultaneous compounds generally contain reduced stems.

1.1.2.1. Simultaneous compounds


In simultaneous compounds, two signs that are generally phonologically reduced are expressed separately on each hand. Simultaneous compounds are usually two-handed lexicalized classifier constructions [Morphology - 5.1.]. Consider, for instance, the sign SIGN (a document). The dominant hand is an entity classifier for long thin objects, which in this sign means pen, whereas the non-dominant hand is also an entity classifier for flat objects, which means paper.



CL(

In PERCH, the first component is a classifier with the sense of a bird, whereas the second classifier indicates a branch.





BIRD CL(


(adapted from Dikyuva et al. 2015: 58)

Two other examples are below:



(CL(

CL(

Numeral incorporation is another type of simultaneous compounding [Syntax – 4.3.4]. As the name implies, one of the two base signs is a numeral, while the other most frequently is a time term (day, week, etc.), or a pronoun. In its citation form, the TİD sign DAY is articulated with a V-Handshape that performs a wiggling movement in neutral signing space; when incorporated, a numeral handshape replaces the handshape of DAY, e.g. the -Handshape for 'three', realized as the sign THREE^DAY ('three days'). Here, two separate signs are fused and produced simultaneously on one hand. This type of compound generally consists of a numeral and a time-related word (such as day, year, etc.):



TWO^DAY





TWO^WEEK




TWO^YEAR

1.1.2.2. Semi-simultaneous compounds

The parts of semi-simultaneous compounds partially overlap temporally. The magnitude of phonological reduction [Phonology - 3.1.1] and thus, the recognizability of the stems vary from one compound to the other. Certain compounds have recognizable elements, whereas others do not.

An example of a semi-simultaneous compound involving movement reduction and handshape assimilation is the compound MAN^TALL ('elder brother'). MAN is signed with a -Handshape proximal to the chin making repeated contact; TALL involves a -Handshape making an upward movement on the ipsilateral space.

In the compound, the -Handshape moves from the chin to the upper ipsilateral area without repetition. That is, we observe (i) loss of movement in the first part, (ii) loss of handshape in the second part (which is a progressive handshape assimilation). See the examples below:



MAN^TALL

'elder brother'



SAY^BAD

‘to swear’



EIGHT^ZERO

‘eighty’

1.2. Loan compounds

Sign languages almost always interact with the ambient spoken languages, which is reflected in various ways such as mouthings, fingerspelling, and in the borrowing of compound structures, among others (see also the section on calques [Lexicon – 2.2.1]).

1.2.1. Faithful loans

Faithful loans are characterized by the one-to-one relationship of input elements of the loan compound. For instance, the TİD compound MOTHER^SCHOOL (‘kindergarten’) mirrors the structure of the Turkish compound *ana+okulu* (mother+school-POSS3.S). Other examples are as follows:



MIND^COME
akl-a+gel (Turkish)
mind-DAT+come
‘come to mind’

(r.f. Göksel & Taşçı 2016: 375)



STEAL^RUN
kap+kaç (Turkish)
steal+run
‘snatch and run’

(Göksel & Taşçı 2016)

1.2.2. Modified loans

In certain borrowed compounds, the order in the loan compound is reversed for phonological or semantic reasons. We refer to these cases as “modified loans”. For instance, the Turkish word for *mau mau* (a card game) is *pis+yedili* (nasty+seven-ASSOC). In TİD, however, the order of the two parts is reversed, which might be explained by the phonological tendency of placing the component articulated in a higher position in the signing space first.

SEVEN^NASTY
pis+yedi-li (Turkish)
nasty+seven-ASSOC
'mau mau (cardgame)'

ROOM^SIT
otur-ma+odası (Turkish)
sit-NR room-POSS.3S
'livingroom'

(Kan & Gökgöz 2009)

1.3. Compounds with fingerspelled components

This type of compounding brings together a finger-spelled component where an orthographic form, the letter, corresponding to the sound of the spoken word is borrowed via the manual alphabet. One or more finger-spelled letters can be the input to this type of compounding which can be sequential or simultaneous.

1.3.1. Sequential

In these compounds, the fingerspelled element is produced separately from the other input element in a sequential manner. The order might be fixed or free; when fixed, the fingerspelled letter can be the initial or the final item.

1.3.1.1. Native-like

In these, the form of native-like compound with a fingerspelled component is quite unlike the form of the borrowed word. For example, the fingerspelled letters U-N, the two letters of the loan word *un* ('flour') in Turkish, combine with the sign KNEAD to yield the meaning 'flour' (Note that the corresponding Turkish word is not a compound). Other similar examples are as follows:



Ç^THROW
çöp (Turkish)
'garbage'



P^PARTY
parti (Turkish)
‘political party’



M^PLAN
mimar (Turkish)
‘architect’

(adapted from *Turkish Sign Language Resource Website* 2008)

1.3.1.2. Loan-like

In these compounds, the internal structure (such as the ordering of the elements) is similar to the loan compound in

sequential loan-like compounds, including fingerspelled components. The compound meaning ‘DVD driver’ consists of two components, just like the Turkish original. These are sequentially combined in the same way as in Turkish, but the first component is represented by a fingerspelled word. The same is true for the compound R^TEACHER *rehber+öğretmen* (guide+teacher) meaning ‘guidance counselor’. See below other examples:



SMALL^Y

küçük+yalı (Turkish)

‘Küçükyalı’ (place name)




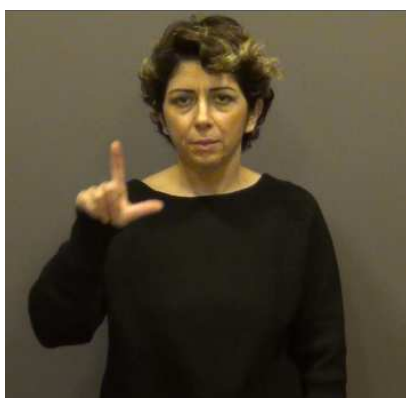
U^TURN

u+dönüşü (Turkish)

‘u-turn’

1.3.2. Simultaneous

In simultaneous compounds, handshape, location, or movement assimilations occur. The simultaneous compounds involving fingerspelling where handshape assimilation occurs are called initialization [[Lexicon – 2.2.2.1](#)]. In initialization, the handshape of the sign is usually the alphabetical handshape for the first letter of the corresponding word from the surrounding spoken language; this handshape replaces the handshape of a lexical item (e.g. the sign WEAR signed with a -Handshape for ‘jacket’). Other such examples are listed below.



L^BLUE

lacivert (Turkish)

‘navy blue’



P]HEAD


psikoloji (Turkish)

'psychology'

(r.f. Taşçı 2012: 56)

In another type of simultaneous compound involving fingerspelling, a fingerspelled letter and a classifier are articulated simultaneously. For instance, the form meaning 'playstation' consists of the letter P on the dominant hand and a classifier on the non-dominant hand (and optionally a second independent sign PLAY).






P^CL():'flat_object'^PLAY

'playstation'

1.4. Phonological and prosodic characteristics of compounds

TiD compounds generally exhibit certain types of phonological processes such assimilation [Phonology – 3.1.1. and Phonology - 2]. In the following sections, we discuss the most prevalent phonological phenomena in more detail.


1.4.1. Phonological characteristics

Regressive handshape assimilation is a common phonological phenomenon observed in TiD compounds. One example is NECK^LONG ('giraffe') which exhibits regressive handshape and movement direction assimilation. NECK has downwards movement near the neck area with -Handshape. LONG, on the other hand is signed with upwards movement with -Handshape. In the compound, the downwards movement of NECK is altered as upwards movement with the -Handshape of LONG.

The hand-arrangement features can also assimilate within compounds. For instance, while STRONG is a two-handed sign, in the compound HEAD^STRONG ('stubborn'), the one-handedness feature of HEAD assimilates to STRONG.




Non-manual features sometimes spread between elements in compounds. Regressive non-manual assimilation is attested in the compound CHICKEN^SMALL('chick'). The forward movement of shoulders and head in

SMALL spreads to the first element CHICKEN.

Besides assimilation processes, there are two other tendencies in terms of movement direction. Namely, the transition movement from the first to the second input element tends to (i) move away from the body (ii) move downwards. As for move-away tendency, when one of the compound elements has a contact of the hand to the body, this element is predominantly the first element (e.g. MAN[^]TALL('elder brother')). Moreover, this kind of contact[^]no-contact compounds are more common than compounds that have contact or no-contact in both elements (e.g. CL():'rectangular_shape'^PROJECTOR('projector')). As a side note, while the former pattern (contact[^]contact) is rare, the latter (no-contact[^]no-contact) pattern is relatively common.


The downward-movement tendency is observed in two ways. First, the second element of the compound tends to be lower in signing location than the first compound element. Second, the place of articulation of two elements is predominantly in the order of head-to-torso rather than head-to-head and torso-to-torso. The compounds that have upwards movement is quite rare, SOFT[^]SLEEP('pillow') is one such example.

1.4.2. Prosodic characteristics

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Non-manual features sometimes spread between elements in compounds. Regressive non-manual assimilation is attested in the compound CHICKEN[^]SMALL('chick'). The forward movement of shoulders and head in SMALL spreads to the first element CHICKEN.

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Information on data and consultants

The descriptions in this chapter are partially based on the references below and partially on research done by the authors during the development of this chapter. Please see the data and consultant information in the references. The linguistic data in images and video clips that were produced or reproduced for this chapter were provided by a near-native fluent signing consultant who was born and raised in Istanbul.

References

- Dikyuva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2015. *Türk İşaret Dili dilbilgisi kitabı* [Turkish Sign Language grammar book]. Ankara: TC Aile ve Sosyal Politikalar Bakanlığı. [1.1]
- Göksel, Aslı. 2013b. Asymmetric signs: Simplex lexemes or semantically decomposable forms? (Talk given at Sign Language Workshop, University of Haifa, 2 April 2013.). [1.1.1.2]
- Göksel, Aslı, & Süleyman S. Taşçı. 2016. Türk İşaret Dili'nde ödünclemeler. In E. Arık (ed.), *Ellerle konuşmak*:

Türk İşaret Dili araştırmaları, 361-388. İstanbul: Koç Üniversitesi Yayınları. [1.1]

Kan, Seda & Gökgöz, Kadir. 2009. Topics in sign language morphology: Compound formation in Turkish Sign Language. (Paper presented at the 7th Mediterranean Morphology Meeting, University of Cyprus, September 2009.). [1.2.2]

Kubus, Okan. 2008. *An analysis of Turkish Sign Language (TİD) phonology and morphology*. Ankara, Turkey: Middle East Technical University MA thesis. [1.4]

Özyürek, Aslı, Deniz İlkbaşaran & Engin Arık. 2004. *Türk İşaret Dili* [Turkish Sign Language]. Koç University. <http://turkisaret dili.ku.edu.tr> (last accessed December 2013)

Taşçı, Süleyman S. 2012. *Phonological and morphological aspects of lexicalized fingerspelling in Turkish Sign Language (TİD)*. İstanbul, Turkey: Boğaziçi University MA Thesis. [1.3]

Taşçı, Süleyman S. & Aslı Göksel. 2014. The morphological categorization of polymorphemic lexemes: A study based on lexicalized fingerspelled forms in TİD. *Dilbilim Araştırmaları Dergisi, Special Issue in Honor of Prof. A. Sumru Özsoy*, 165-180. [1.3]

Taşçı, Süleyman S. 2016. TİD el alfabesi'nin sözlükselleşmesi ve biçimlenişsel yapılandırılması: El değişimi ve benzeşme olguları. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 183-210. İstanbul: Koç Üniversitesi Yayınları. [1.3]

Taşçı, Süleyman S. & Aslı Göksel. 2016. Grammatical encoding of semantic categories; Turkish Sign Language native compounds. (Poster submitted to *TISLR 11*, Melbourne, January 2016.) [1]

Turkish Sign Language resource website [*Türk İşaret Dili kaynak sitesi*]. Boğaziçi University. <http://www.cmpe.boun.edu.tr/tid> (last accessed December 2017)

Authorship information

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Chapter 2. Derivation

Derivation is a morphological process by which a lexeme is created from another lexeme. The creation of the noun *baker* from the verb *bake* is a typical derivational process and it is mediated by the derivational marker *-er*. Derivational markers in TİD can be manual or non-manual.

2.1. Manual markers of derivation

Manual markers may be realized in a sequential or simultaneous manner. In addition, there is a special kind of derivation based on iconic etymology.

2.1.1. Sequential derivation

In TİD, there are some sequential derivational affixes which have been borrowed from the surrounding spoken language, Turkish. These are the privative (negative) suffix *-LESS* and the fingerspelled suffixes *-L-I* and *-C-I*, the associative and the agentive suffixes, respectively. The fingerspelled suffixes are signed on the dominant hand, although otherwise fingerspelling is usually reserved for the non-dominant hand but see [*Lexicon – 2.2.2.1.*].

The associative suffix *-L-I* has been borrowed from the Turkish *-li* in accordance with (a reduced and simplified version of) vowel harmony, yielding two allomorphs. It has a variety of meanings but the most prevalent one is 'with'.



-L-I

-L-U

The usage of the variant -L-U depends on whether the sign that it is attached to is mouthed in Turkish. If the mouthing of such a sign has a rounded vowel (o, ö, u, ü) as the last segment, then some signers use the form -L-U instead of -L-I.

2.1.1.1. Agentive

Similar to the associative suffix -L-I, the agentive suffix is also borrowed from Turkish. It imparts various meanings to the form it creates such as a person selling something, or the occupation of a person. On a par with -L-I, the agentive suffix has two forms that display a reduced form of vowel harmony, yielding the forms -C-I and -C-U. One form of water+agentive suffix 'water vendor' (*su+cu* in Turkish) is given below:



WATER

C

U

'water vendor'

(based on Göksel & Taşçı 2016: 379)

In this example, the sign for water is followed by C and U. Note that the shape of the first letter of the agentive suffix ‘c’ happens to have the same handshape of the form for the sign PERSON which has a different orientation and a downward movement, see [Morphology – 1]. The sign PERSON can also be used instead of -C-I/U with an agentive meaning (e.g. WORK^PERSON ‘worker’).

Agentive forms are rather infrequent in the TİD lexicon, an unexpected fact given that Turkish has a vast number of words containing the agentive suffix. Commonly used signs with the agentive suffix are listed in the table below and their Turkish counterparts have the agentive suffix, too.

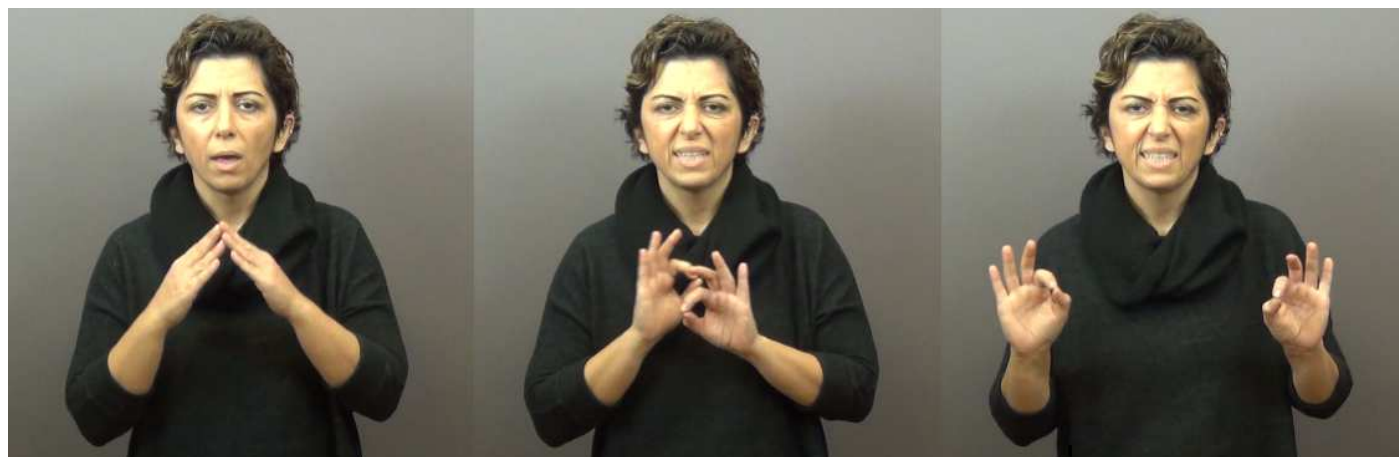
TURKISH WORD	TİD (person who sells or is associated with a thing, place etc.)
Bankacı	BANK^C-I ‘bank clerk’
Eczacı	MEDICINE ^EZ ^C-I ‘pharmacist’
Fırıncı	BAKERY^C-I ‘baker’
Futbolcu	SPORT^C-I ‘football player’
Kitapçı	BOOK^C-I ‘book seller’
Oyuncakçı	TOY^C-I ‘toy seller’
Postacı	POST^C-I ‘postman’
Saatçi	CLOCK^C-I ‘clock seller/repairman’
Sanatçı	ART^C-I ‘artist’
Simitçi	BAGEL^C-I ‘bagel seller’
Tamirci	REPAIR^C-I ‘mechanic’

(Özyürek et al. 2004)

Not all signs with agentive meanings contain the agentive suffix. COMMENTATOR and CARER are two examples.

2.1.1.2. Negative

The privative (negative) marker -LESS means ‘without’. The O-handshape is used in this sign and the movement is from contra-lateral to ipsi-lateral. Also, while producing the privative marker, there is simultaneous mouthing of the Turkish counterpart of this marker -siz. Below, there is an example of HOME-LESS.



HOME

-LESS

2.1.1.3. Attenuative

Attenuative makes the concept more vague or less strong. TID has an attenuative marker. It is produced by wiggling of open 5-handshape hand and with furrowed eyebrows and squinted eyes.



YELLOWISH

2.1.2. Simultaneous derivation

In simultaneous derivation, a new word is created by changing the internal structure of another word, such as its movement pattern. An example is the pair SIT and CHAIR. The verb SIT is produced by a single upwards wrist movement of the hands in 8-handshape. When this sign is articulated with repetition, the word CHAIR is derived, which shows that repetition is a derivational process deriving an instrument from a verb.



SIT



CHAIR

2.1.2.1. Noun-verb pairs

See [Morphology – 2.2.4].

2.1.2.2. Attenuative

See [Morphology – 2.2.4].

2.2.1. Diminutive and augmentative

Non-manual markers that express the meanings diminutive and augmentative are also the lexical non-manuals of the adjectives SMALL and BIG, respectively. When they are co-articulated with a manually

signed noun, they add these meanings to it.

In other words, if the non-manuals of the lexical sign **SMALL**, which are squinted eyes and furrowed eyebrows, are co-articulated with a noun, the result is a derived noun with a diminutive meaning, that is, 'small x'. See the example **SMALL_BALL** below.



SMALL_BALL

If the non-manuals of the lexical sign **BIG**, which are widened eyes and raised eyebrows, are co-articulated with a noun, the result is a derived noun with an augmentative meaning, that is, 'big x'. See the example **BIG-BALL** below.



BIG_BALL

In these cases, the noun also undergoes a manual change: the signer signs it smaller or bigger. In the examples above, in addition to the different the non-manual markers, the sign ball is signed smaller in the diminutive example and bigger in the augmentative example.

The augmentative non-manual markers, widened eyes and raised eyebrows, can also be accompanied by the mouth gesture 'bzz'. Again, the manual sign is signed bigger, as shown with the sign **big_cup** in the example below.



BIG_CUP

2.2.2. Intensive

Intensive meaning (very x) is expressed with widened eyes and raised eyebrows. When these non-manuals co-occur with

adjectives, they function as intensifiers. Also, the mouthings of those adjectives are exaggerated. The first example below is COLD. The second one has the intensified meaning 'very cold'.



COLD



VERY_COLD

The following examples are the adjective HOT (spicy) and the intensified adjective VERY_HOT (very spicy):



HOT (Spicy)



VERY_HOT (Very spicy)

2.2.3. Proximity

Proximity markers emphasize spatial or temporal proximity. Proximity in T1D can be expressed with furrowed eyebrows, squinted eyes, and tongue protrusion where the tip of the tongue is pushed through the lips. For instance, when these non-manual markers are combined with the manual sign NEAR, the resulting meaning is 'very close' or 'right there'



2.2.4. Noun-verb pairs: mouthing

Mouthing is used in instrumental noun-verb pairs in TİD. It involves the entire or partial silent pronunciation of the sign's Turkish counterpart. Mouthing is used simultaneously mostly with nouns and much less frequently with verbs. For example, LIGHTER is intensified with mouthing, however there is no mouthing in LIGHT.

Information on data and consultants

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References

- Açan, Zeynep. 2007. *A linguistic analysis on basic sentence types in Turkish Sign Language (TİD) with reference to non-manual activity*. Ankara, Turkey: Hacettepe University PhD dissertation.
- Aslan Demir, Sema. 2010. Sessizliğin dili: Türk İşaret Diline dair gözlemler. *Bilig* 54. 1-20.
- Aslan Demir, Sema. 2016. Sessizliğin Dili: Türk İşaret Dili'ne dair gözlemler. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 141-156. İstanbul: Koç Üniversitesi Yayınları.
- Dikyuva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2015. *Türk İşaret Dili dilbilgisi kitabı* [Turkish Sign Language grammar book]. Ankara: TC Aile ve Sosyal Politikalar Bakanlığı.
- Kubus, Okan. 2008. *An analysis of Turkish Sign Language (TID) phonology and morphology*. Ankara, Turkey: Middle East Technical University MA thesis.
- Kubus, Okan & Annette Hohenberger. 2011. The phonetics and phonology of TİD (Turkish Sign Language) bimanual alphabet. In R. Channon & H. van der Hulst (eds.), *Formational units in sign languages*, 43-63. Berlin: Walter de Gruyter.
- Özbek, Aslı. 2012a. Verbal Complexity in Turkish Sign Language: Instrumental verbs and classifiers. (Poster presented at 45th Annual Meeting of the Societas Linguistica Europaea, Stockholm University, 29 August - 1 September 2012.)
- Özbek, Aslı. 2012b. Identifying Noun Verb Pairs in Turkish Sign Language: Turkish-TİD Interaction. (International Conference on Turkish Linguistics, Middle East Technical University, Ankara, 18-21 September 2012.)
- Özbek, Aslı. 2012c. Noun-verb pairs in TİD: A methodological criticism. *Proceedings of the International Symposium on Language and Communication: Research trends and challenges*, 1709-1716. Erzurum: Mega Press.
- Özkul, Aslı. 2013. *A phonological and morphological analysis of instrumental noun-verb pairs in Turkish Sign Language*. İstanbul, Turkey: Bogazici University MA thesis.
- Özkul, Aslı. 2016. Türk İşaret Dili'nde araç bildiren isim ve fiil çiftlerine birimbilimsel bir bakış. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 211-232. İstanbul: Koç Üniversitesi Yayınları.
- Özyürek, Aslı, Deniz İlkbaşaran & Engin Arık. 2004. *Türk İşaret Dili* [Turkish Sign Language]. Koç University. <http://turkisaret dili.ku.edu.tr> (last accessed December 2013)
- Taşçı, Süleyman S. & Aslı Göksel. 2014. The morphological categorization of polymorphemic lexemes: A study based on lexicalized fingerspelled forms in TİD. *Dilbilim Araştırmaları Dergisi, Special Issue in Honor of Prof. A. Sumru Özsoy*, 165-180.

Authorship information

Chapter 3. Verbal inflection

(Person) agreement, tense-aspect-mood/modality, and negation are among the typical inflectional morphemes that verbal stems may bear. This chapter describes how TiD expresses the following verbal inflectional notions: agreement, tense/time, aspect, modality and negation.

3.1. Agreement

In TiD only agreement verbs and spatial verbs [Lexicon – 3.2.1.] inflect for agreement. Agreement verbs agree with the person and number features of some of their arguments (their subjects and objects). Spatial verbs agree with their locative arguments. These arguments would answer the questions “from where?” (source) and “to where?” (goal).

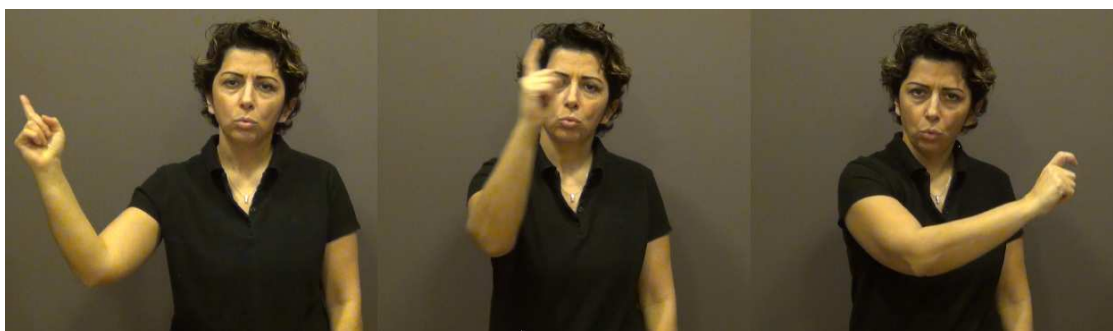
3.1.1. Person and locative markers

Agreement verbs can agree with both of their arguments (double agreement verbs) or only one of them (single agreement verbs) [Lexicon – 3.2.1.]. Double agreement verbs are also categorized into two: forward agreement verbs and backward agreement verbs.

The form of the agreement verb changes depending on the loci of the arguments. These loci may be at or near the actual location of the referents of the arguments physically present in the setting where the sentence is uttered, for example near the location of a person close-by. Alternatively, they may abstractly represent the referents of the arguments that are not physically present but mentioned before in the discourse (see [Lexicon - 3.7. and Pragmatics - 1.1. and 8.1.] for explanations on establishing loci).

Agreement with the verb’s arguments is typically achieved by a modification of the direction of movement and/or the orientation of the hand.

In the case of modification of the direction of movement, when the verb agrees with both its subject and its object, the movement starts at the location associated with the subject and ends at the location associated with the object.



Agreement marking is represented with subscripted indices on the left and the right of the verbs. The positions of the indices correspond to the start and end locations of the movement of the verb, i.e. left represents the start and the right represents the end. In forward agreeing verbs, the left-index represents the subject and the right-index represents the object:

forward agreeing verbs



$_1\text{ASK}_2$ 1 = starting location of the verb movement; subject
'I ask you.' 2 = ending location of the verb movement; object

In backward agreeing verbs, the left-index represents the object and the right-index represents the subject. The following provide representative examples:

backward agreeing verbs



${}_1\text{INVITE}_2$ 1 = starting location of the verb movement; object

‘You invite me.’ 2 = ending location of the verb movement; subject

In the case of modification of the orientation of the hand, the relevant part of the hand – the palm or the fingertips – are oriented towards the object.



${}_2\text{TEACH}_1$

‘You are teaching me.’

The following is an example where both the direction of movement and orientation of the fingertips are modified:



^{3a}TEXT_{3b}

‘He texted her.’



₂INFORM₁

‘You informed me.’

In summary, verbs can agree with one or two arguments by (i) by changing the direction of movement and orientation of the hand, (ii) by only changing the direction of movement, or (iii) by only changing the orientation of the hand.

As for spatial verbs, agreement is not marked based on grammatical roles such as subject and object but on the locative arguments of these verbs such as their source and goal arguments. The meaning of most spatial verbs involves transfer of an entity such as in MOVE and in PUT and these are articulated with path movement. The following illustrates a case where the verb agrees with both of its locative arguments. The starting location of the path movement coincides with the locus of the source, marked with a left-index on the verb PUT and the final location with the locus of the goal, marked with a right-index on the verb.



WAITER IX_{3a} TWO TABLE_{3b} TABLE_{3c} ONE PLATE_{3c 3c} PUT_{3b}

‘The waiter put the plate from this table to that table.’

Sections [3.1.1.1.](#) and [3.1.1.2.](#) focus on subject agreement and object agreement respectively. Before we focus on agreement with each argument, let us describe the way these two agreement types are represented in the examples.

3.1.1.1. Subject markers

As mentioned above, when a forward agreeing verb involves a path movement, the first location slot of the verb coincides with the locus of the subject argument (probably established earlier in the discourse). The following is an example of a forward agreeing verb with subject agreement:

₂SEND₁

‘You sent (it) to me.’

In backward agreeing verbs, the final location slot coincides with the locus of the subject.



₁STEAL₂

‘You stole from me.’

See [[Lexicon – 3.2.2](#)] for a list of backward agreeing verbs attested in TID so far.

When the subject is 1st person singular, the path movement of the verb starts on or near the signer’s body. When the subject is 2nd person singular, it starts in the central space in a locus near the addressee as in the examples above.

When a transitive verb is body-anchored, that is, when the starting location is on the body of the signer, then the verb may or may not agree with the subject. SAY is a body-anchored verb but even when the subject is non-first-person, it is possible to mark the verb with subject agreement, as in the following example:



{3a}SAY{3b}

‘She_{3a} said to him_{3b}.’

3.1.1.2. Object markers

As mentioned above, an agreeing verb usually agrees with one of its objects. In agreeing verbs with path movement,

the movement of the verb ends at the locus of the object in forward agreeing verbs:



TEACHER_{3a} IX_{3a 3a} ASK₁

‘The teacher asked me (a question).’

The path movement starts at the locus of the object in backward agreeing verbs:



TEACHER_{3a} IX_{3a 1} PICK_{3a}

‘The teacher picked me.’

The grammatical role of the object can be a direct or an indirect object, and its semantic role can be theme, experiencer, source, or goal/recipient. The following are examples of possible semantic roles of objects involved in agreement:

theme



TEACHER_{3a} IX_{3a} CHILD_{3b} IX_{3b 3a} SEE_{3b}

‘The teacher saw the child.’



₂TEACH₁

‘You teach me.’

goal/recipient



TEACHER_{3a} IX_{3a} IX₂ SAY₂

‘The teacher told you.’



TEACHER_{3a} IX_{3a} BOOK_{3a} GIVE₁

‘The teacher gave the book to me.’



TEACHER_{3a} IX_{3a} STUDENT_{3b} IX_{3b} BOOK_{3a} SHOW_{3b}

‘The teacher showed the book to the student.’

source



TEACHER_{3a} POSS₁ BOOK₁ TAKE_{3a}

‘The teacher took the book from me.’



₁COPY₂

‘You copied from me.’

In ditransitive verbs, usually, the verb agrees with only one of its objects and often this object is the indirect object and not the direct object. GIVE is a typical example. Below, we see that the direction of the path movement of the verb changes depending on the referent of the indirect object. Below, the indirect object is 2nd person singular:



₃GIVE₂

In contrast, here, it is 1st person singular.



₃GIVE₁

There are also cases where the agreeing verb does not have path movement. In such cases, object agreement can be expressed by changing the orientation of the palm.



₃SUPPORT₁

‘He supports me.’



₁SUPPORT₃

‘I support him.’

3.1.1.3. Locative markers

As explained above, spatial verbs agree with their locative arguments. These arguments are constituents that would answer the questions “from where?” (source) and “to where?” (goal). Even though agreement verbs usually agree

with human arguments, spatial verbs do not have to do so.

The spatial verbs that can be categorized as motion verbs such as WALK or those whose meaning involve transfer of entities such as PUT are usually articulated with path movement. The start location of the movement coincides with the locus of the source and the end location with the locus of the goal. The following illustrate these cases:

NDH: CL:'picture'_{3a}

DH: PICTURE_{3a} THERE_{3a} ONE GIRL_{3b} THERE_IS

'In the picture there is a girl.'

HOUSE_{3k} POSS₃ 3b **IN_FRONT** DOOR_{3c}

'(There is) a door in front of her house.'



DOOR_{3c} 3c NEAR_{3d} PARK_{3d} HOUSE_{3k} 3k WALK_{3d}

'There is) a park near her (house) door. She is walking from her house to the park.'

While agreement with the goal is obligatory, agreement with the source is not. For instance,

the verb PUT may or may not show agreement with the source.



WAITER_{3a} IX_{3a} TABLE_{3b} PLATE_{3c} 3c PUT_{3b}

'The waiter put the plate on the table.'



WAITER_{3a} IX_{3a} TWO TABLE_{3b} TABLE_{3c} ONE PLATE_{3c} PUT_{3b}

‘The waiter put the plate from this table on that table.’

There are also some spatial verbs such as SLEEP that do not semantically involve transfer and are not articulated with path movement. These verbs may show agreement with a locative argument by being articulated at the locus of that argument. This is usually achieved by the use of classifiers representing the subjects.



BED_a IX_a CHILD SLEEP_a

‘The child is sleeping in the bed.’

3.1.2. Number markers

When we consider number marking on verbs, we usually think of marking of plurality of the subject (and/or the object). However, TĪD does not have a general plural marker for the verb, and it does not have morphemes that distinguish 1st person plural, 2nd person plural, and 3rd person plural from their singular counterparts. Rather, the number (or plural) concepts that are marked are *dual*, *multiple* and *exhaustive*.

3.1.2.1. Dual

If one of the arguments of a verb refers to two individuals, then the verb may be marked to show duality which has the meanings ‘two of you’, ‘two of them’ etc.

Dual inflection can take different forms depending on whether the verb is one-handed or two-handed.

When the verb is a one-handed sign such as ASK, both hands can be used and moved simultaneously, each movement starting from or ending in different locations. Thus, each hand represents an event with a different subject or object.

In the following example, there are two different subjects.



₂₊₂GIVE₁

‘You two give me.’

In the following example, on the other hand, there are two different objects.



${}_1\text{GIVE}_{2+2}$

‘I give to you two.’

Simultaneous articulation of (path) movements indicate that the giving event is also simultaneous.

3.1.2.2. Multiple

The verb is inflected with multiple (or collective) when one of the arguments denotes multiple entities. Thus, this concept is closest to the concept of “plural”. Verb forms with multiple are articulated with an arc movement. For instance, in the articulation of the verb INFORM below, the articulation of the verb starts near the signer’s mouth, in a straight line towards a location on the contralateral side of the signing space and then in an arc towards a location on the ipsilateral side of the signing space. In continuous signing, the straight and the arc movements are likely to get fused into one continuous movement.



${}_1\text{INFORM}_{3\text{multiple}}$

‘I informed them.’

r.f. Dikyuva et al. 2015: 209)

3.1.2.3. Exhaustive

The verb is inflected with exhaustive (distributive) when an event is distributed over persons as in the sentence “The teacher gave a candy to each student.”. Exhaustive verb forms are articulated with the reduplication of the verb. However, the number of repetitions does not necessarily represent the number of people involved in the event. In an example such as the one below, the (backward-agreeing) verb starts at a location on the ipsilateral side and moves towards a location on the contralateral side of the signing space. But subsequently, while moving towards the ipsilateral side, the forward movement of the base form is reduplicated (although the reduplicants are likely to have a reduced movement).



${}_1\text{INVITE}_{3a} {}_1\text{INVITE}_{3b} {}_1\text{INVITE}_{3c}$

‘They each invited me.’

3.1.3. Reciprocal markers

A verb is inflected with a reciprocal marker when it expresses a mutual relation between the subject and the object. In English, this meaning is expressed with a reciprocal pronoun, *each other*, in examples such as *Ali and Yeşim sent gifts to each other*. So, when a verb such as SEND is inflected with a reciprocal marker in TİD, this marker expresses the meaning that ‘Ali sent a gift to Yeşim and Yeşim sent a gift to Ali.’ This section focuses on inflecting verbs with reciprocity. See [Lexicon – 3.7.4.] for reciprocal pronouns.

Since plain verbs are not inflected for the features of their arguments, only agreement verbs show reciprocal marking. When an agreement verb is inflected for reciprocity, this can be expressed in a number of ways. Before we describe these ways, let us introduce the indexing convention: when a verb has both superscripts and subscripts with indices such as x and y, the superscripts indicate the movement of the dominant hand while the subscripts indicate the movement of the non-dominant hand.

With some of the one-handed verbs, reciprocal marking can be realized in the following ways:

- (i) The non-dominant hand copies the dominant hand and moves in reversed direction.



${}^y_x \text{GIVE}_y^x$

- (ii) The verb undergoes sequential backward reduplication. If the verb is a forward agreement verb, the articulation of the verb is followed by backward reduplication.



${}_x\text{ASK}_y\text{ASK}_x$

If the verb is a backward agreement verb, the articulation of the verb is followed by forward reduplication.



${}_x\text{CHOOSE}_y\text{CHOOSE}_x$

With two-handed agreement verbs that are articulated with moving both hands symmetrically, the movement may be reduplicated. The direction of the movement depends on whether the verb is a forward or backward agreement verb.



${}_x\text{FOLLOW}_y\text{FOLLOW}_x$ (forward agreement verb)



${}_x\text{INVITE}_y\text{INVITE}_x$ (backward agreement verb)

Some one-handed and two-handed verbs are articulated in neutral signing space, i.e. the loci of their arguments are not as clear as in the cases described above. The articulation of an agreement marker in neutral space is represented with a 0 in the super- and subscripts in the examples below. 0 means the locus of the argument is completely dropped and x^0 or y^0 mean the loci of the arguments are not easily identifiable.

The following are examples of one-handed verbs that use both movement reduplication and copying to the non-dominant hand in neutral signing space: AFFECT, SOMEONE, FAX, SEE, INFORM and BADMOUTH. As can be seen in the videos of the examples, the way the reciprocal marking affects the articulation is not the same across these verbs. The different modifications the verbs undergo are provided below.

The subject agreement marker is dropped (or reduced):



${}^0_0\text{AFFECT}_x{}^y_0$

(ii) The object agreement marker is dropped (or reduced):



${}_x{}^0\text{FAX}_0{}^y++$

(iii) Body-anchoring of the verb is dropped:



${}_x{}^y_0\text{SEE}_0{}^0$

(iv) Internal movement of the verb is dropped:



$x_0^0 \text{INFORM}_{y_0^0} \text{INFORM}_{x_0^0}^0 ++$

(v) Path movement of the verb is reduced:



$x_0^0 \text{BADMOUTH}_{y_0^0} \text{BADMOUTH}_{x_0^0}^0$

Some two-handed verbs that are inflected with the reciprocal marker also get reduplicated but in a reduced way and their argument markers are neutralized. In SUPPORT, each hand represents a different supporting relation.



$x_0^0 \text{SUPPORT}_{y_0^0}^{x_0^0} \text{SUPPORT}_{x_0^0}^{y_0^0} ++$

3.2. Tense

Tense as an inflectional notion refers to marking a verbal element (a lexical verb or an auxiliary) with a morpheme that indicates the time of the event, action or state expressed by the predicate by placing it with respect to the speech time. Main tenses are past, present and future. A past event is interpreted to have happened before the speech time, a present event overlapping with the speech time and a future

event after the speech time.

TiD does not have a productive tense marker that appears as an inflectional morpheme on a verb. However, time lines are used to indicate the time of the event or the state.

3.2.1. Time lines

A time line refers to an imaginary line between the horizontal plane from a point in front of the signer to a point behind the signer, with the present moment corresponding to a point at the signer's chest. In TiD, the part of the line that is in front of the signer's body represents the future, the one in the back the past. However, more fine-grained distinctions in time are also expressed: far past, near past, near future, and far future. Time information is mainly expressed by lexical tense markers [Lexicon - 3.3.1.] and temporal adverbs [Syntax – 6.4.2.1.] which are also articulated in the relevant parts of the time line.

3.2.2. Tense inflection

There is no systematic tense inflection on verbs.

3.3. Aspect

Aspect as an inflectional notion that refers to marking a verb with a morpheme that expresses the way the internal temporal organization of actions, events, states and processes is perceived. A major categorization of such organization is between the presentation of events as incompleted vs. completed, which roughly correspond to imperfective aspect and perfective aspect respectively. These categories also have sub-categories as described below. It is crucial to note that the aspectual information of an event is independent of its time, namely, an event can, for example, be presented as ongoing not only in the present as in the English example "I am writing a text message right now." but also in the past as in "I was writing a text message (when he walked in the door)".

Some aspectual notions are expressed with lexical aspectual markers [Lexicon - 3.3.2.]. However, a number of aspectual notions are expressed either with modifying the verb form such as its movement or with non-manual morphemes such as mouth gestures or both.

3.3.1. Imperfective

An imperfective morpheme presents an event as not completed. Ongoing or habitual events are, for instance, categorized as imperfective. This section discusses the habitual, continuative/durative and conative aspects of the main aspectual category imperfective.

A common imperfective aspect notion is progressive. This aspectual concept presents an event as ongoing, continuous. This may sometimes be expressed by the repetitive and shortened path movement of the verb.



hn

IX₁ HOUSE GO+++

3.3.1.2. Continuative/durative

Continuative/durative inflection expresses that the event is perceived as continuing or lasting for a long, uninterrupted time. In TĪD, this is expressed with the mouth gesture 'lele', which is articulated by protruding the tongue slightly between the teeth and flicking it up and down repeatedly and quite rapidly. 'lele' most commonly occurs with atelic verbs, verbs that have no inherent endpoint. It is rarer with telic verbs, verbs with an inherent endpoint, and when it occurs with a telic verb, it expresses that the event has occurred repeatedly, that is, has an iterative meaning [Morphology – 3.3.2.1]

'lele'

ix₁ ASSOCIATION PRESIDENT BECAUSE CALL

'They keep calling me since I am the president of the association.'

(Dikyuva et al. 2015: 221)

3.3.2. Perfective

Verbs inflected with an imperfective morpheme are presented as a whole unit without internal structure, and thus, terminated or completed. Perfectivity in TĪD is usually expressed with an accentuated movement of the verb and the mouth gesture 'bn'.



'bn'

EAT

'bn' can only occur with eventive predicates. When 'bn' cooccurs with an atelic verb such as an activity, it expresses the meaning of termination (of the activity):



'bn'

THIS MORNING PLAY

‘I played this morning.’

When it cooccurs with a telic verb, especially an accomplishment, it expresses the meaning of completion (of the event):



'bn'

YESTERDAY EVENING COOK

‘I cooked yesterday evening.’

When a verb is reduplicated to express multiple occurrences of an event, ‘bn’ cooccurs with each articulation of the verb.



'bn' 'bn' 'bn'

YESTERDAY EVENING HOUSE GO GO GO

‘Yesterday evening I kept going to homes.’

‘bn’ also frequently cooccurs with the lexical completive marker FINISH [Lexicon – 3.3.2.].



‘bn’

HUSBAND_{3a} POSS₃ THIS MORNING WORK FINISH IX_{3a}

Further, some subtypes of perfective, namely, iterative, inceptive/inchoative and completive, can also be marked with manual and/or non-manual markers.

3.3.2.1. Iterative

When a (completed) event or an action is repeated within a certain period of time, this may be expressed by an iterative marker. The meaning this marker contributes can be paraphrased as “again and again” or as “repeatedly”. Iterative differs from the habitual [Morphology – 3.3.1.1.] in that iterated events are perceived as countable and temporally bound.

Some verbs in TĪD can be inflected manually to express the iterative aspect. The following examples illustrate the bare, citation form of the verb INVITE, and its iterative inflected form. In the iterative form, the articulation of the verb involves a circular movement.

Citation form



INVITE

Iterative form



$_1\text{INVITE}_{3a} \text{ } _1\text{INVITE}_{3b} \text{ } _1\text{INVITE}_{3c}$

‘They are inviting me all the time.’

3.3.2.2. Inceptive/inchoative

A Grammar of Turkish Sign Language (TİD)

Inceptive aspect denotes the beginning of an action whereas inchoative aspect denotes the beginning of a state. In TİD, inceptive/inchoative is marked with the mouth gesture [i:], which is articulated with an intense mouth pattern consisting of gritting the teeth and pulling back the corners of the mouth.

[i:]

ENTER MUSEUM MUSEUM BEAUTİFUL SEE

‘As soon as I entered the museum I saw the beauties.’

(Dikyuva et al 2015: 220)

The non-manual marker [i:] is used mostly in affirmative clauses.

3.3.2.3. Completive

A completive morpheme specifically marks an event as completed and it usually occurs especially with telic verbs, which have natural endpoints and can thus be perceived to be completed. It is not clear whether the aspectual marker FINISH is a suffix, and thus, a verbal inflection marker, see [Lexicon – 3.3.2.].

3.4. Modality

See [Lexicon - Section 3.3.3.] for lexical expressions of modality.

3.5. Negation

This section describes negative morphemes that attach to verbs.

3.5.1. Regular negation

Regular negation refers to cases where the negated verb is the result of a productive process where a negative morpheme attaches to a verbal stem and the negative morpheme and the verbal stem are clearly identifiable. Irregular negation, on the other hand, refers to negated verbs that are the result of partial or complete suppletion.

3.5.1.1. Manual markers

The negative particle NOT, described in [[Lexicon – 3.11.1](#)], frequently cliticizes to verbs. The following are some examples:



KNOW^NOT



COME^NOT

Note that when NOT functions as a clitic, its movement is reduced, its location is displaced towards that of the verb, and thus, it fuses with the articulation of the verb, in contrast with the way it is articulated as a free morpheme [[Lexicon – 3.11.1](#)].

3.5.1.2. Non-manual markers

The most common non-manual marker of (verbal) negation in TID is a single backward head tilt, ‘ht-b’. It is usually accompanied by eye-brow raise. When this non-manual marker cooccurs with the free morpheme NOT, it spreads only over NOT.



ht-b

SICK^NOT

‘(He) is not sick.’

When it cooccurs with the cliticized NOT, then its scope usually covers NOT and the verbal stem.

ht-b

KNOW^NOT

‘(I) don’t know.’

Another verbal negative form is puffed cheeks. This non-manual occurs with perfective verbs.



pc

COCA-COLA DRINK

‘(I) didn’t drink coca-cola.’

3.5.2. Irregular negation

Irregular negation refers to suppletive forms where it is sometimes impossible and sometimes hard to identify the verbal stem. Compare the affirmative form and the negated form of WANT below. The articulation of WANT involves the thumb touching the chest and short downward repetitive movement.



WANT

WANT.NOT, on the other hand, is articulated with the Little-Finger-Handshape touching the chest and an upward hand twist on the vertical plane.



WANT.NOT

Some of the phonological features of WANT such as its location and handshape are retained in WANT.NOT whereas the upward movement can be attributed to the phonological features of NOT. This is an example of partial suppletion.

A case of total suppletion is the negation of the sign THERE.IS resulting in THERE.IS_NOT.



THERE_IS



THERE_IS_NOT

Another suppletive form is a negated modal particle SHOULD.NOT/CAN.NOT. (See [Lexicon – 3.3.3] for contexts where this particle may be used.).



POSSIBLE



SHOULD.NOT

Information on data and consultants

The descriptions in this chapter are based on the references below. Please see the data and consultant information in these references. The linguistic data in images and video clips that were produced or reproduced for this chapter were provided by a near-native fluent signing consultant who was born and raised in Istanbul.

References

- Aslan Demir, Sema. 2016. Sessizliğin Dili: Türk İşaret Dili'ne dair gözlemler. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 141-156. İstanbul: Koç Üniversitesi Yayınları.
- Dikyuva, Hasan. & Ulrike Zeshan. 2008. *Türk İşaret Dili - birinci düzey*. [Turkish Sign Language - level one]. Nijmegen: Ishara Press.
- Dikyuva, Hasan. 2011. *Grammatical non-manual expressions in Turkish Sign Language (TİD)*. Preston, Lancashire, England: University of Central Lancashire (UCLan) MA thesis.
- Dikyuva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2015. *Türk İşaret Dili dilbilgisi kitabı* [Turkish Sign Language grammar book]. Ankara: TC Aile ve Sosyal Politikalar Bakanlığı.
- Dikyuva, Hasan. 2016. Türk İşaret Dili'nde görünüş kodlayan el-dışı işaretler. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 297-314. İstanbul: Koç Üniversitesi Yayınları.

- Geraci, Carlo, Brandt Strickland, Roland Pfau, Meltem Kelepir & Philippe Schlenker. 2015. Sell or negotiate extracting telicity from sign language. (Paper presented at Formal and Experimental Approaches to Sign Language Theory (FEAST), UPF, Barcelona, May 2015)
- Gökgöz, Kadir. 2009. *Topics in Turkish Sign Language (Türk İşaret Dili – TİD) Syntax: Verb movement, negation, and clausal structure*. Istanbul, Turkey: Boğaziçi University MA thesis.
- Gökgöz, Kadir. 2013. Negation in Turkish Sign Language: The syntax of nonmanual markers in A. Herrmann & M. Steinback (eds.), *Nonmanuals in Sign Language*. John Benjamins Publishing.
- Karabüklü, Serpil. 2016a. A semantic analysis of perfective markers in TİD. (Paper presented at Workshop on Altaic Formal Linguistics 12 (WAFL 12), Central Connecticut State University, May 2016.)
- Karabüklü, Serpil. 2016b. *Time and aspect in Turkish Sign Language (TİD: Manual and nonmanual realizations of 'Finish'*. Istanbul, Turkey: Boğaziçi University MA thesis.
- Kubus, Okan. 2008. *An analysis of Turkish Sign Language (TİD) phonology and morphology*. Ankara, Turkey: Middle East Technical University MA thesis.
- Kubus, Okan & Annette Hohenberger. 2013. Phonology and phonetics of reciprocals in Turkish Sign Language (TİD). In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 101-142. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.
- Kubus, Okan. 2016. *Relative Clause Constructions in Turkish Sign Language*. Hamburg, Germany: University of Hamburg PhD Dissertation.
- Özyürek, Aslı, Inge Zwitserlood & Pamela M. Perniss. 2010. Locative expressions in signed languages: A view from Turkish Sign Language (TİD). *Linguistics* 48(5), 1111-1145.
- Sevinç, A. Müge. 2006. *Grammatical relations and word order in Turkish Sign Language TİD*. Ankara, Turkey: Middle East Technical University MA thesis.
- Strickland, Brent, Carlo Geraci, Emmanuel Chemla, Philippe Schlenker, Meltem Kelepir & Roland Pfau. 2015. Event representations constrain the structure of language: Sign language as a window into universally accessible linguistic biases. *National Academy of Sciences*. DOI:10.1073/pnas.1423080112.
- Zeshan, Ulrike. 2003. Aspects of Türk İşaret Dili (Turkish Sign Language). *Sign Language & Linguistics* 6. 43- 75.

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Chapter 4. Nominal inflection

Number (plurality/singularity) is a typical nominal inflectional category. TİD does not have productive singularity or plurality markers. However, certain signs can be pluralized with reduplication. This is described in Morphology - 4.1. Other nominal inflectional processes observed in TİD are localization and distribution. These are explained in Morphology - 4.2.

4.1. Number

One common way of expressing multiple entities is to use numerals and quantifiers such as MANY, TOO_MANY (see [Syntax – 4.4.] and [Lexicon – 3.10.2.]). Another common way is to use classifiers (alone or together with the nouns) ([Morphology - 5]) which can be reduplicated or morphologically modified to include path or circular movements to express plurality.

As for the plural inflection of nouns themselves, TlD does not have a productive way of inflecting all nouns for plurality, hence, it does not have a plural affix.

4.1.1. Manual marking

Even though it is not very common, nouns can be marked for plurality with reduplication. There are two types of plural reduplication: simple reduplication and sideward reduplication.

In simple reduplication, the movement of the noun sign is simply repeated in its canonical signing space.



DAY_{pl}
'days'

(r.f. Kubus 2008: 64)

In sideward reduplication, a noun is repeated by displacing it towards one side of signing space.



TABLE_{pl}
'tables'

When the sign is body-anchored as in MAN, then the signer moves his head and body from the contralateral to the ipsilateral side and the reduplication is achieved by at least three head nods that accompany this movement.



MAN_{pl}
'men'

Sideward plural reduplication is different from localization [Morphology – 4.2.] in that a sideward reduplicated noun is not interpreted as expressing multiple entities being located next to each other.

Some nouns cannot be reduplicated. For instance, BOOK which is two-handed and is signed in the central signing space cannot be reduplicated.

4.1.2. Non-manual marking

As described in [Morphology – 4.1.1.], the reduplication of a body-anchored noun such as GIRL or MAN can be accompanied by head nods; each instance of head nod co-occurs with each reduplication.

4.2. Localization and distribution

Localization refers to signing a sign in a certain location in signing space, usually, not in central space where the citation form of the sign would be articulated but in the lateral space in order to express that the referent of the sign is in a certain location. For instance, the following example is interpreted as the house being at a certain location x. The signer then may point back to this location to express that the referent is “the house at location x”. This is a case of inflection because the form of the noun in this case is different from its form in its uninflected articulation, namely, the noun is inflected with a locus morpheme.



PARK_a aNEXT_TO_b GROCERY_STORE_b IX_b THERE_IS IX_b CHOCOLATE BUY
'There is a grocery store next to the park. Buy chocolate there.'

Spatial distribution is a combination of localization and pluralization via reduplication to express multiplicity of entities at different locations. This is possible only with classifiers. See [Morphology – 5].

Information on data and consultants

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References

- Açan, Zeynep. 2007. *A linguistic analysis on basic sentence types in Turkish Sign Language (TİD) with reference to non-manual activity*. Ankara, Turkey: Hacettepe University PhD dissertation.
- Dikyuva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2015. *Türk İşaret Dili dilbilgisi kitabı* [Turkish Sign Language grammar book]. Ankara: TC Aile ve Sosyal Politikalar Bakanlığı.
- Perniss, Pamela M. & Aslı Özyürek. 2004. How many pots in the window sill? Number and quantification in German and Turkish Sign Languages. (Crosslinguistic perspectives in *sign language research workshop, German Linguistic Society Conference*, Mainz, Germany.)
- Zwitserslood, Inge, Pamela M. Perniss & Aslı Özyürek. 2012. An empirical investigation of multiple entities in Turkish Sign Language: Considering the effects of modality? *Lingua* 122(14), 1636-1667.
doi:10.1016/j.lingua.2012.08.010
- Zwitserslood, Inge, Pamela Perniss & Aslı Özyürek. 2013. Expression of multiple entities in Turkish Sign Language (TİD). In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 273-302. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.

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Chapter 5. Classifiers

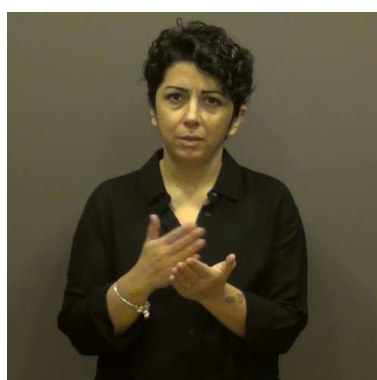
It is common in sign languages to depict salient iconic aspects of animate or inanimate entities by manual articulation, in particular, by handshape. Grammatical categories that express entities by such means are called classifiers. In this chapter, classifiers in TİD are explained and exemplified mainly under two categories: predicate classifiers and size and shape specifiers (SASS, also known as adjectival classifiers).


5.1. Predicate classifiers

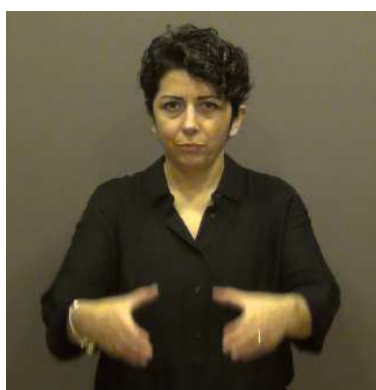
'Predicate classifiers' are classifiers that usually occur with verb stems or locative predicates. They are locative constructions and they contain path motions of single and multiple entities. There are three types of predicate classifiers: entity classifiers, bodypart classifiers, and handle classifiers.

5.1.1. Entity classifiers

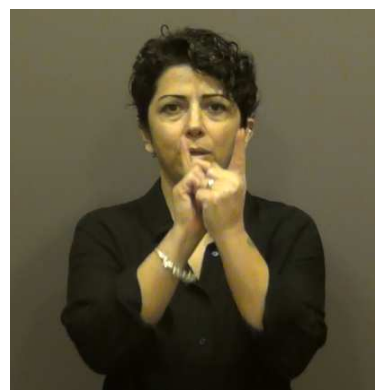
Entity classifiers (or whole entity classifiers/semantic classifiers) may refer to inanimate or animate objects and they are iconically or partially iconically motivated by the shape of the entities. Some examples of whole entity classifier handshapes that are common in TĪD are the Flat-Handshape (for objects with smooth flat surfaces, e.g. a sheet of paper or a book), the Cup-Handshape (for long and/or thick cylindrical objects, e.g. a cup or a tree), and the 1-Handshape (for long, thin objects, e.g. a pen or a person):



CL(): 'turn_the_notebook'



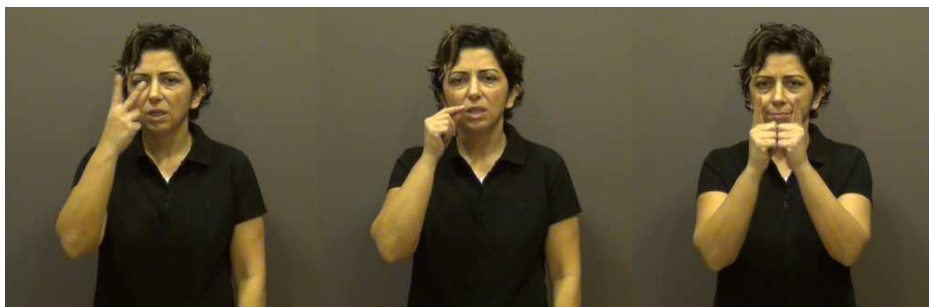
CL(): 'trunk'




CL(): 'come_across'

Entity classifiers can occur in verbs that express a motion of a referent, the localization of this referent in space, or its existence in space, and they are combined with the motion component of the verb. They may be used for describing various entities in a static situation in TĪD: upright human or animal figures, car, truck and plane figures, book and notebook figures, glass and cup figures, armchair figures, round middle-size fruit figures.

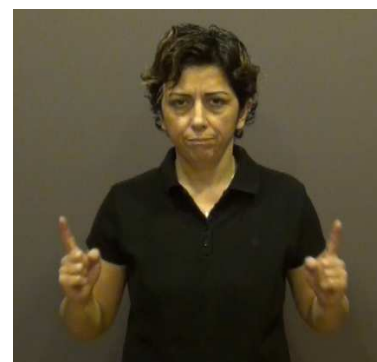
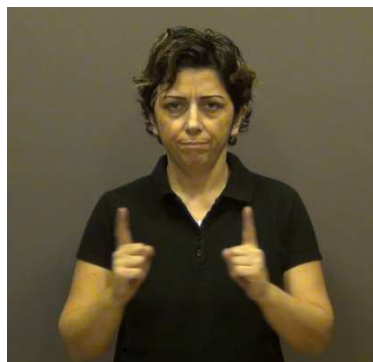
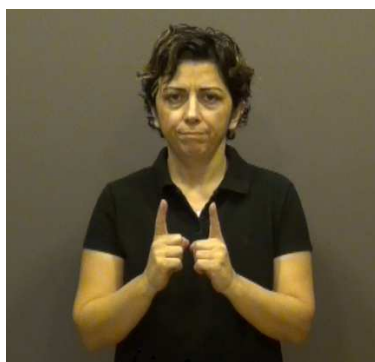
In the figure below, the signer uses two instantiations of the 1-Handshape after she signs TWO and MAN. What the 1-Handshape represents is the body of the referent, which, in this context, indicates two men in an upright position. The orientation of the fingers represents the men's physical orientation towards each other. The fact that the classifier handshapes are still, indicates that the men are not moving. Moreover, the positions of the classifiers in the signing space gives an indication of the proximity of the two men from the perspective of the signer.






TWO MAN CL():‘man_stand’
 ‘Two men are standing face to face.’

(r.f. Dikyuva et al., 2017:160)

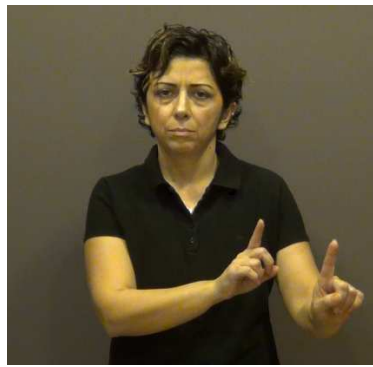
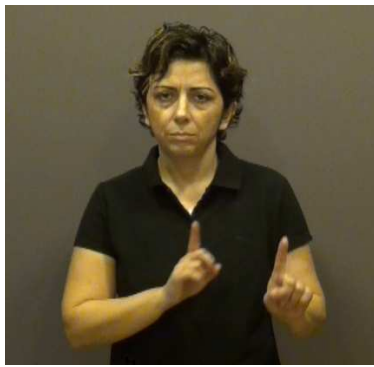
Entity classifiers not only depict static entities, but they can also be used for expressing dynamic states of human and animal figures. The signer in the figure below uses the same 1-Handshape as in the previous figure (after she signs TWO and MAN). The position of the classifiers, the orientation of the hands with respect to each other are the same as the ones in the previous figure. However, the classifiers are moving towards each other in the following utterance, meaning both referents are involved in a movement and they are approaching each other.




(MAN TWO)CL():‘man_stand’ CL():‘man_stand’ CL():‘man_stand’
 ‘Two men are approaching each other.’

(r.f. Arık 2013: 6)

The following figure exemplifies yet another case where the same classifier is used. This time, the two referents are moving in the same direction, placed one after the other, instead of moving towards each other. The difference in the direction of the movement and the orientation of the hands results in the meaning ‘a man is following another man’.

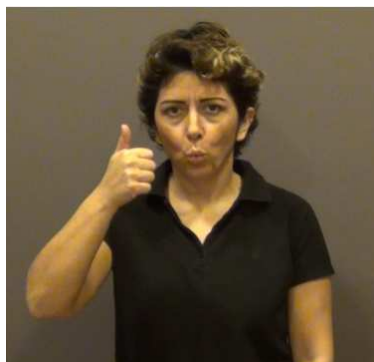
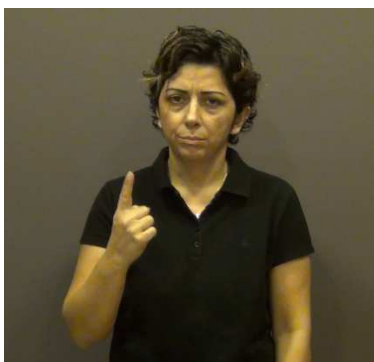


MAN TWO CL(

(r.f. Arık 2013: 6)

The 1-Handshape as shown in the previous figures is mostly used to refer to human beings. The plural information of the referents is maintained through using the relevant number of fingers to depict the number of human entities, e.g. 3-Handshape on the proximal hand and V-Handshape on the distal hand would mean ‘three men are following (another) two men’.

There is a subtype of entity classifiers in TİD which is referred to as honorific classifiers. They share the same characteristics with entity classifiers in terms of the relationship between the handshape and the referent. However, honorific expressions might be used to refer to people of higher status or they indicate politeness, formality, social distance and respect. There is an honorific person classifier which is distinguished from the neutral person classifier in TİD in terms of its handshape as shown in the following figure.





Neutral and honorific person classifiers

(r.f. Zeshan, 2002:265)

Entity classifiers in TİD are not used only for human beings but also for animals, vehicles and geometrical objects.



MINIBUS

CL():‘vehicle_come’ CL():‘vehicle_stop’

(r.f. Kubuş, 2008: 96)

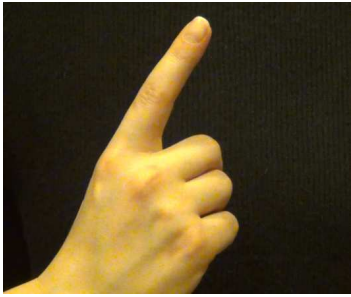
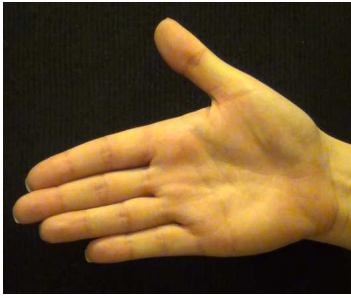
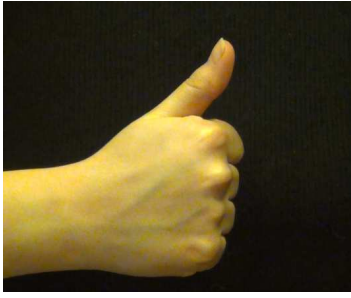


Furthermore, instruments in TİD could be expressed by entity classifiers through representing the shape of the object or by handle classifiers which show the manipulation of the instrument by the hand. Below is an example of two instruments expressed by the same entity classifier.

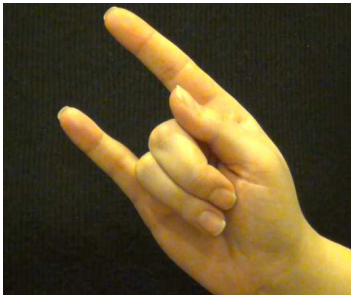

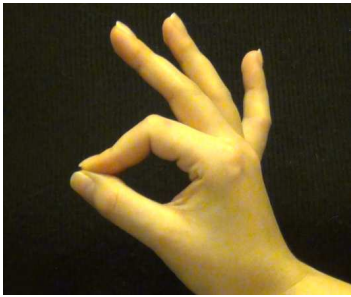
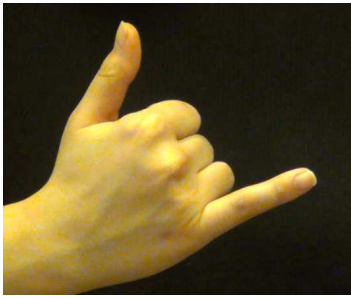
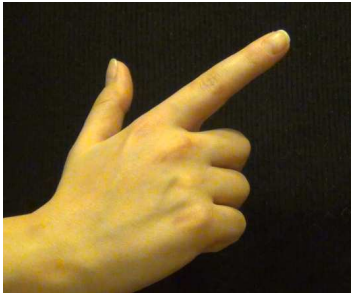
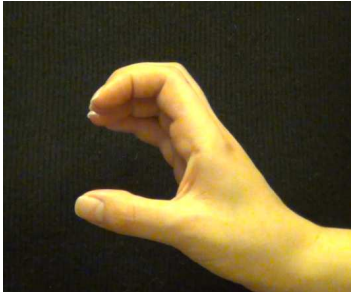


MIXER HAIR_DRYER

(r.f. Özkul, 2013:72)

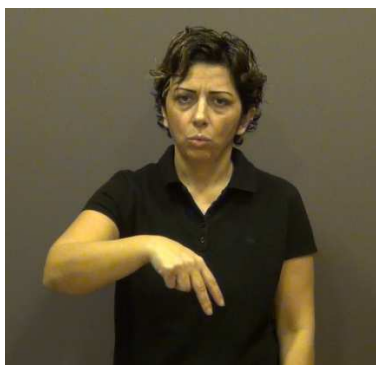
The following table lists the entity classifier handshapes and their examples.


Figure	Handshape name	Examples
	1-Handshape	long-thin objects, human-beings (non-honorific)
	Flat-Handshape	flat objects, surfaces, vehicles (cars, minibuses, bicycles), rectangular static objects
	Thumb-Handshape	honorific human-being, and bottle or alcohol, drinks
	5-Handshape	plural non-honorific human-beings
	Wide-O-Handshape	cylindrical objects (i.e. TELESCOPE)

	Horn-Handshape	square objects (mainly used with 1-handshape) (i.e. POOL)
	Claw-Handshape	small spherical objects
	O-Handshape	small round objects (coins)
	Little+Thumb-Handshape	airplanes
	L-Handshape	objects and instruments with extensions (i.e. HAIR_DRYER and MIXER)
	Cup-Handshape	cylindrical objects

5.1.2. Bodypart classifiers

The handshapes of bodypart classifiers refer mostly to limbs or legs. However, they sometimes refer to the head of an animate being or to the mouth, or even to the eyelids. Hooked V-handshape (together with the V-handshape) and the Flat-hand are among the handshapes which are used to represent limbs, legged objects and the whole body of the referents.



CL(): 'man_stand'
'A man is standing.'

(Kubus, 2008:103-104)


Four-legged animals in TİD do not have specific classifier handshapes. Furthermore, similar classifiers are used to represent animals without legs (worm, snake), two legged animals (chicken), human beings, and many legged-animals (spider). The classifier handshape used for worms and snakes is the index finger indicating the whole body of the animal, which makes the classifier an entity classifier. 5-handshape, the hooked extended flat hand, the 4-handshape and the 8-handshape are used to represent spiders in TİD.


TİD makes use of different body parts of the same referent as classifiers depending on the movement of the referent. In the following example, the movement of the cow is represented by different classifiers.



a-d COW zigzagging through a course with flags


a.

CL():'legged_object(cow)'

b. CL():'limb_with_a_zigzagging_movement'

c. CL():'cow_horn'

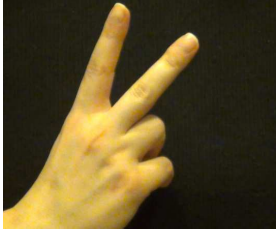
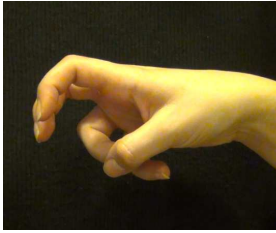
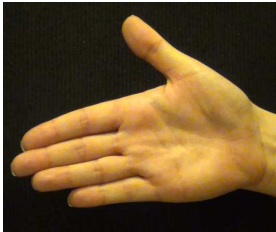


d.

CL():'limb_with_a_zigzagging_movement'

(Kubus, 2008:104)

In this example, the signer uses both the whole body classifier and the limb classifier to represent how a cow zigzagged through the obstacles. The movement begins with walking represented by V-handshape and the signer changes the classifier and represents the zigzag movement through the use of limb classifier. Moreover, TID makes use of different bodypart classifiers to express manner and path verbs. Figures in (a) and (c) above show the path of the movement through locations whereas Figure (b) and (d) show the manner of the cow's movement through the inner movement of the hand.

The following table provides a list of bodypart classifier handshapes and their examples.


Figure	Handshape name	Examples
	V-handshape	standing or walking human being
	8-handshape	animals with many legs
	Flat-hand	the body of the animals without legs
	4-handshape	animals with many legs
	5-handshape	animals with many legs

The list of bodypart classifier handshapes and their examples (r.f. and adapted from Kubus 2008)

5.1.3. Handle classifiers

Handle (or handling) classifiers represent only the part of the object that is handled, for example, the stem of a flower, the handle of a basket, or the handle of a knife.




CL(): 'give_cigarette' (O-handshape as a handle

classifier)

(r.f. Kubus, 2008: 97)

In the figure above, the left hand of the signer in O-handshape indicates that the agent is holding the cigarette and giving it to someone else. In this example, it is the object/theme being manipulated and is expressed through a handle classifier. Handling classifiers are also used to represent instruments (see the figure below). They show how the instrument is manipulated or handled by the hand.




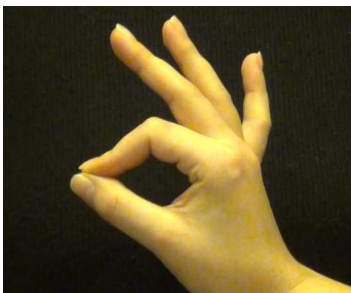

CL (): 'grate_carrot'

(Özkul 2013:77)

In this example, the right hand of the signer indicates that the carrot is being handled and moved up-and-down across the grater. The left hand of the signer represents the grater which is being held still. This figure also shows that the same type of classifier could be used simultaneously on both hands to indicate different handled objects.

The following table provides a list of attested handle classifier handshapes and their examples in TİD.

Figure	Handshape name	Examples
--------	----------------	----------

	Claw-Handshape	small spherical objects
	Fist-Handshape	handling objects (bags, buckets, baggage) and vehicles (i.e. drive)
	Covered-T -andshape	handling objects (tooth brush, a knife, hammer)
	O-Handshape	holding small objects (cigarette, nail, needle)
	Curved-3-Handshape	holding round objects such as round light switches

The list of handle classifier handshapes and their examples (r.f. and adapted from Kubus 2008 and Dikyuva et al 2016: 164)

5.2. Size-and-Shape Specifiers (SASS)

As the name suggests, Size-and-Shape-Specifiers (SASS) express the size and shape of entities. They are used to specify nouns of different shapes such as a table, a box, a tent, a book, and a ball and of different sizes such as small, large, or very big. While entity classifiers can be partially iconic, SASSs are always iconic.

SASS come in two types: static SASS and tracing SASS. Static SASS are handshapes that indicate classes of objects with a particular shape. Often the handshape reflects (part of) the outline of the object. The commonly used handshapes for static SASSes in TİD are the C-Handshape or U-Handshape. The following is an example of static SASS:



BOX

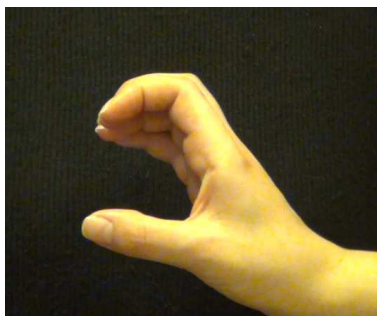


SMALL^BOX

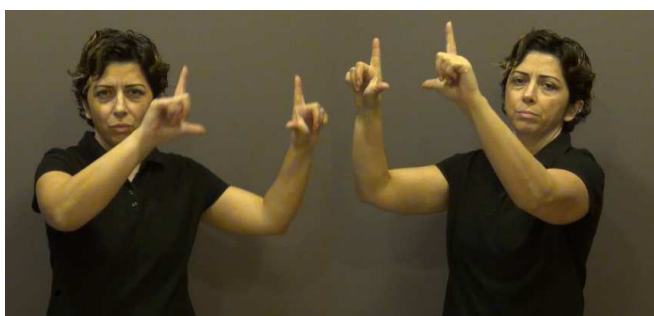



LARGE^BOX

The tracing SASS involves a movement component by which the outline of the object is traced. There is a distinction among handshapes according to the dimension they refer to. Although the 1-handshape is mostly used to specify different shapes, including 2-D geometrical shapes, the ClawHandshape or Flat-Handshape are generally used to represent 3-D Shapes. Cup-Handshape may refer to round objects such as field glasses or cups:



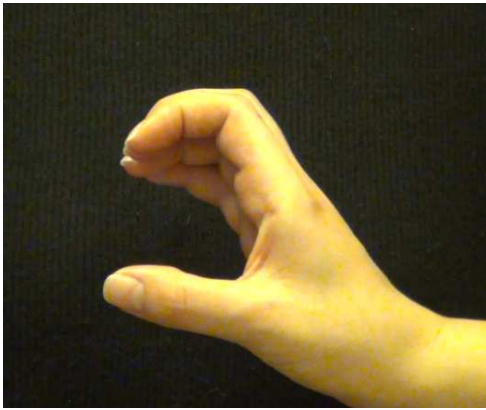
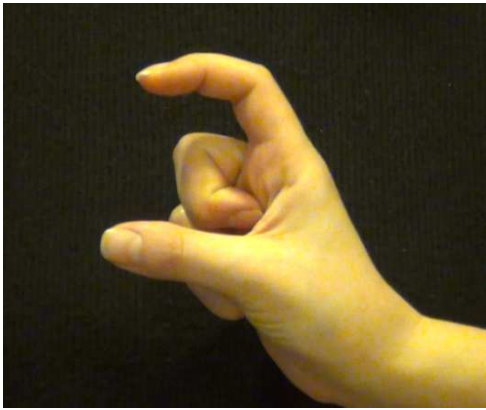
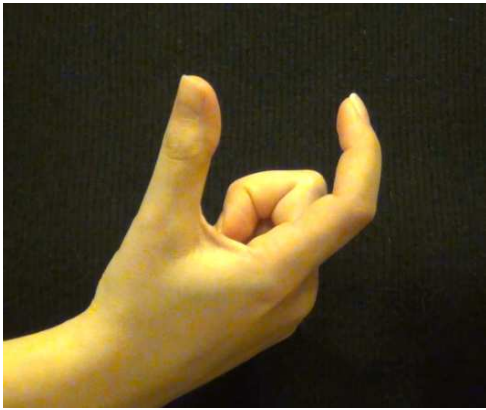
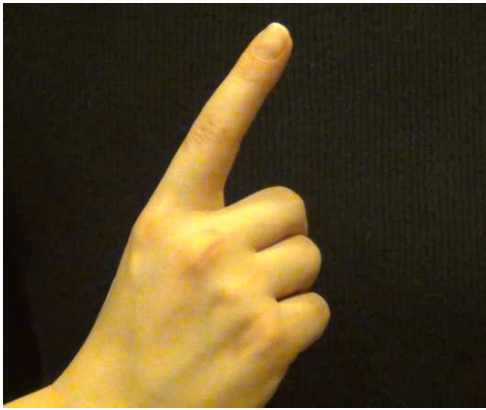
An SASS could be referring to the partial shape of an entity or the whole shape. For instance, in the figure above, the Cup-Handshape refers to a cup. On the other hand, the four sides of a framework are expressed through the L-handshapes produced on both hands in the figure below. The SASS represents the edges and we understand that it is a square or a rectangular shaped object.

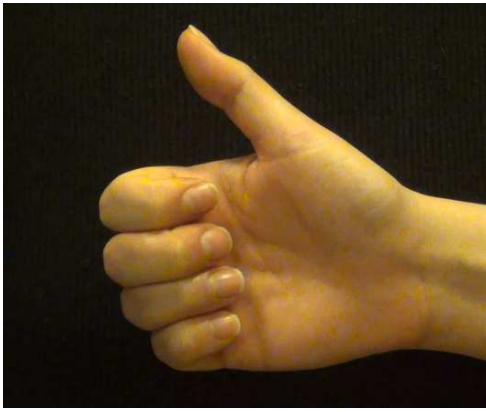
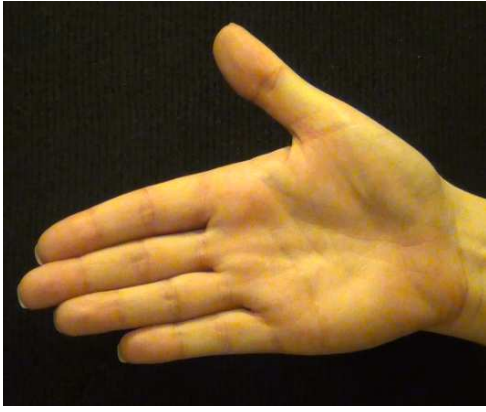
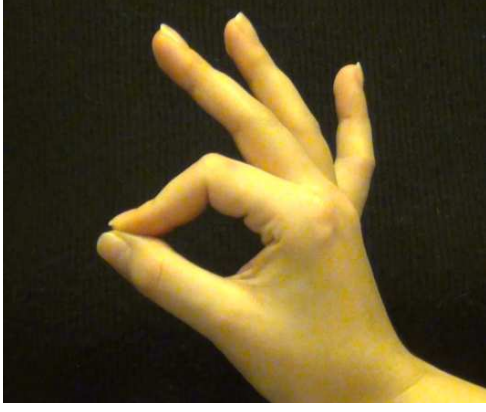



FRAME CL(): 'frame_on_the_wall'
 'The frame is on the wall.'

O-handshape, C-handshape and 1-handshape are other handshapes that are commonly used to form adjectival classifiers (SASSes).

The following table provides a list of SASS handshapes and their examples:

Figure	Handshape name	Examples
	Cup-Handshape	
	C-handshape	
	U-handshape	
	1-handshape	2-D geometrical shapes

	Claw Handshape	3-D Shapes
	Flat-Handshape	3-D Shapes
	O-handshape	
	L-Handshape	rectangular and square objects (i.e. frames)

The list of SASS handshapes and their examples (r.f. and adapted from Kubus 2008)

Information on data and consultants

The descriptions in this chapter are based on the references below. Please see the data and consultant

information in these references. The linguistic data in images and video clips that were produced or reproduced for this chapter were provided by a near-native fluent signing consultant who was born and raised in Istanbul.

References

- Arık, Engin. 2013a. Türk İşaret Dili'nde sınıflandırıcılar üzerine bir çalışma. *Bilig* 67. 1-24.
- Arık, Engin. 2015. Expressing manner, location, and orientation in manner-only motion events in Turkish Sign Language. *Trames: A Journal of the Humanities and Social Sciences* 19(3). 205-220.
- Dikyuva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2015. *Türk İşaret Dili dilbilgisi kitabı* [Turkish Sign Language grammar book]. Ankara: TC Aile ve Sosyal Politikalar Bakanlığı.
- Dikyuva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2017. *Turkish Sign Language grammar*, 248-262. Ankara: The Republic of Turkey Ministry of Family and Social Policies.
- Kubus, Okan. 2008. *An analysis of Turkish Sign Language (TİD) phonology and morphology*. Ankara, Turkey: Middle East Technical University MA thesis.
- Özkul, Aslı. 2013. *A phonological and morphological analysis of instrumental noun-verb pairs in Turkish Sign Language*. İstanbul, Turkey: Bogazici University MA thesis.
- Özyürek, Aslı, Inge Zwitserlood & Pamela M. Perniss. 2010. Locative expressions in signed languages: A view from Turkish Sign Language (TİD). *Linguistics* 48(5), 1111-1145.
- Özyürek, Aslı & Pamela M. Perniss. 2011. Event representations in signed languages. In J. Bohnemeyer, & E. Pederson (eds.), *Event representations in language and cognition*, 84-107. New York: Cambridge University Press.
- Zeshan, Ulrike. 2002. Sign Language in Turkey: The story of a hidden language. *Turkic Languages* 6 (2). 229-274.
- Zwitserlood, Inge, Pamela Perniss & Aslı Özyürek. 2013. Expression of multiple entities in Turkish Sign Language (TİD). In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 273-302. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.

Authorship information

Aslı Özkul

PART 5 Syntax

The major syntactic constituents of a language are clauses and phrases. This part of the grammar is organized into six chapters. The first three chapters focus on the properties of clauses. The first chapter describes how main clause types (declarative, interrogative, imperative, exclamative, and negative) are formed in TlD. The second chapter delves into the internal structure of clauses and describes predicate types and their arguments, word order, and syntactic phenomena such as clausal ellipsis and pronoun copying. The third chapter moves to the properties of complex clauses and describes the various strategies that TlD employs for coordination and subordination of clauses. The fourth, fifth, and sixth chapters describe the internal structure of three remaining major syntactic categories, namely the noun phrase, the adjective phrase, and the adverb phrase.

Chapter 1. Sentence types

Sentence types are commonly categorized as declaratives, interrogatives, imperatives, and exclamatives. This chapter explains how these different sentence types are formed in TlD. Sections for each sentence type list the manual and non-manual expressions that are found obligatorily or optionally in that clause type and describe the syntactic properties of its constituents.

1.1. Declaratives

Declarative sentences are typically used to make statements and assertions. There are no special manual signs for declaratives and there are no non-manual markers that spread over the entire sentence to specifically mark it as declarative. However, the non-manual markers that mark other sentence types such as interrogatives are absent in declaratives and this facilitates the perception of a sentence as a declarative.

1.2. Interrogatives

Interrogative sentences are typically used to ask questions. There are three types of interrogatives: polar, alternative, and content. Non-manual markers play an important role in interrogatives in not only distinguishing them from other sentence types but also differentiating between different interrogative sub-types. However, which specific non-manual markers fulfill these functions is subject to dialectal variation. Moreover, some non-manual markers are more prominent, and thus easier to detect such as raised eyebrows whereas others are more subtle such as a slight backward head tilt (chin up) or a single slight head nod.

The position of the head distinguishes interrogatives from declaratives. In some dialects the head is forward in *both* polar and content questions whereas in some others while the head is forward in polar questions, it is backward in content questions. There are also other non-manual markers such as brow raise, head nod and head shake, which are described below. The spreading domains of these non-manual markers vary.

1.2.1. Polar interrogatives

Polar interrogatives are usually used to ask questions whose answers are expected to be either ‘yes’ or ‘no’. They have non-manual markers that distinguish them from content questions and these non-manual markers spread over the question completely or partially. Polar interrogatives can also have question particles.

Here is an example of a polar interrogative. Here and in the rest of the sub-sections of 1.2.1., the non-manual marker notation “y/n” refers to the bundle of non-manual markers in polar interrogatives.

y/n

UNDERSTAND IX₂

‘Do you understand?’

1.2.1.1. Non-manual markers in polar interrogatives

Polar interrogatives are usually articulated with forward body lean, head forward (chin down), raised, or lowered eyebrows, widened eyes, eye gaze directed to the addressee and a single or slightly repetitive head nod. Some of these non-manual markers are represented in the example below.



bl-f

ht-f

re

hn

UNDERSTAND IX₂

‘Do you understand?’

In a relatively longer question, the spreading domain of these different non-manual markers may differ. Head forward and raised eyebrows tend to spread over the entire question whereas repetitive head nod tends to occur at the end of the question, usually spreading only over the predicate and the sign(s) following it, for instance, the question particle or a subject pronoun.

When a polar interrogative is negated, this creates a potential conflict between head forward (chin down) which marks the polar interrogative and backward head tilt which marks negation. In those cases, even though the question starts with head forward, this non-manual marker is replaced with (a single) backward head tilt when the predicate and the negative sign NOT are articulated.

_____ h-f ht-b

_____ re

ADANA EVER GO^NOT

‘Haven’t you ever been to Adana?’

(Dikyuva et al., 2015: 273)

In the following sections, the non-manual markers are provided in the examples only if they are crucial to the description of the topic.

1.2.1.2. Word order changes between declaratives and polar interrogatives

There are no crucial word order [Syntax – 2.3.] changes between declaratives and polar interrogatives. However, it is frequently the case that the subject pronoun occurs at the end of the question, especially when the subject of the interrogative is the addressee/2nd person.



IX₂ SPORTS DO IX₂

‘Do you do sports?’

When the question is negated and the subject pronoun occurs question-finally, the pronoun follows the negative

marker NOT [Syntax – 1.5.].



IX₂ BREAKFAST MAKE^NOT IX₂

‘Have you not had breakfast?’

1.2.1.3. Interrogative particles

Polar questions may have interrogative (question) particles. The form, the frequency of use, and the optionality/obligatoriness of this particle depends on the signer.

A particle that some signers use is a manual sign articulated with a curved index finger resembling the graphic sign of a question mark in orthography. This sign can be represented as Q_MARK or as Q_PART. We adopt the gloss Q_PART, referring to its function in the question.



Q_PART

Some signers use this question particle to mark the focus [Pragmatics – 4.1.] of the question. In the dialect of these signers, the particle occurs question-finally when the entire question is the focus as in ‘Did you meet the president?’ or after the phrase which is the focus of the question. The latter case can be translated into English either with stress as in ‘Did YOU meet the president?’ or with clefting as in ‘Is it you who met the president?’. The following is an example where the entire question is the focus:

IX₂ YESTERDAY ANKARA GO Q_PART

‘Did you go to Ankara yesterday?’

The examples below show how the particle can be used by some signers to focus different constituents. The position of the article in the question is after the sign which is the focus.

IX₂ YESTERDAY Q_PART ANKARA GO

‘Was it yesterday that you went to Ankara?’

IX₂ YESTERDAY ANKARA Q_PART GO

‘Was it Ankara that you went to yesterday?’

CHILD Q_PART CHOCOLATE EAT

‘Was it the child who ate the chocolate?’

CHILD CHOCOLATE Q_PART EAT

‘Was it the chocolate that the child ate?’

(adapted from Makaroğlu 2012: 54-55)

The distribution of Q_PART in the examples above may be an influence of Turkish where the polar question particle *mi/mu* occurs either sentence-finally or to the right of the focused constituent.

In this dialect, when the Q.PART is not used, the focused phrase occurs at the end of the question. In the following

example, PICNIC is the focused phrase.

TOMORROW GO PICNIC

‘Is it to the picnic you will go tomorrow?’

(Makaroğlu 2012: 57)

An alternative is to double the focused phrase, i.e. to have two copies, one in its basic position and one at the end of the question, see [Pragmatics – 4.1.5] for focus doubling.

TOMORROW PICNIC GO PICNIC

‘Is it to the picnic you will go tomorrow?’ (Makaroğlu 2012: 57)

Mouthing of the Turkish question particle *mi/mu* is also possible: this mouthing occurs when the signer mouths the entire question, and the mouthing of *mi/mu* accompanies the Q_PART if it is present.

_____ y/n

/ucuz mu/

CHEAP Q_PART

‘Is it cheap?’

In the absence of Q_PART, mouthing of *mi/mu* usually accompanies the final manual sign.

_____ y/n

/ucuz mu/

CHEAP

‘Is it cheap?’

Finally, some elderly signers use a question marker which is articulated by the index finger touching the nose and then moving downward in a straight line, which is derived from an older form of the question word WHAT.

1.2.2. Alternative interrogatives

Alternative interrogatives provide alternatives to the addressee to choose from. These are usually in the form of a polar interrogative as in the English example ‘Is he young or old?’ and thus, in TİD an alternative interrogative may be articulated with the non-manual markers of polar interrogatives. Body leans to opposite directions accompany each alternative.

<u> </u> bl-r	<u> </u> bl-l
<u> </u> y/n	<u> </u> y/n
<u>/pahalı mı/</u>	<u>/ucuz mu/</u>
EXPENSIVE	CHEAP

‘Is it expensive or cheap?’

When the manual signs in an alternative question are articulated with the non-manual markers of a content question, the question can be interpreted as ‘Is it a girl or a boy? Which one?’, namely as a content question.



<u> </u> wh
GIRL BOY

‘Is it a girl or boy? (Which one?)’

Sometimes, the question can contain an overt question sign such as WHAT/WHICH.



<u> </u> wh
GIRL BOY WHICH

‘Is it a woman or a man? Which one?’

1.2.3. Content interrogatives

Content interrogatives are usually used to ask questions with question words such as *who*, *what*, *where* etc. Here and in the rest of the sub-sections of 1.2.3., the non-manual marker notation “wh” refers to the bundle of non-manual markers in content interrogatives.

wh
POSS₂ TEACHER WHO
‘Who is your teacher?’

wh
WHERE WORK IX₂
‘Where do you work?’

1.2.3.1. Non-manual markers in content interrogatives

As with polar interrogatives, content interrogatives are also co-articulated with a bundle of non-manual markers. The most common non-manual markers are forward lean of the head, shoulders and the upper torso, non-neutral eyebrow position (raised, lowered, or furrowed eyebrows), slight backward tilt of the head (chin up) and a very small, fast, single or repetitive headshake.



fbl
ht-b
hs
fe
WHERE WORK IX₂
‘Where do you work?’

The non-manual markers and their spreading domains are subject to variation. Non-neutral eyebrow position exhibits the highest variation: A content interrogative may be articulated with raised or lowered brows, with variation among signers as well as within a single signer. Moreover, some signers retain neutral eyebrow position in this type of interrogatives.

Non-manual markers also differ in their prominence. As can be seen in the figure above, whereas the forward lean of the head, shoulders and the upper torso and the raised and furrowed eyebrows are very prominent, the others are more subtle: even though the shoulders are moved forward, the head is slightly tilted backwards and the chin is tilted slightly upwards contrasting with the forward head tilt and the downwards movement of the chin in polar interrogatives. The headshake is also small, short and tense, and it is more subtle than the headshake in negatives [Syntax – 1.5.2.1.] which is larger and slower.

The spreading domains of these non-manual markers also differ. In the utterances of some signers, whereas forward body lean, head backward (chin up) and brow raising/lowering spread over the entire question, headshake occurs with the question sign and may spread over an adjacent sign, and forward body lean may occur towards the end of the question. The following is an example.

re
ht-b
fbl
hs
WHERE WORK IX₂

Moreover, if there is a topic [Pragmatics – 4.2.], these non-manual markers may exclude the topic. In the following example, the phrase VACATION AFTER ‘after the vacation’ is the topic of the question and it is excluded from the spreading domain of the non-manual markers of the content question.



_____ wh

VACATION AFTER WHAT DO IX₂

‘What are you doing after the vacation?’

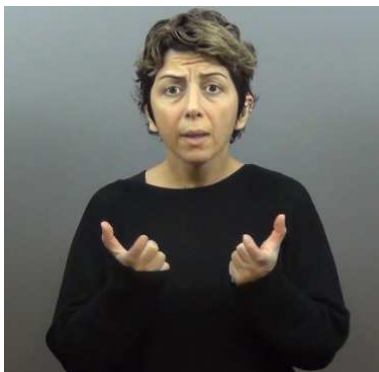
1.2.3.2. List of wh-signs

The following signs are a subset of signs used to question different types of constituents. The signs for each function may vary depending on the region and the generation the signer belongs to. The examples below were elicited from a signer who was born and has lived in Istanbul.

The question signs cooccur with forward lean of the head, shoulders and the torso, raised or lowered or furrowed eyebrows, slight backward tilt of the head/chin and a very small, short head shake. WHAT below is an underspecified question sign, that is, it can be used as a counterpart of *what*, *how*, and *which*.



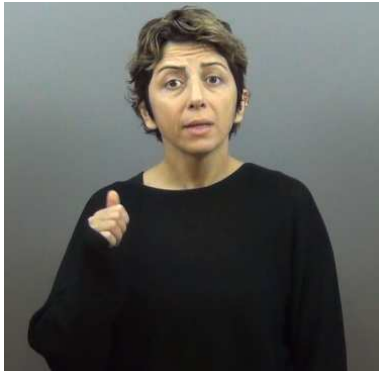
WHAT/HOW/WHICH



WHERE



HOW_MANY



WHEN/HOW_LONG



WHY

Also, a special sign exists for the meaning ‘which grade’, WHICH_GRADE. As the example below shows, this sign is articulated with the movement of HOW_MANY incorporated into the sign GRADE.



WHICH_GRADE

The majority of the question signs, namely, WHERE, WHY, HOW_MANY/MUCH and WHEN, are phonologically similar to the signs of the common nouns PLACE, REASON, NUMBER, and DAY respectively. For instance, PLACE and WHERE are both two-handed signs [Phonology – 1.4] and have the same handshape [Phonology – 1.1.1.]. Whereas PLACE is articulated with a single downward movement and with no non-manual markers, WHERE is articulated without downward movement but with a tremolo movement which can be either up-down or inward-downward and with headshake. A similar difference in movement is observed with the pair DAY and WHEN. The difference between NUMBER and HOW_MANY/MUCH, on the other hand, is only in the absence vs. presence of the non-manual markers. NUMBER is articulated with an opening of the hand and movement towards the contralateral side. Articulation of HOW_MANY/MUCH additionally involves a single head-shake towards the ipsilateral side. Similarly, the only difference between REASON and WHY is the non-manual markers. Finally, PERSON and WHO share only the handshape.



PERSON



WHO



PLACE



WHERE



REASON



WHY



NUMBER



HOW_MANY/MUCH



DAY



WHEN



PERSON



WHO

Complex wh-phrases such as ‘what color’ or ‘which book’ are formed with a common noun [Lexicon – 3.1.1.] and with the basic question sign WHAT/WHICH/HOW functioning as a wh-determiner. The common noun may precede or follow the question sign. See also [Syntax – 1.2.3.6.]. In the following, the complex wh-phrase is WHAT BRAND with the wh-determiner WHAT and the common noun BRAND.

_____ wh
POSS₂ PHONE WHAT BRAND
‘What brand is your phone?’

WHEN is used only in the sense of ‘what day’ or ‘how many days/months/years’. When asking ‘what time?’, the question does not contain a question sign but only the manual sign TIME/HOUR and the wh-non-manual markers. See [Syntax – 1.2.3.3.]

1.2.3.3. Content interrogatives without wh-signs

It is possible to utter a content interrogative without a question sign. The fact that this is a content interrogative is expressed by the non-manual markers and what is questioned (hour/time, age etc.) is expressed by the corresponding manual sign.



_____ wh
IX₂ HOUR HOME GO IX₂
‘What time did you go home?’



_____ wh
POSS₂ SON AGE
‘How old are you?’

1.2.3.5. Position of wh-signs

There are three common configurations of content interrogatives: in the first one, the question sign occurs in its basic (i.e. in-situ) position, namely, if it questions the subject, the subject position, if it questions the object, the object position etc.

WHO TRASH THROW

‘Who threw the trash?’

IX₂ **WHAT** BUY

‘What did you buy?’

IX₂ YESTERDAY **WHY** WORK COME^NOT

‘Why didn’t you come to work yesterday?’

In the second configuration, a question sign occurs twice in the question (doubling): with one copy in the basic position and one copy in the question-final position, see [Syntax – 1.2.3.7].

In the third one, the question sign occurs in the sentence-final position.

NOW DO **WHAT**

‘What will be done now?’

(Dikyuva et al. 2015: 274)

SURGERY POSS₁ SIGN **WHO**

‘Who will sign my surgery (papers) now?’

(Dikyuva et al. 2015: 277)

A less common configuration is where a question sign occurs question-initially.

WHEN IX₂ GO

‘When are you going to go?’

(Makaroğlu, 2012: 85)

1.2.3.6. Split between the wh-sign and its restriction

In complex wh-phrases such as ‘what color’ or ‘which book’, it is possible to split the question sign from the common noun (its restriction). In these cases the question sign occurs after its restriction and it usually occurs question-finally.

In the example below, the question sign is **WHAT** and its restriction is **COLOR**.

IX₂ SON **COLOR** LIKE **WHAT**

‘What color does your son like?’

1.2.3.7. Doubling of the wh-sign

It is possible to double a question sign. In such cases, usually, one copy of that sign is in its basic position in the sentence and another copy in the question-final position.

NOON **WHERE** EAT **WHERE**

‘Where will we eat lunch?’

SCHOOL INSIDE **WHAT** THERE_IS **WHAT**

‘What is there inside the school?’

(Göksel & Kelepir 2013a: 6)

1.2.3.9. Interrogative particles

Content interrogatives do not have interrogative particles.

1.3. Imperatives

The term “imperative” refers to a sentence type with a special form. This form may differ from the forms of other sentence types in the presence of special imperative markers, a difference in word order, presence/absence of certain kinds of subject, verb morphology, and special negative forms. An imperative sentence may be used for a variety of functions but the most typical function of an imperative is commands that are used to give orders such as ‘Give me the book!’. Other functions of imperatives are invitations, suggestions, permissions, instructions, and recommendations. The following subsections describe how imperatives are used to express these functions as well as what marks a sentence as an imperative in TiD.

A combination of manual and non-manual features are used: head tilt, eye gaze towards the addressee, verb articulated with a higher degree of intensity and a shorter duration perceived as abrupt, and optionally but frequently a sentence-final PALM-UP.

1.3.1. Subtypes of imperatives

Head tilt (sideward or forward) is the common non-manual marker in the subtypes of imperatives [Syntax – 1.3.2.2.] but its intensity shows gradation across the subtypes with being the most abrupt in commands and less so in suggestions and instructions.

1.3.1.1. Orders

Orders (or commands) require the addressee to do something.



SIT
‘Sit!’



SIT^NOT
‘Don’t sit!’

Head tilt (forward or sideward) is a very prominent non-manual marker in imperatives and it is very intense and abrupt in orders in comparison to its articulation in the other functions below [Syntax – 1.3.2.2.].

1.3.2. Imperative markers

Even though there is no manual or non-manual marker that exclusively marks a sentence as an imperative, head tilt (forward or sideward) and signing of the verb with a tense movement are the most prominent markers in imperatives. We describe the head tilt in [Syntax – 1.3.2.2.] below.

The following example shows that the verb SIT is articulated with a higher degree of intensity and shorter duration in a command compared to its articulation in a statement.



SIT
'Sit!'

1.3.2.1. Manual signs

TID does not have a manual sign that specifically marks a sentence as an imperative. PALM-UP is quite common in commands and instructions as a gesture but it is not obligatory. PALM-UP has the form of a Flat-Handshape with the palm facing upwards, and it occurs after the verb. When it occurs after a pause, it co-occurs with a single forward head tilt and the verb co-occurs with an optional eye blink.



IX₂

WHY

EAT[^]



NOT

ht-f
EAT

PALM-UP

'Why don't you eat? Eat!'

(r.f. Özsoy et al. 2015: 16)

PALM-UP is usually signed with one hand but when it is preceded by a double-handed sign, it can also be signed with two hands.

PALM-UP is generally used to express the signer's impatience with the addressee or when the signer would like to convey to the addressee that s(he) is strongly obligated to carry out the action expressed by the command.

1.3.2.2. Non-manual markers

Imperatives expressing commands are usually articulated with furrowed brow and/or raised eyebrows, squint and a single forward or sideward head tilt co-articulated with the verb. Moreover, eye gaze is directed towards the addressee.



BALL

PLAY

‘Play ball!’

(r.f. Özsoy et al 2015: 4)

1.3.3. Imperatives and verb classes

We see in [Syntax - 1.3.2.2] that head tilt is a very common non-manual marker in commands. When the verb is a plain verb [Lexicon – 3.2.1.] such as PLAY, the head tilt is forward.



ht-f

PLAY

BALL

‘Play ball!’

(r.f. Özsoy et al 2015: 4)

However, when head tilt is co-articulated with an agreement verb [Lexicon – 3.2.2.], its direction parallels the direction of the movement of the hand towards the goal/theme argument. The following example has a backward agreement verb TAKE. In contrast with the example with the plain verb PLAY above, the direction of head tilt is sideward, paralleling the direction of the verb which is from the ipsilateral side of the signer to neutral space in the frontline of the signer.



IX₃

LOAN

TAKE

‘Let him borrow some money.’

(r. f. Özsoy et al. 2015: 5)

The direction of the head tilt paralleling the movement of the hands in agreeing verbs is unique to imperatives. The following is a declarative with the same verb TAKE.



IX₂ LOAN TAKE
 ‘You borrowed some money.’

(r. f. Özsoy et al 2015: 10)

1.3.6. Negation in imperatives

There is no special negative marker in imperatives but using a negated do is quite common. See the next section.

1.3.6.1. Manual negation

The common negative marker NOT can be used in imperatives as well.

FEED[^]NOT
 ‘Do not feed it!’

An alternative and common way of forming negative commands is using a negated DO together with the lexical verb.



FOOD FEED

		ht-b
DO	^	NOT

 ‘Do not feed it!’

(r.f. Özsoy et al 2015: 10)

1.3.6.2. Non-manual negation

The non-manual marker (single) backward head tilt that occurs in negative declarative clauses also occurs in negative imperatives.

1.3.7.1. Null and/or overt subject

2nd person singular subject pronouns do not usually occur in imperatives. When they do, they tend to occur at the end of the sentence rather than the beginning.

1.3.7.2. The person of the subject

2nd person singular subject pronouns do not usually occur in imperatives. When they do, they tend to occur at the end of the sentence rather than the beginning.

1.5. Negatives

A negative sentence is formed by adding a negative marker to an affirmative sentence [Syntax – 1.1.]. The proposition that is denoted by a positive declarative sentence is cancelled by negation.

1.5.1. Manual marking of negation

This section describes manual negative elements (negative particles, irregular negatives, negative determiners, and adverbials) as well as the syntax of negative clauses.

1.5.1.1. Manual negative elements

Manual marking of negation is also described in [Lexicon – 3.11.1] and [Morphology – 3.5.1.1]. In addition to the basic negative marker NOT, there are other manual markers of negation. The following provides an overview of these other markers which are described in detail in their respective subsections:

(i) Negative particles [Syntax - 1.5.1.1.1.]

NO-NO

NO

EMPTY

PALM-UP

(ii) Irregular negatives [Syntax - 1.5.1.1.2.]

THERE_IS_NOT

NOT_RIGHT

WANT.NOT

SUFFICE.NOT

(iii) Negative determiners and adverbials [Syntax - 1.5.1.1.3.]

NO(adv)

NOT_AT_ALL (HIÇ)

NULL (SIFIR)

1.5.1.1.1. Negative particles

NO_NO is a negative particle in TİD [Lexicon 3.11.1]. It is used for contrast and canceling a presupposition.

POSS₁ FRIEND ALL RESTAURANT PLAY. IX₁ IX₁ NO_NO

‘My friends are all into dining out and entertainment, but I am not.’

NO_NO also occurs as a single-handed sign. In that use, it indicates an advice similar to a polite imperative [Syntax – 1.3.].

FOOD CL(

(<http://tidsozluk.net/tr/Hepsi?d=0024>)

EMPTY is another negative marker that cancels a presupposition.



IX₁ TODAY GO_FOR_A_WALK GO. IX₁ LOOK_AT_{3a} CONFUSION_a++ IX₁ THINK. EMPTY. IX_{3a} CELEBRATION_a IX_{3a}.
'I went for a walk today. I thought I noticed a confusion. Never mind, it was a celebration.'

PALM-UP can also be used to encode a negative meaning. A head shake is used on PALM-UP and the preceding predicate.

IX₁ THIS COMPREHEND PALM-UP
'I don't get this.'

(Gökgöz 2011: 63)

1.5.1.1.2. Irregular negatives

Irregular negatives are also discussed in [Morphology – 3.5.2.]. An irregular negation can still show the negative component in a transparent way. Below we show two transparent negative verbs, WANT.NOT and SUFFICE.NOT.



WANT



WANT.NOT

IX₁ DEAF GET_UPSET WANT.NOT
'I don't want the Deaf to get upset.'

(Gökgöz 2011: 21)



SUFFICE



SUFFICE.NOT



MONEY SUFFICE.NOT

‘The money does not suffice.’

(r.f. Dikyuva et al. 2015: 260-261)

CAN.NOT/SHOULD.NOT is an irregular negative modal. It is an opaque form because one cannot identify the positive form by looking at the negative form. Such forms are called suppletive forms [Morphology – 3.5.]. CAN.NOT/SHOULD.NOT includes modality and means either the negation of possibility or permission. An example is given below.



CAN.NOT/SHOULD.NOT

The negative existential, THERE_IS_NOT ([Morphology- 3.5.2.]), is another suppletive negative form. An example is given below.

IX₁ SMALL, KINDERGARTEN THERE_IS_NOT

‘While I was a small child, there wasn’t a kindergarten.’

(Gökgöz 2009: 49)

1.5.1.1.3. Negative determiners and adverbials

NO(adv) is a negative adverb that occurs at the beginning of a sentence and negates the entire sentence.



NO(adv) SPEAK THERE_IS_NOT

‘No, I didn’t speak.’

(r. f. Gökgöz 2009: 57)

NOT_AT_ALL ‘hiç’ is another negative adverb that indicates a negative perfective meaning. It indicates that the event under discussion has never taken place. This adverb can negate a sentence on its own.

IX₁ TRY NOT_AT_ALL

‘I never tried.’

(adapted from Dikyuva et al. 2017: 225)

The sign NULL ‘sıfır’, which is related to NOT_AT_ALL ‘hiç’, can also negate a sentence on its own.

IX₁ DO NULL

‘I did nothing.’

(Kubus 2016: 45)

NOT_AT_ALL ‘hiç’ can also occur with the basic negative marker NOT. In that case, the adverb can be in a position

preceding the negation or following it.

IX₁ NOT_AT_ALL SEE^NOT
'I have never seen (it).'

(adapted from Dikyuva et al. 2017: 225)

IX₁ SIGN KNOW^NOT NOT_AT_ALL
'I didn't know (how to) sign at all.'

(adapted from Gökgöz 2011: 54)

1.5.1.2.1. Position of negative elements

When the basic negative marker attaches to a predicate, it attaches to its right.

TURKEY IX_{3pl} GO GET_ASHAMED^NOT
'Those people in Turkey are increasingly not getting ashamed.'

(Gökgöz 2009: 19)

When there is a modal marker [Lexicon – 3.3.3.], [Morphology – 3.4.], negation attaches to it on the right. NEED below is the modal marker that negation attaches to.

NO THIS EVENING HOMEWORK PREPARE NEED^NOT
'No, we don't need to prepare homework this evening.'

(Gökgöz 2011: 56)

In a yes/no question, [Syntax – 1.2.1.], with negation, an index sign can follow a negated predicate.

SENTENCE READ KNOW^NOT IX₂
'Don't you know how to read a sentence?'

(adapted from Gökgöz 2011: 57)

A quantifier [Syntax – 4.4.], [Lexicon – 3.10.2.] can follow the negative marker.

BE_USED_TO NOT EVERYBODY
'Not everyone is used to it.'

(adapted from Gökgöz 2011: 71)

The negative adverb NOT_AT_ALL '*hiç*' can follow the negated predicate.







IX₁ SIGN KNOW^NOT NOT_AT_ALL
'I didn't know (how to) sign at all.'

(adapted from Gökgöz 2011: 54)

1.5.2. Non-manual marking of negation

Backward head tilt, single head turn, head shake, non-neutral brow position, puffed cheeks and tongue out are the most common non-manual markers of negation. Below, in the table, the non-manuals used in negation are shown.

Non-manuals	Glosses	Video Examples
-------------	---------	----------------

Backward Head Tilt	<u>bht</u> WANT^NOT 'I don't want it.'	
Single Head Turn	<u>h-trn</u> NOT_AT_ALL	
Head Shake	<u>sht</u> NO-NO	
Non-neutral brow position	<u>nbp</u> NOT_AT_ALL	
Puffed Cheeks	<u>pc</u> GO^NOT 'I didn't go.'	
Tongue out	<u>to</u> IMPOSSIBLE	

1.5.2.1. Head movements

Backward head tilt occurs on the basic negative marker NOT [Morphology – 3.5.1.1.], transparent irregular negative forms [Syntax – 1.5.1.1.2.] and suppletive irregular negative forms [Syntax – 1.5.1.1.2.]. Below backward head tilt is used with the existential negative suppletive THERE_IS_NOT.

ht-b
SINAN HOUSE THERE_IS_NOT
'Sinan isn't at home.'

Backward head tilt can also occur on its own to negate a sentence.

ht-b ht-b
 MIX ONE ONE IX₁ SPEAK_[left] SIGN_[right] _[left]SIGN_[right]
 ‘For me to mix signing and speaking, it’s no good.’

(Zeshan 2003: 57)

A single head-turn (h-trn) occurs with NOT_AT_ALL 'hiç'. ‘nbp’ stands for non-neutral brow position.

h-trn
 nbp
 IX₁ SIGN KNOW^NOT NOT_AT_ALL
 ‘I don’t know how to sign at all.’

(adapted from Gökgöz 2011: 54)

The sign NULL (SIFIR), which is related to NOT_AT_ALL 'hiç', occurs with a head shake (hs).

hs
 IX₁ DO NULL
 ‘I did nothing.’

(Kubus 2016: 45)

Headshake lexically occurs with NO and NO-NO.

hs ht-b
 NO CL:‘not_riding’
 ‘No, I don’t ride a horse.’

(adapted from Açıan 2007: 221)

hs
 POSS₁ FRIEND ALL RESTAURANT PLAY. IX₁ IX₁ NO-NO
 ‘My friends are all into dining out and entertainment, but I am not.’

(Zeshan 2006: 296)

Headshake of a negative marker may spread on an adjacent sign.

hs
 IX₁ SPOUSE FIGHT NO-NO
 ‘Oh no, I don’t fight with my wife.’

(Zeshan 2003: 57)

1.5.2.2. Facial expressions

Non-neutral brow position, which is either raised eyebrows (re) or lowered eyebrows (le), occurs in sentences with negation.

ht-b
 re
 IX₁ SPEAK KNOW^NOT
 ‘I can’t speak at all.’

(Zeshan 2003: 63)

_____ ht-b
 _____ re
 IX₁ WORD KNOW^NOT
 ‘I don’t know the word.’

(Gökgöz 2009: 67)

_____ ht-b
 _____ bl
 IX₁ BANANA FRONT_THROW NOT
 ‘I didn’t throw the banana to the front.’

(Gökgöz 2011: 66)

Puffed-cheeks can be used on a verb to indicate something that is not completed yet (see also [Morphology – 3.5.1.2.]).

_____ pc
 ASLI EAT
 ‘Aslı didn’t eat it.’

(Karabüklü 2016b: 3)

Tongue protrusion occurs in sentences with negative modality [Lexicon – 3.3.3.], [Morphology – 3.4.]; ‘modm-tp’ stands for modality marking tongue position.

_____ modm-t
 THIS WORD TRANSLATE IMPOSSIBLE
 ‘I cannot translate this word.’

(Dikyuva et al. 2017: 229)

1.5.2.4. Spreading domain

Backward head-tilt occurs with the manual negative marker NOT in its non-cliticized, free form. Backward head tilt can spread over the predicate when the negative marker is cliticized to the predicate. Non-neutral brow position usually spreads over the entire negative sentence. The example below shows raised eyebrows (re) spreading over the entire sentence and backward head tilt (bht) spreading over the predicate and the cliticized negative marker.

_____ ht-b
 _____ re
 IX₁ SPEAK KNOW^NOT
 ‘I can’t speak at all.’

(Zeshan 2003: 63)

In addition to non-neutral brow position, head shake can also spread over more than two elements in a negative sentence:

_____ hs
 _____ nbp
 IX_{3pl} IX₁ SAY^NOT
 ‘I didn’t say these.’

(Gökgöz 2011: 72)

Non-neutral brow position (nbp) may also spread over parts of a subordinate clause of a main clause which is negated.

_____ nbp
 [POSS₁ SISTER]_a IX_a CAR DRIVE LIKE^NOT

Information on data and consultants

The descriptions in this chapter are based on the references below. Please see the data and consultant information in these references. The linguistic data in images and video clips that were produced or reproduced for this chapter were provided by a near-native fluent signing consultant who was born and raised in Istanbul.

References

- Açan, Zeynep. 2007. *A linguistic analysis on basic sentence types in Turkish Sign Language (TİD) with reference to non-manual activity*. Ankara, Turkey: Hacettepe University PhD dissertation.
- Arık, Engin. 2006b. Nonmanual markers and constituency in Turkish Sign Language (TİD). Purdue University. (Unpublished manuscript)
- Dikyuva, Hasan. & Ulrike Zeshan. 2008. *Türk İşaret Dili - birinci düzey*. [Turkish Sign Language - level one]. Nijmegen: Ishara Press.
- Dikyuva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2015. *Türk İşaret Dili dilbilgisi kitabı* [Turkish Sign Language grammar book]. Ankara: TC Aile ve Sosyal Politikalar Bakanlığı.
- Dikyuva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2017. *Turkish Sign Language grammar*. Ankara: The Republic of Turkey Ministry of Family and Social Policies.
- Gökgöz, Kadir. 2009. *Topics in Turkish Sign Language (Türk İşaret Dili – TİD) Syntax: Verb movement, negation, and clausal structure*. Istanbul, Turkey: Boğaziçi University MA thesis.
- Gökgöz, Kadir. 2010. Licensing questions in Turkish Sign Language. Purdue University. (Unpublished manuscript)
- Gökgöz, Kadir. 2011. Negation in Turkish Sign Language: The syntax of nonmanual markers. *Sign Language & Linguistics* 14(1). 49-75.
- Gökgöz, Kadir & Engin Arık. 2011. Distributional and syntactic characteristics of nonmanual markers in Turkish Sign Language (Türk İşaret Dili, TİD). *MIT working papers in Linguistics* 62: *Proceedings of the 7th Workshop on Altaic Formal Linguistics*, 63-78.
- Gökgöz, Kadir. 2013. Negation in Turkish Sign Language: The syntax of nonmanual markers in A. Herrmann & M. Steinback (eds.), *Nonmanuals in Sign Language*. John Benjamins Publishing.
- Gökgöz, Kadir & Ronnie Wilbur. 2016. Olumsuz evet-hayır sorularında olumlu önyargı: Türk İşaret Dili’nde olumsuzluk başından tümleyici başa taşımının delili. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 253-274. İstanbul: Koç Üniversitesi Yayınları.
- Göksel, Aslı, Meltem Keleşir, & Aslı Üntak-Tarhan. 2009. Interrogatives in Turkish Sign Language: The specific functions of head tilt, head shake and head nod. (Paper presented at the Workshop on Nonmanuals in Sign Language, Goethe University, Frankfurt am Main, 4-5 April 2009.)
- Göksel, Aslı & Meltem Keleşir. 2011a. Issues in complexity: Sentential complementation in Turkish Sign Language. (Paper presented at the Complex sentences and beyond in sign and spoken languages, University of Göttingen, 13-14 October 2011.)
- Göksel, Aslı & Meltem Keleşir. 2011b. The syntax of nested spreading domains. (Poster presented at Venice feast: Formal approaches to sign languages, University of Venice, 20-22 June 2011.)
- Göksel, Aslı & Meltem Keleşir. 2013a. The phonological and semantic bifurcation of the functions of an

articulator: HEAD in questions in Turkish Sign Language. *Sign Language and Linguistics* 16(1). 1-30.

Göksel, Aslı & Meltem Kelepir. 2016. Observations on clausal complementation in Turkish Sign Language. In R. Pfau, M. Steinbach & A. Hermann (eds), *A matter of complexity: Subordination in sign languages*, 65–94. Berlin: De Gruyter. <https://doi.org/10.1515/9781501503238-005>

Karabüklü, Serpil. 2016b. *Time and aspect in Turkish Sign Language (TİD: Manual and nonmanual realizations of 'Finish'*. Istanbul, Turkey: Boğaziçi University MA thesis.

Makaroğlu, Bahtiyar. 2012. *Türk İşaret Dili'nde soru: Kaş hareketlerinin dilsel çözümlemesi* [Question in Turkish Sign Language: Linguistic analysis of eyebrows]. Ankara, Turkey: Ankara University MA Thesis.

Makaroğlu, Bahtiyar. 2013. Interrogatives in Turkish Sign Language (TİD): The role of eyebrows. In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 143-165. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.

Makaroğlu, Bahtiyar. 2016. Türk İşaret Dili'nde soru tümcelerinin görünümü: Kaş hareketlerinin rolü. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 233-252. İstanbul: Koç Üniversitesi Yayınları.

Nuhbalaoğlu, Derya. & A. Sumru Özsoy. 2014. Linearization in noun phrases in Turkish Sign Language. (Paper presented at Formal and Experimental Advances in Sign Language Theory (FEAST Colloquium), Università Ca' Foscari. 9-11 June 2014.).

Özsoy, A. Sumru, Meltem Kelepir, Derya Nuhbalaoğlu & Emre Hakgüder. 2015. Commands in Turkish Sign Language [Türk İşaret Dili'nde emir yapısı]. *Journal of Japanese Linguistics Society* 146, 13-30. Gengo Kenkyu.

Zeshan, Ulrike. 2002. Sign Language in Turkey: The story of a hidden language. *Turkic Languages* 6 (2). 229-274.

Zeshan, Ulrike. 2003. Aspects of Türk İşaret Dili (Turkish Sign Language). *Sign Language & Linguistics* 6. 43- 75.

Zeshan, Ulrike. 2006. Negative and interrogative structures in Türk İşaret Dili (Turkish Sign Language). In U. Zeshan (ed.), *Interrogative and negative constructions in sign languages*, 128-164. Nijmegen: Ishara Press.

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Chapter 2. Clause structure

This chapter describes the structure of clauses. The most crucial element in a clause is its predicate. Each predicate requires a certain number of arguments. The type of the predicate may also determine the order of the constituents in the clause. The arguments of a predicate have grammatical functions in a clause such as subject, direct object, and indirect object etc. The types of predicates, the realization of their arguments, and the identification of grammatical functions of arguments are described in Syntax - 2.1 and Syntax - 2.2. The rest of the chapter covers the syntactic phenomena that involve the arguments of predicates: word order, null (unpronounced) arguments, ellipsis of certain constituents within the clause, and copying of subject pronouns.

2.1. The syntactic realization of argument structure

A sentence consists of a predicate and a certain number of arguments. The predicate is the core of the event or situation, and the arguments take part in this event or situation. Depending on the lexical meaning of the predicate, the arguments are assigned different semantic roles. Some semantic roles are agent, theme, causer, source, goal, beneficiary, instrument, and experiencer. These semantic roles are associated with the grammatical functions subject, object, and oblique object, all of which are described in [Syntax – 2.2.]. However, semantic roles are independent of grammatical functions. There is no one-to-one match between semantic roles and grammatical functions. Semantic roles are also independent of the complement-adjunct distinction [Syntax - 2.2.2.], where a complement is a syntactically required element in a clause. On the other hand, an adjunct is an optional element which contributes additional information, such as the time of the event expressed in the sentence or the manner in which an action was performed.

The syntactic realization of argument structure involves several factors. First, it involves knowing how many obligatory arguments a predicate requires. For TiD, this ranges from zero to three. Next, the description requires what categories can be a predicate. Verbs, nouns, adjectives, and possessive Noun Phrases can be predicates in TiD. Another relevant factor is the expression of arguments, which interacts with both the morpho-syntax and information structure properties of the language. The syntactic realization of argument structure interacts with morpho-syntax because some forms of verbs more readily allow arguments to be left unexpressed while others do not. It involves discourse because even if morphology would allow the elision of an argument, the information status of an argument may independently determine if one can omit the argument or not [Pragmatics – 4.].

Concerning the expression of an argument, one can express an argument by using a Noun Phrase, a pronoun, or another clause. The order of the expressed arguments may change depending on several factors that are discussed in [Syntax – 2.3.& Pragmatics – 4.].

The same morphological form of a predicate can be associated with more than one argument structure. Such predicates are called labile predicates. Labile predicates display what is called a transitive-inchoative alternation, which includes a similar event with one vs. two obligatory arguments. One can also express such a valency alternation by changing the morphological form of the predicate with a whole entity-handling classifier pair. We describe these alternations in [Syntax - 2.1.1.1.]

In serial verb constructions with a resultative part, an argument is related to more than one theta role. The direct object of the main clause is affected by the main event, and it also hosts the resultant state in such clauses. We talk about resultative clauses in [Syntax – 2.1.1.1.].

2.1.1 Types of predicates

How many arguments a predicate needs for a complete proposition to be formed determines the type of a predicate. Transitive predicates require two arguments. Ditransitive predicates require three arguments [Syntax – 2.1.1.1]. Intransitive predicates require one argument [Syntax – 2.1.2.]. There are also zero-argument predicates in TiD, which do not have an argument. These zero-argument predicates are weather-related in TiD [Syntax - 2.1.1.4].

2.1.1.1. Transitive and ditransitive predicates

Transitive predicates in TİD take two arguments. These may prototypically be an agentive subject which is the controller, instigator, or performer of an event, and a theme object which is the affected participant. Below, the agentive subject of the sentence is the first person pronoun, IX₁ 'I'. The theme object of the sentence is FOOD, which is what is swallowed, thus affected by the event.

IX₁ FOOD SWALLOW CAN.NOT
'I cannot swallow food.'

<http://tidsozluk.net/tr/Yutmak?d=1677>

A transitive verb may have an experiencer-subject and a causer-object. An experiencer is a participant who experiences a feeling or emotion. A causer is the source of the sensation that the experiencer undergoes. Below, the first-person pronominal subject, IX₁ 'I', is the experiencer participant who experiences affection while ANIMAL KIND ALL, 'all kinds of animals', is the causer/stimulus of this affection. Like the predicate SWALLOW above, the transitive predicate LIKE is a plain verb, which means that it does not display manual morphological agreement [Lexicon – 3.2.2.].

IX₁ ANIMAL KIND ALL LIKE
'I like all kinds of animals.'

<http://tidsozluk.net/tr/Sevmek?d=0046>

A transitive verb can also be an agreeing verb such as NOTICE. Semantically, NOTICE is a perception verb. The subject is a perceiver, and the object is a theme. Below, the ending locus of the agreement verb NOTICE is the same as the referential locus of the first-person object. See [Syntax – 2.1.2.3.1.] for manual verb agreement.

TEACHER IX_a NOTICE_a NOT
'The teacher does not notice me.'

<http://tidsozluk.net/tr/G%C3%B6rmek?d=0026>

A transitive agreement verb may also start with the referential locus of the object. Such verbs are called backwards agreement verbs [Lexicon – 3.2.2]. The index b- on CHOOSE shows agreement with the object.

TWO SWEATER THERE_ IS. YELLOW IX_{3a}. BLUE IX_{3b}. IX_{3b} bCHOOSE₁
'There were two sweaters. A yellow one and a blue one. I chose the blue one.'

A transitive clause can include a handling classifier:



GIRL

CHILD

FLOWER

CL():'collect'

'A girl is collecting flowers.'

(Gökgöz in progress)

All of the examples above include a Noun Phrase (NP) object, which is overtly expressed by a noun or pronoun [Syntax - 2.1.2]. An object of a transitive verb can also be a clause. The verb WANT takes a clausal [Syntax – 2.1.2.5] object, illustrated in square brackets below.

PAST IX₁ SMALL [TEACHER BECOME] WANT.


'I wanted to become a teacher when I was small.'

<http://tidsozluk.net/tr/%C4%B0stemek?d=0028>

A ditransitive clause is composed of three obligatory arguments. Below, the ditransitive verb, GIVE, takes an agent subject, a theme direct object, and a recipient indirect object. The theme object is BOOK CL:'thin' ; the indirect object, which is the recipient, is the second person. The agent is a third person, BURCU IX_{3a}. The signer expresses agreement with the agent and the recipient on the verb by using two loci and with the theme by using a handling classifier hand shape.



_aGIVE₂CL():'give'

BURCU IX_{3a} BOOK CL:'thin' _aGIVE₂CL():'give'

'Burcu gave you the thin book.'

(Gökgöz and Sevgi in press)

2.1.1.2. Intransitive predicates: unergatives and unaccusatives

Intransitive predicates take only a single obligatory argument. Although this single argument is always the grammatical subject of a sentence, semantically, it can be a theme or an agent. Predicates with single arguments that are semantic themes are called unaccusative predicates and the sentences they form are called unaccusative sentences. FALL is an unaccusative predicate.



TABLE

PLATE

WRONG

FALLCL(⌘): 'fall'

‘A plate falls off a table accidentally.’

(Gökgöz in progress)

Some other unaccusative predicates in TİD are:

DISAPPEAR

BREAK_DOWN

BURN

CRACK

DIE

FEEL_DIZZY

LEAK

SINK

NOT_FEEL_LIKE_DOING_STH

PILE_UP

We talk about weather predicates in [Syntax – 2.1.1.4.]. Most weather predicates do not take a subject but in order to sign ‘It snows’, one needs to express a subject and a predicate. Thus, this specific weather predicate is an intransitive unaccusative one.



WHITE

SNOW

POUR_DOWN

‘It is snowing.’

When the single argument of an intransitive sentence has an agent theta role, the predicate of the sentence is called an unergative predicate and the sentence an unergative sentence. JUMP is an unergative predicate.



WOMAN

MAN

PLAY

3+3JUMP

‘A woman and a man are playing and jumping.’

(Gökgöz in progress)

Some other unergative predicates are:

SIGN_COMFORTABLY

SWIM

RUN

FLEE

WALK

PRACTICE

ACT_A_ROLE

WORK

THINK

2.1.1.3. Psychological predicates

A psychological predicate involves a psychological state that a participant experiences. Both transitive and intransitive psychological predicates exist in TİD. In one type of transitive psychological predicate, the grammatical subject is the experiencer, while the grammatical object is the causer of the experience. Such verbs are called Experiencer Subject verbs. HATE is an example. As for the other type of psychological predicate, the grammatical object is the experiencer of the state, while the grammatical subject is the causer. Such verbs are called Experiencer Object verbs. IRRITATE is such a verb.

BEFORE IX₁ FRIEND TALK.RECIP. IX₁ THINK_WELL. LATER, IX₃ IX₁ IRRITATE. IX₁ NOW ₁HATE₃.

‘Beforehand I and my friend went along. Later, s/he irritated me. I hate him/her now.’

(<http://tidsozluk.net/en/Nefret%20etmek?d=1051>)

Some other subject experiencer predicates are:

FEAR

LIKE

ENJOY

ADMIRE

BE_CRAZY_ABOUT is a transitive psychological verb in TİD. It takes a clausal complement.

IX₁ MAGAZINE NEWSPAPER ETC LIKE^NOT. IX₁ BOOK READ BE_CRAZY_ABOUT.

‘I don’t like magazines or newspapers etc. I am crazy about reading books.’

GET_BORED is a psychological unaccusative predicate in TİD. The subject of the intransitive clause expresses the experiencer of a psychological state.



MAN GET_BORED

‘The man is getting bored.’

(Gökgöz in progress)

Some other intransitive psychological predicates are the following:

FEEL_ANXIOUS

BE_PLEASED

BE_FED_UP_WITH

GET_ASTONISHED

2.1.1.4. Meteorological predicates

Weather predicates in TİD do not have an argument. They are zero-argument predicates. RAIN, BE_SUNNY, BREEZE, WIND_BLOW, STORM_BLOW, TORNADO, HAIL, and BREEZE are meteorological predicates in TİD.



IX_a ANTALYA_a IX_a VERY BLOW_STORM

‘There will be a storm in Antalya.’



RAIN



HAIL



BREEZE

2.1.1.5. Argument structure alternations

Some verbs in TİD have the same morphological form (see conversion, [[Morphology – 2.1.2.1](#) & [Morphology - 2.2.4.](#)]) whether they are transitive or intransitive. Such verbs are known as labile verbs. BREAK is such a verb in

TİD. It indicates both the event in which someone breaks something or the event in which something breaks on its own.



h1: PERSON_a IX_a PEN BREAK
 h2: BREAK
 “A person broke that pen.”

(Kayabaşı in progress)



h1: WOOD EXTEND SELF BREAK
 h2: EXTEND BREAK
 “The wood(en) stick broke by itself.”

(Kayabaşı in progress)

BE_BORN and GIVE_BIRTH_TO also show an intransitive-transitive labile alternation, i.e., without a morphological handshape change. In the sentence below, ‘a baby was born’. So, the sentence is intransitive.

ELDER_SISTER PREGNANT. BABY BORN. WORLD_a COME_a. IX₁ AUNT BECOME.

‘My sister was pregnant. The baby was born. S/he came to this world. I became an aunt.’

(<http://tidsozluk.net/en/Do%C4%9Fmak?d=0316>)

The following sentence, on the other hand, is transitive, as it indicates the person giving birth to the baby.

IX₁ BABY GIVE_BIRTH_TO. MOTHER BECOME. VERY HAPPY.



‘I gave birth to a baby. I became a mother. I am very happy.’

(<http://tidsozluk.net/tr/Mutlu?d=0237>)

One can have an argument structure alternation with a whole & entity-handling classifier handshape pair. These handshapes provide an unaccusative and a transitive argument structure, respectively. Below, the first instance of OPEN is unaccusative since it is used with a whole entity classifier. The second instance of OPEN is transitive since it is used with a grabbing handling classifier handshape.



h1: DOOR
h2: DOOR
“The door opened.”


OPENCL():'open_the_door'
OPENCL():'open_the_door'

(Kayabaşı in progress)



h1: WOMAN DOOR
h2:
“The woman opened the door, looked inside and closed the door.”

OPENCL():'open_the_door'
DOOR LOOK


CLOSECL():'close_the_door'

(Kayabaşı in progress)

One can also use a whole entity classifier and a contact handling classifier pair to sign a transitive-intransitive alternation. A contact handling classifier is a subtype of handling classifiers where an object is touched without grabbing.




h1: BOY BALL
h2: BALL
“The boy is bouncing the ball.”

BOUNCECL():'bounce_the_ball'

(Kayabaşı in progress)



h1: FLOOR BALL RED
h2: FLOOR
“The red ball is bouncing on the floor.”

BOUNCECL():'bouncing_ball'

(Kayabaşı in progress)


2.1.2. Argument realization

An argument can be expressed by an overt Noun Phrase [Syntax - 2.1.2.1.] or by a pronoun [Syntax - 2.1.2.2.]. An argument can be cross-referenced by an agreeing [Syntax - 2.1.2.3.] or a classifier predicate [Syntax – 2.1.2.4.]. An argument of a predicate can also be a clause [Syntax – 2.1.2.5.].

2.1.2.1. Overt noun phrases

One can express the arguments of a transitive or intransitive predicate overtly. Below, the signer overtly expresses the single argument ‘baby’ of the unergative predicate CRAWL.



BABY CL():'crawl'
‘The baby is crawling.’

(Sevgi 2019:13)


In the following sentence, the signer overtly expresses the single argument ‘plate’ of the unaccusative predicate FALL.



TABLE

PLATE

WRONG

FALLCL():'fall_of_the_plate'

‘A plate falls off a table accidentally.’

(Gökgöz in progress)

In the following transitive clause, the signer expresses both arguments of a transitive predicate overtly (‘girl’ and ‘flower’).

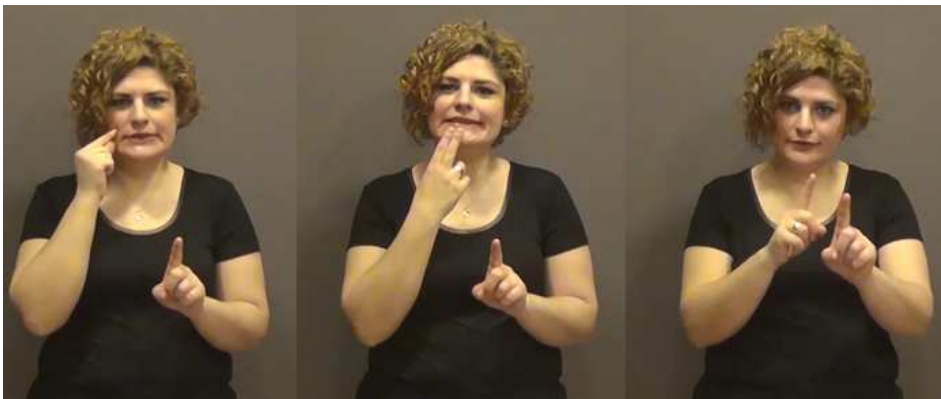


GIRL CHILD FLOWER CL(👉): 'collect'

'A girl is collecting flowers.'

(Gökgöz in progress)

Signers tend to omit the agent argument of a transitive clause if it has been mentioned previously. Below, after introducing the agent in the first transitive clause, the signer leaves it unexpressed in the second transitive clause.



MAN WOMAN MANCL(👉): 'approaching'

'The man approaches the woman.'

(Gökgöz in progress)



BACK STICK CL(👉): 'extend' HITCL(👉): 'hit_with_a_stick'

'(He) hits her on the back with a stick.'

(Gökgöz in progress)

Signers also tend to leave the agent of an unergative clause unexpressed after they introduce it in a preceding clause. In the following example, the agent of the second, unergative clause with CRAWL is left unexpressed after it has been introduced in the preceding transitive clause.



BABY

CL():'walk'

KNOW^NOT

CL():'crawl'

'The baby does not know how to walk. (She) is crawling.'

(Sevgi 2019:13)

2.1.2.2. Pronouns

A pronoun can replace an argument of an intransitive, transitive, or ditransitive clause. When signers use a pronoun, they often express a contrast [Pragmatics – 4.1.3.]. In the following sentence, a pronoun assigned to the left side of the signing space replaces an object, which is contrasted with another object assigned to the right side of the signing space.

FRIEND TOGETHER CLOTH SHOP LOOK_AT.EXHSTV. CLOTH_a IX_a a TAKE SURE IX₁ TAKE^NOT IX_{3a} TAKE_b. FRIEND ANYWAYS IX₁ PAY_b b TAKE.

'I went shopping with my friend; we were looking at all the clothes. (S/he) was about to buy a dress when I told her not to buy (it) but buy **this one** instead. Anyways, she paid and bought the one I told her to buy.'

(<http://tidsozluk.net/tr/%C5%9Eu?d=1000>)

2.1.2.3. Verb agreement

Verb agreement frequently occurs with the internal arguments in TiD. These arguments have the semantic roles of patient, theme, or recipient. We discuss manual agreement in [Syntax - 2.1.2.3.1.].

2.1.2.3.1. Manual verb agreement

Some transitive verbs display manual locus agreement [Morphology – 3.1.]. When a transitive verb is body-anchored with contact or signed near the body or the head, locus agreement is only with the object. In the following example, for its initial location, LOOK_AFTER, is anchored to the nose setting. Therefore, it does not display agreement with the subject. However, it shows agreement with the referential locus of the theme-object, MALE_a CHILD_a IX_a.



IX₁

SELF₁

MALE_a

CHILD_a

IX_a

IX₁



LOOK_AFTER_a

‘I looked after my son.’

When a transitive locus agreement verb is not body-anchored, it can agree with both the subject and the object. These predicates are called double-agreement predicates. SUPPORT is an example. Below, SUPPORT starts at the referential locus of the subject STATE_a and ends in the referential locus of the object IX₁.

IX₁ SCHOOL GO WANT. MONEY THERE_IS_NOT. STATE_a aSUPPORT₁

‘I wanted to go to school but I didn’t have any money. The state supported me.’

(<http://tidsozluk.net/tr/Desteklemek?d=0345>)

SCOLD is another example of double-agreement predicates. Below, SCOLD starts at the referential locus of the subject IX_{3a} and ends at the referential locus of the object IX_{3b}.



IX_{3a}

IX_{3b}

{3a}SCOLD{3b}

‘S/he scolded her/him.’

Some other transitive agreement verbs are the following:

TEASE

LOOK_AT

SCOLD

ORDER

SUPPORT

YELL_AT

ORDER

A transitive agreement verb may also start with the referential locus of the object and end in the referential locus of the subject. Such verbs are called backwards agreement verbs. The 1- index at the beginning of CHOOSE below shows agreement with the object, which is the first person. The -2 index at the end of the predicate shows subject

agreement, which is the second person.



IX₂ IX₁ ₁CHOOSE₂
'You choose me.'

Some other backwards agreement verbs are:

INFLUENCE

COPY

TAKE

BUY

FIND

A semantically transitive verb can display agreement with the referential locus of a locative agreement. GO and COME agree with their goal arguments below.

FRIEND IX₁ TOGETHER GO_AROUND IX GO_a. STUFF IX(indef) LOOK_AT.EXHSTV. ALL CHINA COME_a. IX LEAVE_a.
TURKEY BE, _aTAKE₁.

'I went shopping with my friend. I checked all the stuff. They all come here from China. I left them. If they had been from Turkey, I would have bought them.'

A ditransitive predicate can agree with its agent-subject and recipient-object. GIVE is such a predicate. The movement of the agreeing verb starts at the referential locus of the agent-subject, SPORTS FEDERATION_a, and ends at the referential locus of the recipient-object, the signer. In the following example, the signer does not express locus agreement with the direct object since it is not referential, i.e., 'a duty.'

SPORTS FEDERATION_a VOLLEYBALL FOR DUTY _aGIVE₁.

'The Sports Federation gave me a duty for the volleyball event.'

(<http://tidsozluk.net/tr/%C3%96demek?d=0178>)

When the direct object is referential, locus agreement can start from the referential locus of the direct object, BOOK IX_b below, and end in the referential locus of the indirect object, IX_{2c} below:

IX_{1a} BOOK IX_b IX_{2c} _bGIVE_c

'I gave you the book.'


(İşsever & Makaroğlu 2018)

Classifier agreement can accompany locus agreement as the following sentence shows. The hand moves from the referential locus of the subject to the referential locus of the indirect object. A handling classifier is used for

showing agreement with the direct object.



$_a$ GIVE₂CL():'give'

BURCU IX_{3a} BOOK CL:'thin' $_a$ GIVE₂CL():'give'

'Burcu gave you the thin book.'

Locus agreement can occur with the loci of arguments that are persons. Backward agreement verbs display such locus agreement. In the following sentence with a backwards agreement verb, COPY, the loci are for persons; IX_{1b} is the source-object and IX_{2a} is the goal-subject.

IX_{2a} ALWAYS ALWAYS IX_{1b} bCOPY_a

You always copy (imitate) me.

(İşsever & Makaroğlu 2018)

In the following example with the same backwards verb, the loci are for arguments which are things. The hand moves from the source-object, COMPUTER_b to the goal-object, HARD_DISK_c.

IX_{1a} DATA ALL COMPUTER_b HARD_DISK_c bCOPY_c

I copied all the data from the computer to hard disk.

(İşsever and Makaroğlu 2018)

There are three more verbs in TİD which show locus agreement. These are ANSWER '*cevap vermek*', ASK '*soru sormak*' and WARN '*uyarmak*'. The internal argument in these verbs is incorporated into the verb stem with a handshape that is the initial letter of the corresponding noun in Turkish. The initializations [Lexicon - 2.2.2.1.] in this case are C (for 'cevap', answer) in ANSWER, S (for 'soru', question) in ASK, and U (for 'uyarmak', warn) in WARN. There is no extra overt direct object argument apart from the incorporated theme in such predicates.

IX₁ MOTHER TOGETHER BANK GO. BANK MOTHER LONG TALK.RECIP. THEN SHORT $_a$ ANSWER₁. IX₁ CONFUSED.

'I went to the bank with my mother. The banker talked with my mother for a long time. Then, s/he gave a short answer. I got confused.'

Some other ditransitive verbs are:

GIVE_GIFT_TO

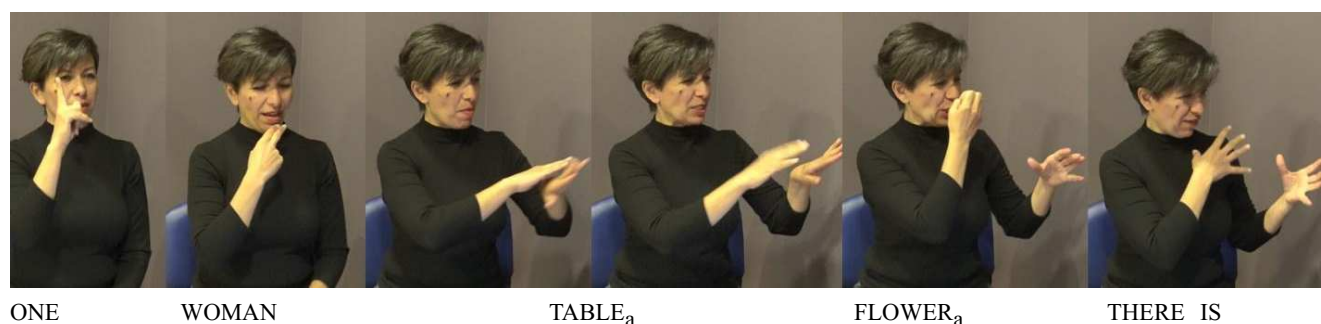
COPY

TAKE

BUY

SELL
 PAY_A_DEBT
 CARRY
 SEND
 PAY
 GET

The spatial verb MOVE below agrees with its locative source and goal arguments as well as the internal argument. The referential locus of ‘flower’ is established where ‘table’ is, that is on the contralateral side of the signer. This is glossed with an a- index below. This referential locus serves as the source of spatial agreement on MOVE in the last two frames. The referential locus of ‘shelf’ is established on the ipsilateral side of the signer. This is glossed with a b- index below. This referential locus serves as the goal of the spatial agreement on MOVE.



‘A woman is moving a flower (pot) from a table to a shelf.’

(Gökgöz in progress)

An intransitive unaccusative verb can have locus agreement. For instance, in the following sentence, the unaccusative verb DIE is signed in non-neutral space where the subject is referentially bound which is shown with an ‘a’ index.



‘My neighbor’s daughter and I grew up together.’

Locus agreement on the unaccusative predicate DIE.




LIKE YESTERDAY NEW LEARN. DIE_a.
 ‘I liked her. Yesterday, I learned she died.’

(<http://tidsozluk.net/en/%C3%96lmek?d=0168>)

Signers can also mark locus agreement on an intransitive unergative predicate as the following example shows. A referential locus on the contralateral signing space is established for ‘robot’ The signer articulates the verb JUMP at this referential locus, thus showing locus agreement.



CL():‘jump’_a

ROBOT CL:‘exist’_a IX_a CIRCLE_TRACING. CL():‘jump’_a.
 ‘There is a round robot. (It) is jumping’

(Gökgöz in progress)

2.1.2.4. Classifier handshape

Classifier predicates agree with the subject and the direct object in a sentence. Transitive and ditransitive sentences can have a grabbing handling classifier or a contact handling classifier which mark agreement with the subject and a direct object. A handling classifier predicate agrees with its object argument for its size and shape. In the following example the extended-fingers of C-Handshape agrees with the diameters of the carpet that is being carried.



CARPET

CL(): 'wrap'

CL(): 'carry'

'The may wraps the carpet and carries it.'

(Sevgi 2019)

A transitive classifier can also agree with the surface of the object which is manipulated by simulating touching. In the following example, the hands mimic touching the surface of a pillow and agreement with a Flat-Handshape is expressed.



TOUGH

PILLOW

CL(): 'push'

'(The boy) is pushing a tough pillow.'

(Sevgi 2019)

An intransitive classifier predicate can agree with the size and shape of a single argument in the sentence. The whole entity classifier Cup-Handshape shows the size and shape of an entire chicken below.



CHICKEN

CL(): 'exist'

'There is a chicken. A chicken (meat) is lying like this.'

(Sevgi 2019)


The C-Handshape below agrees with the subject PLATE.



TABLE

PLATE

WRONG

FALLCL():'fall_of_the_plate'

‘A plate falls accidentally.’

(Kayabaşı in progress)

A body part classifier agrees with the body part of the subject. The classifier shows agreement with the legs of a ROBOT below.



CL():'jump'_a

ROBOT CL:'exist'_a IX_a CIRCLE_TRACING. CL():'jump'_a

‘There is a round robot. (It) is jumping’

(Sevgi 2019)

2.1.2.5. Argument clauses

Clauses can be used as grammatical objects in TİD. Two word orders occur with argument clauses: SOV and SVO. The SOV word order occurs with WANT-type main verbs. We show the clausal object with square brackets. See also [Syntax – 3.3.2.1. and 3.3.2.2].

ELA_k IX_k [GOOD SCHOOL GO] MUCH WANT

‘Ela wants to go to a good school very much.’

(Göksel and Kelepir 2016: 71)

IX₁ [BOOK READ] BE_CRAZY_ABOUT.

‘I am crazy about reading books.’

<http://tidsozluk.net/tr/Mutlu?d=0237>

Other embedding verbs which follow a clausal object are:

LIKE
WANT
BEGIN
GO
FORGET

The SVO order occurs with KNOW-type verbs. The argument clause below, shown in square brackets follows the main clause verb KNOW:

ALI_k SELF_k THINK [AYŞE REST]
'Ali himself thinks Ayle is resting.'

(Göksel and Kelepir 2016: 71)

2.1.3. Argument structure changes

The number of arguments in a clause can increase or decrease through some operations.

2.1.3.1. Extension of argument structures


See [Syntax - 2.1.1.5.] for the inchoative-causative alternation which shows the transformation of an intransitive clause to a transitive clause.


Transitive clauses can be expressed as serial verb constructions. The first verb below shows the initiation of the transitive event. It is marked with a handling classifier. The second verb shows the process of the event. It is marked with a whole entity classifier.



CHILD

MAN

CL(

CL(

"The child rolled the ball (and the ball went) to the man."

(Kayabaşı in progress)

2.1.3.2. Passive

There is no overt morphological marker on the verb to mark the verb as passive but there are some agent backgrounding strategies that are functionally parallel to constructions in other languages with passive morphology where the agent is demoted. One of these strategies is having no overt expression of an agent as the following example shows.

___ bn

HOUSE SELL

'The house has been sold.'

Another strategy for agent-demotion is using a null subject as an impersonal 3rd person plural pronoun. The following sentence means ‘It was understood that ...’

FEDERATION PRESIDENT_{3a} TEN MINUTE LATE. SAY IX_{3a} DRUNK LATE UNDERSTOOD_{3pl}

‘The president of the federation was ten minutes late. It is said that people understood he was late because he was drunk!’

(Kelepir, Özkul & Özparlak 2019: 264)

Also, 1st and 2nd person pronouns can be used in a generic meaning to demote the agent.

ICE_CREAM EAT SICK BE IX₂

‘If you eat ice-cream, you will get sick.’

(Kelepir, Özkul & Özparlak 2019: 266)

2.1.3.4. Reciprocity

Reciprocals are also discussed in [Lexicon – 3.7.4.] and [Morphology – 3.1.3.]. In a reciprocal clause, the object of a transitive sentence is dropped. There are at least two participants in the subject position and their actions affect each other. Signers can reinforce the meaning of reciprocity by using a numeral in the Noun Phrase functioning as the subject. Below TWO is used. Also note below that the two hands go in opposite directions to express reciprocity with the agreeing verb THROW.



IX_a MALE FRIEND TWO BASKETBALL THROW.RECIP

‘Two male friends are throwing a basketball to each other.’

(Gökgöz in progress)

The adverb SAME shows up in reciprocal clauses. This time the plurality of the subject is expressed by coordination within the subject noun phrase. The signer first leans left and then right to sign the coordinated subject consisting of a WOMAN and a MAN. The signer also signs the adverbial sign SAME in the proximal area with his dominant hand and in a more distal area with his non-dominant hand. This shows spatial agreement with the agents of the event.



WOMAN MAN ICE-CREAM SAME HOLD.RECIP

‘A woman and a man are holding an ice-cream cone for each other.’

An agreement auxiliary pronoun can also occur in reciprocal clauses. The auxiliary can be one-handed which moves back and forth between the referential loci of the participants, as ‘we, each of us’ (Kubus and Hohenberger, 2013). The auxiliary can also involve both hands. Below the two hands used as a reciprocal agreement auxiliary go to the sides of the lateral domain. The two-handed auxiliary sign can also go to the proximal and distal sides. There is free variation with this respect, i.e. the choice of where the auxiliary sign ends up is not definitive.



MAN

MAN

TWO

COMB

AUX.RECIP

COMB.RECIP

‘Two man are combing each other’s hair.’

(Gökgöz in progress)

Sometimes signers break the reciprocal meaning into two preceding sentences before they sign the reciprocal predicate. In the sentence below, the signer is setting up the two participants in the event on a proximal and distal referential locus respectively.



h1: MAN

CL (☞): 'stand'

h2:

CL (☞): 'stand'

‘Two man stand opposite to each other.’

(Gökgöz in progress)

In the sentence below, the participant who is on a proximal referential locus is throwing a basketball to the participant who is on a distal referential locus.



BASKETBALL

a_{TRHOW_b}

‘The one on this side is throwing a basketball to the other.’

(Gökgöz in progress)

In the sentence below, this time, the participant who is on a distal referential locus is throwing a volleyball to the participant who is on a proximal referential locus.



IX_b

VOLLEYBALL

a_{TRHOW_b}

‘The one on that side is throwing a volleyball to the other.’

(Gökgöz in progress)

Finally, the participants are throwing the balls to each other in the following sentence.



BALL

THROW.RECIP

‘They are throwing the balls to each other.’

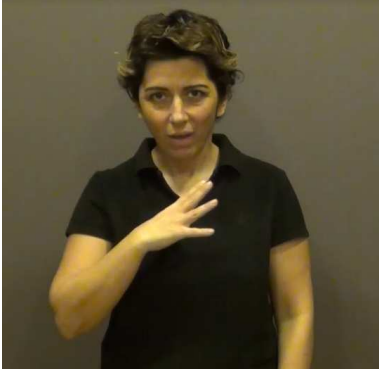
(Gökgöz in progress)

2.1.5. Existentials and possessives

Section 2.1.5.1 is about possessives and Section 2.1.5.2 is about existentials.

2.1.5.1. Possessives

The possessive predicate HAVE (which has the same form as the existential THERE_IS) takes two arguments, the possessor subject and the possessed object.



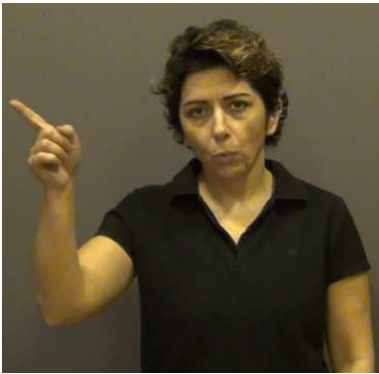
HAVE

IX₁ CAR TWO HAVE.

‘I have two cars.’

(<http://tidsozluk.net/tr/Var?d=0007>)

The possessive pronoun, POSS, can also function as a predicate.



POSS₃

... CAR REGISTRATION WIFE_a POSS_{3a}

‘The car belongs to my wife.’

(<http://tidsozluk.net/tr/Benim?d=0694>)

The wh-word WHO is ambiguous between an argument and a predicate and below it functions as a possessive predicate, meaning ‘whose’.

YOU FOR SURPRISE GIFT GET. HOUSE TITLE. DEED WHO, YOURS.

‘I got a surprise gift for you. The house is whose? Yours.’

(<http://tidsozluk.net/tr/Senin?d=0407>)

2.1.5.2. Existentials

The existential predicate THERE_IS takes only a subject. MAN ONE, a man, is the subject of the existential predicate below.



MAN ONE THERE_IS

‘There is a man’

(Gökgöz in progress)

Locative information is also usually expressed in an existential sentence with THERE_IS.



HOUSE IN GRAPE PLATE THERE_IS

‘There is a plate of grapes in the house.’

(Gökgöz in progress)

An existential meaning is also expressed very frequently with a whole entity or extension classifier that accompany a downward movement to a position. In the example below, a vertical whole entity classifier for ‘tree’ is used with the existential predicate, EXIST.



TREE

CL():‘exist’

‘There is a tree’

(Gökgöz in progress)

In the example below, a horizontal whole entity classifier for ‘car’ is used with the existential predicate, STAND.



RED CAR CL():'stand' POSS₁ NOT

'The red car that stands there is not mine.'

(<http://tidsozluk.net/tr/Onun?d=0489>)

2.2. Grammatical functions

The constituents of a sentence are the verb, its arguments and adjuncts. Arguments are the obligatory constituents of the sentence. Each of the arguments of the verb within a clause has a specific grammatical function. The grammatical functions are subject, direct object, and indirect object [Syntax - 2.1.]. Adjuncts are modifiers of the verb phrase, typically expressing a locational, temporal or a manner relation. Adjuncts are optional.

2.2.1. Subject and object identification

Each argument is associated with a semantic role in relation to the verb. There is a close relation between the semantic role of a constituent and its syntactic function in the sentence. In a clause with an intransitive verb, the semantic role of the single argument is agent, experiencer or theme. The argument of an intransitive verb functions as the subject of the sentence. In an active clause with a transitive verb, the constituent with the semantic role agent or experiencer is typically the subject and theme is the object. An active clause with a ditransitive verb has three arguments. The semantic roles and the grammatical functions of the arguments are agent/subject, theme/object, recipient or source/indirect object.

The morphological type of the verb (plain, spatial, or agreement), the animacy of the verb's arguments, and the information structure are the main factors that determine the positions of subjects and objects in the sentence.

2.2.1.1. Specific position(s) for subject and object

The single argument of a plain intransitive verb [Syntax - 2.1.1.2.] bears the semantic role of agent, experiencer, or theme. It functions as the subject of the sentence. The subject predominantly precedes the verb. In the following example, ATHLETE is the single argument of the intransitive verb RUN and it is also the subject of the sentence.



ATHLETE RUN

'The athlete ran.'

In a transitive construction with a plain verb, the agent/experiencer subject typically precedes the theme object.



GIRL PENCIL BREAK
'The girl broke the pencil.'

In a clause with a transitive verb where the theme as well as the agent/experiencer is animate, Animacy Constraint holds on the order of the arguments. Animacy Constraint states that the thematic role and grammatical function of the arguments as the agent/experiencer and theme is determined by word order in such constructions. The agent/experiencer precedes an animate theme object, as in the following sentence.

GIRL BOY LOVE
'The girl loves the boy.'

(adapted from Dikyuva 2015; 252, 5.9)

In the sentence above, the nominal that occurs in sentence initial position GIRL is interpreted to be the experiencer subject and the nominal that follows it BOY to be the theme object of the verb.

In constructions with a single agreement verb, the grammatical function of the arguments is determined by word order and the directionality of the verb movement. The agent/experiencer functions as subject and precedes the theme object. The theme is also marked by verbal morphology by the movement of the hand in the direction of the locus of the theme in the signing space. Animacy constraint on the order of constituents also holds in constructions with a single agreement verb. The subject/experiencer/agent precedes the animate theme/object.

WOMAN_a MAN_b SEE_b
'The woman saw the man.'

(adapted from Kayabaşı, et.al., in press, Fig. 1)

This sentence can only be interpreted as WOMAN being the experiencer/subject and MAN the theme/object. The movement path of the hand movement of the verb SEE is towards the locus of the referent of the theme/object MAN.

In constructions with a double agreement ditransitive verb, word order and verbal morphology determine the grammatical functions of the arguments. The word order is S-IO-DO-V. With forward agreement verbs, the movement of the hand is from the locus of the subject to that of the indirect object.



IX₂ FRIEND_b PENCIL₂ GIVE_b
'You are giving a pencil to your friend.'



IX₂ IX_{3b} MONEY₂ PAY[^]NOT_{3b}
'You are not paying money to him.'

IX₂ which occurs in sentence initial position in each of the above examples is interpreted to be the agent/subject of its clause and the constituent immediately following it, i.e. FRIEND_b and IX_{3b} in the two respective examples, is interpreted to be the recipient/indirect object.

With backward agreement verbs [Lexicon - 3.2], the movement of the hand is from the locus of the object to that of the subject.



IX₂ IX₃ DEBT_b 3TAKE₂^NOT

‘You did not borrow money from him/her.’

Moreover, the position of an object embedded clause with the semantic role proposition is determined by the semantic category of the matrix verb. See [Syntax - 3.3].

However, deviations from the basic word order of the constituents is possible. The object can precede the subject. This is due to topicalization [Pragmatics - 4.2]. Topicalization is also constrained by animacy constraint. Only nominals with inanimate referents can be topicalized.

IX(dem)_a BOOK ALL STUDENT READ

‘That book, all students read’.

(adapted from Kayabaşı, et.al., 7a)

The animacy constraint on topicalization is overridden by the use of a resumptive pronoun which is a pronominal sign that occurs in the position where the sign of the referent of its antecedent is expected to occur. One resumptive pronoun strategy is a buoy which is a pointing sign - with 1- or flat handshape with extended fingers - produced by the nondominant hand and held throughout the utterance.



CHILD_b

BIRTHDAY



CHILD_b _____

IX₃

FATHER_a

PRESENT

GIVE_b



BUT

SISTER_c

GIVE^NOT_b

‘It is the boy’s birthday. To the boy, the father is giving (him) presents, but not the sister.’

(r. f. Kayabaşı, et.al. in press, Fig.4)

In the above example, first ‘child’s birthday’ is introduced with the signs CHILD BIRTHDAY. Then the sign of BIRTHDAY is partially held on the non-dominant hand (the index finger pointing upwards) and starts as functioning as the buoy for the ‘birthday child’. This buoy is held constantly throughout the utterance, and the signer points to it with IX₃ at the syntactic position where the antecedent of the referent, ‘birthday child’, is predicted to occur.

Another resumptive pronoun strategy is using an index sign which is articulated by pointing to the position of the locus of the antecedent.



IX(dem)

BALL_i

IX₁

CHILD



WHAT_TIME

IX_i

TAKE

KNOW^NOT

‘That ball, I don’t know when the boy took (it).’

In the above example, IX(dem) BALL ‘that ball’ is the theme/object of the backward agreement verb TAKE, which is produced as topic in the sentence-initial position. As the signer is producing the embedded question clause, WHAT_TIME IX_i TAKE KNOW^NOT, she is pointing to the locus of the antecedent the theme/object.

Spreading of a non-manual marker may also differentiate between subjects and objects. A non-manual marker can spread over a constituent that contains the verb and its object (a verb phrase), excluding the subject. In the following examples, brow raise, one of the negative non-manual markers [Syntax - 1.5.2.], spreads over the object and the verb, excluding the subject.

_____ hs
 _____ re
 IX₁ SIGN KNOW^NOT NONE
 ‘I don’t know any sign.’

(Gökgöz 2009; 48)

_____ ht-b
 _____ re
 AUNT YESTERDAY HOUSE SIT.COMPL^NOT
 ‘Yesterday my aunt didn’t sit at home.’

(adapted from Gökgöz 2009; 84)

2.2.1.2. Special anaphoric properties for subject and object

In transitive constructions with plain and agreement verbs, reflexive pronouns, SELF, can be co-referential with subjects.



IX_{1b} SELF_b MIRROR LOOK_b
 ‘I looked at myself in the mirror.’

In reciprocal constructions with plain verbs, reciprocity is expressed by lexically expressed pointing signs or by hand movement. Pronominal pointing involves a movement from the spatial location of the subject to the location of the object. The sign is then duplicated sequentially in reverse direction.

IX₁ → IX₂ KNOW, IX₂ → IX₁ KNOW
 ‘I know you and you know me’.

(Kubuş & Hohenberger 2015, p.111)

For subjects and objects in reciprocal constructions with agreement verbs, see [Morphology - 3.1.3.].

2.2.1.3. Strategies of pronoun copying for subject and object

TID has pronoun copying. In declarative sentences the pronoun that is copied is that of the subject. The copy of the subject pronoun occurs after the verb in the final position in the sentence. In the example below both the subject

pronoun, IX₂, and its copy have the 1-Handshape.



IX₂ TELEVISION SELL^NOT IX₂

‘You did not sell TV.’

However, the copy can differ from the subject pronoun in hand configuration. In the examples below, while the subject pronoun has the 1-Handshape, its copy has the Flat-Handshape.



IX(₂) IX₃ PRESENT BUY IX(₂)

‘You buy him/her a present.’




IX(₂) CARGO SEND^NOT IX(₂)

‘You don’t send him/her cargo.’

Pronoun copying is optional.



IX(₂) FRIEND_b PENCIL₂ GIVE_b

‘You are giving a pencil to your friend.’

2.2.1.4. Null arguments for subject and object

Subjects and objects can be omitted. The subject of a plain verb can be null.

GÜL_a LAST WEEK BODRUM GO. Ø_a A LOT SWIM

‘Gül went to Bodrum last week. (She) swam a lot.’

(adapted from Kayabaşı, et.al. in press, , example 3)

In the answer to the preceding question which contains the antecedent arguments, both the subject and the object of a plain verb can be omitted.

_____ y/n
A: BOY POSS₂ NOTEBOOK DIRTY Q_PART
‘Did the boy dirty your notebook?’

B: YES Ø_a Ø_b DIRTY
‘Yes, he dirtied (it).’

(adapted from Kayabaşı, et.al. in press, example 4)

The subject and the indirect object of a double agreement verb can also be omitted.



‘The woman saw the man. (S/he) (him/her) Asked a question.’

(adapted from Kayabaşı, et.al. in press, Fig. 1)

See also [Syntax - 2.3].

2.2.2. Other grammatical functions: arguments vs. adjuncts

With respect to the order of constituents, temporal adjuncts can occur before or after the subject before the verb. In the following sentence, YESTERDAY precedes the subject.



YESTERDAY IX₁ SCHOOL GO^NOT
‘Yesterday, I did not go to school.’

-

The following example illustrates that the temporal adjunct can also follow the subject in the preverbal domain.

‘Gül went to Bodrum last week.’

(adapted from Kayabaşı et.al. in press, example 3)

A temporal adjunct within an embedded clause also occurs after the subject.

_____hs
 _____re _____lips-p
 [BILGE YESTERDAY WHAT READ] KNOW^LITTLE
 ‘I know, a little, what Bilge read yesterday.’

(adapted from Hakgüder 2015a, example 103)

2.3. Word order

Word order refers to the sequence in which the main constituents in a clause are articulated. The main constituents are the verb and its arguments [Syntax - 2.1.], although the position of the adverbials and other adjuncts in a sentence is also relevant.

The concept of word order applies only to cases where the subject, object, verb, and other constituents are articulated sequentially. Sometimes two constituents may be articulated simultaneously, e.g. a verb and its subject or a verb and an adverb. In these cases, the concept of word order is not relevant. Further, various categories, such as negation, can be expressed non-manually, which gives rise to simultaneous articulation. Again, this is not part of word order. For these reasons, the examples below only show the signs that are ordered one after the other in a sentence without taking note of any form of simultaneous expression, be it manual or non-manual.

2.3.1.1. Order of subject, object and verb

The basic word order in intransitive sentences [Syntax - 2.1.1.2.] in TİD is Subject-Verb when a lexical subject is present:

Subject-Verb

GIRL FRIEND SIBLING WALK
 ‘The girlfriends and siblings are walking.’

(adapted from Sevinç 2006: 153; ex. 15)

IX₁ SIT
 ‘I sat down.’

(adapted from Sevinç 2006: 32; ex. 12)

If the subject is expressed by a pronoun [Syntax - 2.1.1.2.], the pronoun can follow the predicate:

Verb (Predicate)-Index

... DEAF LIKE _ THAT IX_{1pl}
'We, the deaf are like this.'

(adapted from Dikyuva et al. 2017: 203; ex. 4.16)

The word order in transitive sentences [Syntax - 2.1.1.1.] depends on whether a noun phrase (NP) that is an argument is a subject or an object [Syntax - 2.2.1.] and whether it denotes an animate or an inanimate entity. When both argument NPs are animate, the NP that is the subject comes first. The most frequent order in such cases is Subject-Object-Verb but Subject-Verb-Object is also possible.

Subject-Object-Verb (where both NPs are animate)

MAN_a IX_{3a} WOMAN_b IX_{3b} SHOUT_{3b}
'This man shouted at that woman.'

(adapted from Sevinç 2006: 31; ex. 10)

Subject-Verb-Object (where both NPs are animate)

DOG SEE_{3b} CAT_b ...
'The dog saw the cat...'

(adapted from Sevinç 2006: 33; ex. 14)

However, when the object is inanimate, the order is more flexible and the object can be placed either after or before the subject (this latter for topicalization purposes [Pragmatics - 4.2.]).

Object-Subject-Verb (where the object NP is inanimate)

BICYCLE GIRL ENJOY
'The girl enjoys riding bicycles.'

(adapted from Açıkan 2007: 205; ex. 15)

BOOK CHILD BUY
'The child bought a book.'

(adapted from Açıkan 2007: 206; ex. 17)

Some signers accept the following orders as well:

Subject-Verb-Object

SINAN LOVE YAŞAM
'Sinan loves Yaşam'

(Kubus 2015: 41; ex. 9b)

Object-Verb-Subject

TROUSERS LOOK _ FOR IX₃
'Is s/he looking for a pair of trousers?'

(adapted from Açıkan 2007: 205; ex. 16)

Sentences where the verb is an agreement verb [Syntax - 2.1.2.3.] also have the same order. The unmarked case is for the subject to come before the object although Object-Verb-Subject order is also possible:

Subject-Object-Verb

SINAN_a YAŞAM_b a VISIT_b

‘Sinan visits Yaşam’.

(Kubus 2015: 43; ex. 11a)

Object-Subject-Verb (less common)

SINAN_a VISIT_b YAŞAM_b
‘Sinan visits Yaşam’.

(Kubus 2015: 43; ex. 11b)

As can be surmised from the examples above, Subject-Object-Verb is the unmarked order in TİD. The other orders are generally used for backgrounding, focalizing, and topicalizing particular constituents [Pragmatics - 4.1.].

2.3.1.3. Order of modals with respect to the verb

The modals MUST, HAVE_TO, and CAN follow the main verb.

IX₂ TODAY TURKISH LANGUAGE SIGN COURSE GO MUST
‘You must to go to the TİD course today.’

(adapted from Gökgöz 2011: 33; ex. 30)

YES ALL SAFETY^BELT WEAR HAVE_TO
‘Yes, everyone has to wear a safety belt.’

(adapted from Gökgöz 2011: 33; ex. 31)

2.3.1.4. Order of negation with respect to verb, modals and auxiliaries

See[Syntax - 1.5.1.2.1.].

2.3.1.5. Order of arguments of ditransitive verbs

In ditransitive verbs [Syntax - 2.1.1.1.] the indirect object is usually placed before the direct object.

CHILD MOTHER MONEY TAKE
‘The child took the money from his/her mother.’

(Dikyuva et al. 2017: 213; ex. 5.12)

CHILD GRANDFATHER LETTER SEND
‘The child sent a letter to the grandfather.’

(Dikyuva et al. 2017: 213; ex. 5.13)

2.3.2. Basic order of constituents in other clauses

Apart from declarative sentences with verbal predicates, word order is significant in other types of clauses as well. These are equative sentences, coordinated clauses, and sentences of other functional types, namely, interrogatives and imperatives.

2.3.2.1. Basic order in the different types of sentence

In equative sentences [Syntax - 2.1.4.] in TİD, there are no overt verbs. The predicate may be expressed simply by a noun phrase, an adverbial phrase, or an adjectival phrase. If the predicate is an adjectival phrase (e.g. HEAVY ‘(is)

heavy’) the order is Subject- Predicate:

ALL FAMILY HAPPY

‘The whole family is happy.’

(adapted from Açı 2007: 86; ex. 45)

BAG HEAVY

‘The bag is heavy’

(Dikyuva et al. 2017: 211)

If the predicate is expressed by a locative phrase (e.g. TABLE TOP ‘(is) on the table (top)’) then the order may be Predicate-Subject:

TABLE TOP BOOK

‘There is book on the table’

(Dikyuva et al. 2017: 212)

Another type of predicate occurs in existential sentences. Existential sentences in TİD may indicate the presence (or absence, in the case of negative existential sentences) of an entity, or they may show possession, ownership, or part-whole relations [Syntax – 2.1.5.]. The sign THERE_IS is a 5-Handshape sign with body contact [Phonology - 1.2.], and is most often placed at the end of the sentence, although it can sometimes occur at the beginning:

ROOM CHAIR THERE_IS

‘There is chair in the room’

(Dikyuva et al. 2017: 211)

SHE SISTER THERE_IS

‘She has a sister.’

(Dikyuva et al. 2017: 212)

THERE_IS VIOLIN MAKE

‘(Yes) there are violin players’

(Açı 2007: 65; ex. 13)

Yes-no questions have the same word order as declarative sentences. They are distinguished from declaratives by non-manual markers [Syntax - 1.2.1.2.]. Another, less frequently used, alternative is to place a lexical sign, a morpheme that resembles the orthographic question mark sign, at the end of the sentence [Syntax - 1.2.1.3.]

In content questions which contain the words WHAT, WHO, WHEN, WHERE, WHY, WHICH, WHICH_ONE, HOW_MANY, HOW_MUCH, there are various positions for these items [Syntax - 1.2.3.5.].

In coordinated clauses, the word order of the second clause is usually copied from that of the first. For example, if the verb is at the end in the first clause, it is also at the end in the second clause. (Note that some constituents may be elided in coordinated clauses, which results in various interpretations) [Syntax - 3.1.4.2.].

MAN SIT_DOWN AND WOMAN HUG

‘The man sat down and hugged the woman.’

CAT BE_FRIGHTENED AND WOMAN ATTACK

‘The cat was frightened and the woman attacked [it].’

(adapted from Sevinç 2006: 36; ex. 16a, b)

However, the word order within the two coordinated clauses may sometimes be different. The first clause below is verb-final, but the second one is verb initial:

MAN SHOUT_AT AND BECOME_SAD WOMAN

‘The man shouted at (the woman) and the woman became sad’

(adapted from Sevinç 2006: 40; ex. 24)

2.4. Null arguments

Null arguments of a verb (typically, subjects and objects) are pronominal [Lexicon - 3.7.] arguments that are phonologically unexpressed in a clause.

In the answer of the question-answer pair below, neither the subject (referring to BOY in the question) nor the object (referring to NOTEBOOK in the question) of the plain verb DIRTY is an overt nominal. The null arguments in the examples are represented with the symbol \emptyset .

(1) $\frac{\text{y/n}}{\text{A: BOY}_a [\text{IX(poss)}_2 \text{ NOTEBOOK}]_b \text{ DIRTY Q_PART}}$
'Did the boy dirty your notebook?'

B: YES $\emptyset_a \emptyset_b \text{ DIRTY}$
'Yes, he dirtied it.'

(adapted from Kayabaşı, et.al. in press, 3 &

The null pronouns above are interpreted as definite pronouns [Pragmatics - 1.2.], namely, as *he* and *it*, respectively referring to the subject and the object of the question clause.

Arguments of both plain [Lexicon – 3.2.1.] and agreement verbs [Lexicon – 3.2.2.] can be realized as null pronouns. Null arguments can be licensed by verb agreement [Morphology - 3.1.] and/or by a topic [Pragmatics – 4.2.].

2.4.1. Subject and object null arguments

Both subjects and objects of plain and agreement verbs can be phonologically null within a clause.

2.4.1.1. Null subjects

The subject of a plain intransitive verb such as SWIM and PLEASED in the examples below can be null.

$\emptyset_a \text{ A_LOT SWIM}$
'She swam a lot.'

$\emptyset_a \text{ PLEASED}$
'She was pleased.'

(adapted from Kayabaşı, et.al. in press, 3 &

The subject of an agreement verb such as ASK below can also be null.

$\emptyset_a \emptyset_b \text{ aASK}_b$
'He asked her.'

(adapted from Kayabaşı, et.al. in press,

2.4.1.2. Null objects

Objects of plain transitive verbs and of agreement verbs can be null, as well. In the examples below, KISS is a plain transitive verb and ASK is an agreement verb.

MOTHER \emptyset_i KISS BUT SISTER \emptyset_i KISS^NOT

'The mother kissed him but the sister did not kiss him.'

(adapted from Kayabaşı, et.al. in press,

$\emptyset_a \emptyset_b$ ASK_b

‘He asked her.’

(adapted from Kayabaşı, et.al. in press,

2.4.2. Types of verbs that can license null subjects

Null subjects can be licensed by plain, spatial and agreement verbs. In the following, the transitive plain verb LOVE licenses a null subject, which is understood to refer to the signer.

GO_OUT+++ \emptyset_1 MUCH LOVE ONE MONTH AFTER \emptyset_1 MARRY

‘After going out for a month, I loved a lot, and got married.’

(<http://tidsozluk.net/tr/Sevmek?d=00>)

A spatial verb can license a null subject. The following example is from the following large discourse.

“The man borrowed a lot of money, did not pay the installments. They took everything away by force. The man protested and wanted to jump off the bridge. He got on the bridge. The police were ready. They talked to him for a long time. Everything was straightened out. He started to work again and after working for a long time, he slowly paid back his debt.”

(<http://tidsozluk.net/tr/Atlamak?d=0724>)

The null subject in the following example refers to “the man”/“he” in the story.

\emptyset_a BRIDGE GET_ON

‘He got on the bridge.’

Agreement verbs can license a null subject. In the following example, the backward agreement verb BUY and forward agreement verb GIVE have null subjects. Both of the null subjects refer to the signer. 3a in the example represents the locus of the source of BUY in the signing space.

_____ eg:3a
_____ ht:3a to 3b

IX₁ SIBLING_b PENCIL LOSE \emptyset_1 CL(): ‘five’ BUY₁ \emptyset_1 \emptyset_{3b} 1GIVE_{3b}

‘My sibling lost his/her pencil. I bought five (pencils) and gave them to him/her.’

(<http://tidsozluk.net/tr/Vermek?d=0018>)

2.4.3. Null subjects in main clauses

Subjects of main clauses can be expressed as null arguments. Null subjects can be licensed by plain, spatial and agreement verbs [Syntax – 2.4.1.1.]. The null subject can have a definite or an indefinite reading [Syntax – 2.4.6.].

2.4.4. Null arguments in embedded clauses

Subjects of main clauses can be expressed as null arguments. Null subjects can be licensed by plain, spatial and agreement verbs [Syntax – 2.4.1.1.]. The null subject can have a definite or an indefinite reading [Syntax – 2.4.6.].

2.4.5. Pragmatic and semantic conditions licensing null arguments

Null arguments are typically topics (old, known information) of the sentences they occur in. The overt antecedent of null topic [Pragmatics – 4.2.] is introduced in the context before the null argument occurs. A common context for these constructions is the question-answer pairs. Answers to questions usually contain null arguments. In the following question-answer pair, the answer contains a null subject and a null object, both are old, given information since their antecedents (BOY and NOTEBOOK) have been expressed in the question.

_____ y/n
A: BOY_a [IX(poss)₂ NOTEBOOK]_b DIRTY Q_PART
‘Did the boy dirty your notebook?’

B. YES Ø_a Ø_b DIRTY
‘Yes, he dirtied it.’

(adapted from Kayabaşı, et.al. in press, .

The following example is not a question-answer construction but there is a pair of sentences whose subjects are co-referential. In these cases, typically, the subject of the following sentence is null. GÜL is introduced in the first sentence and the null subject in the second sentence functions as the topic. This example also shows that null arguments can function as topic continuity devices in discourse [Pragmatics – 4.2.].

GÜL_a LAST WEEK BODRUM GO. Ø_a A LOT SWIM.
‘Gül went to Bodrum last week. She swam a lot.’

(adapted from Kayabaşı, et.al. in press,

2.4.6. Referential properties of null arguments

The identification of the referents of null arguments depends on a number of factors. If the antecedent is localized in the sentence preceding the one which contains the null arguments, the referent of the null argument can be identified unambiguously. However, if there was no localization, there may be ambiguity. That is, the null argument may refer to any of the appropriate entities salient in the discourse. In the following example, both of the arguments of the agreement verb ASK are null. In the absence of localization or other clues in the discourse, their referents are potentially ambiguous.

Ø_{a/b} Ø_{b/a} _____ a/b ASK_{b/a}
‘She/he asked him/her.’

(adapted from Kayabaşı, et.al. in press,

In the following question-answer pair, either of the noun phrases in the question, MAN or WOMAN, can be interpreted to function as the antecedent of the null arguments in the answer.

_____ y/n
A: MAN_a [WOMAN_b LETTER a/b GIVE_{b/a}] REMEMBER
‘Did the man remember that he gave the letter to the woman?’

B: YES $\emptyset_{a/b}$ [$\emptyset_{a/b}$ LETTER a/b GIVE b/a] REMEMBER

‘Yes, s/he remembered that s/he gave the letter to her.’

(adapted from Kayabaşı, et.al. in press, example 27)

In the absence of any further clues, the ambiguity in antecedent assignment is a consequence of the ambiguity in the identification of the topic of the discourse.

In addition to localization and context, world knowledge may also be operative in referent assignment to null arguments. In the following example, the subjects of both the matrix verb of saying, SAY, and that of the embedded plain verb CLEAN are null.

[BROTHER IX(poss)₁]_a [MOTHER_b SHOUT] GET_TIRED \emptyset_b [\emptyset_a ROOM CLEAN] SAY

‘My brother is tired of mother shouting. She told him to clean the room.’

(adapted from Kayabaşı, et.al. in press, example 28)

Here the null subject of SAY is interpreted to refer to the mother and the null subject of CLEAN is interpreted to refer to the brother since according to our world knowledge, it is usually mothers who tell their children to clean their rooms.

The following is another example.

MAN_a WOMAN_b LOOK_FOR \emptyset_b PLEASED

‘The man looked for the woman. He was pleased.’

(adapted from Kayabaşı, et.al. in press, example 26)

In contexts in which the arguments in a topic construction are not localized [Morphology – 4.2.][Pragmatics – 8.1.], the semantic roles and the grammatical functions of the null arguments of the double agreement predicates are assigned in accordance with the predictions based on world knowledge.

BOY_a MOTHER_b CALL \emptyset_b \emptyset_a WATER b GIVE_a

‘The boy called the mother. She gave him water.’

(adapted from Kayabaşı, et.al. in press, example 24)

In contexts where world knowledge does not seem to yield a salient pattern with respect to antecedent assignment to the null arguments of a double agreement verb, the null arguments are interpreted to refer ambiguously to either of the arguments in the preceding context. One such context is where the referents of the arguments are both animate and are not localized in the first sentence.

MAN_a WOMAN_b MEET. $\emptyset_{a/b}$ $\emptyset_{b/a}$ PRESENT a/b GIVE b/a

‘The man met the woman. S/he gave him/her a present.’

WOMAN_a MAN_b SEE_b. $\emptyset_{a/b}$ $\emptyset_{b/a}$ a/b ASK b/a

‘The woman saw the man. S/he asked him/her a question.’

(adapted from Kayabaşı, et.al. in press, 23 &

Null arguments may also be definite or indefinite. In the following two examples, the null subjects refer to the signer and the addressee, respectively, hence, they are definite.

\emptyset_1 KNOW NOT

‘I don’t know.’

y/n

GO DO Ø Ø₂ WAIT WHAT

‘Go do it, what are you waiting for?’

(adapted from Kayabaşı, et.al. in press, 3)

However, a null subject can also have an indefinite/impersonal interpretation, as in the following example. Here, the subject does not refer to a definite individual but has an indefinite and impersonal interpretation [Pragmatics – 1.5.] This interpretation is translated as ‘one’ in the example.

Ø CAR WELL TAKE CARE++ BETTER

Ø TAKE CARE^NOT++ CAR QUICK BREAK DOWN

‘One has to take good care of a car. Otherwise, the car will break down quickly.’

(<http://tidsozluk.net/tr/Bakmak?d=00>)

Information on data and consultants

Please see the data and consultant information in the references. The linguistic data in images and video clips that were produced or reproduced for this chapter were provided by a near-native fluent signing consultant who was born and raised in Istanbul. The examples with a link underneath are from tidsozluk.net (Makaroğlu and Dikyüva, 2017)

[2.4.] - The data for Kayabaşı, et.al. were obtained from a deaf consultant and five adult native TİD participants. The participants were 25-50 years of age, four male, one female. They were all born to deaf parents. The female informant was born in Kırklareli and was exposed to home sign until school age. She learned TİD in school. Two of the male informants were born and raised in Istanbul, the third was born in Tokat, the fourth in Mardin. All informants attended schools for the deaf, and all, with the exception of one, are high school graduates. One male informant is a university graduate.

References

- Açan, Zeynep. 2007. *A linguistic analysis on basic sentence types in Turkish Sign Language (TİD) with reference to non-manual activity*. Ankara, Turkey: Hacettepe University PhD dissertation.
- Dikyüva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2015. *Türk İşaret Dili dilbilgisi kitabı* [Turkish Sign Language grammar book]. Ankara: TC Aile ve Sosyal Politikalar Bakanlığı.
- Dikyüva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2017. *Turkish Sign Language grammar*. Ankara: The Republic of Turkey Ministry of Family and Social Policies.
- Gökgöz, Kadir. 2009. *Topics in Turkish Sign Language (Türk İşaret Dili – TİD) Syntax: Verb movement, negation, and clausal structure*. Istanbul, Turkey: Boğaziçi University MA thesis.
- Gökgöz, Kadir. 2011. Negation in Turkish Sign Language: The syntax of nonmanual markers. *Sign Language & Linguistics* 14(1). 49-75.
- Göksel, Aslı & Meltem Kelepir. 2011a. Issues in complexity: Sentential complementation in Turkish Sign Language. (Paper presented at the Complex sentences and beyond in sign and spoken languages, University of Göttingen, 13-14 October 2011.)
- Göksel, Aslı & Meltem Kelepir. 2016. Observations on clausal complementation in Turkish Sign Language. In R. Pfau, M. Steinbach & A. Hermann (eds), *A matter of complexity: Subordination in sign languages*, 65–94. Berlin: De Gruyter. <https://doi.org/10.1515/9781501503238-005>

- Hakgüder, Emre. 2015a. *Complex clauses with embedded constituent interrogatives in Turkish Sign Language (TİD)*. Istanbul, Turkey: Boğaziçi University MA thesis.
- İşsever, Selçuk & Bahtiyar Makaroğlu. 2015. WH-Movement in Turkish Sign Language. In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 167-189. New Castle Upon Tyne: Cambridge Scholars Publishing.
- Kayabaşı, Demet. In progress. *The causative-inchoative alternation in Turkish Sign Language and the age of acquisition effects on complex clauses*. İstanbul, Turkey: Boğaziçi University MA Thesis.
- Kayabaşı, Demet, Hande Sevgi & A. Sumru Özsoy. in press. Null arguments in Turkish Sign Language. Morphological complexity within and across boundaries. In A. Güreş, D. Uygun-Gökmen & B. Öztürk (eds.), *In honor of Aslı Göksel*. John Benjamins
- Keleş, Meltem, Aslı Özkul, & Elvan T. Özparlak. 2018. Agent-backgrounding in Turkish Sign Language (TİD). *Sign Language & Linguistics* 21(2), 257-283.
- Kubus, Okan & Annette Hohenberger. 2013. Phonology and phonetics of reciprocals in Turkish Sign Language (TİD). In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 101-142. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.
- Kubus, Okan & Annette Hohenberger. 2015. The phonology and phonetics of reciprocals in Turkish Sign Language (TİD). In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 101- 142. New Castle upon Tyne: Cambridge Scholars Publishing.
- Kubus, Okan. 2016. *Relative Clause Constructions in Turkish Sign Language*. Hamburg, Germany: University of Hamburg PhD Dissertation.
- Makaroğlu, Bahtiyar, & Hasan Dikyuva (eds.). 2017. *Güncel Türk İşaret Dili sözlüğü* [The contemporary Turkish Sign Language dictionary]. Ankara: Aile ve Sosyal Politikalar Bakanlığı. URL: <http://tidsozluk.net>.
- Makaroğlu, Bahtiyar, & Selçuk İşsever. 2018. Agreement verbs in Turkish Sign Language (TİD) from the perspective of templatic morphology. *Dilbilim Araştırmaları Dergisi* 29(1), 51-86.
- Sevgi, Hande. 2019. *Effects of age of acquisition on morphosyntactic structures in Turkish Sign Language: Evidence from classifiers*. İstanbul, Turkey: Boğaziçi University MA thesis.
- Sevinç, A. Müge. 2006. *Grammatical relations and word order in Turkish Sign Language TİD*. Ankara, Turkey: Middle East Technical University MA thesis.

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3.2. Subordination: distinctive properties

Subordination refers to the realization of a clause as a dependent constituent within a larger, superordinate clause. A subordinate clause can function as a subject, an object, or an adjunct. For example, in the sentence *John thinks*

Bill is a university lecturer, the finite clause *Bill is a university lecturer* is a dependent of *John thinks*, specifically, an object complement of *thinks*. In the noun phrase, *Bill, who is a university lecturer*, the clause *who is a university lecturer* is a dependent of *Bill*, specifically, an adjunct that modifies *Bill*. Such dependent clauses are called subordinate clauses and they are embedded within other phrases or clauses. These can have one of the following functions: (i) subject or object clauses (clauses that occur as arguments of main verbs and that are embedded inside a main clause where the main verb is THINK, KNOW, WANT, and other similar verbs; these embedded clauses can be declarative or interrogative constructions), (ii) relative clauses (adjectival clauses that modify nouns [Syntax - 3.4.]), and (iii) adverbial clauses (clauses that modify a verb or a whole sentence [Syntax - 3.5.]). Subordination is a strategy that is widely used in role shift (embedded clauses that are used in reported speech [Syntax - 3.3.3.]). Some examples of subordinate clauses are the following:

Object clause (embedded declarative):

_____ sbp

HASAN KNOW [ELIF HORSE_RIDE WORK SUCCEED WORK++ SUCCEED]

‘Hasan knows that Elif is working on and succeeding at horseback riding’

(Göksel & Kelepir 2016: 17, ex. 23)

Object clause (embedded interrogative):

_____ br
_____ hb
_____ hn _____ hs _____ hn

HALE_a IX_a BILGE_b aASK_b [IX₁ WHERE WORK] aASK_b

‘Hale asks Bilge where I work.’

(Hakgüder 2015a: 85, ex. 78)

Relative clause:

_____ hn _____ hs
_____ re _____ sq _____ re

HOUSE ARRIVE [MOTHER SAME] HOUSE GO

‘(She) arrived home. She went to the house that belongs to her mother too.’

Adverbial clause:

[IX₂ ₂INVITE₁ FOR] IX₁ COME
'I came here to invite you.'

3.2.1. Subject pronoun copy

In some sentences with subordinate clauses in TİD, the main clause is followed by a pronominal copy of the subject. These are sentences where the main verb is WANT, LIKE, FORGET_TO and possibly other verbs in the same group [Syntax - 3.3.2.1].

ALI_a [IX₁ UNIVERSITY WORK] WANT IX_{3a}
'Ali wants me to work at the university'.

IX_a POSS₁ SON IX_a [SWIM] MUCH LIKE IX_a
'My son (he) likes swimming very much.'

(adapted from Göksel & Kelepir 2016: 9, ex. 11a, c)

In an other type of complex sentence, where the main verb is KNOW_THAT or FORGET_THAT [Syntax - 3.3.2.1], a subject pronoun copy occurs only if it is followed by the main verb:

ALI_a IX_{3a} [IX₁ UNIVERSITY WORK] IX_{3a} KNOW_THAT
'Ali knows that I am working at the university'.

(adapted from Göksel & Kelepir 2016: 9, ex. 12c)

Sentences with KNOW_THAT as the matrix verb behave the same when the subordinate clause is an interrogative. This applies to similar non-agreeing verbs. Here, the subject pronoun copy occurs before the second mention of the main verb.

IX₁ KNOW_THAT [WHO PASS EXAM] IX₁ KNOW_THAT
'I know who passed the exam'.

(adapted from Hakgüder 2015b: 23; ex. 27)

3.2.2. Position of question signs

Question signs, specifically, wh-signs [Syntax - 1.4.2.2.], occur in two positions in embedded clauses: either in-situ, or at the end of the sentence (as opposed to the four possible positions in interrogatives that are simplex clauses [Syntax - 1.2.]). In the first two examples, the question signs occur in-situ.

IX₂ FORGET [IX_{1+2pl-incl} **WHEN** MARRY] FORGET
'You forgot when the two of us got married.'

(adapted from Hakgüder 2015a: 83; ex. 73)

ANN WONDER [**WHO** LIKE PHILIP]
'Ann wonders who likes Philip.'

(Hakgüder 2015a: 89; ex. 81)

IX₁ KNOW_THAT [GÜNAY_a IX_{3a} AYŞE_b _aCHEAT_ON_b **WHO**]
'I know who Günay is cheating on Ayşe with.'

(adapted from Hakgüder 2015a: 83; ex. 74)

3.2.3. Spreading of non-manual markers

Some subordinate clauses are welded with their main clauses by non-manual markers [Syntax - 1.3.2.2.] that spread across clause-boundaries. There are at least three instances of such spreading in TİD. One of these is a single shared non-manual marker that runs over the whole main clause, the non-manual marker ‘static body posture’:

sbp

HASAN KNOW_THAT [ELIF HORSE_RIDE WORK SUCCEED WORK++SUCCEED]
 ‘Hasan knows that Elif is working on and succeeding at horse riding.’

(adapted from Göksel & Kelepir 2016: 7; ex. 6b)

This sentence does not only exemplify the lack of a break after KNOW, but a dedicated marker that is the indicator of syntactic complexity.

In the other two cases, spreading is local. One of these occurs in complex clauses with GUESS as the main verb. The other one occurs when the main verb is negative.

The verb GUESS contains a non-manual component, which is squint. When this verb has an object clause as its complement, squint can spread progressively into the first word of the complement clause:

sq

AYŞE GUESS [ÜLKÜ SLEEP]
 ‘Ayşe thinks that Ülkü is sleeping.’

(adapted from Göksel & Kelepir 2016: 15; ex. 21)

Alternatively, squint can spread into the last word of a preceding complement clause:

sq

IX₂ [ELECTION WIN] GUESS WHO
 ‘Who do you think will win the election?’

(adapted from Göksel & Kelepir 2016: 16; ex. 22)

In the case of negation, one of the non-manual markers associated with negation, non-neutral brow position (nbp), can spread into the verb phrase of the subordinate clause:

nbp

POSS₁ SISTER_a IX_{3a} [CAR DRIVE] LIKE^NOT
 ‘My sister doesn’t like driving a car’.

(adapted from Göksel & Kelepir 2016)

3.2.4. Interpretation of embedded negation in the matrix clause

In some complex sentences, the negation that is associated with the subordinate clause appears on the main verb. One place where this happens is with the main verb WANT. In the sentence below, what Melek wants is ‘not to meet her friends today’. However, the negative marker NOT, instead of appearing in the embedded clause as the meaning suggests, appears in the main clause, negating the main verb (as it does in the English translation):

ht-b

MELEK [TODAY FRIEND MEET] WANT.NOT
 ‘Melek doesn’t want to meet her friends today.’

(Göksel & Kelepir 2016: 13; ex. 18)

3.3. Argument clauses

Role shift/role shift [Pragmatics – Chapter 6] is a phenomenon that involves the enacting and performing another person’s speech or actions. Getting in the role of other animate beings such as animals or inanimate beings is also possible. Role shift may be used in contexts where direct speech is

used but also in other contexts as well. In role shift the expressions that are signed are interpreted from another person's perspective or with respect to another context other than that of the actual conversation. Important properties of role-shift are body shift, change in the direction of eye gaze, and altered facial expressions. These signal to the addressee that the signer is adopting somebody else's perspective. Role shift may be used to report someone else's speech or thought (attitude role shift), alternatively it may be used to describe physical actions performed by someone else (action role shift).

3.3.2.1. Verbs taking object clauses

There are a number of verbs that can have clausal objects, such as WANT, LIKE, THINK, and others. These verbs form two distinct groups with respect to their syntactic behavior. Among the verbs in the first group are WANT, LIKE, KNOW_HOW_TO, FORGET_TO, MAKE_AN_EFFORT, and the other group contains, among others, the verbs THINK, KNOW_THAT, FORGET_THAT, UNDERSTAND, and BELIEVE. In the examples below, the embedded object clause is in square brackets and the main verb is in italics:

MELEK [CHILD GOOD SCHOOL GO] **WANT**
 'Melek wants her child to go to a good school.'

(Göksel and Kelepir 2016: p6; ex. 4a)

sbp

HASAN KNOW_THAT [ELIF HORSE.RIDE WORK SUCCEED WORK++SUCCEED]
 'Hasan knows that Elif is working on and succeeding at horse riding.'

(adapted from Göksel & Kelepir 2016: 7; ex. 6b)

3.3.2.2. Position(s) within the matrix clause

The position of an object clause depends on the verb that takes it as an object. Object clauses of the verbs WANT, LIKE, KNOW_HOW_TO, FORGET_TO, MAKE_AN_EFFORT occur before the verbs that they are the object of:

MELEK [RUN] MUCH **LIKE**
 'Melek likes running very much'.

(adapted from Göksel & Kelepir 2016: p19; ex. 24b)

In contrast, object clauses of the verbs THINK, KNOW_THAT, FORGET_THAT, UNDERSTAND, and BELIEVE, occur after the verbs that take them as objects:

ALI_i SELF_i **THINK** [AYŞE REST]
 'Ali himself thinks that Ayşe is resting.'

(adapted from Göksel & Kelepir 2016: p7; ex. 6a)

The object clauses above are declarative clauses. Object clauses can also be in the form of interrogative clauses. In this case, they behave somewhat differently in terms of their order with respect to the main verb. The verb FIND_OUT has free word order with respect to its complement. The object clause can come either after or before the main verb:

y./n

IX₂ **FIND_OUT** [WHO EXAM PASS]
 'Did you find out who passed the exam?'

_____y/n

IX₂ [WHO EXAM PASS] FIND_OUT
 ‘Did you find out who passed the exam?’

(Hakgüder 2015a: 72; ex. 62-63)

When the main verb is ASK and the sentence cast as indirect speech, the object clause can only come before the main verb, although it does not have to be strictly adjacent to it:

[GIRL HALE]_a [POSS₁ MOTHER NAME WHAT] BILGE_b ASK_b
 ‘Hale asks Bilge what my mother’s name is.’

(adapted from Hakgüder 2015a: 75; ex. 64)

In direct speech, the object clause can either follow or precede the main verb ASK. In the next example, the complement comes before the main verb ASK:

[GIRL HALE]_a [AYŞE WHAT HIGH SCHOOL GO] BILGE_b _aASK_b
 ‘Hale asks Bilge: ‘Which high school did Ayşe attend?’’

(adapted from Hakgüder 2015a: 75; ex. 65)

The following example has a different order. The complement object clause comes after the main verb ASK:

IX₂ ₂ASK₃ [BUTTERFLY HOW_MANY THERE_IS]
 ‘You ask him/her: How many butterflies are there?’’

(adapted from Hakgüder 2015a: 76; ex. 66b)

3.3.2.4. Special non-manual markers

There is a special non-manual marker found in interrogative subordinate clauses that are the direct objects of ASK. This non-manual marker is head backward, and it is found in subordinate clauses that are cast both as indirect and direct speech. This marker is the same as that found in wh-constructions that are simplex clauses [Syntax - 1.2.3.4.]:

_____hs
 _____re
 _____hp-b _____ht-l

H1: [WHAT THERE_IS] WONDER

H2: _____IX

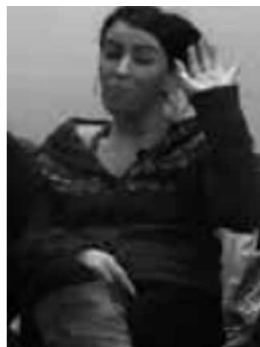
(adapted from Hakgüder 2015a: 103; ex. 99)

3.3.3. Role shift

Role shift/role shift [Pragmatics – 6] is a phenomenon that involves the enacting and performing another person’s speech or actions. Getting in the role of other animate beings such as animals or inanimate beings is also possible. Role shift may be used in contexts where direct speech is used but also in other contexts as well. In role shift the expressions that are signed are interpreted from another person’s perspective or with respect to another context other than that of the actual conversation. Important properties of role-shift are body shift, change in the direction of eye gaze, and altered facial expressions. These signal to the addressee that the signer is adopting somebody else’s perspective. Role shift may be used to report someone else’s speech or thought (attitude role shift), alternatively it may be used to describe physical actions performed by someone else (action role shift).

3.3.3.1. Markers of role shift

The non-manual markers that signal role shift in TİD are optional body shift with head tilt and optional break of eyegaze. Below are two examples where the signer situates the original speakers of the quoted utterance by pronouns in spatial locations [Pragmatics – 8.1.]. These spatial loci are generally slightly to the left or to the right. During the quoted utterance, the body is oriented towards one of these points together with a slight head tilt:



(adapted from Kelepir & Göksel 2016: 341)

In relatively long narratives of quoted utterances, eye gaze is generally directed towards the locus associated with the original speaker of quotes and is optionally sustained towards the actual addressee in shorter quotes. These may be one or two utterance long segments of speech. Two examples are presented below respectively:



(adapted from Kelepir & Göksel, 2016:342)

The pronouns in quoted utterances are often used with a different reference than their canonical references, for example, a first person pronoun can indicate the speaker of the original utterance, rather than the signer herself. These cases of reference shift are described in [Pragmatics – 6].

3.3.3.2 Integration of the role shifted clause into the main clause

The complements of attitude role shift clauses have a unique positional character. While the sentential

complements of TİD verbs take sentential complements either before the verb (for example, verbs such as WANT [Syntax – 3.3.2.2.]), or following the verb (for example verbs such as THINK [Syntax – 3.3.2.2.]), the role shift clauses introduced by SAY can occur in either position as in the examples below.

IX₃ SAY ... SISTER EAT GROW BEAT
'He says my sister fed me, nurtured me, beat me'.

HOUR FIVE GO HOUR FIVE NECESSARY GO SAY
'She said I must go at five o'clock.'

(Kelepir & Göksel, 2013: 200-201)

Moreover, specific non-manual markers and a prosodic break (pause) occurs between SAY and the role shifted complement clause.

3.3.3.3. Syntactic contexts introducing attitude role shift

Attitude role shifts are predominantly expressed by the verb SAY in the form of the 1-Handshape shape moving from the mouth to forward neutral signing space or to the location associated with the goal. When the goal is pronounced, SAY functions as a single-agreement verb, agreeing with the goal. The mouthing that accompanies SAY is *de* or sometimes *söyle*, the two verbs that mean SAY in spoken Turkish. In the following example, SAY is not inflected for goal.



SAY
'He/She said "...'"

In the following example SAY is inflected for goal.



SAY₃

‘He/she said to him/her “...”’

(adapted from Kelepir and Göksel, 2013: 198)

To summarize, attitude role shift clauses appear in two types of constructions (QU means quoted utterance; pc means prosodic change which can be body shift, changing the direction of eyegaze and altered facial expressions):

ht

SAY *pause* QU

pc

QU *pause* SAY

3.4. Relative clauses

Relative clauses are sentence-like elements that accompany a noun and modify the meaning of that noun just like an adjective. In the examples in the following subsections, the head noun is shown in italics and the relative clause is shown in squared brackets.

3.4.1. Types of relative clause

According to the position of the head noun in a relative clause, TİD possesses three different types of relative clauses: internally headed, externally-headed, and free. The most frequent type is the internally headed relative clause. An example for an internally headed relative clause is provided below. The non-manual marker squint spreads over the relative clause [Syntax - 3.4.6.1.]. The head noun, *SON*, is inside the spreading domain of the squint. This shows that this is a case of internally headed relative clause.

_____ hs
_____ sq _____ re
[IX₃ *SON* BEFORE HUG KISS] NOW BRIDE CUT
'The son, who had regularly hugged and kissed the bride, didn't do this anymore.'

(Kubus 2016: 190)

Sometimes, the head noun can be repeated either within the relative clause or external to it, which results in doubling. An example of a head noun which is doubled within a relative clause is shown below:

_____ sq
... [**WATER** BEFORE IBRAHIM BRING **WATER**] RUN_OUT PALM-UP
'The water that İbrahim had brought earlier was run out.'

(Kubus 2016: 206)

In some cases, the head noun is not overt. Such constructions can be categorized as free relatives. Free relative clauses might be related to the fact that TİD is a high-context-language. In other words, the referents can usually be derived from the context or shared information among interlocutors. An example of a free relative clause is shown below. In the example, there is no overt head noun but it is understood that the relative clause [FIRST WIFE GO_a IX_a] modifies ‘the place’.

[o]
 _____ sq re hn
 ... IBRAHIM GO_a [FIRST WIFE GO_a IX_a]
 'Ibrahim went to (the place) where his first wife went to.'

(Kubus 2016: 183)

Relative clauses whose heads are external to the relative clause can also occur in TĪD. In such cases, the head noun can be before the relative clause, after the relative clause or both before and after the relative clause. Below, the head noun is *HANGMAN* and the modifying clause [COMPETITION A-B-C] follows it. Squint spreads only over the modifying clause, not over the head noun. So, the head noun is external to the relative clause. Raised eyebrows 're' also sometimes occurs in relative clauses in TĪD, as in the example above. The head noun and the modifying clause, in this case, are topicalized.

hs
 _____ sq
 _____ re ht
 IX₁ HANGMAN [COMPETITION A-B-C] CL-WANT^NOT
 'I didn't like hangman, a game which uses letters.'

(Kubus 2016: 340)

The following example shows a head noun, *MONEY_BAG*. (H1) and (H2) represent right and left hand respectively. *MONEY_BAG* is a two-handed sign. In this example, *MONEY.BAG* is first introduced, then the signer points at the non-dominant hand. After pointing, the relative clause is introduced while the non-dominant hand remains in a hold. And then the signer continues to sign.

sq
 (h1) AFTER *MONEY_BAG*_a [IX_a IX_a SORRY] *MONEY_BAG*_a GIVE
 (h2) *MONEY_BAG*_a ----- *MONEY_BAG*_a
 'Afterwards, I gave back the money bag, which I was sorry about.'

(Kubus 2016: 181)

Lastly, the head noun can occur both inside and outside the relative clause. Below, the head noun *GLASSES* occurs both inside the relative clause and outside it.

bl-f
 _____ re
 _____ sq hn
 [EYE OPTICIAN *GLASSES* DROP] AGAIN DOOR HIT BREAK *GLASSES*
 '(He) broke his glasses, which he had dropped at the optician's office earlier, again by hitting the door.'

(Kubus 2016: 182)

3.4.2. Presence or absence of a relativization sign

The use of a relativization sign in TĪD is optional. While the following example has a relative clause, [*WATER* BEFORE IBRAHIM BRING *WATER*], it does not contain any relativization sign.

sq
 ... [*WATER* BEFORE IBRAHIM BRING *WATER*] RUN_OUT PALM-UP
 'The water that Ibrahim had brought earlier was gone.'

Possible relativization signs are described in the following subsection.

3.4.2.1. List of relativization signs

The most common relativization sign is an index sign, IX, which can have a different phonetic realization as a Flat-Handshake. The sign SAME and sometimes a pointer or theme buoy [*Lexicon - 1.2.3.*] can also be used as a

relativization sign in TİD. These relativization signs are sometimes accompanied by raised eyebrows, head nod and mouthing of [o]. An IX is used as a relativization sign in the following example, with a head-nod (hn), [o] and raised-eyebrows (re).

hn
[o]
sq re
 SOFT [*SPONGEHARD FRONT BACK SOFT ABOVE HARD IX₃*] BUY
 'Buy a soft sponge, which has a hard substance on top, and a soft substance beneath.'

(Kubus 2016: 348)

The sign SAME is the relativization sign in the following example.

sq
 A_WEEK_LATER IN WOMAN SELF [*DOOR SAME POOR VERY WALK DOOR SAME*] LOOK
 'A week later, the girl looked at the door, through which the poor man was walking slowly.'

(Kubus 2016: 346)

Lastly, the example below shows a pointer buoy [*Lexicon - 1.2.3.*] used as a relativization sign. (h1) and (h2) represent right and left hand respectively. The left hand, which is functioning as a relativization sign, is pointing to the CL-PERSON who is coreferential with the head of the relative clause.

(h1) [*MAN₃ PERSON CL:'come_together' CL:'person' HELP CL:'person'*] TURKISH CITIZEN BIRTH

(h2) IX₃..... IX₃.....

'The man that I met, who was helping me, was a Turkish citizen.'

(adapted from Kubus 2016: 322)

3.4.2.1.2. Singular/plural specificity of the relativization sign

There are various forms of IX as a relativization sign in TİD. This relativization sign may be in the forms of dual (two hands are used) or V-Handshake (*TWO_OF_YOU/US*) or else plural (repetitive/exhaustive form of IX) [*Lexicon - 3.7.*]. Two examples of IX used as a relativization sign in a form of dual with two hands is shown below. In these cases, both hands are used to refer to the two entities. Although the plural form of the [o] pronoun in Turkish is *onlar*, 'they' which is plural, the mouthing does not adapt to this. It remains singular. There are two relativization signs below, SAME(2h) and IX(2h)_(3a,3b).

re
[o]
sq hn
 (h1) IX IX MARRIED MARRIED IX₂ SAME(2h) IX(2h)_(3a,3b)] VISIT.RECIP_(3a,3b) CHAT
 (h2) SECOND THIRD

'The second and third (person), both of whom are married, visited each other and chatted.'

(Adapted from Kubus 2016: 312)

In the sentence below, the relativization sign is IX(2)_(3a,3b) is doubled. The other relativization sign SAME_(3a,3b) is also used.

sq

[IX(2)_(3a,3b) FRIEND MUST EACH_OTHER FRIEND OTHER FRIEND IX(2)_(3a,3b) SAME_(3a,3b)

____[o]

____re

IX_(3a,3b)]]

MEVLUT GO FINISH

'Two friends who had to be friends with each other, went to her funeral prayer.'

(Adapted from Kubus 2016: 314)

In the example below, mouthing is repeated three times as the index finger moves repetitively in the plural form.

[o][o][o]

sq

RESEARCH [REFERENCE BOOK IX⁺⁺_{3a,3b,3c} BOOK DIFFERENT⁺⁺ BOOK] MANY

DEAF IX₁ SEE⁺⁺_{3a,3b,3c}

'I have researched several references, mostly different books, and I noticed that the word 'deaf' was used often.'

(Kubus 2016: 338)

3.4.2.2. Position of the relativization sign

An index sign can be used as a relativization sign [Syntax - 3.4.2.1.]. The index can be at the beginning of a relative clause, within the relative clause (in situ), or at the end of the relative clause. The relative-clause final position of the index is the most common among the three. Sometimes, a combination of the index in the clause initial and clause final positions of the relative clause can occur, as the example below shows.

_[o]

____re _____sq

[IX₃ MAN₃ PERSON ₁ SWEAR₃ ALL] ₃IX₁ GOOD

'The man, whom I had sworn at, was good to me.'

(Kubus 2016: 196)

The example below shows a within-clause index as a relativization sign.

____re

____sq [o] ____sq

[HOUSE ARRIVE IX₃ GIRL₃] THINK

'The girl who arrived home was thinking.'

(Kubus 2016: 197)

The example below shows doubling of the index as a relativization sign. These relativization signs are accompanied by the mouthing of *bu* 'this', which is a demonstrative pronoun in Turkish.

'bu'

'bu'

____re _____sq ____re

IX₁ ₁TELL₃ [IX₃ GRANDMA₃ BAD BACK GOSSIP IX₃] SICK VERY DIE

'I told (her) that the old woman, who was bad and gossiped about her, had been extremely ill and was now dead.'

(Kubus 2016: 199)

SAME is another relativization sign. It occurs in the clause final position.

____hn

____hs

____re _____sq ____re

HOUSE ARRIVE [MOTHER SAME] HOUSE GO

'She went to the house that belongs to her mother, too.'

(Kubus 2016: 179)

SAME can also be used with a clause final index. Example of a combination of the relativization signs SAME and IX

are given below:

sq

[IX(2)_(3a,3b) FRIEND MUST EACH_OTHER FRIEND OTHER FRIEND IX(2)_(3a,3b) SAME_(3a,3b)

____[o]
 ____re
 IX_(3a,3b)
 MEVLUT GO FINISH.
 'Two friends who had to be friends with each other, went to her funeral prayer'

(Adapted from Kubus 2016: 314)

3.4.2.3. Optionality or obligatoriness of the relativization sign

Relativization signs are not obligatory in TİD.

3.4.3. Position of the noun phrase with the relative clause within the matrix clause

The preferred position of a noun phrase with a relative clause is clause-initial. In-situ and post-verbal positions are less frequent. Below, the example shows a fronted noun phrase [Syntax - 4.1.] which is modified by a relative clause.

____hs
 _____sq _____ht _____hn _____ht
 [GIRL₃ EARNING₃GIVE₁] IX₁ WANT^NEG IX₁ TELL^NOT
 'I could not tell that I did not want the money that the woman had earned.'

(Kubus 2016: 344)

The example below shows an in-situ noun phrase which is modified by a relative clause. The noun phrase, HANGMAN [COMPETITION A-B-C], is the object of the main clause and it is in its in-situ position after the subject of the main clause, IX₁.

____hs
 _____sq
 _____re _____ht
 IX₁ HANGMAN [COMPETITION A-B-C] CL-WANT^NOT
 'I didn't like hangman, a game which uses letters.'

(Kubus 2016: 340)

3.4.4. Subject vs. object relativization

There is no differentiation with respect to the human/non-human specificity of the head noun and the relativization sign used and with respect to the order of the relative clause to the rest of the main clause. However, there is an interaction between animacy and the use of subject vs. object relative clause. Namely, there is a preference for subject relativization with an animate entity whereas an inanimate entity most often occurs with object relativization. Although all four combinations of the function of the noun+relative clause and what is targeted to be the head inside the relative clause (Subject-Subject, Subject-Object, Object-Object, Object-Subject) are possible in TİD, Subject-Subject relative clauses are commonly used with an animate head noun while Object-Object relative clauses are commonly used with an inanimate head noun. Example of a Subject-Subject relative clause with an animate head noun is provided below. Here, the subject of the relative clause is an animate entity which is referred to by a finger-listing buoy [Lexicon - 1.2.3.], i.e. the first woman. The relativization sign is the index, IX_{3a}, pointed to the entity in neutral space.

_____ hn hn
 _____ sq re _____ sq

(h1) [IX MARRY FINISH IX_{3a}] SINGLE_{3b} CL: 'meet'_{3a,3b}

(h2) FIRST

'The first (woman), who was already married, met (the woman), who was single.'

(Adapted from Kubus 2016: 206)

Example of a Subject-Object relative clause with an inanimate head noun is provided below. An inanimate head, WATER, occurs at the beginning and at the end of the relative clause and both the head nouns and the relative clause are in the scope of squint. The head noun ('water') is the object of relative clause, whereas the complex noun modified by the relative clause, ('the water that Ibrahim had brought earlier.'), is the subject of the main clause.

_____ sq
 ... [WATER BEFORE IBRAHIIM BRING WATER] OVER PALM-UP
 'The water that Ibrahim had brought earlier was gone.'

(Kubus 2016: 206)

An example of an Object-Subject relative clause with an inanimate head noun is provided below. In this example, the head noun is animate, BABY, and it is the subject of the relative clause but the complex noun modified by the relative clause ('the baby who was sleeping') is object for the main clause.

_____ sq hn
 NURSE_a LOOK_AT_b [BABY_b SLEEP]
 'The nurse looked at the baby who was sleeping.'

(Kubus 2016: 344)

An example of an Object-Object relative clause with an inanimate head noun is provided below. The head of the relative clause is the inanimate entity, MONEY, which is the object targeted by relativization. In turn, the entire noun phrase [Syntax - 4] modified the relative clause ('the money that he got') is used as the object of the main clause predicate [Syntax - 2.1.1.], SPEND^NOT.

_____ 'bu'
 _____ sq re _____ hs _____ ht
 [SON_{3a} MONEY_{3b} GIVE_{3b} IX_{3b}] MONEY WHAT_DO SPEND^NOT
 'The son did not save the money that he got (from his parents).'

(Kubus 2016: 318)

3.4.5. Displacement of relative clauses

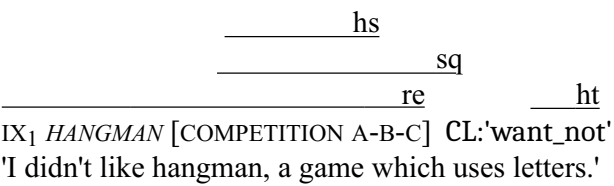
The preferred position of a noun phrase with a relative clause is clause-initial. In-situ and post-verbal positions are less frequent. Below, the example shows a fronted noun phrase [Syntax - 4.1.] which is modified by a relative clause.

_____ hs
 _____ sq _____ ht _____ hn _____ ht
 [GIRL₃ EARNING₃ GIVE₁] IX₁ WANT^NOT IX₁ TELL^NOT
 'I could not tell that I did not want the money that the woman had earned.'

(adapted from Kubus 2016: 344)

The example below shows an in-situ noun phrase which is modified by a relative clause. The noun phrase,

HANGMAN [COMPETITION A-B-C], is the object of the main clause and it is in its in-situ position after the subject of the main clause, IX₁.





(adapted from Kubus 2016: 340)



3.4.6. Special non-manual marking

Squint is the most frequent non-manual marker in relative clauses in TĪD. Other common non-manual markers used in relative clauses are headshake, raised eyebrows and head nod/forward body lean.

3.4.6.1. List of non-manual markers

Several non-manuals are important for marking relativization in TĪD.

	Potential relative clause non-manual markers	
Upper face		
	<div>Raised Eyebrows</div> <div></div>	+
	<div>Squint</div> <div></div>	+
Lower face		

	Tensed cheeks	+
		
	Tensed lips	+
		
Head		
	Back head tilt	?
	Head forward	+
	Short headshake	+
Body		
	(Forward) Body lean	+

List of Non-manual markers in relative clauses

The most prominent non-manual marker in a relative clause in T1D is a squint. The second and third most common non-manual markers are headshake and raised eyebrows respectively. These non-manual markers may occur on their own or they may be combined. The most frequent non-manual marker is the squint on its own which is followed by squint + head shake. Squint also combines with raised eyebrows. While squint and raised eyebrows on their own are capable of marking relative clauses, headshake cannot, rather it requires to combine with squint and/or raised eyebrows. Some other combinations are used less frequently such as raised eyebrows + head shake and raised eyebrows + head nod. Three non-manual markers are rarely used together.

3.4.6.2. The spreading domain of each non-manual marker

The most frequent non-manual marker squint usually spreads over the scope of the relative clause. However, this spread is not obligatory. In some rare cases, the spread is not full. A relativizer is present in most of those cases where the squint is not fully present. In short, the relative clause is marked either by a relativizer, a squint or the combination of these.

When present, raised eyebrows also tend to spread over the entire RC and rarely over an external head noun. Head shake needs to combine with another non-manual marker to be present in a relative clause. The position of this non-manual marker is not systematic.

Head nod tends to occur at the end of the RCs, marking the end of a prosodic Intonational Phrase [Phonology - 2.2.3.] as an edge marker [Phonology - 2] with its shorter duration compared to squint and raised eyebrows which are domain markers [Phonology - 2], marking the entire scope of the relative clause. Below we show an example where the edge marker head nod and the domain marker squint are present together.

_____hn

_____sq

_____sq
AFTER MORNING IN [MAN ADORE ALL F-I-G-U-R-E SAME(loc)_a] CL:'gather'(loc)_a

'Afterwards, in the morning, the people gathered at the same (place) that they used to adore the cult figures.'

(Kubus 2016: 330)

3.4.7. Restrictive vs. non-restrictive relative clauses

A restrictive relative clause is one which restricts the possible entities that the head noun of the relative clause can refer to. A non-restrictive relative clause provides additional information without narrowing down the set of entities that the head noun refers to. The first example below is a restrictive relative clause while the second example is a potential non-restrictive relative clause:

_____sq

[GIRL FAR VILLAGE IN] BOY₃ IX₃ LOVE

'The girl who was from a village far away loved the boy.'

(Kubus 2016: 209)

_____hs

_____sq

_____re

_____ht

IX₁ HANGMAN [COMPETITION A-B-C] CL:'want_not'

'I didn't like hangman, a game which uses letters.'

(adapted from Kubus 2016: 340)

The preferred position of a head noun is inside the relative clause in a restrictive relative clause while the non-restrictive relative clauses are mostly observed with an external (postnominal) head noun or a doubled-head noun. The relativization sign does not depend on the semantics of the relative clause with the exception that SAME is limited to restrictive relative clauses. As for non-manual markers, squint is still the most common non-manual marker for both restrictive and non-restrictive relative clauses while there is a small preference for raised eyebrows to be used more frequently with non-restrictive relative clauses. Restrictive relative clauses can occur in fronted (most frequent), embedded and postverbal positions while nonrestrictive relative clauses only occur in fronted or embedded positions in almost the same ratio

3.5. Adverbial clauses

Adverbial clauses express an adverbial meaning such as reason, purpose and time, and function as modifiers of main clauses. Adverbial clauses are categorized into the following types: conditional, temporal, locative, manner, reason, purpose, concessive, substitutive, additive and absolute.

The adverbial clause constructions that are found in TiD are described in detail in the following sections. These constructions have some common properties: First, adverbial clauses obligatorily precede the main clause. Second, raised eyebrows and head thrust are non-manual markers that are used to mark both conditional clauses and temporal clauses, head thrust being the most frequent NMM across adverbial clauses. Lastly, no common non-manual markers accompany main clauses.

3.5.1. Conditional clauses

A conditional sentence consists of two clauses which are called antecedent and consequent clauses. An antecedent clause expresses the condition and it might be syntactically dependent on the consequent clause.

Semantically, conditional clauses can be mainly categorized into (i) factual conditionals, (ii) counterfactual conditionals, (iii) concessive conditionals, and (iv) non-predictive/peripheral conditionals. These, as well as other less canonical conditional constructions, are described in detail in the following sections.

3.5.1.1. The role of non-manual markers in conditional sentences

Common non-manual markers in conditional clauses are raised eyebrows, head orientation and head nod. Non-manual markers distinguish between different semantic types of conditionals.

3.5.1.2. Factual conditionals

If the realization of the condition is a realistic possibility in a conditional clause, then it is a factual conditional clause.

3.5.1.2.1. Non-manual markers and their properties in factual clauses

The non-manual markers used to mark the antecedent clause in factual conditional clauses are raised eyebrows on the predicate and head thrust at the end of the antecedent clause.



PULL

‘If you pull...’

How these non-manual markers align and spread are shown in the example below:



re
h-th

[CAT TAIL PULL] CAT ANGRY SCRATCH

‘If you pull the tail of the cat, it will scratch you.’

There are no shared non-manual markers in the consequent clauses of factual clauses. Furrowed eyebrows, head nod, neutral eyebrow position are among the non-manual markers that accompany consequent clauses.

The non-manual markers used to mark the antecedent clause in factual conditional clauses are raised eyebrows on the predicate and head thrust at the end of the antecedent clause.

3.5.1.2.2. Manual conditional signs in factual conditionals

There is a manual sign IF in factual conditionals in TID but it is not obligatory.



IF

When IF is absent, the conditional meaning can still be maintained through the NMMs.

3.5.1.2.3. Order of the components of the factual conditional clauses

The antecedent (subordinate) clause always precedes the consequent (main) clause.

[YOU WEIGHT LOSE WANT] YOU FOOD BREAD VERY LITTLE EAT NECESSARY
'If you want to lose weight, you should eat less.'

3.5.1.3. Counterfactual conditionals

In contrast with factual conditionals, in counterfactual clauses, the fulfillment of the condition is unrealistic, unlikely or impossible.

3.5.1.3.1. Non-manual markers and their properties in counterfactual conditionals

The non-manual markers used to mark antecedent clauses in counterfactual conditional clauses are raised eyebrows on the predicate, repetitive head nod and head thrust at the end of the antecedent clause.



BE

'If I were...'

How these non-manual markers align and spread are shown in the following example:



_____re
 _____hn
 _____h-th

[IX₂ COME IX₁ KNOW IX₁] AIRPORT IX₂ MEET₁₋₂

‘If I had known that you were coming I would have picked you up from the airport.’

Repetitive head nod distinguishes counterfactual conditional clauses from factual ones. Moreover, there are no shared non-manual markers in the consequent clauses across different types of conditional clauses. So, the consequent clause is neutral in terms of the non-manual markers.

3.5.1.3.2. Manual conditional signs in counterfactual conditionals

The sign IF is not obligatory in counterfactual conditional clauses as in factual conditional clauses. When IF is absent, the conditional meaning is maintained through NMMs.

3.5.1.3.3. Order of the components of the counterfactual conditional clause

The ordering of components in counterfactual conditional clauses has the same restrictions as the components of factual conditional clauses. The antecedent (subordinate) clause must precede the consequent (main) clause in this type of conditionals, as well.

[TEACHER IX₁ BE] IX₂ READ WRITE IX₁ TEACH

‘If I were a teacher, I would teach you how to read and write.’

3.5.1.4. Concessive conditionals

Concessive conditional clauses have the semantics of both concession and conditionality:

‘Even if you are lucky, you have to work hard in order to get what you want.’

3.5.1.4.1. Non-manual markers and their properties in concessive clauses

The non-manual markers used to mark the antecedent clause in concessive conditional clauses are the same as the ones of factual conditional clauses. These are raised eyebrows on the predicate and head thrust at the end of the antecedent clause:

_____re
 _____hth

[IX₂ IX₃ LOVE NOT EVEN] IX₃ TOWARDS NICE BEHAVE KNOW IX₂

‘Even if you don't like him you can still be polite, you know.’

3.5.1.4.2. Manual conditional signs in concessive conditionals

There is a specific sign EVEN which is used in concessive conditionals.



EVEN

However, this sign is not compulsory in concessive conditionals.

3.5.1.4.3. Order of the components of the concessive conditional clause

As in the factual and counterfactual conditionals, in concessive conditionals, as well, the antecedent clause must precede the consequent clause.

[JOB WORK LITTLE ALCOHOL EVEN TAKE] IX₂ JOB FIRE
 ‘At work, even if you drink just a little, they will fire you.’

Regarding the position of the sign EVEN in the clause, it can precede the predicate as in the example above or it can follow the predicate as in the example below:

[IX₂ IX₃ LOVE NOT EVEN] IX₃ TOWARDS NICE BEHAVE KNOW IX₂
 ‘Even if you don't like him you can still be polite.’

3.5.2. Temporal clauses

Temporal clauses are the type of adverbial clauses which indicate the temporal relation between two clauses. This relation could be of anteriority, simultaneity or posteriority.

3.5.2.1. Internal structure of temporal clauses

There is no specific manual marker that encodes temporal simultaneity. Temporal simultaneity between two events is expressed by non-manual markers. One of these non-manual markers is head thrust which is used to mark other types of adverbial clauses, as well.

h-th
 [FRIEND HOME COME] IX₁ HOLIDAY PLAN
 ‘When my friend came home, I was planning the holiday.’

Anteriority of an event with respect to another event is expressed by placing the subordinate clause denoting anteriority before the main clause. The subordinate clause contains a manual sign AFTER. The syntactic position for this manual sign is the right edge of the subordinate clause:

h-th
re
 [POSS₁ FRIEND HOME COME AFTER] HOLIDAY PLAN
 ‘After my friend came home, I planned the holiday.’

Before-clauses usually have the negative marker NOT even though the event in the subordinate clause is not semantically negated. The syntactic position for this manual sign is the right edge of the subordinate clause, right after negation:

[FRIEND HOME COME NEG BEFORE] IX₁ HOLIDAY PLAN
'Before my friend came home, I planned the holiday.'

3.5.2.2. Manual signs marking subordination in temporal clauses

There are separate manual signs for anteriority and posteriority, namely, AFTER and BEFORE. However, there is no manual sign that encodes simultaneity.



AFTER



BEFORE

These two signs are obligatory in the adverbial clause in order to convey the relevant temporal relation.

3.5.2.3. Other markers of subordination in temporal clauses

There are separate manual signs for anteriority and posteriority, namely, AFTER and BEFORE. However, there is no manual sign that encodes simultaneity.



AFTER



BEFORE

These two signs are obligatory in the adverbial clause in order to convey the relevant temporal relation.

3.5.2.4. Non-manual markers in temporal clauses

The non-manual markers used in temporal clauses are head thrust and raised eyebrows. Head thrust is observed in all three types of temporal clauses (and some other types of adverbial subordinate clauses) whereas raised eyebrows are observed only with the manual signs AFTER and BEFORE.

3.5.2.5. Position of the temporal clause with respect to the main clause

A temporal clause must precede the main clause in all three types of temporal relations.

3.5.3. Locative clauses

Locative clauses convey information about the location of the main event. Here is an example of a locative clause in the form of free relative:

_____ hn
_____ sq

AFTER MORNING IN [MAN ADORE ALL F-I-G-U-R-E SAME(loc)_a] CL:'gather'(loc)_a
'Afterwards, in the morning, the people gathered at the same (place) where they used to adore the cult figures.'

(adapted from Kubus, 2016: 202)

3.5.4. Manner clauses

Manner clauses describe the way main event is realized.

3.5.4.2. Manual signs marking subordination in manner clauses

There are no specific manual markers to mark manner clauses in TĪD.

3.5.4.4. Non-manual markers in manner clauses

There is no single non-manual marker that is specific to the manner clause type. But some non-manual markers such as head/torso lean right and head nod accompany manner clauses.

3.5.4.5. Position of the manner clause with respect to the main clause

Manner clauses precede the verb of the main clause.

3.5.5. Reason clauses

A reason clause expresses a reason for the main event.

3.5.5.1. Internal structure of reason clauses

TĪD shows different preferences regarding the word order and clause order in adverbial clauses which denote reason. However, the subordinate clause must precede the main clause in general.

There are two strategies used in expressing reason clauses: subordination and juxtaposition. The following is an example of subordination.

_____ h-th

[IX₁ WASHING MACHINE MUCH PUT] IX₃ MACHINE BREAK IX₃
'The washing machine was broken since I put too much in it.'

In this example, head thrust accompanies the final sign of the reason clause PUT.

3.5.5.2. Manual signs marking subordination in reason clauses

The manual subordinating markers for reason clauses are FOR_THIS_REASON and FOR:



FOR_THIS_REASON



FOR

The subordinating morpheme FOR_THIS_REASON is followed by a pause when it is used as in the example below:



_____ fe
 [VERY TIRED FOR_THIS_REASON] IX₁ HOME RETURN
 ‘I went home because I was tired.’

FOR_THIS_REASON can also function as a coordination marker and can occur in the main clause. In those cases, the pause is before FOR_THIS_REASON.



_____ h-th
 _____ re
 WEATHER NICE FOR_THIS_REASON CAMP MAKE
 ‘The weather was nice. Therefore, we did camping.’

The second sign which is used in reason clauses is FOR. This sign functions only as a subordinating morpheme.

_____ h-th
 _____ fe
 [WASHING MACHINE VERY OLD FOR] BREAK
 ‘The washing machine was broken since it was very old.’

3.5.5.4. Non-manual markers in reason clauses

One common non-manual marker used in reason clauses is head thrust. Other non-manual markers such as furrowed eyebrows and raised eyebrows sometimes accompany the reason clauses.



_____ fe
 [VERY TIRED FOR_THIS_REASON] IX₁ HOME RETURN
 ‘I went home because I was tired.’

As shown in the example above, furrowed eyebrows spreads from the beginning of the reason clause and its spreading domain contains the subordinating morpheme FOR_THIS_REASON. Thus, both FOR_THIS_REASON and the furrowed eyebrows mark the end of the reason clause.

_____ h-th
 _____ fe
 [WASHING MACHINE VERY OLD FOR] BREAK

‘The washing machine was broken since it was very old.’

The common non-manual marker head thrust at the end of the subordinate clause accompanies the manual sign FOR. In the example above, furrowed eyebrows is also observed partially on the subordinate clause.

3.5.5.5. Position of the reason clause with respect to the main clause

Reason clauses must precede the main clause.

3.5.6. Purpose clauses

Purpose clauses describe the purpose of the main event.

3.5.6.1. Internal structure of purpose clauses

Purpose clauses are produced with the subordinating morpheme FOR. In the example below, the clause [IX₂ INVITE FOR] expresses the purpose of the speaker's coming.

[IX₂ 2INVITE₁ FOR] IX₁ COME
‘I came here to invite you.’

3.5.6.2. Manual signs marking subordination in purpose clauses

Purpose clauses are marked by the subordinating morpheme FOR (*için* ‘for’) which is also used to mark reason clauses. There is another sign FOR (*diye*), as well.



FOR '*için*'



FOR '*diye*'

3.5.6.4. Non-manual markers in purpose clauses

There is no non-manual marker specific to purpose clauses.

3.5.6.5. Position of the purpose clause with respect to the main clause

There is no non-manual marker specific to purpose clauses.

3.5.7. Concessive clauses

Concessive clauses express a fact in view of which the main clause event would not be expected.

3.5.7.2. Manual signs marking subordination in concessive clauses

There are no manual signs that mark subordination in concessive clauses.

3.5.7.4. Non-manual markers in concessive clauses

There are no non-manual markers specific to concessive clauses.

3.5.7.5. Position of the concessive clause with respect to the main clause

The clause which expresses concession always precedes the main clause.

3.5.7.6. Simultaneous expression of the main event and the adverbial clause

The clause which expresses concession always precedes the main clause.

3.5.8. Substitutive clauses

Substitutive clauses express substitution as in the following example:

‘They went to the seaside instead of staying at home.’

3.5.9. Additive clauses

Additive clauses express the presence of a second person/thing/event in addition to the first one.

‘Besides working for our company as a sales manager, she is a freelance translator.’

3.5.9.1. Internal structure of additive clauses

Two types of constructions are used to express addition. One is in the form of coordination with the conjunction "BOTH...AND...", see [Syntax - 3.1]. The other is an adverbial clause with the subordinating sign OTHER.

_____ ht-r _____ ht-l
[MEAL COOK IX₁ COOK OTHER] GARDEN IX₁ WORK IX_a[ipsi_up] IX_b[contra_up]
‘Besides cooking, I look after the garden.’

3.5.9.2. Manual signs marking subordination in additive clauses

The following shows the subordinating sign OTHER.



OTHER

3.5.9.5. Position of the additive clause with respect to the main clause

The dependent clauses with other must precede the main clauses.

3.5.9.6. Simultaneous expression of the main event and the adverbial clause

Signers make use of simultaneous expression of the main clause and the subordinate clause while expressing addition. In such utterances, the signer first introduces the event in the adverbial clause with the dominant hand, then the event in the main clause with the non-dominant hand. At the end, the signer refers to two events simultaneously by pointing at two contrastive loci with two index fingers as shown in the example below.

$\frac{\text{ht-r}}{\text{[MEAL COOK IX}_1\text{ COOK OTHER]}} \quad \frac{\text{ht-l}}{\text{GARDEN IX}_1\text{ WORK. IX}_a[\text{ipsi_up}] \text{ IX}_b[\text{contra_up}]}$

‘Besides cooking, I look after the garden.’



$\text{IX}_a[\text{ipsi_up}] \text{ IX}_b[\text{contra_up}]$

‘I look after this job as well as that job.’

3.6. Comparative clauses

Comparison is a cognitive act where two entities are compared with each other based on their position on a scale. The scale is provided by a predicate [Syntax - 2.1.1.], which denotes a property. When the respective positions of the compared entities are different from each other on the relevant scale provided by the predicate, a comparison of inequality arises. This cognitive comparison then is expressed in language by comparative constructions. When the respective positions of the compared entities are the same, comparison of equality arises. This cognitive understanding of equality, in turn, is expressed in language by equative constructions.

There are four different structural ways of expressing comparative clauses across languages. These are exceed comparatives, location comparatives, conjoined comparatives and subordinated comparatives. Of these four possible linguistic structures, T1D employs Conjoined Comparatives and Locational Comparatives.

Conjoined comparatives are biclausal structures [Syntax - 3.], which include two juxtaposed clauses with parallel structures but without any overt signs of conjunction [Lexicon - 3.9.1.]. The predicate of these clauses can be either an adjective (TALL, SHORT) or a verb (SCARED). The subject of the first clause is called the standard and the subject of the second clause is called the comparee.

[GIRL DOG SCARED] [MAN DOG MORE SCARED]

Standard Comparee

‘The girl is scared of the dog. The man is more scared of the dog.’

(Özsoy and Kaşıkara 2018a: 16)

When the two clauses in a conjoined comparative construction have an adjectival predicate, the construction expresses absolute gradability which is expressed by using antonyms, as shown below.

[TWO MEN] [[ONE TALL] [ONE SHORT]]

‘(There are) two men. One is tall. One is short.’

(Özsoy and Kaşıkara 2018a: 14)

Absolute gradability can also be expressed by negating the second sentence with NOT [Syntax - 1.5.]:

[TWO PEOPLE] [[ONE OLD] [ONE OLD NOT]]

‘Two people. One is old. One is not old.’

(Özsoy and Kaşıkara 2018a: 14)

The two strategies mentioned above can be combined for expressing absolute gradability. Below, the second sentence [HOT NOT] COLD] is negated and it also includes the antonym predicate of the first sentence.



[TWO WATER] [[[WATER IX] HOT] [[HOT NOT] COLD]]

‘(There are) two (glasses of) water. This water is hot. (This water) is not hot. (It is) cold.

(Özsoy and Kaşıkara 2018a: 15)

When the conjoined construction has a verbal predicate such as SCARED as in the example below, it expresses scalar gradability which compares two entities on a scale of a property. By using the conjoined construction with a verbal predicate, two possible comparisons can be made. First, two different subjects can be compared with respect to a single object:

[GIRL DOG SCARED] [MAN DOG MORE SCARED]

‘The girl is scared of the dog. The man is more scared of the dog.’

(Özsoy and Kaşıkara 2018a: 16)

Second, two different objects (CAT and DOG, below) can be compared with respect to a single subject.

[SELF GIRL CAT SEE] [SCARED] [DOG SEE] [MORE SCARED]

‘The girl sees the cat and is scared. (She) sees the dog and is more scared.’

(Özsoy and Kaşıkara 2018a: 17)

There are two properties of scalar gradable comparisons. First, non-manuals and signing space are used to express comparison. Namely, the standard is on the contralateral side and is assigned a locus by indexing and/or body/head shift while the comparee is on the ipsilateral side. The comparee is also assigned a locus by indexing and/or body

shift/head shift. Second, the parameter marker, (MORE, MOST, LESS) which expresses superiority or inferiority, occurs in the clause where the comparee is expressed.

The second structural way of expressing comparison is by locational comparatives. They express scalar gradability of adjectival predicates. The locational comparatives employ a special kind of index, IX(comp) (index of comparison), to express the relation between two NPs.



IX(comp)

Expression of a comparison with IX_{COMP} includes three steps: Step 1 is assigning a locus to the standard; step 2 is assigning a locus to the comparee. Assigning loci to the compared items may be done in different ways. First, there can be an optional topic phrase [Pragmatics - 4.2. and Syntax - 2.3.3.] specifying the participants to be compared. Second, the localization of the two participants in the signing space can be expressed by indexing or body shift. Step 3 for the expression of a comparison with IX_{COMP} is arc movement from the locus of the standard to the locus of the comparee. Eye gaze parallels the direction of the arc movement of the hand. IX(comp) expresses the comparative relation between the standard and the Comparee.



eg:a-to-b

[[CAT IX _a]	[OTHER LION _b]]	[_a IX(comp) _b]	MORE BRAVE]
Step-1	Step-2	Step-3	

‘The lion is braver than the cat.’

(Özsoy and Kaşıkara 2018a: 22)

In the case of adjectives whose signs are double-handed, the arc movement of IX(comp) from the locus of the comparee to the locus of the standard is produced simultaneously with the expression of the parameter of comparison, as shown in the following example. [_aBIGGER_b] involves movement from locus a to locus b.

[[TWO BALL]] [GREEN IX_a] [BLUE_b] [_aBIGGER_b]
 ‘Two balls. The blue is bigger than the green.’

(Özsoy and Kaşıkara 2018a: 23)

By locus assignment, the participants in the comparative structure are assigned to the opposite sides of the signing space. The standard is located in the contralateral side, which is where a signer's non-dominant hand is and the comparee is located in the ipsilateral side, which is the side of the signer's dominant hand. Even when the standard is not stated explicitly, the comparee is still assigned to the ipsilateral side. Below, [TWO BALL] is in topic position and one understands that there is another ball that is compared to the blue ball. Nonetheless, this standard is not expressed but the comparee BLUE_b is assigned to the ipsilateral side of the signing space. ‘we’ stands for widened eyes.

_____ we
 _____ re

[TWO BALL] [[BLUE_b] _aBIGGER_b]
 ‘Two balls. The blue is bigger.’

(adapted from Özsoy and Kaşıkara 2018a: 25)

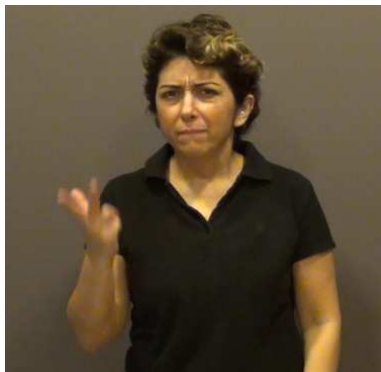
There are three distinct signs of degree of gradability used with locational comparatives in TID: comparative marker MORE, superlative marker MOST and inferiority marker LESS. While producing MORE, all the fingers of the dominant hand are selected and there is a wrist twist. The orientation changes from palm-down to palm-up.

Simultaneous with the manual sign, expression of augmentation [Morphology– 2.2.1.] involves widened-eyes and raised eyebrows.



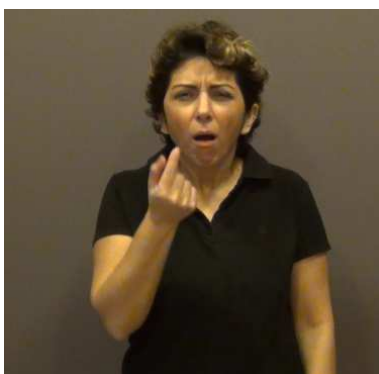
MORE

The sign MOST is articulated with 3-Handshape. The unselected fingers are closed. Again, the orientation is palm-up and there are non-manuals, squinted eyes, eyebrow lowering and lip bite, used while producing this sign.



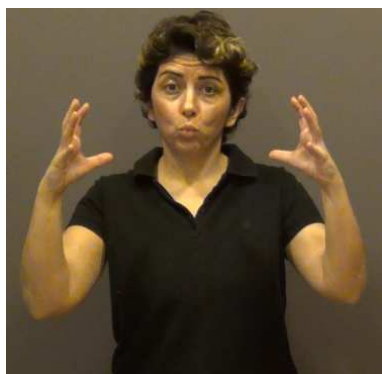
MOST

The sign LESS is articulated with thumb and index finger. The index finger is extended and makes a narrow opening with thumb. Also, there are two non-manuals: squinted eyes and eyebrow lowering.



LESS

MORE can incorporate into some adjectival predicates. In the articulation of BIG, two hands are involved and they are open. All the fingers are extended and the hands are held apart from each other in the neutral space. Instead of signing MORE+BIG for the expression of *bigger*, the hands are pulled further apart, the eyes are open wider and the eyebrows are raised further. BIG and BIGGER in TID are shown below.

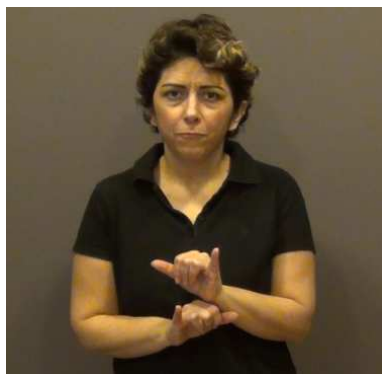


BIG

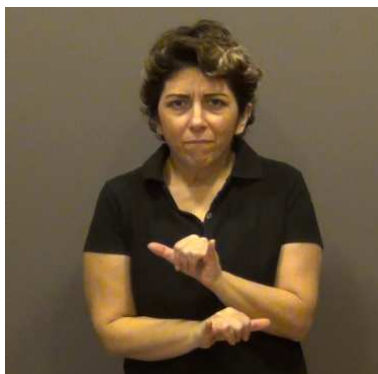


BIGGER

The comparative morpheme can be incorporated into the predicate THIN as well. However, there is semantic opposition between BIG and THIN which is reflected in articulation. THIN is also articulated with both hands. The selected fingers of both hands are the thumb and the little finger. Unselected fingers are closed and the two hands are held close to each other in the neutral space. One hand is placed under the other. When THIN is inflected with the comparative morpheme, the sign involves movement in which the two hands cross each other even further. This time eyes are squinted and eyebrows are furrowed. THIN and THINNER are shown below.



THIN



THINNER

Information on data and consultants

The descriptions in this chapter are partially based on the references below and partially on research done by the authors during the development of this chapter.

In general, please see the data and consultant information in the references. Unless stated otherwise below, the linguistic data in images and video clips that were produced or reproduced for this chapter were provided by a near-native fluent signing consultant who was born and raised in Istanbul.

More detailed information for some of the sections are also provided below:

[3.4] “Relative clauses”: All the examples in this section have been taken from Kubus (2016). The visuals of these examples will not be reproduced for the grammar since it is very difficult to get complex and context-dependent examples such as those to be reproduced naturally. As explained in detail in Kubus (2016: 152, 308-309), most of these data were taken from social media, such as Facebook, YouTube, Vimeo, Izlesene.com, which is a very common method for sharing stories and exchanging information among the Deaf community in Turkey.

[3.5] “Adverbial clauses”: the descriptions in this chapter are based on preliminary findings of original research conducted by the author of this section as part of her PhD dissertation. The images and video

clips were produced by a near-native fluent signer and a native hard-of-hearing signer, both raised in Istanbul. Additionally, the descriptions and the glossed examples are based on the data produced in natural conversations. These data are part of the BÜ-TİD (Boğaziçi University TİD) corpus.

[3.6] “Comparative clauses”: The data and the descriptions are mainly based on Kaşıkara & Özsoy (2015) and Özsoy & Kaşıkara (2018).

References

- Arık, Engin. 2016b. Türk İşaret Dili’nde mekânsal dil. In E. Arık, *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 315-336. İstanbul: Koç Üniversitesi Yayınları.
- Dikyuva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2017. *Turkish Sign Language grammar*. Ankara: The Republic of Turkey Ministry of Family and Social Policies.
- Göksel, Aslı & Meltem Keleşir. 2016. Observations on clausal complementation in Turkish Sign Language. In R. Pfau, M. Steinbach & A. Hermann (eds), *A matter of complexity: Subordination in sign languages*, 65–94. Berlin: De Gruyter. <https://doi.org/10.1515/9781501503238-005>
- Hakgüder, Emre. 2015a. *Complex clauses with embedded constituent interrogatives in Turkish Sign Language (TİD)*. İstanbul, Turkey: Boğaziçi University MA thesis.
- Hakgüder, Emre. 2015b. On Wh-Complements in Turkish Sign Language. (Paper presented at Formal and Experimental Advances in Sign Language Theory (FEAST), Barcelona, 4 May 2015.)
- Kaşıkara, Hüner & A. Sumru Özsoy. 2015. Nonmanuals in comparatives in Turkish Sign Language. (*Workshop on Nonmanuals*, University of Göttingen, October 2015.)
- Keleşir, Meltem & Aslı Göksel. 2013. Aspects of reported utterances in Turkish Sign Language. In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 191-218. Newcastle upon Tyne, UK: Cambridge Scholars Publishing. (207)
- Keleşir, Meltem & Aslı Göksel. 2016. Türk İşaret Dili’nde aktarılmış anlatımın özellikleri. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 337-360. İstanbul: Koç Üniversitesi Yayınları.
- Kubus, Okan. 2016. *Relative Clause Constructions in Turkish Sign Language*. Hamburg, Germany: University of Hamburg PhD Dissertation.
- Özsoy, A. Sumru & Hüner Kaşıkara. 2018a. Comparatives in Turkish Sign Language (TİD). In K. Wojtylak, Y. Treis & L. de Vries (eds.), *Comparative Constructions*. Free University of Amsterdam.

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Chapter 4. The noun phrase

A Noun Phrase (NP) is a phrasal syntactic category in which the syntactic head, that is the most important element, is a noun [Lexicon - 3.1.]. An NP can consist of only a noun without any modifiers, such as an Adjective [Lexicon - 3.4.] or a Numeral [Lexicon - 3.10.1]. The following is an example of a noun phrase with only the head noun.


CAT
'cat'

An NP can also include one or more modifiers which do not change the basic meaning of the NP but modify it in several ways including definiteness [Pragmatics - 1.2.], quality, quantity, spatial position and origin. A modifier can be a Determiner [Lexicon - 3.6.] described in this chapter in [Syntax – 4.1.], a possessive [Syntax – 4.2.], a numeral [Syntax – 4.3.], an Adjective [Syntax – 4.4.], a quantifier [Syntax – 4.4.] . Also, certain combinations of these [Syntax - Section 4.6.] may occur inside an NP. Below, there is an example of an NP with the head noun SHEET_OF_PAPER and a demonstrative determiner THIS.




THIS
'This sheet (of paper)'

SHEET_OF_PAPER

NPs can have a number of grammatical functions [Syntax - 2.2.]. In the following sentence, the NP, [POSS()₁ CAR], functions as the Subject of the predicate WORK.



[POSS()₁

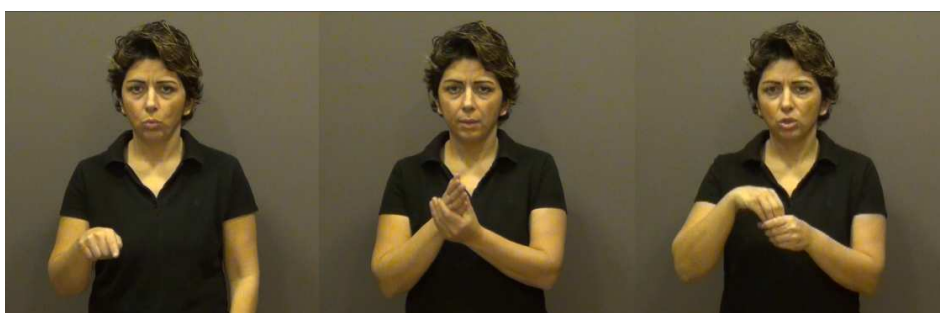
CAR]

WORK

^ NOT

'My car isn't running.'

An NP can also function as the object of a postposition. In the following example, [this class] is the object of the postposition FOR.



[THIS
'for this class']

CLASS]

FOR

4.1. Determiners

TiD has determiners which can be either an Article [Syntax - 4.1.1.] or a Demonstrative [Syntax - 4.1.2.].

4.1.1. Articles

The numeral ONE is used as an indefinite [Pragmatics - 1.3.] article in the following NP, [ONE RESEARCH].



IX()₁
WANT

[ONE


RESEARCH]

SHARE

'I want to share a (piece of) research'

A pointing sign, IX, can be used to introduce a referent [Pragmatic - 1.]. This is called locus assigning (IX(loc)_a). After this, a pointing pronoun (IX_{3a}) is directed to the same location. The pointing sign now functions as a pronoun [Lexicon - 3.7.] as given below.




[POSS(₁) FRIEND_a IX(loc)_a] EAR ACHE. TODAY IX_{3a} HOME STAY WANT
'My friend has an earache. She wants to stay home today.'

(r.f. from Nuhbaloglu and Özsoy 2014: 9)

A noun phrase can contain both a possessive pronoun and a locus assigner as the following example shows.



POSS(₃) FATHER IX(loc)_a
'His father (who I am assigning to this location loc-a in space)'

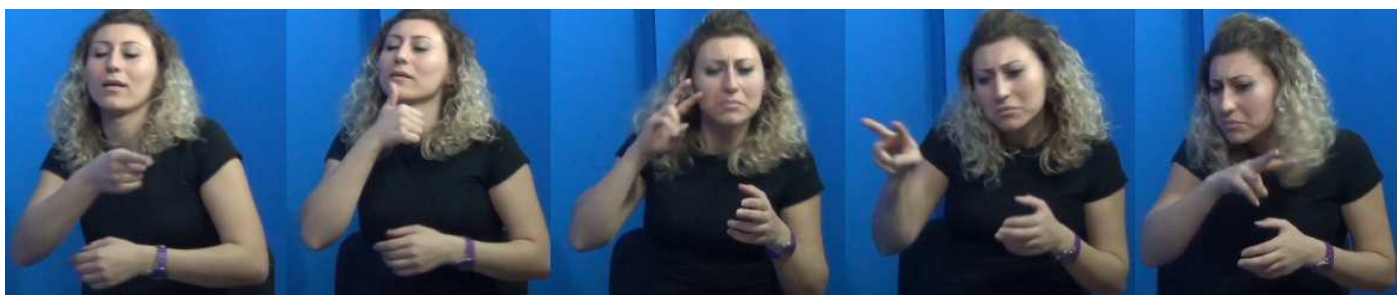
The indefinite article ONE can also be used with a locus assigner.



ONE MAN IX(loc)_a

'A man (who I am assigning to this location loc-a in space)'

A definite article is used to refer to a referent that is already introduced into the discourse, namely both the signer and the addressee know about this referent. A pointing sign that accompanies a noun can be used as a definite article in TİD.



[IX(def) MAN]
 'The man is looking for (the frog).'

LOOK_FOR

4.1.1.1. The position of the article

The indefinite article, ONE, occurs in the prenominal position.



IX()₁
 WANT


[ONE

RESEARCH]

SHARE

'I want to share a research with you.'

The locus assigning index, IX(loc), occurs in postnominal position.

[*POSS*()₁ *FRIEND*_a *IX(loc)*_a] *EAR ACHE*
 'My friend has an earache.'

(adapted from Nuhbaloglu and Özsoy 2014: 9)

The definite article, IX(def) , can occur pre- or post-nominally.



IX(def) BEE HIVE
 'The bee hive'



SEA

REED

[MAN

IX(def)]

HOLD_RIFLE WAIT

'The man is holding a rifle and waiting in the reeds by the lake.'

4.1.1.2. Simultaneous manual articulation

In TİD, a definite article can be articulated with the dominant hand while the head noun of the noun phrase is articulated with the nondominant hand. Below, a classifier handshape functions as the head noun, a STUFFED_POTATO. This head noun is simultaneously articulated with the definite pointing sign. (h1) stands for the right hand, which is the dominant hand here and (h2) stands for the left hand, which is the nondominant hand here.



(h1) IX(def)

TASTE

SUPERB


(h2) STUFFED_POTATO...

'The taste of the stuffed potato is superb.'

4.1.1.3. Non-manual marking

Eyegaze optionally occurs during the articulation of a locus assigning point, IX(loc).

___eg

[POSS()_1 FRIEND_a IX(loc)_a] EAR ACHE

'My friend has an earache.'

(Adapted from Nuhbaloglu and Özsoy 2014: 9)

Eyegaze optionally occurs during the articulation of the definite article, IX(def), too.



eg

[IX(def) MAN] LOOK_FOR

'The man is looking for (the frog).'

The corners of the mouth are sometimes pulled down [Pragmatics - 1.3.] (mouth corner down - mcd) during the articulation of the indefinite article, ONE.



mcd

ONE MAN

4.1.2. Demonstratives

Demonstratives provide deictic [Pragmatics – 1.1.] information with respect to proximity or distalness of the noun that is referred to [Pragmatics - 5.1.3.]. They are always definite in meaning. The following example shows a proximal referent to the signer, which is indicated by the demonstrative THIS.



THIS
'this sheet'

SHEET

The demonstrative THIS above is articulated in the center of the signing space while the demonstrative THAT uses more peripheral space with respect to the midline of the body and it shows a distal referent to the signer.



THAT
'that pen'

PEN

4.1.2.1. The position of the demonstrative

A demonstrative precedes a noun in a noun phrase.

[THAT MAN] MONEY TAKE
'That man took the money.'

(Adapted from Nuhbaloğlu and Özsoy 2014: 8)

4.1.2.3. Non-manual marking

Sometimes non-manual markers accompany demonstratives. In the example below, eyegaze (eg) accompanies the demonstrative.



—eg

THAT
'that pen'

PEN

4.1.2.4. Anaphoric usage

Anaphoric usage is referring back to a referent that was already introduced into the discourse. A demonstrative pointing sign can be used anaphorically as a pronoun [Syntax - 2.1.2.2.], [Pragmatics - 2.1.], [Lexicon - 3.7.].



IX_a

ONE

BAD

DO

IX_a

"The stepmother does something bad to her."

4.2. Possessive phrases

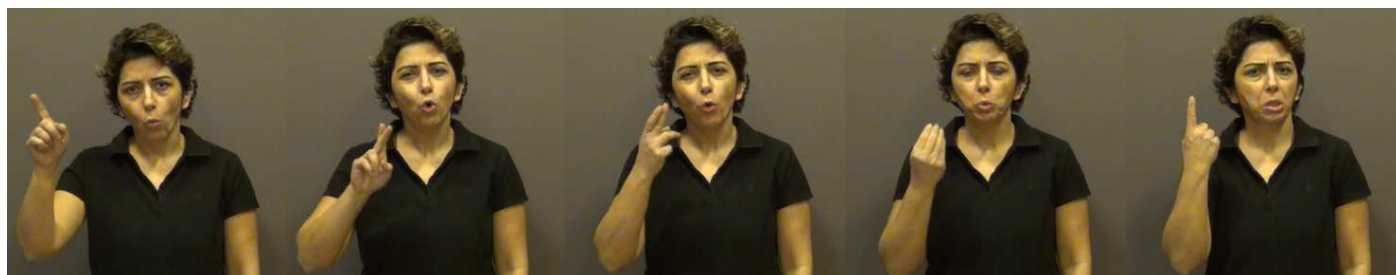
A possessive phrase is a noun phrase which includes a possessor, whom something belongs to, and a possessee, something that belongs to the possessor. There are different ways of expressing the possessive relation as we show in [Syntax - 4.2.1.].

4.2.1. Ways of expressing the possessive relation in the noun phrase

A possessive phrase is a noun phrase which includes a possessor, whom something belongs to, and a possessee, something that belongs to the possessor. There are different ways of expressing the possessive relation as we show in [Syntax - 4.2.1.].

4.2.1.1. Attributive possessive pronouns

An attributive possessive pronoun indicates the possessor of a possessive noun phrase. It can be signed with a 1-Handshape. This pronoun can precede the head noun.



[POSS()₃

INTERESTING

NOVEL]

VERY

'Her/his novel is very interesting.'

An attributive possessive pronoun can also follow the head noun.




FATHER
'Her father'
[video example]

POSS()₃

There are two other possessive pronouns: one has the Flat-Handshape:



POSS()₁
'my computer'


COMPUTER

The other has the V-Handshape with the base joint of middle finger flexed:



STEP_MOTHER

'her stepmother'

POSS()₃

4.2.1.2. Possessive markers

Possessive pronoun with V-Handshape (the base joint of middle finger flexed) can also be used as a possessive marker between the possessor noun and the possessed noun.



IX(def)_a

HOUSE

POSS()_{3a}

LOCATION

'The house's location'

4.2.1.3. Juxtaposition

The possessive relation between a possessor and a possessee can be expressed by putting these two together without any other markers as the following two examples show:

[PRINCIPAL COMPUTER] THERE_IS
'The principal has (a) computer'

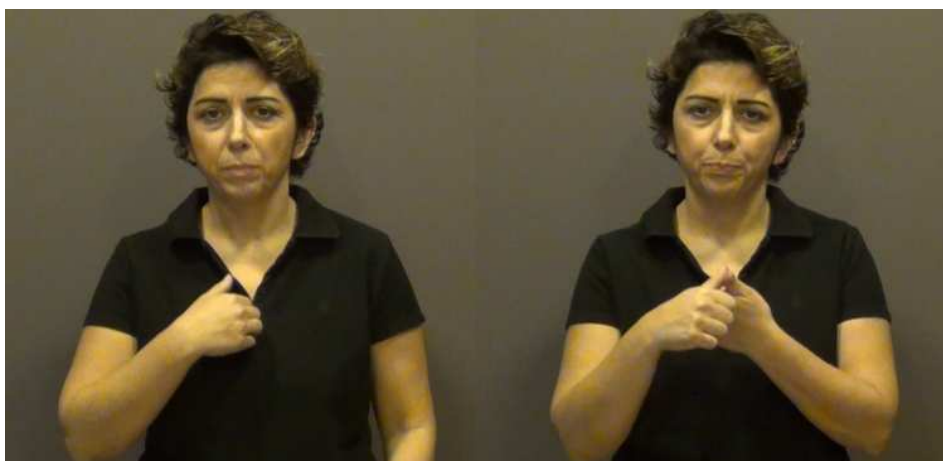
(Adapted from Arik 2006b: 6)



YESTERDAY [XXX HENNA] THERE_IS
'There was X's henna (party/ceremony) yesterday.'

4.2.2. The position of the possessive pronoun

A possessive pronoun can occur preminally.



POSS()₁

SPOUSE

'my spouse'

A possessive pronoun can also occur postnominally.



IX(def)_a

HOUSE

POSS_{3a}


LOCATION

'the house's location'

4.3. Numerals

When a number sign [Lexicon - 3.10.1.] indicates the number of entities that are referred to, that number sign is called a cardinal numeral [Lexicon - 3.10.1.1.]. An example of a cardinal numeral, TWO, is provided below.



[POSS()₁ DAUGHTER TWO] BE _LOCATED _AT
'My two daughters are here.'

When a number sign indicates the order of a referent in a sequence, that number sign is called an ordinal numeral [Lexicon - 3.10.1.1.]. Ordinal numbers are expressed with buoy signs.



(h1) TWO BOOK THERE_IS IX_{3a} BOOK YELLOW
(h2) TWO
'There are two books. The first one is yellow.'

A plural sign can be reduplicated [Phonology - 3.3.1.] when used with a numeral.



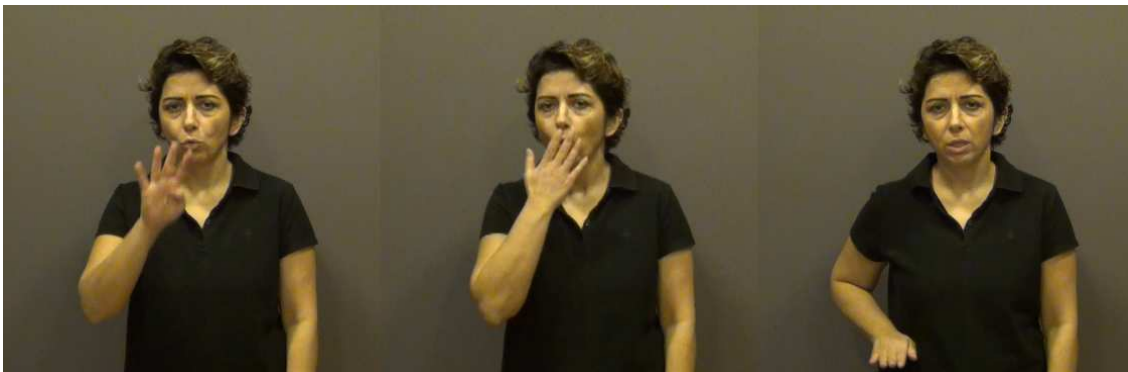
THREE

HOUSE+++

'three houses'

4.3.1. The position of the numeral

A numeral can precede a noun.



FOUR

STUDENT

'four students'

It can also follow a head noun.



PROJECT

TWO

THERE_IS

'There are two projects.'

4.3.3. Definite and indefinite reading

See [Pragmatics - 1.3.] for indefinite reading.

4.3.4. Numeral incorporation

Numeral incorporation is the blending of the movement and place of articulation of a sign and the handshape of a numeral. In the following example, the numeral TWO is incorporated into WEEK.



TWO^WEEK
'Two weeks'

Signs that can be incorporated with a numeral are the following:



100s (200, 300, 400, 500, 600)



1000s (2000, 3000, 4000, 5000, 6000)



GRADE (2nd, 3rd, 4th, 5th, 6th)



HOUR (2, 3, 4, 5, 6)



WEEK (2,3,4,5,6^WEEK^LATER)



MONTH (2, 3, 4, 5, 6)



YEAR (2, 3, 4, 5, 6)

(Kubus 2008: 88)

(See also [Lexicon - 3.7.2.2.] for number incorporation into pronouns.)

4.4. Quantifiers

Quantifiers [Lexicon - 3.10.2.] indicate the number or the amount of the set that the head noun in a noun phrase denotes. ALL, MANY, SOME_1, SOME_2, A_FEW and A_LITTLE are some of the quantifiers [Lexicon - 3.10.2.] that are found in TİD.

4.4.1 The position of the quantifier

Quantifiers can occupy either a prenominal or a postnominal position. The following example shows the quantifier MANY occurring in prenominal position.

SCHOOL CLASS [MANY GIRL] THERE_IS
"There are many girls in class at school."

(adapted from Özsoy et al. 2012:8)

The following example shows the quantifier ALL occurring in postnominal position.



SPOUSE+++ ALL IN
'All of the spouses are included.'

4.5. Adjectives

There are different kinds of adjectives in TİD [Lexicon - 3.4.]. An adjective in TİD can denote quality, size, shape, color, origin, value, dimension, physical property, speed, human propensity and age.

4.5.1. Prenominal vs. postnominal adjectives

A prenominal adjective occurs before the noun.

[RED APPLE] EXIST
'There is a red apple.'

(Nuhbaloğlu and Özsoy 2014: 15)

A postnominal adjective occurs after the noun.

[RABBIT BIG] STRONG
'The big strong rabbit'

(Özsoy et al. 2012: 8)

The adjectives for size, age, color and value follow the head noun. YOUNG below expresses the age.

[PERSON YOUNG] INTERNET LIKE
'The young person likes internet.'

(Özsoy et al. 2012: 6)

COOL below expresses the value.

[MAN COOL] PUT_ON_COAT
'The cool man is putting on his coat.'

(Özsoy et al. 2012: 6)

Adjectives for physical properties, human characteristic/propensities and speed usually follow the head noun as well. The following are examples of a physical property and a human propensity, respectively.

SQUARE UNEVEN
'uneven square'

(Özsoy et al. 2012: 6)

[HUSBAND VERY JEALOUS] PROBLEM
'A very jealous husband is a problem.'

(Özsoy et al. 2012: 6)

Adjectives for difficulty, similarity and location also occur postnominally. The examples below exemplify adjectives of these notions respectively.

EXAM [QUESTION DIFFICULT] THERE_IS
'There was/is a difficult question in the exam.'

(adapted from Özsoy et al. 2012: 6)

[PLACE DIFFERENT] STAY
'S/he lives in a different place.'

(Özsoy et al. 2012: 6)

SIBLING [BUILDING HIGH] LIVE
'My sibling lives in a high building'

(Özsoy et al. 2012: 7)

Adjectives can also occur prenominally in TİD as the following examples show:

LONG BEARD
'long beard'

BROWN BEARD
'brown beard'

POINTED HEAD
'pointed head'

ROUND BOX
'round box'

HOT COFFEE
'hot coffee'

(Özsoy et al. 2012: 6)

Adjectives that indicate similarity or opposition can also occur prenominally. For instance, the adjective OTHER occurs prenominally below.

[OTHER DOG] FISH EAT^NEG
'The other dog didn't eat the fish.'

(Özsoy et al. 2012: 8)

4.5.2. Symmetric adjectives

Symmetric adjectives are those adjectives which can occur either in pre-nominal or post-nominal position. Colors are symmetric adjectives in TİD. In the examples below, YELLOW is post-nominal whereas RED is pre-nominal.

SUN YELLOW ROUND
'the yellow round sun'

(Özsoy et al. 2012: 8)

RED PANTS
'red pants'

(Özsoy et al. 2012: 8)

4.5.3. Reduplicated adjectives

An adjective can be repeated/reduplicated in the prenominal and postnominal position as the example below shows.

POINTED HAT POINTED
'A pointed hat'

(Özsoy et al. 2012: 9)

4.6. Multiple noun phrase constituents

More than one modifier can precede or follow a noun in a noun phrase. The order of prenominal modifiers is shown in [Syntax - 4.6.1.] and the order of postnominal modifiers are shown in [Syntax - 4.6.2.].

4.6.1. Prenominal modifiers

An adjective and a numeral can precede a noun in either Numeral-Adjective-Noun order or in Adjective-Numeral-Noun order without any semantic difference.

[TWO BLACK DOG] SEE₃
'I saw two black dogs.'

(adapted from Nuhbalaoğlu & Özsoy 2014: 16)

[BLACK TWO DOG] SEE₃

'I saw two black dogs.'

(adapted from Nuhbalaoğlu & Özsoy 2014: 16)

Both Demonstrative-Adjective-Noun and Demonstrative-Numeral-Noun orders occur.

[IX₁ BLACK DOG] SEE₃
'I saw the black dog.'

(adapted from Nuhbalaoğlu & Özsoy 2014: 16)

[IX₁ TWO DOG] SEE₃
'I saw two dogs.'

(adapted from Nuhbalaoğlu & Özsoy 2014: 16)

Some orders where one modifier precedes the noun while another modifier follows the noun are also possible as exemplified below.

[BLACK DOG TWO] SEE₃
'I saw two black dogs.'

(adapted from Nuhbalaoğlu & Özsoy 2014: 18)

[TWO DOG BLACK] SEE₃
'I saw two black dogs.'

(adapted from Nuhbalaoğlu & Özsoy 2014: 18)

[IX₁ CHILD LITTLE] TAKE
'I took a little child.'

(adapted from Nuhbalaoğlu & Özsoy 2014: 18)

[IX₁ DOG TWO] SEE₃
'I saw the two dogs.'

(adapted from Nuhbalaoğlu & Özsoy 2014: 18)

Two possible orders where two modifiers precede the head noun while a modifier follows the head noun are possible as the following examples show.

[IX₁ BLACK DOG TWO] SEE₃
'I saw the two black dogs.'

(adapted from Nuhbalaoğlu & Özsoy 2014: 19)

[IX₁ TWO DOG BLACK] SEE₃
'I saw the two black dogs.'

(adapted from Nuhbalaoğlu & Özsoy 2014: 19)

When all modifiers precede the head noun, the order Demonstrative-Numeral-Adjective-Noun is the preferred one. There are also two less preferred orders as shown below:

[IX₁ TWO BLACK DOG] SEE₃
'I saw the two black dogs.'

(adapted from Nuhbalaoğlu & Özsoy 2014: 18)

[IX₁ BLACK TWO DOG] SEE₃
'I saw the two black dogs.'

(adapted from Nuhbalaoğlu & Özsoy 2014: 18)

[TWO BLACK IX DOG] SEE₃
'I saw the two black dogs.'

(adapted from Nuhbalaoğlu & Özsoy 2014: 18)

4.6.2. Postnominal modifiers

Two modifiers can occur postnominally in the following orders:

[MALE ONE LITTLE] THERE_IS
'There is a little male.'

(adapted from Nuhbalaoğlu & Özsoy 2014: 16)

[DUCK BABY LITTLE NINE] THERE_IS
'There are nine little baby ducks.'

(adapted from Nuhbalaoğlu & Özsoy 2014: 16)

There are two possible orders where a demonstrative occurs prenominally while two modifiers occur postnominally as exemplified below:

[IX₁ DOG BLACK TWO] SEE₃
'I saw the two black dogs.'

(adapted from Nuhbalaoğlu & Özsoy 2014: 16)

[IX₁ DOG TWO BLACK] SEE₃
'I saw the two black dogs.'

(adapted from Nuhbalaoğlu & Özsoy 2014: 16)

Information on data and consultants

The descriptions in this chapter are partially based on the references below and partially on research done by the authors during the development of this chapter. In general, please see the data and consultant information in the references. The linguistic data in images and video clips that were produced or reproduced for this chapter were provided by a near-native fluent signing consultant who was born and raised in Istanbul.

The data for the original research are from the TİDBİL database which is part of the BÜ-TİD (Boğaziçi University TİD) corpus.

References

Arık, Engin. 2006b. Nonmanual markers and constituency in Turkish Sign Language (TİD). Purdue University. (Unpublished manuscript)

Dikyuya, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2015. *Türk İşaret Dili dilbilgisi kitabı* [Turkish Sign Language grammar book]. Ankara: TC Aile ve Sosyal Politikalar Bakanlığı.

Nuhbalaoğlu, Derya. & A. Sumru Özsoy. 2014. Linearization in noun phrases in Turkish Sign Language. (Paper presented at Formal and Experimental Advances in Sign Language Theory (FEAST Colloquium), Università Ca' Foscari. 9-11 June 2014.).

Özsoy, A. Sumru, Aslı Göksel, Meltem Kelepir & Derya Nuhbalaoğlu. 2012. NP structure and linearization in Turkish Sign Language [Türk İşaret Dilinde ad öbeği yapısı ve işaret dizimi]. (Paper presented at the 7th International Turkish Language Conference (7. Uluslararası Türk Dili Kurultayı), Ankara, Turkey, 24-28

September 2012.)

Zeshan, Ulrike. 2002. Sign Language in Turkey: The story of a hidden language. *Turkic Languages* 6 (2). 229-274.

Zwitserlood, Inge, Pamela M. Perniss & Aslı Özyürek. 2012. An empirical investigation of multiple entities in Turkish Sign Language: Considering the effects of modality? *Lingua* 122(14), 1636-1667.
doi:10.1016/j.lingua.2012.08.010

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Chapter 5. The structure of adjectival phrase

An adjective phrase is a phrasal syntactic category in which the syntactic head, that is the most important element, is the adjective. There are different kinds of adjectives in TİD [Lexicon - 3.4.]. An adjective in TİD can denote quality, size, shape, color, origin, value, dimension, physical property, speed, human propensity and age. The adjectives can occur as adjuncts of noun phrases (NP) in the prenominal and postnominal positions [Syntax – 4] and as predicates. This chapter focuses on the internal structure of adjective phrases and provides examples and descriptions of intensifiers and other modifiers of adjectives, adjectives that function as predicates and take arguments, and adjuncts of adjectives.

5.1.2. Modifications of manual signs and non-manual modifiers

In TİD, there are several ways of modifying a sign to intensify its meaning. The modification can occur by changing the internal structure of the sign such as changing the movement pattern, increasing the tension of the face and hand, and adding non-manuals such as eyebrow lowering, tilting the head back or puffed cheeks.

Changing the movement pattern into a slower movement generally denotes intensification. For instance, the sign RICH has a downward movement [Phonology - 1.3.] of V-Handshape [Phonology - 1.1.1.] on the cheek [Phonology - 1.2.] but when this movement is produced at a slower rate, the sign VERY_RICH is derived.



RICH



VERY_RICH

(r.f. from Dikyuva et. al. 2015: 200)

Changing muscle tension on the face and the hand also denotes intensification. For example, the sign FAST is produced with 7-Handshape [Phonology - 1.1.1.] and it has a repetitive movement but when the movement of the hands and non-manuals are exaggerated, the sign VERY_FAST is derived.



FAST



VERY_FAST

(r.f. Dikyuva et. al. 2015: 200)

Lastly, adding some non-manuals to the signs can denote intensification as well. For example, the sign COLD is produced with both hands with Fist-Handshape and it has an inward movement from the wrist. However, when the movement becomes slower and puffing is added to the sign, it means VERY_COLD.



COLD



VERY_COLD

(r.f. Dikyuva et. al. 2015: 201)

5.1.4. Degree comparatives

Degree comparatives express gradation between two or more items. They involve an adjectival predicate [Syntax - 2.1.1.1.]. This adjectival predicate is used to compare the subject of a first clause to the subject of a second clause [Syntax - 3.6.].

Degree comparatives are expressed in two allomorphic variations the use of which depend on the nature of the adjectival predicate used. The first allomorphic variant is the use of lexical degree signs, which are also called, parameter markers [Syntax - 3.6.]. Two of these parameter marker signs are MORE and MOST, which express relative and absolute superiority. These markers are coarticulated with raised eyebrows and eye opening.

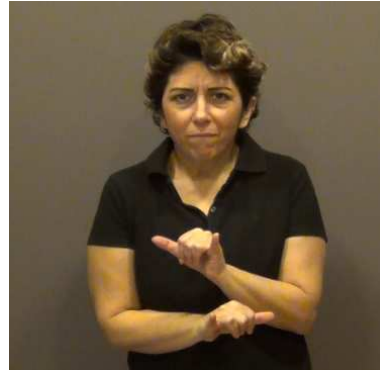
Another parameter marker is LESS which expresses relative but not absolute inferiority. This marker is coarticulated with eyebrow furrowing and eye squint.

The second morphological variant used in expressing degree comparatives is incorporation of the degree into the predicate sign, namely expressing BIGGER rather than MORE+BIG. As can be seen from the examples below, these comparative signs consist of both manuals and non-manuals. For the manual part the comparative morpheme is incorporated with the adjectival predicate. We illustrate this way of expressing comparison with two signs below. There is a semantic difference between these two signs and this is reflected in the way they are expressed. In the expression of BIGGER, the movement is outward but in the expression of THINNER, the movement is inward. For the

non-manual part, the eyes are wide open with BIGGER and the eyebrows are raised whereas the eyes are squinted and the eyebrows are furrowed for THINNER.



BIGGER

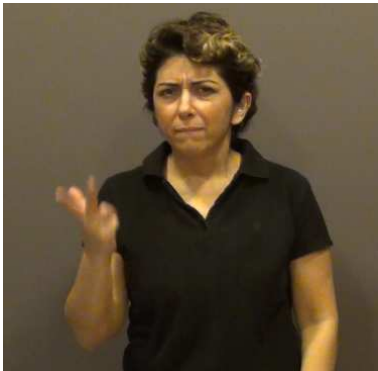


THINNER

(r.f. Özsoy& Kaşıkara 2018b: 22)

5.1.5. Superlatives

Superlative form of an adjective is expressed by the manual sign MORE which is articulated with 3-Handshape. The non-manual markers are squinted eyes, eyebrow lowering and lip bite. Similar to the sign for MORE, the orientation for MOST is palm up.



most

(r.f. Özsoy& Kaşıkara 2018b: Fig.3)

Information on data and consultants

Please see the data and consultant information in the references. The linguistic data in images and video clips that were produced or reproduced for this chapter were provided by a near-native fluent signing consultant who was born and raised in Istanbul.

References

Dikyuva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2015. *Türk İşaret Dili dilbilgisi kitabı* [Turkish Sign Language grammar book]. Ankara: TC Aile ve Sosyal Politikalar Bakanlığı.

Özsoy, A. Sumru, & Hüner Kaşıkara. 2018b. Comparatives in Turkish Sign Language (TİD). *Linguistic Discovery* 16(1), 47-63.

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PART 6 Pragmatics

Pragmatics is the study of meaning in terms of the contextual use of language. In one respect, pragmatics is concerned with how meaning of an expression is influenced by prior or subsequent expressions. In broader terms, pragmatics studies how the time, place, and style contribute to meaning, and the conditions or strategies by which language users effectively refer to entities or events.

In this part of the grammar, the first chapter is about reference, namely, how definiteness and specificity influence referring expressions. The next chapter reference tracking involves strategies for introducing and maintaining referents in a discourse. The third chapter speech acts describe how language users fulfill aims such as assertions, questions, commands, requests, and exclamation. The next chapter on information structure outlines how old and new information is marked in TiD. The following chapter is about how TiD uses devices of reporting and role shift. The seventh chapter on expressive meaning exposes how signers imply certain meanings that goes beyond the content of their literal expressions. Next chapter consists of various uses of signing space with a focus on topographic relations, temporal expressions, and perspective. The chapter on figurative meaning covers meaning construed by metaphor and metonymy. The next chapter communicative interaction is about the linguistic elements or strategies that contribute to the dynamic flow of a conversation. The final chapter explains the reflections of different kinds of registers and politeness on the linguistic forms of TiD.

Chapter 1. Reference

Reference is the relationship between a linguistic expression and the entity that it represents. A linguistic expression (or a referring expression) is said to “refer” to a discourse referent. This chapter focuses on how reference is conveyed in TiD. Section 1.1 explains the concept of deixis. Sections 1.2, 1.3, and 1.4 describe different types of noun phrases in terms of their referential properties, namely, definite noun phrases, indefinite noun phrases, and specific vs. non-specific noun phrases. Section 1.5 covers ways of expressing impersonal reference.

1.3. Indefiniteness

When a speaker assumes that his/her addressee does not know a discourse referent, s/he uses an indefinite noun phrase. Indefinite noun phrases can be of different forms: a full noun phrase [Syntax - Chapter 4.] with an indefinite determiner such as *a* or *some* plus a common noun as in *a student*, a noun phrase with a common noun but no determiner as in “*There is **snow** on the roads.*”, and an indefinite pronoun [Lexicon - Section 3.7.7.] with the meaning ‘someone’. Indefinites are usually used to introduce new referents into the discourse [Pragmatics - Chapter 5.].

In T1D, indefinite discourse referents can be expressed in the following ways: (i) common nouns with no determiner, (ii) noun phrases with an indefinite determiner, and (iii) pronominal forms which are usually indefinite determiners with an unpronounced ‘person’, functioning as pronouns. The first type is described here whereas the latter two will be described in the following sections.

Existential and possessive constructions [Syntax - Section 2.1.5.] typically contain common nouns with no indefinite determiner that are interpreted as indefinite expressions. MILK is an indefinite expression in the existential clause in (a) and so is SISTER in the possessive construction in (b).

a. FRIDGE_a IX_a MILK THERE_IS
‘There is milk in the fridge.’

b. POSS₁ SISTER THERE_IS
‘I have a sister.’

It is also possible to have indefinite noun phrases in the object position.

IX₁ MILK WANT

‘I want milk.’

1.3.1. Manual marking

Nouns can be preceded by indefinite determiners. Common indefinite determiners are ONE, ONE_[ipsi_up], SOME_1, SOME_2, and OTHER [Lexicon, Section 3.6.2.].



VARIOUS BOOK THERE_IS. SOME_1 BOOK INTERESTING SOME_1 BOOK INTERESTING NOT.

'There are various books. Some books are interesting. Some books are not interesting.'

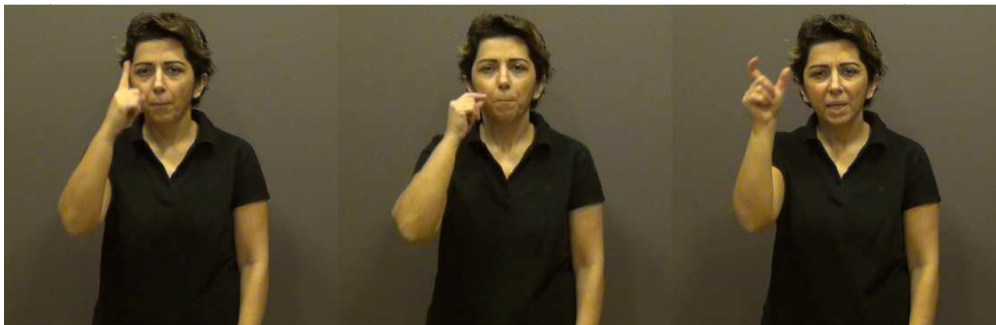
Determiners can occur alone and function as indefinite pronouns with the meaning 'someone'. They can be analyzed as modifying an unpronounced 'person'.

non-sp

PHONE **OTHER**₁STEAL₃

'Someone has stolen my phone.'

Determiners can concatenate with signs meaning 'person' and function as indefinite pronouns. An example is ONE^PERSON^C_PERSON.



ONE PERSON C_PERSON

'someone'

(recreated from Kelepir et al. 2018: 266)

ONE^PERSON^C_PERSON DOORBELL PRESS

'Someone is ringing the door.'

(adapted from Kelepir et al. 2018: 266)

See [[Lexicon - Section 3.7.7](#)] for other possible combinations.

1.3.2. Non-manual marking

See [[Pragmatics - Section 1.4.2.](#)]

1.4. Specificity

As mentioned in [[Pragmatics - Section 1.3.](#)] indefinites are used when the speaker assumes that the addressee is not familiar with a certain individual/thing. Indefinites are further divided into specific and non-specific. A speaker uses a specific indefinite when s/he knows the referent or has a certain individual/thing in mind and a non-specific indefinite when s/he does not know the referent or does not have a certain individual/thing in mind.

The indefinite forms described in [[Pragmatics - Section 1.3.](#)] can be used to express both specific and non-specific individuals/things. The difference is expressed through the presence vs. absence of non-manual marking of non-specificity which is described in [[Pragmatics - Section 1.4.2.](#)] below.

1.4.1. Manual marking

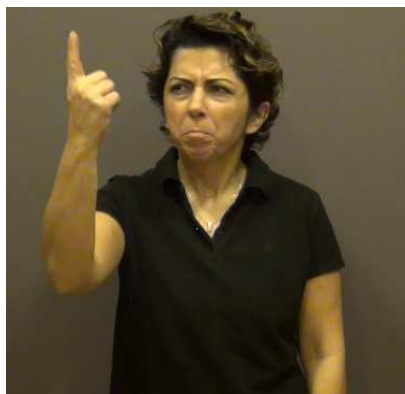
One of the signs that form non-specific indefinites is OTHER [[Lexicon - Section 3.6.2.](#)]. OTHER can function as an indefinite pronominal and it can combine with other signs to form more complex indefinites. Possible combinations are OTHER^ONE^C_PERSON ‘someone’ and ONE^OTHER ‘someone’.



OTHER ONE C_PERSON
‘someone’

As mentioned above, these forms are used when the signer does not know the referent or has no referent in mind. Sentences with these forms can be followed by ‘... but I don't know who.’.

Another sign that can also function as a non-specific indefinite pronoun is ONE_[lateral_up]. This sign has the same handshape as the numeral ONE but it is articulated by pointing the index finger towards the higher region of the (ipsi-) lateral signing space.



ONE_[lateral_up]

'someone (non-specific & exclusive)'

(r. f. Kelepir et al. 2018a: 270)

For some signers, potential referents of these forms with OTHER and ONE_[lateral-high] exclude the addressee and also perhaps other people socially or physically close to the signer. Non-specific indefinite referents in contexts that involve, for instance, inappropriate acts such as throwing bottles into the sea, leaving trash on a desk, stealing, smoking etc., are expressed more frequently with these forms than with the more neutral forms such as the ONE^PERSON C_PERSON described in [Pragmatics - Section 1.3.1.] This exclusive reading is represented as ‘someone (non-specific, exclusive to our group)’ in the translations of the examples below. These examples have been adapted from Kelepir et al. (2018a: 268-274).

non-sp

ONE^OTHER SHOE₁STEAL₃[lateral-high]

'Someone (non-specific, exclusive to our group) has stolen my shoe.'

(adapted from Kelepir et al. 2018a: 274)

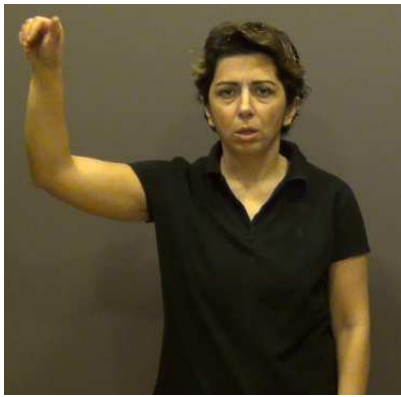
non-sp

OTHER^ONE^C_PERSON SEA WATER BOTTLE THROW FINISH

'Someone (non-specific, exclusive to our group) has thrown the water bottle into the sea.'

(adapted from Kelepir et al. 2018a: 268)

When an argument is non-specific indefinite (and exclusive in the sense explained above) and the verb is an agreement verb [Lexicon - Section 3.2.2.] that inflects for that argument, the agreement marker is also articulated in the higher region of the ipsilateral side of the signer.

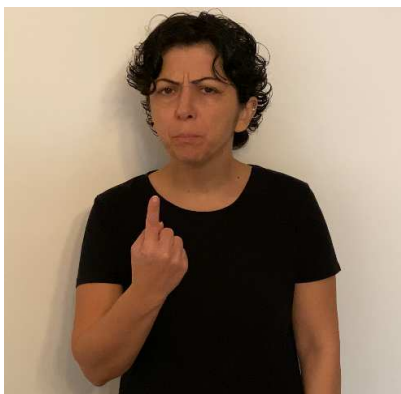


${}_1\text{STEAL}_3[\text{lateral_high}]$

'(Someone from outside) stole (it).'

(recreated from Kelepir et al. 2018b: 174)

When the signer assumes that the individuals who are present or nearby are in the set of potential referents, s/he articulates an indefinite sign or an agreement marker in the lower part of the central signing space.



$\text{ONE}_{[\text{central_low}]}$

‘someone (from here)’

(recreated from Kelepir et al. 2018a: 270)



$_1\text{STEAL}_3[\text{CENTRAL_LOW}]$

‘(Someone from here) stole (it).’

(recreated from Kelepir et al. 2018b: 176)

An example of a context for the use of an inclusive indefinite is the following: The signer notices that her/his phone is missing, and s/he suspects that someone in that room stole the phone.

non-spec

$\text{POSS}_1 \text{PHONE ONE}^{\wedge} \text{PERSON}_1 \text{STEAL}_3[\text{center_low}]$

‘Someone (inclusive) has stolen my phone.’

1.4.2. Non-manual marking

The non-manual markers of non-specificity are brow furrowing, lowered mouth corners, and averted eye gaze.



non-manual markers of non-specificity

(recreated from Kelepir et al. 2018a: 270)

1.5. Impersonal reference

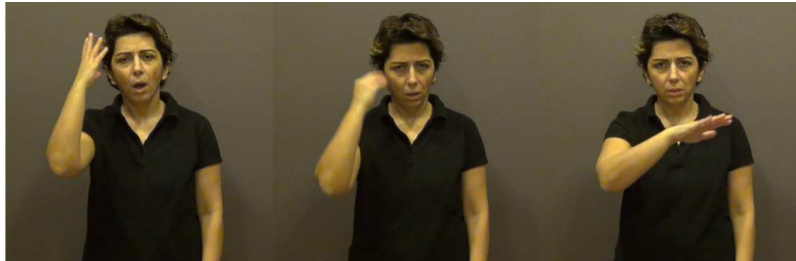
Impersonal reference refers to cases where the referent of an individual in the discourse is not clear or its degree of reference is very low. TID employs the following strategies to express impersonal reference: non-specific indefinite pronouns, see [Pragmatics - Section 1.4.], a multiple/plural marker on the verb [Morphology - Section 3.1.2.] that does not refer to a referential set of individuals, (non-deictic use of) 2nd person pronouns with impersonal reference, and null subjects.

In the following example the verb UNDERSTAND is marked with multiple/plural. This sentence is possible in a context where the subject of the verb was not mentioned before in the discourse, and thus, it is understood not to refer to a definite set of people.

FEDERATION PRESIDENT_{3a} TEN MINUTE LATE SAY IX_{3a} DRUNK LATE Ø UNDERSTAND_{3pl}

‘They said the president of the federation was ten minutes late and they/people (impersonal) understood that he was drunk.’

(Kelepir et al. 2018a: 263)



UNDERSTAND_{3pl}

(recreated from Kelepir et al. 2018a: 263)

Null subjects with impersonal reference, marked with the symbol Ø in the examples below, can occur in sentences where, for instance, a generalization is made regarding the people in a certain location:

FRANCE Ø SNAIL EAT

‘In France, they eat snails.’

They can also be used in contexts where the signer does not know the identity of or does not want to identify a corporate entity such as the municipality or the government.

Ø TAKSIM MOSQUE BUILD

‘They will build a mosque in Taksim.’

When a signer uses a 2nd person pronoun non-deictically, the pronoun does not refer to the addressee but it has a generic, impersonal reference. For instance, an example like the following can be uttered even when the addressee is male:

_____re

_____h-th

IX₂ PREGNANT, HEAVY SOMETHING LIFT NOT NECESSARY

‘If you are pregnant, you should not lift something heavy.’

Information on data and consultants

The descriptions in this chapter reflect the findings of research that has addressed only some aspects of indefiniteness, (non)-specificity and impersonal reference, and thus, they are not complete.

For the data and consultant information see the references below. The linguistic data in images and video clips that were produced or reproduced for this chapter were provided by a near-native fluent signing consultant who was born and raised in Istanbul.

References

- Arık, Engin. 2013b. Expressions of space in Turkish Sign Language. In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 219-242. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.
- Arık, Engin. 2016b. Türk İşaret Dili'nde mekânsal dil. In E. Arık, *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 315-336. İstanbul: Koç Üniversitesi Yayınları.
- Dikyuva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2015. *Türk İşaret Dili dilbilgisi kitabı* [Turkish Sign Language grammar book]. Ankara: TC Aile ve Sosyal Politikalar Bakanlığı.
- Kelepir, Meltem, Aslı Özkul & Elvan T. Özparlak. 2018a. Agent-backgrounding in Turkish Sign Language (TİD). In G. Barberà & P. Cabredo Hofherr (eds.), *R-Impersonals in sign languages. Special issue. Sign Language and Linguistics* 21(2), 257-283.
- Kelepir, Meltem, Aslı Özkul & Elvan T. Özparlak. 2018b. Clusivity distinction in indefinites in Turkish Sign Language (TİD). *Proceedings of the 53rd annual meeting of the Chicago Linguistic Society*, University of Chicago, 25-27 May 2017.
- Kubus, Okan. 2016. *Relative Clause Constructions in Turkish Sign Language*. Hamburg, Germany: University of Hamburg PhD Dissertation.
- Saral, Burcu. 2019. *The Universal Quantifier 'All' in Turkish Sign Language*. İstanbul, Turkey: Boğaziçi University MA Thesis.

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Chapter 2. Reference tracking

Reference tracking is about the cues according to which addressees keep track of the identity of referents in discourse. A referent is usually introduced to the conversation with an indefinite form [Pragmatics - 1.3.]. After the introduction, it is usually inappropriate to use long chunks of words (such as noun phrases) for a referent that is mentioned again. Instead, a shorter underspecified form is used such as pronouns [Lexicon - 3.7.]; verbal agreement [Morphology - 3.1.]; classifiers [Morphology - 5]; and buoys [Pragmatics - 2.2.3.]. The meaning of these forms is understood by referring back to the original introduction (antecedent) of the referent. The referent is expressed via different linguistic strategies depending on its place in the discourse and common ground between the interlocutors [Pragmatics - 5.3]. Thus, this chapter explains reference tracking strategies that employ pronouns, agreement, classifiers, and buoys.

2.1. Pronouns

The pronoun types in TĪD are person, honorific, possessive, locative/demonstrative, emphatic, reciprocal, interrogative, and relative [Lexicon - Section 3.7.]. Person pronouns distinguish first person and non-first person (2nd or 3rd person). The number information can either be singular, dual, or plural. Locative/demonstrative pronouns can be topographical or abstract pointings. Reflexive pronoun SELF in TĪD is combined with a personal pronoun, or the referent is identified from the previous context. It is generally used with emphatic (intensification) meaning.



IX₃ SELF KNOW^NOT
'S/he himself doesn't know.'

(adapted from Zeshan 2002: 263)



SELF THINK CLEAN BETTER

‘(I) would rather do the cleaning myself.’

(adapted from Zeshan 2002: 263)

Reciprocal pronouns refer to multiple entities where both parties do an action and get effected by the action. Interrogative pronouns are question words such as WHAT/HOW, WHERE, HOW_MANY, WHEN, WHO, and WHY [Syntax - Section 1.2.3.2.]. Relative pronouns in TID occur clause-finally which are phonetically identical to indexical signs.

2.2. Other means

The most prototypical device for reference tracking is pronouns. However, various other strategies are used in TID such as spatial agreement, classifier handshapes, and buoys.

2.2.1. Agreement

TID has spatial verbal agreement [Morphology - Chapter 3]. Agreement verbs change their direction of movement and sometimes hand orientation. In this way certain spatial loci are associated with arguments (agent, patient, etc. [Semantics - Chapter 6]). Generally, the referents are assigned distinct loci in the beginning of discourse. In the following utterance, the referents *boy* and *girl* are signed in different locations first. Then, they are inferred from the initial and final locations of the verb.



BOY_a IX_a GIRL_b IX_b BOOK_a GIVE_b
‘The boy gave the book to the girl’

While agreement verbs generally denote agent and patient, spatial verbs agree with topographic information, source and goal [Morphology - Chapter 3 and Lexicon - Section 3.2.3.].



SCHOOL_a IX_a HOME_b a WALK_b

‘I walked from school to home’

2.2.2. Classifier handshapes

Classifier handshapes indicate the shape features of an entity such as vehicles, flat objects, long thin objects, etc. Alternatively, classifier handshapes copy the shape of a body-part or hands during object manipulation [Morphology - Chapter 5]. The former category is called entity classifiers [Morphology - Section 5.1.1.], whereas the latter two are body-part [Morphology - Section 5.1.2.], and handle classifiers [Morphology - Section 5.1.3.] respectively. Felicitous usage of classifiers requires lexical introduction of the referents as in the sentence below.



h1: GAS_STATION CL:‘general_entity’_b CAR_a CL:‘vehicle_move’_b

h2: GAS_STATION CAR CL:‘general_entity’_b

‘The car entered the gas station.’

2.2.3. Buoys

Buoys are forms produced on the non-dominant hand for purposes of listing a number of referents (such as items in a schedule or family members), or denoting a salient referent by pointing to the referent by the non-dominant hand or alternatively holding the non-dominant hand component of the referent’s lexical sign [Lexicon - Section 1.2.3.].

Buoys that list referents are called list buoys. In the example below, the signer lists her relatives. The dominant hand is later used to refer back to a single item or multiple items in the list.



h1: THREE SIBLING EXIST IX_{b,c} WOMAN IX_a MAN

h2: THREE _____

‘I have three siblings. Two of them are female, the other one is male.’

A prominent discourse referent, that is, a topic that has been continuously referred to during a conversation is held constant by pointer buoys.



h1: IX_a SOMETHING MISTAKE EXIST

h2: IX_a _____

‘That (person) made a mistake’

In fragment buoys, the non-dominant hand of a lexical sign is held stationary to maintain a repeatedly mentioned referent. In the example below, the referent (FILM for the TV series Spartacus) is mentioned for the fourth time in total by the interlocutors:



h1: FILM MAN DIE PALM-UP

h2: FILM _____

‘The man dies in that film.’

Information on data and consultants

Please see the data and consultant information in the references. The linguistic data in images and video clips that were produced or reproduced for this chapter were provided by a near-native fluent signing consultant who was born and raised in Istanbul.

References

Dikyuva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2015. *Türk İşaret Dili dilbilgisi kitabı* [Turkish Sign Language grammar book]. Ankara: TC Aile ve Sosyal Politikalar Bakanlığı.

Kubus, Okan. 2016. *Relative Clause Constructions in Turkish Sign Language*. Hamburg, Germany: University of Hamburg PhD Dissertation.

Sümer, Beyza. 2015b. *Scene-setting and referent introduction in Turkish and Turkish Sign Language (Türk İşaret Dili, TİD): What does modality tell us?*. İstanbul, Turkey: Boğaziçi University MA Thesis.

Zeshan, Ulrike. 2002. Sign Language in Turkey: The story of a hidden language. *Turkic Languages* 6(2). 229-274.

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Chapter 4. Information structure

The flow of information is an important part of the grammar of a language and in every utterance, the constituents are ordered in a particular way so that they convey new, shared or old information, or alternatively, indicate what the sentence is about. In this context, we examine various types of new information (Focus), [Pragmatics - 4.1.] and constituents that convey what the sentence is about (Topic) [Pragmatics – 4.2.].

4.1. Focus

Focused constituents contribute new information to the informative content of a sentence.

4.1.1. All-new focus

All-new focus provides information all of which is new, and refers to sentences which lack a particular salient part. This kind of focus is also known as presentational focus, information focus, neutral focus, or broad focus. The following declarative sentence is a response to what happens in a picture where a man is eating a chicken leg. In fact, all-new focus sentences are typically answers to wh-questions such as ‘What’s happening?’. The signer blinks after the subject and at the end of the sentence. Other than these blinks, there are no other prominent nonmanual markers in the sentence. This means that no particular part is salient, hence, the sentence provides a description of a state of affairs, which is all new information.



eb

MAN

CHICKEN

‘A man is eating chicken.’

eb

CL(): ‘eat’

(adapted from Gökgöz in progress)

The introduction of new referents into the discourse is another case of sentences with all new information. The referents may serve as the grammatical indefinite subject of the predicate THERE_IS.



h1: IX_{3a} CAT TWO.....
h2: CAT MALE THERE_IS

‘There are two male cats.’

(Gökgöz in progress)

In Figure-Ground sentences, the constituent which is larger and less mobile is called the Ground while the constituent which is smaller and more mobile is called the Figure. When all new focus includes Figure-Ground information, the flow of the information is Ground first and then Figure. Below the Ground is COUCH and the Figure is ROPE.



h1: COUCH BELOW ROPE SOAP TIED THERE_IS
h2: COUCH BELOW ROPE SOAP TIED.....

‘There is a piece of rope tied around a bar of soap under the couch.’

(Gökgöz in progress)

When a new segment of discourse unrelated to the previous contexts begins with a sentence containing new information, the focused element is often but not always non-manually marked with a squint. The example below includes a squint while the next one does not.



sq

h1: CL(): 'extend'

STAIRS

h2: CL(): 'extend'

'There are stairs.'

(adapted from Gökgöz in progress)

PIANO is under presentational focus below but it is not marked prosodically.





we

we

re

re

neutral face

h1: CL(): 'fall'
CL(): 'fall'

IX_{3a}

PIANO

MUSIC

PIANO

h2: CL()
CL(): 'fall'

CL()

PIANO

MUSIC

PIANO

'A piano is falling down the stairs.'

(Gökgöz in progress)

4.1.2. New information focus

New information focus provides new information in the form of a single constituent. This kind of focus is

also called identificational focus, or narrow focus. The focused element in TİD may occupy different positions in a sentence. It can occur in the sentence-initial position.

YESTERDAY_[focus], CHILD GARDEN BALL PLAY
 ‘The child played ball in the garden yesterday.’

(Makaroğlu 2012: 67)

The focused element may also occur in the sentence-final position.

CHILD GARDEN BALL PLAY YESTERDAY_[focus]
 ‘The child played ball in the garden yesterday.’

(Makaroğlu 2012: 67)

In both of these sentences, the salient part that the signer conveys is ‘yesterday’.

The answer to a wh-question which asks for the identification of a particular entity or state of affairs, such as ‘What did the man kick?’, contains a constituent which carries new information focus. Clefted constituents in a wh-cleft also carry new information focus. BALL below is new information.





MAN FOOTCL(): ‘KICK’ ROUND_OBJ.CL(): ‘go’ IX_{3a} WHAT
 BALL

‘What the man kicked (and as a consequence went) was a ball.’

(adapted from Kayabaşı in progress)

Self-corrective focus occurs in narrative discourse where the signer confuses the referents and self-corrects. These are typically marked prosodically with closed-eyes, raised eye-eyebrows, and optionally, a change in head position mostly actualized as a head-shake - the latter two of which correlate with the non-manual marking of negation in TİD (Gökgöz 2011). Corrective focus below is on CAT.



MAN CL(): ‘use_stetoscope’ CAT
 CL(): ‘use_stetoscope’

‘The man... no, the cat is using the statoscope.’

4.1.3. Contrastive focus

Contrastive focus is used for invalidating the old information mentioned in the previous discourse by providing a new one. This is also a case of new information focus since one constituent is made salient. However, in contrastive focus, the salient constituent is contrasted with a previously mentioned constituent.

ANKARA_[focus] (YESTERDAY) (EVENING) (GO)

‘TO ANKARA, I went yesterday evening.’

(Adapted from Makaroğlu 2012: 68)

Another example of contrastive focus is provided below. The information that ‘The house belongs to all her family.’ is invalidated by providing the information that it belongs to ‘her’ only.



IX_{3a}
POSS₁

HOUSE

FAMILY

ALL

POSS₃

NO-NO

‘That house does not belong to all her family. (It is) HERS.’

(<http://tidsozluk.net/tr/Kendi?d=0058>)

4.1.4. Emphatic focus

Emphatic focus augments or emphasizes an element.

IX₁ GO YESTERDAY_[E-Focus].

‘I went YESTERDAY.’

(Makaroğlu 2012: 73)

Emphatic focus can be doubled.

IX₁ YESTERDAY_[E-Focus] GO YESTERDAY_[E-Focus].

‘I went YESTERDAY.’

(Makaroğlu 2012: 74)

4.1.5. Focus doublings

The information-focused element may occur in the sentence-final position with a double in the sentence internal position of the focused constituent.

CHILD YESTERDAY_[focus] GARDEN BALL PLAY YESTERDAY_[focus]

‘The child played ball in the garden yesterday.’

(Makaroğlu 2012: 67)

4.2. Topic

Topic provides information concerning what the sentence is about. A distinction is made regarding the discourse status of topics. Some topics are continued or shifted topics. While topic shift indicates a change from a previously built context by starting a new one, topics with continued discourse status maintain former referents in the discourse.

Similar to presentational utterances that bring new referents into a new context, topic shifts, containing mediated information, are mostly marked non-manually with a squint, and more optionally with a brow raise or a change in head position. CAT below is a shifted topic.



_____re

_____sq

CAT

SIT

‘The cat (from the previous context) is sitting’

(Gökgöz in progress)

MOUSE below is a shifted topic.



_____hn

_____sq

IX_{3a}

MOUSE


‘There is the mouse (from the previous context)’

(Gökgöz in progress)

Continued topics that maintain previously built referents do not seem to be marked prosodically although an eyeblink during or at the end of the sign may optionally occur. CAT below is a continued topic below.



CAT

LEGSCL():‘walk’ CARPET

FLAT_OBJECTCL():‘pull’

‘The cat is pulling the carpet.’

(adapted from Gökgöz in progress)

IX_{3a} CAT is a continued topic below.



eb

IX_{3a}

CAT

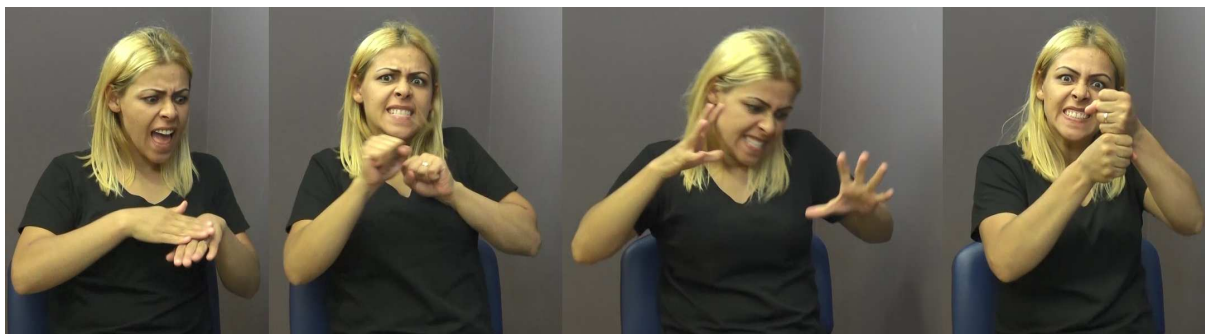
BLACK

ANIMALCL():‘run’

‘Then the black cat runs (storming) back.’

(adapted from Gökgöz in progress)

Constructed action or role shift in which the signer takes on the role of a character in the narrative spreads across most notably in continued topics which may block further prosodic marking. CAT is a continued topic below.



rs

CAT

GET_ANGRY

SMALL_ANIMALCL(, ): 'catch'

'The cat gets angry and catches the mouse'

(adapted from Gökgöz in progress)

Scene-setting topics, whether they are new to the discourse or present old information, are fronted adverbial or prepositional clauses that provide spatial or temporal information. They occur sentence-initially, preceding an optional aboutness topic. Scene-setting topics in TİD are often marked with a non-neutral head position and optionally with a brow raise.

Scene setting topic



hp-d

DOORCL(): 'extending'

'There is a door which extends like this.'

Following sentence



CAT

MOUTHCL(

'The cat opens his mouth.'

(adapted from Gökgöz in progress)

Base-generated topics, which often represent a class or a set of items precede information-focused constructions.

What does Ali like the most among fruits?

FRUIT, APPLE (ALI) (VERY_MUCH) (LIKE)

'As for fruits, Ali likes apples the most.'

(Makaroğlu 2012: 69)

In cases where topics which represent a class or set of entities co-occur with focus, the topic and focused constituents can be animate or inanimate entities.

Inanimate entities:

Which city do you like the most?

CITY_[Topic] ISTANBUL_[I-Focus] IX₁ MOST LIKE

'As for cities, I like İstanbul the most.'

(Makaroğlu 2012: 78)

Animate entities:

Which singer do you like the most?

SINGER_[Topic] ZÜLFÜ LIVANELİ_[I-Focus] IX₁ MOST LIKE

'As for singer, I like Zülfü Livaneli the most.'

(Makaroğlu 2012: 78)

Animacy has an effect on the interpretation of a constituent as the topic of a sentence. The following sentence includes an inanimate object, BOOK, which can be interpreted as a topic.

BOOK CHILD BUY

'The book, the child bought.'

(Açan 2007: 206)

However, CHILD cannot be interpreted as a topicalized direct object in the sentence below. Rather it is the subject.

Information on data and consultants

Please see the data and consultant information in the references. The examples with a link underneath are from tidsozluk.net (Makaroğlu and Dikyuva, 2017).

References

- Açan, Zeynep. 2007. *A linguistic analysis on basic sentence types in Turkish Sign Language (TİD) with reference to non-manual activity*. Ankara, Turkey: Hacettepe University PhD dissertation.
- Gökgöz, Kadir. 2011. Negation in Turkish Sign Language: The syntax of nonmanual markers. *Sign Language & Linguistics* 14(1). 49-75.
- Gökgöz, K. In progress. ‘Supporting sign language development of deaf children with hearing parents through linguistically-informed preschool stories’, Boğaziçi University, Bilimsel Araştırma Projeleri (BAP), Start-up Project, #14458, 2018-2020.
- Kayabaşı, Demet. In progress. *The causative-inchoative alternation in Turkish Sign Language and the age of acquisition effects on complex clauses*. İstanbul, Turkey: Boğaziçi University MA Thesis.
- Makaroğlu, Bahtiyar. 2012. *Türk İşaret Dili'nde soru: Kaş hareketlerinin dilsel çözümlemesi* [Question in Turkish Sign Language: Linguistic analysis of eyebrows]. Ankara, Turkey: Ankara University MA Thesis.
- Makaroğlu, Bahtiyar, & Hasan Dikyuva (eds.). 2017. *Güncel Türk İşaret Dili sözlüğü* [The contemporary Turkish Sign Language dictionary]. Ankara: Aile ve Sosyal Politikalar Bakanlığı. URL: <http://tidsozluk.net>.

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Chapter 5. Discourse structure

This chapter has a section on foregrounding and backgrounding strategies, namely the foregrounding strategies or structures by which new or salient information is indicated, or backgrounding means by which old or less salient information is expressed.

5.3. Foregrounding and backgrounding

TİD uses non-manual (squint in relative clauses) or manual strategies (fingerspelling and mainly entity classifiers) to identify the foregrounded and backgrounded information (See also [[Pragmatics - Chapter 2](#)]). Foregrounding information refers to highlighting the most salient piece of discourse. The less-salient stretch of discourse, which does not make the discourse advance, is considered backgrounded. In simple terms, a foregrounding strategy tells the addressee that “this is a new information and I will most probably say more about it” (introduction) or “I have talked about this information some time before and now I bring back the topic again” (reintroduction). Conversely, a backgrounding strategy tells the addressee that “This is an

information that I have given you earlier, please keep this information in mind for a while since I might say something about it” (maintenance).

Generally, foregrounded and salient information is expressed by relatively long units (e.g. noun phrases) whereas backgrounded information is typically expressed by shorter units such as pronominals, classifiers, role shift, or not expressed at all. The latter forms generally denote previously mentioned referents or referents that are already known, perceived or attended by both the signer and the addressee (e.g. an object in the room where the conversation takes place).

One typical backgrounding strategy is holding the non-dominant hand of a sign while the dominant hand keeps on signing. In the example below, the demonstrative pronoun in the non-dominant hand is kept active during the whole utterance, backgrounding the person information who is introduced earlier in the narrative [Lexicon - Section 1.2.3].



h1: IX SOMETHING MISTAKE EXIST

h2: IX _____

‘That (person) made a mistake’

When talking about temporally advancing events (narratives), relative clauses are occasionally used for foregrounding, that is, introducing a referent into discourse. The last line in the example below is such an utterance where a relative clause is used for introducing the referent ‘the girl’.

“A woman and her son live in a house in a village.

The son wants to get married.

However, the mother is a very bad person.

She has complained about the girlfriends that he has had so far.

The girl, who is from a village far away, loves the boy.”

_____sq

[GIRL FAR VILLAGE IN] BOY_a IX_a LOVE

The girl, who was from a village far away, loved the boy.

(Kubus 2016: 209)

As another strategy of foregrounding, relative clauses in narratives are usually used for reintroducing a referent that has been mentioned before:

“(…) There were three women, who had known each other for years. One woman was married. Another woman married soon after. The other woman was still single. (…).

The first (woman), who was already married, met the single woman.”

___re

h-n

h-n

sq

‘o’

sq

(h1)[IX MARRY FINISH IX_i] SINGLE_j CL:‘meet’_(i,j)

(h2)FIRST

‘The first (woman), who was already married, met the single woman.’

(adapted from Kubus 2016: 192)

Occasionally, relative clauses fulfill backgrounding function when it gives extra background information about an already mentioned referent:

h-n

h-n

GERMANY IX IN ONE YOUNG PERSON E-V-E-N-T GOOD WATCH

re h-n

[IX₁ HEARING ONE FRIEND₁ FILM₁ GIVE₁] IX₁ CHANGE SIGN FILM₁ TELL₂

“I heard a good and thrilling story about a young boy in Germany. I changed the story, which a hearing friend told me, and will tell the story to you all.”

(Kubus 2016: 264)

Information on data and consultants

Please see the data and consultant information in the references. The linguistic data in images and video clips that were produced or reproduced for this chapter were provided by a near-native fluent signing consultant who was born and raised in Istanbul.

References

Kubus, Okan. 2016. *Relative Clause Constructions in Turkish Sign Language*. Hamburg, Germany: University of Hamburg PhD Dissertation.

Sümer, Beyza. 2015b. *Scene-setting and referent introduction in Turkish and Turkish Sign Language (Türk İşaret Dili, TİD): What does modality tell us?*. İstanbul, Turkey: Boğaziçi University MA Thesis.

Authorship information

Kubus, Okan. 2016. *Relative Clause Constructions in Turkish Sign Language*. Hamburg, Germany: University of Hamburg PhD Dissertation.

Sümer, Beyza. 2015b. *Scene-setting and referent introduction in Turkish and Turkish Sign Language (Türk İşaret Dili, TİD): What does modality tell us?*. İstanbul, Turkey: Boğaziçi University MA Thesis.

Chapter 6. Reporting and role shift

This chapter describes how TİD expresses quoted utterances, attitudes, actions, gestures, and facial expressions. First, attitude role shift is explained where an utterance is directly quoted by means of verbs such as SAY and ASK, which can involve additional strategies such as perspective shift. Next, action role shift is described, which is imitation of real world actions and facial expressions of another person or animal.

6.1. Attitude role shift and (in)direct speech

Attitude role shift indicates that the signer quotes from another person’s utterances, thoughts or attitudes such as actions, gestures, and facial expressions. The markers of role shift are body shift, change in the direction of eye gaze, and altered facial expressions [Syntax - Section 3.3.3].

During quotation (direct speech), the loci of referents in signing space might shift from that of the actual signer to the perspective of the quoted person. First and second person pronouns as well as the person reference of agreement verbs are shifted to the perspective of the quoted person. In the attitude shift sentence below, the goal of the verb ASK is the quoted person, yet the spatial goal is the body of the signer.



²ASK ₁
'Ask me'

(r.f. Kelepir & Göksel 2013: 196)

SAY is a frequently used agreement verb to introduce (in)direct speech. It behaves differently than regular agreement verbs in two respects: SAY is sometimes repeated within a single utterance, and SAY can be articulated with the non-dominant hand. These are exemplified below respectively:

SEMRA SAY MELEK WHAT DO SAY
'Semra asked "What is Melek doing?"'

_____	<i>hold</i>	
GUEST ARRIVE		SAY
<i>h1</i>		<i>h2</i>
'... said that guests arrived.'		

(Kelepir & Göksel 2013: 205-206)

Rarely, the non-dominant hand is held stationary while the dominant hand produces the quoted utterance. The intermittent or continuous nature of SAY helps the procession of discourse as the addressees should get "who says to whom" information that change frequently during a narrative that has plenty of attitude role shift.

6.2. Action role shift

In action role shift or constructed action, the signer imitates real world actions and facial expressions. This special type of 'quotation' or reported action involves a considerable degree of facial expressions, head and body movements as expressive means to narrate an event in a vivid manner. Eye gaze break and body rotation are important characteristics in constructed action as in attitude role shift. The spatial arrangement of referents and actions is based on the vantage point of the reported actor in character perspective, or role shifted utterance can involve elements from both character and observer perspectives yielding an interaction with transitivity and classifier types [Pragmatics - Section 8.3]. The amount of visual detail is up to the signer's narrative style. See below two examples where the same event is produced without and with action role shift respectively:



DOG MAN_a IX_a BITE_a



rs: DOG

DOG MAN IX_a BITE_a

Here is an example with an intransitive verb WALK:



MAN WALK

'The man walks.'

The same event can be expressed with more visual details as in the example below:



rs: MAN, JOYFUL

MAN JOYFUL WALK

'The man walks joyfully.'

The action role shift portion of the sentences above only contains the imitation of an animate entity (the dog, the man). Action role shift can also incorporate lexical and classifier predicates[Morphology - Chapter 5]. The two events in the examples above are presented with alternative realizations with various combinations of role shift with lexical, and classifier predicates.

Action role shift combined with classifier predicates:



rs: MAN-SLOW

MAN SELF SLOW CL:'person'

'The man is walking slowly.'

Action role shift combined with both lexical and classifier predicates:



rs:

IX₁, AFRAID_____

IX₁ SELF GO WALK, BACK SOMETHING EXIST, CL:'eyes_back' OBSCURE DOG IX_a FEAR
CL:'person_walk' RUN_AWAY

'I was walking. I looked back and feared whether there is a dog. I walked with fear and ran away.'

Information on data and consultants

The descriptions in this chapter are partially based on the references below and partially on research done by the author during the development of this chapter [Section 6.2.]. Please see the data and consultant information in the references. The linguistic data in images and video clips that were produced or reproduced for this chapter were provided by a near-native fluent signing consultant who was born and raised in Istanbul.

References

- Arık, Engin. 2013b. Expressions of space in Turkish Sign Language. In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 219-242. Newcastle upon Tyne, UK: Cambridge Scholars Publishing. [6.2]
- Arık, Engin. 2016b. Türk İşaret Dili'nde mekânsal dil. In E. Arık, *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 315-336. İstanbul: Koç Üniversitesi Yayınları. [6.2]
- Keleşir, Meltem & Aslı Göksel. 2013. Aspects of reported utterances in Turkish Sign Language. In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 191-218. Newcastle upon Tyne, UK: Cambridge Scholars Publishing. [6.1]
- Keleşir, Meltem & Aslı Göksel. 2016. Türk İşaret Dili'nde aktarılmış anlatımın özellikleri. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 337-360. İstanbul: Koç Üniversitesi Yayınları. [6.1]
- Kubus, Okan. 2016. *Relative Clause Constructions in Turkish Sign Language*. Hamburg, Germany: University of Hamburg PhD Dissertation. [6.2]

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Chapter 8. Signing space

This chapter is devoted to the description of how signing space, the three-dimensional area in front of a signer, is allocated to express spatial arrangements of entities, how expressions about time fall on to the axes of the body, and finally how character and observer perspectives used in relation to different classifier types.

8.1. Uses of signing space

Signing space is the three-dimensional area where the hands can move during signing. The spatial locations of referents [Pragmatics - Chapter 1] involve either an abstract or topographical use. Abstract use assigns referents arbitrarily to certain locations. In other words, the meaning of the sentence does not change if a referent is assigned a different location. Topographic use makes an analogy between the spatial arrangement of entities in the real world and that of hands in the signing space. In addition, signing space can be used as a metaphor for the abstract concept time. Certain timelines in signing space are used to express concepts such as past, present, future,

before, and after [Morphology – Section 3.2.1.]. Finally, events can be narrated via various perspectives and frames of reference.

8.1.2. Topographic use

Topographic use of space renders signing space a small-sized model of entities and their spatial arrangements. When talking about static spatial interrelations of entities, the most typical construction is in the form of GROUND FIGURE GROUND.FIGURE. In this construction, first the GROUND is mentioned, and then it is followed by the FIGURE. Finally, the FIGURE is localized with a downward movement with respect to the GROUND. See below an example in this typical construction pattern:



h1: TABLE BOWL APPLE CL:'round_object'
h2: ROUND_OBJ.CL:'bowl'
'There is a bowl (on the) table. The apple is in the bowl'

Another but less common construction type involves producing lexical signs followed by locative predicates that express the loci of entities with respect to each other.



h1: SHIP TWO CL:'general_entity'_a CL:'general_entity'_b
h2: SHIP CL:'general_entity'_a
'Two ships are side by side'

Describing locative relations may involve Size-and-Shape-Specifiers [Morphology - Section 5.2.] to express figure information but rarely. In other words, FIGURE element can be expressed by a tracing outline of the entity:



WALL_a PAINTING CL:'rectangular_object' RECTANGLE_a
'The painting is on the wall.'

As for ON and NEXT.TO relations between entities, TID uses simultaneous or sequential constructions with equal tendency. In other words, the entities might be expressed by each hand at the same time, or one after another with the same hand. Alternatively, the same sign can be repeated in different locations.

Another aspect of ON and NEXT_TO relations is that simultaneous constructions are more commonplace in NEXT.TO relations than ON. In sequential constructions the two entities are localized in separate time slots with a repeating locative predicate in separate loci [Morphology - Chapter 4.1.]. In the example below a sequential construction is followed by a simultaneous localization of the four entities with the numeral FOUR which incorporates a locative downward movement.



h1: SHIP_a SHIP_b SHIP_c FOUR-LOC
h2: IX _____
'There are four ships side by side.'

(adapted from Perniss, Zwitserlood, & Özyürek 2011: 1595)

In simultaneous constructions the entities are represented at the same time with either a single hand (as in the example below) or two classifier handshapes [Morphology - Chapter 5]. Both unimanual and bimanual simultaneity are used with equal tendency when talking about NEXT_TO relations. See below an example sentence with bimanual simultaneity:



h1: APPLE CL:'round_object'_a
h2: CL:'round_object'_b
'Two apples are side by side.'

Besides classifier constructions, alternatively (or in addition to classifiers), relational lexemes are sometimes used to express relations such as NEXT.TO, ON, UNDER, IN. The order in these constructions are typically in GROUND FIGURE RELATIONAL-LEXEME format. See below an example with a relational lexeme:



h1: TABLE TELEPHONE ABOVE_a
h2: TABLE_a _____
'The telephone is on the table'

If there are two entities TID may use certain classifier constructions [Morphology - Chapter 5] to differentiate lateral, sagittal, and diagonal configurations when describing static spatial relations and dynamic spatial events. See below signed descriptions of two apples in three axial configurations: lateral, diagonal, and sagittal:



lateral



diagonal



sagittal

Generally, the spatial layout in the real world is reflected faithfully in signing space as in the examples above. However, the orientation and location of entities might not directly reflect real arrangement of entities. For example, the orientation of the set of objects described may use different axes, namely frontal or lateral, in order to describe the same spatial arrangement. See below two sentences which denote the same spatial arrangement on lateral and sagittal axes. The first sentence is not faithful to the real-world layout in terms of location, and the second one in terms of orientation.



h1: CAR	CL:'vehicle'
h2: CAR	CL:'vehicle'

(adapted from Arik & Nadolske 2006a: 8)



h1: CAR CL:'vehicle'
h2: CAR CL:'vehicle'

(adapted from Arik & Nadolske 2006a: 9)

In static configurations of two animate-like entities with intrinsic frontness and backness (the front of an animal is its head), orientation information is always expressed. Whether location, axis, situation (static vs. dynamic) information is faithfully represented in sign depends on the axial and facing configuration of two entities in the real world. For example, more spatial information is likely to be represented in sign, if two entities face each other on the lateral axis than two entities facing opposite sides on sagittal axis. See below two examples respectively:



h1: HORSE	CL:'eyes'
h2: HORSE	CL:'eyes'

‘Two horses are facing each other (laterally)’

(adapted from Arik 2009: 87)



h1: HORSE CL:'eyes'
h2: HORSE CL:'eyes'
'Two horses are facing opposite sides (sagittally)'

(adapted from Arik 2009: 87)

If two entities are very close to each other, then axial and facing features have no influence on signed representations. Different from static events, in dynamic events, that is, when one of two entities move, entities on sagittal axis elicit more spatial information in sign than entities on the lateral axis do.

8.2. Temporal expressions

Signing about time involves systematic usage of space where past, present, and future are mapped on certain lines of signing space [Morphology - Section 3.2.1.]. A way of mapping time onto signing space is the *basic time line* which is an imaginary line along the sagittal axis. The shoulder or neutral position represents present, frontal signing area future, and back of the body past. This mapping is manifested in time adverbials such as YESTERDAY, TODAY and TOMORROW.



YESTERDAY



TODAY



TOMORROW

The mapping is iconic in that the distance in the signed time line corresponds to distance in time. See below examples that denote FAR-FUTURE, NEAR-FUTURE, NEAR-PAST, and, FAR-PAST:



FAR-FUTURE



NEAR-FUTURE



NEAR-PAST



FAR-PAST

When timepoints are described with respect to a reference point, generally the *sequence time line* is used which is from contralateral to ipsilateral signing area (lateral axis). This time line is observed in lexical items such as AFTER which is used as a connective between consecutive events:



AFTER

In construction level, when giving information about a specific time interval, *sequence time line* can be used. See below an example where two dates and the interval between them are located with a downward movement along the lateral axis.



h1: FIFTEEN AUGUST IX_a UNTIL_b THIRTY AUGUST IX_b-LOC VACATION

h2: 1X_a _____ IX_a-LOC VACATION

‘I am on vacation from 15 August to 30 August’

8.3. Perspective

Narrating a spatial event requires a preference of a certain perspective or viewpoint. In turn, the particular perspective goes parallel with certain grammatical structures (such as the type of classifier to be used) and localization of referents. Two main perspectives are used in T1D: *character perspective*, and *observer perspective* (See also [[Pragmatics - Chapter 6](#)]). To exemplify, see below an event (a woman carrying a tray) from character and another event (a woman approaching) with observer perspective:



WOMAN SELF CL: ‘handling_carry_tray’

‘The woman carried the tray.’



WOMAN CL: 'person_approach'

'The woman approached me.'

In character perspective, the event is narrated from the vantage point of the character in the utterance (which is *the woman* in the examples below). The signer's body is integral to the signing space since the whole body of the signer assumes the role of the referred character. The size of movements and entities are close to real world size. Observer perspective on the other hand, takes a vantage point external to the signer. The signing space does not include the signer's body, but includes the area in front of the signer. The size of movements and entities in events are scaled down to the size of the area in front of the signer. In the examples above, the movement of arms during walking are visible in character perspective, but not in observer perspective. *The man* is represented by hand, not the whole body. Another difference between character and observer perspective is that the former usually uses the sagittal axis whereas the latter resorts to the lateral axis.

As for classifier types, handling classifiers generally co-occur with character perspective. The hands animate the hands of referents in handling classifiers while signer's body represents the body of referents (as in the example above where a woman carries a tray). As entity classifiers are small-sized models of entities, they commonly occur in observer perspective (as in the example above where a woman approaches to the signer).

This type of *aligned constructions* generally represent a single animate character and a single inanimate entity. Typically, character perspective with handling classifiers denotes a transitive event where an agent manipulates an object, whereas observer perspective with entity classifiers refer to intransitive events where the agent gets involved in a non-manipulative action.

Rarely, entity classifiers can be produced with character perspective, and handling classifiers with observer perspective. The former commonly expresses intransitive activities of inanimate characters whereas the latter represents transitive actions of two animate entities at the same time. See below examples for these two types of *non-aligned constructions* respectively.

Character perspective with entity classifier (inanimate, intransitive)



h1: CL:'entity_ball_fall'

h2: ...

'The ball fell in front of me (the signer)'

(adapted from Perniss & Özyürek 2008: 363-364)

Observer perspective with handling classifier (animate, transitive)



GIRL IX_a BOY IX_b WATER_b GIVE_a MONEY_a GIVE

'There is a boy and a girl. The boy gave the girl a glass of water. The girl gave money to the boy'

(adapted from Perniss & Özyürek 2008: 362)

Besides character and observer perspectives, *fused perspective* combines two perspectives together. The head and torso of the signer represents the activity of the character and at the same time orient towards locations according to observer perspective, whereas the frontal signing area represents the zoomed-out entities or movements of events. See below a sentence which is produced in fused perspective:

Fused perspective



h1: CHILD CL: 'person, walk' _____
h2: GIRL CL: 'eyes, look'
'The girl is looking at the child who is walking'

(adapted from Perniss & Özyürek 2008: 65)

Besides the character/observer distinction, when describing the location of an entity with respect to another one, there are mainly two strategies of specification which are called *frames of reference*. When *egocentric frame of reference* is used, the objects are located as seen by the narrator or the addressee. *Allocentric frame of reference* allows to represent entities with respect to other fixed entities, or alternatively intrinsic features of objects. The realization in signing space is influenced by the frame of reference choice.

Along the frame of reference distinction, two alternative descriptions are possible which denote two entities that are located on, for example, the sagittal axis according to the signer's viewpoint. In a description of this layout with egocentric perspective, the sagittal axis in signer's viewpoint is faithfully represented on the sagittal axis of signing space. See an example sentence below:

h1: WOMAN THERE MAN CL: 'person' _[proximal]
h2: CL: 'person' _[distal] _____
'The woman and the man are side-by-side in the middle and facing left'

(adapted from Arık 2013b: 222)

If allocentric perspective is adopted to represent the same layout, the objects are localized in signing space only with respect to each other. Since lateral axis is used instead of sagittal axis in the real scene, the axial information is omitted.

h1: (...) CL: 'person' _[proximal]
h2: CL: 'person' _[proximal]

The preference for one frame of reference is not influenced by the sitting orientation of interlocutors. However, when addressees respond to narrators, the addressees tend to adopt the perspective of narrators.

Information on data and consultants

Please see the data and consultant information in the references. The linguistic data in images and video clips that were produced or reproduced for this chapter were provided by a near-native fluent signing consultant who was born and raised in Istanbul.

References

- Arık, Engin. 2003. *Spatial representations in Turkish and Sign Language of Turkey (TID)*. Amsterdam, Netherlands: University of Amsterdam MA thesis.
- Arık, Engin & Marie A. Nadolske. 2006a. Conceptualization of space in Turkish Sign Language (TID). (Paper presented at the 8th conference on Conceptual Structure, Discourse, and Language: Language in Action (CSDL8) at UCSD, La Jolla, CA, 3-5 November 2006.)
- Arık, Engin. 2006c. Locative constructions in Turkish Sign Language (TID). (Poster presented at Theoretical Issues in Sign Language Research 9, Florianapolis, Brazil, 9-12 December 2006.)
- Arık, Engin & Marina Milkovic. 2007. Perspective taking strategies in Turkish Sign Language and Croatian Sign Language. In R. Shields (ed.), *LSO working papers in Linguistics 7: Proceedings of WIGL 2007*. 17-31.
- Arık, Engin. 2008. Body and space in representing space in Turkish, Croatian, Austrian, and American Sign Languages. *Working paper series: 9th conference on Conceptual Structure, Discourse, & Language (CSDL9)*. Social Science Research Network.
- Arık, Engin. 2009. *Spatial language: Insights from sign and spoken languages*. West Lafayette, IN: Purdue University PhD dissertation.
- Arık, Engin. 2010a. *A crosslinguistic study of the language of space: Sign and spoken languages*. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.
- Arık, Engin. 2010b. Describing motion events in sign languages. *Poznań Studies in Contemporary Linguistics* 46(4). 367-390.
- Arık, Engin. 2011. Left/right and front/back in sign, speech, and co-speech gestures across languages: What do data from Turkish Sign Language, Croatian Sign Language, American Sign Language, Turkish, Croatian, and English reveal?. *Poznań Studies in Contemporary Linguistics* 47(3). 442-469.
- Arık, Engin. 2012a. Expressions of space during interaction in American Sign Language, Croatian Sign Language, and Turkish Sign Language. *Poznań Studies in Contemporary Linguistics* 48(2), 179-202.
- Arık, Engin. 2012b. Space, time, and iconicity in Turkish Sign Language (TID). *Trames: A Journal of the Humanities and Social Sciences* 16(4). 345-358.
- Arık, Engin. 2013b. Expressions of space in Turkish Sign Language. In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 219-242. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.
- Arık, Engin. 2015. Expressing manner, location, and orientation in manner-only motion events in Turkish

Sign Language. *Trames: A Journal of the Humanities and Social Sciences* 19(3), 205-220.

Arık, Engin. 2016b. Türk İşaret Dili'nde mekânsal dil. In E. Arık, *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 315-336. İstanbul: Koç Üniversitesi Yayınları.

Özyürek, Aslı, Inge Zwitterlood & Pamela M. Perniss. 2010. Locative expressions in signed languages: A view from Turkish Sign Language (TİD). *Linguistics* 48(5), 1111-1145.

Özyürek, Aslı & Pamela M. Perniss. 2011. Event representations in signed languages. In J. Bohnemeyer, & E. Pederson (eds.), *Event representations in language and cognition*, 84-107. New York: Cambridge University Press.

Perniss, Pamela. M. & Aslı Özyürek. 2008. Representations of action, motion and location in sign space: A comparison of German (DGS) and Turkish (TİD) sign language narratives. In J. Quer (ed.), *Signs of the time: Selected papers from TISLR 8*, 353-376. Seedorf: Signum Press.

Perniss, Pamela. M., Inge Zwitterlood & Aslı Özyürek. 2011. Does space structure spatial language? Linguistic encoding of space in sign languages. In L. Carlson, C. Holscher, & T. Shipley (eds.), *Proceedings of the 33rd annual meeting of the Cognitive Science Society*, 1595-1600. Austin, TX: Cognitive Science Society.

Sümer, Beyza, Inge Zwitterlood, Pamela Perniss & Aslı Özyürek. 2012. Development of locative expressions by Turkish deaf and hearing children: Are there modality effects?. *36th Annual Boston University Conference on Language Development* 1-2, 568-580. Cascadilla Press.

Sümer, Beyza, Inge Zwitterlood, Pamela Perniss & Aslı Özyürek. 2013. Acquisition of locative expressions in children learning Turkish Sign Language (TİD) and Turkish. In E. Arik (ed.), *Current directions in Turkish Sign Language research*, 243-272. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.

Sümer, Beyza. 2015a. *Acquisition of spatial language by signing and speaking children: A comparison of Turkish Sign Language (TİD) and Turkish*. Nijmegen, Netherlands: Radboud University Nijmegen PhD dissertation.

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Chapter 9. Figurative meaning

Sometimes a word, a phrase, or a sentence is used not to express its literal meaning but a different meaning implied by it. This is called figurative meaning or indirect meaning. Metaphor [Pragmatics – Chapter 9.1.] and Metonym [Pragmatics – Chapter 9.2.] are two major means to express figurative meaning.

9.1. Metaphor

Metaphors are used in poetry as well as in everyday language. Metaphors map concrete concepts

to abstract concepts. They may be formulated in the following sentence form: X is Y. "Life is a stage" is an example of this from English. Here, the concrete concept of *stage* is mapped to the abstract concept of *life*. This mapping also applies to parts of these concepts: people correspond to actors, life corresponds to stage and people's actions correspond to actors' actions. In this mapping, the more concrete domain is the "source" and the more abstract domain is the "target".

9.1.1. Cognitive basis of metaphors

Fixed idiomatic expressions such as "Life is a stage." are not common in TlD. However, there are single signs which map abstract notions to concrete concepts which are iconically depicted.

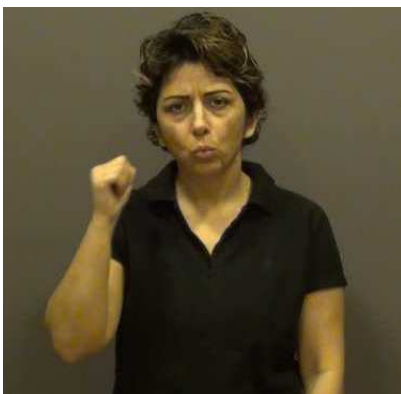
The agreement verb [Lexicon – Section 3.2.2] INFORM is an example. It is articulated on the mouth area and it contains a movement from the mouth of the signer towards the locus of the recipient of the news and the handshape changes [Phonology – Section 1.3.2.] from the Open-O-Handshape to 5-Handshape. This is a metaphorical expression since the abstract notion, transfer of news, is mapped to concrete, physical movement of throwing.



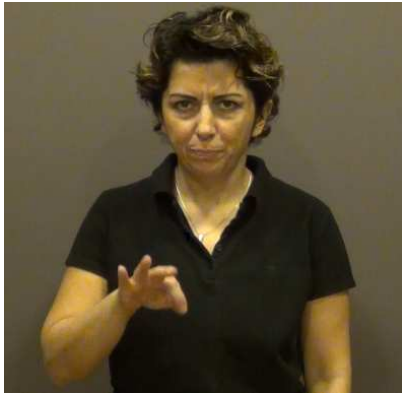
INFORM

9.1.2. Types and combinations of metaphors

Since metaphors map concrete concepts to abstract notions, many such concrete concepts are related to the body of the signer. For instance, the physical area in the back of the body is mapped to concepts related to past, the area near the signer's chest is mapped to concepts related to present, and the area in front of the signer's body is mapped to concepts related to future. Thus, temporal adverbs such as YESTERDAY, NOW and TOMORROW are signed in these respective parts of the signing space [Lexicon – Section 3.3.1. and Morphology – Section 3.2.].



YESTERDAY



NOW



TOMORROW

(r.f. Dikyuva et al. 2015: 299)

Another set of metaphorical signs are verbs of cognition such as UNDERSTAND, LEARN and FORGET. These are articulated near the head, and the handshape and the movement of the sign involves metaphorical mapping. The articulation of UNDERSTAND resembles capturing of an object:



UNDERSTAND

(r.f. Dikyuva et al. 2015: 299)

Thus, concrete action of capturing of an object and putting it in the head is mapped to the abstract concept of understanding something.

Similarly, LEARN resembles pulling objects towards the head continuously where objects are mapped to the abstract concept of information and pulling action is mapped to the cognitive process of learning.



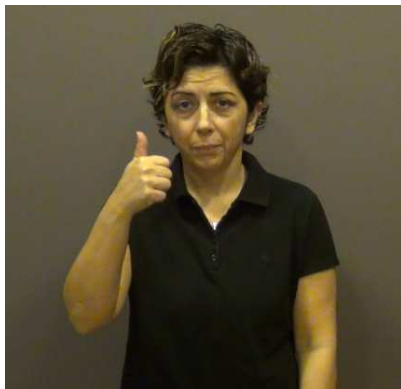
LEARN

FORGET is articulated by snapping the fingers near the head, and during finger snapping the hand undergoes a short movement that goes from the head outwards.



FORGET

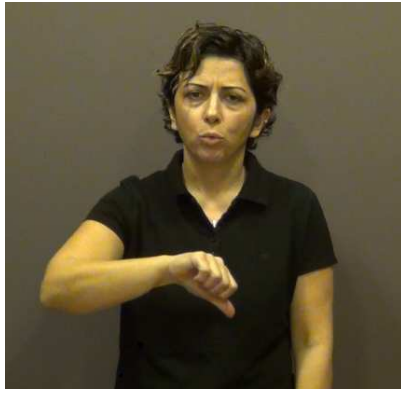
Direction in the signing space also plays a metaphorical role: usually good things are signed above and bad things are signed below. Since WINNER and SUCCESS are considered to be positive concepts, they are articulated by an upwards movement whereas LOSER and DIRT by downwards movement.



WINNER



SUCCESS



LOSER



DIRT

(r.f. Dikyuva et al. 2015: 302-303)

Even though it is rare, verbs can also be used with figurative meaning. One such example is the metaphoric use of the verb EAT.

PHONE IMMEDIATELY BATTERY EAT

Lit. 'The phone immediately eats the battery.' 'The phone uses up the battery immediately.'

(adapted from Dikyuva et al. 2015: 300)

In this example, the physical consumption via eating is mapped to the consumption of the energy of the battery.

9.2. Metonymy

Metonymy is the expression of an entity standing for another related entity. In the following example, the writer Orhan Pamuk stands for the actual works by him.

People like to read Orhan Pamuk.

In the following, the capital city of Turkey, Ankara, stands for the government.

Ankara announced the decision.

9.2.1. Metonymy vs. metaphor

Metaphoric usage of linguistic expressions involves two domains: concrete and abstract, and concrete concepts are mapped to abstract concepts. Metonymy, on the other hand, involves substituting one concept with another related one.

Metonymy [Lexicon - 1.1.] is also possible in TİD. The sign ANTALYA, a city in Turkey, is homophonous with the sign ORANGE since Antalya is famous for its oranges.



ANTALYA – ORANGE

In the following example, FEDERATION, which is an institution stands for the members of that institution.

FEDERATION YESTERDAY REPORT ACCEPT
'Federation accepted the report yesterday.'

In the following, DENİZLİ, another city in Turkey, stands for the Deaf association in that city.

DENİZLİ T-I-D EDUCATION START
'Denizli has started TID education.'

In the following, a vehicle, BICYCLE, stands for its driver.

MORNING BICYCLE IX₁ HIT
'A bicycle hit me in the morning.'

(adapted from Dikyuva, et al., 2015: 304)

Information on data and consultants

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References

- Aslan Demir, Sema. 2010. Sessizliğin dili: Türk İşaret Diline dair gözlemler. *Bilig* 54. 1-20.
- Aslan Demir, Sema. 2016. Sessizliğin Dili: Türk İşaret Dili'ne dair gözlemler. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 141-156. İstanbul: Koç Üniversitesi Yayınları.
- Dikyuva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2015. *Türk İşaret Dili dilbilgisi kitabı* [Turkish Sign Language grammar book]. Ankara: TC Aile ve Sosyal Politikalar Bakanlığı.

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Complete list of references

- Açan, Zeynep. 2001. *A study on sign languages and Turkish Sign Language*. Ankara, Turkey: Hacettepe University MA thesis.
- Açan, Zeynep. 2007. *A linguistic analysis on basic sentence types in Turkish Sign Language (TİD) with reference to non-manual activity*. Ankara, Turkey: Hacettepe University PhD dissertation.
- Akalın, Şükrü H. 2013. Türk İşaret Dili. *Yeni Türkiye* 55. 1496-1502.
- Alemdaroğlu, Ayça. 2005. Politics of the body and eugenic discourse in early Republican Turkey. *Body & Society* 11(3). 61-76.
- Altinkurt, Nimet. 2008. *Özel eğitim ve rehabilitasyon merkezlerinde yaşanan sorunlar ve çözüm önerileri* [Problems in special education and rehabilitation centers, and suggestions for solution]. İzmir, Turkey: Dokuz Eylül University MA thesis.
- Aran, Oya, Pınar Santemiz, İsmail Ari, Ahmet A. Kındıroğlu & Lale Akarun. 2016. Otomatik işaret dili tanıma ve Türk İşaret Dili için bilgisayar uygulamaları. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 471-498. İstanbul: Koç Üniversitesi Yayınları.
- Arık, Engin. 2003. *Spatial representations in Turkish and Sign Language of Turkey (TID)*. Amsterdam, Netherlands: University of Amsterdam MA thesis.
- Arık, Engin & Marie A. Nadolske. 2006a. Conceptualization of space in Turkish Sign Language (TID). (Paper presented at the 8th conference on Conceptual Structure, Discourse, and Language: Language in Action (CSDL8) at UCSD, La Jolla, CA, 3-5 November 2006.)
- Arık, Engin. 2006b. Nonmanual markers and constituency in Turkish Sign Language (TİD). Purdue University. (Unpublished manuscript)
- Arık, Engin. 2006c. Locative constructions in Turkish Sign Language (TID). (Poster presented at Theoretical Issues in Sign Language Research 9, Florianapolis, Brazil, 9-12 December 2006.)
- Arık, Engin & Marina Milkovic. 2007. Perspective taking strategies in Turkish Sign Language and Croatian Sign Language. In R. Shields (ed.), *LSO working papers in Linguistics 7: Proceedings of WIGL 2007*. 17-31.
- Arık, Engin. 2008. Body and space in representing space in Turkish, Croatian, Austrian, and American Sign Languages. *Working paper series: 9th conference on Conceptual Structure, Discourse, & Language (CSDL9)*. Social Science Research Network.
- Arık, Engin. 2009. *Spatial language: Insights from sign and spoken languages*. West Lafayette, IN: Purdue University PhD dissertation.
- Arık, Engin. 2010a. *A crosslinguistic study of the language of space: Sign and spoken languages*. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.

- Arık, Engin. 2010b. Describing motion events in sign languages. *Poznań Studies in Contemporary Linguistics* 46(4). 367-390.
- Arık, Engin. 2011. Left/right and front/back in sign, speech, and co-speech gestures across languages: What do data from Turkish Sign Language, Croatian Sign Language, American Sign Language, Turkish, Croatian, and English reveal?. *Poznań Studies in Contemporary Linguistics* 47(3). 442-469.
- Arık, Engin. 2012a. Expressions of space during interaction in American Sign Language, Croatian Sign Language, and Turkish Sign Language. *Poznań Studies in Contemporary Linguistics* 48(2). 179-202.
- Arık, Engin. 2012b. Space, time, and iconicity in Turkish Sign Language (TİD). *Trames: A Journal of the Humanities and Social Sciences* 16(4). 345-358.
- Arık, Engin. 2013a. Türk İşaret Dili'nde sınıflandırıcılar üzerine bir çalışma. *Bilig* 67. 1-24.
- Arık, Engin. 2013b. Expressions of space in Turkish Sign Language. In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 219-242. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.
- Arık, Engin. 2013c. Introduction: Previous and Current Research on Turkish Sign Language (TİD). In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 1-17. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.
- Arık, Engin. 2015. Expressing manner, location, and orientation in manner-only motion events in Turkish Sign Language. *Trames: A Journal of the Humanities and Social Sciences* 19(3). 205-220.
- Arık, Engin. 2016a. Geçmişten geleceğe Türk İşaret Dili araştırmaları. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 7-22. İstanbul: Koç Üniversitesi Yayınları.
- Arık, Engin. 2016b. Türk İşaret Dili'nde mekânsal dil. In E. Arık, *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 315-336. İstanbul: Koç Üniversitesi Yayınları.
- Arıkanlı, Oğuz. 1973. *Tarihimizde ilk'ler* [Premieres in our history]. İstanbul: Milliyet Yayınları.
- Aslan Demir, Sema. 2010. Sessizliğin dili: Türk İşaret Diline dair gözlemler. *Bilig* 54. 1-20.
- Aslan Demir, Sema. 2016. Sessizliğin Dili: Türk İşaret Dili'ne dair gözlemler. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 141-156. İstanbul: Koç Üniversitesi Yayınları.
- Aslan, Erhan, Gülşen Danacı & Neşe Arslan. 2007. The colour signaling process in Turkish Sign Language. *Dil Dergisi* 138. 34-42.
- Atabay, Efe. 2009. Eugenics, modernity and the rationalization of morality in early Republican Turkey. Montreal, Canada: McGill University thesis.
- Batır, Betül. 2008. An historical overview of development of the education of deaf, mute, and blind children in Turkey. *International Review of Turkology* 1(2). 17-24.
- De Grati, Ferdinand. 1898. [Report from] Turkey. In Bureau (ed.), *International reports of schools for the Deaf*, 27. Washington City: Volta Bureau.
- Demir, Ömer & Mehmet Aysoy. 2002. *Turkey disability survey*. Ankara: State institute of statistics.
- Demirtaş, Bahattin. 2008. Atatürk döneminde eğitim alanında yaşanan gelişmeler. *Akademik Bakış* 1(2). 157-176.

- Deringil, Selim. 2002. *İktidarın sembolleri ve ideoloji*. İstanbul: Yapı Kredi Yayınları.
- Dikyuva, Hasan. & Ulrike Zeshan. 2008. *Türk İşaret Dili - birinci düzey*. [Turkish Sign Language - level one]. Nijmegen: Ishara Press.
- Dikyuva, Hasan. 2011. *Grammatical non-manual expressions in Turkish Sign Language (TİD)*. Preston, Lancashire, England: University of Central Lancashire (UCLan) MA thesis.
- Dikyuva, Hasan. 2012. Mardin Sign Language: signing in a “deaf family”. *Sign Languages in Village Communities: Anthropological and Linguistic Insights* 4. 395-399.
- Dikyuva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2015. *Türk İşaret Dili dilbilgisi kitabı* [Turkish Sign Language grammar book]. Ankara: TC Aile ve Sosyal Politikalar Bakanlığı.
- Dikyuva, Hasan. 2016. Türk İşaret Dili’nde görünüş kodlayan el-dışı işaretler. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 297-314. İstanbul: Koç Üniversitesi Yayınları.
- Dikyuva, Hasan, Bahtiyar Makaroğlu & Engin Arık. 2017. *Turkish Sign Language grammar*. Ankara: The Republic of Turkey Ministry of Family and Social Policies.
- Armen T. Marsoobian, Kirkor Sahakoğlu & Anna Turay. 2013. *Dildilian kardeşlerin objektifinden bir Ermeni ailesinin yitik geçmişine tanıklıklar*. [Bearing witness to the lost (bygone) history of an Armenian family through the lense of the Dildilian brothers]. (Exhibition brochure, Depo (Tütün Deposu), 26 April – 8 June 2013.)
- Ergenç, İclal, Selçuk İşsever, Bahtiyar Makaroğlu & Hasan Dikyuva. 2014. Agreement verbs in Turkish Sign Language (TİD) –Turkish bimodal bilingualism. (2nd International Conference on Linguistic Rights of the Deaf, Moscow, May 2014.)
- Ergin, Osman Nuri. 1939. Dilsizler ve körler mektebi [Mutes and blinds school]. *Türk Maarif Tarihi* 3, 1165-1172. İstanbul: Osmanbey Matbaası.
- Ergin, Rabia. 2017. *Central Taurus Sign Language: A unique vantage point into language emergence*. Medford, MA: Tufts University dissertation.
- Eryiğit, Cihat, Hatice Köse, Meltem Keleşir & Gülşen Eryiğit. 2016. Building machine-readable knowledge representations for Turkish Sign Language generation. *Knowledge-Based Systems* 108, 179-194.
- Faraggi, Jacques & Boudeville. 1886. [Devoirs d'élèves (non corrigés)] 'Compte-rendu de la journée.' *Revue internationale de l'Enseignement des Sourds-Muets* (deuxième année) 1, 343-345.
- Fisher, Carol G. & Fisher, A.W. 1987. *Topkapı Sarayı in the mid-seventeenth century: Bobovi's description*, *Archivum Ottomanicum*, 5-81.
- Genç, G. Aydan, Figen Başar, Maviş E. Kayıkçı, Didem Türkyılmaz, Zerrin Fırat, Öznur Duran, Özlem Ulusoy, Erol Belgin, Bilgehan Budak, Gülsevin Tekinalp, Murat Yurdakök, Şule Yiğit, & Ayşe Korkmaz. 2005. Newborn hearing screening outcomes in Hacettepe University. *Çocuk Sağlığı ve Hastalıkları Dergisi* 48. 119-124.
- Geraci, Carlo, Brandt Strickland, Roland Pfau, Meltem Keleşir & Philippe Schlenker. 2015. Sell or negotiate extracting telicity from sign language. (Paper presented at Formal and Experimental Approaches to Sign Language Theory (FEAST), UPF, Barselona, May 2015)

- Gürboğa, Coşgun & Tevhide Kargın. 2013. İşitme engelli yetişkinlerin farklı ortamlarda kullandıkları iletişim yöntemlerinin/becerilerinin incelenmesi [An investigation of hearing impaired adult's communication methods and skills in various settings]. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi* 36(1-2). 51-64.
- Gaillard, H. 1911. "The Failure of the Oral Method" translated from French by F.R.Gray. *The Silent Worker* (March, 1911) 23(6), 15.
- Gök, Süleyman. 1939. Dilsizliğin telâfisi: Türkiyede ve Avrupada dilsizler [Compensation for muteness: Mutes in Turkey and Europe] *Dilsiz Neşriyat Yurdu* 1. İstanbul: Resimli Ay Matbaası.
- Gök, Süleyman. 1940. Dilsizliğin telâfisi: Sağır dilsizlerin tedris usulleri ve konuşma tarzları [Compensation for muteness: Educational methods for Deaf-Mutes and ways of speaking]. *Dilsiz Neşriyat Yurdu* 2, 1-32. İstanbul: Aydınlık Basımevi.
- Gök, Süleyman. 1958. Dünyada ve Türkiye’de sağır, dilsiz okulları tarihçesi ve eğitim sistemi [The history and education systems of deaf, mute schools in the World and Turkey]. *Türkiye Sağır, Dilsiz ve Körler Tesanüt Cemiyeti Neşriyatı* 1. İstanbul: Hüsnütabiat Matbaası.
- Gökgöz, Kadir. 2009. *Topics in Turkish Sign Language (Türk İşaret Dili – TİD) Syntax: Verb movement, negation, and clausal structure*. İstanbul, Turkey: Boğaziçi University MA thesis.
- Gökgöz, Kadir. 2010. Licensing questions in Turkish Sign Language. Purdue University. (Unpublished manuscript)
- Gökgöz, Kadir & Engin Arık. 2010. Distributional and syntactic characteristics of nonmanual markers in Turkish Sign Language (Türk İşaret Dili, TİD). (Paper presented at the 7th Workshop on Altaic Formal Languages (WAFL7), LA, CA. 29-31 October 2010.)
- Gökgöz, Kadir. 2011. Negation in Turkish Sign Language: The syntax of nonmanual markers. *Sign Language & Linguistics* 14(1). 49-75.
- Gökgöz, Kadir & Engin Arık. 2011. Distributional and syntactic characteristics of nonmanual markers in Turkish Sign Language (Türk İşaret Dili, TİD). *MIT working papers in Linguistics* 62: *Proceedings of the 7th Workshop on Altaic Formal Linguistics*, 63-78.
- Gökgöz, Kadir. 2013. Negation in Turkish Sign Language: The syntax of nonmanual markers in A. Herrmann & M. Steinback (eds.), *Nonmanuals in Sign Language*. John Benjamins Publishing.
- Gökgöz, Kadir & Ronnie Wilbur. 2016. Olumsuz evet-hayır sorularında olumlu önyargı: Türk İşaret Dili’nde olumsuzluk başından tümleyici başa taşımının delili. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 253-274. İstanbul: Koç Üniversitesi Yayınları.
- Gökgöz, Kadir. 2018. Syllables in TİD. *Dilbilim Araştırmaları Dergisi* 29(1), 29-49.
- Gökgöz, K. In progress. ‘Supporting sign language development of deaf children with hearing parents through linguistically-informed preschool stories’, Boğaziçi University, Bilimsel Araştırma Projeleri (BAP), Start-up Project, #14458, 2018-2020.
- Göksel, Aslı, Meltem Keleş, & Aslı Üntak-Tarhan. 2009. Interrogatives in Turkish Sign Language: The specific functions of head tilt, head shake and head nod. (Paper presented at the Workshop on Nonmanuals in Sign Language, Goethe University, Frankfurt am Main, 4-5 April 2009.)

- Göksel, Aslı & Meltem Keleşir. 2011a. Issues in complexity: Sentential complementation in Turkish Sign Language. (Paper presented at the Complex sentences and beyond in sign and spoken languages, University of Göttingen, 13-14 October 2011.)
- Göksel, Aslı & Meltem Keleşir. 2011b. The syntax of nested spreading domains. (Poster presented at Venice feast: Formal approaches to sign languages, University of Venice, 20-22 June 2011.)
- Göksel, Aslı & Meltem Keleşir. 2013a. The phonological and semantic bifurcation of the functions of an articulator: HEAD in questions in Turkish Sign Language. *Sign Language and Linguistics* 16(1). 1-30.
- Göksel, Aslı. 2013b. Asymmetric signs: Simplex lexemes or semantically decomposable forms? (Talk given at Sign Language Workshop, University of Haifa, 2 April 2013.)
- Göksel, Aslı & Meltem Keleşir. 2016. Observations on clausal complementation in Turkish Sign Language. In R. Pfau, M. Steinbach & A. Hermann (eds), *A matter of complexity: Subordination in sign languages*, 65–94. Berlin: De Gruyter. <https://doi.org/10.1515/9781501503238-005>
- Göksel, Aslı, & Süleyman S. Taşçı. 2016. Türk İşaret Dili'nde ödünclemeler. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 361-388. İstanbul: Koç Üniversitesi Yayınları.
- Hakgüder, Emre. 2015a. *Complex clauses with embedded constituent interrogatives in Turkish Sign Language (TİD)*. İstanbul, Turkey: Boğaziçi University MA thesis.
- Hakgüder, Emre. 2015b. On Wh-Complements in Turkish Sign Language. (Paper presented at Formal and Experimental Advances in Sign Language Theory (FEAST), Barcelona, 4 May 2015.)
- Haydar, Ali. 1925. Sağır ve dilsizler [Deaf and mute]. *Muallimler Mecmuası*, 29. 1237-1260. Available from: Hakkı Tarık Us Osmanlıca Süreli Yayınları, <http://www.tufts.ac.jp/common/fs/asw/tur/htu/data/HTU1558-03/index.djvu>
- İlkbaşaran, Deniz & Süleyman S. Taşçı. 2012. Ideology and language in the early republic: A history of deaf education in Turkey. *Proceedings of the International Symposium on Language and Communication: Research trends and challenges (ISLC)*, 1767-1777. Erzurum: Mega Press.
- İlkbaşaran, Deniz. 2015. *Literacies, mobilities and agencies of deaf youth in Turkey: Constraints and opportunities in the 21st century*. San Diego, CA: University of California, San Diego PhD Dissertation.
- İlkbaşaran, Deniz. 2016. Türkiye'deki sağır gençlerin iletişim alışkanlıkları ve Türk İşaret Dili'nin toplumsal dilbilimi açısından incelenmesi. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 411-444. İstanbul: Koç Üniversitesi Yayınları.
- İşsever, Selçuk & Bahtiyar Makaroğlu. 2015. WH-Movement in Turkish Sign Language. In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 167-189. New Castle Upon Tyne: Cambridge Scholars Publishing.
- Kaiser, Hilma (ed.). 2000. *Marsovan 1915; The Diaries of Bertha Morley*, 38-39, 46, 59. Reading: Taderon Press.
- Kan, Seda & Gökgöz, Kadir. 2009. Topics in sign language morphology: Compound formation in Turkish Sign Language. (Paper presented at the 7th Mediterranean Morphology Meeting, University of Cyprus, September 2009.)

Karabüklü, Serpil. 2015. Description of a perfective marker in Turkish Sign Language (TİD). (Poster presented at Formal and Experimental Advances in Sign Languages Theory (FEAST), University of Pompeu Fabra, May 2015.)

Karabüklü, Serpil. 2016a. A semantic analysis of perfective markers in TİD. (Paper presented at Workshop on Altaic Formal Linguistics 12 (WAFL 12), Central Connecticut State University, May 2016.)

Karabüklü, Serpil. 2016b. *Time and aspect in Turkish Sign Language (TİD: Manual and nonmanual realizations of 'Finish'*. Istanbul, Turkey: Boğaziçi University MA thesis.

Karabüklü, Serpil. 2018. Strategies to express time in a tenseless language: Turkish Sign Language (TİD). *Dilbilim Araştırmaları Dergisi* 29(1). 87–118.

Karakaş, İzi. 2007. *An analysis of policies towards the born disabled, victims of work accidents and natural disasters during the Hamidian Era (1876-1909)*. İstanbul, Turkey: Boğaziçi University MA Thesis.

Kaşıkkara, Hüner & A. Sumru Özsoy. 2015. Nonmanuals in comparatives in Turkish Sign Language. (*Workshop on Nonmanuals*, University of Göttingen, October 2015.)

Kayabaşı, Demet. In progress. *The causative-inchoative alternation in Turkish Sign Language and the age of acquisition effects on complex clauses*. İstanbul, Turkey: Boğaziçi University MA Thesis.

Kayabaşı, Demet, Hande Sevgi & A. Sumru Özsoy. in press. Null arguments in Turkish Sign Language. Morphological complexity within and across boundaries. In A. Gürer, D. Uygun-Gökmen & B. Öztürk (eds.), *In honor of Aslı Göksel*. John Benjamins

Keleşir, Meltem & Aslı Göksel. 2013. Aspects of reported utterances in Turkish Sign Language. In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 191-218. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.

Keleşir, Meltem & Aslı Göksel. 2016. Türk İşaret Dili'nde aktarılmış anlatımın özellikleri. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 337-360. İstanbul: Koç Üniversitesi Yayınları.

Keleşir, Meltem, Aslı Özkul, & Elvan T. Özparlak. 2018a. Agent-backgrounding in Turkish Sign Language (TİD). In G. Barberà & P. Cabredo Hofherr (eds.), *R-Impersonals in sign languages. Special issue. Sign Language and Linguistics* 21(2), 257-283.

Keleşir, Meltem, Aslı Özkul & Elvan T. Özparlak. 2018b. Clusivity distinction in indefinites in Turkish Sign Language (TİD). *Proceedings of the 53rd annual meeting of the Chicago Linguistic Society*, University of Chicago, 25-27 May 2017.

Kemaloğlu, Yusuf K. & Pınar Y. Kemaloğlu. 2012. The history of sign language and deaf education in Turkey. *Kulak Burun Bogaz İhtisas Dergisi* 22(2), 65-76. doi: 10.5606/kbbihtisas.2012.013.

Kemaloğlu, Yusuf K. 2016. Türkiye'de sağırın görünürlüğü ve toplumsal ve eğitimsel sorunları üzerine demografik bir inceleme. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 51 - 85. İstanbul: Koç Üniversitesi Yayınları.

Köse, Hatice, Pınar Uluer & Neziha Akalın. 2016. İnsansı robot destekli interaktif Türk İşaret Dili eğitimi. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 499-528. İstanbul: Koç Üniversitesi Yayınları.

- Kubus, Okan. 2008. *An analysis of Turkish Sign Language (TİD) phonology and morphology*. Ankara, Turkey: Middle East Technical University MA thesis.
- Kubus, Okan & Annette Hohenberger. 2011. The phonetics and phonology of TİD (Turkish Sign Language) bimanual alphabet. In R. Channon & H. van der Hulst (eds.), *Formational units in sign languages*, 43-63. Berlin: Walter de Gruyter.
- Kubus, Okan & Annette Hohenberger. 2013. Phonology and phonetics of reciprocals in Turkish Sign Language (TİD). In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 101-142. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.
- Kubus, Okan & Annette Hohenberger. 2015. The phonology and phonetics of reciprocals in Turkish Sign Language (TİD). In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 101- 142. New Castle upon Tyne: Cambridge Scholars Publishing.
- Kubus, Okan. 2016. *Relative Clause Constructions in Turkish Sign Language*, 178-179. Hamburg, Germany: University of Hamburg PhD Dissertation.
- Kubus, Okan, Deniz İlkbaşıran & Shane K. Gilchrist. 2016. Türkiye’de işaret dili planlaması ve Türk İşaret Dili’nin yasal durumu. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 23-50. İstanbul: Koç Üniversitesi Yayınları.
- Makaroğlu, Bahtiyar. 2012. *Türk İşaret Dili'nde soru: Kaş hareketlerinin dilsel çözümlemesi* [Question in Turkish Sign Language: Linguistic analysis of eyebrows]. Ankara, Turkey: Ankara University MA Thesis.
- Makaroğlu, Bahtiyar. 2013. Interrogatives in Turkish Sign Language (TİD): The role of eyebrows. In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 143-165. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.
- Makaroğlu, Bahtiyar & İpek P. Bekar & Engin Arık. 2014. Evidence for minimal pairs in Turkish Sign Language. *Poznań Studies in Contemporary Linguistics* 50(3), 207-230. doi: 10.1515/psicl-2014-0015
- Makaroğlu, Bahtiyar. 2016. Türk İşaret Dili’nde soru tümcelerinin görünümü: Kaş hareketlerinin rolü. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 233-252. İstanbul: Koç Üniversitesi Yayınları.
- Makaroğlu, Bahtiyar & Hasan Dikyüva. 2016. *Yabancı dil olarak Türk İşaret Dili eğitim seti* [Turkish Sign Language education package as second language]. Ankara University. tidegitim.com (last access March 8, 2018).
- Makaroğlu, Bahtiyar, & Hasan Dikyüva (eds.). 2017. *Güncel Türk İşaret Dili sözlüğü* [The contemporary Turkish Sign Language dictionary]. Ankara: Aile ve Sosyal Politikalar Bakanlığı. URL: <http://tidsozluk.net>.
- Makaroğlu, Bahtiyar, Elif A. Akkök, & Yeşim Aksan. 2018. Verbs in Turkish Sign Language: A cognitive linguistic approach. *Dilbilim Araştırmaları Dergisi*29(1), 119-137.
- Makaroğlu, Bahtiyar, & Selçuk İşsever. 2018. Agreement verbs in Turkish Sign Language (TİD) from the perspective of templatic morphology. *Dilbilim Araştırmaları Dergisi*29(1), 51-86.
- Miles, M. 2000. Signing in the Seraglio: mutes, dwarfs and jestures at the Ottoman court 1500-1700. *Disability & Society* 15(1). 115-134 .
- Miles, M. 2009a. Deaf people, sign language and communication, in Ottoman and Modern Turkey:

Observations and excerpts from 1300 to 2009. URL: www.independentliving.org/miles200907.html

Miles, M. 2009b. Hittite Deaf men in the 13th century BC: Introductory notes with annotated bibliography. URL: <http://www.independentliving.org/docs7/miles200809.html>

Milli Eğitim Bakanlığı [Ministry of Education]. 2015. *Türk İşaret Dili dersi etkinlik kitabı (1, 2, 3. Sınıflar* [Turkish Sign Language course activity book (1st, 2nd, and 3rd Grades). URL: http://orgm.meb.gov.tr/dosyalar/Turk_Isaret_Dili_188SFa.pdf (last access March 8, 2018)

Milli Eğitim Bakanlığı [Ministry of Education]. 2016. *Türk İşaret Dili dersi öğretim programı yürürlükte* [Turkish Sign Language course education program is in operation]. URL: <http://orgm.meb.gov.tr/www/turk-isaret-dili-dersi-ogretim-programi-yuru...> (Last access March 8, 2018)

Morton, Cynthia C., & Walter E. Nance. 2006. Newborn hearing screening - a silent revolution. *New England Journal of Medicine* 354(20). 2151-2164.

Nuhbalaoğlu, Derya. 2013. Determining the paradigm of personal pronouns in Turkish Sign Language. Boğaziçi University. (Unpublished manuscript)

Nuhbalaoğlu, Derya. & A. Sumru Özsoy. 2014. Linearization in noun phrases in Turkish Sign Language. (Paper presented at Formal and Experimental Advances in Sign Language Theory (FEAST Colloquium), Università Ca' Foscari. 9-11 June 2014.).

Nuhbalaoğlu, Derya. 2019. Comprehension and production of referential expressions in German Sign Language (DGS) and Turkish Sign Language (TİD): An empirical approach. *Sign Language & Linguistics* 22(2), 282-290.

Özbek, Aslı. 2012a. Verbal Complexity in Turkish Sign Language: Instrumental verbs and classifiers. (Poster presented at 45th Annual Meeting of the Societas Linguistica Europaea, Stockholm University, 29 August - 1 September 2012.)

Özbek, Aslı. 2012b. Identifying Noun Verb Pairs in Turkish Sign Language: Turkish-TİD Interaction. (International Conference on Turkish Linguistics, Middle East Technical University, Ankara, 18-21 September 2012.)

Özbek, Aslı. 2012c. Noun-verb pairs in TİD: A methodological criticism. *Proceedings of the International Symposium on Language and Communication: Research trends and challenges*, 1709-1716. Erzurum: Mega Press.

Özkul, Aslı. 2013. *A phonological and morphological analysis of instrumental noun-verb pairs in Turkish Sign Language*. İstanbul, Turkey: Bogazici University MA thesis.

Özkul, Aslı. 2016. Türk İşaret Dili'nde araç bildiren isim ve fiil çiftlerine birimbilimsel bir bakış. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 211-232. İstanbul: Koç Üniversitesi Yayınları.

Özkul, Aslı. 2019. Deontic and epistemic necessity in Turkish sign language (TİD). *Poznan Studies in Contemporary Linguistics* 55(3), 543-577.

Özsoy, A. Sumru, Aslı Göksel, Meltem Kelepir & Derya Nuhbalaoğlu. 2012. NP structure and linearization in Turkish Sign Language [Türk İşaret Dilinde ad öbeği yapısı ve işaret dizimi]. (Paper presented at the 7th International Turkish Language Conference (7. Uluslararası Türk Dili Kurultayı), Ankara, Turkey, 24-28 September 2012.)

- Özsoy, A. Sumru, Meltem Keleşir, Derya Nuhbalaoğlu & Emre Hakgüder. 2015. Commands in Turkish Sign Language [Türk İşaret Dili'nde emir yapısı]. *Journal of Japanese Linguistics Society* 146, 13-30. Gengo Kenkyu.
- Özsoy, A. Sumru & Hüner Kaşıkara. 2018a. Comparatives in Turkish Sign Language (TİD). In K. Wojtylak, Y. Treis & L. de Vries (eds.), *Comparative Constructions*. Free University of Amsterdam.
- Özsoy, A. Sumru, & Hüner Kaşıkara. 2018b. Comparatives in Turkish Sign Language (TİD). *Linguistic Discovery* 16(1), 47-63.
- Özsoy, A. Sumru, Meltem Keleşir, Derya Nuhbalaoğlu, & Emre Hakgüder. 2018c. Properties of command constructions in TİD. *Dilbilim Araştırmaları Dergisi* 29(1), 161-178.
- Özyürek, Aslı, Deniz İlkbaşaran & Engin Arık. 2004. *Türk İşaret Dili* [Turkish Sign Language]. Koç University. <http://turkisaretdili.ku.edu.tr> (last accessed December 2013)
- Özyürek, Aslı, Inge Zwitterlood & Pamela M. Perniss. 2010. Locative expressions in signed languages: A view from Turkish Sign Language (TID). *Linguistics* 48(5), 1111-1145.
- Özyürek, Aslı & Pamela M. Perniss. 2011. Event representations in signed languages. In J. Bohnemeyer, & E. Pederson (eds.), *Event representations in language and cognition*, 84-107. New York: Cambridge University Press.
- Perniss, Pamela M. & Aslı Özyürek. 2004. How many pots in the window sill? Number and quantification in German and Turkish Sign Languages. (Crosslinguistic perspectives in *sign language research workshop, German Linguistic Society Conference*, Mainz, Germany.)
- Perniss, Pamela. M. & Aslı Özyürek. 2008. Representations of action, motion and location in sign space: A comparison of German (DGS) and Turkish (TID) sign language narratives. In J. Quer (ed.), *Signs of the time: Selected papers from TISLR 8*, 353-376. Seedorf: Signum Press.
- Perniss, Pamela. M., Inge Zwitterlood & Aslı Özyürek. 2011. Does space structure spatial language? Linguistic encoding of space in sign languages. In L. Carlson, C. Holscher, & T. Shipley (eds.), *Proceedings of the 33rd annual meeting of the Cognitive Science Society*, 1595-1600. Austin, TX: Cognitive Science Society.
- Platt, Claribel. 1933. The Martha King Memorial School, in Ernest Pye (ed.) *Charlotte R. Willard of Merzifon, her life and times*, 55-64. New York: Fleming H. Revell Company.
- Roe, William R. 1917. *Peeps into the Deaf World*. Derby: Bemrose.
- Santemiz, Pınar, Oya Aran, Murat Saraclar & Lale Akarun. 2009. İşaret dili videolarından hizalama ile ayrık işaret çıkarımı [Alignment based extraction of isolated signs from sign language videos]. IEEE Conference Publications.
- Saral, Burcu. 2019. *The Universal Quantifier 'All' in Turkish Sign Language*. İstanbul, Turkey: Boğaziçi University MA Thesis.
- Schalenghe, Sara. 2005. The Deaf in Ottoman Syria, 16th - 18th centuries. *Arab Studies Journal* 12 (2) - 13 (1), 10-25.
- Selim, Kumur. B. 2006. Deaf people at the Ottoman Court. In: G. L. Albrecht, S. L. Snyder, J. Bickenbach,

- D. T. Mitchell & W. O. Schallick III (eds.) *Encyclopedia of disability*, 353. Thousand Oaks, CA.: Sage.
- Sevgi, Hande. 2019. *Effects of age of acquisition on morphosyntactic structures in Turkish Sign Language: Evidence from classifiers*. İstanbul, Turkey: Boğaziçi University MA thesis.
- Sevinç, A. Müge. 2006. *Grammatical relations and word order in Turkish Sign Language TİD*. Ankara, Turkey: Middle East Technical University MA thesis.
- Sevinç, A. Müge & Cem Bozşahin. 2006. Verbal categories in Turkish Sign Language TİD. *The 13th International Conference on Turkish Linguistics*.
- Sevinç, A. Müge. 2015. *Finite-state sign language morphophonology*. Ankara, Turkey: Middle East Technical University PhD thesis.
- Strickland, Brent, Carlo Geraci, Emmanuel Chemla, Philippe Schlenker, Meltem Kelepir & Roland Pfau. 2015. Event representations constrain the structure of language: Sign language as a window into universally accessible linguistic biases. *National Academy of Sciences*. DOI:10.1073/pnas.1423080112.
- Sümer, Beyza, Inge Zwitserlood, Pamela Perniss & Aslı Özyürek. 2012. Development of locative expressions by Turkish deaf and hearing children: Are there modality effects?. *36th Annual Boston University Conference on Language Development* 1-2, 568-580. Cascadilla Press.
- Sümer, Beyza, Inge Zwitserlood, Pamela Perniss & Aslı Özyürek. 2013. Acquisition of locative expressions in children learning Turkish Sign Language (TİD) and Turkish. In E. Arik (ed.), *Current directions in Turkish Sign Language research*, 243-272. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.
- Sümer, Beyza. 2015a. *Acquisition of spatial language by signing and speaking children: A comparison of Turkish Sign Language (TİD) and Turkish*. Nijmegen, Netherlands:Radboud University Nijmegen PhD dissertation.
- Sümer, Beyza. 2015b. *Scene-setting and referent introduction in Turkish and Turkish Sign Language (Türk İşaret Dili, TİD): What does modality tell us?*. İstanbul, Turkey: Boğaziçi University MA Thesis.
- Sümer, Beyza & Aslı Özyürek. 2016. İşitme engelli çocukların dil edinimi [Sign language acquisition by deaf children]. In C. Aydın, T. Goksun, A. Kuntay, & D. Tahiroğlu (eds.), *Aklın çocuk hali: Zihin gelişimi araştırmaları* [Research on Cognitive Development], 365-388. İstanbul: Koc University Press.
- Sümer, Beyza, Pamela M. Perniss, & Aslı Özyürek. 2017. A first study on the development of spatial viewpoint in sign language acquisition: The case of Turkish Sign Language. In F.N. Ketrez, A.C. Kuntay, Ş. Özçalışkan, & A. Özyürek (Eds.) *Social environment and cognition in language development: Studies in honor of Ayhan Aksu-Koc*, 223-240. John Benjamins.
- Sümer, Beyza, & Aslı Özyürek. 2020. No effects of modality in development of locative expressions of space in signing and speaking children. *Journal of Child Language*, 1-31.
- Taşçı, Süleyman S. 2012. *Phonological and morphological aspects of lexicalized fingerspelling in Turkish Sign Language (TİD)*. İstanbul, Turkey: Boğaziçi University MA Thesis.
- Taşçı, Süleyman S. 2013. Hand reversal and assimilation in TİD lexicalized fingerspelling. In E. Arik (Ed.), *Current directions in Turkish Sign Language research*, 71-100. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.

- Taşçı, Süleyman S. & Aslı Göksel. 2014. The morphological categorization of polymorphemic lexemes: A study based on lexicalized fingerspelled forms in TİD. *Dilbilim Araştırmaları Dergisi, Special Issue in Honor of Prof. A. Sumru Özsoy*, 165-180.
- Taşçı, Süleyman S. 2016. TİD el alfabesi'nin sözlükselleşmesi ve biçimlenişsel yapılandırılması: El değişimi ve benzeşme olguları. In E. Arık (ed.), *Ellerle konuşmak: Türk İşaret Dili araştırmaları*, 183-210. İstanbul: Koç Üniversitesi Yayınları.
- Taşçı, Süleyman S. & Aslı Göksel. 2016. Grammatical encoding of semantic categories; Turkish Sign Language native compounds. (Poster submitted to *TISLR II*, Melbourne, January 2016.)
- Taşçı, Süleyman S., & Aslı Göksel. 2018. Native compounds in TİD: A classification based on headedness. *Dilbilim Araştırmaları Dergisi* 29(1), 1-28.
- Tekin, Mustafa & Z. Serap Arıcı. 2007. Genetic epidemiology of congenital/prelingual deafness and mating type. *American Journal of Medical Genetics Part A* 143(14), 1583- 1591.
- Tove Skutnabb-Kangas. 2000. Bilingual education and sign language as the mother tongue of deaf children. In Cynthia J. Kellett Bidoli & Elana Ochse (eds.), *English in international deaf communication*. 75-94. Bern: Peter Lang.
- Turgut, Kadir & Süleyman S. Taşçı. 2011. A historical perspective on first deaf schools, education methods and deafness in Turkey. (Paper presented at the Conference of International Sign Language Users, Gazi University, Ankara, 21-23 October 2011.)
- Turkish Sign Language resource website [Türk İşaret Dili kaynak sitesi]*. Boğaziçi University. <http://www.cmpe.boun.edu.tr/tid> (last accessed December 2017)
- Turkish Sign Language dictionary [Türk İşaret Dili sözlüğü]*. 2012. Ankara: T.C. Milli Eğitim Bakanlığı Özel Eğitim ve Rehberlik Hizmetleri Genel Müdürlüğü.
- Uğraşkan, Muzaffer. 1962. Rehabilitasyon hakkında etüdlerimiz. *Ankara Sağır, Dilsiz ve Körler Derneği* 2. Ankara: Özel Matbaası.
- White, George E. 1933. Arrival and work in Merzifon, in Ernest Pye (Ed.) *Charlotte R. Willard of Merzifon, her life and times*, 35-42. New York: Fleming H. Revell Company.
- Wilkinson, E. L. 2009. *Typology of signed languages: Differentiation through kinship terminology*. Albuquerque, New Mexico: The University of New Mexico PhD Dissertation.
- Yaprak Kemaloğlu, P. 2012. *Türkiye'de Sağır sporunun toplumsal analizi* [Social analysis of Deaf sports in Turkey]. İstanbul, Turkey: Marmara University PhD dissertation.
- Yıldırım, Nuran. 1997. İstanbul'da sağır-dilsiz ve âmâların eğitimi. *İstanbul Armağanı* 3, 305-330. İstanbul: Büyükşehir Belediyesi Yayınları
- Zeshan, Ulrike. 2002. Sign Language in Turkey: The story of a hidden language. *Turkic Languages* 6 (2). 229-274.
- Zeshan, Ulrike. 2003. Aspects of Türk İşaret Dili (Turkish Sign Language). *Sign Language & Linguistics* 6. 43- 75.
- Zeshan, Ulrike. 2006. Negative and interrogative structures in Türk İşaret Dili (Turkish Sign Language). In

U. Zeshan (ed.), *Interrogative and negative constructions in sign languages*, 128-164. Nijmegen: Ishara Press.

Zwitserlood, Inge, Pamela M. Perniss & Aslı Özyürek. 2012. An empirical investigation of multiple entities in Turkish Sign Language: Considering the effects of modality? *Lingua* 122(14), 1636-1667.
doi:10.1016/j.lingua.2012.08.010

Zwitserlood, Inge, Pamela Perniss & Aslı Özyürek. 2013. Expression of multiple entities in Turkish Sign Language (TİD). In E. Arık (ed.), *Current directions in Turkish Sign Language research*, 273-302. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.

Glossary of grammatical terms

Action role shift

Also called constructed action, action role shift is a construction where the signer takes the role of another character. Under action role shift, the signer may shift his/her body toward the position associated to the character and his/her facial expressions indicate how the character feels and his/her gestures reproduce those produced by the character.

Adjective

An adjective is a lexical element that typically specifies a property and that can modify a noun (e.g. *clean*, *red* in English).

Adjunct

An adjunct is an optional constituent that is not selected by any other word present in the sentence. Rather, an adjunct is attached to some other constituent of the sentence, modifying its meaning. As such, adjunct is opposed to argument. An adjunct can be a word or a phrase (including clauses). For example, in the sentence “Ada left quickly at five because she was tired”, ‘quickly’ is an adverbial adjunct; ‘at five’ is a PP adjunct (or an adjoined prepositional phrase), and ‘because she was tired’ is an adjoined clause. Besides their category, adjuncts are also distinguished according to the constituent they attach to. For example, the sentence ‘Ada prefers to look at boys with glasses’ is ambiguous due to the constituent the PP adjunct ‘with glasses’ is attached to. It can either be attached to ‘boys’, or to some larger constituent including the verb.

Adposition

Prepositions and postpositions, together called adpositions, are a class of words expressing spatial or temporal relations or marking semantic roles. They typically combine with a noun phrase or a pronoun. A preposition comes before its nominal complement; a postposition comes after its complement. In sign languages an adposition marks the (usually spatial) relation between two items.

Adverbial

An adverbial is a constituent that is simplex or complex in form and that functions as an adverb; sometimes used interchangeably with simplex adverb.

Affirmative sentence

An affirmative or positive sentence is a declarative sentence used to express the validity or truth of a basic assertion. As such, it is opposed to a negative sentence. This dimension is often referred to in grammar as polarity.

Affixation / affix

Affixation is a word formation process by which a base (a stem or root) is extended by additional bound material; the items attached in this way are called affixes, they may come before or after a base, break up the base, or appear suprasegmentally.

Agreement

Agreement is an asymmetric relation between two or more constituents, by which one inherits the formal features of the other. For example, in the sentence 'Girls now are moving forward', the copula BE agrees with the subject 'girls' in number (plural) and person (third). This syntactic relation is morphologically expressed in English through verbal inflection, hence the form 'are'. In sign languages, agreement is often expressed through spatial modification.

Agreement verb

An agreement verb is a verb that is lexically defective (i.e. unspecified for one phonological feature) in that it requires syntactic agreement with a person or a locus to be realized.

Alignment

Alignment refers to the temporal coordination of different articulations; e.g. alignment of a non-manual marker with a string of signs, or alignment of various non-manual markers with each other.

Allomorph

Allomorphs are affixes or stems that are identical in meaning but have different phonological forms and are in complementary distribution; allomorphs are variants of the same morpheme.

Allophone

Variants of the same underlying phoneme that are either in complementary distribution or in free variation.

Anaphora

Expression that is referentially dependent on another expression previously mentioned in the context (i.e. the antecedent). In the following example, the pronoun *he* is co-referent with the antecedent *a man*: 'Mary saw *a man*. *He* was walking home.' Typical anaphoric expressions are pronouns or definite noun phrases.

Antecedent

The antecedent is the expression an anaphora is co-referent with, i.e. the anaphora refers back to the referent of the antecedent.

Argument

An argument is a constituent that completes the meaning of a predicate. Most predicates take one, two, or three arguments. For example, the verb 'to run' takes one argument (the subject, as in 'Ada runs'); the verb 'to destroy' takes two arguments (the subject and the object, as in 'the typhoon destroyed the beach'); the verb 'to send' takes three arguments (the subject, the object and the indirect object, as in 'Ada sent a present to her brother'). Arguments are often associated to verbs, but other syntactic categories can take arguments as well, or select them. For example, the noun 'destruction' can be said to select two arguments, as in 'the destruction of the beach by the typhoon', or the Adjective 'proud' can be said to select two arguments, as in 'Nico (is) proud of Ada'. Arguments must be distinguished from adjuncts, which are never selected and thus optional.

Argument structure

Argument structure refers to the syntactico-semantic frame of predicates (typically verbs, but also nouns, adjectives or prepositions) and indicates the participants in the action or state denoted by that predicate. Argument structure typically includes the number of arguments a lexical item takes (e.g., the participants in the event denoted by a verb), their syntactic category, and their semantic relation to this lexical item.

Article

An article (or determiner) is a functional element that combines with nouns and that specifies features such as number, gender, definiteness, and closeness/distance (e.g. *the*, *a*, *that* in English).

Aspect

Aspect describes the internal temporal structure of an event or situation as reflected in a sentence or verb (e.g. repeated occurrence of an event).

Assimilation

Assimilation is a phonological process whereby the form of a phoneme is influenced by properties (features) of an adjacent phoneme; if the source of assimilation precedes the target, we speak of progressive assimilation, if it follows the target, we speak of regressive assimilation.

Atelic

Atelic eventualities do not contain an end point as part of the event description.

Attitude role shift

Attitude role shift, also called constructed discourse, is a construction where the signer reports utterances or thoughts of another person (the character) and typically does so by rotating his/her body toward the position associated to the character. Attitude role shift is usually accompanied also by a change in head position and eye gaze.

Auxiliary

An auxiliary is a semantically weak verb that combines with a lexical verb and expresses grammatical features like tense, aspect, and agreement (e.g. *have* and *be* in English); the lexical verb usually appears in a fixed (e.g. infinitival or participial) form.

Back-channeling

Back-channeling is a discourse strategy by which an addressee provides feedback without interrupting the speaker's/signer's flow; back-channel signals can be manual/vocal (e.g. *hmmm*) or non-manual (e.g. head nod).

Blend

A blend is a word formation process by which two otherwise independent stems or words merge by losing some of their phonological features to form a new item with a new meaning, e.g. English *smog* is a blend of *smoke* and *fog*.

Borrowing

Borrowing refers to the integration of a lexical item or expression from one language into the lexicon of another language (e.g. German borrowing English *computer*); borrowed elements may undergo certain phonological changes.

Boundary marker

A boundary marker is a linguistic signal that marks the start or end of a (mostly syntactic or prosodic) domain; can be manual or non-manual.

Buoy

A buoy is a sign articulated by the non-dominant hand, which may be held in space while the dominant hand continues signing; a buoy may be referred to (e.g. pointed at) by the dominant hand.

Calque

A calque is an item which in its entirety, or part-by-part, is borrowed directly from the donor language; Calques are verbatim translations of simplex or polymorphemic forms and are modeled on the constructions of the donor language.

Causative

A causative is a construction that indicates that an agent causes someone or something to do or be something, or causes a change of state. Prototypically, it brings a new argument, the causer, into a clause, with the original subject becoming the object, as in 'John makes Mary cry' vs. 'Mary cries'. All languages have ways to express causativization, but they differ in the means they employ. Many have lexical causative forms, such as English 'raise' vs. 'rise'; Other languages have morphological inflections that change verbs into their causative form. Other languages, and sign languages among them, employ periphrasis with the use of an auxiliary.

Citation form

A citation form is the basic form referring to the dictionary entry of a lexeme. As lexemes are abstract objects, citation forms make it possible to refer to a lexeme.

Classifier

Generally, a classifier is a morpheme that reflects certain semantic properties of a referent; for sign languages, a classifier is a visually motivated (iconically based) lexical/grammatical category, mostly a handshape that combines with certain types of predicates.

Classifier construction

A classifier construction is a complex sign that encodes information about spatial localization and (manner of) motion and that is part of the non-core lexicon.

Classifier predicate

A classifier predicate is a complex predicate made up of a classifier and a verb.

Clause

A clause is the smallest grammatical unit that can express a complete proposition (i.e. a statement that can be either true or false). Typically, it consists of a subject and a predicate, which in turn is prototypically a verb phrase, a verb and its internal arguments.

Cliticization

Cliticization refers to a process whereby a functional element phonologically attaches to a lexical element such that a single prosodic word is created (e.g. English *can't* and French *j'aime*); the functional element is referred to as a clitic.

Coalescence

Coalescence refers to a special type of cliticization; most commonly, cliticization of an indexical sign to a preceding symmetrical two-handed sign, such that a single prosodic word is created.

Code-switching

Code-switching refers to a (usually bilingual or multi-lingual) language user's switching between two languages or registers during communicative interaction.

Coherence

Coherence is the semantic continuity of a text or discourse which is determined by semantic and conceptual relations between its parts.

Cohesion

Cohesion are grammatically realized relations in a text or discourse that are used to explicitly link different parts of discourse. Cohesive devices make it possible for the addressee to keep track of the discourse referent.

Common noun

A common noun is a noun that denotes a class or type of entity; a common noun can be a count noun (e.g. *book* in English) or a mass noun (e.g. *rice* in English).

Comparative/comparison

Comparison introduces orderings between two or more objects with respect to the degree to which they possess some property. In the prototypical case, a comparison involves two objects that are explicitly expressed ('John is taller than Mary'). However, comparison can be more implicit (in 'John is tall' John's height is evaluated with respect to a contextually determined degree of tallness). Many languages have one or more syntactic constructions specifically encoding a comparison.

Complement clause

A complement clause, or object clause (also called completive) is a subordinate argument clause carrying the syntactic function of an object, as 'that she would do it' in 'Ada promised that she would do it'.

Complementizer

A complementizer is a functional word or a particle introducing a subordinate clause, such as *that* in English as in "John knows that he is lucky." It is often abbreviated as C.

Complex movement

A complex movement is a movement composed of a change in more than one phonological parameter (e.g. simultaneous change of location and handshape).

Compounding/Compound

Compounding is a word formation process by which two otherwise independent stems or words come together to form a new item with a new meaning; the result is a compound.

Conjunction

A conjunction is a functional element that links phrases, clauses, or sentences; coordinating conjunctions (e.g. English *and*, *but*) have to be distinguished from subordinating conjunctions (e.g. English *that*, *because*).

Constituent

A constituent is a word or a group of words which function(s) as a single unit within a given syntactic structure. The constituent structure of a sentence can be identified using constituency tests. Typical constituents phrases that can be distinguished according to their category in noun phrases (NP), verb phrases (VP), Adjectival phrase (AP), Adverbial Phrase (AdvP) and the like.

Constituent negation

Constituent negation refers to a type of negation whereby a constituent smaller than the clause is negated, e.g. negation of the verb in *I didn't steal the book, I borrowed it*.

Contact (in the sense of language contact)

Language contact refers to the circumstances determined by two language communities living side-by-side that allow linguistic patterns and words from one to be used in the other.

Contact (in the sense of phonology)

Contact refers to an articulator physically touching another articulator, a body part, or the torso, or the appearance of an articulator in a location.

Context

The context of an utterance consists at least of the speaker, the addressee, the time and the place of the utterance. Broader definitions of context may also include information about the previous discourse and the communicative situation, shared background knowledge and shared world knowledge among other kinds of information.

Contralateral

Contralateral refers to a location/area on the side opposite of the active articulator.

Control verb

The term control refers to the constructions in which the understood subject of a non-finite embedded clause is determined by some expression in the main clause.

Control verbs (such as promise, order, try, ask, tell, force, yearn, refuse, etc.) obligatorily determine which of their arguments in the main clause controls the embedded clause. Some of them qualify as subject control verbs. 'Promise' is an example, as in 'Ada promised to leave', where the understood subject of 'leave' is obligatorily interpreted as the main subject. Some are object control verbs. An example is 'order', in 'Ada ordered Auguste to leave', where the understood subject of the infinitive is obligatorily interpreted as the object of the main verb, 'Auguste'. Arbitrary control occurs when the controller is understood to be anybody in general, as in 'Running is good for health'.

Conversion

Conversion (also called zero affixation) is a category-changing process, where the input and output categories are phonologically identical, i.e. where there is no overt affix that bears the information of category change (e.g. *walk* (N) and *walk* (V), *put* (present tense) and *put* (past tense) in English).

Coordination

Coordination is a non-hierarchical combination of at least two constituents belonging to the same syntactic category, such as noun phrases, verb phrases or clauses, either through conjunction or juxtaposition

Copula

A copula is a word used to relate the subject of a sentence with a non-verbal predicate, such as the word 'is' in the sentence 'Ada is nice'. It is often a verbal element, but it can also be pronominal in nature or suffixal. Many languages have one main copula, others have more than one, and some (including many sign languages) have none.

Correlative

Correlatives are conjunctions that are separated in a sentence but coordinate the constituents they introduce, which have thus the same function. Examples of correlatives in English are. 'both... and', or 'either ..or'. The same term can also be used to refer to the constituents themselves that are coordinated in a correlative structure. For example, 'Ada' and 'Maya' are two correlative noun phrases in 'Both Ada and Maya love to play'. Similarly in 'Either you call or you write a letter', the two clauses can be referred to as correlative clauses. Correlative constructions can also be found in some languages as the functional equivalent of relative clauses: 'the boy was late, that boy called' meaning 'The boy who was late called'.

Co-speech gesture

A body movement, executed by the hand(s) or another body part, that accompanies speech, often to illustrate, supplement, or accentuate the message conveyed in speech; e.g. pointing gesture, thumbs-up gesture, headshake, shrug.

Count noun

A count noun is a noun that can appear in the plural and that may combine with numerals like *three* but not with quantity expression like *much* (e.g. *book*, *horse*).

Declarative

Declaratives are the most common type of sentences in any given language. They are used to express statements, to make something known, to explain or to describe. As a sentence type, they are usually opposed to interrogatives, imperatives and exclamatives. The corresponding declarative force is specialized to provide new information. Declaratives are typically used to realize assertional speech acts.

Definiteness/Indefiniteness

Definite expressions are noun phrases that denote referents that have the property of being unique ("The book is on the table", where there is just one relevant book in the context of utterance) or the property of being familiar both to the signer and to the addressee. Indefinite noun phrases denote referents that are not known to the signer but can be known to the addressee.

Deixis

Deixis is a strategy to refer to objects present in the actual context of utterance. Deictic expressions can refer to concrete entities ('I', 'you', 'that (one)') as well to the spatiotemporal coordinates of the context of utterance ('here', 'now', 'yesterday').

Demonstrative

A demonstrative is deictic word (a type of determiner) that specifies which entity a speaker refers to and distinguishes this entity from others; they may e.g. be used for spatial deixis (e.g. English *this* vs. *that*).

Deontic modality

Deontic modality refers to the speaker's attitude towards the possibility or necessity of an event, embodied in the notions obligation, permission, prohibition, wishing, desiring, etc.

Derivation

Derivation is a lexical word formation process that creates a new lexeme, mostly by combining a stem and an affix.

Derivational affixation

Derivational affixation is a type of affixation whose function is to create a lexeme associated with an already existing lexeme (e.g. *-er* in *swimm-er*); derivational affixation contrast with inflectional affixation which exists solely for grammatical purposes (e.g. agreement morphology).

Determiner

A determiner (or article) is a functional element that combines with nouns and that specifies features such as number, gender, definiteness, and closeness/distance (e.g. *the, a, that* in English).

Discourse

A discourse is formed by a sequence of logically united utterances, which are also connected to the context.

Discourse marker

Discourse markers are cohesive devices between two utterances (such as connectors or discourse particles) that establish coherence

Discourse structure

Discourse structure describes the relations between grammatical elements and their effects beyond the sentence level.

Ditransitive

A ditransitive verb is a verb which takes a subject and two objects corresponding to a theme and a recipient. These objects may be called direct and indirect, or primary and secondary. An example of a ditransitive verb in English is 'send', as in 'Ada sent a letter to her friend'.

Domain marker

A domain marker is a phonological signal that spans over an entire prosodic or syntactic domain; can be manual or non-manual.

Dominance reversal

In a dominance reversal, a signer uses his non-dominant instead of his dominant hand for signing; a dominance reversal may be phonologically (e.g. articulatory constraints) or pragmatically motivated.

Dominant hand

The dominant hand is the preferred hand of a signer, i.e. the hand s/he would normally use to articulate one-handed signs.

Doubling (syntactic)

Syntactic doubling refers to the repetition of a morpho-syntactic constituent within a sentence; e.g. doubling of a wh-sign.

Dual

One of the values of the feature number that indicates 'two' of an entity.

Ellipsis

Ellipsis refers to the omission from a clause of one or more words that are nevertheless understood in the context of the remaining elements. There are numerous distinct types of ellipsis, according to the nature of the omitted constituent and to the syntactic context where it occurs. Some of the most common types are briefly described below.

Gapping occurs in coordinate structures: material that is present in the first conjunct can be omitted, i.e. 'gapped', from the second conjunct. The gapped material usually contains a finite verb, as in 'Nico plays the piano and Phil the trumpet'.

VP ellipsis omits a non-finite VP. The ellipsis site must be introduced by an auxiliary verb or by the particle *to*, as in 'Phil played today, and Ada will tomorrow'.

Sluicing elides everything from a direct or indirect question except the question word, as in 'Ada will call someone, but I don't know who'.

Embedded clause

An embedded, or dependent, clause is a clause that is dependent from another clause in a given sentence. It can be an argument clause or an adjunct (or adverbial) clause.

Embodiment

In the context of role shift, embodiment is understood as a phenomenon whereby the actual signer (i.e. the narrator) of a text or discourse uses his/her body as one of the interlocutors or agents in the narrated discourse.

Entity classifier

An entity classifier (also called whole entity or semantic classifier) is a classifier (handshape) which reflects shape properties of the subject of an intransitive clause (e.g. a car moving).

Epistemic modality

Epistemic modality refers to the speaker's belief or knowledge about an event, embodied in the notions of knowing, believing, assuming, etc.

Ergativity

Ergativity refers to a system of marking grammatical relations in which intransitive subjects pattern together with transitive objects, and differently from transitive subjects. Ergativity may be manifest, for example, in terms of morphological case marking on nominals, or patterns of agreement on the predicate. An example of an ergative language is Basque.

Event structure

Event structure or situation type refers the internal temporal structure of eventualities and it is also known under other denominations like Aktionsart, actionality or inner aspect.

Evidentiality

Evidentiality is a grammatical category used to mark the source of information. Evidential markers typically distinguish between the following sources of information: (i) visual, (ii) sensory, (iii) inference, (iv) assumption, (v) reported and (vi) quotative.

Exclamative

An exclamative is a grammatical form specialized to convey surprise, denoting that all or some part of the utterance is unexpected, as in 'What a beautiful day!'. It is one of the four well-recognized sentence types, together with declaratives, interrogatives and imperatives. The corresponding exclamative force is specialized to convey a surprise. Declaratives are typically used to realize assertional speech acts. Unlike the other assertions, questions or commands, exclamations are expressive speech acts that are not used to ask the speaker to do something.

Exhortative

An exhortative construction is a construction used to express an order or an invitation including other participants other than the addressee, and typically the first and third person ('Let us go!').

Existential clause

An existential clause is a clause that refers to the existence or presence of something. Examples in English include the sentences 'There is bread in the kitchen' and 'There are three pencils on the desk'. Many languages form existential clauses without any particular marker, simply using forms of the normal copula, the subject being the noun (phrase) referring to the thing whose existence is asserted.

Expressive meaning

Expressive meaning is the meaning that is conveyed but not actually said, i.e. expressive meaning is typically due to some kind of pragmatic enrichment. Expressive meaning does not contribute to the truth-conditional meaning of an utterance.

Extended exponence

Extended exponence is a concept related to morphology whereby two markers occurring in different places in a word or phrase belong to the same morpheme; i.e. two separate units realizing a single function.

Extraction

Extraction refers to any syntactic operation responsible for the displacement of a word or a constituent from the position within a larger constituent where it is interpreted. For example, we can say that 'who' is extracted from the object position of the embedded clause in 'Who do you think Ada will call?'.

Extraposition

Extraposition is a mechanism of syntax altering word order in such a manner that a relatively "heavy" constituent appears in a position other than its canonical position, usually to the right. The relative clause 'which was addressed to Ada' is extraposed in the following sentence: 'A letter arrived yesterday which was addressed to Ada'.

Fingerspelling

Fingerspelling refers to the use of handshapes from the manual alphabet to represent (part of) a word, often because no sign exists for the concept; in fingerspelled sequences certain reduction and assimilation phenomena may occur.

Finite clause

A finite clause is a clause with a finite verb.

Floating quantifier

A floating quantifier is a quantifier that is not immediately adjacent to the NP it quantifies. French ‘tous’ (all) in ‘les étudiants ont tous lu ce livre’ (the students have all read this book) vs ‘Tous les étudiants ont lu ce livre’ (all the students have read this book) is an example.

Focus

A focus is an item that is presented as a new piece of information in the context of utterance. Entire sentences can be a focus, for example when they are used as opening lines in a conversation. In other cases, only a part of the sentence is new information, for example the constituent *War and Peace* is a focus in the following question-answer pair: “Which book did you read? I read War and Peace”. Focus can be contrastive or emphatic, as the constituent *Anna Karenina* in the sentence “I am not reading War and Peace, I am reading ANNA KARENINA”.

Free relative

A free relative clause is a relative clause not containing any (overt) antecedent, or head, as ‘what you will read’ in ‘I will read what you will read’. In many languages, free relatives are introduced by a wh-element, as ‘what’ in the English example.

Functional element/category

A syntactic category that has grammatical meaning rather than lexical or encyclopedic meaning and that fulfills a syntactic function (e.g. negation, tense, number).

Gapping

Gapping is a type of ellipsis occurring in coordinate structures: some material that is present in one conjunct is omitted, i.e. ‘gapped’, from the other conjunct. The gapped material usually contains a finite verb, as in ‘Nico plays the piano and Phil the trumpet’.

Gender

Gender is a grammatical (morphosyntactic) category that classifies nouns in terms of their (real or assumed) semantically shared properties in some languages; in others, the classification can be somewhat arbitrary.

Gloss

Explanation/rendering of a morpheme or word in a text by means of providing a literal translation in another language (usually English).

Grammatical function

Grammatical function refers to the syntactic role of a constituent in a given syntactic structure, such as subject or object. It is independent from the category of that given constituent and rather depends on its position in the structure.

Grammatical word

A grammatical word is a free form composed of a root and morphosyntactic features (inflection), which enables it to be used in a syntactic context; the morphosyntactic features can have overt expressions, or they can be phonologically null.

Grammaticality judgment

A grammaticality judgment is a metalinguistic assessment of the acceptability of a given utterance by a native speaker. Grammaticality judgments are typically used in linguistic research to gather negative evidence about what the grammar *cannot* generate, alongside with what is actually produced.

Grammaticalization

Grammaticalization refers to a process by which an independent lexical form diachronically develops into a free or bound functional (grammatical) element; e.g. in English development of future tense marker from the verb *go*.

Head of a word

The head of a word is the element which provides the label for the categorial status of a word or compound, thus determining whether it is a noun, verb etc. The concept of head presupposes asymmetrical (head-complement or head-modifier) structures.

Headedness

Headedness is the property that distinguishes symmetrical from asymmetrical constructions in morphology, used usually in compounding. Symmetrical constructions are usually considered headless, while asymmetrical constructions have a syntactic head (and a complement or modifier).

Homonym

Two or more words that are phonologically identical but have different meanings, causing lexical ambiguity.

Iconicity

Iconicity implies a non-arbitrary (motivated) relation between form and meaning, i.e. a phonological form reflects in some way the assumed visual (or auditory) characteristics of the entity or event it refers to; the form of the category/construction is then iconic.

Illocutionary force

The illocutionary force of an utterance depends on the speaker's intention in producing that utterance and the corresponding syntactic structures he/she uses to reach this goal. Declarative, interrogative, imperative and exclamative sentences are linguistic structures that are typically used to perform the illocutionary acts of making an assertion, eliciting information from the addressee, eliciting a behavior from the addressee and conveying a surprise.

Imperative

An imperative is a grammatical form that is specialized to elicit a (possibly non-linguistic) behavior from the addressee, as in 'Go away!'. It is one of the four well-recognized sentence types, along with declaratives, interrogatives and exclamatives. The corresponding imperative force is specialized to elicit a specific behavior of the addressee. Imperatives are typically used to realize commands or requests.

Impersonal verb

An impersonal verb is a verb whose argument structure does not include an external argument. For example, 'seem' in 'It seems that Ada is growing' does not assign any interpretation to 'it', which is a pure place holder, or expletive subject.

Implicature

Implicatures are context-dependent pragmatic aspects of the meaning of an utterance that do not contribute to the truth-conditional meaning of an utterance (what is said) but to the pragmatic meaning of this utterance (what is meant). Conversational implicatures are calculated on the basis of conversational maxims.

Incorporation

A complex verb formed by the syntactic combination of a verb with a noun (noun incorporation) or another verb; in sign languages often used for the combination of a verb and a classifier or of a noun and a numeral (numeral incorporation).

Indefinite pronoun

An indefinite pronoun is a pronoun that stands for an entity without specifying any grammatical (morphosyntactic) features such as number (e.g. *someone* in English).

Indirect question

An indirect question is a question, or interrogative, sitting in an embedded position, as ‘when she should leave’ in ‘Ada asked me when she should leave’. An indirect question is typically embedded under a declarative.

Inflection

Inflection is a type of word formation which is to some extent dependent on a syntactic structure and involves morphosyntactic features such as e.g. person, number, and tense.

Information structure

The term information structure refers to the way in which information is packaged within a sentence. For example, the information conveyed by an utterance can be divided in old vs. new information and within a sentence it is possible to identify a constituent that is a topic and a constituent that is focus.

Initialization

Initialization is a sign language-specific type of word formation (compounding) whereby the handshape of a lexeme is the handshape of the manual alphabet representing the first letter of the corresponding word in the spoken language (e.g. the sign lemonade with a C-handshape).

Interrogative

The term interrogative refers to a grammatical form that is specialized to elicit information from the addressee, as in ‘What have you done?’, or to report a doubt or a similar attitude towards a given propositional content, as in ‘I wonder what you did’. The corresponding interrogative force is specialized to elicit information from the addressee. Interrogatives are typically used to realize a question.

Intonation

Intonation refers to the totality of the prosodic phenomena that accompany the segmental part of strings (i.e. stress, pitch, and pause), marked mostly through non-manual articulations (such as facial expressions) in sign languages.

Intransitive verb

An intransitive verb is a verb that only takes one argument, as ‘telephone’ and ‘arrive’. Intransitive verbs can be distinguished between unaccusatives, that only take an internal argument, such as ‘arrive’, and unergatives, whose only argument is the external argument, such as ‘telephone’.

Ipsilateral

Ipsilateral refers to a location/area on the side of the active articulator.

Irreversible predicate

An irreversible predicate is a predicate that selects for two arguments associated with different semantic features, such as animacy. For example, typically 'eat' is an irreversible predicate, because its external argument is animate and its internal argument is inanimate. Only 'Ada eats a salad' is a meaningful sentence, while the reverse, 'A salad eats Ada' is semantically odd. Irreversible predicates are opposed to reversible predicates.

Isomorphic

The term isomorphic refers to the equivalence between the values of two sets of entities, rules etc.; e.g. in isomorphic use of space, signs are produced in a spatial configuration that corresponds to (i.e. is isomorphic with) a real-world configuration.

Juxtaposition

Juxtaposition is a kind of coordination not involving any overt conjunction, such as *and*, *or*, *but* or the like. Two constituents that are juxtaposed usually belong to the same syntactic category and perform the same grammatical function.

Layering/layer

In sign language linguistics, layering refers to the simultaneous (i.e. layered) use of various manual and non-manual articulators, e.g. a string of signs accompanied by a body lean, a head movement, and a specific eyebrow position.

Lexeme

A lexeme is a (semi-)abstract unit of meaning which corresponds to the basic forms in the lexicon; the actual realization of these units in language use are called 'word forms' (or sometimes simply 'words').

Lexical item

A lexical item is any item that is part of the vocabulary of a particular language, and that has to be learned in order for the language to be used.

Lexicalization

Lexicalization refers to the adoption of a particular form into the lexicon of a language; the form can be a completely novel form, or might be based on previously existing items.

Lexicon

The lexicon is the mental repository of all the vocabulary items of a language.

Loan sign

A loan sign is a sign that is of foreign origin, influenced by the spoken language or taken from another sign language.

Local lexicalization

Reduction of a fingerspelled sequence that is repeatedly used within a discourse; the phonological changes (e.g. dropping of letters, creation of movement contour) are characteristic of lexicalization.

Locus

A locus is a point in space used for grammatical purposes (e.g. pronominalization, agreement); it either is the actual location of a present discourse referent or an arbitrary location established by means of pointing or some other strategy.

Main clause

The main clause of a sentence, also called the independent clause, is a clause that is syntactically and semantically autonomous. It is thus opposed to the subordinate clause, which is syntactically and semantically dependent on the main clause.

Mass noun

A mass noun is a noun that does not usually appear in the plural and that cannot combine with numerals like *three*; however, it may combine with quantity expression like *much* (e.g. *rice*, *milk*).

Measure phrase

Measure phrases are constructions containing a noun referring to a measure of time, capacity, weight, length, temperature, currency. For example 'five months' in 'I will leave in five months', or '4 kilos' in 'I bought four kilos of strawberries'.

Metaphor

Metaphor is a general cognitive mechanism, which is important for the constitution of meaning of many expressions in everyday language. In a metaphor, two different concepts can be mapped on each other and one (typically abstract) concept is being understood through the other (typically more concrete) concept.

Metonymy

In a metonymy, one entity stands for another related entity such as a part (face) for a whole (person), a writer for his writing, a place (Paris) for an institution (French government).

Minimal pair

Two lexemes that differ from each other only in terms of a single distinctive feature, a single phoneme in spoken languages (e.g. *bat* and *mat* in English) or a single parameter in sign languages.

Modal particle

A modal particle is a particle that expresses (logical/semantic) modality (e.g. *doch*, *ja*, etc., in German).

Modal verb

A modal verb is a verb – mostly an auxiliary – that expresses (logical/semantic) modality (e.g. the verbs *can*, *must*, etc., in English).

Modality

A functional feature that indicates the speaker's level of commitment to the actuality of an event, or its desirability, necessity, possibility, etc.

Modality differences

Differences between signed and spoken languages that are due to or related to the difference in communication channel (visual-gestural vs. oral-auditive).

Morpheme

A morpheme is the smallest linguistic unit that bears meaning; it can be free (i.e. standing on its own) or bound (i.e. morphologically dependent on a stem/base and unable to be used on its own).

Morphosyntactic feature

Morphosyntactic features (also called grammatical features) are the categories of declension and conjugation (e.g. number, tense, etc.) which carry grammatical information and enable a word to be used in a particular syntactic context.

Mouth gesture

A mouth gesture is a configuration of the mouth that may accompany a sign or signs and that is not related to a word of the surrounding spoken language.

Mouthing

A mouthing is the (mostly silent) articulation of (a part of) a word from the surrounding spoken language that is either related to the sign it accompanies or specifies its meaning; occasionally, a mouthing may spread over a string of signs.

Nativization

Nativization implies the adoption of a foreign word into the native lexicon such that it conforms fully to the native phonology.

Negation

Negation is a semantic notion which is encoded by dedicated morphemes. Negation systematically changes the meaning of expressions by introducing various kinds of oppositions. Negating a proposition has the effect of reversing its truth value, i.e. of the two clauses *Tim is at home* and *Tim is not at home*, only one can be true. By contrast, constituent negation only affects the constituent in the scope of negation

Negative suppletion

Negative suppletion refers to a process whereby a negative morpheme is phonologically different from its affirmative form.

Neologism

A word (sign) or phrase that is newly formed, usually for naming new objects or states of affairs.

Neutral word order

Every language has a neutral word order, an ordering of main constituents that is pragmatically neutral and syntactically unmarked. Typically, the neutral word order for a given language is established following the following criteria: it corresponds to the ordering of constituents in declarative main clauses; both the subject and the object are nominal; it is pragmatically neutral; no element is emphatic or topicalized.

Non-concatenative morphology

The part of morphology that is about non-affixal word formation processes (such as stem modifications or templatic morphology).

Non-dominant hand

The non-dominant hand is the non-preferred hand of a signer, i.e. the hand s/he would normally only use in the articulation of two-handed signs.

Non-finite clause

A non-finite clause is a dependent clause whose verb is non-finite. Many languages can form non-finite clauses with infinitives, participles and gerunds. Like any embedded clause, a non-finite clause depends on another clause in the sentence.

Non-manual (marker)

A non-manual marker is a lexical or information-bearing unit which is expressed by articulators other than the hands; non-manual markers can have phonological, morphological, syntactic, and prosodic functions.

Non-native lexicon

The non-native lexicon is the repository (mental dictionary) of the forms that are borrowed from other languages and, in the case of sign languages, from co-speech gesture.

Number

An inflectional feature (functional category) that indicates whether the an expression refers to a single entity or to more than one entities. The most common values of the category number are singular and plural, but intermediate values such as dual and paucal also exist.

Numeral

The term ‘numeral’ indicates an item specifying the number of the entities referred to by a noun. Numerals can be classified into three main categories: cardinals (which answer the question ‘how many?’), ordinals (which answer the question ‘which in order?’), and distributive numerals (which answer the question ‘how many each?’).

Numeral incorporation

Under numeral incorporation, a polymorphic form (a compound) is created by simultaneous the combination of a numeral and a syntactically adjacent noun.

Parameter

Parameters are the phonological components (building blocks) of a sign: handshape, orientation, location, movement, and non-manuals.

Particle

The term particle is typically used for items that cannot be inflected (e.g. conjunctions), but it is also applied to formally dependent items (e.g. clitics) and functionally dependent items (e.g. adpositions and auxiliaries).

Parts of speech

The lexical and functional categories that are the building blocks of syntax: verb, noun, adverb, adjective, conjunction, etc. (see also *syntactic category*).

Passive

In a passive construction the patient (or theme) argument of a transitive or a ditransitive verb is in the subject position, the agent argument is absent or expressed optionally, and the verb or the verb phrase is marked in a special way.

Personal pronoun

Personal pronouns are pronouns that are associated primarily with a particular grammatical person – first person (as *I*), second person (as *you*), or third person (as *he*, *she*, *it*). Personal pronouns may also take different forms depending on number (usually singular or plural), natural gender, case, and formality.

Path movement

Path movement refers to a movement of the whole hand, be it in neutral signing space or on the signer’s body.

Perspective

Perspective refers to the viewpoint from which an event is described. The event can be described from an external viewpoint (observer or narrator perspective) or from an internal viewpoint (character perspective).

Plain verb

A sign language verb that cannot be spatially modified to agree with (indicate) one or more of its arguments; plain verbs contrast with agreement verbs and a spatial verbs.

Plural

One of the values of the category number, indicating that there is more than one of an entity.

Polar interrogative

Polar interrogatives are sometimes called yes/no interrogatives because they ask whether a certain state of affairs holds or not, so they are naturally answered by 'yes' or 'no'. A direct polar interrogative in English is 'Are you sick?' while an indirect polar interrogative in English is the embedded clause in 'I wonder whether you are sick'.

Politeness

The linguistic expression of the intention of a speaker to save the face of the addressee (or some other person) in communicative interaction. To express his/her intention, the speaker uses various linguistic strategies.

Possession

Possession can be viewed as the realizations of a – typical asymmetric - association or relationship between two referents. Possession comprises kinship relations, whole-part relations, ownership relations and more general associations between possessor and possessum.

Possessive

A possessive construction is typically a noun phrase expressing a possession. It is usually articulated into the *possessor* (someone who possesses something) and the *possessed* (often referred to as *possessum* or *possessee* as well).

Postposition

See adposition

Predicate

In traditional grammaticography, a predicate combines with a subject to form a sentence, and ascribes a property to the subject referent (e.g. 'Socrates' is the subject in the sentence 'Socrates is mortal' and 'is mortal' is the predicate). Predicates combine with a certain number of dependents or participants in order to express a complete predication to refer to a particular event or situation.

Preposition

See adposition

Presupposition

A presupposition of an utterance is some additional information that the speaker or signer assumes (or acts as if he/she assumes) in order for the utterance to be meaningful in the current context. In the sentence 'Peter stopped smoking', the use of the verb *stop* presupposes that Peter used to smoke.

Pronoun

A syntactic category that takes the place of a noun phrase (e.g. English *I, him, mine*, etc.)

Personal pronouns are pronouns that are associated primarily with a particular grammatical person – first person (as *I*), second person (as *you*), or third person (as *he, she, it*). Personal pronouns may also take different forms depending on number (usually singular or plural), natural gender, case, and formality. Semantically, pronouns are used as cohesive devices to establish co-reference between the referent of the pronoun and the referent of its antecedent.

Proper noun

A subgroup of the syntactic category noun; proper nouns denote individuals (e.g. persons: *Noam Chomsky*, places: *Europe*).

Prosodic word

A prosodic unit that consists of at least one syllable and that may or may not be a lexical word; cliticization or compounding may yield a prosodic word.

Prosody

Elements of speech or signing that determine how we say what we say, e.g. the pauses, the prominent parts, the rhythmic chunks, tones, etc.

Purpose clause

Purpose clauses are subordinate clauses expressing the purpose of the event expressed by the main clause, as in ‘We stopped driving to work in order to save money’.

Quantifier

A syntactic category that indicates quantity (excluding numerals), e.g. *some, many, never*. Semantically, quantifiers are operators that quantify over a set of individuals, with different interpretations depending on the meaning of the quantifier.

Raising verb

Raising constructions involve the movement of an argument from an embedded or subordinate clause to a matrix or main clause; in other words, a raising predicate/verb appears with a syntactic argument that is not its semantic argument, but is rather the semantic argument of an embedded predicate. An example of raising verb in English is ‘seem’, as in ‘Ada seems to be happy’.

Reason clause

Reason clauses are subordinate clauses expressing a reason for the event expressed by the main clause, as in ‘I called you because I missed you’.

Reduplication

Under reduplication, a morphological process is realized by repeating (part of) a stem.

Reference

Reference is the symbolic relationship between a linguistic expression and a concrete or abstract entity that it represents. The reference of an expression is the set of entities that the expression denotes.

Reference tracking

Reference tracking has to do with specifying the referents’ identity in a text or discourse, i.e. with signaling which discourse referent we are talking about. Languages use various morphosyntactic devices such as pronouns or verbal agreement and pragmatic principles such as accessibility and salience to specify a referent in a discourse context.

Reflexive

A construction where the agent and another thematic role bearing argument refer to the same entity (e.g. *He washes himself*); a reflexive pronoun is a pronoun that refers to the agent (e.g. *himself*).

Register

The term register describes all kinds of linguistic variation that depends on the communicative situation or the specific purpose of communication.

Resumptive

A resumptive pronoun is a pronoun that refers back to a previously realized item within the same syntactic structure. Resumptive pronouns are often found in relative clauses, where they refer back to the relative pronoun, as in ‘This is the toy that Ada thinks that we should definitely buy it’. The use of resumptive pronouns is marginal in standard English, but completely acceptable in colloquial varieties and in many languages.

Reversible predicate

A reversible predicate is a predicate that selects for two arguments that are not necessarily associated with different semantic features such as animacy. An example of a reversible predicate is ‘kiss’, because both its external argument and its internal argument are indistinct with respect to animacy. Both ‘Ada kissed Nico’, and ‘Nico kissed Ada’ are thus meaningful.

Role shift

A construction where a signer assumes the characteristics of another person/animal (the character) and linguistically marks his/her utterance accordingly, commonly by rotating his/her body towards the position in space associated to the character (and by other non-manual markers); role shift is typically used in narration to report someone else’s utterance (attitude role shift, also called constructed discourse) or action (action role shift, also called constructed action).

Root

A root is the part of a word that carries the main conceptual meaning expressed by that word and that cannot be segmented any further.

Scope

Scope refers to the domain over which a certain feature – be it semantic or phonological – has an effect; e.g. negation can have semantic scope over part of a sentence or the whole sentence (sentential scope), and a non-manual marker like headshake can have scope (i.e. can extend) over part of a sentence or the whole sentence.

Secondary movement

Movements of the hand that are not path movements; articulator-internal movements: handshape changes, orientation changes, and hand-internal movements like finger wiggling.

Secondary predication

A secondary predicate is an expression that attributes a property to a nominal phrase (that can be the subject or another argument of the main verb) but it is not the main predicate of the clause. In ‘The boys arrived home exhausted’, for example, the underlined element expresses a secondary predication on the main subject.

Sentence

A sentence is a unit in which words are grammatically linked to make a statement or to describe something (typically via a declarative sentence), to express a command (typically via an imperative sentence), to elicit information from an addressee (typically via an interrogative sentence) or to convey surprise (typically via an exclamative sentence).

The typical sentence contains at least a predicative nucleus consisting of a subject and of a predicate (for example, in “John is smart” the property of being smart is predicated of John and in “Mary thinks that John is smart” the property of thinking that John is smart is predicated of Mary). However, there can be elliptical sentences with a minimal structure.

Serial verb construction

The serial verb construction, also known as (verb) serialization or verb stacking, is a syntactic phenomenon by which two or more verbs or verb phrases are put together in a single clause. Serial verb constructions are often described as coding a single event.

Shared sign language

A sign language that emerged in a village community, due to an increased likelihood of deafness; often a considerable proportion of the hearing population also knows the sign language (also known as village sign language or rural sign language).

Signing space

Space in front of the signer that plays a role at different linguistic levels: phonology (location specification of lexical signs), morphology (e.g. agreement), semantics (e.g. topographic descriptions), pragmatics (e.g. reference tracking, contrast).

Simple movement

A simple movement is a movement that consists of a change in only one phonological parameter (e.g. location or orientation).

Simultaneity

The combined expression of two (or more) signs – be they manually or non-manually articulated – at the same time (by the same person).

Size-and-Shape-Specifier (SASS)

A Size-and-Shape-Specifier is a classifier(-like) item that expresses the size and shape of an entity, usually by outlining its boundaries.

Sluicing

Sluicing is an ellipsis phenomenon which elides everything from a direct or indirect question except the question word, as in ‘Ada will call someone, but I don’t know who’.

Small clause

A small clause is a construction that has the semantics of a clause, with its typical subject-predicate divide, but it lacks either a verb or the markers of (verbal) inflection typically associated with finite clauses. An example is ‘Ada smarter’ in ‘I consider Adasarter’.

Spatial agreement

Sign languages have the option of exploiting space for agreement: the sign encoding the lexical verb is modified to include agreement with the locus in space associated with the argument(s) of the verb. Typically, the orientation and the direction of movement is modified and oriented towards the point in space associated with the external argument, the internal argument or both. Not all verbs agree in space.

Spatial verb

A verb that can be spatially modified to indicate the locative source and/or locative goal of an event, e.g. WALK (from a to b), PUT-DOWN.

Specificity

Indefinite noun phrases can be specific and non-specific. An indefinite is specific when the signer, but not the addressee, knows the referent of the noun phrase. An indefinite is non-specific indefinite when neither the signer nor the addressee know its referent.

Speech act

A speech act is a linguistic act that is performed by a speaker while uttering a sentence. Speech acts can either be explicit performative or implicit performative and they are typically performed to make an assertion, a question, a command or to convey surprise.

Spreading domain

A spreading domain is a prosodic domain over which a manual or non-manual articulation is extended.

Stem

A stem (also called a base) is the morphological unit to which inflection and derivation applies.

Stem modification

A stem modification (also called stem-internal change or base modification) is a word formation process which affects the phonological form of the stem (e.g. English *sing* – *sang* – *sung*); stem modification may combine with affixation.

Subordination

Subordination is a principle of hierarchical organization of linguistic constituents. More precisely, the constituent A is said to be subordinate to the constituent B if A depends on B.

Subordination conjunction

See complementizer.

Suppletion

Suppletion refers to a word form which is associated with another form but has a completely or partially different phonological form, also called base allomorphy (e.g. *go* – *went* and *bad* – *worse* in English).

Suprasegmental features

Phonological or prosodic features that associate with the segmental layer of a word/sign; e.g. tone in spoken languages, non-manual features in sign languages; suprasegmental features constitute a layer on top of the segmental layer.

Syllable

A prosodic unit that is composed of a sequence of segments and that is the domain for stress assignment; in spoken languages, a syllable consists minimally of a vowel, in sign languages minimally of a movement.

Syntactic category

Building blocks of syntax; e.g. lexical categories such as noun, verb, etc., functional categories such as tense, number, etc., and phrasal categories such as Noun Phrase, Tense Phrase, etc.)

Telic

Telic eventualities are conceptualized as involving a change of state that amounts to the end point of the event described by the predicate.

Temporal clause

A temporal clause is a type of adverbial clause expressing a temporal relationship between two clauses. The time of the event in the adverbial clause can be before, after or simultaneous with the time of the event in the main clause.

Tense

Tense is a morphosyntactic category that refers to the reference time of an event with respect to utterance time. The reference time can either be identical to the utterance time, precede the utterance time (past) or be located after the utterance time (future).

Thematic role

Thematic roles encode the general semantic interpretation of an argument as a specific participant in an event/action described by the predicate. Typical thematic roles are agent, stimulus, experiencer, patient, theme, benefactive, recipient or instrument.

Topic

If the content provided by the sentence can be divided in old information and new information, a topic is the constituent that the rest of the sentence talks about. A topic can be a constituent familiar from the previous sentence but it can be a new argument of conversation. The latter case involves so-called topic shift and is a way to switch to another topic in discourse.

Transitional movement

A movement that is phonetically required to move the hand from the end point of one sign to the beginning point of the next sign, i.e. a movement that is not part of the lexical specification of either of the two adjacent signs.

Transitive

Refers to argument-taking properties of a verb; a transitive verb requires an internal and an external argument (e.g. *visit*, *love*).

Turn-taking

Turn-taking refers to a change in the role of discourse participants: from addressee to active speaker/signer, and vice versa; turn-taking signals are used to initiate turn-taking.

Unaccusative

An intransitive verb whose only argument is assigned the thematic role patient or theme instead of agent (e.g. *melt*, *fall*).

Unergative

An intransitive verb whose only argument is assigned the thematic role agent (e.g. *run*, *swim*).

Voice

The voice of a verb refers to the relation between the event expressed by the verb and the participants identified by its arguments. Typically, when the subject is the agent or experiencer, the verb is in the active voice; when the subject is the patient or undergoer, the verb is said to be in the passive voice.

Wh-phrase

The wh-phrase is a constituent of a clause that is characterized as a question operator. A wh-phrase can be a word, as 'what' in 'What do you see ?' or an entire phrase, as 'which girl' in 'Which girl do you see?'.

Wh-question

Content interrogatives or wh-questions are used to ask the addressee to fill in some specific missing information and thus elicit a more elaborate answer than just 'yes' or 'no'. In many languages, they contain a specialized set of interrogative words or phrases that have a common morphological marking (*what, which, who, why, when* etc.). Since in English this marking is the morpheme *wh-*, these interrogative phrases are called wh-phrases, and content interrogatives are often called wh-questions.

Word

Word is a term which is sometimes used interchangeably with 'word form'; otherwise it has to be qualified by the terms 'phonological' and 'grammatical'.

Word form

A word form is the realization of a lexeme in a grammatical context; word forms carry grammatical information and are inflected for number, tense, etc.