

Lingue dei segni e sordità 1

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# A Grammar of Italian Sign Language (LIS)

edited by  
Chiara Branchini and Lara Mantovan



**Edizioni**  
Ca' Foscari

A Grammar of Italian Sign Language (LIS)

## **Lingue dei segni e sordità**

A series edited by  
Anna Cardinaletti, Sabina Fontana

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# Lingue dei segni e sordità

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Chiara Branchini, Lara Mantovan (edited by)

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## **A Grammar of Italian Sign Language (LIS)**

edited by Chiara Branchini and Lara Mantovan

# **Table of Contents**

<b>Introduction</b>	15
<b>List of abbreviations</b>	21
<b>List of conventions</b>	23
<b>PART I</b>	<b>SOCIO-HISTORICAL BACKGROUND</b>
<b>1</b>	<b>History</b> 29
<b>2</b>	<b>The sign language community</b> 41
	<b>2.1 Community characteristics</b> 41
	<b>2.2 Sign language users</b> 45
	<b>2.3 Deaf culture</b> 48
	<b>2.4 Deaf education</b> 59
<b>3</b>	<b>Status</b> 69
	<b>3.1 Current legislation</b> 69
	<b>3.2 Language policy</b> 73
	<b>3.3 Language attitudes</b> 80
<b>4</b>	<b>Linguistic study</b> 87
	<b>4.1 Grammatical description</b> 87
	<b>4.2 Lexicographic work</b> 91
	<b>4.3 Corpora</b> 93
	<b>4.4 Sociolinguistic variation</b> 95



PART II PHONOLOGY

<b>1</b>	<b>Sublexical structure</b>	107
	1.1 Active articulators	110
	1.2 Location	134
	1.3 Movement	150
	1.4 Two-handed signs	157
	1.5 Non-manuals	162
<b>2</b>	<b>Prosody</b>	169
	2.1 The lexical level	172
	2.2 Above the lexical level	176
	2.3 Intonation	182
	2.4 Interaction	183
<b>3</b>	<b>Phonological processes</b>	185
	3.1 Processes affecting the phonemic level	186
	3.2 Processes affecting the syllable	199
	3.3 Processes affecting the prosodic word	203
	3.4 Processes affecting higher prosodic units	205

PART III LEXICON

<b>1</b>	<b>The native lexicon</b>	215
	1.1 Core lexicon	216
	1.2 Non-core lexicon	223
	1.3 Interaction between core and non-core lexicon	227
<b>2</b>	<b>The non-native lexicon</b>	241
	2.1 Borrowings from other sign languages	241

	<b>2.2 Borrowings from (neighboring) spoken language</b>	243
	<b>2.3 Borrowings from conventionalised gestures</b>	258
<b>3</b>	<b>Parts of speech</b>	263
	<b>3.1 Nouns</b>	264
	<b>3.2 Verbs</b>	269
	<b>3.3 Lexical expressions of inflectional categories</b>	274
	<b>3.4 Adjectives</b>	296
	<b>3.5 Adverbials</b>	301
	<b>3.6 Determiners</b>	305
	<b>3.7 Pronouns</b>	311
	<b>3.9 Conjunctions</b>	329

#### PART IV MORPHOLOGY

<b>1</b>	<b>Compounding</b>	355
	<b>1.1 Native compounds</b>	355
	<b>1.2 Loan compounds</b>	369
	<b>1.3 Compounds with fingerspelled components</b>	370
<b>2</b>	<b>Derivation</b>	373
	<b>2.1 Manual markers of derivation</b>	374
	<b>2.2 Non-manual markers of derivation</b>	383
<b>3</b>	<b>Verbal inflection</b>	393
	<b>3.1 Agreement</b>	393
	<b>3.2 Tense</b>	407
	<b>3.3 Aspect</b>	411
	<b>3.4 Modality</b>	414
	<b>3.5 Negation</b>	417

<b>4</b>	<b>Nominal inflection</b>	423
	4.1 Number	424
	4.2 Localisation and distribution	428
<b>5</b>	<b>Classifiers</b>	431
	5.1 Predicate classifiers	432
	5.2 Size-and-Shape Specifiers (SASS)	450

PART V SYNTAX

<b>1</b>	<b>Sentence types</b>	467
	1.1 Declaratives	468
	1.2 Interrogatives	469
	1.3 Imperatives	479
	1.4 Exclamatives	488
	1.5 Negatives	492
<b>2</b>	<b>Clause structure</b>	505
	2.1 The syntactic realization of argument structure	505
	2.2 Grammatical functions	533
	2.3 Word order	538
	2.4 Null arguments	554
	2.5 Clausal ellipsis	559
	2.6 Pronoun copying	563
<b>3</b>	<b>Coordination and subordination</b>	571
	3.1 Coordination of clauses	571
	3.2 Subordination: distinctive properties	581
	3.3 Argument clauses	583
	3.4 Relative clauses	597

	<b>3.5 Adverbial clauses</b>	606
	<b>3.6 Comparative clauses</b>	640
	<b>3.7 Comparative correlatives</b>	643
<b>4</b>	<b>The noun phrase</b>	647
	<b>4.1 Determiners</b>	647
	<b>4.2 Possessive phrases</b>	655
	<b>4.3 Numerals</b>	659
	<b>4.4 Quantifiers</b>	663
	<b>4.5 Adjectives</b>	666
	<b>4.6 Multiple noun phrase constituents</b>	671
<b>5</b>	<b>The structure of adjectival phrase</b>	675
	<b>5.1 Intensifiers and other modifiers</b>	675
	<b>5.2 Arguments</b>	684
	<b>5.3 Adjuncts</b>	685
PART VI PRAGMATICS		
<b>1</b>	<b>Reference</b>	689
	<b>1.1 Deixis</b>	690
	<b>1.2 Definiteness</b>	693
	<b>1.3 Indefiniteness</b>	695
	<b>1.4 Specificity</b>	696
	<b>1.5 Impersonal reference</b>	698
<b>2</b>	<b>Reference tracking</b>	703
	<b>2.1 Pronouns</b>	703
	<b>2.2 Other means</b>	707

<b>3</b>	<b>Speech acts</b>	711
	3.1 Assertions	711
	3.2 Questions	712
	3.3 Commands and requests	712
<b>4</b>	<b>Information structure</b>	713
	4.1 Focus	714
	4.2 Topic	718
	4.3 Morphological and prosodic markers of topic and focus	721
<b>5</b>	<b>Discourse structure</b>	727
	5.1 Coherence and discourse markers	727
	5.2 Cohesion	735
	5.3 Foregrounding and backgrounding	739
<b>6</b>	<b>Reporting and role shift</b>	741
	6.1 Attitude role shift and (in)direct speech	741
	6.2 Action role shift	742
<b>7</b>	<b>Expressive meaning</b>	743
	7.1 Conversational implicature	743
	7.2 Conventional implicature	745
	7.3 Presupposition	745
<b>8</b>	<b>Signing space</b>	747
	8.1 Uses of signing space	747
	8.2 Temporal expressions	754
	8.3 Perspective	756

<b>9</b>	<b>Figurative meaning</b>	759
	9.1 Metaphor	760
	9.2 Metonymy	764
<b>10</b>	<b>Communicative interaction</b>	769
	10.1 Discourse markers	770
	10.2 Turn taking	770
	10.3 Back-channeling	776
	10.4 Repairs	777
<b>11</b>	<b>Register and politeness</b>	779
	11.1 Register	780
	11.2 Politeness	784
	<b>Appendix: List of handshapes</b>	787
	<b>Complete list of references</b>	789
	<b>Glossary of grammatical terms</b>	801
	<b>List of authors</b>	827



# Introduction

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## Presentation

*A Grammar of Italian Sign Language (LIS)* is a comprehensive presentation of the grammatical properties of LIS. It has been conceived as a tool for students, teachers, interpreters, the Deaf community, researchers, linguists and whoever is interested in the study of LIS.

It is one output of the Horizon 2020 SIGN-HUB project and it follows the *SignGram Blueprint*, the first comprehensive guide to sign language grammar description. The *SignGram Blueprint* (link <https://www.degruyter.com/view/product/467598>), is a Manual guiding language specialists and linguists writing reference grammars of sign languages. It is the output of the *SignGram* COST Action “Unraveling the grammars of European sign languages: pathways to full citizenship of deaf signers and to the protection of their linguistics heritage”, Action IS1006 (2011-2015), it has been implemented on the SIGN-HUB platform and is available in open access.

Within the SIGN-HUB project, several grammars have been created for other sign languages (Catalan SL, Dutch SL, French SL, German SL, Spanish SL, Turkish SL) in addition to this one, and the goal is that further sign languages will join the repository with new grammar descriptions.

*A Grammar of Italian Sign Language* is composed of a Table of Contents and six Parts: Part 1 is devoted to introducing the social and historical background in which the language has developed, and the remaining five Parts cover the main properties of Phonology, Lexicon, Morphology, Syntax and Pragmatics.

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Thanks to the electronic format of the grammar, text and videos are highly interconnected, therefore this is not a traditional book, but a hybrid product which is designed to fit its content, namely, the description of a visual language. After the introduction, the reader will find a list of abbreviations and conventions used for glossing the examples, including the ones that are linked to a video.

In what follows, we first explain the motivation that led us to write a digital grammar of LIS, we then provide information on the methodological choices guiding the writing as well as indications on how the grammar is composed and how it can be used. We conclude the introduction by presenting SIGN-HUB, the wider project that enabled the realisation of the LIS grammar, together with other six sign language grammars.

## Goals and coverage

Despite the great advances in sign language research registered in the last decades in Italy (and abroad), a comprehensive description of the grammar of LIS is still lacking.

The lack of a complete descriptive grammar has negative effects on different domains of the life and education of the Deaf community. A direct drawback is the lack of tools that enable sign language teachers to provide rich and detailed information on LIS to deaf students, to students learning LIS as a second language, but also to professionals training to become interpreters. This lack also affects researchers investigating LIS and its typological relations to other spoken and sign languages. Moreover, a detailed description of the LIS grammar will favour the development of diagnostic tests able to assess language impairment and language pathologies, which in turn can help therapists who need to assess language competence.

This grammar incorporates the results of previous research and adds new research on some topics, however, it is by no means a complete description of LIS. Some sections are void of content, either because there is not enough research or because the specific topic does not apply to the LIS grammar. In general, *A Grammar of LIS* contains sections and topics that have received more attention and others that need to be further investigated and for which only an initial description is available. Moreover, not all examples are linked to a video. *A Grammar of LIS* has, however, many visuals: 1,541 video examples and 712 still images.

Far from being a final product, this grammar aims at encouraging other researchers and language professionals to take up the challenge of enriching it in a collective effort, thus contributing to advances in the personal, social and political sphere of the Deaf (and hearing) community.

Access to the *Grammar* requires a general knowledge about grammar and grammatical terminology, but basic concepts are explained in a glossary and in the text as well. The *Grammar* intends to be accessible to a general reader, in particular through the extensive use of visual examples (videos and pictures), which the digital format of the grammar allows.

In this sense, as a digital and on-line product, *A Grammar of LIS* radically differs from other, more traditional grammars since it provides hundreds of visual examples.

### Methodological choices

The grammar has been written by a team of senior and junior researchers (six hearing and one deaf, five women and two men) at Ca' Foscari University of Venice and at the University of Milan-Bicocca with the essential contribution of seven Deaf consultants participating to the discussion of the data and the making of the visual examples. The writing has been accomplished over 4 years, thanks to the SIGN-HUB project.

The authors have a background in formal linguistics. While the theory has guided the description of the linguistic phenomena contained in the grammar, the language employed to describe them is not technical, as the intended users of this grammar are not (only) professionals working in the field of linguistics. However, as we mentioned, we assume familiarity with basic notions and grammatical concepts specific to sign languages.

Although the grammar has many authors, we made an effort to adopt a homogenous style. Together with the authors of the sign language grammars created within the SIGN-HUB project (see below), we agreed on some guidelines. As a general rule, we tried to write concrete, simple and easy to read descriptions. For example, we agreed on the use of the term 'sign' for the lexical unit of LIS, except for linear order facts and some prosodic and morphological descriptions where the expressions 'prosodic word', 'word order' and 'word internal' phenomena are employed. The term 'language channel' has been preferred to 'language modality' to avoid confusion with the grammatical term; 'spoken languages' has been preferred to 'oral languages'; while 'sign languages' has been used rather than 'signed languages'.

In writing *A Grammar of LIS*, we avoided to define linguistic terms, as they are present in the glossary at the end of the grammar, and to compare the phenomena observed in LIS with those present in other sign or spoken languages, as this is usually found in a Handbook, not in a grammar.

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The structure of the Table of Contents follows the *SignGram Blueprint*, output of the Cost Action *SignGram* project, a tool for guiding language specialists writing reference grammars of sign languages. The adoption of the same structure and style for the seven sign language grammars produced within the SIGN-HUB project has the welcome outcome of allowing typological comparative studies of sign language grammars and encouraging fruitful contaminations. However, not all grammars contain the same amount of grammatical description. This is due to different reasons: (i) the numerosity of the team working on the task, (ii) the absence/presence of previous studies investigating grammatical phenomena, (iii) the impossibility to collect data for a set of properties or the lack of sufficient information to write a description of a section, (iv) some sections or subsections that had been thought to hold for some sign languages might not be relevant for all of them.

*A Grammar of LIS*, as all sign language grammars produced within the SIGN-HUB project, is written in English. This was a requirement of the European Union, which funded the project. While the English version of *A Grammar of LIS* allows foreign Deaf and hearing students, teachers, interpreters and researchers to access it, it may be an obstacle for Italian users. For this reason, the authors are planning to produce an Italian version of the present grammar.

## How to use the grammar

Each Part of the grammar contains an introduction explaining the function of the linguistic component under investigation (e.g. Phonology) and the organisation of the Part. Each Part is composed of chapters organised in sections and subsections. Information on authorship, data and consultants is reported at the end of each chapter. At the end of the grammar, the reader can find: (i) an appendix containing the complete list of LIS handshapes and the labels we used to refer to them, (ii) a complete list of references to previous works in the literature on which the grammar is based, and (iii) a glossary of grammatical terms explaining basic concepts that are taken for granted in the text.

Typically, if there is a concept/term that is mentioned but not described in a section, an indication connects it to the section where it is explained. In other cases, the section where some properties (for example, lexical) of a phenomenon are discussed is linked to another section of the grammar where other properties (for instance, syntactical) of that phenomenon are addressed. This is also the reason why many topics are addressed and described in different parts of the grammar. Many of them have, in fact, clear relations to differ-

ent domains or can be described differently depending on what one aims at observing: its phonological (Phonology) or lexical description (Lexicon), its morphological modification (Morphology), its syntactic distribution in the sentence (Syntax), its use in the discourse and speech context (Pragmatics). Just to provide an example, negation can be observed from the point of view of the negative words employed to produce a negative sentence (Lexicon), their internal composition and modification (Morphology), or their distribution in the sentence (Syntax).

When relevant, information about the data gathered in order to produce the description is found at the end of the chapter. This is important because it might provide information about the particular variety represented in the description. Variation within the LIS community is well-known, but hardly studied, so this piece of information might help identify on which variation certain generalisations have been drawn.

We follow the decision taken in the *SignGram Blueprint* to devote an independent part to Pragmatics on an equal footing with other grammar components to promote the description and analysis of so far understudied domains of LIS grammar addressing, among other issues, discourse structure, figurative meaning, and communicative interaction. The reader may be surprised not to find a part on Semantics. However, the meaning component is not neglected in the grammar. It is discussed whenever the form that is associated to a specific semantic phenomenon is presented. For example, we discuss the meaning of subordinate clauses when we discuss their form, and not in a separate section.

## The SIGN-HUB project

*A Grammar of Italian Sign Language (LIS)* is an output of *The SIGN-HUB project: Preserving, researching and fostering the linguistic, historical and cultural heritage of European Deaf signing communities with an integral resource* funded by the European Union's Horizon 2020 (2016-2020).

The project involved ten teams from seven countries (France, Germany, Israel, Italy, The Netherlands, Spain and Turkey) and has been designed by a European research consortium to provide an innovative and inclusive resource hub for the linguistic, historical and cultural documentation of the Deaf communities' heritage 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 customised accessible interfaces. The project initially fed the platform with core content in the following domains, expandable in

the future to other sign languages: (i) digital grammars of seven sign languages (Catalan SL, Dutch SL, French SL, German SL, Italian SL, Spanish SL, Turkish SL), (ii) an interactive digital atlas of linguistic structures of the world's sign languages, (iii) online sign language assessment instruments 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 centralised platform to specialists and to the general public, should (i) help explore and value the identity and the cultural, historical, and linguistic assets of Deaf signing communities, (ii) advance linguistic knowledge on the natural languages of the Deaf, and (iii) impact on the diagnosis of language deficits within these minorities.

The digital platform also contains a 40-minute documentary movie *We were there - we are here* including short fragments from the 137 interviews conducted in the context of the project, as well as fragments from previously existing materials (collected in France and Israel). The elderly signers coming from 7 countries (France, Germany, Israel, Italy, Spain, Turkey and the Netherlands) share their experiences from the past concerning personal relationships, work, education and historical events.

An edited volume *Our lives - our stories: Life experiences of elderly Deaf signers* will soon be published by De Gruyter Mouton (expected publication date January 2021). The volume, authored by SIGN-HUB members based on information collected during the interviews and by researchers from outside the project, offers a glimpse on the life experiences of Deaf elderly signers and on the social, political, historical and educational events characterising the 20th century in different countries. For more information on the SIGN-HUB project, the reader can visit the international ([www.sign-hub.eu](http://www.sign-hub.eu)) or national ([www.sign-hub.it](http://www.sign-hub.it)) website of the project.

We hope that the seven sign language grammars freely accessible to the general public will contribute to a deeper understanding and knowledge of sign languages boosting the description and analysis of more sign languages of the world. We particularly hope that *A Grammar of Italian Sign Language* will inspire a more robust linguistic awareness in the Italian Deaf community, which will support the diffusion of their language and culture on the national territory. Hopefully, this will promote a deeper consciousness towards its neglected social and political rights and will contribute to the recognition of LIS.

## A Grammar of Italian Sign Language (LIS)

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# List of abbreviations

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In this grammar, the only abbreviation used to refer to a sign language name is LIS, which stands for Italian Sign Language. Below, we list the abbreviations used to refer to grammatical terms and non-manual markers.

### Grammar-related abbreviations

AUX	auxiliary
CL	classier construction
COLL	collective
CONTRA	contralateral
DEF	definite
DEM	demonstrative
DISTR	distributive
EXCL	exclusive
INCL	inclusive
INDEF	indefinite
INT	intensive marker
IPSI	ipsilateral
IX	index, pointing sign
LOC	locative
PL	plural
POSS:	possessive
SASS	Size-And-Shape

### Specifier Abbreviations of non-manual markers (based on the grammatical function)

COND	conditional
MARKER FOC	focus marker
NEG	negation marker
REL	relative clause marker
RS	role shift
TOP	topic marker
WH	wh- (content) interrogatives
Y/N	yes/no (polar) interrogatives

**Abbreviations of non-manual markers (based on the form)**

BL-B	body lean backward
BL-F	body lean forward
BL-LEFT	body lean to the left
BL-RIGHT	body lean to the right
BLOW	blowing out air
CD	chin down
CE	closed eyes
CU	chin up
EG	eye gaze
FE	furrowed eyebrows
GT	grinding teeth
HN	head nod
HS	head shake
HT-B	head tilt backward
HT-LEFT	head tilt to the left
HT-RIGHT	head tilt to the right
LP	lip protrusion
MD	mouth-corners down
MU	mouth-corners up
OM	open mouth
PC	puffed cheeks
RE	raised eyebrows
SC	sucked cheeks
SQ	squint
TL	teeth on the lower lip
TP	tongue protrusion we: wide-open eyes
WRN	wrinkled nose

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## List of conventions

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In this section, we provide the list of the notation conventions used throughout the LIS grammar. In line with common practice in the field of sign language linguistics, the signs in the examples are represented by glosses in small caps. Below the string of glosses, the English translation is reported enclosed in single quotation marks. An example is shown below.

MARIA DOG HELP  
'Maria helped the dog.'

If the example consists of one single sign and the gloss is transparent enough to infer its meaning, no English translation is provided. For illustrative purposes, each notation convention is associated with an example applicable to LIS.

*Sign reduplication:* if a sign is reduplicated, plus signs are added after the gloss.

### Example

HOUSE++  
'Houses'

*Variant forms:* if there are lexical variants of a sign, each variant is associated with a number included between brackets.

### Example

PHONE(1)

*Manual articulators:* when the dominant hand (dom) and the non-dominant hand (n-dom) are used independently, the signing production of each hand is shown in a separate line



**Example**

dom: DOG  
 n-dom: IX  
 'The dog'

*Temporal extension of signs:* the duration of a sign is represented by adding a sequence of dashes after the relevant gloss.

**Example**

dom: DOG BEAUTIFUL  
 n-dom: IX-----  
 'The cute dog'

*Non-manual markers:* non-manuals are indicated by a straight line above the gloss(es). The extension of the line reflects the extension of the corresponding non-manual marking. Above the line, the abbreviation referring to the relevant non-manual is reported.

**Example**

wh  
 WHICH

*Mouthing and mouth gestures:* the approximate transcription is provided between square brackets and the approximate orthographic representation is given between single quotes.

**Examples**

[sss]  
 NOT\_YET  
 'fresco'  
 FRESH

*Fingerspelling:* if hyphens are interpolated between letters, the gloss refers to a fingerspelled word.

**Example**

L-U-C-A

*Multi-word glosses:* if the gloss identifying a single sign requires two or more words in the glosses, an underscore is interpolated between words.

**Example**

NOT\_YET  
 'Not yet'

*Multi-morphemic signs:* if a sign is composed by more than one morpheme (e.g. compounds, incorporation, cases of cliticisation), a circumflex accent is added between morphemes.

**Example**

MONTH^TWO  
 ‘Two months’

*Compounds*: if the internal composition of a compound is not relevant to the linguistic description, a gloss identifying the whole meaning of the compound is provided (e.g. computer instead of electricity^CL(5): ‘type’). In simultaneous compounds, i.e. compounds in which each hand contributes a separate root, manual articulators are signalled by h1 and h2 included within brackets.

**Example**

CL(V): ‘fork’(h1)^CL(5): ‘dish’(h2)  
 ‘Fork’

*Suppletive forms*: if a sign is composed by more than one morpheme and the morphemes are not segmentable or identifiable, a dot is added in between.

**Example**

EXIST.NOT  
 ‘There is not’

*Pointing signs*: pointing signs are generally glossed as ix. If it functions as personal pronoun, the grammatical person is indicated by a subscript number after the gloss. If the pointing sign has another function (e.g. locative, demonstrative), this is indicated between brackets after the gloss.

**Examples**

IX<sub>1</sub>  
 ‘I’  
 ix(loc)  
 ‘There’

*Verbal agreement*: the locations relevant to verbal agreement are indicated by subscripts.

**Example**

<sub>1</sub>help<sub>2</sub>  
 ‘(I) help (you)’

*Handshape specification*: if a sign is produced with a particular handshape that needs to be specified, the handshape is indicated between brackets after the gloss.

**Example**

poss(G)<sub>1</sub>  
 ‘My’

*Location specification*: if a sign is produced in a particular location in the signing space, this is indicated as subscripts included in square brackets.

**Example**

ix(loc)<sub>[tpsl\_distal]</sub>  
'There'

*Classifier constructions:* the format representation for classifier constructions is CL(handshape): 'interpretation\_in\_English'

**Example**

CL(G): 'brush\_teeth'  
'Brushing teeth.'

*Size-And-Shape Specifiers:* the format representation for SASS is SASS(handshape): 'interpretation\_in\_English'

**Example**

SASS(flat closed L): 'little'  
'Little amount'

*Discourse stretch:* if an example reproduces a communicative exchange between signers, each contribution is signalled by a capital letter followed by a colon.

**Example**

A: YES  
B: THANK\_YOU  
'Yes.' 'Thank you.'



### 3.3 Lexical expressions of inflectional categories

In LIS, morphosyntactic features of tense, aspect, modality and agreement can be conveyed through both manual and non-manual markers [MORPHOLOGY 3] occurring with the lexical verb. The present section provides a description of the lexical manual markers available.

#### 3.3.1 Tense markers

The present section provides a description of the lexical markers employed in LIS to convey temporal information. The other strategies, namely the use of temporal adverbials and inflection of the verb sign by means of suprasegmental (non-manual) features will be explored in [LEXICON 3.5] and [MORPHOLOGY 3.2] respectively.

To anchor an event in the past or in the future, LIS signers may resort to two lexical markers: *DONE* (a) and *TO\_BE\_DONE* (b). These two signs always follow the main verb defining the event.



a. *DONE*



b. *TO\_BE\_DONE*

The sign *DONE* expresses anteriority and indicates that the event happened before the time of utterance, as exemplified below.

G-I-A-N-N-I HOUSE BUY *DONE*  
 ‘Gianni bought a house.’  
 (recreated from Zucchi 2009, 101)



The sign `DONE` can also express anteriority with respect to a reference time specified by a temporal adverbial.

YESTERDAY TIME THREE AFTERNOON G-I-A-N-N-I EAT DONE



‘Yesterday at 3, Gianni had already eaten.’

(based on Zucchi et al. 2010, 201)

The lexical marker `TO_BE_DONE` indicates that the action or event will take place after the time of utterance, as shown below, or after a reference time.

G-I-A-N-N-I HOUSE BUY TO\_BE\_DONE



‘Gianni will buy a house.’

(recreated from Zucchi 2009, 101)

The lexical tense markers are not employed when temporal information is conveyed through time adverbials and the information can be gathered by the discourse context. In the example below, the first sentence specifies that the action of going to the movies occurred yesterday and the following sentence is understood as describing a past action as well, although lacking an overt marker specifying the tense. The temporal adverbial `YESTERDAY` introducing the first sentence marks the whole event as past.

YESTERDAY G-I-A-N-N-I CINEMA GO<sub>a</sub> MARIA MEET<sub>a</sub>



‘Yesterday Gianni went to the cinema. Maria met him there.’

(based on Zucchi 2009, 102)

### 3.3.2 Aspectual markers

Aspectual markers are employed to indicate whether the event described by the predicate is complete (perfective aspect) or not (imperfective aspect).

Perfective aspect in LIS is conveyed through the articulation of the sign `DONE`, which may encode both temporal [LEXICON 3.3.1] and aspectual information. When conveying perfective aspectual information, the sign `DONE` is related to lexical verbs by following them. In the following example, the sign `DONE` indicates that the action described by the verb was completed before the time of utterance.

G-I-A-N-N-I HOUSE BUY DONE



‘Gianni has bought a house.’

(recreated from Zucchi et al. 2010, 199)

Since **DONE** acts as a marker of perfectivity, it can only occur with predicates describing events that have an ending point, thus conveying the meaning that the action has been completed and it is not an open process. For this reason, **DONE** cannot occur with stative predicates (such as **STINK**) in that they describe a permanent state rather than an event that can be marked as completed.

Moreover, **DONE** cannot occur with the sign **NOT** nor with the negative quantifiers **NOBODY**, **NOTHING** and **NEVER**. To convey the meaning that the event described by the predicate has not been completed, LIS employs a simple sentential negation, the sign **NOT** in example (a), or a negative quantifier, the sign **NOTHING** in the example (b) [SYNTAX 1.5.1].

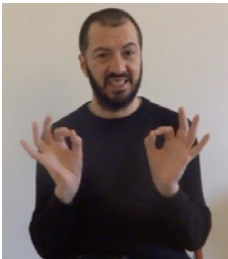
a. GIANNI HOUSE BUY NOT  
'Gianni has not bought a house.'  
(based on Zucchi et al. 2010, 214)



b. G-I-A-N-N-I HOMEWORK NOTHING  
'Gianni has not done his homework.'  
(based on Zucchi et al. 2010, 212)



The negative counterpart of the completive aspectual marker **DONE** in LIS is the negative lexical sign **NOT\_YET** (see [MORPHOLOGY 3.5.2] and [SYNTAX 1.5.1.1.1] for further details). The sign **NOT\_YET** includes the presupposition that the event is expected to occur in the future.



NOT\_YET

In the example below, the sign **NOT\_YET** indicates that Gianni has not done his homework yet, but he is going to do so in the future.

G-I-A-N-N-I HOMEWORK NOT\_YET  
'Gianni has not done his homework yet.'  
(based on Zucchi et al. 2010, 212)



It is important to notice that *DONE* can also be used as lexically contentful main verb meaning ‘finish’. In these instances, it is produced in preverbal position, as in the example below.

GIANNI CAKE *DONE* EAT

‘Gianni has finished eating the cake.’

(based on Zucchi 2009, 124)



In order to deliver the imperfective aspect, LIS employs lexical adverbials such as *EVERY\_DAY* (a), *USUALLY* (b), *ALWAYS* (c).

a. *EVERY\_DAY* CHILD CRY

‘The child cries every day.’



b. *USUALLY* IX<sub>1</sub> SLEEP CL(V): ‘go\_to\_bed’ LATE

‘I usually go to bed late.’



c. CHILD CRY *ALWAYS*

‘The child was always crying.’

(based on Bertone 2011, 222)



Crucially, imperfective aspect can also be encoded morphologically, namely through modifications of the manual verb sign, whose articulation can be lengthened and repeated to convey that the event is an ongoing process of indefinite duration [MORPHOLOGY 3.3.1.1]. For ease of explanation, we report here one example.

CHILD CRY++

‘The child was always crying.’

(based on Bertone 2011, 222)



### 3.3.3 Modality markers

Modality markers are linguistic elements encoding the attitude of the signer toward the validity of the content of a proposition, or the necessity/permission of an event to happen. To be more specific, we usually distinguish between markers of deontic modality and markers of epistemic modality. Deontic modality is the semantic category conveying obligation, necessity, recommendation, ability, permission and intention/volition. On the other hand, epistemic modality carries the judgment of the signer with respect to the truth of the utterance and to the probability of the event, based on his/her knowledge or ev-



idences. In other words, epistemic markers yield the signer’s estimation of the likelihood of an event or state. The circumstances influencing the event can either be internal or external to the participant(s).

Sign languages can select various markers to encode modality, either lexical, such as manual signs, or morphosyntactic, such as non-manual markers occurring with modal verbs or morphological modifications of the articulation of the verb.

In LIS, we find lexical markers, i.e. manual signs, dedicated to each modality. We describe them in turn. For the morphological features and syntactic distribution of modality markers, the reader is referred to [MORPHOLOGY 3.4.] and [SYNTAX 2.3.1.3.], respectively.

### 3.3.3.1 Deontic modality


LIS employs several manual signs to encode obligation, prohibition, necessity, recommendation, ability, permission, intention and volition.


Obligation can be conveyed through the signs *MUST* and *OBLIGATION*. The modal *MUST* is the unmarked marker mainly encoding participant-internal obligation. It can be marked by furrowed eyebrows (*fe*).



*MUST*

Below, we provide a couple of examples showing the use of *MUST* in context.

a. cond  
 a. PALM\_UP TOOTH HURT EXTRACT *MUST*   
 ‘Well, if your tooth hurts, it must be extracted.’


b. fe  
 b. ROOM POSS(G)<sub>1</sub> MESS. MUM IX<sub>3</sub> SAY<sub>1</sub> ARRANGE *MUST*   
 ‘My room was a mess. My mother told me: “You must tidy it.”’

Obligation imposed by participant-external conditions, such as public policies or laws, is encoded through the marker OBLIGATION, which is likely to be an example of grammaticalisation into modality marker.




OBLIGATION  
'It is obligatory/Have to'

The example below shows the use of OBLIGATION in context.

cond  
COMPETITION PARTICIPATE WANT IX<sub>2</sub> REGISTRATION OBLIGATION   
'If you want to participate in the competition, you have to sign up for it.'

It should be noted that the sign OBLIGATION can also be used as an agreement verb. This is illustrated below.


sq y/n  
IX<sub>2</sub> FILM IX<sub>a</sub> HORROR<sub>a</sub> IX<sub>a</sub> FEAR IX<sub>2</sub> IX<sub>1</sub> OBLIGATION<sub>2</sub> SEE<sub>a</sub>   
'As for horror films, do they scare you? I force you to watch them.'

Prohibition is expressed through the markers MUST<sup>^</sup>NOT and FORBIDDEN. Both can occur with the typical negative non-manual marker, i.e. headshake (hs). MUST<sup>^</sup>NOT encodes a general prohibition.



MUST<sup>^</sup>NOT  
'Must not'

The example below shows the use of MUST^NOT in context.


EARLIER IX<sub>1+2</sub> GO\_OUT HOUSE FATHER IX<sub>a</sub> SAY<sub>3a</sub> MUST^NOT <sup>hs</sup>   
 'You must not tell dad that we went out earlier.'

FORBIDDEN is used to express prohibitions regulated by public policies that cannot be avoided or changed.

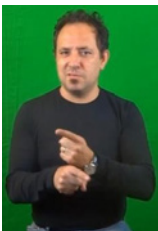


FORBIDDEN

The example below shows the use of FORBIDDEN in context.

<sup>sq</sup> <sup>re</sup> <sup>hs</sup>   
 FRIARY ENTER CLOTHES T-SHIRT SHORTS FORBIDDEN ABSOLUTELY  
 'It is absolutely forbidden to enter a friary with a t-shirt and shorts.'

Necessity is conveyed through the markers MUST and BE\_FORCED. MUST can be used to convey a necessity connected to unexpected participant-internal conditions.



MUST

In the example below, the signer expresses the necessity to go to the supermarket since he is having friends for dinner but he finds out that his fridge is empty. As the example shows, MUST is marked by head nod (hn) rather than furrowed eyebrows as is usually the case when MUST encodes obligation.

hn  
IX<sub>1</sub> SUPERMARKET GO MUST  
'I must go to the supermarket.'




On the other hand, when necessity is imposed by external conditions, and we have no possibility of avoiding it, we use BE\_FORCED. This marker is lexically specified for the non-manuals grinding teeth (gt) and head tilt backward (ht-b).



gt  
ht-b  
BE\_FORCED  
'(To) be forced to'

Below, we provide an example showing the use of BE\_FORCED in context.

gt  
ht-b

VENICE IX(loc)<sub>a</sub> BE\_COMMON IX<sub>a</sub> WATER CL(5): 'raise' IX<sub>1</sub> BE\_FORCED  
BOOT BUY 

'The high-tide is very common in Venice. I have to buy boots.'

Recommendations can be expressed by employing the sign BETTER, usually accompanied by a head tilt to the side. This is illustrated below.



ht-left  
BETTER

The use of BETTER in recommendations is illustrated below.

cond    ht-left  
 TOOTH HURT IX<sub>2</sub> BETTER TOOTH<sup>^</sup>EXTRACT GO  
 'If your tooth hurts, you should get it extracted.'



Ability is conveyed through the sign BE\_ABLE.



BE\_ABLE  
 '(To) be able to'

BE\_ABLE can either occur with the mouthing of the Italian modal *potere* 'can' inflected for the third singular person, i.e. *può* (a), or with the mouthing of the Italian word meaning 'be able', namely *capace* (b). In both instances, the sign expresses ability and can be marked by head nod. We provide two illustrative examples below.

y/n  
'può'  
 a. CAR WHEEL CHANGE BE\_ABLE IX<sub>2</sub>  
 'Can you change the car wheel?'



hn  
'capace'  
 b. IX<sub>1</sub> SURF BE\_ABLE IX<sub>1</sub>  
 'I can surf.'



The deontic negative counterparts of BE\_ABLE are BE\_ABLE<sup>^</sup>NOT and IMPOSSIBLE\_PA\_PA [SYNTAX 1.5.1.1.2]. Both occur with the typical non-manual for negation, i.e. headshake (hs).



\_\_\_\_\_ hs  
 BE\_ABLE^NOT  
 '(To) not be able to'

BE\_ABLE^NOT is used to express the inability of doing something, as exemplified below.

\_\_\_\_\_ hs  
 \_\_\_\_\_ 'capace'  
 IX<sub>1</sub> SWIM BE\_ABLE^NOT  
 'I cannot swim.'



The sign IMPOSSIBLE\_PA\_PA is glossed this way because it is obligatory accompanied by the mouth gesture [pa pa].



\_\_\_\_\_ hs  
 \_\_\_\_\_ [pa pa]  
 IMPOSSIBLE\_PA\_PA  
 '(To) not be able to'

This sign conveys the inability of doing something despite having tried hard to succeed in it. In other words, it implies various attempts, which eventually failed.

\_\_\_\_\_ hs

IX<sub>3</sub> MIRKO<sub>3</sub>TEACH<sub>1</sub> CHESS RULE IX<sub>1</sub> UNDERSTAND IMPOSSIBLE\_PA\_PA

'Mirko tried hard to teach me the rules of chess, but I cannot understand them.'




Permission in LIS involves three different markers: BE\_ABLE, CAN and FEEL\_FREE. BE\_ABLE is used to grant permission to do something, with respect to external conditions. It can be marked by furrowed eyebrows and/or head nod. Since its articulation is homophonous to the marker employed to encode ability, it is only the context that allows to disambiguate its function.




BE\_ABLE  
'(To) be allowed to'

For instance, in (a) it is used to convey that the daughter is now allowed to return home later since she is older. In (b), the permission conveyed by the sign BE\_ABLE depends on the time allotted to visitors in the hospital.

hn  
fe

a. TODAY IX<sub>2</sub> HOUSE COME\_BACK TIME LATE BE\_ABLE   
 'Today, you are allowed to come home later.'

hn  
fe


b. HOSPITAL<sub>2</sub> COME<sub>1</sub> BE\_ABLE TIME AT\_EIGHT CLOSE   
 'You are allowed to come to the hospital until 8.'


CAN is employed to ask or give permission to do something, depending on personal (i.e. participant-internal) conditions.



CAN

The use of CAN in context is shown in the two examples below.

a. IX<sub>2</sub> HOSPITAL COME CAN. IX<sub>1</sub> HAPPY IX<sub>1</sub>   
 ‘You can come to visit me at the hospital. I am glad if you do.’


b. SUITCASE IX<sub>2</sub> STAY CAN   
 ‘You can leave your luggage (here).’

FEEL\_FREE yields a more general sense of permission.



FEEL\_FREE  
 ‘(To) feel free to’

Below, we provide an example showing the use of FEEL\_FREE in interaction.

A: \_\_\_\_\_ y/n  
 IX<sub>1</sub> ASK<sub>2</sub> COMPUTER TOUCH IX<sub>1</sub> TYPE   
 B: FEEL\_FREE IX  
 ‘I ask you if I can use that computer?’ ‘Yes, feel free to do so.’

The deontic negative counterpart of BE\_ABLE encoding permission is BE\_ABLE^NOT, which conveys the general impossibility for a state of affairs to occur. In other words, it encodes that the event is not al-




lowed due to external conditions. It is usually marked by headshake on the negation NOT.



hs  
BE\_ABLE^NOT  
'(To) not be allowed'

The example below shows the use of BE\_ABLE^NOT in context.


hs  
GIANNI SMOKE BE\_ABLE^NOT   
'Gianni is not allowed to smoke.'

The deontic negative counterpart of CAN is CAN^NOT (marked by headshake), which is used to deny the permission to do something, depending on participant-internal conditions. This is illustrated in the example below.



hs  
CAN^NOT  
'Cannot'

Below, we provide an example showing the use of CAN^NOT in context.

hs  
IX<sub>3</sub> HOSPITAL COME CAN^NOT REASON IX<sub>1+3</sub> ARGUE   
'He cannot come to the hospital because we had a quarrel.'


Intention/volition is conveyed in LIS through the modal **WANT**, which can be accompanied by head nod.



WANT

The example below shows the use of **WANT** to convey the intention to buy a house.


hn

IX<sub>1</sub> HOUSE BUY WANT IX<sub>1</sub> 

'I want to buy a house.'

Crucially, when the signer wants to express a desire, rather than a true intention of doing something, the modal **WANT** displays a reduplicated and reduced articulation. Moreover, the verb is marked by the non-manual consisting in head tilting left and right, to encode the wish which is being expressed.


ht-right-left

IX<sub>1</sub> HOUSE BUY WANT++ 

'I would like to buy a house.'

The negative counterpart is **WANT<sup>^</sup>NOT** marked by headshake, as in the example below.

hs

IX<sub>1</sub> FILM IX<sub>1</sub> SEE WANT<sup>^</sup>NOT 

'I don't want to watch a film.'

### 3.3.3.2 Epistemic modality

Epistemic modality markers convey the signer's evaluation or judgment about the possibility or impossibility that an event has occurred, is occurring or will occur. The signer can be more or less cer-

tain about his/her evaluation, which is formulated considering direct evidences or personal knowledge or belief. LIS employs several manual signs yielding epistemic modality, some of which also function as deontic markers [LEXICON 3.3.3.1]. In these instances, it is only the context that allows to disambiguate the function of the modality marker.

In this section, we list the lexical markers of epistemic modality and their semantics. For details about the morphological properties of the corresponding non-manual markers, as well as the syntactic distribution of the epistemic markers, the reader is referred to [MORPHOLOGY 3.4] and [SYNTAX 2.3.1.3], respectively.

Epistemic certainty, namely certainty about the likelihood of the event in the utterance, is encoded through the modal BE\_ABLE, and the signs OBLIGATION and SURE. These yield slightly different semantics but share the certainty the signer has of the likelihood of the event described in the utterance, which is based on his/her knowledge or available evidences. We describe each in turn.

BE\_ABLE encodes a strong degree of certainty, and it is used when the signer knows that the event is possible based on his/her knowledge of the external conditions. This is further specified by the articulation of the non-manuals head nod (hn) and furrowed eyebrows (fe) which in general express certainty [MORPHOLOGY 3.4.2].



\_\_\_\_\_ fe  
 \_\_\_\_\_ hn  
 \_\_\_\_\_  
 BE\_ABLE  
 'Can'

In the example below, the signer implies that he has the possibility of checking the luggage because he knows that the situation allows him to do that (for instance, he does not have anything else to do).

\_\_\_\_\_ fe  
 \_\_\_\_\_ hn  
 \_\_\_\_\_  
 SUITCASE POSS<sub>3</sub> IX<sub>1</sub> CONTROL BE\_ABLE IX<sub>1</sub>  
 'I can watch her luggage.'



BE\_ABLE also functions as epistemic marker when it conveys the certainty of the signer about the ability of someone/something else. In other words, it can be used when the signer is sure that the event is possible because he knows that the agent is capable of fulfilling it. In so doing, the marker has a double function in that it conveys both the ability of the interlocutor and the certainty of the signer about it. This holds both when the agent is human, in (a) below the signer is saying that he is sure that Gianni is able to win the competition, and when the agent is non-human, in (b) the signer knows that the electric car can drive for 400 km. In so doing, epistemic certainty is conveyed. In both instances, BE\_ABLE is reduplicated and marked by furrowed eyebrows (fe), repeated head nod (hn) and puffed cheeks (pc), as to underline the certainty.

\_\_\_\_\_ pc  
 \_\_\_\_\_ hn  
 \_\_\_\_\_ fe

a. GIANNI WIN BE\_ABLE++



'I am sure that Gianni is able to win (the competition).'

\_\_\_\_\_ pc  
 \_\_\_\_\_ hn  
 \_\_\_\_\_ fe

b. FOUR^HUNDRED KILOMETRE BE\_ABLE++



'(The electric car) has a driving range of 400 km.'

OBLIGATION is used when the signer describes an event that is inevitably going to happen due to the present conditions. In these instances, the sign occurs with the mouthing of the Italian word for 'necessarily', namely *per forza*.



OBLIGATION  
 'Necessarily'

The example below shows the use of OBLIGATION to express that eating all chocolate cream is definitely going to happen.

Context: you and your girlfriend love chocolate cream. She bought a jar and hid it. You find it while she is not at home.

‘per forza’  
 IX<sub>1</sub> EAT ALL OBLIGATION  
 ‘I eat it all, I can’t resist.’



One further possibility of expressing epistemic certainty is to employ the sign SURE.



SURE  
 ‘(To) be sure’  
 ‘Surely’

This sign can either function as a predicative adjective (a), or sentential adverb (b). It can be accompanied by head nod and furrowed eyebrows.

a. IX<sub>1</sub> SURE IX<sub>2</sub> CHESS UNDERSTAND IMPOSSIBLE\_PA\_PA  
 ‘I am sure that you will never understand how to play chess.’



hn  
fe  
 b. SURE GIANNI COME  
 ‘Gianni is coming surely.’  
 (based on Lerose 2012, 344)



The sign OBVIOUS, sometimes marked by head nod, can be employed as well. Interestingly, this could be an example of grammaticalisation of the adjective BRIGHT into a modal encoding epistemic certainty.



OBVIOUS

Below, we provide an example showing the use of OBVIOUS as lexical marker of epistemic modality.

LUCA<sub>a</sub> IX<sub>a</sub> EXAM PASS OBVIOUS

'It is obvious that Luca will pass the exam.'



On the other hand, epistemic certainty that the event is surely not going to happen is conveyed in LIS through CAN^NOT and IMPOSSIBLE\_NO\_WAY.

CAN^NOT is used to convey that the event cannot happen because of the lack of favourable conditions. It implies that if the conditions change, the event may become possible. It can be accompanied by headshake.



CAN^NOT

'(To) not be possible'

Below, we provide a couple of examples showing the use of CAN^NOT as lexical marker of epistemic modality.

- cond
- a. SEA SASS(flat open 4): 'flat' WAVE EXIST.NOT LEAVE SURF  
CAN^NOT
- 'If the sea is flat with no waves, it is not possible to surf.'

b. CAR WHEEL HOLE CL(flat open 5): 'deflate'. IX JACK EXIST.NOT.

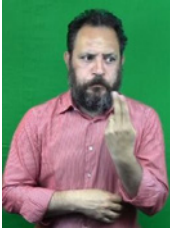
hs

WHEEL CHANGE CAN^NOT



'You have a punctured tyre. You do not have the jack. It is impossible to change the wheel.'

The sign IMPOSSIBLE\_NO\_WAY is the strongest negative epistemic marker. It is lexically specified for the non-manual puffed cheeks (pc) and can be accompanied by headshake.



hs

pc

IMPOSSIBLE\_NO\_WAY

'(To) be absolutely unlikely to happen'

This marker yields the knowledge of the signer that the event is surely not going to happen due to the absolute absence of favourable conditions.

a. WHEEL CAR IX<sub>1</sub> CHANGE IMPOSSIBLE\_NO\_WAY



'I cannot change the (car) wheel.'

b. IX<sub>1</sub> SURF IMPOSSIBLE\_NO\_WAY BECAUSE SHARK EXIST IX(LOC) IX<sub>1</sub> NOT

IMPOSSIBLE\_NO\_WAY



'I am definitely not going to surf because there are sharks, I really can't.'

When the signer is expressing his/her judgment about the likelihood of an event, (s)he uses BE\_POSSIBLE(1) or BE\_POSSIBLE(2). These manual signs only differ in their movement: BE\_POSSIBLE(1) displays an arc-shaped downward path movement (a), whereas BE\_POSSIBLE(2) shows a double downward short movement (b).



a. BE\_POSSIBLE(1)  
'(To) be possible'



b. BE\_POSSIBLE(2)  
'(To) be possible'


These epistemic markers can either be used if the signer has some evidence for the likelihood of the event, or to express his/her hypotheses and suppositions. The different degrees of certainty and possibility are encoded through non-manual markers (see [MORPHOLOGY 3.4.] for their possibility of spreading). Specifically, squinted eyes usually convey the signer uncertainty about the likelihood of the event (a); raised eyebrows and mouth corners down (md), sometimes combined with a head tilt backwards, express that the event could be possible but the signer is not sure due to lack of evidence. In other words, they express a presupposition (b). Head nod encodes a higher probability that the event can happen considering the circumstances (c-d), despite the lack of evidences. Signers can add a further manual marker, glossed PALM\_BACK in (d), to state that they do not have evidence for it at the time of the utterance.

- \_\_\_\_\_ sq  
a. FRIEND IX<sub>1</sub> LOOK\_FOR FIND BE\_POSSIBLE(1)  
'I (think) I can find the friend I am looking for.'







md  
re

b. HEADACHE BE\_POSSIBLE(1) REASON SLEEP LITTLE   
'Maybe you have a headache because you did not sleep enough.'

hn

c. IX<sub>a</sub> DAUGHTER IX<sub>a</sub> FUTURE QUEEN BE\_POSSIBLE(2)   
'In the future, the daughter could become queen.'

d. DATE TWO^FIVE DECEMBER TRAIN IX(LOC) SEAT EMPTY

hn  
BE\_POSSIBLE(2) PALM\_BACK   
'It is possible to find free seats on the train on December 25<sup>th</sup>.'

When the signer has no knowledge or evidence about the likelihood of the event, (s)he can use the sentence adverbial MAYBE (a) [LEXICON 3.5], the modal SEEM (b), or the verb KNOW^NOT (c) occurring with the typical non-manual for negation, i.e. headshake.



a. MAYBE



b. SEEM



c. KNOW<sup>^</sup>NOT  
'Do not know'

We provide one example for each marker below.

a. MAYBE IX BROTHER POSS<sub>1</sub> ACCIDENT  
'Maybe my brother had a (car) accident.'



b. SEEM IX BROTHER POSS<sub>1</sub> FORGET  
'It seems that my brother forgot (our appointment).'



c. IX BROTHER POSS<sub>1</sub> WHERE IX<sub>1</sub> KNOW<sup>^</sup>NOT<sub>hs</sub>  
'I do not know where my brother is.'



### 3.3.4 Agreement markers

In LIS, plain verbs [LEXICON 3.2.1], namely verbs articulated on the body, can realise agreement with their arguments through an agreement marker that can be considered an auxiliary (glossed AUX). This is a semantically empty deictic sign that can be used to express agreement relation only when animate arguments are involved. AUX is phonologically similar to a pronoun, thus it could be an instance of grammaticalisation of a pronominal element into an auxiliary. It displays a path movement from the subject to the object of the predicate. As we can see in the following example, the agreement marker AUX follows the verb.

GIANNI<sub>a</sub> PIETRO<sub>b</sub> BE\_FAMILIAR<sub>a</sub> AUX<sub>b</sub>  
'Gianni knows Pietro.'  
(based on Bertone 2011, 159)



AUX can express all person combinations. We provide three illustrative examples: in (a) it realises agreement between a first person sin-

gular subject and a third person singular object; in (b) agreement is between a second person singular subject and a first person singular object; in (c) AUX connects a second person singular subject with a third person plural object.

a. IX<sub>1</sub> IX<sub>3</sub> BE\_FAMILIAR<sub>1</sub>AUX<sub>3</sub>  
'I know him/her.'



b. IX<sub>2</sub> IX<sub>1</sub> BE\_FAMILIAR<sub>2</sub>AUX<sub>1</sub> SURE  
'You know me for sure.'



c. IX<sub>2</sub> IX<sub>3pl</sub> IX<sub>2</sub> BE\_FAMILIAR<sub>2</sub>AUX<sub>3pl</sub>  
'You know them.'



Interestingly, AUX can also be employed with agreement verbs showing two points of articulation, such as GIVE. In such instances, the occurrence of the auxiliary is to reinforce the semantics of the verb, so it is not obligatory since the verb is already marking the agreement between the subject and the indirect object. See the example below.

GIANNI<sub>a</sub> PIETRO<sub>b</sub> BOOK<sub>a</sub>GIVE<sub>b</sub> AUX<sub>b</sub>  
'Gianni gives the book to Pietro.'



A further auxiliary marker is GIVE\_AUX, which is a causative auxiliary marker employed in causative psychological predicates to show overt morphological agreement with the subject (EARTHQUAKE) and the experiencer object (first person singular) [SYNTAX 2.1.1.3].

EARTHQUAKE GIVE\_AUX<sub>1</sub> FEAR  
'Earthquakes scare me.'



### 3.4 Adjectives

Adjectives are typically used to describe, qualify, or specify a nominal element. Note that the same sign may be used as an adjective or an adverbial, as exemplified below with the sign QUICK [LEXICON 3.5].

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# Glossary of grammatical terms

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## **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 sub-



ject 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 polymorphic 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 (hand-shape) 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?’.



### **Extrapolation**

Extrapolation 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 extrapolated 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 placeholder, 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 matt 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.

es, 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 Ada smarter'.

### **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.





## A Grammar of Italian Sign Language (LIS)

edited by Chiara Branchini and Lara Mantovan

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*A Grammar of Italian Sign Language (LIS)* is a comprehensive presentation of the grammatical properties of LIS. It has been conceived as a tool for students, teachers, interpreters, the Deaf community, researchers, linguists and whoever is interested in the study of LIS. It is one output of the Horizon 2020 SIGN-HUB project. It is composed of six Parts: Part 1 devoted to the social and historical background in which the language has developed, and five Parts covering the main properties of Phonology, Lexicon, Morphology, Syntax and Pragmatics. Thanks to the electronic format of the grammar, text and videos are highly interconnected and are designed to fit the description of a visual language.



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