# A Grammar of Italian Sign Language (LIS)

edited by Chiara Branchini and Lara Mantovan



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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# 3 Coordination and subordination

**Summary** 3.1 Coordination of clauses. – 3.2 Subordination: distinctive properties. – 3.3 Argument clauses. – 3.4 Relative clauses. – 3.5 Adverbial clauses. – 3.6 Comparative clauses. – 3.7 Comparative correlatives.

In this chapter, we will consider complex sentences consisting of two clauses. The two clauses may be independent and coordinated, or one of them may be independent, while the other one is subordinate.

The main difference between coordination and subordination is that coordinated clauses have the same status, they are both independent clauses, while in complex sentences consisting of an independent and a subordinate clause, the two clauses are not on the same level: only the independent clause can be produced on its own, while the subordinate clause cannot.

# 3.1 Coordination of clauses

Coordination is the combination of at least two constituents [SYNTAX 2], often of the same syntactic category (such as noun phrases, verb phrases, or clauses) either through conjunction or juxtaposition. Conjunction refers to the connection of constituents through the use of conjunctions [LEXICON 3.9.1], juxtaposition refers to the coordination of constituents without the use of conjunctions, only by juxtaposing the two constituents one next to the other. This section illustrates how LIS coordinates clauses.

# 3.1.1 Types of clausal coordination

Within clausal coordination, we may distinguish three main types of conjunction: conjoined conjunction, adversative conjunction, and disjunctive conjunction.

Depending on the type of conjunction, LIS coordinates clauses either through the employment of both manual and non-manual conjunctions, or through the only use of non-manual markings.

In the following example, a case of conjoined conjunction, the two clauses are coordinated only through the non-manual markings composed of: a change in head and shoulder position between the two clauses (which are produced in a different location in space), chin down (cd) at the end of the first clause, and eye blink signalling the boundary between clauses.

cd



MARIO CAKE PREPARE LUCA BANANA CL (unspread 5): 'cut\_banana' 'Mario prepares a cake and Luca cuts a banana.'

When joining clauses in adversative conjunction, they may be coordinated through the use of the manual conjunction BUT, as shown below. When it happens, the two conjoined clauses are also marked by chin down (cd) and eye blink at the end of the first clause.

cd

LUCA PARTY GO WANT BUT DANCE NOT



'Luca wants to go to the party, but he doesn't dance.'

In disjunctive conjunction, LIS employs the manual conjunction glossed or and the following non-manual markers: optional forward body lean (bl-f), chin down (cd) and eye blink occurring at the end of the first clause, as shown in the example below.

> cd bl-f

EVENING IX(dem) A-N-N-A BOOK READ OR FILM SEE 'Tonight Anna will read a book or will watch a film.'



In the following sections, the three types of clausal coordination will be described in detail.

# 3.1.2 Coordination by manual markers

In this section, we describe the manual markers LIS employs to coordinate clauses in the three types of conjunction: conjoined conjunction, adversative conjunction and disjunctive conjunction.

# 3.1.2.1 Manual markers of coordination

When coordinating clauses, LIS makes use of manual markers of conjunction in conjoined conjunction, adversative conjunction and disjunctive conjunction. In the following sections, their optionality or obligatoriness, as well as their position in the sentence will be described.

# 3.1.2.1.1 Manual markers in conjoined coordination

In conjoined coordination, clauses may be coordinated through the use of the manual marker Plus.



PLUS

The example below shows two clauses coordinated through the sign PLUS.

L-A-U-R-A BOOK READ PLUS C-A-R-L-O TELEVISION SEE 'Laura reads a book and Carlo watches television.'



# 3.1.2.1.2 Manual markers in adversative coordination

In adversative coordination, LIS may employ the manual marker glossed but produced either as a one-handed (a) or two-handed (b) sign with all fingers extended, as shown in the pictures below.



a. BUT (one-handed)



b. BUT (two-handed)

The example below shows the use of BUT in a sentence.

LAURA WINE DRINK WANT BUT FATHER WANT NOT

'Laura wants to drink wine, but her father doesn't want her to.'

# 3.1.2.1.3 Manual markers in disjunctive coordination

The manual marker employed in disjunctive coordination is the sign glossed or. It is a one-handed sign produced with the thumb and index finger closed in a circle and the other fingers extended. It is produced with short repeated movements of the hand from right to left.



OR

The example below shows the use of or in context.

M-A-R-C-O MONEY SASS(5): 'size\_big' MONEY BANK DEPOSIT OR EGYPT

TICKET PLANE BUY

'Marco will either deposit the money in the bank or buy a plane ticket to Egypt.'

# 3.1.2.2 Position of manual markers of coordination

In this section, we shall describe the position of manual markers of coordination in the different types of clause conjunction.

# 3.1.2.2.1 Position of manual markers in conjoined coordination

In conjoined coordination, the manual marker PLUS is produced between the two clauses.

# 3.1.2.2.2 Position of manual markers in adversative coordination.

In adversative coordination, the manual marker BUT occurs between the first and the second clause, as confirmed by the presence of the following prosodic non-manual markings signalling the clause boundary between the first and the second conjunct: a pause in the signing stream, eye blink and chin down (cd) after the last sign of the first clause. These non-manuals marking the end of the first clause precede the manual marker BUT.

ANNA<sub>a</sub> MARIO<sub>b a</sub>PERSUADE<sub>b</sub> DONE BUT PARTY <sub>b</sub>GO<sub>a</sub> NOT 'Anna tried to persuade Mario, but he didn't go to the party.'

# 3.1.2.2.3 Position of manual markers in disjunctive coordination

As in adversative coordination, also in disjunctive coordination, the manual marker or occurs between the first and the second conjunct. Evidence for its position is provided by the same prosodic non-manuals marking clause boundary in adversative coordination.

cd

ANNA IX TELEVISION SEE OR BOOK READ 'Anna watches television or reads a book.'



# 3.1.2.3 Optionality or obligatoriness of manual markers of coordination

In this section, we will specify the optionality or obligatoriness of the manual markers of coordination across the three types of conjunctions.

# 3.1.2.3.1 Optionality/obligatoriness of manual markers in conjoined coordination

It is optional to use the manual marker PLUS in conjoined coordination.

# 3.1.2.3.2 Optionality/obligatoriness of manual markers in adversative conjunctions

The manual marker BUT is not obligatory in adversative conjunction.

# 3.1.2.3.3 Optionality/obligatoriness of manual markers in disjunctive conjunctions

The manual marker or is obligatory when coordinating two clauses in disjunctive conjunction. This constraint does not hold when coordinating signs within a clause in disjunctive conjunction, where non-manual markers alone may be used to coordinate the constituents [LEXICON 3.9.1].

# 3.1.3 Coordination by non-manual markers

In this section, we will describe the types and spreading of non-manual markers in clause coordination across the three types of conjunctions: conjoined conjunction, adversative conjunction, and disjunctive conjunction, both in the presence of manual markers and in their absence, namely, when the conjunct clauses are juxtaposed.

## 3 1 3 1 List of non-manual markers of coordination

We will describe here the set of non-manual markings employed in the three different types of clause coordination in LIS.

# 3.1.3.1.1 Non-manual markers in conjunctive coordination

The non-manual markers employed in conjunctive coordination are: a change in body orientation and head position, a signing pause, eye blink, and chin down. All these non-manual markings can be used in the presence of the manual marker AND, or as the only markers in conjunctive coordination.

# 3.1.3.1.2 Non-manual markers in disjunctive coordination

In disjunctive coordination, the non-manual markers cannot be employed alone to coordinate two clauses. They are produced with the manual marker or. They are composed of: a signing pause, eye blink, chin down, the labial movements reproducing the equivalent Italian word o 'or', and, optionally, forward body lean.

### 3 1 3 1 3 Non-manual markers in adversative coordination

LIS marks adversative coordination through the use of the following non-manual markers: a pause in the signing stream, eye blink, chin down, backward head tilt, and, optionally, raised or furrowed brows. All these non-manual markings maybe be used in the presence of the manual marker BUT, or as the only markers.

# 3.1.3.2 The spreading domain of non-manual markers of coordination

In this subsection, the spreading domain of the non-manuals marking the different types of coordination is illustrated.

# Spreading domain of non-manual markers in conjunctive coordination

The non-manuals marking conjunctive coordination have a different spreading domain. The first conjunct is generally produced on the right of the signing space, hence the signer's head and body are turned to the right (this is indicated in the example below by the subscript 'a'). The second conjunct is produced on the opposite side of the signing space, hence the signer's head and body are turned to the left (this is indicated in the example below by the subscript 'b'). The chin is lowered at the end of the first clause (and optionally also at the end of the second clause) (cd), and a signing pause and eye blink occur at the boundary of the two clauses.

$$\frac{cd}{\text{MARIA FOOD}_{a} \operatorname{COOK}_{a} \operatorname{STIR}_{a}} \quad \text{L-U-C-A}_{b} \text{ TABLE}_{b} \text{ DISH++}_{b} \text{ ARRANGE}_{b}$$
'Maria cooks the food and Luca sets the table.'

# Spreading domain of non-manual markers in disjunctive coordination

In disjunctive coordination, a signing pause, eye blink and chin down (cd) occur between the two conjuncts. The labial movements reproducing the equivalent Italian word o 'or' and, optionally, forward body lean occur simultaneously to the production of the manual marker or.



M-I-R-K-O STUDENT MEET OR MEETING ATTEND 'Mirko meets the student or attends the meeting.'



# 3.1.3.2.3 Spreading domain of non-manual markers in adversative coordination

In adversative coordination, a pause in the signing stream and eve blink occur between the two conjuncts, a backward head tilt (ht-b), and, optionally, raised (re) or furrowed brows are produced simultaneously to the manual marker, if present, or at the beginning of the second conjunct, if the manual marker is absent.

ht-b

L-U-C-A PARTY GO DANCE LIKE NOT



'Luca goes to the party, but he doesn't like to dance.'

# 3.1.4 Properties of coordination

This section describes some properties displayed by LIS coordinated clauses.

As shown in [SYNTAX 3.1], clauses may be coordinated either through the employment of conjunctions, as the manual sign PLUS in (a), or through the juxtaposition of the conjoined clauses, as in (b) below.

a. L-A-U-R-A BOOK READ PLUS C-A-R-L-O TELEVISION SEE 'Laura reads a book and Carlo watches television.'



b. MARIA FOOD COOK STIR L-U-C-A TABLE DISH++ ARRANGE 'Maria cooks the food and Luca sets the table.'



### 3.1.4.1 Extraction

The property of extraction is related to the movement of a constituent to the left edge or to the right edge of the sentence. This happens in *wh*-questions [SYNTAX 1.2.3] or topics [PRAGMATICS 4.2]. In LIS, extraction out of a coordinate structure is possible if the same constituent is extracted from both coordinated conjuncts. In the example below, what is interpreted as the object of the verb in both conjuncts.

mother like father like.Not Q<sub>artichoke</sub>
'What does mother like and father not like?'

The following is another case of extraction of a constituent (ORANGE IX) out of coordinated clauses through topicalisation.

\_\_\_\_\_\_top ORANGE IX MOTHER LIKE FATHER IMPOSSIBLE\_NO\_WAY 'As for oranges, mother likes them and father dislikes them.'

In the examples above, the extracted constituent is the object of the verb in each coordinated conjunct.

# 3.1.4.2 Gapping

Gapping refers to the possibility of eliding the verb of a conjunct in a coordinated structure. In LIS, it is possible to elide the verb of one coordinated clause, if it is identical to the verb of the other conjunct, as shown in the examples below.

a. LAURA<sub>a</sub> MEAT EAT SARA<sub>b</sub> SALAD 'Laura eats meat and Sara salad.'



b. Tomorrow Party.  $IX_1$  Meat Bring a-n-n-a Beer L-u-C-a Salad 'Tomorrow there is a party. I will bring meat, Anna beer, and Luca salad.'

C.  $IX_1$  NEWS SEE  $IX_2$  FILM 'I watch the news and you the film.'



In attested cases of gapping, the elided verb is in the second conjunct, never in the first conjunct.

# 3.1.4.3 Scope

Another property associated with coordination is the scope of some elements, like question particles and negative elements [SYNTAX 1.5]. When a question sign or a negative sign affects the meaning of two constituents, those constituents can be analysed as conjuncts of a coordinated structure. This is what happens in LIS.

# 3.1.4.3.1 Scope of negation

In LIS, a negative element may affect the meaning of two verbs in coordinated conjuncts only if they share the same subject. In the example below, the negative sign  $_{\rm NEG\_O}$  negates the verb of both conjuncts. This suggests that what is coordinated in the sentence below is not two clauses, but two verb phrases.

\_\_\_neg GABRIELE CAR CLEAN\_UP WEDDING GO NEG\_O



'Gabriele did not clean the car and did not go to the wedding.'

# 3.1.4.3.2 Scope of yes/no questions

In LIS, a question sign, YES^NO in the example below, can have scope over both conjuncts of a coordinated structure.

Gabriele Padua Stay  $IX_a$  Lara $_a$  Go mountain Y Yes Y NO 'Gabriele remained in Padua and Lara went to the mountain, right?'

# 3.2 Subordination: distinctive properties

Subordination refers to clauses which are hierarchically connected to each other, unlike coordination where they are joined together equally. In subordination, only the main clause is independent, namely syntactically and semantically autonomous, while the subordinate clause is dependent upon the main clause. In the following subsections, we will describe one property typical of subordination, subject pronoun copy, in order to serve as an identification tool to distinguish subordinate from coordinate clauses.

# 3.2.1 Subject pronoun copy

The pronoun copy phenomenon [SYNTAX 2.6] consists of a pronoun at the end of a sentence which relates to an argument of the sentence, as exemplified in the LIS sentence below where the final copy pronoun  $IX_3$  refers to the subject CAT.

 ${\rm CAT_a~IX_a~KIBBLE~LIKE~IX_{3a}}$  'The cat likes the kibble, he.'



In LIS, the pronoun copy can be related to both the subject and the object of the clause (an example of object pronoun copy is presented below). From a pragmatic point of view, the pronoun copy can refer to constituents which fulfil different pragmatic functions, as, for example, focus or emphatic expressions, but it seems to mostly accompany topics [PRAGMATICS 4.2] as displayed by the sentence below.

 $\underline{\phantom{a}}$  top MOUSE<sub>a</sub> CAT CL(spread curved open 5): 'eat' DONE IX<sub>3a</sub> 'As for the mouse, the cat ate it.'



In LIS complex sentences, composed of a main clause and a subordinate clause, the subordinate clause typically precedes the main clause. In this case, a pronoun copy of the main clause subject may appear at the end of the sentence, right after the main clause. The sentence below, an indirect declarative clause, demonstrates such a case where the pronoun copy ix, refers to mother, the subject of the main clause.

M M-A-R-I-A FRUIT EAT MOST MUST MOTHER SAY IX3a 'My mum said that Maria should eat more fruit, she (my mum).'

However, in object clauses [SYNTAX 3.3.2] the order between the subordinate and the main clause may be inverted, that is, the subordinate clause may follow the main clause, as shown below. In this case, if present, the pronoun copy refers to the subject of the subordinate clause.

FATHER REMEMBER  $\mathrm{IX}_{\mathrm{a}}$  SISTER adventure like  $\mathrm{IX}_{3\mathrm{a}}$ 'My dad remembers that his sister likes adventures, she.'

In both complex sentences reported above, the indirect declarative clause and the object clause, the subject pronoun copy refers to the subject of the very last clause. For this reason, the pronoun copy strategy is not a diagnostic to discriminate between a main and a subordinate clause. However, while the pronoun copy can easily be found in complex sentences composed of a subordinate and a main clause, it is very rarely employed when main sentences are coordinated [SYNTAX 2.6.1], as shown in the example below, where no pronoun copy is used.

MOTHER IX CHOCOLATE WHITE ADORE IX FATHER BLACK 'My mother likes the white chocolate and my father likes the dark one.'

# 3.2.2 Position of question signs

To be developed.

# 3.2.3 Spreading of non-manual markers

To be developed.

# **3.2.4** Interpretation of embedded negation in the matrix clause To be developed.

# 3.3 Argument clauses

This section describes a type of subordination whereby the subordinate clause functions as the subject [SYNTAX 3.3.1] or the object [SYNTAX 3.3.2] of the main clause predicate.

Role shift [SYNTAX 3.3.3], whereby the signer assumes the perspective of another referent, is also described in this section.

# 3.3.1 Subject clauses

A subject clause (or subjective) is a subordinate argument clause carrying the syntactic function of a subject [SYNTAX 2.2.1]. Subject clauses (within brackets) can be: i) simple declarative clauses, with no special interpretation (e.g. '[That Gianni will come] should be clear to you'), ii) relative clauses [SYNTAX 3.4] (e.g. '[Whoever has finished the exam] can go out'), or iii) interrogative clauses [SYNTAX 1.2.3] (e.g. '[Whether I am coming or not] is uncertain'). In the following, however, we will only treat simple declarative clauses, referring to the relevant sections for the other two types.

In LIS, verbs that can take as an argument a subject clause include SEEM (a), BE\_ASTONISHING (b), STRANGE (c), and OBLIGATION (d).

$\underline{\text{bl-f}}$	We
a. GIANNI ARRIVE SEEM	4
'It seems that Gianni has arrived.'	
b. GIANNI WORK RESIGN BE_ASTONISHING	N. W.
'It is surprising that Gianni has resigned.'	
C. GIANNI ARRIVE STRANGE	SW
'It is strange that Gianni has arrived.'	Ü
•	SW
d. GIANNI ARRIVE OBLIGATION	$\checkmark$
'It is compulsory for Gianni to come.'	

# 3.3.1.1 Position(s) within the matrix clause

In LIS, subject clauses can be *extraposed* namely they can appear at the end of the sentence, as shown by the following examples.

<u>bl-f</u>	NNa
a. SEEM GIANNI ARRIVE	2
'It seems that Gianni has arrived.'	
bl-f	500-
b. BE_ASTONISHING GIANNI IX WORK RESIGN	2000
'It is surprising that Gianni has resigned.'	
C. STRANGE GIANNI ARRIVE	W.
'It is strange that Gianni has arrived.'	
	W
d. obligation gianni arrive	<b>V</b>
'It is compulsory for Gianni to come.'	

There does not seem to be a clear preference for the initial or final position, and no pronominal index is required if the subject clause is extraposed.

# 3.3.1.2 Special non-manual markers

Subject clauses do not seem to be marked by a special non-manual marker, but there is an intonational break between the main verb and the subject clause. Verbs like SEEM, BE\_ASTONISHING, STRANGE and OBLIGATION are uttered with a lexically specified non-manual marker which stops when the intonational break occurs. Therefore, the boundary of the subject clause is marked by this interruption. Another marker of the boundary between the subject clause and the verb that takes it as an argument is body lean, as indicated in the examples below.

# 3.3.1.3 Tense and aspectual marking

Subject clauses do not seem to be reduced, as they can contain a verb, a lexical subject and the aspectual marker DONE.

bl-f

a. SEEM GIANNI CONTRACT PUT SIGNATURE DONE 'It seems that Gianni has signed the contract.'



bl-f bl-b

b. Gianni contract put signature done seem 'It seems that Gianni has signed the contract.'



3.3.1.4 Anaphoric relations To be developed.

3.3.1.5 Null arguments To be developed.

# 3.3.2 Object clauses

An object clause (or completive, or complement clause) is a clause carrying the syntactic function of an object. Object clauses (within brackets) can be declarative clauses (e.g. 'Piero knows [that Gianni signed the lease]'), free relative clauses (e.g. 'Paolo bought [what is necessary]') [SYNTAX 3.4] or interrogative clauses (e.g. 'Paolo asked me [who took the exam]') [SYNTAX 1.2.3]. In the following, however, we will only treat simple declarative clauses, referring to the relevant sections for the other two types.

Depending on the matrix verb, object clauses can correspond to at least two types of structures: i) finite object clauses and ii) non-finite object clauses. Finite object clauses can have a lexical subject, tense and aspectual markings. The subject of the object clause does not need to refer to the arguments in the main clause. The sentence 'Gianni said that Piero will sign the contract' contains a finite object clause, as shown by the presence of an auxiliary ('will') and of a lexical subject ('Piero'). On the other hand, non-finite object clauses cannot have a lexical subject or tense and aspectual markings. The subject of the object clause is interpretatively dependent on an argument in the main clause. The sentences 'Gianni forgot to sign the contract' and 'The cook forced Maria to eat meat' contain a non-finite object clause. The null subject of the object clause depends in its interpretation on the main clause subject ('Gianni'), in the first sentence, and on the main clause object, ('Maria'), in the second sentence.

# 3.3.2.1 Verbs taking object clauses

Verbal predicates that take an object clause are traditionally classified into a number of groups characterized in semantic terms. A representative set of predicates with some LIS verbs for each type is presented below.

i) Desiderative predicates: HOPE

GIANNI HOPE LEAVE
'Gianni hopes (to be able to) leave.'



ii) Directive predicates: FORBID

<u>re</u>
PIETRO LEAVE IX GIANNI FORBID
'Gianni forbids Pietro from leaving.'



iii) Achievement predicates: BE\_ABLE

<u>re</u>
GIANNI LEAVE PUNCTUAL BE\_ABLE
'Gianni manages to leave on time.'



iv) Factive predicates: COMPLAIN

GIANNI COMPLAIN TRAIN GO\_AWAY CL(curved open V): 'get\_on\_train' NEG\_O V 'Gianni complained that the train left and he could not board it.'

v) Experiencer-object verbs: HAPPY

re bl-right
GIANNI HAPPY PIETRO LEAVE
'Gianni is happy that Pietro left.'



vi) Aspectual verbs: BEGIN

GIANNI BEGIN HOUSE BUILD 'Gianni began building a house.'



# vii) Perception predicates: SEE

rs: Gianni
GIANNI SEE MARIA LEAVE
'Gianni saw Maria leaving.'



viii) Propositional attitude predicates: SURE

GIANNI SURE PIETRO CAKE EAT ALL
'Gianni is sure that Pietro ate all the cake.'



ix) Utterance predicates: say

GIANNI SAY PIETRO<sub>a</sub> IX<sub>a</sub> CAKE EAT ALL 'Gianni said that Pietro ate all the cake.'



# 3.3.2.2 Position(s) within the matrix clause

Although the unmarked order when the object is a noun phrase is SOV [SYNTAX2.3.1.1], finite object clauses resist sitting between the matrix subject and the matrix verb. As a matter of fact, a finite object clause normally precedes or follows the matrix clause. The following are examples of an object clause that follows (a) or precedes (b) the matrix clause that contains the verb HOPE.

bl-right	Ma
a. Gianni hope maria leave	4
'Gianni hopes Maria will leave.'	
-	
re bl-b	W
b. maria leave gianni hope	2
'Gianni hopes Maria will leave.'	

If the object clause is sentence initial, it can be resumed by the sign PE. PE is the determiner-like element also present in relative clauses [SYNTAX 3.4]. In the following sentence, the embedded clause is articulated on the side of the dominant hand (as indicated by body lean towards the right) and PE is articulated after the embedded clause in the same area of the signing space to indicate that it refers to the object clause.

### bl-r

PIETRO<sub>a</sub> IX<sub>a</sub> CAKE EAT ALL PE GIANNI SURE 'Gianni is sure that Pietro ate all the cake.'



In the following sentence, the embedded clause is also articulated with a body lean towards the right. PE, which follows the main subject, is articulated with the same body lean.

bl-r bl-r

GIANNI CAR SEIZE MARIA PE WARN





The choice between sentence initial (with or without PE) and sentence final position is fairly free, as confirmed by the following pairs in which the sentence (a) contains a sentence final object clause and the sentence (b) contains a sentence initial object clause:

- Clausal argument of say:
  - a. Gianni say pietro<sub>a</sub> ix<sub>a</sub> cake eat all 'Gianni says that Pietro ate all the cake.'



b. Pietro cake eat all gianni say

'Gianni says that Pietro ate all the cake.'



- Clausal argument of SURE:
  - a. Gianni sure pietro, ix, cake eat all 'Gianni is sure that Pietro ate all the cake.'



bl-right

b. Pietro cake eat all gianni know sure 'Gianni knows for sure that Pietro ate all the cake.'



iii) Clausal argument of see:

bl-right

a. Gianni see maria leave 'Gianni saw Maria leaving.'



b. Maria Leave Gianni see 'Gianni saw Maria leaving.'



iv) Clausal argument of HAPPY:

a. GIANNI HAPPY PIETRO LEAVE 'Gianni is happy that Pietro left.'



re

b. PIETRO LEAVE GIANNI HAPPY 'Gianni is happy that Pietro left.'



v) Clausal argument of COMPLAIN:

a. Gianni complain train go\_away CL(curved open V): 'get\_on'  $NEG_O$ 

'Gianni complained that the train left and he could not board it.'

b. train go\_away CL(curved open V): 'get\_on' neg\_on gianni complain

'Gianni complained that the train left and he could not board it.'

Non-finite object clauses occupy a different position, though. This is shown in the following sentences, in which we can infer that the object clause is non-finite because:

- i) it cannot contain a tense or aspectual auxiliary and
- ii) the null subject in the object clause is interpretatively dependent (it refers to the main clause subject GIANNI in the (a) sentence and to the main clause indirect object MARIA in the (b) sentence). In both sentences the non-finite object clause appears between the matrix subject and the matrix verb, a position in which finite object clauses do not normally occur.

re

a. GIANNI CONTRACT PUT\_SIGNATURE FORGET 'Gianni forgot to sign the contract.'



b. CHEF IX<sub>a</sub> MARIA<sub>a</sub> MEAT EAT FORCE<sub>a</sub>
'The cook forced Maria to eat meat.'



However, non-finite object clauses (like finite clauses) can also be found in the left periphery of the sentence.

CONTRACT PUT\_SIGNATURE GIANNI FORGET 'Gianni forgot to sign the contract.'



If the main verb takes both an indirect object and an object clause, the following two orders are attested.

bl-right	
<u>re</u>	NVo
a. GIANNI PIETRO PERSUADE LEAVE	5
'Gianni convinced Pietro to leave.'	
bl-right	000-
b. Gianni persuade pietro leave	2
'Gianni convinced Pietro to leave.'	

Finally, both finite and non-finite clauses can appear in another type of structure. In this structure, the main verb is followed by the sign  $\mathbf{Q}_{\text{artichoke}}$  and the object clause immediately follows. This structure, which is very productive, is illustrated in (a) with a finite object clause and in (b) with a non-finite object clause.

Although these sentences may seem bi-clausal constructions involving a question and an answer, they are likely to be special cases of subordination, possibly to be related to free relatives [SYNTAX 3.4]. For instance, they do not have the same non-manuals and intonation of question-answer pairs, as shown by the pair (a) and (b) below, which are the question-answer pairs corresponding to (a) and (b) above.

bl-left	
wh	
a. A: GIANNI SAY Q <sub>artichoke</sub>	
bl-right	nna.
B: PIETRO, CAR POSS, SEIZE	200
'What did Gianni say?' 'Someone stole Pietro's car.'	

bl-left
wh

b. A: GIANNI FORGET Qartichoke
bl-right

B: CONTRACT PUT\_SIGNATURE

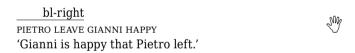
'What did Gianni forget?' 'To sign the contract.'

# 3.3.2.3 Factivity

No peculiarity of object clauses introduced by factive verbs has been identified

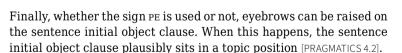
# 3.3.2.4 Special non-manual markers

A different use of space distinguishes finite and non-finite object clauses. If the object clause is finite, it is typically articulated with a body lean, as indicated in the examples below (the transition from object clause to main clause is signalled by body shift).



Body lean can (but does not need to) occur on a non-finite clause, as confirmed by the following sentence.

CONTRACT PUT\_SIGNATURE GIANNI FORGET
'Gianni forgot to sign the contract.'



# 3.3.2.5 Tense and aspectual marking

As expected, aspectual markers can be present in finite object clauses. The examples below show the occurrence of done (a) and dole done done (b).

re

a. PIETRO CONTRACT PUT SIGNATURE DONE GIANNI KNOW 'Gianni knows that Pietro signed the contract.'



re

b. PIETRO CONTRACT PUT SIGNATURE TO BE DONE GIANNI KNOW 'Gianni knows that Pietro will sign the contract.'



### 3.3.2.6 Anaphoric relations with the main clause arguments

When the object clause is non-finite, its subject must be null and its interpretation depends on the subject or the object of the main clause, as indicated above. However, the anaphoric relations with the main clause arguments are more complex in the presence of role shift [SYNTAX 3.3.3].

### 3.3.2.7 Occurrences of null arguments

The subject of the object clause can be null in finite object clauses and must be null in non-finite ones.

### 3.3.3 Role shift

Role shift is a strategy that may be used in contexts where direct speech is used but has a much more general distribution. It is characterized by two general properties. Semantically, the expressions that are signed under role shift are somehow interpreted 'from another person's perspective', or 'with respect to another context' than the context of the actual speech act.

Morpho-syntactically, role shift is overtly marked by some modification, which may involve: i) body shift, ii) change in the direction of eye gaze, and/or iii) altered facial expressions in order to mark that the signer is adopting somebody else's perspective. We will distinguish between role shift as used to report someone else's speech or thought (attitude role shift), and role shift used to describe physical actions performed by someone else (action role shift, also called constructed action).

The following sentence illustrates the occurrence of attitude roleshift. Two features should be stressed. First, after the main verb the signer shifts his body towards the locus associated with the main subject ('Gianni') to indicate that the rest of the utterance should be interpreted from this person's perspective. Second, and related to this, the first person pronoun  $ix_1$  in the embedded subject position does not refer to the actual speaker, as is normally the case with indexical pronouns, but, rather, to the person whose perspective is adopted (namely 'Gianni').

 $\underline{ \quad \text{rs: Gianni} } \\ \text{GIANNI SAY IX}_1 \text{ LEAVE SOON} \\ \text{'Gianni said that he would leave soon.'}$ 



Other expressions are not evaluated with respect to the context of the actual speech act under role shift. Other deictic expressions [PRAGMATICS 1.1] do the same. These include expressions like  $\text{IX}(\text{loc})_{\text{[proximal]'}}$   $\text{IX}(\text{loc})_{\text{[distal]'}}$  Today, tomorrow, now, etc. For example, in the following sentence tomorrow is evaluated with respect to the moment of Gianni's utterance, hence the translation.

rs: Gianni
YESTERDAY GIANNI SAY<sub>1</sub> IX<sub>1</sub> LEAVE TOMORROW
'Yesterday Gianni told me that he would leave today.'

Attitude role shift somewhat resembles direct speech in spoken languages in that it is intended to report more or less faithfully the words or the mental content of the person whose perspective is adopted.

Action role shift is not used to report the content of a thought or of an utterance, but to describe an action. By using action role shift the signer *becomes* the agent of the action and this is indicated (among other things) by body shift towards the position in space associated with the actual person who performed the action. For example, in the following sentence, the verb donate starts being articulated from the signer's body, but, as the signer shifts towards the position associated with Gianni, the sentence indicates that the person who performed the action is not the actual speaker, but Gianni.

 $\frac{\text{re}}{\text{GIANNI ARRIVE BOOK}_{1}\text{CL(flat open 5): 'donate\_book'}_{2}} \overset{\text{rs: Gianni}}{\text{When Gianni arrives, he will give you the book as a present.'}}$ 

However, by using action role shift, the signer does not simply report that someone else performed a given action, but can also indicate how that action was performed.

In the following sentences, the use of role shift allows the signer to show, instead of describing it, the gracious act of Gianni (a) and

the angry attitude of the customer (b). The possibility to directly express how the action is performed, including the body language of the protagonist of the action, makes action role shift a very powerful narrative device.

a. GIANNI HOUSE ARRIVE. MARIA  $IX_1$  FLOWER  $_1$ CL(closed 5): 'donate\_flower'  $_2$ ' 'Gianni arrived. He donated flowers to Maria.'

b.  $IX_1$  QUIET  $IX_1$  SEE WAITER MISTAKE CL(curved open L): 'drop\_dish'

 $\frac{rs: customer}{customer \ CL(curved \ open \ L): \ 'drop\_dish'_1 \ CL(5): \ 'food\_fall\_on'_1} \\ \underline{rs: \ customer}$ 

GET\_ANGRY 1INSULTE++2

'While there, I see a waiter making a mistake. He makes a dish fall on a customer, who gets dirty. The customer insults the waiter angrily.'

Another noticeable property is that, when reporting a dialogue or an event involving multiple persons, the signer can role shift into (assume the perspective of) multiple characters. This may happen sequentially, as when the signer shifts back and forth between two loci in the signing space linked to two characters, or simultaneously, when, in action role shift, the dominant and non-dominant hands represent two characters involved in some action.

#### 3.3.3.1 Markers of role shift

Body shift toward the locus of the person whose perspective is adopted is the main marker of role shift, but this does not need to involve shifting of the entire body. Change in the direction of eye gaze and head movement may suffice. Change in body posture and altered facial expressions in order to mark that the signer is adopting somebody else's perspective also frequently occur.

### 3.3.3.2 Integration of the role-shifted clause into the main clause

There is some evidence that an object clause marked by role shift is less integrated into the main clause than the corresponding object clause without role shift. This is suggested by the following con-

trast. In sentence (a) there is no role shift, therefore the third person pronoun  ${\rm IX}_3$  is used to refer to the matrix subject  ${\rm GIANNI}.$  The object clause is fully integrated into the main clause, as shown by the fact that the entire sentence can be interpreted as a direct question, although the sign what is the object of the embedded clause. Sentence (b) is minimally different: as role shift occurs,  ${\rm GIANNI}$  is referred to by the pronoun  ${\rm IX}_1.$  However, the interpretation in which the entire sentence is interrogative is not possible. The sign  ${\rm Q}_{\rm artichoke}$  can be interpreted only inside the embedded structure, as shown by the translation.

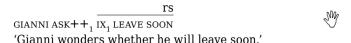
$$\frac{re}{a.\; GIANNI_a\; IX_a\; SAY\; IX_{3a}\; BUY\; Q_{artichoke}}$$
 'What did Gianni say that he bought?' 
$$\frac{wh}{rs}$$
 b. GIANNI SAY  $IX_1\; BUY\; Q_{artichoke}$  'Gianni said: "What did I buy?"'

### 3.3.3.3 Syntactic contexts introducing attitude role shift

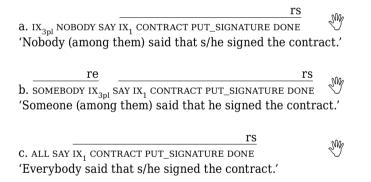
Verbs that support attitude role shift include utterance predicates (like SAY) and propositional attitude predicates (like THINK). The following sentences contain a representative, but not complete, list of verbs that can introduce attitude role shift.

e. GIANNI TEXT IX<sub>1</sub> LEAVE SOON
'Gianni said by text message that he would leave soon.'

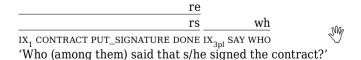
As shown by the following sentence, attitude role shift can occur in an indirect question introduced by an interrogative verb.



Attitude role shift is not restricted to cases where the subject of the main verb is a proper name or an expression denoting a definite individual, like in the examples above. Provided that spatial anchoring is possible, the subject of the main verb can be a quantification [SYNTAX 4.4]. This is shown in the following examples.



Role shift is possible also when the subject of the main verb is an interrogative expression, as in the following example.



### 3.3.3.4 Special signs introducing action role shift

Attitude role shift is systematically introduced by verbs that report a mental attitude or an act of saying, apart from intrinsically negative verbs like DENY that seem to resist role shift. Action role shift does not need to be introduced by any special sign.

3.3.3.5 Syntactic differences between action role shift and attitude role shift

Possible differences of the level of integration into the main clause of action and attitude role shift need to be further studied.

### 3.4 Relative clauses

Relative clauses are subordinate clauses that modify a noun (called *head* of the relative clause). The noun modified by the relative clause has a syntactic role both in the main clause and in the relative clause. LIS makes a productive use of relative clauses marking them with manual [SYNTAX 3.4.2] and non-manual markers [SYNTAX 3.4.6].

### 3.4.1 Types of relative clause

LIS displays more than one type of relative clauses. It has both what we shall call *full* relative clauses and *free* relative clauses.

In LIS full relative clauses, the head noun (always in bold in the examples) is produced inside the relative clause (always within brackets in the examples) according to its syntactic role. In the following example, the head noun child is the subject of the relative clause predicate EAT, it is marked by specific non-manuals (glossed 'rel') marking relative clauses in LIS [SYNTAX 3.4.6] and it follows the time adverbial yesterday modifying the predicate of the relative clause. Time adverbials always mark the beginning of a clause in LIS [SYNTAX 2.3.1.2]. The entire relative clause is marked by specific non-manuals (glossed 'rel'). Optionally, the main clause (TODAY STOMACH\_ACHE in the following example) can contain a pronominal sign (IX $_3$ ) co-referent with the head noun in the relative clause (co-reference between elements in a sentence is signalled in the examples by the presence of the same indexing).

 $\frac{\text{rel}}{\text{[YESTERDAY CHILD++}_{a}\text{ CAKE EAT PE}_{a}\text{]}} \frac{\text{TODAY (IX}_{3a}\text{) STOMACH\_ACHE}}{\text{The children that yesterday ate the cake today have stomach ache.'}}$ 

In the example below, the head noun dog is produced inside the relative clause in object position.

[P-A-O-L-O DOG<sub>a</sub> FIND PE<sub>a</sub>] L-U-C-A CL(flat open 4): 'wash\_dog' 'Luca washes the dog that Paolo found.'



As opposed to full relative clauses, LIS free relative clauses do not display a head noun modified by the relative clause. In its place, the relative clause displays a *wh*-sign phonologically homophonous to *wh*-signs in LIS *wh*-questions [LEXICON 3.7.5]. The *wh*-sign is produced inside the relative clause and it is marked by the non-manual markings (rel) spreading over the relative clause.

rel
[EXAM DONE WHO] GO\_OUT BE\_ABLE
'Who has taken the exam can go out.'
(recreated from Branchini 2009, 104)



### 3.4.2 Presence or absence of a relativization sign

LIS relative clauses display the presence of manual signs of relativisation. Full relative clauses and free relatives differ for the relativisation sign employed.

### 3.4.2.1 List of relativization signs

LIS full relative clauses display a manual sign (glossed PE in the examples) spatially agreeing with the head noun. The sign PE is produced with only the index finger extended (configuration G in LIS) in the neutral space. During its movement, the wrist twists from a position of the hand with the palm facing the face of the signer to a position of the hand whose palm faces the signer's interlocutor, as illustrated in the video below. During the production of the sign, oral components involving the production of a bilabial phoneme such as /p/ are produced, hence the gloss PE [LEXICON 3.7.6].



When the head noun is an abstract entity or when it is a noun produced on the body of the signer [LEXICON 3.1], the relativisation sign PE agrees with an arbitrary point in the signing space, as shown in the example below.

[P-A-O-L-O M-A-R-I-A IDEA SUGGEST PE] IMPORTANT 'The idea that Paolo suggested to Maria is important.' (recreated from Branchini 2014, 193)



As already pointed out [SYNTAX 3.4.1], LIS free relatives display the presence of a wh-sign. However, not all wh-signs are allowed to mark the relative clause in LIS free relatives. The table below lists the wh-signs permitted or not permitted in this type of construction.

**Table 1** Wh-signs allowed in LIS free relatives

Wh-signs	Availability to mark LIS free relatives
WHO	yes
WHAT	no
WHICH	yes
HOW	yes
HOW_MANY	no
WHERE	yes
WHEN	yes
WHY	yes

As shown in the table above, all wh-signs except what and HOW\_MANY can be used in LIS free relatives. The examples below exemplify free relatives with the different *wh*-signs available to mark this construction in LIS.

rel

a. [EXAM DONE WHO] GO\_AWAY BE\_ABLE

'Who has taken the exam can go out.'

(Branchini 2009, 104)

b. [P-A-O-L-O LIKE WHICH] IX, SEE DONE

'I saw which Paolo likes.'

(Branchini 2009, 105)

C.  $\overline{[G-I-A-N-N-I_3 MONEY_3 GIVE_1 HOW]}$  IX<sub>1</sub> LIKE NOT

'I don't like how Gianni gives me the money.'

(Branchini 2009, 106)

d. [SISTER POSS<sub>1</sub> HOLIDAY GO WHERE] BEAUTIFUL

'Where my sister went on holiday is beautiful.' (Branchini 2009, 106)

rel

e. [TRAIN ARRIVE WHEN] IX, READ DONE

'I read when the train arrives.'

rel

f. [p-a-o-l-o leave why] ix<sub>1</sub> find\_out

'I found out why Paolo left.'

(Branchini 2009, 106)

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

LIS full relative clauses do not display a different relativisation sign for human/non-human referents represented by the head noun. In other words, regardless of the human/non-human feature of the head noun, LIS full relative clauses display the same sign PE.

Free relative clauses display *wh*-signs used for human referents, like the *wh*-sign who, and *wh*-signs employed for non-human referents, like the *wh*-sign what.

### 3.4.2.1.2 Singular/plural specificity of the relativization sign

In LIS full relative clauses, the manual relativisation sign PE does not inflect for the singular/plural feature of the head noun. Even in the presence of a plural referent, the sign PE is invariant in its form. In the example below, although the head noun CHILD++ is plural, the sign PE agrees with one point in the signing space associated with the head noun.

rel
[CHILD++a WIN PEa] TEACHER PRIZE GIVE



'The teacher gives the prize to the children who win.' (recreated from Branchini 2014, 192)

As for LIS free relative clauses, *wh*-signs are specified for the singular number feature.

### 3.4.2.2 Position of the relativization sign

In full relative clauses, the sign PE can be produced at the end of the relative clause, as in the example (a), or adjacent to the head noun following it, as in the example (b).

a.  $[CHILD++_a WIN PE_a]$  TEACHER PRIZE GIVE 'The teacher gives the prize to the children who win.' (Branchini 2014, 192)

b. [CHILD<sub>a</sub> PE<sub>a</sub> COMPETITION WIN] TEACHER PRIZE GIVE 'The teacher gave a prize to the child who won the competition.' (Branchini 2014, 199)

In free relatives, the *wh*-sign is always produced at the end of the relative clause [SYNTAX 3.4.2.1].

# rel [EXAM DONE WHO] GO\_AWAY BE\_ABLE 'Who has taken the exam can go out.' (Branchini 2009, 104)

### 3.4.2.3 Optionality or obligatoriness of the relativization sign

In LIS full relative clauses, the presence of the relativisation sign PE is optional, as shown in the relative clause below where the relativisation sign is absent.

rel
[CHILD WIN] TEACHER PRIZE GIVE
'The teacher gives the prize to the child who wins.'

In LIS free relative clauses, the presence of the *wh*-sign is obligatory.

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

In LIS full relative clauses, the relative clause (including the head noun) precedes the main clause regardless of the syntactic role of

the head noun in the main clause. In the examples below, the head noun CHILD is the subject of the main clause predicate FALL-DOWN in (a); and the indirect object of the main clause predicate GIVE in (b). In both sentences, the relative clause precedes the main clause.

a. [CHILD, FOTBALL PLAY PE,] YESTERDAY TREE CL(V): 'fall\_down' 'The child who plays football yesterday fell off a tree.'

b. [CHILD<sub>a</sub> FOOTBALL PLAY PE<sub>a</sub>] YESTERDAY A-N-N-A<sub>b</sub> BALL NEW CL(unspread curved open 5): 'give\_ball', DONE 'Yesterday Anna gave a new ball to the child who plays football.'

In LIS free relatives, the relative clause always precedes the main clause, regardless of the syntactic role of the wh-sign in the main clause. In the example (a) below, the wh-sign who is the subject of the main clause predicate EXIT, while in (b) the wh-sign WHICH is the object of the main clause predicate SEE. In both sentences, the relative clause precedes the main clause.

a. [EXAM DONE WHO] GO\_AWAY BE\_ABLE 'Who has taken the exam can go out. (Branchini 2009, 104)

rel b. [P-A-O-L-O LIKE WHICH] IX, SEE DONE 'I saw which Paolo likes.' (Branchini 2009, 105)

### 3.4.4 Subject vs. object relativization

LIS relative clauses do not show a different relativisation pattern with respect to the syntactic role of the head noun in the relative clause.

Manual and non-manual markers of relativisation do not change depending on the syntactic role of the head noun with the respect to the relative clause predicate (subject, object or adjunct).

### 3.4.5 Displacement of relative clauses

### 3.4.6 Special non-manual marking

LIS displays a combination of obligatory non-manuals specifically marking the relative clause. Their distribution in the relative clause differs in the two syntactic types identified above: full relative clauses and free relative clauses.

### 3.4.6.1 List of non-manual markers

The non-manuals marking LIS full relative clauses are: raised eyebrows, squint eyes, and a forward head nod.



Figure 1 Non-manual marking of LIS full relative clauses

Free relative clauses are marked by the following non-manual markings: raised eyebrows and squint eyes.



Figure 2 Non-manual marking of LIS free relative clauses

### 3.4.6.2 The spreading domain of each non-manual marker

In full relative clauses, the non-manual markings raised eyebrows and squint eyes (glossed 'rel' in the examples) may spread over the entire relative clause reaching their maximal intensity over the sign PE, when the latter is produced at the end of the relative clause (a), or over the last sign of the relative clause when the sign PE is not produced (b).

a. [CHILD++ WIN PE] TEACHER PRIZE GIVE
'The teacher gives the prize to the children who win.'
(Branchini 2014, 192)

b. [CHILD WIN] TEACHER PRIZE GIVE

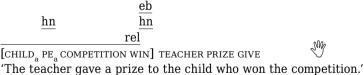
'The teacher gives the prize to the child who wins.'

Alternatively, raised eyebrows and squint eyes can be produced only over PE.

hn
rel
[CHILD WIN PE] TEACHER PRIZE GIVE
'The teacher gives the prize to the child who wins.'

The non-manual marking head nod is produced over the sign PE (either when it is produced at the end of the relative clause, as in the example above, or next to the head noun, as in the example below). A signing pause, an optional eye blink, and a head nod mark the end of the relative clause and the beginning of the main clause.

Spreading of raised eyebrows and squint eyes over the entire relative clause is obligatory when the sign PE is produced next to the head noun, as in the example below.



'The teacher gave a prize to the child who won the competition.' (recreated from Branchini 2014, 199)

In free relatives, the non-manual markings raised eyebrows and squint eyes (glossed 'rel' in the examples) obligatorily spread over

the entire relative clause. A signing pause and eye blink mark the end of the relative clause and the beginning of the main clause.

 $\frac{-eb}{rel}$  [EXAM DONE WHO] TODAY RELAX 'Who has taken the exam today is relaxed.' (Branchini 2009, 104)

### 3.4.7 Restrictive vs. non-restrictive relative clauses

LIS distinguishes between restrictive and non-restrictive relative clauses.

Typically, restrictive relative clauses provide information which is crucial in identifying the referent head noun, which is non-specific, as in the sentence: 'The woman who speaks French works in the Italian Embassy'. On the other hand, non-restrictive relative clauses provide additional information on an already specified referent, as in the sentence: 'Laura, who speaks French, works in the Italian Embassy'.

While in LIS restrictive relative clauses the head is inside the relative clause, in LIS non-restrictive relative clauses the head is always produced outside the relative clause. More precisely, the head immediately precedes the relative clause.

While LIS restrictive full relative clauses typically display the relativisation sign PE, non-restrictive relative clauses cannot. Moreover, non-restrictive relative clauses are not marked by the 'rel' non-manual markings described for restrictive relative clauses [SYNTAX 3.4.6.1]. The non-manuals marking non-restrictive relative clauses are: an eye blink, head nod, and a signing pause at the beginning and end of the non-restrictive relative clause. The example below illustrates a non-restrictive relative clause in LIS.

 $\frac{hn}{\underline{eb}} \qquad \qquad \frac{hn}{\underline{eb}}$ MARIA [LAST^YEAR MEDICINE NEW FIND\_OUT] PRIZE WIN 'Maria, who discovered a new medicine last year, won the prize.' (recreated from Branchini, 2017)

As shown in the example above, the head noun MARIA precedes the time adverbial LAST^YEAR. As time adverbs sit at the beginning of the clause, this shows that the head is external to the relative clause.

Furthermore, while the head of a restrictive relative clause must be an indefinite noun, the head of a non-restrictive relative clause can be a definite referent: a proper name (a), a pronominal sign (b), a definite description (c).

$$\frac{\text{hn}}{\text{eb}}$$
  $\frac{\text{hn}}{\text{eb}}$ 

a. Maria [CITY ROME KNOW NOT] ARRIVE LATE

'Maria, who doesn't know the city of Rome, arrives late.'

$$\begin{array}{cc} \underline{hn} & \underline{hn} \\ \underline{eb} & \underline{eb} \end{array}$$

b.  $\text{IX}_3$  [SPIDER FEAR] HOUSE a  $\text{POSS}_1$  COUNTRYSIDE VISIT a NEVER 'He, who is afraid of spiders, never visits my house in the countryside.'

$$\frac{\text{hn}}{\text{eb}}$$
  $\frac{\text{hn}}{\text{eb}}$ 

C. BOYFRIEND POSS $_3$  [CITY ROME KNOW NOT] ARRIVE LATE 'Her boyfriend, who doesn't know the city of Rome, arrives late.' (Branchini 2014, 231)

### 3.5 Adverbial clauses

An adverbial clause is part of a complex sentence. Although it is sentential in form, its function is adverbial. In this section, we will describe adverbial clauses expressing condition of the main event [SYNTAX 3.5.1], time [SYNTAX 3.5.2], location [SYNTAX 3.5.3] manner [SYNTAX 3.5.4], reason [SYNTAX 3.5.5], purpose [SYNTAX 3.5.6], and concession [SYNTAX 3.5.7].

### 3.5.1 Conditional clauses

A conditional sentence is composed of two clauses: the antecedent clause expressing a condition, and the consequent clause. The antecedent clause is syntactically dependent on the consequent clause.

Semantically, conditional clauses may be distinguished into i) factual conditionals, ii) counterfactual conditionals, iii) concessive conditionals, and iv) non-predictive/peripheral conditionals. In the following sections, each type of conditional clause, and also other less standard conditional sentences, will be described in detail.

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

Inside conditional sentences, the following non-manual markers (glossed 'cond') are obligatory found: raised eyebrows, head and body movement, eye blink, and signing pause. Their occurrence and distribution in the different types of conditional clauses will be illustrated below.

### 3.5.1.2 Factual conditionals

In factual conditionals, the condition expressed by the antecedent (subordinate) clause is realistic and possible. The following example is a factual conditional clause in LIS.

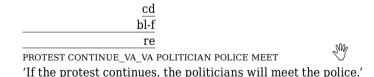


'If Anna arrives late at the train station, she will miss the train.'

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

The obligatory non-manual markers used to mark the antecedent clause in factual conditional clauses are: raised eyebrows (re), chin down (cd) at the end of the antecedent clause, a signing pause and eye blink between the antecedent and the consequent clause and, optionally, body lean forward (bl-f) over the antecedent clause. The consequent clause is not marked by specific non-manual markers.

The following example shows the alignment and spreading of the non-manual marking in a factual conditional clause.



The non-manual markers used in factual conditional clauses are very similar to those used in temporal clauses [SYNTAX 3.5.2.4]. For this reason, in the absence of manual markers, a sentence like the one below might be ambiguous between a factual conditional clause and a temporal clause.

cd bl-f
re

OUTSIDE RAIN PLAY IMPOSSIBLE\_NO\_WAY

'If it rains, it is impossible to play.'

'When it rains, it is impossible to play.'



#### Manual conditional signs in factual conditionals 3.5.1.2.2

Different manual signs are available to mark factual conditionals. The following list is not exhaustive of the variants used on the national territory. The more commonly used are the sign glossed IF(1) produced either as a one-handed or two-handed sign (a-b), the sign glossed IF(2) (c), the sign glossed IF(3), a variant from the northern-east city of Trieste (d), the sign glossed IF(4), a variant from the city of Turin (e), the sign glossed IN\_CASE (f), and the sign glossed OCCASION (g).



a. IF(1) (one-handed sign)



b. IF(1) (two-handed sign)



c. if(2)



d. if(3) (Trieste)



e. if(4) (Turin)



f. in\_case



q. occasion

Manual markers are optional. When present, they occur at the beginning of the antecedent clause and they co-occur with the obligatory non-manual markers spreading over the antecedent clause, as shown below.

cd re IF RAIN GO\_OUT NOT 'If it rains, I don't go out.'



When the manual marker is absent, the obligatory non-manual markers alone are able to mark the sentence as a conditional clause.

# 3.5.1.2.3 Order of the components of the factual conditional clause

The antecedent clause always precedes the consequent clause.

cond

TOMORROW RAIN THEATRE CANCEL



'If it rains tomorrow, the performance will be cancelled.'

### 3.5.1.3 Counterfactual conditionals

In counterfactual conditionals, the event described in the antecedent clause is unrealistic, very unlikely, or impossible. The following example is a counterfactual conditional clause.

cond

 $\mathsf{LARA_a} \ \mathsf{CHILD_b} \ \mathsf{_a} \mathsf{SCOLD_b} \ \mathsf{IX}_{3b} \ \mathsf{ARM} \ \mathsf{BREAK} \ \mathsf{NOT}$ 



'If Lara had scolded the child, he wouldn't have broken his/her arm.'

### 3.5.1.3.1 Non-manual markers and their properties in counterfactual conditionals

The non-manuals marking counterfactual conditionals are the same used in factual conditionals: raised eyebrows (re), chin down (cd) at the end of the antecedent clause, a signing pause and eye blink between the antecedent and the consequent clause and, optionally, body lean forward (bl-f) over the antecedent clause. They only mark the antecedent clause. As in factual conditional clauses, the consequent clause is not marked by specific non-manual markers.

The example below shows the occurrence and spreading of nonmanual markers in counterfactual conditional clauses.

IX, PRESIDENT FRANCE PRESIDENT, IX, JAPAN IX, MEET, ''If I were the French president, I would meet the Japanese president'

### 3.5.1.3.2 Manual conditional signs in counterfactual conditionals

Optionally, the same manual signs used in factual conditional clauses may be employed in counterfactual conditional clauses [SYNTAX 3.5.1.2.2]. When this happens, the obligatory non-manuals marking the antecedent clause are also produced. When the manual marker is absent, the obligatory non-manual markers alone are able to mark the sentence as a conditional clause.

# 3.5.1.3.3 Order of the components of the counterfactual conditional clause

As in factual conditional clauses, the antecedent clause always precedes the consequent clause in counterfactual conditionals.

cond

L-U-C-A $_{\rm a}$  IX $_{\rm 3a}$  SMOKE QUIT LIVE CONTINUE



'If Luca had quitted smoking, he would have lived longer.'

#### 3 5 1 4 Concessive conditionals

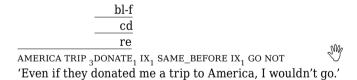
Conditional concessive clauses, typically introduced by 'even if' in English, are a construction in which the truth of the proposition expressed by the antecedent clause does not affect the truth of the proposition expressed by the consequent clause. An example of a concessive conditional clause in LIS is provided below.

$$\frac{\text{cond}}{\text{RING }_{3}\text{DONATE}_{1}\text{ IX}_{1}\text{ SAME ACCEPT NOT}}$$
'Even if s/he gave me a ring, I wouldn't accept it.'

Concessive conditionals have the same structure of concessive clauses [SYNTAX 3.5.7].

### Non-manual markers and their properties in concessive clauses

The non-manual markers used to mark concessive conditional clauses are the same employed in factual and counterfactual conditional clauses: raised eyebrows (re), chin down (cd) at the end of the antecedent clause, a signing pause and eye blink between the antecedent and the consequent clause and, optionally, body lean forward (blf) over the antecedent clause.



#### 3.5.1.4.2 Manual conditional signs in concessive conditionals

The same manual markers used in the antecedent of factual and counterfactual conditional clauses may be optionally employed to mark the antecedent of concessive conditional clauses [SYNTAX 3.5.1.2.2]. In addition to them, the concessive interpretation is obtained through the obligatory use of the manual markers illustrated below: SAME (a) and SAME\_BEFORE (b). Other synonyms of these signs may also be employed.



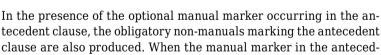
a. SAME



b. same before

The manual markers same and same\_before are produced in the consequent clause, either before or after the subject.

Libia IX(loc) trip  $_3$ donate $_1$  IX $_1$  same go not 'Even if s/he donated me a trip to Libia, I wouldn't go.'



tecedent clause, the obligatory non-manuals marking the antecedent clause are also produced. When the manual marker in the antecedent clause is absent, the obligatory non-manual markers alone are able to mark the sentence as a conditional clause.

3.5.1.4.3 Order of the components of the concessive conditional clause

As in factual and counterfactual conditional clauses, in concessive conditionals the antecedent clause must precede the consequent clause.

### 3.5.1.5 Non-predictive/peripheral conditionals

Non-predicative/peripheral conditionals have the superficial form of conditional clauses. However, the antecedent clause does not specify any condition.

cond

BOYFRIEND COME MEANING  $IX_3$  ANGRY ANYMORE



'If your boyfriend comes, it means he's not angry anymore.'

# 3.5.1.5.1 Non-manual markers and their properties in non-predictive/peripheral conditionals

The non-manual markers of predictive/peripheral conditionals are the same of factual, counterfactual, and concessive conditional clauses: raised eyebrows (re), chin down (cd) at the end of the antecedent clause, a signing pause and eye blink between the antecedent and the consequent clause and, optionally, body lean forward (bl-f) over the antecedent clause.

cd bl-f re

IX<sub>3,3</sub>INVITE<sub>1</sub> IX<sub>3</sub> ANGRY ANYMORE



'If I invite him, he won't be angry anymore.'

Since raised eyebrows and chin down also mark polar questions, the lack of a condition linking the antecedent to the consequent clause, as well as the lack of manual conditional markers, might induce ambiguity in its interpretation between a non-predictive conditional clause and a polar interrogative [SYNTAX 1.2.1] followed by a declarative clause [SYNTAX 1.1], as in the following example.

cd re

 ${\tt HUNGER~IX}_2~{\tt EAT~PALM\_UP~BE\_ABLE~PALM\_UP}$ 

'If you are hungry, you can eat.'

'Are you hungry? You can eat.'



### 3.5.1.5.2 Manual conditional signs in non-predictive/peripheral conditionals

The same manual markers used in the antecedent of factual, counterfactual, and concessive conditional clauses may be optionally employed to mark the antecedent of non-predictive/peripheral conditional clauses.

In the presence of the optional manual marker, the obligatory nonmanuals marking the antecedent clause are also produced. When the manual marker is absent, the obligatory non-manual markers alone are able to mark the sentence as a conditional clause.

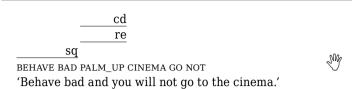
### 3.5.1.5.3 Order of the components of the non-predictive/peripheral conditional clause

As in factual, counterfactual, and concessive conditional clauses, in non-predictive/peripheral conditionals, the antecedent clause must precede the consequent clause:

cond
ANNA CALL<sub>3</sub> PLEASE WARN<sub>3</sub> TIME PUNCTUAL
'If you call Anna, please warn her to be on time.'

### 3.5.1.6 Other conditional constructions

LIS has a construction called Imperative and Declarative (IaD) [SYN-TAX 1.3.9] expressing the possibility of an event, which differs in form, but not in meaning, from a conditional clause. The Declarative and Imperative is so called as it is a bi-clausal construction composed of an imperative clause [SYN-TAX 1.3] followed by a declarative clause [SYN-TAX 1.1]. It is marked by the following non-manual markers obligatorily spreading over the imperative clause: squint eyes (sq), raised eyebrows (re), and chin down (cd).



### 3.5.2 Temporal clauses

Temporal clauses are adverbial clauses indicating a temporal relation between the event described in the main clause and the event taking place in the subordinate clause. The temporal relation may be of simultaneity (if the two events are simultaneous), anteriority (if the event of the subordinate clause takes place before the event described in the main clause), or posteriority (if the subordinate clause describes an event that takes place after the event of the main clause).

### 3.5.2.1 Internal structure of temporal clauses

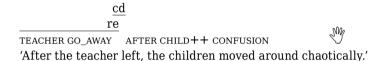
Temporal simultaneity between the subordinate clause and the main clause is expressed either i) by juxtaposing the two clauses, or ii) through the optional use of a manual marker. When the two clauses are juxtaposed, the subordinate clause is marked with non-manual markers: raised eyebrows (re), chin down (cd), a signing pause, and, optionally, eye blinking between the two clauses.

$$\frac{cd}{\frac{re}{IX_2}\sum_{2}TEXT_1} IX_1 DRIVE}$$
 'When you sent me the text message, I was driving.'

Sometimes, beside the non-manuals marking the subordinate clause described above, a manual marker, glossed moment in the following example, may be produced.

Anteriority of the event in the subordinate clause may be expressed by the same non-manual markers used to mark simultaneity, and no manual markers.

Alternatively, anteriority may be expressed through the employment of the manual marker glossed AFTER and the same non-manual markers used to mark simultaneity spreading over the subordinate clause.



Another option is to produce the manual sign done [LEXICON 3.3.1] after the subordinate clause predicate, and the non-manual markers spreading over the subordinate clause.

$$\frac{cd}{re}$$
LUCA VASE BREAK DONE IX<sub>1</sub> ARRIVE

'I arrived after Luca broke the vase.'

Posteriority of the event in the subordinate clause may be expressed through the use of a manual marker occurring in the main clause, as the sign glossed BEFORE in the example below, together with the same non-manual markers used in simultaneity and anteriority spreading over the subordinate clause.

Another way to express posteriority is through the use of the manual sign done [LEXICON 3.3.1] produced after the main clause predicate together with the same non-manuals marking simultaneity and anteriority spreading over the subordinate clause.

cd

 $\overline{\text{IX}_{1}}$  ARRIVE LUCA<sub>a</sub>  $\overline{\text{IX}_{a}}$  VASE BREAK DONE 'Luca broke the vase before I arrived.'



### 3.5.2.2 Manual signs marking subordination in temporal clauses

Different manual signs may be used to express simultaneity: WHEN (a), MOMENT (b), EXACTLY (c), and the phrases TIME NOW PE (d) and TIME NOW IDENTICAL (e) (or TIME IDENTICAL NOW).



a. when



b. Moment



C. EXACTLY







d. TIME

NOW

PΕ







e. TIME

NOW

IDENTICAL

Note that these manual signs are optional. While the manual sign WHEN is produced at the beginning of the subordinate clause, the other signs are produced at the beginning of the main clause. Each manual sign is shown below with an example containing it.

re

a. WHEN IX<sub>1</sub> PADUA ARRIVE IX<sub>1</sub> 1TEXT<sub>2</sub>

'When I arrive in Padua, I will send you a message.'



cd

**b.** <sub>2</sub>TEXT<sub>1</sub> MOMENT IX<sub>1</sub> SHOWER



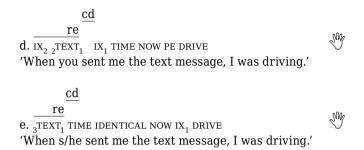
'When you sent me the text message, I was taking a shower.'

cd re

C. 3TEXT<sub>1</sub> EXACTLY IX<sub>1</sub> SHOWER



'When s/he sent me the text message, I was taking a shower.'

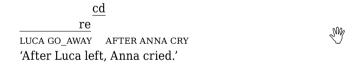


The optional manual sign expressing anteriority is the sign AFTER.



AFTER

When produced, it appears at the beginning of the main clause.



LIS displays different manual signs that may be optionally used to express posteriority:

BEFORE (a), EARLIER (b), NOT\_YET (c). The phrase ALREADY BEFORE (d) can also be used.



a. BEFORE





b. Earlier



C. NOT\_YET





d. ALREADY

BEFORE

Each manual sign is shown below together with an example containing it.

cdre a.  $\overline{\text{IX}_2 \text{ ARRIVE}}$   $\text{IX}_{1\text{pl}}$  BEFORE EAT DONE 'We ate before you arrived.'



re b.  $\overline{\text{IX}_2 \text{ ARRIVE}}$   $\text{IX}_{\text{1pl}}$  EARLIER EAT DONE 'We ate before you arrived.'



cd re C. ALARM NOT\_YET IX THIEF GO\_AWAY 'The thief left before the alarm went on.'





d. Bank close A-n-n-a money take already before 'Anna withdrew the money before the bank closed.'



Of these, the manual sign NOT\_YET is the only one occurring inside the subordinate clause, at the end of it. All other signs are produced in the main clause, with some flexibility with respect to their position: the sign before can be produced either at the beginning or end of the main clause, or before the main clause predicate. The manual sign already before can be produced either at the end of the main clause, or be separated by other signs within the main clause predicate, as can be observed below.

cd re

IX, CINEMA ARRIVE GIRLFRIEND ALREADY TICKET BUY BEFORE 'When I arrived at the cinema, my girlfriend had already bought the tickets.'

The sign EARLIER can be produced before the main clause predicate, or at the beginning of the main clause.

### 3.5.2.3 Other markers of subordination in temporal clauses

### 3.5.2.4 Non-manual markers in temporal clauses

The same non-manual markers are used to express all types of temporal relations (simultaneity, anteriority, and posteriority). They are composed of: raised evebrows (re) spreading over the subordinate clause, chin down (cd) occurring at the end of the subordinate clause, a signing pause at the end of the subordinate clause and, optionally, eye blink between the two clauses. These non-manual markings are obligatory, but they are not unique to this construction, they are rather employed in different types of constructions in LIS. For example, they also mark conditional clauses [SYNTAX 3.5.1] and in the absence of manual signs, a sentence might be ambiguous between a simultaneous temporal clause and a conditional clause.

> cd re

OUTSIDE RAIN PLAY IMPOSSIBLE NO WAY

'When it rains outside, it is impossible to play.'

'If it rains outside, it is impossible to play.'



### 3.5.2.5 Position of the temporal clause with respect to the main clause

The subordinate clause always precedes the main clause in all types of temporal clauses. The manual sign specifying the temporal relation between the two clauses typically sits in the main clause.

3.5.2.6 Simultaneous expression of the main event and the adverbial clause To be developed.

### 3.5.3 Locative clauses

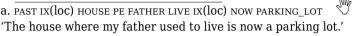
Locative clauses are dependent clauses specifying the location where the event predicated of in the main clause takes place. An example of a locative clause (within squared brackets) in English is the following: 'John has hidden his book [where the dog sleeps]'.

LIS expresses locative clauses through the use of relative clauses [SYNTAX 3.4].

### 3.5.3.1 Internal structure of locative clauses

Locative clauses in LIS take the form of a relative clause [SYNTAX 3.4].

The locative clause may contain a head noun, as HOUSE in (a), or a more generic sign expressing location, as AREA in (b). The relativisation sign PE may be optionally produced at the end of the locative clause (b) or next to the head noun (a). Its presence is, however, not compulsory, as shown in (c).



b. Football child++ play area pe CL(4): 'grass grow' any-MORE

'The grass doesn't grow anymore where the children play football.'

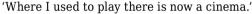
rel

C. PAST FATHER MOTHER IX HOUSE LIVE IX(loc) NOW PARKING LOT 'In the place where my parents used to live, now there is a parking lot.'

Another way to express locative clauses in LIS is through a free relative clause [SYNTAX 3.4], that is, a relative clause that, instead of displaying a head noun and the sign PE, employs a wh-element, like the sign where in the example below.

rel

PAST IX, PLAY WHERE NOW CINEMA





### 3.5.3.2 Manual signs marking subordination in locative clauses

As already pointed out, the same manual signs employed in relative clauses may be used to mark the subordinate clause of locative clauses. These are the sign PE optionally produced either at the end of the sentence-initial locative clause or after the head noun.

Another manual marker used in locative clauses is the sign where produced at the end of the subordinate clause.

3.5.3.3 Other markers of subordination in locative clauses To be developed.

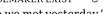
### 3.5.3.4 Non-manual markers in locative clauses

The locative clause is marked by the same non-manuals marking relative clauses, namely, squint eyes (sq), raised eyebrows (re) eyeblink (eb) and head nod (hn).

The spreading domain and obligatoriness of the different non-manual markings differ. While the non-manual marker squint eyes obligatory spreads over the entire locative clause, the non-manual marking raised eyebrows appears to be optionally produced. When present, it may spread i) only over the sign PE when it surfaces at the end of the locative clause (in full relatives), as in sentence (a) below, ii) only over the *wh*-sign (in free relatives), as in sentence (b) below, or iii) over the entire locative clause, as shown in sentence (c) below. In the absence of the sign PE in full relatives, the non-manual marking raised eyebrows may be substituted by repeated head nods produced at the end of the locative clause (d). Finally, a head nod and an eyeblink separates the locative clause from the main clause. The following sentences reproduce the spreading domain of the different nonmanuals marking locative clauses in LIS.

hn re sq eb





'There is a shoemaker shop near the place where we met vesterday.'

sq eb

b. Past IX, Play where Now Cinema



'Where I used to play there is now a cinema.'

hn re sg eb

C. IX<sub>1</sub> EAT DONE POINT PE IX<sub>1</sub> COMPUTER FORGET IX<sub>1</sub>



'I forgot the computer where I ate.'

hn hn sa eb d. Past father mother ix house live ix(loc)

PARKING LOT



'Near the house where my parents used to live there is now a parking lot.'

### 3.5.3.5 Position of the locative clause with respect to the main clause

As a general rule, the locative clause precedes the main clause. However, we should report the possibility of topicalizing the main clause at the left periphery of the locative clause.

re sq COMPUTER IX, FORGET POINT PE PAST IX, EAT DONE 'I forgot the computer where I ate.'



3.5.3.6 Simultaneous expression of the main event and the adverbial clause To be developed.

#### 3.5.4 Manner clauses

Manner clauses are dependent clauses expressing the way in which the event in the main clause is realized. An example of a manner clause (within squared brackets) in English is the following: 'Carla sewed the trousers [as her mother taught her]'. In this sentence, the sentence-final manner clause, which is introduced by the subordinating morpheme 'as', clarifies the way in which Carla carried out the event of sewing.

#### 3.5.4.1 Internal structure of manner clauses

Manner meaning in LIS can be expressed by two different structures. They may be dependent clauses in the form of a free relative clause [SYNTAX 3.4]. As such, they are dependent on a main clause and they contain the wh-element How surfacing at the end of the manner clause, but no head noun, as in the sentence below.

IX<sub>2.2</sub>EXPLAIN<sub>1</sub> HOW RICE IX<sub>1</sub> COOK DONE 'I cooked the rice the way you explained to me.'



A manner meaning can also be expressed by an adverbial dependent clause introduced by a subordinating sign, as the sign identical in the sentence below.



 ${\rm IX}_2$  HOUSE BUILD IDENTICAL TIME PAST 'You built the house as they used to do in the past.'

### 3.5.4.2 Manual signs marking subordination in manner clauses

Manner clauses are marked by the subordinating *wh*-morpheme How obligatorily produced at the end of the manner clause when they have the structure of a free relative clause (a). They are introduced by a subordinating manual sign, such as IDENTICAL (b), PE (c) or AS\_IF (d), when they are adverbial dependent clauses.

rel	MA
a. IX <sub>2 2</sub> EXPLAIN <sub>1</sub> HOW RICE IX <sub>1</sub> COOK DONE	4
'I cooked the rice the way you explained to me.'	
b. ix <sub>2</sub> house build identical time past	S
'You built the house as they used to do in the past.'	_
C CADIA IV CEW IV DE DACT MOTHED TEACH	M
C. CARLA $_{\rm a}$ IX $_{\rm a}$ SEW IX $_{\rm a}$ PE PAST MOTHER TEACH $_{\rm 3a}$ 'Carla sews as her mother taught her to.'	U
d. $IX_3$ behave as_if house $POSS(G)_3$	M
'He behaves as if the house was his own.'	V

3.5.4.3 Other markers of subordination in manner clauses To be developed.

### 3.5.4.4 Non-manual markers in manner clauses

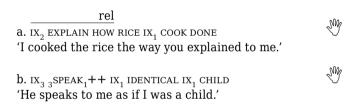
Non-manual markers are only present when the manner meaning is expressed by free relative clauses. In these sentences, the non-manuals are the same marking free relative clauses, namely, squint eyes (sg), raised evebrows (re), head nod (hn) and eve blink (eb).

The non-manual marking squint eyes is obligatorily produced over the entire manner clause, raised eyebrows is optionally produced over the sign How. The non-manuals head nod and eyeblink are obligatorily produced at the end of the manner clause and before the main clause.

eb	
$\overline{\mathrm{hn}}$	
sq	°NN
IX <sub>2</sub> EXPLAIN HOW RICE IX <sub>1</sub> COOK DONE	2
'I cooked the rice the way you explained to me.'	

# 3.5.4.5 Position of the manner clause with respect to the main clause

When the manner meaning is expressed by a free relative clause, this obligatorily precedes the main clause (a). When the manner meaning is expressed by a simple adverbial clause, this follows the main clause (b).



3.5.4.6 Simultaneous expression of the main event and the adverbial clauseTo be developed.

#### 3.5.5 Reason clauses

Reason clauses (also called causal clauses) are subordinate clauses that typically give a reason for the event expressed in the main clause, as in the following sentence: 'I called you because I missed you'. Here, the reason clause is introduced by 'because'.

The reason clause may also provide the reason for the belief the speaker has towards the event expressed in the main clause. For example, by uttering the sentence 'It (must have) snowed, since the street is white', the speaker does not assert that the reason of snowing is the whiteness of the street, but (s)he is inferring that it snowed from the fact that the street is white.

Reason clauses have something in common with purposes clauses [SYNTAX 3.5.6], since they both express some sort of explanation for the event expressed in the main clause. This is why in some languages,

including Italian (but not LIS), they can be introduced by the same marker (perché 'so that', 'because').

- (i) Ti ho chiamato perché andassi in banca
- (I) you have called so-that (you) go(SUBJ) to bank
- 'I called you so that you would go to the bank.'
- (ii) Ti ho chiamato perché eri andato in banca
- (I) you have called because (you) had gone to bank
- 'I called you because you had gone to the bank.'

Sentence (i) expresses the purpose of the event of calling and the verb in the purpose clause is subjunctive. Sentence (ii) expresses the reason that triggered the event of calling and the verb in the reason clause is indicative. Notice that in sentence (i) the event expressed in the purpose clause (going to the bank) is unrealized at the time of the main event (the calling), whereas the event in the reason clause is realized in (ii). This suggests a way to distinguish the two types of clauses: the event expressed by the purpose clause cannot precede the event in the main clause, while this restriction does not apply to reason clauses.

Still, in Italian there can be cases where the same clause can be interpreted either as a reason clause or as a purpose clause. This happens in the following sentence where the non-finite clause can express either the reason why someone went to the store or the purpose of the visit to the store.

È andato al supermercato per fare la spesa (he) is gone to the store to-do the shopping 'He went to the store to do shopping' 'He went to the store because he wanted to do shopping'

#### 3.5.5.1 Internal structure of reason clauses

Reason clauses in LIS are introduced by the sign glossed REASON, as in the following sentence.

GIANNI CAR DRIVE CL(closed 5): 'car bump and stop' REASON FUEL EXHAUST

'Gianni was driving, his car bumped and stopped because there was no fuel left.'

Reason clauses have the make-up of finite declarative clauses, as shown by the fact that the verb can be inflected. For example, in the following reason clause the verb snow is reduplicated to indicate continuative aspect.

TRAM ARRIVE LATE REASON SNOW++ CL(5): 'snow accumulate' 'The tram arrived late because it continued to snow, and the snow accumulated.

Reason clauses can indicate the relation of causation between the event in the reason clause and the event in the main clause, as in the example above, where the snowing caused the delay of the tram. However, they can also indicate the reason why the speaker has a certain belief. For example, the following sentence was elicited as a comment to a visual narrative in which a person stayed with a swimsuit in the snow and subsequently got sick.

BOY IX STUPID REASON BOAST, OUTSIDE SNOW COLD BODY NAKED ONLY SWIMSUIT. BOAST AFTER WORSE SICK

'That boy is stupid because he is a braggart. It was cold and snowing but he stayed outside with only a swimsuit. He was acting cool, but later he got sick.'

In this sentence, the reason clause can be naturally interpreted as indicating the reason why the speaker thinks that the boy is stupid, namely the fact that he behaved as a braggart in the snow.

# 3.5.5.2 Manual signs marking subordination in reason clauses

The sign Reason obligatorily introduces reason clauses in LIS. However, there is another way to express causality in LIS and this involves the underspecified interrogative sign  $\boldsymbol{Q}_{artichoke}$  discussed in [SYNTAX 1.2.3.2] and illustrated in the following picture.



Q<sub>artichoke</sub>

The following is an example of a sentence expressing causation and involving  $\boldsymbol{Q}_{\rm artichoke}.$ 

CAR CL(closed 5): 'car\_bump\_and\_stop' Qartichoke ENGINE\_OIL EXHAUST
'Why did the car stop? Because the engine oil finished.'

However, the sign  $\mathbf{Q}_{\mathrm{artichoke}}$  does *not* play the role of introducing a subordinate clause in this structure, which is more akin to a question-answer pair ('Why did the car stop? Because the engine oil finished').

The sign glossed REASON is very similar to the *wh*-sign corresponding to 'why', glossed as why. Note that the manual parameters are the same, however the two signs differ in terms of absence/presence of specific non-manuals. The sign REASON introducing a reason clause is articulated with neutral facial expressions (a), whereas the sign interrogative pronoun why is obligatorily produced with the non-manuals typical of *wh*-questions [SYNTAX 1.2.3.1] (b).



a. REASON 'Because'



b. wнy 'Why'

The reader should therefore be careful not to confuse the two signs. The following sentence shows the *wh*-sign why included in an interrogative sentence ('Why did Maria leave the house?') followed by the

answer 'to meet up with a friend'. That this sentence is a questionanswer pair is indicated by the non-manual marking, namely lowered eye-brows (typical of wh-signs) spreading from the beginning to the sign why and raised eye-brows on the answer.

wh MARIA HOUSE GO OUT WHY.FRIEND MEET 'Why did Maria leave the house? To meet up with a friend.'

Conversely, the sign REASON functions as a subordinating conjunction introducing a subordinate reason clause. As shown in the example below, it is not accompanied by any special non-manual marking.

MARIA HOUSE GO OUT REASON FRIEND MEET 'Maria left the house to meet up with a friend.'



3.5.5.3 Other markers of subordination in reason clauses To be developed.

#### 3.5.5.4 Non-manual markers in reason clauses

No specific non-manual marker associated to reason clauses has been identified, apart from eye-blink, which is a common marker of the boundary between matrix and subordinate clause.

3.5.5.5 Position of the reason clause with respect to the main clause

In LIS the reason clause follows the main clause. Cases where the reason clause precedes the main clause (as in the English sentence 'Because you are tired, you should go home now') are not accepted by our informants.

3.5.5.6 Simultaneous expression of the main event and the adverbial clause

A major strategy to express causation in LIS seems to be sequential, with the clause that expresses the causer event following the clause that expresses the caused event. However, thanks to the availability of two manual articulators, in principle the causer event and the caused event can be expressed simultaneously rather than sequentially. In fact, the simultaneous strategy can be used in classifier predicates [MORPHOLOGY 5.1], as in the following example where the dominant hand describes the fall of the man and the non-dominant hand describes the fall of the motorbike

```
MOTORBIKE MAN
dom: CL(V): 'move_to_a' CL(V): 'ride_bike' CL(V): 'man_fall'
n-dom: CL(3): 'be_at_a'
                           CL(3): 'ride_bike' CL(3): 'bike_fall'
'The man got on the motorbike, he rode it for a while until he fell
off from it '
```

However, an important proviso is necessary here. Although the classifier predicate can be used to describe a situation where a man falls because his motorbike does, its meaning is less specific than this. For example, a translation like 'The man got on the motorbike and rode it. The man and motorbike both fell' cannot be excluded. Therefore, classifier predicates cannot be considered structures specialized for causation.

We can conclude that the presence of a structure dedicated to the expression of causation (the clause introduced by the sign REASON) does not prevent the language to express causation in other forms, including classifier predicates and question-answer pairs with the interrogative signs corresponding to 'why'.

#### 3.5.6 Purpose clauses

Purpose clauses are subordinate clauses that specify the goal or the purpose of the action expressed in the main clause, as in the following examples containing respectively a finite and a non-finite purpose clause: 'I woke him up early so that he could arrive on time' and 'I woke up early to arrive on time'.

### 3.5.6.1 Internal structure of purpose clauses

Purpose clauses in LIS are typically introduced by the sign glossed GOAL, as in the following sentence where the purpose clause conveys the information that the reason why Maria goes to the store is that she wants to buy food.

MARIA STORE GO GOAL FOOD BUY++



'Maria goes to the store in order to buy food.'

Purpose clauses introduced by the sign GOAL can have the make-up of finite declarative clauses, as shown by the fact that they can contain a specification of tense or aspect. For example, the purpose clause in the following sentence contains the aspectual marker TO\_BE\_DONE (the sign glossed TO\_BE\_DONE derives from the verb 'must' but is used as an aspectual marker here.

GIANNI MECHANIC CAR BRING TO\_BE\_DONE GOAL OVERHAUL ''Gianni will take his car to the mechanic, so that he gets it serviced.'

The presence of specialised signs introducing purpose and reason clauses (GOAL and REASON respectively) reduces the chances of ambiguity between these two types of clauses in LIS. For example, (a) and (b) below are not ambiguous. They express a reason meaning and a purpose meaning respectively.

**a.** Gianni $_a$  ix $_a$  car function not. Look\_for mechanic reason want fix holiday leave

'Gianni's car does not work. He is looking for a mechanic because he wants to have it fixed and leave for the holidays.'

b. Gianni car function not. look\_for mechanic goal fix ready can holiday leave

'Gianni's car does not work. He is looking for a mechanic so that it can be fixed and he can leave for the holidays.'

# 3.5.6.2 Manual signs marking subordination in purpose clauses

The only sign that could be identified as a marker of subordination in LIS purpose clauses is GOAL. It belongs to the purpose clause, as indicated by consistent eye-blink after the last sign of the matrix clause and before the sign GOAL itself.

3.5.6.3 Other markers of subordination in purpose clauses To be developed.

# 3.5.6.4 Non-manual markers in purpose clauses

No specific non-manual marker associated to purpose clauses has been identified.

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

In LIS the purpose clause naturally follows the main clause. Cases where the purpose clause precedes the main clause (as in the English sentence 'To stop him, we told him a lie') are not produced by our informants.

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

A major strategy to express the goal of an action in LIS is sequential, where the clause that expresses the goal follows the clause that expresses the main event. However, thanks to the availability of two manual articulators, the goal and the main event might be expressed simultaneously rather than sequentially. A hypothetical example is a situation where someone jumps in order to grasp a grape and, although the two actions temporally overlap, grasping is the goal of jumping. In this situation, in principle, in a classifier predicate construction [MORPHOLOGY 5.1] one hand might express the jumping action, while the other hand might simultaneously express the grasping action. Still, the sequential strategy seems to be preferred to the simultaneous strategy, as illustrated by the following example where the action of jumping and the action of grasping are expressed by the two hands one after the other.

MAN<sub>a</sub> IX<sub>a</sub> GRAPE

dom: CL(V): 'jump'

n-dom: GRASP

'The man jumped to grasp the grapes.'

SW

Further research is needed to understand if the preference for sequentiality when expressing the purpose of the action is limited to these types of examples or is more general, possibly expressing the fact that the goal is conceived as temporally coming after the event performed to reach it, even if the two events are simultaneous in reality.

#### 3.5.7 Concessive clauses

By using a concessive clause, a speaker states that something happens in spite of a state of affairs. Concessive clauses are expressed in English with subordinators such as *although* (among others) ('Although Rose hates pineapple, she has eaten my cake').

Concessive clauses are semantically (and often superficially) similar to concessive conditionals [SYNTAX 3.5.1.4]. The main difference between them is that, by using a concessive conditional, one does not entail that the antecedent must be true. For example, the concessive conditional sentence 'Even if Rose hated pineapple, she would eat my cake' does not imply that Rose hates pineapple.

However, the sentence 'Although Rose hates pineapple, she has eaten my cake', a genuine concessive, *does* imply that Rose hates pineapple at the moment of utterance and, nonetheless, she is willing to eat my cake made of pineapple fruit.

While there is clear evidence that concessive conditionals are subordinate clauses, further research is needed to establish the exact syntactic status of LIS constructions that are functionally equivalent to concessive clauses. In this section, we list a variety of ways in which the concessive meaning can be expressed in LIS.

#### 3.5.7.1 Internal structure of concessive clauses

A common way to express the concessive meaning is through the sign glossed same, as in the following sentence.

$$\frac{\text{sq}}{\text{re}}$$
 GIANNI<sub>a</sub> IX<sub>a</sub> SICK SAME JOB PARTICIPATE 'Although Gianni is sick, he goes to work.'



This sentence is a biclausal structure, as revealed by the change in non-manual-marking (raised eyebrows and squint eyes over the sign  $\operatorname{GIANNI}_a\operatorname{IX}_a\operatorname{SICK}$ ). The same type of analysis can be proposed for the following sentence, in which the change of non-manual-marking signals the transition from the first clause (MAN SHORT) to the second one.



# 3.5.7.2 Manual signs marking subordination in concessive clauses

The sign same helps the transmission of the concessive meaning. It is often produced after the concessive clause, as the first (a) or second (b) sign of the main clause.



a. MAN BLIND SAME PASTA COOK BE\_ABLE 'Although the man is blind, he can cook pasta.'



b. L-U-C-A<sub>a</sub> IX<sub>a</sub> CAT ALLERGY IX<sub>b</sub> MARIA SAME CAT BUY 'Although Luca is allergic to cats, Maria buys one.'

We can say that the sign same belongs to the sentence-final clause expressing the state of affairs against which the concessive clause is contrasted, on the basis of the spreading of the non-manual markings. In the examples above, the non-manual markings only spread over the sentence-initial concessive clause, but not over the sign same.

The sign same can also be produced at the end of the main clause, as shown below.

L-U-C-A CAT ALLERGY MARIA CAT BUY SAME 'Although Luca is allergic to cats, Maria buys one.'

However, the presence of the sign SAME in concessive clauses is not obligatory, as shown by the following sentences in which an abrupt change in non-manual-marking signals the transition from the clause that expresses a concession to the following clause.

\_\_\_\_\_re a. MAN SHORT PLAY BASKETBALL  $IX_3$  BE\_ABLE 'Although that man is short, he can play basketball.'

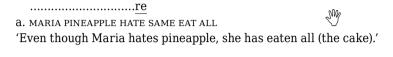
b. IX<sub>a</sub> GABRIELE IX<sub>a</sub> MONTH MARCH IX<sub>3a</sub> ENGAGED WEDDING<sub>b</sub> POSS,

aCOME<sub>b</sub>

'Although Gabriele is busy in March, he will come to my wedding.'

Superficially, concessive clauses are very similar to concessive conditionals, as shown by the concessive clause (a) and the concessive con-

ditional (b) reported below. However, while the non-manual markings spreading over the concessive conditional are stronger, they seem to be less intense over the adverbial concessive clause.



b. Maria IX PINEAPPLE HATE CAKE POSS EAT ALL SAME 'Even if Maria hated pineapple, she would eat all my cake.'

It should be noted that another way to express the concessive meaning is through adversative coordination [SYNTAX 3.1]. In the following sentences, the sign but establishes a contrast between the first and the second clause.

a. L-U-C-A<sub>a</sub> IX<sub>a</sub> CAT ALLERGY EXIST BUT IX<sub>b</sub> MARIA BUY CAT 'Luca is allergic to cats, but Maria buys one.'

b. woman arm++ exist.not but be\_able put\_signature paint dance only feet palm\_back

'This woman does not have arms, but she can put a signature, dance, and paint only with her feet.'

In adversative coordination, the sign  ${\tt BUT}$  and the sign  ${\tt SAME}$  (with the meaning 'just the same') can co-exist. The sign  ${\tt SAME}$  can either follow the sign  ${\tt BUT}$  (a) or be produced at the end of the sentence-final clause (b).

a. WOMAN ARM++ EXIST.NOT BUT SAME PUT\_SIGNATURE PAINT DANCE
ONLY FEET PALM\_BACK
'This woman does not have arms but, nonetheless, she can put a signature, dance, and paint only with her feet.'

b. L-u-c- $A_a$  IX $_a$  CAT ALLERGY EXIST BUT MARIA CAT BUY SAME 'Luca is allergic to cats, but Maria buys one just the same.'

Notice that the optional position of the sign same at the end of the sentence-final clause is also found in concessive conditionals, as shown in the example repeated below.

re

M MARIA IX, PINEAPPLE HATE CAKE POSS, EAT ALL SAME 'Even if Maria hated pineapple, she would eat all my cake.'

3.5.7.3. Other markers of subordination in concessive clauses To be developed.

## 3.5.7.4 Non-manual markers in concessive clauses

A clear change in non-manual marking is systematically used to create a contrast between the sentence-initial clause expressing a concession and the sentence-final clause against which it is contrasted, roughly consisting in raised evebrows (re) and, optionally, squint eyes (sq).

It should be noticed that the three types of constructions expressing the concessive meaning (concessive clauses, concessive conditionals and adversative coordination) differ in the presence and intensity of the non-manual markings. While concessive conditionals are strongly marked by raised eyebrows over the conditional clause, concessive clauses are less strongly marked by raised brows and, optionally, by squinted eyes. Adversative coordination lacks the presence of specific and consistent non-manual marking.

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

The concessive clause must precede the main clause. This is also the case in concessive conditionals, while, in adversative coordination, the two clauses may be inverted without a change in meaning, as shown in the examples below.

a. L-U-C-A<sub>a</sub> IX<sub>a</sub> CAT ALLERGY EXIST BUT IX<sub>b</sub> MARIA BUY CAT 'Luca is allergic to cats, but Maria buys one.'



b. Maria  $IX_a$  cat buy but L-u-c-a $_b$   $IX_b$  allergy cat exist 'Maria buys a cat, but Luca is allergic to them.'



A final property differentiating adversative coordination on the one hand and concessive clauses and concessive conditionals on the other hand, is the possibility to produce the first clause of the construction is isolation. Only the sentence-initial clause of an adversative coordinate construction can be produced on its own as shown below:

L-u-C-A IX<sub>3</sub> CAT ALLERGY EXIST 'Luca is allergic to cats.'

The impossibility to produce the sentence-initial concessive clause in isolation, the obligatory non-manual markings spreading over it and the impossibility to invert the order of the two clauses seem to suggest that the functional equivalent of concessive clauses (as well as concessive conditionals) in LIS are subordinate clauses.

3.5.7.6 Simultaneous expression of the main event and the adverbial clauseTo be developed.

## 3.6 Comparative clauses

A comparative construction involves three things: a scale, which is usually encoded as a gradable predicate, and two objects: the first and the second term of comparison.

In this section, we will describe how comparatives are expressed in LIS, and we will show that degrees can be overtly realized as points in the signing space (i.e. *loci*).

The adjectives described in the chapter are all open scale gradable adjectives: they can be defined as *gradable* because they are compatible with the degree adverb very, and they are *open scale* because they are not compatible with adverbs like COMPLETELY.

In LIS, comparative clauses there are two main strategies to convey *more*-comparatives. The first strategy, exemplified below, is an analytic form in which the lexical comparative marker MORE is used, which is a lexical sign with an invariant form. By Pos we indicate a morpheme that refers to a *point in the scale*, in this case height.

MAN TALL $_{\alpha}$ POS $_{\beta}$  WOMAN MORE 'The woman is taller than the man.' (recreated from Aristodemo 2017, 16)



The second strategy, exemplified below, is a synthetic form, in which a morpheme that we gloss ICONIC\_MORE is used. The initial and final place of articulation of ICONIC\_MORE are the loci associated with the first term of comparison (in this case MAN) and a higher position in the scale.

MAN TALL $_{\alpha}$ POS $_{\beta}$  WOMAN TALL $_{\beta}$ ICONIC $_{\gamma}$ MORE $_{\gamma}$  'The woman is taller than the man.' (recreated from Aristodemo 2017. 16)



The analytic form can be used with all the kind of open scale gradable adjectives. However only a particular class of open scale gradable adjectives allows the synthetic form; they are iconic adjectives that meet two crucial requirements: (i) they are all classifier signs of the Size and Shape type [MORPHOLOGY 5.2] (although many of them, like the one in the example, may have become lexicalized signs), (ii) the movement is always perpendicular to the orientation of the whole hand. Examples are TALL (a), BIG (b), DEEP (c), shown in the videos below.

a. TALL
(recreated from Aristodemo 2017, 14)

b. BIG
(recreated from Aristodemo 2017, 14)

c. DEEP
(recreated from Aristodemo 2017, 14)

Less-comparatives behave in a similar way: the comparison can be expressed by the analytic form using the lexical sign Less, as in (a), or by a synthetic form glossed ICONIC\_LESS, as in (b).

a. MAN TALL\_ $_\alpha POS_\gamma$  WOMAN LESS 'The woman is less tall than the man.' (recreated from Aristodemo 2017, 18)



b. MAN TALL\_ $_{\alpha}$ POS $_{\gamma}$  WOMAN TALL. $_{\gamma}$ ICONIC\_LESS $_{\beta}$  'The woman is less tall than the man.' (recreated from Aristodemo 2017, 18)



The synthetic form <code>iconic\_less</code> can be used only with the special class of adjectives that allow the synthetic form <code>iconic\_more</code>.

From a syntactic point of view, comparatives involve coordination. In fact, it is possible to insert the conjunction but between the two clauses of the construction.

```
a. GIANNI TALL__{\alpha}POS_{\beta} BUT MARIA TALL._{\beta}ICONIC_MORE_{\gamma} 'Gianni is tall, but Maria is taller (than him).' (Aristodemo 2017, 33) b. GIANNI TALL__{\alpha}POS_{\beta} BUT MARIA MORE 'Gianni is tall, but Maria is taller (than him).' (Aristodemo 2017, 33)
```

The two parts are not equivalent, because the first contains the adjective in its neutral form, while the second one contains a comparative form. The inversion of the two sentences is not allowed.

It is possible to anaphorically refer to a visible or overt degree thanks to a pronoun that points to the locus in which the degree was previously established, as can be seen in the example below.

```
GIANNI TALL__{\alpha}POS_{\beta} MARIA TALL._{\beta}ICONIC_MORE_{\gamma}. IX_{\beta} ONE METRE SEVENTY. IX_{\gamma} ONE METRE EIGHTY 'Maria is taller than Gianni. This one (Gianni's degree) is 1 metre 70 and that one (Maria's degree) is one metre 80.' (based on Aristodemo 2017, 19)
```

The pronoun  $ix_{\beta}$  refers to the degree of Gianni's height, while  $ix_{\gamma}$  refers to the degree of Maria's height. Once the scale is available, any degree on the scale can be used to establish a new locus that can be the antecedent for an anaphoric relation.

Iconic degrees and scales can be introduced also with non-iconic adjectives by using the modifier A\_BIT, followed by ICONIC\_MORE or ICONIC\_LESS. In A\_BIT ICONIC\_MORE (a) the hand moves upward, while in A\_BIT ICONIC\_LESS (b) the hand moves downward.

```
a. A_BIT αICONIC_MORE β

'A bit more.'
(recreated from Aristodemo 2017, 40)

b. A_BIT αICONIC_LESS β

'A bit less.'
(recreated from Aristodemo 2017, 40)
```

A\_BIT ICONIC\_MORE and A\_BIT ICONIC\_LESS can be used also with highly abstract adjectives, making their degrees visible, as in the example below.



GIANNI INTELLIGENT MARIA A\_BIT  $_{\alpha}ICONIC\_LESS_{\beta}$  'Gianni is smart, Maria is a bit less smart (than him)' (recreated from Aristodemo 2017, 41)

# 3.7 Comparative correlatives

ca

Comparatives correlatives are bi-clausal constructions as exemplified below.

<u> </u>	sq			
re	re			Ma
a. RUN++ SW	EAT++			4
'The more yo	ou run, the	more you swea	ıt.'	
(recreated fr	om Geraci	2007, 52)		
re				
sq				0000
b. RUN++ SW	EAT MOST			
'The more yo	ou run, the	more you swea	ıt.'	
(adapted from	m Geraci 20	007, 52)		

LIS signers can use two constructions to express the meaning of a comparative correlative. The first one is symmetrical, as shown in (a) above, the other is asymmetrical, as shown in (b) above. In both cases, the verb of the first clause (RUN) is reduplicated. The two options differ in that the verb of the second clause (SWEAT) is reduplicated only in (a), while in (b) a marker of quantity, corresponding to the English 'more', appears post-verbally. In both (a) and (b) are present special non-manuals: squint eyes and raised eyebrows. These non-manuals are spread differently in the two variants: in (a) they equally spread over the two clauses, while in (b) they only spread on the first clause. Finally, in (a) both clauses are possible in isolation, while in (b) only the second clause is possible in isolation.

Despite their possible symmetric structure, the two clauses are not reversible: if the order of the two clauses is reversed, the meaning is not preserved.

Comparative correlatives in LIS are sensitive to the type of predicate or modifier involved in the construction. The following examples show this feature.

```
a GIANNI RIIN++ SWEAT++
'The more Gianni runs, the more he sweats.'
(Geraci 2007, 71)
b. GIANNI RUN CONTINUE VA VA++, SWEAT++
'The longer Gianni runs, the more he sweats.'
(Geraci 2007, 71)
C. SEA DEEP<sub>[prolonged]</sub>, COLD INCREASE++
'The deeper the sea, the colder the water.'
(Geraci 2007, 71)
d. Hair long_{prolonged}, time dry more
'The longer the hair, the more time to dry them.'
(Geraci 2007, 71)
```

In LIS comparative correlatives, while atelic verbs trigger reduplication of the verb, like in (a) and (b) above, stative verbs yield a different verbal morphology, namely intensification, whereby the movement of the sign for the predicate or modifier is different from its citation form: it is articulated slower and the muscles are more tensed (c, d). In this, asymmetric variants behave like symmetric ones, as can be seen in (d): stative predicates do not show reduplication, but intensification.

Wh-phrases, which typically occur at the end of the sentence [SYN-TAX 1.2.3.5], appear in sentence-final position also in comparative correlatives, as shown in the following example.

```
STUDY++ LEARN LESS WHO
'Who is such that, the more he studies the less he learns?'
(Geraci 2007, 74)
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#### Information on Data and Consultants

The descriptions in this chapter are based on the references below. The linguistic data illustrated as images and video clips have been checked through acceptability judgments and have been reproduced by Deaf native-signing consultants.

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# References

- Aristodemo, V. (2009). L'interpretazione in lingua dei segni italiana [BA dissertation]. Venice: Università Ca' Foscari Venezia. [3.5.1]
- Aristodemo, V.; Geraci, C.; Santoro, M. (2016). Adjunct Subordinate: The Case of Temporal Clauses in LIS. Talk presented at FEAST Conference. Venice. [3.5.2]
- Aristodemo, V. 2017. Gradable Constructions in Italian Sign Language [PhD dissertation]. Paris: École des Hautes Études en Sciences Sociales. [3.6]
- Aristodemo, V.; Geraci, C. (2017). "Visible Degrees in Italian Sign Language". Natural Language & Linguistic Theory, 36(3), 685-99. [3.6]
- Barattieri, C. (2006). Il periodo ipotetico in LIS [MA dissertation]. Siena: Università degli Studi di Siena. [3.5.1]
- Bertone, C. (2007). La struttura del sintagma determinante nella Lingua dei Segni Italiana (LIS). [PhD dissertation]. Venezia: Università Ca' Foscari. [3.4]
- Bertone, C. (2011). Fondamenti di grammatica della lingua dei segni italiana. Milano: Franco Angeli. [3.4], [3.5.1]
- Branchini, C. (2009). "Relative libere e interrogative Wh- in LIS". Bertone, C.; Cardinaletti, A. (a cura di), Atti della giornata di studi (16-17 maggio 2007). Venezia: Edizioni Cafoscarina, 101-15. [3.4]
- Branchini, C. (2014). On Relativization and Clefting: An Analysis of Italian Sign Language. Berlin: Mouton De Gruyter. [3.4]
- Branchini, C. (2017). Digging Up the Core Features of (non)Restrictiveness in Sign Languages Relative Constructions. Talk presented at the Formal and Experimental Advances in Sign language Theory (FEAST) 2017. University of Iceland, Reykjavik. [3.4.7]
- Branchini, C.; Donati, C. (2009). "Relatively Different: Italian Sign Language Relative Clauses in a Typological Perspective". Lipták, A. (ed.), Correlatives Cross-Linguistically, Amsterdam: John Benjamins, 157-91. [3.4]
- Branchini, C.; Mantovan, L. (2015). In Search for non-Restrictive Relative Clauses in Italian Sign Language (LIS). Talk presented at the First meeting Morpho-Syntax of Portuguese Sign Language (LGP) and other Sign Languages. Porto. [3.4.7]
- Brunelli, M. (2011). Antisymmetry and Sign Languages: A Comparison Between NGT and LIS. Utrecht: LOT. [3.5.1]

- Calderone, C. (forthcoming). Can You Retrieve It? Pragmatic, Morpho-Syntactic and Prosodic Features in Sentence Topic Types in Italian Sign Language (LIS) [PhD dissertation]. Venice: Ca' Foscari University of Venice. [3.2]
- Cecchetto, C.; Geraci, C.; Zucchi, S. (2006). "Strategies of Relativization in LIS". Natural Language and Linguistic Theory, 24, 945-75. [3.4]
- Cirillo, R. (2012). Lingue dei Segni e Lingue Verbali: frasi locative a confronto [MA dissertation]. Pavia: Università degli Studi di Pavia. [3.5.3]
- Franchi, M.L. [1987] (2004). "Componenti non-manuali". Volterra, V. (a cura di), La lingua dei segni italiana. Bologna: il Mulino, 159-77. [3.5.1]
- Geraci, C. (2002). L'ordine dei segni nella LIS (lingua dei segni italiana) [MA dissertation]. Milano: Università degli Studi di Milano. [3.5.3]
- Geraci, C. (2007). "Comparative Correlatives in Italian Sign Language". Traitement Automatique des Langues, 48(3), 55-92. [3.7]
- Geraci, C. (2008). "Comparative Correlative in LIS". Bagnara, C.; Corazza, S.; Fontana, S.; Zuccalà, A. (eds), I segni parlano. Prospettive di ricerca sulla Lingua dei Segni Italiana = Atti del III Convegno Nazionale sulla lingua dei segni italiana, Dall'Invisibile al Visibile. Milano: Franco Angeli, 95-104. [3.7]
- Geraci, C.; Ceccheto, C.; Zucchi, S. (2008). "Sentential Complementation in Italian Sign Language". Grosvald, M.; Soares, D. (eds), *Proceedings of the Thirty-Eighth Western Conference on Linguistics, WECOL 2008*. Davis (CA): University of California Davis. 46-58. [3.3]

# **Complete list of references**

- AA.VV. (2010). Dizionario di Arte Contemporanea in Lingua dei Segni Italiana. Torino: Edizione Umberto Allemandi & C.
- Ajello, R.; Mazzon, L.; Florida, N. (1997). "Gesti linguistici: la labializzazione in LIS". *Quaderni della sezione di glottologia e linguistica*. Chieti-Pescara: Università degli Studi "G. d'Annunzio" Chieti-Pescara, 5-45.
- Ajello, R.; Mazzoni, L.; Nicolai, F. (2001). "Linguistic Gestures: Mouthing in Italian Sign Language (LIS)". Boys-Braem, P.; Suddon-Spence, R. (eds), *The Hands are the Heads of the Mouth. The Mouth as Articulator in Sign Language*. Fulda: Signu-Verlag, 231-46.
- Amorini, G. (2008). "Metafora in LIS". Bagnara et al. 2008, 116-22.
- Amorini, G.; Lerose, L. (2012). Studi linguistici in Lingua dei Segni Italiana (LIS) Analisi fonologica e le funzioni deittiche ed avverbiali, e aspetti metaforici in parametri formazionali [PhD dissertation]. Klagenfurt: Alpen-Adria-Universität.
- Angelini, N.; Borgioli, R.; Folchi, A.; Mastromatteo, M. (1991). *I primi 400 segni. Piccolo dizionario della Lingua Italiana dei Segni per comunicare con i sordi.*Firenze: La Nuova Italia.
- Aristodemo, V. (2009). L'interpretazione in lingua dei segni italiana [BA dissertation]. Venezia: Università Ca' Foscari Venezia.
- Aristodemo, V. (2013). The Complexity of Handshapes: Perceptual and Theoretical Perspective [MA dissertation]. Venice: Ca' Foscari University of Venice.
- Aristodemo, V. (2017). *Gradable Constructions in Italian Sign Language* [PhD dissertation]. Paris: École des Hautes Études en Sciences Sociales.
- Aristodemo, V.; Geraci, C. (2018). "Visible Degrees in Italian Sign Language". Natural Language and Linguistic Theory, 36(3), 685-99.
- Aristodemo, V.; Geraci, C.; Santoro, M. (2016). "Adjunct Subordinate: The Case of Temporal Clauses in LIS". Talk presented at the FEAST Conference. Venice.
- Aristotele (1996). *Opere biologiche*. A cura di D. Lanza e M. Vegetti. Torino: UTET.
- Bagnara, C.; Chiappini, G.; Conte, M.P.; Ott, M. (a cura di) (2000). Viaggio nella città invisibile = Atti del 2° Convegno nazionale sulla Lingua Italiana dei Segni (Genova, 25-27 settembre 1998). Pisa: Edizioni del Cerro.
- Bagnara, C.; Corazza, S.; Fontana, S.; Zuccalà, A. (2008). I segni parlano. Prospettive di ricerca sulla Lingua dei Segni Italiana. Milano: Franco Angeli.

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- Bagnara, C.; Fontana, S.; Tomasuolo, E.; Zuccalà, A. (2009). I segni raccontano. La Lingua dei Segni Italiana tra esperienze, strumenti e metodologie. Milano: Franco Angeli.
- Barattieri, C. (2006). Il periodo ipotetico in LIS [MA dissertation]. Siena: Università degli Studi di Siena.
- Battaglia, K. (2011). "Variazione lessicale e fonologica nella LIS". Cardinaletti, Cecchetto, Donati 2011, 189-203.
- Battaglia, K.; Cardinaletti, A.; Cecchetto, C.; Donati, C.; Geraci, C.; Mereghetti, E. (a cura di) (2012). La variazione nel lessico della lingua dei segni italiana = Proceedings of the XLIV Congresso Internazionale della SLI, Lessico e Lessicologia (Viterbo, 27-29 settembre 2010).
- Bauman, H-D.L.; Murray, J. (2009). "Reframing: From Hearing Loss to Deaf Gain". Deaf Studies Digital Journal, 1, 1-10.
- Beda il Venerabile (1969). Bede's Ecclesiastical History of the English People. Ed. by B. Colgrave and R.A.B. Mynors. Oxford: Clarendon Press.
- Bertone, C. (2002). "I segni nome nella tradizione e nella cultura della comunità dei sordi italiana". Quaderni di Semantica, 22(2), 335-46.
- Bertone, C. (2003). "L'iconografia sacra all'origine di un gruppo di segni nome nella Lingua Italiana dei Segni". La voce silenziosa, 21, 11-29.
- Bertone, C. (2005). "Nascita ed evoluzione dei segni". La voce silenziosa, 29(9), 7-22.
- Bertone, C. (2007). La struttura del sintagma determinante nella Lingua dei Segni Italiana (LIS) [PhD dissertation]. Venezia: Università Ca' Foscari Venezia.
- Bertone, C. (2009a). "The Syntax of Noun Modification in Italian Sign Language (LIS)". Working Papers in Linguistics, vol. 19. Venice: Ca' Foscari University of Venice, Department of Language Science, 7-28.
- Bertone, C. (2009b). "La grammatica dello spazio nella LIS". Bertone, Cardinaletti 2009, 79-100.
- Bertone, C.; Cardinaletti, A. (a cura di) (2009). Alcuni capitoli della grammatica della LIS = Atti dell'Incontro di Studio "La grammatica della Lingua dei Segni Italiana" (Venezia, 16-17 maggio 2007). Venezia: Editrice Cafoscarina.
- Bertone, C. (2011). Fondamenti di grammatica della lingua dei segni italiana. Milano: Franco Angeli.
- Bertone, C.; Cardinaletti, A. (2011). "Il sistema pronominale della lingua dei segni italiana". Cardinaletti, Cecchetto, Donati 2011, 145-60.
- Betto, R.; Franchi, M.L.; Massoni, P.; Peruzzi, A.M.; Rossini, P.; Santarelli, B. (1988). Abecedario della L.I.S. - Lingua Italiana dei Segni. Roma: Regione Lazio Ass.to I.C.A. e I.P.
- Bianchini, C. (2006). Analogie ed omologie nell'indicazione delle relazioni spazio-temporali in codici diversi [MA dissertation]. Perugia: Università degli Studi di Perugia.
- Bonet, J.P. (1620). Reduction de las letras y Arte para enseñar á ablar los Mudos. Madrid: por Francisco Abarca de Angulo.
- Borghi, A.M.; Capirci, O.; Gianfreda, G.; Volterra, V. (2014). "The Body and the Fading Away of Abstract Concepts and Words: A Sign Language Analysis". Frontiers in Psychology, 5, 811.
- Boschin, L.; Corazza, S. (a cura di) (1985). Materiale di lavoro. Corso di Lingua Italiana dei segni. Trieste: ENS - Regione Autonoma Friuli V. Giulia: I.R.Fo.P.
- Branchini, C. (2006). On Relativization and Clefting in Italian Sign Language [PhD dissertation]. Urbino: Università di Urbino.
- Branchini, C. (2009). "Relative libere e interrogative Wh- in LIS". Bertone, Cardinaletti 2009, 101-15.

- Branchini, C. (2014). On Relativization and Clefting: An Analysis of Italian Sign Language. Berlin: De Gruyter Mouton.
- Branchini, C. (2017). "Digging up the Core Features of (Non)restrictiveness in Sign Languages Relative Constructions". Talk presented at the FEAST Conference. University of Iceland, Reykjavik.
- Branchini, C.: Cardinaletti, A.: Cecchetto, C.: Donati, C.: Geraci, C. (2013). "Whduplication in Italian Sign Language (LIS)". Sign Language & Linguistics, 16(2), 157-88.
- Branchini, C.; Cecchetto, C.; Chiari, I. (2014). "La lingua dei segni italiana". La linguistica italiana all'alba del terzo millennio (1997-2010), vol. 2. Roma: Bulzoni Editore, 369-404.
- Branchini, C.; Donati, C. (2009). "Relatively Different: Italian Sign Language Relative Clauses in a Typological Perspective". Lipták, A. (ed.), Correlatives Cross-Linguistically. Amsterdam: John Benjamins, 157-91.
- Branchini, C.; Geraci, C. (2011). "L'ordine dei costituenti in LIS: risultati preliminari". Cardinaletti, Cecchetto, Donati 2011, 113-26.
- Branchini, C.; Mantovan, L. (2015). "In Search for Non-Restrictive Relative Clauses in Italian Sign Language (LIS)". Talk presented at the first meeting Morpho-Syntax of Portuguese Sign Language (LGP) and other Sign Languages. Porto.
- Brunelli, M. (2006). The Grammar of Italian Sian Language, with a Study about its Restrictive Relative Clauses [MA dissertation]. Venice: Ca' Foscari University of Venice.
- Brunelli, M. (2011). Antisymmetry and Sign Languages: A Comparison Between NGT and LIS. Utrecht: LOT.
- Calderone, C. (2014). Segni di poesia [MA dissertation]. Bologna: Università di Bologna.
- Calderone, C. (2020). Can you Retrieve it? Pragmatic, Morpho-Syntactic and Prosodic Features in Sentence Topic Types in Italian Sign Language (LIS) [PhD dissertation]. Venice: Ca' Foscari University of Venice.
- Caon, F. (2010). Dizionario dei gesti degli italiani: una prospettiva interculturale. Perugia: Guerra.
- Cardinaletti, A.; Cecchetto, C.; Donati, C. (a cura di) (2011). Grammatica, lessico e dimensioni di variazione nella LIS. Milano: Franco Angeli.
- Caselli, M.C.; Maragna, S.; Volterra, V. (2006). Linguaggio e sordità. Gesti, segni e parole nello sviluppo e nell'educazione. Bologna: il Mulino.
- Castro, P. de (2018). Il colostro: discorso aggiunto alla ricoglitrice di Scipion Mercurio (1642). Delhi: Pranava Book.
- Cecchetto, C.; Checchetto, A.; Geraci, C.; Santoro, M.; Zucchi, S. (2015). "The Syntax of Predicate Ellipsis in Italian Sign Language (LIS)". Lingua, 166, 214-35.
- Cecchetto, C.; Geraci, C.; Zucchi, S. (2006). "Strategies of Relativization in LIS". Natural Language and Linguistic Theory, 24, 945-75.
- Cecchetto, C.; Geraci, C.; Zucchi, S. (2009). "Another Way to Mark Syntactic Dependencies: The Case for Right-peripheral Specifiers in Sign Languages". Language, 85(2), 278-320.
- Cecchetto, C.; Zucchi, S. (2006). "Condizioni di verità, sottospecificazione e discorso nelle lingue dei segni". Pititto, R.; Venezia, S. (a cura di), Tradurre e comprendere. Pluralità dei linguaggi e delle culture. Roma: Aracne, 353-85.
- Celo, P. (2000). "Elementi di coesione nella Lingua dei Segni Italiana". Bagnara et al. 2000, 96-102.

- Chesi, C.; Geraci, C. (2009). Segni al computer: manuale di documentazione della Lingua dei Segni Italiana. Siena: Edizioni Cantagalli.
- Cimino, E. (a cura di) (2002). L'educazione dei sordomuti. Indici bibliografici della rivista dal 1872 al 2002. Siena: Edizioni Cantagalli.
- Cirillo, R. (2012). Lingue dei Segni e Lingue Verbali: frasi locative a confronto [MA dissertation]. Pavia: Università degli Studi di Pavia.
- Conte, G.; Santoro, M.; Geraci, C.; Cardinaletti, A. (2011). "Perché alzi le sopracciglia? Le funzioni linguistiche marcate dal sollevamento in LIS". Cardinaletti, Cecchetto, Donati 2011, 161-9.
- Corazza, S. (1990). "The Morphology of Classifier Handshapes in Italian Sign Language (LIS)". Lucas, C. (ed.), Sign Language Research: Theoretical Issues. Washington DC: Gallaudet University Press, 71-82.
- Corazza, S. (2000). "Aspetti morfologici dei verbi in LIS". Gran, L.; Bidoli, C.K. (a cura di), L'interpretazione nelle lingue dei segni: aspetti teorici e pratici della formazione. Trieste: Edizioni Università di Trieste, 19-28.
- Corazza, S.; Lerose, L. (2008). "L'origine della lingua dei segni, variante triestina". Bagnara et al. 2008, 132-9.
- Corazza, S.; Volterra, V. (2008). "La Lingua dei Segni Italiana: nessuna, una, centomila". Bagnara et al. 2008, 19-29.
- Cuccio, V.; Fontana, S. (2011). "Spazio cognitivo e spazio pragmatico: riflessioni su lingue vocali e lingue dei segni". Esercizi Filosofici, 6, 133-48.
- Cuccio, V.; Fontana, S. (2012). "Non-Literal Meaning. Metaphor and Metonymy in Sign Systems". Gola, E.; Ervas, F. (eds), Metaphor in Focus: Philosophical Perspectives on Metaphor Use. Newcastle: Cambridge Scholar Publishing, 155-79.
- Donati, C.; Barberà, G.; Branchini, C.; Cecchetto, C.; Geraci, C.; Quer, J. (2017). "Searching for Imperatives in European Sign Languages". Heinold, S.; Van Olmen, D. (eds), Imperatives and Other Directive Strategies. Amsterdam: John Benjamins, 111-55.
- Epifano, M. (2003). Immaginario. Immagini per un abbecedario, comunicare con i segni. Osmannoro: PLAN.
- Fedeli, L. (2015). Slang Terms in Italian Sign Language (LIS): A Sociolinguistic Perspective [MA dissertation]. Venice: Ca' Foscari University of Venice.
- Folchi, A.; Mereghetti, E. (1995). "Tre educatori sordi italiani". Porcari Li Destri, G.; Volterra, V. (a cura di), Passato e presente: uno sguardo sull'educazione dei sordi in Italia. Napoli: Gnocchi, 61-75.
- Fontana, S. (2008). "Mouth Actions as Gestures in Sign Language", in Kendon, A.; Russo Cardona, T. (eds), "Dimensions of Gestures", special issue, Gesture, 8(1), 104-23.
- Fontana, S.; Fabbretti, D. (2000). "Classificazione e Analisi delle forme labiali della LIS in storie elicitate". Bagnara et al. 2000, 103-11.
- Fontana, S.; Raniolo, E. (2015). "Interazioni tra oralità e unità segniche: uno studio sulle labializzazioni nella lingua dei segni italiana". Schneider, G.M.; Janner, M.C.; Élie. B. (eds), Voix et silence, Voce e Silenzio, Voces y silencio. Berna: Peter Lang, 241-57.
- Fontana, S.; Roccaforte, M. (2015). "Lo strutturarsi e il destrutturarsi dei suoni nell'interazione con la Lingua dei Segni Italiana LIS". Vayra, M.; Avesani, C.; Tamburini, F. (a cura di), Il farsi e il disfarsi del linguaggio. Acquisizione, mutamento e destrutturazione della struttura sonora del linguaggio. Milano: Edizioni AISV, 371-81.
- Fontana, S.; Zuccalà, A. (2009). "Lo spazio sociale della sordità: da individuo a comunità". Bagnara et al. 2009, 35-45.

- Fontana, S.; Zuccalà, A. (2012). "Dalla Lingua dei Sordi alla Lingua dei Segni: come cambia la comunità". Fontana, S.; Mignosi, E. (a cura di), Segnare, parlare. intendersi: modalità e forme. Milano-Udine: Mimesis, 31-50.
- Fontana, S.; Carratello, V.; Fontana, S. (2008). "Uno studio della LIS in diacronia: alcune riflessioni". Bagnara et al. 2008, 123-31.
- Fornasiero, E. (2020). Description and Analysis of Evaluative Constructions in Italian Sign Language (LIS) [PhD dissertation]. Venice: Ca' Foscari University of Venice.
- Franchi, M.L. (2004). "Componenti non manuali". Volterra 2004, 159-77.
- Geraci, C. (2002). L'ordine dei segni nella LIS (lingua dei segni italiana) [MA dissertation]. Milano: Università degli Studi di Milano.
- Geraci, C. (2006a). LIS (lingua dei segni italiana) tra ricerca e divulgazione [PhD dissertation]. Milano: Università degli Studi di Milano-Bicocca.
- Geraci, C. (2006b). "Negation in LIS (Italian Sign Language)". Bateman, L.; Ussery, C. (eds), Proceedings of NELS 35. Amherst (MA): GLSA, 217-29.
- Geraci, C. (2007). "Comparative Correlatives in Italian Sign Language". Traitement Automatique des Langues, 48(3), 55-92.
- Geraci, C. (2009a). "Epenthesis in Italian Sign Language". Sign Language & Linquistics, 12(1), 3-51.
- Geraci, C. (2009b). "Real World and Copying Epenthesis: The Case of Classifier Predicates in Italian Sign Language". Schardl. A.: Walkow, M.: Abdurrahman, M. (eds), Proceedings of North East Linguistics Society, 36. Amherst (MA): GLSA, 237-50.
- Geraci, C. (2012). "Language Policy and Planning: The Case of Italian Sign Language". Sign Language Studies, 12(4), 494-518.
- Geraci, C. (2014). "Spatial Syntax in Your Hands". Iver, J.; Kusmer, L. (eds), NELS 44: Proceedings of the Forty-Fourth Annual Meeting of the North East Linguistic Society, vol. 1. Amherst (MA): GLSA, 123-34.
- Geraci, C. (2015). "Italian Sign Language". Bakken Jepsen, J.; De Clerck, G.; Lutalo-Kiingi, S.; McGregor, W.B. (eds), The World's Sign Languages. Berlin: De Gruyter Mouton, 473-510.
- Geraci, C.; Aristodemo, V. (2013). "Grammar and Processing: The Case of whquestions in LIS". Paper presented at Incontro di Grammatica Generativa 40 (Trento, February 13-15).
- Geraci, C.; Aristodemo, V. (2016). "An in-Depth Tour into Sentential Complementation in Italian Sign Language". Herrmann, A.; Pfau, R.; Steinbach, M. (eds), Complex Matters: Subordination in Sign Languages. Berlin: De Gruyter Mouton, 95-150.
- Geraci, C.; Battaglia, K.; Cardinaletti, A.; Cecchetto, C.; Donati, C.; Giudice, S.; Mereghetti, E. (2011). "The LIS Corpus Project. A Discussion of Sociolinguistic Variation in the Lexicon". Sign Language Studies, 11(4), 528-74.
- Geraci, C.; Bayley, R.; Branchini, C.; Cardinaletti, A.; Cecchetto, C.; Donati, C.; Giudice, S.; Mereghetti, E.; Poletti, F.; Santoro, M.; Zucchi, S. (2010). "Building a Corpus for Italian Sign Language: Methodological Issues and Some Preliminary Results". LREC 2010, 4th Workshop on Representation and Processing of Sign Languages: Corpora and Sign Language Technologies, 98-101.
- Geraci, C.; Bayley, R.; Cardinaletti, A.; Cecchetto, C.; Donati, C. (2015). "Variation in Italian Sign Language (LIS): The Case of Wh-signs". Linguistics, 53(1), 125-51.
- Geraci, C.; Cecchetto, C.; Zucchi, S. (2008). "Sentential Complementation in Italian Sign Language". Grosvald, M.; Soares, D. (eds), Proceedings of the

- Thirty-Eighth Western Conference on Linguistics, WECOL 2008. Davis: University of California Davis, 46-58.
- Geraci, C.; Gozzi, M.; Papagno, C.; Cecchetto, C. (2008). "How Grammar can Cope with Limited Short-Term Memory: Simultaneity and Seriality in Sign Languages". Cognition 106(2), 780-804.
- Geraci, C.: Mantovan, L.: Aristodemo, V. (2016). "Is it going backwards? Not really!". Talk presented at the FEAST Conference. Venice.
- Geraci, C.; Toffali, L. (2008). "Tendenze innovatrici e conservative nell'uso delle lingue: la variabile dell'età nella Lingua dei Segni Italiana". Bella, G.; Diamantini, D. (a cura di), La qualità della vita nella società dell'informazione. Milano: Guerini e Associati, 97-115.
- Gianfreda, G. (2011). "Un corpus di conversazioni in lingua dei segni italiana attraverso videochat: una proposta per la loro trascrizione e analisi". Cardinaletti, Cecchetto, Donati 2011, 95-109.
- Gianfreda, G.; Volterra, V.; Zuczkowski, A. (2014). "L'espressione dell'incertezza nella Lingua dei Segni Italiana (LIS)", in Zuczkowski, A.; Caronia, L. (eds), "Communicating Certainty and Uncertainty: Multidisciplinary Perspectives on Epistemicity in Everyday Life", special issue, Journal of Theories and Research in Education, 9(1), 199-234.
- Girardi, P. (2000). "Come nasce il segno". Bagnara et al. 2000, 140-50.
- Giuranna, R.: Giuranna, G. (2000), "Poesia in LIS: iconicità e arbitrarietà, concreto e astratto". Bagnara et al. 2000, 341-8.
- Giuranna, R.; Giuranna, G. (2003). Sette poesie in Lingua dei Segni Italiana (LIS). CD-ROM. Pisa: Edizioni del Cerro.
- Johnson, R.E.; Erting, C. (1989). "Ethnicity and Socialization in a Classroom for Deaf Children". Lucas, C. (ed.), The Sociolinguistics of the Deaf Community. New York: Academic Press, 41-84.
- Ladd, P. (2003). Understanding Deaf Culture: In Search of Deafhood. Bristol: Channel View Publication Ltd.
- Laudanna, A. (2004). "Ordine dei segni nella frase". Volterra, V. (a cura di), La lingua dei segni italiana. Bologna: il Mulino, 211-30.
- Laudanna, A.; Volterra, V. (1991). "Order of Words, Signs, and Gestures: A First Comparison". Applied Psycholinguistics, 12, 135-50.
- Lerose, L. (2008). "L'avverbio in LIS". Bagnara et al. 2008, 43-60.
- Lerose, L. (2009). "I tipi di avverbio in LIS". Bertone, Cardinaletti 2009, 43-59.
- Lerose, L. (2011). Fonologia LIS. Tricase (Lecce): Libellula Edizioni.
- Magarotto, C. (a cura di) (1995). Vocabolario della lingua gestuale italiana dei sordi. Roma: Armando Editore.
- Mantovan, L. (2015). Nominal Modification in Italian Sign Language (LIS) [Phd dissertation]. Venice: Ca' Foscari University of Venice.
- Mantovan, L. (2017). Nominal Modification in Italian Sign Language (LIS). Berlin; Boston: De Gruyter Mouton.
- Mantovan, L.; Geraci, C. (2015). "The Syntax of Cardinal Numerals in Italian Sign Language (LIS)". Bui, T.; Özyıldız, D. (eds), NELS 45: Proceedings of the Forty-Fifth Annual Meeting of the North East Linguistic Society, vol. 2. Amherst (MA): GLSA, 155-64.
- Mantovan, L.; Geraci, C. (2018). "R-Impersonal Interpretation in Italian Sign Language (LIS)". Barberà, G.; Cabredo Hofherr, P. (eds), "Reference Impersonals in Sign Languages", special issue, Sign Language & Linguistics, 21(2), 232-57.
- Mantovan, L.; Geraci, C.; Cardinaletti, A. (2014). "Addressing the Cardinals Puzzle: New Insights from Non-Manual Markers in Italian Sign Language". Cras-

- born, O.; Efthimiou, E.; Fotinea, S.E.; Hanke, T.; Hochgesang, J.; Kristoffersen, J.H.; Mesch, J. (eds), Beyond the Manual Channel = 6th Workshop on the Representation and Processing of Sign Languages, Revkiavik: ELRA, 113-16.
- Mantovan, L.; Geraci, C.; Cardinaletti, A. (2019). "On the Cardinal System in Italian Sign Language (LIS)". Journal of Linguistics, 55(4), 795-829.
- Mantovan, L.: Giustolisi, B.: Panzeri, F. (2019). "Signing Something While Meaning Its Opposite: The Expression of Irony in Italian Sign Language (LIS)". Journal of Pragmatics, 142, 47-61.
- Maragna, S.; Marziale, B. (2009). I diritti dei Sordi. Uno strumento di orientamento per la famiglia e gli operatori: educazione, integrazione e servizi. Milano: Franco Angeli.
- Maragna, S.; Vasta, R. (a cura di) (2015). Il manuale dell'abate Silvestri. Le origini dell'educazione dei sordi in Italia. Roma: Bordeaux Edizioni.
- Marziale, B.; Volterra, V. (a cura di) (2016). Lingua dei segni, società, diritti. Roma: Carocci.
- Mazzoni, L. (2008). Classificatori e impersonamento nella Lingua dei Segni Italiana. Pisa: Edizioni Plus, Pisa University Press.
- Natural, A. (2014). Gli avverbi: analisi comparativa tra lingue orali e Lingua dei Segni Italiana [BA dissertation]. Venezia: Università Ca' Foscari Venezia.
- Padden, C. (1988). Interaction of Morphology and Syntax in American Sign Lanauage. New York: Garland Press.
- Palazzo, D. (2014). Il mio cammino verso la comunità sorda. Bari: La Matrice.
- Pendola, T. (1867). Istituzioni dei sordomuti in Italia. Siena: Porri.
- Perotti, V. (2018). La realizzazione dei verbi riflessivi e reciproci in LIS [BA dissertation]. Venezia: Università Ca' Foscari Venezia.
- Petitta, G.; Di Renzo, A.; Chiari, I. (2015). "Evaluative Morphology in Sign Languages". Grandi, N.; Körtvélyessy, L. (eds), Edinburgh Handbook of Evaluative Morphology. Edinburgh University Press Ltd, 155-69.
- Pietrandrea, P. (1995). Analisi semiotica dei Dizionari della Lingua Italiana dei Segni [dissertation]. Roma: Università degli Studi La Sapienza.
- Pietrandrea, P. (1997). "I dizionari della LIS: analisi quantitative e qualitative". Caselli, M.C.; Corazza, S. (a cura di), LIS. Studi, esperienze e ricerche sulla lingua dei segni in Italia = Atti del 1° Convegno nazionale sulla Lingua dei Segni (Trieste, 13-15 ottobre 1995). Pisa: Edizioni del Cerro, 42-54.
- Pietrandrea, P. (2000). "Complessità dell'interazione di iconicità e arbitrarietà nel lessico della LIS". Bagnara et al. 2000, 38-49.
- Pietrandrea, P. (2002). "Iconicity and Arbitrariness in Italian Sign Language". Sign Language Studies, 2(3), 296-321.
- Pigliacampo, R. (2001). Il Genio Negato: Giacomo Carbonieri psicolinquista sordomuto del XIX Secolo. Siena: Edizioni Cantagalli.
- Pignotti, G. (a cura di) (1997). Dizionario mimico gestuale [CD-ROM]. Ascoli Piceno: Rinascita Informatica.
- Pizzuto, E. (1986). "The Verb System of Italian Sign Language". Tervoort, B.T. (ed.), Signs of Life. Amsterdam: University of Amsterdam, 17-31.
- Pizzuto, E. (2004). "Aspetti morfo-sintattici". Volterra, V. (a cura di), La lingua dei segni italiana. La comunicazione visivo-gestuale dei sordi. Bologna: il Mulino, 179-209.
- Pizzuto, E. (2007). "Deixis, Anaphora and Person Reference in Signed Languages". Pizzuto, E.; Pietrandrea, P.; Simone, E. (eds), Verbal and Signed Languages: Comparing Structures, Constructs and Methodologies. Berlin: Mouton De Gruyter, 275-308.

- Pizzuto, E. (2009). "Meccanismi di coesione testuale e Strutture di Grande Iconicità nella Lingua dei Segni Italiana (LIS) e altre lingue dei segni". Bertone. Cardinaletti 2009. 137-58.
- Pizzuto, E.; Corazza, S. (1996). "Noun Morphology in Italian Sign Language (LIS)". Lingua, 98, 169-96.
- Pizzuto, E.: Giuranna, E.: Gambino, G. (1990). "Manual and Non-manual Morphology in Italian Sign Language: Grammatical Constraints and Discourse Processes". Lucas, C. (ed.), Theoretical Issues in Sign Language Research. Washington: Gallaudet University Press, 83-102.
- Pizzuto, E.; Rossini, P.; Russo, T.; Wilkinson, E. (2005). "Formazione di parole visivo-gestuali e classi grammaticali nella Lingua dei Segni Italiana (LIS): dati disponibili e questioni aperte". Grossmann, M.; Thornton, A. (a cura di), La Formazione delle parole = XXXVII Congresso internazionale di studi della Società di Linguistica Italiana S.L.I. (L'Aquila, 25-27 settembre 2003). Roma: Bulzoni, 443-63.
- Platone (1989). Cratilo. A cura di C. Licciardi. Milano: Biblioteca Universale Rizzoli. Plinio il Vecchio (1982-88). Storia Naturale. A cura di G.B. Conte. Torino: Einaudi.
- Puricelli, E.; Marcioni, M.; Domini, M.; Leogrande, E. (1993). Anch'io voglio comunicare. Manuale dei principali segni religiosi. Milano: Arte Grafica 2B.
- Ouaman, I. (2000). "L'extracomunitario sordo e udente: quale differenza nella comunità di minoranza?". Bagnara et al. 2000, 448-51.
- Radutzky, E.J. (1989). La Lingua Italiana Dei Segni: Historical Change in the Sign Language of Deaf People in Italy [PhD dissertation]. New York: New York University.
- Radutzky, E. (1992). Dizionario bilingue elementare della lingua dei segni italiana LIS. Roma: Edizioni Kappa.
- Radutzky, E. (2000). "Cambiamento storico della Lingua dei Segni". Bagnara et al. 2000, 120-39.
- Radutzky, E. (2004). "Alfabeto manuale". Volterra 2004, 231-40.
- Radutzky, E. (2009). "Il cambiamento fonologico storico della Lingua dei Segni Italiana". Bertone, Cardinaletti 2009, 17-42.
- Radutzky, E.; Santarelli, B. (2004). "Movimenti e orientamenti". Volterra 2004, 109-58.
- Regione Marche, Servizi Sociali e ENS, Comitato Regionale Marche (1996). Dizionario Regionale del Linguaggio Mimico Gestuale Marchigiano. Ancona: Edizione Regione Marche.
- Roccaforte, M. (2018). Le componenti orali della lingua dei segni italiana. Analisi linguistica, indagini sperimentali e implicazioni glottodidattiche. Roma: Sapienza Università Editrice.
- Romeo, O. (1991). Dizionario dei Segni. La lingua dei segni in 1400 immagini. Bologna: Zanichelli.
- Romeo, O. (1997). La grammatica dei segni. La Lingua dei segni in 13000 immagini e 150 frasi. Bologna: Zanichelli.
- Romeo, O. (2004). Dizionario tematico dei segni. Bologna: Zanichelli.
- Rosselli, C. (2009). Thesaurus artificiosae memoriae. Montana: Kessinger Pub-
- Russo Cardona, T. (1999). Immagini e metafore nelle lingue parlate e segnate. Modelli semiotici e applicazioni alla LIS [PhD dissertation]. Roma: Università degli Studi La Sapienza.

- Russo Cardona, T. (2004). "Iconicity and Productivity in Sign Language Discourse: An Analysis of Three LIS Discourse Registers". Sign Language Studies, 4(2), 164-97.
- Russo Cardona, T. (2005a). "A Crosslinguistics, Cross-cultural Analysis of Metaphors in Two Italian Sign Language (LIS) Registers". Sign Language Studies, 5(3), 333-59.
- Russo Cardona, T. (2005b). "Un lessico di freguenza della LIS". De Mauro, T.; Chiari, I. (a cura di), Parole e numeri. Analisi quantitative dei fatti di lingua. Roma: Aracne, 277-90.
- Russo Cardona, T.; Giuranna, R.; Pizzuto, E. (2001). "Italian Sign Language (LIS) Poetry: Iconic Properties and Structural Regularities". Sign Language Studies, 2(1), 84-112.
- Russo Cardona, T.; Volterra, V. (2007). Le lingue dei segni. Storia e semiotica. Roma: Carocci.
- Santoro, M. (2016). "Simultaneous and Sequential Compounds in LIS: Preliminary Results from a Perceptual Experiment". Poster Presented at FEAST Conference. Venice.
- Santoro, M. (2018). Compound in Sign Languages: The Case of Italian and French Sign Language [PhD dissertation]. Paris: École Hautes des Études en Sciences Sociales (EHESS).
- Santoro, M.: Mantovan, L.: Aristodemo, V.: Geraci, C. (2016), "A Sociolinguistic View on Variable Subjects in Italian Sign Language". Presentation at Grammar and Corpora Conference (Mannheim, November 11 2016).
- Segna con me (2014). Directed by S. Bencivelli and C. Tarfano. Produzioni dal Basso.
- Sicard, R.A. (1808). Théorie Des Signes Pour L'instruction Des Sourds-Muets. Paris: Institution Des Sourds Et Muets.
- StarLIS (a cura di) (2005). Dizionario Illustrato della Lingua dei Segni Italiana. Roma: StarLIS.
- Tota, M. (2010). Uno studio diacronico della LIS: la varietà segnica coratina [MA dissertation]. Roma: Università degli Studi La Sapienza.
- Trovato, S. (2009a). "Bambini non udenti nella scuola dell'infanzia". Insegnare, 1, 21-5.
- Trovato, S. (2009b). "Le ragioni del diritto alla lingua dei segni". Bagnara et al. 2009, 21-34.
- Verdirosi, M.L. (2004). "Luoghi". Volterra 2004, 23-48.
- Vian, N. (2015). "Traduzione e traducibilità delle metafore nella lingua dei segni". Celo, P. (a cura di), *I segni del tradurre*. Roma: Aracne, 35-62.
- Vicenti, R. (2018). Le costruzioni passive nella Lingua dei segni italiana [BA dissertation]. Venezia: Università Ca' Foscari Venezia.
- Volterra, V. (2004). La Lingua dei Segni Italiana. La comunicazione visivo-gestuale dei sordi. 2a ed. Bologna: il Mulino.
- Volterra, V.; Roccaforte, M.; Di Renzo, A.; Fontana, S. (2019). Descrivere la lingua dei segni italiana. Una prospettiva sociosemiotica e cognitiva. Bologna: il Mulino.
- Zattini, F. (1997). "Storia e cultura della comunità sorda in Italia 1874-1922". Zuccalà, A. (a cura di), Cultura del gesto e cultura della parola. Roma: Meltemi, 69-83.
- Zinna, S. (2010). Dar voce alla cultura sorda. Il teatro come strumento di comunicazione e partecipazione culturale. Villalba di Guidonia: Editore Aletti.

- Zuccalà, A. (1997a). "Segni nome e identità culturale nella LIS". Zuccalà, A. (a cura di), Cultura del gesto e cultura della parola. Roma: Meltemi, 69-83.
- Zuccalà, A. (a cura di) (1997b), Cultura del gesto e cultura della parola, Vigagio antropologico nel mondo dei sordi. Roma: Meltemi.
- Zuccalà, A. (2000a). "L'invenzione della sordità. Riflessioni sulla rappresentazione sociale". Bagnara et al. 2000, 405-12.
- Zuccalà, A. (2000b). "La sordità del pregiudizio ovvero alcuni pregiudizi sulla sordità". Attenasio, L. (a cura di), Fuori norma. La diversità come valore e sapere. Roma: Armando Editore, 264-84.
- Zucchi, S. (2009). "Along the Time Line: Tense and Time Adverbs in Italian Sign Language". Natural Language Semantics, 17, 99-139.
- Zucchi, S. (2017). Fonologia dei segni. Lecture given at Università degli Studi di Milano. Unpublished material.
- Zucchi, S.; Neidle, C.; Geraci, C.; Duffy, Q.; Cecchetto, C. (2010). "Functional Markers in Sign Languages". Brentari, D. (ed.), Sign Languages. Cambridge: Cambridge University Press, 197-224.

# Complete sitography

- ASPHI (Avviamento e Sviluppo di Progetti per ridurre l'Handicap mediante l'Informatica). Dizionario multimediale dei termini multimediali per audiolesi. https://nuovaecdl.asphi.it/index.php/materiale-per-
- CDI, Centro di documentazione per l'integrazione. http://www.cdila. it/cdila/Index?q=object/detail&p=\_system\_cms\_node/\_a\_ ID/\_v\_98.
- Cooperativa Alba. DizLis. http://www.dizlis.it/web/il-progetto.html. Council of Europe. European Charter for Regional and Minority Languages. 1992. https://www.coe.int/en/web/european-charter-regional-or-minority-languages.
- Daniele, L. (2010). Matita. https://www.youtube.com/watch?v=GIMJa8yaBHc. Deaf statistics in Gallaudet University Library. http://libguides.gallaudet.edu/c.php?g=773916&p=5553198.
- ELAN (EUDICO Linguistic Annotator). http://www.lat-mpi.eu/tools/elan/ download.
- Ente Nazionale Sordi Onlus (ENS) (Italian National Agency of the Deaf). https://www.ens.it.
- Ethnologue archive. https://www.ethnologue.com/language/ise.
- Eugeni, C. (2008). Una panoramica della situazione dei sordi italiani in generale e della lingua dei segni italiana in particolare. Version updated after amendments by Dino Giglioli president of the National interpreters' association (ANIMU). http://www.unapeda.asso.fr/article.php3?id\_article=551.
- Eugeni, C. (2008). Una panoramica della situazione dei sordi italiani in generale e della lingua dei segni italiana in particolare. Version updated after amendments by Dino Giglioli president of the National interpreters' association ANIMU. http://www.unapeda.asso.fr/article.php3?id\_ article=551.
- Giuranna, R. (2003). Orologio. https://www.youtube.com/watch?v=i9TW4jC6cE.

- ICIDH. International Classification of Impairments, Disabilities, and Handicaps. (1980). https://apps.who.int/iris/bitstream/handle/10665/ 41003/9241541261\_eng.pdf;jsessionid=DAD00ED84358AD50B0D0 0EA14A8728FA?sequence=1.
- Laudo, L. ABC story Buongiorno? https://www.youtube.com/ watch?v=WIMv-FCUuG0.
- Lega del filo d'oro, association for Deafblind people (ISTAT, 2016). https:// www.legadelfilodoro.it/news/presentazione-dello-studioistat-sulla-popolazione-sordocieca-italia.
- List of associations and resources related to deaf people in Italy. http:// www.cdila.it/cdila/Index?q=object/detail&p=\_system\_cms\_ node/\_a\_ID/\_v\_98.
- List of available dictionaries available. http://www.istc.cnr.it/sites/default/files/u182/bibliolis\_arg\_2011.pdf.
- Ministero dell'Istruzione, dell'Università e della Ricerca (MIUR) (Ministry of Education, University and Research). http://hubmiur.pubblica.istruzione.it/web/istruzione/home.
- Movimento LIS subito. http://www.lissubito.com.
- Scarlato, E. (2013). Dubbio dubbio. https://www.youtube.com/watch?v= e60GxhashTo.
- Sign Language Watch, European Parliament Resolution on Sign Language. (1988). https://www.pragmaprojects.com/signlanguagewatch/ index.php/component/zoo/item/european-parliament-resolution-on-sign-languages-1988.
- SignMedia Smart, a Sign Language Media Glossary for Mobile Devices http://www.signmedia.eu.
- Silvestri, D. (2013). A bocca chiusa. Sony Music Entertainment Italy S.p.a. https://www.youtube.com/watch?v=xpdsirdCxj8.
- Spread the sign, online Sign language dictionary. https://www.spreadthesign.com.
- The Babylonian Talmud. (1918). Translated by Michael L. Rodkinson. https://www.jewishvirtuallibrary.org/jsource/Judaism/Full-Talmud.pdf.
- The SIGN-HUB project: preserving, researching and fostering the linguistic, historical and cultural heritage of European Deaf signing communities with an integral resource. http://www.sign-hub.eu/.
- United Nation. Convention on the Rights of Persons with Disabilities. (2006). https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html.
- Zatini, F. Storia dei Sordi, di tutto e di tutti circa il mondo della Sordità. http://www.storiadeisordi.it.

# **Glossary of grammatical terms**

#### **Action role shift**

Also called constructed action, action role shift is a construction where the signer takes the role of another character. Under action role shift, the signer may shift his/her body toward the position associated to the character and his/her facial expressions indicate how the character feels and his/her gestures reproduce those produced by the character.

#### **Adiective**

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.

The antecedent is the expression an anophora is co-referent with, i.e. the anaphora refers back to the referent of the antecedent.

#### Argument

An argument is a constituent that completes the meaning of a predicate. Most predicates take one, two, or three arguments. For example, the verb 'to run' takes one argument (the subject, as in 'Ada runs'); the verb 'to destroy' takes two arguments (the subject and the object, as in 'the typhoon destroyed the beach'); the verb 'to send' takes three arguments (the subject, the object and the indirect object, as in 'Ada sent a present to her brother'). Arguments are often associated to verbs, but other syntactic categories can take arguments as well, or select them. For example, the noun 'destruction' can be said to select two arguments, as in 'the destruction of the beach by the typhoon', or the Adjective 'proud' can be said to select two arguments, as in 'Nico (is) proud of Ada'. Arguments must be distinguished from adjuncts, which are never selected and thus optional.

#### Argument structure

Argument structure refers to the syntactico-semantic frame of predicates (typically verbs, but also nouns, adjectives or prepositions) and indicates the participants in the action or state denoted by that predicate. Argument structure typically includes the number of arguments a lexical item takes (e.g., the participants in the event denoted by a verb), their syntactic category, and their semantic relation to this lexical item.

#### Article

An article (or determiner) is a functional element that combines with nouns and that specifies features such as number, gender, definiteness, and closeness/distance (e.g. the, a, that in English).

#### Aspect

Aspect describes the internal temporal structure of an event or situation as reflected in a sentence or verb (e.g. repeated occurrence of an event).

#### **Assimilation**

Assimilation is a phonological process whereby the form of a phoneme is influenced by properties (features) of an adjacent phoneme; if the source of assimilation precedes the target, we speak of progressive assimilation, if it follows the target, we speak of regressive assimilation.

#### Atelic

Atelic eventualities do not contain an end point as part of the event description.

#### Attitude role shift

Attitude role shift, also called constructed discourse, is a construction where the signer reports utterances or thoughts of another person (the character) and typically does so by rotating his/her body toward the position associated to the character. Attitude role shift is usually accompanied also by a change in head position and eye gaze.

## **Auxiliary**

An auxiliary is a semantically weak verb that combines with a lexical verb and expresses grammatical features like tense, aspect, and agreement (e.g. have and be in English); the lexical verb usually appears in a fixed (e.g. infinitival or participial) form.

#### **Back-channeling**

Back-channeling is a discourse strategy by which an addressee provides feedback without interrupting the speaker's/signer's flow; back-channel signals can be manual/vocal (e.g. hmmm) or non-manual (e.g. head nod).

#### Blend

A blend is a word formation process by which two otherwise independent stems or words merge by losing some of their phonological features to form a new item with a new meaning, e.g. English smog is a blend of smoke and fog.

#### **Borrowing**

Borrowing refers to the integration of a lexical item or expression from one language into the lexicon of another language (e.g. German borrowing English computer); borrowed elements may undergo certain phonological changes.

#### **Boundary marker**

A boundary marker is a linguistic signal that marks the start or end of a (mostly syntactic or prosodic) domain; can be manual or non-manual.

## Buoy

A buoy is a sign articulated by the non-dominant hand, which may be held in space while the dominant hand continues signing; a buoy may be referred to (e.g. pointed at) by the dominant hand.

#### Calque

A calque is an item which in its entirety, or part-by-part, is borrowed directly from the donor language; Calques are verbatim translations of simplex or polymorphemic forms and are modeled on the constructions of the donor language.

#### Causative

A causative is a construction that indicates that an agent causes someone or something to do or be something, or causes a change of state. Prototypically, it brings a new argument, the causer, into a clause, with the original subject becoming the object, as in 'John makes Mary cry' vs. 'Mary cries'. All languages have ways to express causativization, but they differ in the means they employ. Many have lexical causative forms, such as English 'raise' vs. 'rise'; Other languages have morphological inflections that change verbs into their causative form. Other languages, and sign languages among them, employ periphrasis with the use of an auxiliary.

#### Citation form

A citation form is the basic form referring to the dictionary entry of a lexeme. As lexemes are abstract objects, citation forms make it possible to refer to a lexeme.

#### Classifier

Generally, a classifier is a morpheme that reflects certain semantic properties of a referent; for sign languages, a classifier is a visually motivated (iconically based) lexical/grammatical category, mostly a handshape that combines with certain types of predicates.

### **Classifier construction**

A classifier construction is a complex sign that encodes information about spatial localization and (manner of) motion and that is part of the non-core lexicon.

#### Classifier predicate

A classifier predicate is a complex predicate made up of a classifier and a verb.

#### Clause

A clause is the smallest grammatical unit that can express a complete proposition (i.e. a statement that can be either true or false). Typically, it consists of a subject and a predicate, which in turn is prototypically a verb phrase, a verb and its internal arguments.

#### Cliticization

Cliticization refers to a process whereby a functional element phonologically attaches to a lexical element such that a single prosodic word is created (e.g. English can't and French j'aime); the functional element is referred to as a clitic.

#### Coalescence

Coalescence refers to a special type of cliticization; most commonly, cliticization of an indexical sign to a preceding symmetrical two-handed sign, such that a single prosodic word is created.

### Code-switching

Code-switching refers to a (usually bilingual or multi-lingual) language user's switching between two languages or registers during communicative interaction.

#### Coherence

Coherence is the semantic continuity of a text or discourse which is determined by semantic and conceptual relations between its parts.

#### Cohesion

Cohesion are grammatically realized relations in a text or discourse that are used to explicitly link different parts of discourse. Cohesive devices make it possible for the addressee to keep track of the discourse referent.

### Common noun

A common noun is a noun that denotes a class or type of entity; a common noun can be a count noun (e.g. book in English) or a mass noun (e.g. rice in English).

### Comparative/comparison

Comparison introduces orderings between two or more objects with respect to the degree to which they possess some property. In the prototypical case, a comparison involves two objects that are explicitly expressed ('John is taller than Mary'). However, comparison can be more implicit (in 'John is tall' John's height is evaluated with respect to a contextually determined degree of tallness). Many languages have one or more syntactic constructions specifically encoding a comparison.

#### **Complement clause**

A complement clause, or object clause (also called completive) is a subordinate argument clause carrying the syntactic function of an object, as 'that she would do it' in 'Ada promised that she would do it'.

### Complementizer

A complementizer is a functional word or a particle introducing a subordinate clause, such as that in English as in "John knows that he is lucky." It is often abbreviated as C.

### **Complex movement**

A complex movement is a movement composed of a change in more than one phonological parameter (e.g. simultaneous change of location and handshape).

### Compounding/Compound

Compounding is a word formation process by which two otherwise independent stems or words come together to form a new item with a new meaning; the result is a compound.

### Conjunction

A conjunction is a functional element that links phrases, clauses, or sentences; coordinating conjunctions (e.g. English and, but) have to be distinguished from subordinating conjunctions (e.g. English that, because).

#### Constituent

A constituent is a word or a group of words which function(s) as a single unit within a given syntactic structure. The constituent structure of a sentence can be identified using constituency tests. Typical constituents phrases that can be distinguished according to their category in noun phrases (NP), verb phrases (VP), Adjectival phrase (AP), Adverbial Phrase (AdvP) and the like.

### **Constituent negation**

Constituent negation refers to a type of negation whereby a constituent smaller than the clause is negated, e.g. negation of the verb in I didn't steal the book, I borrowed it.

### Contact (in the sense of language contact)

Language contact refers to the circumstances determined by two language communities living side-by-side that allow linguistic patterns and words from one to be used in the other

#### Contact (in the sense of phonology)

Contact refers to an articulator physically touching another articulator, a body part, or the torso, or the appearance of an articulator in a location.

#### Context

The context of an utterance consists at least of the speaker, the addressee, the time and the place of the utterance. Broader definitions of context may also include information about the previous discourse and the communicative situation, shared background knowledge and shared world knowledge among other kinds of information.

#### Contralateral

Contralateral refers to a location/area on the side opposite of the active articulator.

#### Control verb

The term control refers to the constructions in which the understood subject of a non-finite embedded clause is determined by some expression in the main clause. Control verbs (such as promise, order, try, ask, tell, force, yearn, refuse, etc.) obligatorily determine which of their arguments in the main clause controls the embedded clause. Some of them qualify as subject control verbs. 'Promise' is an example, as in 'Ada promised to leave', where the understood subject of 'leave' is obligatorily interpreted as the main subject. Some are object control verbs. An example is 'order', in 'Ada ordered Auguste

to leave', where the understood subject of the infinitive is obligatorily interpreted as the object of the main verb, 'Auguste'. Arbitrary control occurs when the controller is understood to be anybody in general, as in 'Running is good for health'.

#### Conversion

Conversion (also called zero affixation) is a category-changing process, where the input and output categories are phonologically identical, i.e. where there is no overt affix that bears the information of category change (e.g. walk (N) and walk (V), put (present tense) and put (past tense) in English).

#### Coordination

Coordination is a non-hierarchical combination of at least two constituents belonging to the same syntactic category, such as noun phrases, verb phrases or clauses, either through conjunction or juxtaposition

### Copula

A copula is a word used to relate the subject of a sentence with a non-verbal predicate, such as the word 'is' in the sentence 'Ada is nice'. It is often a verbal element, but it can also be pronominal in nature or suffixal. Many languages have one main copula, others have more than one, and some (including many sign languages) have none.

#### Correlative

Correlatives are conjunctions that are separated in a sentence but coordinate the constituents they introduce, which have thus the same function. Examples of correlatives in English are. 'both... and', or 'either ..or'. The same term can also be used to refer to the constituents themselves that are coordinated in a correlative structure. For example, 'Ada' and 'Maya' are two correlative noun phrases in 'Both Ada and Maya love to play'. Similarly in 'Either you call or you write a letter", the two clauses can be referred to as correlative clauses. Correlative constructions can also be found in some languages as the functional equivalent of relative clauses: 'the boy was late, that boy called' meaning 'The boy who was late called'.

#### Co-speech gesture

A body movement, executed by the hand(s) or another body part, that accompanies speech, often to illustrate, supplement, or accentuate the message conveyed in speech; e.g. pointing gesture, thumbs-up gesture, headshake, shrug.

#### **Count noun**

A count noun is a noun that can appear in the plural and that may combine with numerals like three but not with quantity expression like much (e.g. book, horse).

### **Declarative**

Declaratives are the most common type of sentences in any given language. They are used to express statements, to make something known, to explain or to describe. As a sentence type, they are usually opposed to interrogatives, imperatives and exclamatives. The corresponding declarative force is specialized to provide new information. Declaratives are typically used to realize assertional speech acts.

### Definiteness/Indefiniteness

Definite expressions are noun phrases that denote referents that have the property of being unique ("The book is on the table", where there is just one relevant book in the

context of utterance) or the property of being familiar both to the signer and to the addressee. Indefinite noun phrases denote referents that are not known to the signer but can be known to the addressee.

#### Deixis

Deixis is a strategy to refer to objects present in the actual context of utterance. Deictic expressions can refer to concrete entities ('I', 'you', 'that (one)') as well to the spatiotemporal coordinates of the context of utterance ('here', 'now', 'yesterday').

#### Demonstrative

A demonstrative is deictic word (a type of determiner) that specifies which entity a speaker refers to and distinguishes this entity from others; they may e.g. be used for spatial deixis (e.g. English this vs. that).

### **Deontic modality**

Deontic modality refers to the speaker's attitude towards the possibility or necessity of an event, embodied in the notions obligation, permission, prohibition, wishing, desiring, etc.

#### Derivation

Derivation is a lexical word formation process that creates a new lexeme, mostly by combining a stem and an affix.

#### **Derivational affixation**

Derivational affixation is a type of affixation whose function is to create a lexeme associated with an already existing lexeme (e.g. -er in swimm-er); derivational affixation contrast with inflectional affixation which exists solely for grammatical purposes (e.g. agreement morphology).

### **Determiner**

A determiner (or article) is a functional element that combines with nouns and that specifies features such as number, gender, definiteness, and closeness/distance (e.g. the, a, that in English).

#### **Discourse**

A discourse is formed by a sequence of logically united utterances, which are also connected to the context.

#### Discourse marker

Discourse markers are cohesive devises between two utterances (such as connectors or discourse particles) that establish coherence.

#### Discourse structure

 $\label{lem:prop:constraints} Discourse structure describes the relations between grammatical elements and their effects beyond the sentence level.$ 

### 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?'.

### **Extraposition**

Extraposition is a mechanism of syntax altering word order in such a manner that a relatively "heavy" constituent appears in a position other than its canonical position, usually to the right. The relative clause 'which was addressed to Ada' is extraposed in the following sentence: 'A letter arrived yesterday which was addressed to Ada'.

### Fingerspelling

Fingerspelling refers to the use of handshapes from the manual alphabet to represent (part of) a word, often because no sign exists for the concept; in fingerspelled sequences certain reduction and assimilation phenomena may occur.

### Finite clause

A finite clause is a clause with a finite verb

### Floating quantifier

A floating quantifier is a quantifier that is not immediately adjacent to the NP it quantifies. French 'tous' (all) in 'les étudiants ont tous lu ce livre' (the students have all read this book) vs 'Tous les étudiants ont lu ce livre' (all the students have read this book) is an example.

#### Focus

A focus is an item that is presented as a new piece of information in the context of utterance. Entire sentences can be a focus, for example when they are used as opening lines in a conversation. In other cases, only a part of the sentence is new information, for example the constituent War and Peace is a focus in the following question-answer pair: "Which book did you read? I read War and Peace". Focus can be contrastive or emphatic, as the constituent Anna Karenina in the sentence "I am not reading War and Peace, I am reading ANNA KARENINA".

### Free relative

A free relative clause is a relative clause not containing any (overt) antecedent, or head, as 'what you will read' in 'I will read what you will read'. In many languages, free relatives are introduced by a wh-element, as 'what' in the English example.

### Functional element/category

A syntactic category that has grammatical meaning rather than lexical or encyclopedic meaning and that fulfills a syntactic function (e.g. negation, tense, number).

## Gapping

Gapping is a type of ellipsis occurring in coordinate structures: some material that is present in one conjunct is omitted, i.e. 'gapped', from the other conjunct. The gapped material usually contains a finite verb, as in 'Nico plays the piano and Phil the trumpet'.

Gender is a grammatical (morphosyntactic) category that classifies nouns in terms of their (real or assumed) semantically shared properties in some languages; in others, the classification can be somewhat arbitrary.

#### Gloss

Explanation/rendering of a morpheme or word in a text by means of providing a literal translation in another language (usually English).

### **Grammatical function**

Grammatical function refers to the syntactic role of a constituent in a given syntactic structure, such as subject or object. It is independent from the category of that given constituent and rather depends on its position in the structure.

#### Grammatical word

A grammatical word is a free form composed of a root and morphosyntactic features (inflection), which enables it to be used in a syntactic context; the morphosyntactic features can have overt expressions, or they can be phonologically null.

### **Grammaticality judgment**

A grammaticality judgment is a metalinguistic assessment of the acceptability of a given utterance by a native speaker. Grammaticality judgments are typically used in linguistic research to gather negative evidence about what the grammar cannot generate, alongside with what is actually produced.

### Grammaticalization

Grammaticalization refers to a process by which an independent lexical form diachronically develops into a free or bound functional (grammatical) element; e.g. in English development of future tense marker from the verb go.

#### Head of a word

The head of a word is the element which provides the label for the categorial status of a word or compound, thus determining whether it is a noun, verb etc. The concept of head presupposes asymmetrical (head-complement or head-modifier) structures.

### Headedness

Headedness is the property that distinguishes symmetrical from asymmetrical constructions in morphology, used usually in compounding. Symmetrical constructions are usually considered headless, while asymmetrical constructions have a syntactic head (and a complement or modifier).

### Homonym

Two or more words that are phonologically identical but have different meanings, causing lexical ambiguity.

#### Iconicity

Iconicity implies a non-arbitrary (motivated) relation between form and meaning, i.e. a phonological form reflects in some way the assumed visual (or auditory) characteristics of the entity or event it refers to; the form of the category/construction is then iconic.

### Illocutionary force

The illocutionary force of an utterance depends on the speaker's intention in producing that utterance and the corresponding syntactic structures he/she uses to reach this goal. Declarative, interrogative, imperative and exclamative sentences are linguistic structures that are typically used to perform the illocutionary acts of making an assertion, eliciting information from the addressee, eliciting a behavior from the addressee and conveying a surprise.

#### **Imperative**

An imperative is a grammatical form that is specialized to elicit a (possibly non-linguistic) behavior from the addressee, as in 'Go away!'. It is one of the four well-recognized sentence types, along with declaratives, interrogatives and exclamatives. The corresponding imperative force is specialized to elicit a specific behavior of the addressee. Imperatives are typically used to realize commands or requests.

#### Impersonal verb

An impersonal verb is a verb whose argument structure does not include an external argument. For example, 'seem' in 'It seems that Ada is growing' does not assign any interpretation to 'it', which is a pure place holder, or expletive subject.

### **Implicature**

Implicatures are context-dependent pragmatic aspects of the meaning of an utterance that do not contribute to the truth-conditional meaning of an utterance (what is said) but to the pragmatic meaning of this utterance (what is meant). Conversational implicatures are calculated on the basis of conversational maxims.

### Incorporation

A complex verb formed by the syntactic combination of a verb with a noun (noun incorporation) or another verb; in sign languages often used for the combination of a verb and a classifier or of a noun and a numeral (numeral incorporation).

#### Indefinite pronoun

An indefinite pronoun is a pronoun that stands for an entity without specifying any grammatical (morphosyntactic) features such as number (e.g. someone in English).

### Indirect question

An indirect question is a question, or interrogative, sitting in an embedded position, as 'when she should leave' in 'Ada asked me when she should leave'. An indirect question is typically embedded under a declarative.

### Inflection

Inflection is a type of word formation which is to some extent dependent on a syntactic structure and involves morphosyntactic features such as e.g. person, number, and tense.

#### Information structure

The term information structure refers to the way in which information is packaged within a sentence. For example, the information conveyed by an utterance can be divided in old vs. new information and within a sentence it is possible to identify a constituent that is a topic and a constituent that is focus.

#### Initialization

Initialization is a sign language-specific type of word formation (compounding) whereby the handshape of a lexeme is the handshape of the manual alphabet representing the first letter of the corresponding word in the spoken language (e.g. the sign lemonade with a C-handshape).

### Interrogative

The term interrogative refers to a grammatical form that is specialized to elicit information from the addressee, as in 'What have you done?', or to report a doubt or a similar attitude towards a given propositional content, as in 'I wonder what you did'. The corresponding interrogative force is specialized to elicit information from the addressee. Interrogatives are typically used to realize a question.

#### Intonation

Intonation refers to the totality of the prosodic phenomena that accompany the segmental part of strings (i.e. stress, pitch, and pause), marked mostly through non-manual articulations (such as facial expressions) in sign languages.

#### Intransitive verb

An intransitive verb is a verb that only takes one argument, as 'telephone' and 'arrive'. Intransitive verbs can be distinguished between unaccusatives, that only take an internal argument, such as 'arrive', and unergatives, whose only argument is the external argument, such as 'telephone'.

### **Ipsilateral**

Ipsilateral refers to a location/area on the side of the active articulator.

#### Irreversible predicate

An irreversible predicate is a predicate that selects for two arguments associated with different semantic features, such as animacy. For example, typically 'eat' is an irreversible predicate, because its external argument is animate and its internal argument is inanimate. Only 'Ada eats a salad' is a meaningful sentence, while the reverse, 'A salad eats Ada' is semantically odd. Irreversible predicates are opposed to reversible predicates.

### Isomorphic

The term isomorphic refers to the equivalence between the values of two sets of entities, rules etc.; e.g. in isomorphic use of space, signs are produced in a spatial configuration that corresponds to (i.e. is isomorphic with) a real-world configuration.

### Juxtaposition

Juxtaposition is a kind of coordination not involving any overt conjunction, such as and, or, but or the like. Two constituents that are juxtaposed usually belong to the same syntactic category and perform the same grammatical function.

#### Layering/layer

In sign language linguistics, layering refers to the simultaneous (i.e. layered) use of various manual and non-manual articulators, e.g. a string of signs accompanied by a body lean, a head movement, and a specific eyebrow position.

#### Lexeme

A lexeme is a (semi-)abstract unit of meaning which corresponds to the basic forms in the lexicon; the actual realization of these units in language use are called 'word forms' (or sometimes simply 'words').

#### Lexical item

A lexical item is any item that is part of the vocabulary of a particular language, and that has to be learned in order for the language to be used.

#### Lexicalization

Lexicalization refers to the adoption of a particular form into the lexicon of a language; the form can be a completely novel form, or might be based on previously existing items.

#### Lexicon

The lexicon is the mental repository of all the vocabulary items of a language.

### Loan sign

A loan sign is a sign that is of foreign origin, influenced by the spoken language or taken from another sign language.

#### Local lexicalization

Reduction of a fingerspelled sequence that is repeatedly used within a discourse; the phonological changes (e.g. dropping of letters, creation of movement contour) are characteristic of lexicalization.

#### Locus

A locus is a point in space used for grammatical purposes (e.g. pronominalization, agreement); it either is the actual location of a present discourse referent or an arbitrary location established by means of pointing or some other strategy.

#### Main clause

The main clause of a sentence, also called the independent clause, is a clause that is syntactically and semantically autonomous. It is thus opposed to the subordinate clause, which is syntactically and semantically dependent on the main clause.

#### Mass noun

A mass noun is a noun that does not usually appear in the plural and that cannot combine with numerals like three; however, it may combine with quantity expression like much (e.g. rice, milk).

### Measure phrase

Measure phrases are constructions containing a noun referring to a measure of time, capacity, weight, length, temperature, currency. For example 'five months' in 'I will leave in five months', or '4 kilos' in 'I bought four kilos of strawberries'.

### Metaphor

Metaphor is a general cognitive mechanism, which is important for the constitution of meaning of many expressions in everyday language. In a mataphor, 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 beween 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 devises 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 oft he 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 devises such as pronouns or verbal agreement and pragmatic principles such as accessibility and salience to specify a referent in a discourse context.

### Reflexive

A construction where the agent and another thematic role bearing argument refer to the same entity (e.g. He washes himself); a reflexive pronoun is a pronoun that refers to the agent (e.g. himself).

### Register

The term register describes all kinds of linguistic variation that depends on the communicative situation or the specific purpose of communication.

#### Resumptive

A resumptive pronoun is a pronoun that refers back to a previously realized item within the same syntactic structure. Resumptive pronouns are often found in relative clauses, where they refer back to the relative pronoun, as in 'This is the toy that Ada thinks that we should definitely buy it'. The use of resumptive pronouns is marginal in standard English, but completely acceptable in colloquial varieties and in many languages.

### Reversible predicate

A reversible predicate is a predicate that selects for two arguments that are not necessarily associated with different semantic features such as animacy. An example of a reversible predicate is 'kiss', because both its external argument and its internal argument are indistinct with respect to animacy. Both 'Ada kissed Nico', and 'Nico kissed Ada' are thus meaningful.

### Role shift

A construction where a signer assumes the characteristics of another person/animal (the character) and linguistically marks his/her utterance accordingly, commonly by rotating his/her body towards the position in space associated to the character (and by other non-manual markers); role shift is typically used in narration to report someone else's utterance (attitude role shift, also called constructed discourse) or action (action role shift, also called constructed action).

#### Root

A root is the part of a word that carries the main conceptual meaning expressed by that word and that cannot be segmented any further.

### Scope

Scope refers to the domain over which a certain feature – be it semantic or phonological – has an effect; e.g. negation can have semantic scope over part of a sentence or the whole sentence (sentential scope), and a non-manual marker like headshake can have scope (i.e. can extend) over part of a sentence or the whole sentence.

## Secondary movement

Movements of the hand that are not path movements: articulator-internal movements: handshape changes, orientation changes, and hand-internal movements like finger wiggling.

### Secondary predication

A secondary predicate is an expression that attributes a property to a nominal phrase (that can be the subject or another argument of the main verb) but it is not the main predicate of the clause. In 'The boys arrived home exhausted', for example, the underlined element expresses a secondary predication on the main subject.

#### Sentence

A sentence is a unit in which words are grammatically linked to make a statement or to describe something (typically via a declarative sentence), to express a command (typically via an imperative sentence), to elicit information from an addressee (typically via an interrogative sentence) or to convey surprise (typically via an exclamative sentence). The typical sentence contains at least a predicative nucleus consisting of a subject and of a predicate (for example, in "John is smart" the property of being smart is predicated of John and in "Mary thinks that John is smart" the property of thinking that John is smart is predicated of Mary). However, there can be elliptical sentences with a minimal structure.

### Serial verb construction

The serial verb construction, also known as (verb) serialization or verb stacking, is a syntactic phenomenon by which two or more verbs or verb phrases are put together in a single clause. Serial verb constructions are often described as coding a single event.

## Shared sign language

A sign language that emerged in a village community, due to an increased likelihood of deafness; often a considerable proportion of the hearing population also knows the sign language (also known as village sign language or rural sign language).

### Signing space

Space in front of the signer that plays a role at different linguistic levels: phonology (location specification of lexical signs), morphology (e.g. agreement), semantics (e.g. topographic descriptions), pragmatics (e.g. reference tracking, contrast).

### Simple movement

A simple movement is a movement that consists of a change in only one phonological parameter (e.g. location or orientation).

### **Simultaneity**

The combined expression of two (or more) signs – be they manually or non-manually articulated – at the same time (by the same person).

### Size-and-Shape-Specifier (SASS)

A Size-and-Shape-Specifier is a classifier(-like) item that expresses the size and shape of an entity, usually by outlining its boundaries.

### Sluicing

Sluicing is an ellipsis phenomenon which elides everything from a direct or indirect question except the question word, as in 'Ada will call someone, but I don't know who'.

#### Small clause

A small clause is a construction that has the semantics of a clause, with its typical subject-predicate divide, but it lacks either a verb or the markers of (verbal) inflection typically associated withfinite 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 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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Chiara Calderone Socio-historical background; Syntax 2.2; Syntax 2.6; Syntax 3.2; Pragmatics 1.1; Pragmatics 1.2; Pragmatics 1.3; Pragmatics 1.4; Pragmatics 2; Pragmatics 4; Pragmatics 5; Pragmatics 7; Pragmatics 8; Pragmatics 9; Pragmatics 10; Pragmatics 11

Carlo Cecchetto Syntax 1.1; Syntax 1.2; Syntax 1.3; Syntax 2.5; Syntax 3.3; Syntax 3.5.5; Syntax 3.5.6; Syntax 3.5.7.1; Syntax 3.5.7.2; Syntax 3.5.7.4; Pragmatics 6

Alessandra Checchetto Lexicon 3.1; Lexicon 3.2.1; Lexicon 3.2.2; Lexicon 3.2.3; Lexicon 3.5; Morphology 2.1.2.1; Morphology 2.2.4; Syntax 1.4; Syntax 1.5; Syntax 2.3; Syntax 3.5.5; Syntax 3.5.6; Syntax 3.6; Syntax 3.7

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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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