
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.

cd
 ANNA_a MARIO_b PERSUADE_b DONE BUT PARTY_b GO_a 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 may 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.


3.1.3.2.1 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.

$\overline{\text{cd}}$
 $\overline{\text{cd}}$ 
 MARIA FOOD_a COOK_a STIR_a L-U-C-A_b TABLE_b DISH++_b ARRANGE_b
 'Maria cooks the food and Luca sets the table.'

3.1.3.2.2 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.

$\overline{\text{cd}}$
 $[\text{o}]$

 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 eye 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_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.


neg wh

MOTHER LIKE FATHER LIKE.NOT Q_{artichoke} 

'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_a MEAT EAT SARA_b SALAD
'Laura eats meat and Sara salad.'



b. TOMORROW PARTY. IX₁ 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. IX₁ NEWS SEE IX₂ 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 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.

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 YES^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 IX₃ refers to the subject CAT.

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.

top
 MOUSE_a CAT CL(spread curved open 5): ‘eat’ DONE IX_{3a} 
 ‘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_3 refers to *MOTHER*, the subject of the main clause.

M-A-R-I-A FRUIT EAT MOST MUST MOTHER_a SAY IX_{3a} 
 '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 IX_a SISTER_a ADVENTURE LIKE IX_{3a} 
 '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_a IX_a CHOCOLATE_a WHITE ADORE_a IX_b FATHER BLACK_b 
 '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).

bl-f

a. GIANNI ARRIVE SEEM

'It seems that Gianni has arrived.'



b. GIANNI WORK RESIGN BE_ASTONISHING

'It is surprising that Gianni has resigned.'



c. GIANNI ARRIVE STRANGE

'It is strange that Gianni has arrived.'







d. GIANNI ARRIVE OBLIGATION

'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.

- | | |
|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| <p><u>bl-f</u>
a. SEEM GIANNI ARRIVE
'It seems that Gianni has arrived.'</p> |  |
| <p><u>bl-f</u>
b. BE_ASTONISHING GIANNI IX WORK RESIGN
'It is surprising that Gianni has resigned.'</p> |  |
| <p>c. STRANGE GIANNI ARRIVE
'It is strange that Gianni has arrived.'</p> |  |
| <p>d. OBLIGATION GIANNI ARRIVE
'It is compulsory for Gianni to come.'</p> |  |

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

 re

PIETRO LEAVE IX GIANNI FORBID

'Gianni forbids Pietro from leaving.'



- iii) Achievement predicates: BE_ABLE

 re

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'

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

NEG_O

- 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_a IX_a 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 [SYNTAX 2.3.1.1], 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
a. GIANNI HOPE MARIA LEAVE
'Gianni hopes Maria will leave.'




 re bl-b
b. MARIA LEAVE GIANNI HOPE
'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_a IX_a 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 

‘Gianni spreads the news that Gianni stole a car.’


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:

i) Clausal argument of SAY:

a. GIANNI SAY PIETRO_a IX_a CAKE EAT ALL 


‘Gianni says that Pietro ate all the cake.’

re

b. PIETRO CAKE EAT ALL GIANNI SAY 

‘Gianni says that Pietro ate all the cake.’

ii) Clausal argument of SURE:

a. GIANNI SURE PIETRO_a IX_a 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 COM-
 PLAIN 
 '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.'

re
 b. CHEF IX_a MARIA_a MEAT EAT FORCE_a 
 '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

re

a. GIANNI PIETRO PERSUADE LEAVE
 ‘Gianni convinced Pietro to leave.’



bl-right

b. GIANNI PERSUADE PIETRO LEAVE
 ‘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 $Q_{artichoke}$ 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.

wh bl-b

a. GIANNI SAY $Q_{artichoke}$ PIETRO_a CAR_a POSS_{3a} SEIZE_a
 ‘Gianni said that someone stole Pietro’s car.’



wh bl-b

b. GIANNI FORGET $Q_{artichoke}$ CONTRACT PUT_SIGNATURE
 ‘Gianni forgot to sign the contract.’



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 $Q_{artichoke}$

bl-right


B: PIETRO_a CAR POSS_{3a} SEIZE

‘What did Gianni say?’ ‘Someone stole Pietro’s car.’



_____ bl-left
 _____ wh

b. A: GIANNI FORGET Q_{artichoke}
 _____ 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).

_____ bl-right

PIETRO LEAVE GIANNI HAPPY 

‘Gianni is happy that Pietro left.’

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.’

Finally, whether the sign PE is used or not, eyebrows can be raised on the sentence initial object clause. When this happens, the sentence initial object clause plausibly sits in a topic position [PRAGMATICS 4.2].


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 TO_BE_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 role-shift. 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 in-

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').


_____ rs: Gianni

GIANNI SAY ix_1 LEAVE SOON 

'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 $ix(\text{loc})_{[\text{proximal}]}$ $ix(\text{loc})_{[\text{distal}]}$, 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 ix_1 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.

_____ re _____ rs: Gianni

GIANNI ARRIVE BOOK $_1$ CL(flat open 5): 'donate_book' $_2$ 

'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.

rs: Gianni

a. GIANNI HOUSE ARRIVE. MARIA IX₁ FLOWER₁ CL(closed 5): 'donate flower'₂



'Gianni arrived. He donated flowers to Maria.'

b. IX₁ QUIET IX₁ SEE WAITER MISTAKE CL(curved open L): 'drop_dish'
rs: customer

CUSTOMER CL(curved open L): 'drop_dish'₁ CL(5): 'food_fall_on'₁
rs: customer



GET_ANGRY₁ INSULTE++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 IX_3 is used to refer to the matrix subject 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, GIANNI is referred to by the pronoun IX_1 . However, the interpretation in which the entire sentence is interrogative is not possible. The sign $Q_{\text{artichoke}}$ can be interpreted only inside the embedded structure, as shown by the translation.


_____ re _____ wh

a. GIANNI_a IX_a SAY IX_{3a} BUY Q_{artichoke} 

'What did Gianni say that he bought?'

_____ wh

_____ rs


b. GIANNI SAY IX₁ 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.

_____ rs

a. GIANNI_a IX_a THINK IX₁ LEAVE SOON 


'Gianni thinks that he will leave soon.'

_____ rs

b. GIANNI DOUBT IX₁ LEAVE SOON 


'Gianni doubts that he would leave soon.'

_____ rs

c. GIANNI WARN IX₁ LEAVE SOON 


'Gianni warned that he would leave soon.'

_____ rs

d. GIANNI CONFIRM IX₁ LEAVE SOON 

'Gianni confirmed that he would leave soon.'


_____ rs

e. GIANNI TEXT IX₁ 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.

_____ rs

GIANNI ASK+ +₁ IX₁ LEAVE SOON 

'Gianni wonders whether he will leave soon.'

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.

_____ rs

a. IX_{3pl} NOBODY SAY IX₁ CONTRACT PUT_SIGNATURE DONE 

'Nobody (among them) said that s/he signed the contract.'

_____ re _____ rs

b. SOMEBODY IX_{3pl} SAY IX₁ CONTRACT PUT_SIGNATURE DONE 

'Someone (among them) said that he signed the contract.'

_____ rs


c. ALL SAY IX₁ CONTRACT PUT_SIGNATURE DONE 

'Everybody said that s/he signed the contract.'

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

_____ re

_____ rs _____ wh

IX₁ CONTRACT PUT_SIGNATURE DONE IX_{3pl} SAY WHO 

'Who (among them) said that s/he signed the contract?'

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_{3a}**) 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).


rel

[YESTERDAY CHILD + +_a CAKE EAT PE_a] TODAY (IX_{3a}) STOMACH_ACHE 

‘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.


rel

[P-A-O-L-O DOG_a FIND PE_a] 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].

PE 

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.

rel

[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)

rel

b. [P-A-O-L-O LIKE WHICH] IX₁ SEE DONE

'I saw which Paolo likes.'

(Branchini 2009, 105)

rel

c. [G-I-A-N-N-I₃ MONEY₃ GIVE₁ HOW] IX₁ LIKE NOT

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

(Branchini 2009, 106)

rel

d. [SISTER POSS₁ HOLIDAY GO WHERE] BEAUTIFUL
 'Where my sister went on holiday is beautiful.'
 (Branchini 2009, 106)

rel

e. [TRAIN ARRIVE WHEN] IX₁ READ DONE
 'I read when the train arrives.'

rel

f. [P-A-O-L-O LEAVE WHY] IX₁ 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 PE_a] 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).

rel

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

rel

b. [CHILD_a PE_a 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.

rel

a. [CHILD_a FOOTBALL PLAY PE_a] YESTERDAY TREE CL(V): 'fall_down'
 'The child who plays football yesterday fell off a tree.'

rel

b. [CHILD_a FOOTBALL PLAY PE_a] YESTERDAY A-N-N-A_b BALL NEW
_bCL(unspread curved open 5): 'give_ball'_a 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.

rel

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] IX₁ 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).

rel


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

rel

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.

hn eb
hn
rel

[CHILD_a PE_a COMPETITION WIN] TEACHER PRIZE GIVE 
 ‘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.

$$\frac{\text{rel}}{\text{rel}} \quad \frac{\text{eb}}{\text{eb}}$$

[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.

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

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).

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

a. MARIA [CITY ROME KNOW NOT] ARRIVE LATE
'Maria, who doesn't know the city of Rome, arrives late.'

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

b. IX₃ [SPIDER FEAR] HOUSE_a POSS₁ COUNTRYSIDE VISIT_a NEVER
'He, who is afraid of spiders, never visits my house in the countryside.'

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

c. BOYFRIEND POSS₃ [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.

cond	
A-N-N-A STATION ARRIVE LATE TRAIN MISS	
‘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.

cd	
bl-f	
re	
PROTEST CONTINUE_VA_VA POLITICIAN POLICE MEET	
‘If the protest continues, the politicians will meet the police.’	

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.'



3.5.1.2.2 Manual conditional signs in factual conditionals

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



g. 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
LARA_a CHILD_b SCOLD_b IX_{3b} ARM BREAK 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 non-manual markers in counterfactual conditional clauses.

cd	
bl-f	
re	
IX ₁ PRESIDENT FRANCE	PRESIDENT _a IX _a JAPAN IX ₁ MEET _a

'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 _a IX _{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.

cond

RING₃DONATE₁ IX₁ 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].

3.5.1.4.1 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 (bl-f) over the antecedent clause.

bl-f
cd
re

AMERICA TRIP₃DONATE₁ IX₁ SAME_BEFORE IX₁ GO NOT 

‘Even if they donated me a trip to America, I wouldn’t go.’

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.

_____ cond

LIBIA IX(LOC) TRIP₃ DONATE₁ IX₁ SAME GO NOT 

'Even if s/he donated me a trip to Libia, I wouldn't go.'

In the presence of the optional manual marker occurring in the antecedent 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 IX₃ 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

IX₃ INVITE₁ IX₃ 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

HUNGER IX₂ 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 non-manual markers 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 CALL₃ PLEASE WARN₃ 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) [SYNTAX 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 [SYNTAX 1.3] followed by a declarative clause [SYNTAX 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).

cd
re
sq

BEHAVE BAD PALM_UP CINEMA GO NOT

'Behave bad and you will not go to the cinema.'



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.

cd
re

IX_2 $_2$ 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.

cd
re


$_2$ TEXT $_1$ MOMENT IX $_1$ SHOWER

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



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.


cd
re

L-U-C-A GO_AWAY A-N-N-A CRY 

'After Luca left, Anna cried.'

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.


cd
re

TEACHER GO_AWAY AFTER CHILD++ CONFUSION 

'After the teacher left, the children moved around chaotically.'

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.


cd
re

LUCA VASE BREAK DONE IX₁ 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.

cd
re

ALARM THIEF IX BEFORE GO_AWAY 

'The thief left before the alarm went on.'

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.

re
cd

IX₁ ARRIVE LUCA_a 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

PE




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.

cd
_____ re

a. *WHEN* IX₁ PADUA ARRIVE IX₁ TEXT₂ 


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

cd
_____ re

b. ₂TEXT₁ MOMENT IX₁ SHOWER 


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

cd
_____ re

c. ₃TEXT₁ EXACTLY IX₁ SHOWER 


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

cd
re

d. IX₂ TEXT₁ IX₁ TIME NOW PE DRIVE 

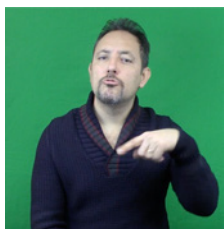
'When you sent me the text message, I was driving.'

cd
re

e. TEXT₁ TIME IDENTICAL NOW IX₁ DRIVE 

'When s/he sent me the text message, I was driving.'


The optional manual sign expressing anteriority is the sign AFTER.



AFTER

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

cd
re

LUCA GO_AWAY AFTER ANNA CRY 

'After Luca left, Anna cried.'

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.


$$\frac{\text{cd}}{\text{re}}$$
 a. IX₂ ARRIVE IX_{1pl} BEFORE EAT DONE
 'We ate before you arrived.'



$$\frac{\text{cd}}{\text{re}}$$
 b. IX₂ ARRIVE IX_{1pl} EARLIER EAT DONE
 'We ate before you arrived.'




cd
re

C. ALARM NOT_YET IX_a THIEF_a GO_AWAY 

‘The thief left before the alarm went on.’

cd
re

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

IX₁ 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 eyebrows (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).

rel

a. PAST IX(LOC) HOUSE PE FATHER LIVE IX(LOC) NOW PARKING_LOT 


'The house where my father used to live is now a parking lot.'

rel

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 IX₁ PLAY WHERE NOW CINEMA 

'Where I used to play there is now a 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 eye-blink separates the locative clause from the main clause. The following sentences reproduce the spreading domain of the different non-manuals marking locative clauses in LIS.


hn
re
sq eb

a. YESTERDAY IX₁₊₂ MEET AREA PE LEFT SHOP SHOEMAKER EXIST 
 'There is a shoemaker shop near the place where we met yesterday.'


hn
re
sq eb

b. PAST IX₁ PLAY WHERE NOW CINEMA 
 'Where I used to play there is now a cinema.'

hn
re
sq eb

c. IX₁ EAT DONE POINT PE IX₁ COMPUTER FORGET IX₁ 
 'I forgot the computer where I ate.'

hn hn
sq eb

d. PAST FATHER ^ MOTHER IX HOUSE LIVE IX(loc) NOW 
 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 IX₁ FORGET POINT PE PAST IX₁ 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.

_____ rel

IX₂ EXPLAIN₁ HOW RICE IX₁ 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.

IX₂ 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
a. IX₂ EXPLAIN₁ HOW RICE IX₁ COOK DONE

'I cooked the rice the way you explained to me.'



b. IX₂ HOUSE BUILD IDENTICAL TIME PAST

'You built the house as they used to do in the past.'



c. CARLA_a IX_a SEW IX_a PE PAST MOTHER TEACH_{3a}

'Carla sews as her mother taught her to.'



d. IX₃ BEHAVE AS_IF HOUSE POSS(G)₃

'He behaves as if the house was his own.'



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 (sq), raised eyebrows (re), head nod (hn) and eye 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
hn
sq


IX₂ EXPLAIN HOW RICE IX₁ COOK DONE 

'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).

rel

a. IX₂ EXPLAIN HOW RICE IX₁ COOK DONE 

'I cooked the rice the way you explained to me.'

b. IX₃₃ SPEAK₁++ IX₁ IDENTICAL IX₁ CHILD 

'He speaks to me as if I was a child.'

3.5.4.6 Simultaneous expression of the main event and the adverbial clause

To 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 $Q_{\text{artichoke}}$ discussed in [SYNTAX 1.2.3.2] and illustrated in the following picture.



$Q_{\text{artichoke}}$

The following is an example of a sentence expressing causation and involving $Q_{\text{artichoke}}$.

CAR CL(closed 5): 'car_bump_and_stop' $Q_{\text{artichoke}}$ ENGINE_OIL EX-HAUST 
 'Why did the car stop? Because the engine oil finished.'

However, the sign $Q_{\text{artichoke}}$ 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. WHY
'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 question-answer 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 re
 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

ty 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_a MAN_b
 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_a IX_a GRAPE

dom: CL(V): ‘jump’

n-dom: GRASP



‘The man jumped to grasp the grapes.’

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.

sq
re
 GIANNI_a IX_a 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 GIANNI_a IX_a 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.

re
 MAN SHORT IX₃ SAME BASKETBALL PLAY
 'Although that man is short, he plays basketball.'



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.

_____ sq
 _____ re
 a. MAN BLIND SAME PASTA COOK BE_ABLE 
 'Although the man is blind, he can cook pasta.'


_____ re
 b. L-U-C-A IX_a IX_a CAT ALLERGY IX_b 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.

_____ re
 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.'

_____ re
 b. IX_a GABRIELE IX_a MONTH MARCH IX_3a ENGAGED WEDDING_b POSS_1
 a COME_b 
 '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.

.....re
 a. MARIA PINEAPPLE HATE SAME EAT ALL 
 ‘Even though Maria hates pineapple, she has eaten all (the cake).’


_____re
 b. MARIA IX_a PINEAPPLE HATE CAKE POSS₁ 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_a IX_a CAT ALLERGY EXIST BUT IX_b 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 BUT and the sign SAME (with the meaning ‘just the same’) can co-exist. The sign SAME can either follow the sign 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

MARIA IX_a PINEAPPLE HATE CAKE POSS₁ 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 eyebrows (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_a IX_a CAT ALLERGY EXIST BUT IX_b 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 in isolation. Only the sentence-initial clause of an adversative coordinate construction can be produced on its own as shown below:

L-U-C-A IX₃ 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 clause

To 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-_α POS-_β 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_{-α} POS_β WOMAN TALL_β ICONIC_MORE_γ
 '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_{-α} POS_γ WOMAN LESS
 'The woman is less tall than the man.'
 (recreated from Aristodemo 2017, 18)



b. MAN TALL_{-α} POS_γ WOMAN TALL_γ ICONIC_LESS_β
 'The woman is less tall than the man.'
 (recreated from Aristodemo 2017, 18)



The synthetic form ICONIC_LESS can be used only with the special class of adjectives that allow the synthetic form ICONIC_MORE.


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_{-α} POS_β BUT MARIA TALL_{-β} ICONIC_MORE_γ
 ‘Gianni is tall, but Maria is taller (than him).’
 (Aristodemo 2017, 33)

b. GIANNI TALL_{-α} POS_β 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_{-α} POS_β MARIA TALL_{-β} ICONIC_MORE_γ IX_β ONE METRE SEVENTY.
 IX_γ 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_β refers to the degree of Gianni’s height, while IX_γ 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_α ICONIC_MORE_β 
 ‘A bit more.’
 (recreated from Aristodemo 2017, 40)


b. A_BIT_α ICONIC_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_α ICONIC_LESS_β 
 'Gianni is smart, Maria is a bit less smart (than him)'
 (recreated from Aristodemo 2017, 41)

3.7 Comparative correlatives

Comparatives correlatives are bi-clausal constructions as exemplified below.

$\frac{\text{sq}}{\text{re}} \quad \frac{\text{sq}}{\text{re}}$
 a. RUN++ SWEAT++ 
 'The more you run, the more you sweat.'
 (recreated from Geraci 2007, 52)

$\frac{\text{re}}{\text{sq}}$
 b. RUN++ SWEAT MOST 
 'The more you run, the more you sweat.'
 (adapted from Geraci 2007, 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 RUN++ 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_[prolonged] 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 [SYNTAX 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)

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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