5 Discourse structure

Summary   5.1 Coherence and discourse markers. – 5.2 Cohesion. – 5.3 Foregrounding and backgrounding.

The discourse level goes beyond the sentence level and it is formed by utterances linked to a specific pragmatic context.

Discourse structure requires coherence, which means that the different parts of the text have to be coherently connected with each other, keeping logic continuity within the discourse. An example of coherence is represented by the correct use of temporal and causal relationships between different sentences. Another textual property is represented by cohesion. Sentences are linked to each other through linguistic strategies that keep track of reference.

Both coherence and cohesion strategies may be overtly or covertly realised. In the first case, the discourse markers have a manual or non-manual realisation. In the second case, covert relationships are established between utterances, by taking advantage of the world knowledge and the implicatures [PRAGMATICS 7].

5.1 Coherence and discourse markers

Coherence is that property of a text through which it is possible to organise and guarantee a logic transmission of meanings. In order to assure coherence, it is necessary that the conceptual building blocks

of discourse follow a certain order and are united through logical connections as well as discourse markers. Two or more utterances can be linked to each other by discourse markers which involve conjunctions [LEXICON 3.9], reformulations, argumentative markers, and discourse particles.

As stated before, discourse markers can be explicit, namely overtly expressed, or implicit, namely left unexpressed. As will be discussed in the following sections, overt particles in LIS can be realised throughout manual signs, non-manual markers, and spatial relationships.

5.1.1 Manual discourse markers

The manual markers used in coordination and subordination [SYNTAX 3] can also be considered as discourse connectors from a discourse point of view. The same markers also play a role in the dynamics of a signed conversation [PRAGMATICS 10].

The various discourse markers used in LIS can be classified into four categories according to their function: i) discourse structuring markers, ii) discourse connectors, iii) reformulation markers, and iv) argumentative markers.

Discourse structuring markers are used to link phrases or sentences binding together pieces of discourse. They enhance the logical structure of a text and express several different relationships, such as introducing, connecting or concluding a discourse. Some examples of discourse structuring markers in LIS are listed and shown below.
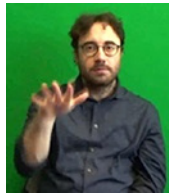
Table 1 Discourse structuring markers in LIS

Ordering markers: initial	

now
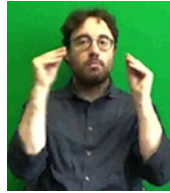
start

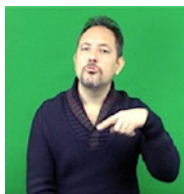know

well

unexpected

Ordering markers: continuity

after

plus

in_addiction

aside

Ordering markers: closure

finish

Ordering
markers:
closure

anymore

last

close

An example of the contextual use of an initial marker is reported below. The discourse particle is marked in bold.

WELL IX$_2$ HOPE IX$_{2pl}$ UNDERSTAND IX$_1$ EXPLAIN
'Well, I hope you understood what I explained.'

The following sentence includes the sign PLUS, employed as continuative discourse marker. For the sake of clarity, it is highlighted in bold.

PLEASE HOUSE COME_BACK WINDOW CL(A): 'roll_up_the_blinds'
CL(4): 'rolled_up_blinds' PLUS CAT IX$_a$ FOOD GIVE$_{3a}$
'Please, when you come back home, roll up the blinds and also feed the cat.'

The example below shows a case of final discourse marker in bold.

SIGN IX PARAMETER FOUR HANDSHAPE PALM_ORIENTATION,

MOVEMENT LOCATION **FINISH**

'The sign has four parameters: handshape, palm orientation, movement and location. Finish.'

Discourse connectors are those markers which link sentences and form more complex discursive structures. Some examples of discourse connectors are reported in the table below.

Table 2 Discourse connectors in LIS

| BUT | CONTRARY | OR |

| PLUS | CONSEQUENCE |

An example of discourse connectors in LIS is the sign consequence. Such discourse particle creates a consequential relationship among sentences, as displayed in the example below.

MUNICIPALITY PROJECT ELIMINATE CONSEQUENCE IX COMPANY CLOSE

'The municipality cancelled the project and as a result the company closed down.'

Reformulation markers are used to rephrase sentences or pieces of discourse, by adding information or by adding further explanation to a concept, as displayed below.

Table 3 Reformulation markers in LIS

Explanatory:	MEANING	
Recapitulative:	BRIEFLY	
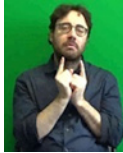
An example of a reformulation marker is shown below.

MUNICIPALITY IX MONEY INVEST NEG_O MEANING PROJECT

PE COLLAPSE

'The municipality does not have money, namely the project fell apart.'

Argumentative markers are supposed to reinforce or exemplify the discourse, examples of these two markers are reported in the table below.

Table 4 Argumentative markers in LIS

Reinforcement:	EXACTLY	
Exemplifiers:	EXAMPLE	TYPE

In the examples below, we show how argumentative markers can be used in context. Respectively, example (a) displays a case of reinforcement marker and example (b) shows a case of exemplificative marker.
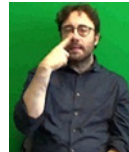
a. VENETO REGION EXACTLY IX(loc) PADUA IX(loc) DONE PROTEST

NUMBER MOST

'Most of the protests have taken place in Veneto, especially in Padua.'

b. IX$_2$ GLOVE++ TYPE POSS$_3$ CLEAN TAKE

'Take the gloves, those for cleaning.'

5.1.2 Non-manual discourse markers

In LIS, discourse particles may also be realised through non-manual markers, which can reinforce the meaning of the manual sign or bear independent meaning. The example below shows a case of adversative coordination [SYNTAX 3.1]. Note that the discourse particle BUT is omitted and substituted by a particular use of non-manuals which scope over the adversative clause, specifically, mouth corners down (md).

<div style="text-align:right">md</div>

IX$_1$ DWELL ROME IX(loc) IMPOSSIBLE_NO_WAY IX(loc)

MILAN IX$_1$ ACCEPT

'I coudn't live in Rome, but I'd be willing to live in Milan.'

5.1.3 Strategies using signing space

The signing space may also be used to convey information at a discourse level. The signing space may cover several discourse functions: i) signalling a topic which is not at-issue and deviates from the main discourse, ii) marking contrast between two or more referents, or iii) realising temporal relationships.

In the example below, the signing space is used to establish a main topic (a play at the theatre) and a secondary topic (the information about the play's writer). Through lateral body leans, the signer associates the main topic with the contralateral area and the secondary topic with the ipsilateral area.

<u>   bl-left   </u>
YESTERDAY THEATRE IX_a TITLE WHICH D-O-N-G-I-O-V-A-N-N-I IX_a
<u>   bl-right   </u>
PE_b PAST WRITER WHO IX_b M-O-Z-A-R-T IX_b PERIOD DEAD BEFORE IX_{3b}
<u>   bl-left   </u>
THEATRE IX_a IX_1 SEE BEAUTIFUL-INT

'Yesterday, the theatre presented the play 'Don Giovanni', the play was written by Mozart before he died, I looked at the play, which was very beautiful.'

Alternatives can be encoded in the signing space as well. This may be done by placing two options in different locations of the horizontal plane, as displayed in the example below.

IX_2 BUY OR IX_a $APPLE_a$ OR $WINDOW_b$ CHOOSE IX_2
'You can choose to buy an Apple Mac or a Windows PC.'

The use of signing space may also convey temporal information [PRAGMATICS 8], such as the establishment of consequential events. The anaphoric time line, which is realised through space, follows an imaginary diagonal trajectory. Anaphoric temporal references are determined within the discourse and are expressed with respect to a point of reference marked along this line. In the sentence below, the point of reference is represented by the birth of the signer's nephew, which is signed close to the signer's body on the ipsilateral side. The move to Bologna realises a relation of posteriority and is expressed farther from the signer's body on the contralateral side.

NEPHEW BE_BORN IX_1 BOLOGNA MOVE
'After my nephew was born, I moved to Bologna.'

5.2 Cohesion

Cohesion is another property of discourse and it mostly concerns the use of grammatical and lexical forms to indicate semantic relations across sentences. Some of the linguistic devices which enhance textual cohesion are referring expressions, such as pronouns [LEXICON 3.7]; [PRAGMATIC 4.2] which refer to previously introduced elements. Such strategies make possible for the addressee to keep track of discourse referents. An example of this pronominal function is displayed below, where the pronouns IX_{3a} and IX_{3b} both refer to previously mentioned subjects, GIANNI and MARIA respectively.

GIANNI$_a$ MARIA$_b$ PAST SCHOOL TOGETHER GROW$_{a+b}$
NOW IX$_{3a}$ STOP WORK ALREADY CONTRARY IX$_{3b}$ CONTINUE UNIVERSITY
'Gianni and Maria went to school together and grew up together. Now he is already working after quitting school, while she is continuing her studies at the university.'

In the example above, the second utterance is clearly linked to the previous one and the pronominal expressions co-refer with the two antecedents.

As will be discussed in the following sections, several strategies can be used in LIS for referring back to already mentioned elements: manual strategies, non-manuals strategies, and the signing space.

5.2.1 Manual strategies

Pronouns and determiners in LIS are able to manually track back referents previously introduced in the discourse structure. Co-reference is realised by pointing toward those locations that were previously established and associated with the relevant referents. This cohesive device contributes to ensure reference tracking.

An example of pronominal expressions was presented above: references to GIANNI and MARIA was realised by directing pointing pronouns toward the locations in space previously associated with these two referents. In addition, an example of a demonstrative form is presented below.

BOOK IX(dem)$_{[proximal]}$ IX$_1$ READ DONE IX(dem)$_{[distal]}$ NOT_YET
'As for this book, I have read it, that one not yet.'

However, not only pronominal or demonstrative forms are used for reference tracking, also other linguistic strategies which are language specific. For example, LIS, as other sign languages, makes use of some linguistic devices typical of the visual-gestural channel.

One of these elements consists in handshapes classifiers [MORPHOLOGY 5] which denotes an entity and adds cohesion to the discourse. Three major classes of predicative classifiers, such as entity classifiers [MORPHOLOGY 5.1.1], bodypart classifiers [MORPHOLOGY 5.1.2] and handle classifiers [MORPHOLOGY 5.1.3] are used for representing referents which move, are being moved or can be located somewhere. In the case of predicative classifiers, the subject can be explicitly mentioned, but it can also be omitted. An example of predicative classifier which allows the omission of the object pronoun ('him') is reported below and highlighted in bold.

dom: DOG IX$_a$ DOG **aCL(spread curved open 5):**
'bite'b

n-dom: PERSON CL(G): 'walk'$_b$ 🖐

'There is a dog and a person who is walking by. The dog bites
(him).'

In LIS, signers can also produce discourse markers with the non-
dominant hand guiding the discourse and providing a conceptual
landmark. These strategies are known as buoys [PRAGMATICS 2.2.3]. List
buoys are employed to keep a visual track of both ordered and unor-
dered entities which are introduced into the discourse.

Buoys differ from numerals in that they are mostly realised with
the fingers oriented to the ipsilateral side rather than upward. More-
over, the association between the referent and the finger is gener-
ally enhanced by moving the dominant index toward the tip of the
appropriate finger of the non-dominant hand. An example of buoy is
presented below.

IX$_1$ CHILD FOUR HALF IX$_a$ MALE IX$_b$ FEMALE
dom:.   FIRST IX$_{[index]}$ SPORT FOOTBALL IX$_{[middle]}$ VOLLEYBALL
n-dom: FOUR--------- SPORT FOOTBALL FOUR--- VOLLEYBALL

dom: IX$_{[ring]}$ SKATING ICE IX$_{[pinky]}$ UNEXPECTED CHESS   🖐
n-dom: FOUR SKATING ICE FOUR----------------- CHESS

'I have four children, half are male and half female. The first plays
football, the second plays volleyball, the third ice-skates, and the
fourth, unexpectedly, plays chess.'

Finally, another strategy which enhances textual cohesion in LIS is
a phenomenon called dominance reversal. Such linguistic strategy
permits to shift the dominance of the hand for reasons of linguistic
convenience. In the second part of the sentence displayed below, the
signs are produced with the non-dominant hand. In this case, the
classifier for HOUSE is placed on the ipsilateral side and is realised
with the dominant hand. Therefore, the signer chooses to sign the
remain part of the sentence with the non-dominant hand in order to
facilitate the production of the rest of the sentence. Meanwhile he
keeps track of the house through the dominant hand.

dom: HOUSE EXIST TWO   CL(spread curved open 5): 'house is_at_a'
                                            ------------   -----------
n-dom: HOUSE   CL(spread curved open 5):
                         'house is_at_b' IX_b $POSS_1$ MAN GO_b 🖐
'There are two houses, one is mine. A man goes there.'

5.2.2 Non-manual strategies

Another important linguistic device for reference tracking is role shift. Role shift [PRAGMATICS 6] is used for referring to a particular participant and assuming his/her perspective. The participant referred to may be some other person or the signer himself/herself in a different time and place.

Some non-manual markers, such as the temporary interruption of eye contact between signer and interlocutor, indicates that the referential shift is taking place. In case of role shift, no other linguistic strategies are needed: for example, the repetition of the nominal expression denoting the referred entity is possible, but not necessary. An example of role shift is reported below and highlighted in bold.

<div>

                   rs: bear
BEAR CL(**closed 5**): **'bear_lumber'**   🖐
'The bear is lumbering.'

</div>

In LIS, the specific use of squint eyes accompanying topic expressions [PRAGMATICS 4.3.2] seems to highlight that the entity the signer is presenting has been previously introduced into the discourse. However, this marker also suggests that the referent is no longer easily accessible in the mind of the interlocutor. An example of this use is reported below.

<div>

        sq
MAN IX(dem) IX_1 $_3TELL_1$ EVERYTHING   🖐
'The man (you know) has told me everything.'

</div>

5.2.3 Strategies using signing space

As already announced, the signing space also plays an important function in the retrieval of previously introduced elements. In particular, agreement predicates allow the omission of the argument [SYNTAX 2.4.2], but they still guarantee the possibility to track back the correct entity. In the example proposed below, the locations where the agreement verb is realised are spatially connected to the loca-

tions where the two subjects GIANNI and MARIA have been previously produced.

GIANNI$_a$ MARIA$_b$ BOOK $_{3a}$CL(flat open 5): 'give_ book'$_{3b}$ ✋
'As for Gianni and Maria, he gave the book to her.'

The agreement verb GIVE allows the omission of the subject and the object, since the referents were clearly established in the signing space. Another example displays a case of farther reference tracking.

ROOM KITCHEN$_a$ MOTHER CL(flat closed 5): 'be_at' EXIST, IX$_1$ BATHROOM$_b$

$_a$GO$_b$ $_b$GO$_a$ DISAPPEAR$_a$ ✋

'Mum was in the kitchen, I went to the bathroom and when I came back, she was gone.'

The referential entity MUM, introduced in the first sentence, is retrieved in the second sentence despite the shift of the subject. This is possible because the verb of the second sentence, DISAPPEAR, agrees with the location of the subject (MOTHER).

5.3 Foregrounding and backgrounding

As in other sign languages, also in LIS specific spatial means can identify foreground or background information. The first concerns the most highlighted part of the discourse, while the second refers to the less salient stretch of discourse.

Again, given the visual channel, a simultaneous strategy can be used: the non-dominant hand keeps track of background information, while the dominant hand provides the new and salient information.

In the following example, the signer keeps the sign for 'slice of bread' through the non-dominant hand adding information about the preparation of this bread through the dominant hand.

IX$_1$ BREAD IX$_1$ CL(unspread 5): 'cut_the bread'

dom: IX$_a$ IX$_1$ CHEESE CL(unspread V):
                                                        'spread_on_a'
n-dom: CL(unspread 5): 'slice_at_a'---- CHEESE CL(unspread 5):
                                                        'slice_at_a'----
dom: THEN TUNA IX$_1$ CL(flat closed 5): 'put_tuna_on_a'
n-dom: CL(unspread 5): 'slice_at_a'--------------------------

dom: THEN TOMATO IX$_1$ PUT$_a$ CL(curved open L):
                                        'put_tomato_on_a' IX$_1$

n-dom: CL(unspread 5): 'slice_at_a'

----

dom: CL(unspread 5): 'put_slice_on_a' CL(flat open 5):

'eat' DELICIOUS NOT

n-dom: CL(unspread 5): 'slice_at_a'------- CL(flat open 5): 'eat'   🖐

'I cut a loaf of bread in half, there I spread cheese, then I added tuna and some slices of tomato. I ate it, but it was not good!'

Information on Data and Consultants

The descriptions in these sections are based on the references below and on grammatical judgments. For information on data and consultants see the references. The video clips and images exemplifying the linguistic data have been produced by a LIS native signer coming from the northern part of Italy and involved in the SIGN-HUB Project.

Authorship Information

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