Chapter 2
A syntactic outline of Italian Sign Language (LIS)

Introduction

This chapter will be devoted to introducing some characteristics specific of languages in the visual-gestural modality and providing the reader with the necessary basic knowledge on LIS syntactic structure relevant for the analysis of relative clauses and cleft constructions presented in the second and third parts of this work. Being that the research on LIS is at a very early stage, the final picture I will present will not be exhaustive of the different syntactic properties displayed by LIS nor of its structure. It will rather be a state-of-the-art representation of what we presently know about LIS. In § 2.1, I examine the internal structure of signs and illustrate some modality-specific uses of space, movement and face expressions for linguistic purposes. Section § 2.2 is a description of LIS syntax in the three structural layers composing the clause: the CP layer, the IP layer, and the VP layer. The representation of each clausal layer will confirm the head-final nature of LIS. The illustrations and examples provided in this chapter always refer to LIS. Section § 2.3 presents some preliminary data on LIS relative and cleft constructions, explaining the challenges they pose for a fine-grained analysis. Section § 2.4 sums up the information presented in this chapter.

2.1. Modality-specific characteristics

2.1.1. The internal structure of signs

Signs are the basic lexical units of sign languages. They can be produced with either one or two hands. One-handed signs are realized with the so-called ‘dominant hand’, the selection of which depends on whether the signer is right- or left-handed. Two-handed signs can be produced with both hands performing the same sign, except being specular (in this case the sign is said to be symmetric), or they can be produced with each hand displaying a different handshape and/or movement (in which case the sign is said to be asymmetric). In asymmetric signs the role of each hand is different. There is
a primary hand, the dominant hand, while the other hand is said to support
the dominant hand and is therefore identified as the nondominant hand
Figure (1) exemplifies a two-handed symmetric sign characterized by the
same handshape and movement. Figure (2) illustrates a two-handed asym-
metric sign where each hand displays a different handshape and movement.

Most signs are realized within the signing space extending from the signer’s
head to his waist and from shoulder to shoulder.

Stokoe’s (1960) pioneering analysis of ASL5 detected a sub-lexical struc-
ture in signs. Each sign can be analyzed along four parameters: handshape,
hand orientation, movement, and location. In the production of a sign, such
parameters combine simultaneously. Each parameter is set independently
combining in a potentially unlimited number of different signs with different
meanings, just as phonemes do in spoken languages. To clarify, the variation
of one and only parameter provides a minimal pair, just as the variation of
phonemes does in spoken languages. The LIS examples in figure (3a) and
(3b) are a minimal pair differing only in their location; figure (4a) and (4b)
are a minimal pair differing in handshape.

![Figure 1. ‘Ticket’](image1.png)

![Figure 2. ‘Tax’](image2.png)

![Figure 3a. ‘To know’](image3a.png)

![Figure 3b. ‘To speak’](image3b.png)
2.1.2. The linguistic use of space and movement

As we have seen in the preceding paragraph, at the phonological level, space and movement (together with handshape and orientation) are used as distinctive features. At the morphological level, space and movement play a central role in both derivational and inflectional morphology. Nouns are derived from verbs by changing the movement of the sign: a single movement for verbs and a repeated, smaller sign for nouns (see Volterra 2004 [1987]; Pizzuto, Giuranna, and Gambino 1990; Pizzuto and Corazza 1996). In figure (5) the sign for the verb displays a single, wide movement, while in figure (6) its derived noun form exhibits a repeated, smaller movement.

The signs for verbs undergo a variety of morphological markings by changing their root form. The movement associated with the verb can convey aspectual or manner distinctions (the length of the event, whether it takes place
continuously, repeatedly or regularly, or whether it involves the referents present in the discourse context). Figure (7) illustrates the LIS sign for ‘to wait’. In the three stages illustrated in figure (8) the movement of the verb is modified to convey an aspectual information, namely that the event takes place for a long time. This is achieved by decreasing the speed of the verb and increasing the space covered by it.

Figure 7. ‘To wait’

Figure 8. ‘To wait for a long time’

Figure (9) represents the sign for ‘to give’. In the three stages illustrated in figure (10), the movement of the verb is altered to convey a distributional reading, namely that the action is distributed among many people in front of the signer. In order to do so, the movement is repeated and directed towards different locations in the signing space.
The strategy of incorporating into the verb different morphemes instead of adding them to it (as many oral languages do in the form of suffixes and prefixes) shows that sign languages display an alternative structure provided as a linguistic possibility by the Universal Grammar. A detailed description of the different linguistic uses of space and movement employed by sign languages is beyond the goal of this chapter. In what follows, I will give a brief description of some aspects of the syntactic use of space and movement that will be relevant for the analysis carried out in the second part of this work.

2.1.2.1. Verb agreement

In LIS, as well as in other sign languages, the use of space is central for morphological verb agreement. In the description given in Volterra ([1987] 2004)
and Pizzuto, Giuranna, and Gambino (1990), LIS verbs can be divided into three main categories depending on their place of articulation. A first category includes verbs produced near or on the signer’s body, as in figure (11).

This class of verbs shows no overt manual agreement with its arguments. A second category includes verbs produced in the neutral space in front of the signer with only one point of articulation, as in figure (12).

Verbs belonging to this category agree with only one of their potential arguments by changing their only point of articulation. The argument they agree with usually carries a thematic/patient role and occupies either a subject position (as is the case with intransitive verbs, e.g. FALL, or with verbs used intransitively, e.g. BRAKE) or an object position (with verbs used transitively, e.g. FIND).

A third category includes verbs produced in the neutral signing space with two points of articulation and a movement path connecting them, as illustrated in figure (13).
This last class of verbs show overt agreement with their arguments by altering one or both of their points of articulation. Verbs belonging to these last two categories display morphological subject and/or object agreement. As shown by Bahan (1996) for ASL, the signs for verbs move between the locations associated with discourse referents to specify grammatical relations. Subject and object morphological agreement is realized by moving the verb sign from the location associated with the subject to the location associated with the object. In the LIS example in (1), the agreeing verb GIVE starts in the location associated with the subject to end in the location associated with the object. In (1) the use of indices is employed to show this spatial verb agreement.\(^7\)

(1) TEACHER\(_i\) CHILD\(_k\) HOMEWORK \(_i\)GIVE\(_k\)

‘The teacher gives the child the homework.’

Finally LIS features both null subject and null objects, as in (2). This is not surprising given the rich inflectional morphology illustrated above.

(2) pro\(_i\) pro\(_k\) HOMEWORK \(_i\)GIVE\(_k\)

‘He/she gives him/her/them the homework.’

Research on verb agreement in ASL have led Neidle et al. (2000) to claim that spatial locations are instantiations of overt person features\(^8\) (\(\phi\)- features). Although further study in this direction needs to be carried out for LIS,\(^9\) a similar behaviour in the use of space and movement suggests that an analysis in this direction could be extended to Italian Sign Language.

\(2.1.2.2.\) Space and referentiality

LIS and other sign languages associate discourse referents with different locations in the signing space. If the referent is physically present during the discourse, it will be assigned the location in space it occupies. When it is absent, it will be assigned an arbitrary location. Once introduced in the discourse, further reference to it can be made by simply pointing in the direction of the location it has been assigned. This pointing towards a fixed abstract location has been assimilated into pronominal reference (see Volterra [1987] 2004; Pizzuto, Giuranna and Gambino 1990, a.o. for studies on pronominal reference in LIS; Meier 1990; Lillo-Martin 1995; Neidle et al. 2000, a.o. for similar studies on ASL). Pronominal signs,\(^10\) glossed ‘IX’, are realized with the index finger extended as shown in figure (14).
The sign orientation can be modified to produce a possessive marker, as in figure (15), thus identifying the referent as the possessor.

Demonstrative pronouns are also employed. Lacking a deeper analysis of demonstrative phrases in LIS, we can simply say that the handshape of demonstratives closely resembles that of pronouns with the index finger extended, as in figure (14).

This strategy of associating referential entities with locations in the signing space avoids many ambiguities we find in spoken languages. While in the English sentence ‘Tom wrote to Peter and told him he had to work hard’, it is not clear which person has to work hard, this ambiguity would not be present in LIS since the different pronominals would be unambiguously associated with different points in space.

2.1.3. The non-manual component

Besides the movement of the hands, crucial information is conveyed by the activation of specific non-manual markings (henceforth NMMs). Facial expressions and head and upper body movements interact with the manual component in the production of the sentence. Due to their independent articulation, manual and non-manual components can be produced simultaneously. Different facial expressions and head and body movements can, furthermore, combine producing a multi-layered structure.

NMMs can have affective and linguistic functions. Carrying out the dual purpose of conveying affective and linguistic information employing the same channel, NMMs have been compared to intonation in oral languages (see Padden 1990; Reilly, McIntire and Seago 1992; Nespor and
Sandler 1999, a.o.). The central role played by NMMs is the reason for the production of most signs near the signer’s face and also why interlocutors usually maintain eye contact when engaged in communication tasks (see Siple 1978; Baker and Cokely 1980; Bahan 1996).

As for LIS, an exhaustive description of the different NMMs is still lacking. For the purpose of the present work, I will focus exclusively on linguistic NMMs, the presence of which is obligatory and widespread through different syntactic structures. The presence of linguistic NMMs is required by the grammar of sign languages. They are believed to mark specific syntactic boundaries, often being the only syntactic marker available. Following is a brief illustration of linguistic NMMs focussing on their lexical, adverbial and syntactic roles at sentence level.13

Some lexical signs require a specific NMM associated with them. In this case, the NMM is produced just over the manual sign and no further spreading is attested.14 The function of lexical NMMs seems to be completing the meaning of the manual sign. The manual and non-manual marking combine to form a single linguistic unit. In LIS, the sign PLEASE is required to be produced with an imploring expression. Signs for emotions and physical states also fall within this category: the sign TIRED is produced with half-open eyes. Also, signs denoting physical characteristics are produced with NMMs conveying a representation of the meaning of the sign. In the sign FAT the cheeks are puffed out and the arms move away from the body in a round shape.

In some cases, the NMM is the only distinctive feature of a minimal pair as in figure (16a) and (16b). In the sign for ‘to work’ (16a) the NMM is characterized by the mouthing of the first letter ‘l’ corresponding to the Italian word for work (‘lavoro’), while in (16b) the manual sign is accompanied by puffing out the cheek and releasing the air repeatedly. This NMM is responsible for the different interpretation of the sign, corresponding to the English word ‘loan’.

Figure 16a ‘To work’  Figure 16b ‘Loan’
NMMs can combine with verb signs to carry out adverbial modification. The verb sign for ‘to see’, shown in figure (17), can combine with the lexical non-manual components characterized by raised eyebrows, the head moving backwards and the mouth suddenly opening and letting out air, thus producing a slight noise corresponding to a bilabial phoneme conventionally glossed ‘pa’. This combination conveys the meaning ‘to see suddenly’, as in figure (18).

Figure 17. ‘To see’

Figure 18. ‘To see suddenly’
The extension of the NMM over the lexical material is commonly referred to as ‘spreading’. The spread of these specific adverbial NMMs (indicated in the glossing by a line over the sign it is co-articulated with) is confined to the verb sign, as shown in (3). As illustrated, there is no manual material conveying the adverbial information modifying the verb.

(3) \textit{pa} CHILDREN DOG SEE\textsuperscript{15}  
‘The children suddenly saw the dog.’

Non-manual markings carrying out syntactic functions are the obligatory markers of different syntactic structures. Due to their sensitivity to syntactic domains, their spreading behaviour is different from that of lexical and adverbial NMMs. While the latter spread over single signs, syntactic markings may occur over phrasal domains. I follow NKMBL (2000) for ASL; Cecchetto, Geraci and Zucchi (2006, 2009) for LIS; Pfau and Steinbach (2005) for DGS; and Pfau and Quer (2007) for DGS and LSC, a. o., in claiming that non-manual syntactic markings are associated with syntactic features located in the heads of functional projections. Their distribution and intensity is therefore strictly connected to the syntactic domains they are associated with. To illustrate, the next section reports Geraci’s (2006) analysis of the non-manual syntactic marker associated with $+\text{neg}$ in LIS.

In his work, Geraci (2006) observes that sentential negation in LIS may be manually expressed by the presence of one negative marker, the position of which is always sentence-final. He analyzes negative markers like NOT, NOT-YET, NEVER (4) and n-words, i.e. negative quantifiers like NOBODY and NOTHING (5) acting as arguments of the matrix verb.$^{16}$

(4) a. GIANNI ARRIVE NOT  
‘Gianni has not arrived.’

b. GIANNI ARRIVE NOT-YET  
‘Gianni has not arrived yet.’

c. GIANNI ARRIVE NEVER  
‘Gianni has never arrived.’

(5) a. CONTRACT SIGN NOBODY  
‘Nobody has signed the contract.’

b. PAOLO SIGN NOTHING  
‘Paolo has signed nothing/Paolo hasn’t signed anything.’
As appears from the translations provided for the glosses in (4) and (5), the presence of only one negative marker or n-word in a LIS sentence is able to negate the sentence. On the other hand, the presence of two negative elements within a sentence leads to ungrammaticality, as shown in (6) and (7).

(6) a. *GIANNI ARRIVE NOT NOT-YET
    b. *GIANNI ARRIVE NOT-YET NOT
    c. *GIANNI ARRIVE NOT-YET NEVER
    d. *GIANNI ARRIVE NEVER NOT-YET
    e. *GIANNI ARRIVE NEVER NOT
    f. *GIANNI ARRIVE NOT NEVER

(7) a. *GIANNI SIGN NOTHING NOT
    b. *GIANNI SIGN NOT NOTHING
    c. *CONTRACT SIGN NOT NOBODY
    d. *CONTRACT SIGN NOBODY NOT

Nor is it possible for two n-words to appear within the same sentence, as shown in (8).

(8) a. *SIGN NOBODY NOTHING
    b. *SIGN NOTHING NOBODY
    c. *NOBODY SIGN NOTHING
    d. *NOTHING SIGN NOBODY

As for the interaction with other elements making up the LIS sentence, negative markers and n-words cannot co-occur with the aspectual marker DONE, occurring in a postverbal position.\textsuperscript{17}

(9) a. *GIANNI CAKE EAT NOT DONE
    b. *GIANNI CAKE EAT DONE NOT
    c. *GIANNI EAT DONE NOTHING
    d. *GIANNI EAT NOTHING DONE
Although LIS does not have auxiliaries, it is possible to verify the position of negative markers with modals. Geraci provides the examples in (10), claiming that negation always follows modals in LIS.

(10) a. GIANNI CONTRACT SIGN CAN NOT
    ‘Gianni can not sign the contract.’

    b. GIANNI CONTRACT SIGN CAN NEVER
    ‘Gianni can never sign the contract.’

    c. GIANNI SIGN CAN NOTHING
    ‘Gianni cannot sign anything.’

    d. CONTRACT SIGN CAN NOBODY
    ‘Nobody can sign the contract.’

So far, negation seems to occupy the right periphery of the sentence in LIS. One last piece of distributional evidence, however, shows that *wh* elements (*who, what, where*, etc.) are the rightmost elements in a LIS sentence, and thus negation always precedes interrogative pronouns, as in (11).

(11) a. GIANNI SIGN NOT-YET WHAT
    ‘What hasn’t Gianni signed yet?’

    b. SIGN NOTHING WHO
    ‘Who hasn’t signed anything?’

Let’s now address the main topic of this paragraph, namely, Geraci’s analysis of the distribution of the non-manual marking associated with +*neg* in LIS (indicated as neg-NMM). Like many syntactic domains, negation has a non-manual marking associated with it and roughly composed of lowered eyebrows and a side-to-side headshake. In the variety of LIS analyzed by Geraci, the neg-NMM is not able to negate a LIS sentence alone, as shown in (12).

(12) a.  *PAOLO CONTRACT SIGN

    b.  *PAOLO CONTRACT SIGN

    c.  *PAOLO CONTRACT SIGN
The neg-NMM obligatorily co-occurs with negative elements, as shown by the grammaticality of (13) and by the ungrammaticality of (14) where the negative elements occur with no neg-NMM.

\[(13) \quad \text{a. PAOLO CONTRACT SIGN NOT} \]
\[\text{‘Paolo hasn’t signed the contract.’} \]
\[\text{b. PAOLO SIGN NOTHING} \]
\[\text{‘Paolo hasn’t signed anything.’} \]

\[(14) \quad \text{a. *PAOLO CONTRACT SIGN NOT} \]
\[\text{b. *PAOLO SIGN NOTHING} \]

As Geraci observes, the neg-NMM only spreads over the negative sign, never extending over larger domains, as shown in (15).

\[(15) \quad \text{a. *PAOLO EAT NOT} \]
\[\text{b. *PAOLO EAT NOT} \]
\[\text{c. *CONTRACT SIGN NOBODY} \]
\[\text{d. *GIANNI SIGN NOTHING} \]

One relevant remark constituting an exception in the behaviour of neg-NMM is represented by the position of n-words in a LIS sentence. As already mentioned, n-words always occur at the right periphery of the sentence. However, as Geraci observes, n-words may also appear in argument position, as one would expect to find them. The argument position seems, nonetheless, to be a marked option for a LIS signer. A condition binds the possibility of n-words appearing in argument position, namely that the neg-NMM spreads over the n-words and rightwards over the remaining lexical material of the sentence. This is shown by the ungrammaticality of (16) where the NMM is confined to the n-words in argument position, and by the grammaticality of (17) where the NMM spreads rightwards.

\[(16) \quad \text{a. *GIANNI NOTHING SIGN} \]
b. *NOBODY CONTRACT SIGN

(17) a. PAOLO NOBODY HELP
    ‘Paolo has helped nobody.’ (emphatic)

        neg

b. NOBODY CONTRACT SIGN
    ‘Nobody has signed the contract.’ (emphatic)

The spreading behaviour of the neg-NMM offers interesting evidence for
the presence of syntactic movement (or in the relevant case, lack of syntactic
movement). As Geraci claims, the spreading of the NMM takes place in
order to permit the lack of any material in NegP (which he situates high in
the structure between AgrP and TP). Specifically, the rightward spreading
of the NMM connects the head and the foot of the neg chain by occurring over
the manual material produced between the n-word argument position and
the location in the structure where it should move in order to check its +neg
feature (Spec, NegP according to Geraci).

The behaviour of the non-manual correlate of LIS negative structures
exemplifies the fundamental role of NMMs in providing sign languages with
a clear way of signaling syntactic domains and movement chains.

Having provided the reader with some basic information on the syntax of
sign languages, I now illustrate the present knowledge of LIS syntax with regard
to the three layers of structural representation, namely, the CP, IP and VP layers.

2.2. Representing LIS syntactic structure

Formal studies on Italian Sign Language are rather recent. In this section, I
will try to sum up the understanding of the structural organization of LIS that
linguists have gained so far. In order to do so, I will analyze each layer of
clausal hierarchical organization: the CP layer, the IP layer, and the VP layer.
For each structural layer, a tentative description and skeleton will be proposed.

Although there has been some debate as to the word order displayed by
LIS, and a recent study using corpus data has pointed out the presence of
both SOV and SVO orders driven by social and linguistic variables, there
is now general consensus on the fact that LIS is a head-final language, i.e.
a language whose complements precede their heads. Thus the informants
consulted for this work reported the following subject, object, verb (SOV)
unmarked order for a LIS sentence.
Before looking for more evidence for the head-final nature of LIS within the IP and the VP layer, let us consider the material sitting inside the CP domain.

2.2.1. The CP layer

The complementizer layer (CP) is functional in nature; that is, it is specified for non-thematic properties, and it is traditionally believed to carry out two relevant functions. (a) It signals the kind of sentence: a declarative, a question, an exclamative, a relative, a comparative, a hypothetical, etc. and allows selection as such by a higher structure. This is a property sometimes referred to as clausal Type (Cheng 1991), or specification of Force (Chomsky 1995). This function is typically carried out by free functional morphemes and operator-like elements such as relative and interrogative pronouns.

(b) It shows some kind of agreement with the IP (Inflectional Phrase), explained below. That is, some languages allow for the presence of free morphemes agreeing with the finite/nonfinite form of the verb in the inflectional phrase. In Italian, the functional morphemes *per* (‘to’) and *di* (‘of’) introduce a nonfinite verb, while *che* (‘that’) obligatorily co-occurs with a finite verb.

Property (b) is referred to as finiteness (Rizzi 1997). The CP layer also hosts topics and focalized elements. In light of the different functions carried out by the CP layer, Rizzi (1997) assumes it to host functional projections carrying out different specifications, namely, force, topic, focus, and finiteness. When the functional morphemes are overtly realized, they head the projection corresponding to their function while operator-like elements are believed to occupy a specifier position.

In LIS, formal studies on the CP layer are at an early stage. In his dissertation thesis, Brunelli (2011) investigates the left periphery of LIS in a comparative study with Sign Language of the Netherlands (*Nederlandse Gebarentaal*, or NGT). Brunelli proposes a universal antisymmetric structure of projections inside the CP reflecting the order of projections within the split-CP proposed by Rizzi (1997, 2001) assuming that raising movements are only possible towards the left periphery, as predicted by the antisymmetric structure with Specifier-Head-Complement configuration.

He observes that topicalized arguments, marked by raised eyebrows, occupy the left periphery of the sentence in LIS (19a) preceding affirmative, negative, imperative, polar and wh-interrogative clauses and that a LIS sentence can display more than one topic (19b) suggesting the presence of different topic projections.
(19) a.  
\[
\text{SCHOOL} \, \text{IX}_{1\text{LFT}}, \, \text{IX}_{1\text{GOLFT}} \, \text{NOT} \\
\text{‘(As for) the/that school, I don’t go there.’}
\]  
(Brunelli 2011: 171)

b.  
\[
\text{SCHOOL} \, \text{IX}_{3}, \, \text{TOMORROW EVENING} \, \text{MEETING}, \, \text{IX}_{2} \, \text{IX}_{3} \\
\text{‘As for the school, as for the meeting tomorrow evening, will you be there?’}
\]  
(Brunelli 2011: 174)

He proposes that two topic projections are located above the interrogative zone, above WhPhrase and InterrogativePhrase: the higher TopicPhrase (TopP) is associated with the relevant topic NMM; the lower TopP hosts the d-linked lexical material of the wh-phrase and one TopP is located below the InterP. Example (20) provides a representation of the CP layer as proposed in Brunelli (2011).

(20)  
\[
\begin{align*}
\text{Spec} & \rightarrow \cdots \\
\text{LTop} & \\
\text{Spec} & \rightarrow \text{LTop}' \\
\text{LTop} & \rightarrow \text{WhP} \\
\text{Spec} & \rightarrow \text{Wh}' \\
\text{Wh} & \rightarrow \text{InterP} \\
\text{Spec} & \rightarrow \text{Inter}' \\
\text{Inter} & \rightarrow \text{TopP} \\
\text{Spec} & \rightarrow \text{Top}' \\
\text{Top} & \rightarrow \text{FocP} \\
\text{Spec} & \rightarrow \text{Foc}' \\
\text{Foc} & \rightarrow \text{FinP/IP}
\end{align*}
\]

(adapted from Brunelli 2011: 220)
He furthermore suggests that conditional clauses and relative clauses undergo topicalization towards the left periphery.

While the presence of free functional morphemes do not seem to be attested, recent studies on LIS wh-questions (Cecchetto, Geraci and Zucchi 2009; Brunelli 2011), and on the strategies of relativization in LIS (Cecchetto, Geraci and Zucchi 2006; Branchini and Donati 2009; Brunelli 2011) shed some light on the position of wh-interrogative elements and relative operators inside the CP layer. In the next sections, I briefly review the studies on LIS wh-questions and relative clauses, providing a provisional tree for the CP layer in LIS which this work adopts when discussing the data on relativization and elefts.

### 2.2.1.1. Interrogative pronouns

In their work on wh-interrogatives, Cecchetto, Geraci and Zucchi (2009) detect specific signs, equivalent to the wh-interrogative pronouns employed by spoken languages, always occurring at the right periphery of the sentence, as shown in (21) and (22).

(21) **SARA EAT WHAT**

‘What did Sara eat?’

(22) **APPLE EAT WHO**

‘Who ate the apple?’

Wh-phrases appear to be the most peripheral element of the clause, obligatorily following time adverbials (23), negatives (24), and aspectual markers (25).

(23) **ARRIVE IN-TIME WHO**

‘Who arrived in time?’

(24) **SARA EAT NOT WHAT**

‘What didn’t Sara eat?’

(25) **SARA EAT DONE WHAT**

‘What did Sara eat?’
If the *wh*-element has an overt NP restriction, i.e. ‘which apple’, the former will always appear at the right edge of the sentence, while there are three options for the NP: (i) it can remain in situ (26), (ii) it can be realized at the right periphery preceding the *wh*-determiner (27), or (iii) it can be doubled (28). No doubling of the *wh*-element is ever attested (29).

\[ \textit{sara apple eat which} \]

(26) SARA APPLE EAT WHICH

\[ \textit{sara eat apple which} \]

(27) SARA EAT APPLE WHICH

\[ \textit{sara apple eat apple which} \]

(28) SARA APPLE EAT APPLE WHICH

‘Which apple did Sara eat?’

\[ \textit{*sara apple which eat apple which} \]

(29) *SARA APPLE WHICH EAT APPLE WHICH

LIS *wh*-questions are associated with a specific NMM roughly composed of lowered eyebrows and obligatorily spreading over the *wh*-phrase. The non-manual spreading may also occur over other signs.

When the *wh*-phrase is the object of the sentence, the *wh*-NMMs cannot spread over the subject, as shown in (30).

\[ \textit{sara eat what} \]

(30) SARA EAT WHAT

‘What did Sara eat?’

When the *wh*-phrase is the clausal subject, the *wh*-NMMs may optionally spread over the whole sentence, as in (31).

\[ \textit{sara see who} \]

(31) SARA SEE WHO

‘Who saw Sara?’

The generalization governing the spreading of the *wh*-non-manual correlate seems to be connected to the argumental interpretation of the *wh*-phrase. The non-manual spreading in heavy discourse-linked expressions confirms such a hypothesis. In this case, in fact, *wh*-phrases can remain in situ. When they do, the NMM obligatorily spreads over the entire sentence if the *wh*-phrase is the clausal subject (32), while it spreads over the *wh*-element and over the
material following it, but not over the subject, if the *wh*-phrase is the clausal object (33).

(32) \[ wh \]
\[ \text{WHO ARRIVE} \]
\[ ‘Who arrives?’ \]

(33) \[ wh \]
\[ \text{SARA WHAT EAT} \]
\[ ‘What did Sara eat?’ \]

Cases of reduplication of the *wh*-phrase have been noticed in Brunelli (2011); Geraci and Bayley (2011); and Geraci et al. (in prep), and an analysis of the phenomenon is provided in Branchini, Cardinaletti, Cecchetto, Donati and Geraci (2013). In these (marked) *wh*-interrogative sentences, two identical *wh*-elements occupy a strict sentence-initial and final position, as illustrated in (34).

(34) \[ \underline{wh} \ldots \underline{wh} \]
\[ \text{WHAT}_1 \ YESTERDAY \ IX_2 \ STEAL \ \text{WHAT}_2 \]
\[ ‘What did you steal yesterday?’ \]

As for unmarked LIS *wh*-questions, Cecchetto, Geraci and Zucchi (2009) argue for a derivation of the *wh*-phrase moving from its base position, within IP, to Spec, CP, which they claim is on the right in LIS. Three main facts lead Cecchetto et al. to suppose that Spec, CP is on the right: (a) when not discourse-linked, the *wh*-phrase is always the rightmost peripheral element in the clause, as in (35); (b) the *wh*-phrase cannot occupy the C° head position (being that LIS a head-final language, this would be compatible with the observed data) because it is a phrase; (c) when discourse-linked, *wh*-phrases occur *in situ* and spreading of the NMM is to the right, thus suggesting that it connects the head and the foot of the *wh*-chain, the latter being placed on the right.

(35) \[ \underline{wh} \]
\[ \text{ANNA BUY NOT WHAT} \]
\[ ‘What didn’t Anna buy?’ \]

In order to explain Spec, CP’s rightward location, Cecchetto, Geraci and Zucchi (2009) suggest a modality-driven implementation based on linearization facts and on the presence of non-manual marking.
Their explanation capitalizes on the assumption that the spreading of the \(wh\)-NMM in LIS marks a \(wh\)-dependency connecting a Probe, the \(wh\)-feature in the head of COMP, and its Goal, namely the position of the \(wh\)-phrase overtly or covertly moving to Spec, CP. In LIS, the \(wh\)-dependency may be marked only by movement of the \(wh\)-phrase to Spec, CP, by the spreading of the \(wh\)-NMM when the \(wh\)-phrase remains in situ, or by both devices. Because LIS a head-final language, the \(C^o\) head is on the right. It is for this reason, they claim, that in LIS the linearization algorithm is forced to linearize the specifier of CP to the right, rather than to the left, to allow the \(wh\)-dependency to take place by linking the argument position of the \(wh\)-phrase to the \(C^o\) head position where the \(wh\)-feature is located. Were it otherwise, i.e. were the Spec, CP placed on the left, the \(wh\)-NMM would connect the two positions occupied by the \(wh\)-phrase while failing to mark the \(wh\)-dependency between the Probe, \(C^o\), and its Goal, the \(wh\)-phrase base position.

The spreading pattern of the NMM is consistent with the generalization claimed above. More specifically, it accounts for the connection of the \(C^o\) position, where the abstract \(wh\)-feature is checked, with the matching feature located in the base position of the \(wh\)-phrase within the sentence. The overt movement of the \(wh\)-phrase to Spec, CP connects the two positions of the \(wh\)-chain; thus non-manual spreading is not obligatory. Whenever the \(wh\)-phrase occurs \textit{in situ}, the non-manual spreading is the only way of connecting the head and the foot of the \(wh\)-chain. In this case, the \(wh\)-NMM obligatory spreads over the lexical material intervening between the \(wh\)-phrase and Spec, CP. The impossibility of spreading over the subject in sentences like (33) receives the following explanation: the \(wh\)-phrase in object position is located after the subject, and spreading starts from the object moving rightwards covering the intervening material between the object and \(C^o\). Thus the subject is out of reach.

Brunelli (2011) takes a different stand on the position of the specifier hosting \(wh\)-phrases in LIS, suggesting that the surface position of \(wh\)-phrases at the right periphery of the sentence only apparently requires rightward movement.

Within the structure of the split-CP he proposes, he submits that the higher \(wh\)-projection (WhP) hosts the \(wh\)-NMM and the lower \(wh\)-projection (FocP) hosts the lexical \(wh\)-phrases when they raise from within the IP. In accordance with Kayne’s (1994) antisymmetric structure, the surface position of \(wh\)-phrases is derived by subsequent leftward movements of the \(wh\)-phrase to Spec, FocP and by remnant movement of the IP to Spec, TopP above the FocP, thus obtaining the desired linear order.
In this work, I shall adopt Cecchetto, Geraci and Zucchi’s (2009) proposal of the specifier of the projection hosting *wh*-phrases (be it CP or, in a split-CP à la Rizzi, WhP) being located on the right.

The discussion on *wh*-clauses in LIS has provided a piece of information on the structure of the CP layer and the location of *wh*-phrases. A further contribution comes from the analysis on LIS relativization strategies carried out by Cecchetto, Geraci and Zucchi (2006) and Brunelli (2011), to which I shall now turn.

2.2.1.2. Relative pronouns

Cecchetto et al. (2006) have identified a structure in LIS equivalent to a relative construction. It is a bi-clausal structure composed of a dependent clause and a main clause. What is relevant for the present description is that the dependent clause contains a sign Cecchetto et al. gloss ‘PROREL’, realized at the right edge of the dependent clause, as shown in (36).

(36) raised eyebrows

\[ \text{BOY}_i \text{ CALL PROREL}_i \text{ LEAVE DONE} \]

‘A boy that called left.’

(Cecchetto et al. 2006: 953)

Cecchetto et al. analyse the sentence in (36) as a correlative construction and the sign PROREL as a correlative marker, i.e. a relative pronoun, base-generated at the right of the head of the relative clause and moved rightwards to Spec, CP.

A different analysis of LIS relatives is provided by Brunelli (2011), who identifies the presence of externally-headed and internally-headed relative clauses (EHRCs and IHRCs).

Brunelli accounts for the observed data on the basis of Cinque’s (2005, 2008) unified structure deriving relative clauses and within Kayne’s (1994) antisymmetric approach. In a nutshell, he analyses the sign that Cecchetto et al. refer to as PROREL as an anaphoric demonstrative that may: (i) occupy an situ position within the relative IP; (ii) raise outside the relative IP followed by remnant movement of the relative IP stranding it in final position, thus patterning with *wh*-interrogative clauses; (iii) raise with the NP head of the relative clause in EHRCs. As suggested for *wh*-interrogative clauses, movement is always to specifier positions on the left banning rightward movement.

In this work, I assume that Cecchetto et al.’s (2006, 2009) proposal of Spec, CP being placed on the right results from their analysis of two
constructions in LIS, namely wh-interrogative and relative clauses, thus including this piece of information in the tentative skeleton of LIS CP structure I shall provide in the following section.

2.2.1.3. Representing the CP layer

The structure sketched in (37) is a preliminary representation of the CP layer in LIS, in a split-CP à la Rizzi (1997).

I depart from Kayne’s (1994) antisymmetry in supposing LIS to display all heads of projections on the right, as proposed for head-final languages.

I adopt Brunelli’s (2011) proposal of different topic projections (whose exact number and position need to be further investigated; for the time being I assume two topic projections) and of a focus projection selecting the Fin phrase. I further follow Cecchetto, Geraci and Zucchi (2006, 2009) in assuming a projection (WhP in the structure) hosting the wh-phrase (and the relative pronoun in Cecchetto et al.’s 2006 analysis) in its specifier located on the right.

(37)
2.2.2. The IP layer

As elsewhere illustrated, there are reasons to believe that LIS possesses functional projections associated with agreement features. However, lacking an in-depth investigation of the agreement system of LIS, I will not provide a structural representation of the agreement projections making up the IP layer.

The head-final character of LIS is confirmed within the IP layer by the post-position of functional categories. As with other sign languages, the literature on LIS agrees on the fact that LIS does not have auxiliaries. However, LIS displays some other elements, presumably occupying the head of functional projections, all occurring after the verb. Modals are post-verbal, as illustrated in (38).

(38) **DOG CAT CHASE CAN**
    ‘The dog can chase the cat.’

I follow Geraci (2006) and Cecchetto, Geraci and Zucchi (2006, 2009) and assume that modal verbs in LIS occupy the head of the functional projection I°. The sign glossed as DONE conveys the meaning that the event has been completed. It can mark both present and past events and it occupies a post-verbal position, as illustrated in (39). Zucchi (2003) and Zucchi et al. (2010) analyse DONE as an aspectual marker. Following Cecchetto, Geraci and Zucchi (2009), I will assume that it is located in the head of the functional projection AspP.

(39) **DOG CAT CHASE DONE**
    ‘The dog has chased the cat.’

As already discussed, negation in LIS, both in the form of negative markers (40) and of n-words (41), also follows the verb.

(40) **neg** **DOG CAT CHASE NOT**
    ‘The dog does not chase the cat.’

(41) **neg** **DOG CHASE NOBODY**
    ‘The dog chases nobody.’
Temporal information in the form of an independent manual sign can be absent from the sentence when already determined in the context of discourse; otherwise, time adverbials can be employed and they obligatorily occupy a sentence-initial position, as in (42).

(42) **YESTERDAY DOG CAT CHASE DONE**

‘Yesterday the dog chased the cat.’

Following Cecchetto, Geraci and Zucchi (2009), I will locate time adverbials in an IP left-adjoined position.

Finally, I assume that the clausal subject raises from its base position in Spec, VP to occupy Spec, IP. Such assumption is motivated by a theory-related reason, namely, the consideration contained in Chomsky (2000) that IP is universally specified for an EPP feature posing the constraint on its specifier to be obligatorily filled by the subject. The subject raises to Spec, IP also to enter in a checking relation with I°, to check its ϕ-features in a Spec-Head configuration and receive nominative case.

Having spelled out the relevant elements occurring in the IP layer, let’s now try to locate them in the structure by analyzing their distribution in the sentence.

It seems that modals and the aspectual marker DONE cannot co-occur in the same sentence, as shown in (43ab).

(43) a. **DOG CAT CHASE DONE MUST**

   b. **DOG CAT CHASE MUST DONE**

   ‘The dog must have chased the cat.’

The same restriction holds for DONE and negation:33

(44) **DOG CAT CHASE DONE NOT**

   ‘The dog has not chased the cat.’34

The co-occurrence of negation and modals allows us to locate the former in a higher position. As appears in Geraci’s (2006) analysis, negation in LIS is rather high in the structure following both the verb and the modal, as illustrated in (45).

(45) **DOG CAT CHASE CAN NOT**

   ‘The dog can not chase the cat.’
I will finally assume the proposal made in Geraci (2006) that negative elements sit in the specifier of NegP placed on the right, as previously claimed by Cecchetto, Geraci and Zucchi (2009) for Spec, CP.

The tree structure provided in (46) reproduces all the data illustrated in this section and located in the IP layer in LIS.

(46)

2.2.3. The VP layer

Three elements remain to be located in the structural representation of a LIS sentence: namely, the object, the verb, and manner adverbs. Starting from the last of these, the distribution data in (47) show that elements like ON-TIME follow the verb but precede the aspectual marker DONE, modals and negation.

(47) a. **ANNA LEAVE ON-TIME DONE**
   ‘Anna has left on time.’

   b. **ANNA LEAVE ON-TIME MUST**
   ‘Anna must leave on time.’

   c. **ANNA LEAVE ON-TIME NOT**
   ‘Anna did not leave on-time.’
I follow Cecchetto, Geraci and Zucchi (2009) and assume that manner adverbs are right-adjoined to VP, while the object of a LIS sentence surfaces as the internal argument of V\(^\circ\). A proposal for the internal structure of the VP layer is given in (48).

(48)

\[
\begin{array}{c}
\text{VP} \\
\text{ON-TIME} \\
\text{ts} \\
\text{object} \\
\end{array} + \begin{array}{c}
\text{VP} \\
\text{V}' \\
\text{V} \\
\end{array}
\]

2.2.4. The Determiner Phrase (DP)

Investigation on the internal structure of the nominal domain in LIS is very recent (see Bertone 2007, 2008, 2009a, 2009b, 2011; Bertone and Cardinaletti 2011; Mantovan 2011). I will here briefly present some general facts characterizing nominal elements in LIS. The evidence here presented will be relevant for the analysis of LIS relative structures and cleft constructions carried out in the second and third part of this work.

According to recent studies on the nominal domain (see Abney 1987 and subsequent work), a nominal phrase is headed by a series of functional projections, the topmost of which is a determiner.

The literature on sign languages presents contrasting views on the DP domain, ranging from the claim that sign languages lack determiners (De Vriendt and Rasquinet 1989) to proposals on which signs produced with the index finger pointing towards a specific direction in either pre- or post-nominal position are determiner elements (Hoffmeister 1977; Kegl 1977; Wilbur 1979). Some studies on ASL (an head-initial language) instead treat pre-nominal and post-nominal pointing signs differently. Only the former are analyzed as determiner-like elements while the latter are interpreted as locative adverbs (Bahan et al. 1995; MacLaughlin 1997; Neidle et al. 2000). As for LIS, there is evidence for the presence of a rich system of determiners. What follows is a preliminary survey of some LIS data concerning the DP domain.
2.2.4.1. Identifying D heads in LIS

LIS displays the following determiner-like elements:

- **pronouns and demonstratives**

  Pronominal elements (glossed IX) and demonstratives (glossed DEM) display the same handshape, an extended index finger, and are therefore hardly distinguishable. LIS determiners do not seem to display information for gender and case features, but they display a different movement encoding information for number and person specification.\(^{35}\)

  \[(49)\] IX-3 SOCCER PLAY  
  ‘He/she plays soccer.’

  \[(50)\] CHILDREN\_i DEM\_i SOCCER PLAY  
  ‘These children play soccer.’

  Both pronouns and demonstratives may appear as pronominal elements, as shown in (49) for pronouns and in (51) for demonstratives.

  \[(51)\] DEM SOCCER PLAY  
  ‘These play soccer.’

  LIS does not seem to distinguish between ‘this/these’ and ‘that/those’ except for the index finger pointing towards a position far from the signer, thus introducing a distal demonstrative ‘that/those’, and a position next to the signer thus introducing a nearby referent ‘this/these’.

- **numerals**

  \[(52)\] CHILDREN\_i FIVE\_i SOCCER PLAY  
  ‘Five children play soccer.’

- **quantifiers**

  \[(53)\] CHILDREN\_i ALL\_i/MANY\_i/EACH\_i SOCCER PLAY  
  ‘All/many/each child(ren) play(s) soccer.’

- **possessives**\(^{36}\)

  \[(54)\] CHILDREN POSS-2 SOCCER PLAY  
  ‘Your children play soccer.’
The determiner elements illustrated above co-refer with the referent they identify. This is shown in the glosses by co-indexation. When the sign for the referent is produced in the signing space, the determiner agrees in space with it by being signed in the same spatial location; if the sign is instead produced on the signer’s body, a conventional spatial location is selected.

2.2.4.2. Distribution of D-like elements in the sentence

The determiner-like elements illustrated above occupy a post-nominal position when occurring with an NP, this being further evidence for the head-final nature of LIS. A pre-nominal position is also attested, as in (55) below, but the preferred position for all of this study’s informants (see section 5.3.4) is Noun Determiner.

(55)  

a. DEM₁ CHILDREN₁ SOCCER PLAY
    ‘These/those children play soccer.’

b. ALL₁ CHILDREN₁ SOCCER PLAY
    ‘All children play soccer.’

While elements like pronouns and demonstratives are unequivocally considered determiner-like elements, their coordination with possessives, numerals, and quantifiers confirms that demonstratives belong to the same DP category. This is illustrated for LIS in (56).

(56)  

a. ALESSANDRA VIDEO CLIP POSS-3 VIDEO CLIP₁ DEM₁ CORRECT DONE
    ‘Alessandra has corrected his/her video clip and that video clip.’

b. ALESSANDRA BOOK₁ DEM₁ PENₖ ALLₖ TAKE DONE
    ‘Alessandra has taken that book and all the pens.’

c. ALESSANDRA CAT₁ DEM₁ DOGₖ FIVEₖ HAVE
    ‘Alessandra has got that cat and five dogs.’

2.2.4.3. Reduplication of D heads

As illustrated above, LIS displays different elements occupying the head of the DP.

A peculiarity of LIS (and other sign languages) is the possible reduplication of the D head through what I will here roughly define as a deictic
marker, assuming the configuration of a pronominal element or demonstrative, therefore labeled ‘IX’. Reduplication of the DP in LIS seems to be an option for both simple and complex sentences. To illustrate, in a simple sentence, reduplication takes place both with a DP in situ as in (57) and with a dislocated DP as in (58).

(57) \textsc{Maria}_i \textsc{IX}_i \textsc{Paolo} MEET DONE
\hspace{1cm} ‘Maria (she) has met Paolo.’

(58) \textsc{Maria}_i, \textsc{Paolo} IX_i KNOW WELL
\hspace{1cm} ‘As for Maria, Paolo knows her well.’

In (58) the reduplicated D might be considered a resumptive pronoun as generally found in clitic left dislocation; the peculiarity of LIS is that such a strategy seems also to be at play with in situ constituents. In chapter 6, we will see how such reduplication is productive also in complex sentences.

Finally, as is the case in many languages, different determiner-like elements may co-occur with only one nominal element. When this happens, ordering constraints seem to govern the position of the various heads according to the following hierarchy of appearance: possessives>numerals>demonstratives/pronominals>quantifiers.

More specifically:

\textit{a. when post-nominal, possessives precede all other heads: numerals (59a), demonstratives/pronominals (59b), quantifiers (59c).}

(59) a. \textsc{Son} POSS-1 \textsc{Three} ICE-CREAM LIKE
\hspace{1cm} ‘My three sons like ice cream.’

a’. *\textsc{Son} THREE POSS-1 ICE-CREAM LIKE

b. \textsc{Book}_i POSS-1 DEM/i/IX_i IX-1 READ DONE
\hspace{1cm} ‘I read this/it my book.’

b’. *\textsc{Book}_i DEM/i/IX_i POSS-1 IX-1 READ DONE

c. \textsc{Son}_i POSS-1 ALL_i ICE-CREAM_i LIKE
\hspace{1cm} ‘All my sons like ice cream.’

c’. *\textsc{Son}_i ALL_i POSS-1 ICE-CREAM LIKE

\textit{b. Numerals follow possessive D heads (59a) but precede all other D heads: demonstratives/pronominals (60a) and quantifiers (60b).}
(60)  a.  \textsc{children}_{i} \textsc{three}_{i} \textsc{dem}_{i/ix}_{i} \textsc{ice-cream like}  \\
    \textquote{These/the three children like ice cream.}

b.  \textsc{children}_{i} \textsc{twelve}_{i} \textsc{all}_{i} \textsc{ice-cream like}  \\
    \textquote{All twelve children like ice cream.}

c.  \textit{Demonstratives/pronominals follow possessives (59b) and numerals (60a) but are preferred in a position preceding quantifiers (61).}

(61)  a.  \textsc{children}_{i} \textsc{dem}_{i/ix}_{i} \textsc{all}_{i} \textsc{ice-cream like}  \\
    \textquote{All these/they children like ice cream.}

b.  ??\textsc{children}_{i} \textsc{all}_{i} \textsc{dem}_{i/ix}_{i} \textsc{ice-cream like}

d.  \textit{Quantifiers tend to appear after other D heads.}

The data on the DP in LIS seem to confirm the validity of Greenberg universal 20.

\textbf{2.2.4.4. Naked NPs}

NPs may also occur without any determiner; in this case the definite/indefinite specification is retrieved from the context. Sometimes both readings are possible, as shown in (62).

(62)  \textsc{boy book read}  \\
    \textquote{A/the boy reads a/the book.}

\textbf{2.2.4.5. Heavy NPs}

As briefly mentioned above, although D heads are preferred in a postnominal position, determiners occurring before nominal elements are also attested as an accepted variant. It is interesting to observe that the position of determiners taking a heavy NP (i.e. an NP containing a large amount of phonological material) as their complement is more restricted to a postnominal position according to the ordering constraints illustrated above. In (63) the determiner \textsc{three} selects the complex NP \textquote{sisters of my friend’}
and in (64) the determiner ALL selects the complex NP ‘my friend’s sons’. The relevant determiners are fully acceptable in a post-nominal position (the a. examples) and hardly acceptable in a pre-nominal position (the b. examples). Such contrast in acceptability between the a. and the b. examples confirms the head-final nature of LIS. If, contrary to facts, LIS showed no preference between the NP D and the D NP ordering constraint, as seemed to appear in (55), we shouldn’t observe any contrast in the ordering possibilities of the determiners represented in the examples below and this would provide evidence for the free order of the elements within the Determiner Phrase.

(63) a. FRIEND$_k$ POSS-1 SISTER POSS-3$_k$ THREE MARRY DONE
   ‘Three sisters of my friend are married.’
   b. ??THREE FRIEND$_k$ POSS-1 SISTER POSS-3$_k$ MARRY DONE

(64) a. FRIEND$_k$ POSS-1 SON$_i$ POSS-3$_k$ ALL$_i$ LEAVE DONE
   ‘All my friend’s sons have left.’
   b. ??ALL$_i$ FRIEND$_k$ POSS-1 SON$_i$ POSS-3$_k$ LEAVE DONE

2.2.4.6. Summing up LIS DP

The data presented in section 2.2.4 seem to point towards the presence in LIS of a rich system of determiner heads overtly or covertly realized. Although determiner heads display some freedom in their superficial position, the signers’ preferred post-nominal position as well as the strict post-nominal location of determiners taking heavy NP complements confirm the head-final nature of LIS. Although a far deeper analysis of the DP structure in LIS is needed, I propose a representation of the nominal elements in terms of DPs.

2.2.5. A structure

In trying to unify all the information I have gathered on the internal clausal structure of LIS, I offer in (65) a tentative skeleton comprehensive of the three structural layers analyzed above. The structure in (65) is only a partial analysis of the sentence-internal structure of LIS. Many domains remain to be investigated and some assumptions need to be verified by further research. The tree structure here proposed is therefore not conclusive, but open to corrections as more issues are investigated.
Representing LIS syntactic structure

(65)

```
(WhP Spec Top')
(Wh' Spec)
(Wh Spec TopP)

(Wh Spec Top')
(FocP Top°)
(Spec Foc°)
(FinP Foc)
(Spec Fin)
(NegP Fin°)
(Neg negative markers/n-words)

(IP Neg°)
(time adverbial)
(IP)
(subject)
(I°)
(AspP)
(Asp°)
(Asp')
(modal)

(VP)
(Asp°)
(DONE)

(VP ON-TIME)

(ts)

(V')
(object)
(V)
```
2.3. Introducing relative and cleft constructions in LIS: the challenges

As widely discussed in the literature on spoken languages (see chapter 7 for a detailed discussion), relative and cleft constructions are syntactic structures traditionally discussed together and compared as they seem to display some superficial similarities. One similarity concerns the employment, in many European and Asian languages, of the same relative pronouns and complementizers introducing the dependent clause of both constructions. This occurs to such an extent that many researchers, following one of the two main analyses proposed to derive cleft constructions, e.g. the extraposition analysis, interpret the dependent clause of cleft constructions as a relative clause.

Notwithstanding their superficial similarities, the interpretation of relative and cleft constructions is very different, and according to many proposals, their structural representation also differs greatly.

Turning to LIS, we may already anticipate that relative and cleft structures do, likewise, present some similarities. Above all, the same sign, conventionally glossed PE, plays a crucial role in both constructions and its syntactic nature seems to be that of a determiner univocally identifying the referent it agrees with. A further element that might equate the two syntactic constructions is the employment of similar NMMs over the initial portion of the sentence.\(^{40}\) To illustrate, (66a) exemplifies a relative clause and (66b) a cleft construction in LIS.

\begin{align*}
\text{rel} & \quad \begin{array}{c}
\text{(66) a. } [\text{DOG}_i \text{ CAT CHASE PE}_i] [(\text{IX}_i) \text{ HOME COME}] \\
\text{‘The dog that chased the cat came home.’}
\end{array} \\
\text{cleft} & \quad \begin{array}{c}
\text{b. } \text{HOUSE}_i \text{ PE}_i \text{ ANNA}_k \text{ IX-3}^k \text{ BUY WANT} \\
\text{‘It is a house that Anna wants to buy.’}
\end{array}
\end{align*}

However, as discussed in chapter 6 for relative clauses and in chapter 8 for cleft constructions, the two phenomena display very different syntactic properties and semantic interpretations. Among them, the dependent clause of LIS relative constructions has nominal features while the dependent clause of LIS clefts does not; the sign PE may occupy two different positions within the relative clause (next to the NP head or a relative clause-final position) while it always follows the clefted constituent in clefts; the head of the relative clause can only be a NP while the clefted constituent can be of different syntactic categories.
Such differences cannot be adequately explained within the framework of a simple analysis but call for a deeper investigation by comparing the LIS data against the theoretical and typological discussion of relativization and clefts addressed in chapter 3 and 7 respectively.

2.4. Summary

This chapter was thought of as an introduction to the syntax of sign languages for readers not acquainted with languages in the visual-gestural modality. It furthermore intended to sum up the present understanding of the syntactic structure and hierarchical organization of Italian Sign Language. In order to reach this goal, § 2.1 was devoted to describing the internal structure of signs and illustrating some modality-specific syntactic characteristics, such as the linguistic use of space and movement and the simultaneous realization of manual and non-manual components. In § 2.2 I tried to sum up the contribution of recent formal research on LIS by presenting a unified perspective on the internal organization and structure of LIS in the three structural layers of the CP, IP, and VP domains. Finally, § 2.3 briefly presented LIS relative and cleft constructions and the challenges they pose, calling for a cross-linguistic discussion of the phenomena in world languages.

The third chapter will temporarily depart from the discussion on sign language to introduce one of the main topics of this work, i.e. relativization structures.