SignGram Blueprint

A Guide to Sign Language Grammar Writing

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References

Sources on comparatives and comparative correlatives in sign languages:

Aristodemo, V. & C. Geraci. 2015. Comparative constructions and visible degrees in LIS. Paper presented at *FEAST* 2015, University of Venice.

Geraci, C. 2007. Comparative correlatives in Italian Sign Language. *Traitement Automatique des Langues* 48(3). 55–92.

Kaşıkara, H., A.S. Özsoy, E. Tamyürek-Özparlak. 2015. "Backward agreement" in TİD comparatives: is it agreement, directionality, or gestural?. Poster presented at *FEAST* 2015, University of Venice.

General sources on comparatives and comparative correlatives:

Culicover, P. & R. Jackendoff. 1999. The view from the periphery: The English comparative correlative. *Linguistic Inquiry* 30. 543–571.

Den Dikken, M. 2005. Comparative correlatives comparatively. *Linguistic Inquiry* 36(4). 497–532.

Dixon, R.M.W. 2008a. Comparative constructions. A cross-linguistic typology. *Studies in Language* 32(4). 787–817.

Stassen, L. 2013. Comparative constructions. In M.S. Dryer & M. Haspelmath (eds.), *The world atlas of language structures online* (http://wals.info/).

Chapter 4 The noun phrase

4.0 Introduction

4.0.1 What is a noun phrase?

A **noun phrase** is a single noun [Lexicon – Section 3.1], a pronoun [Lexicon – Section 3.7] or a group of words containing a noun or a pronoun as its head that function together as a constituent [Syntax – Section 2.0.1] of a sentence. The typical syntactic function of a noun phrase in a sentence is to express the subject, direct object, indirect object of the verb or the object of a preposition/postposition [Lexicon – Section 3.8]. As the argument of the predicate, each of the noun phrases bears the relevant semantic relation by which it is associated with the verb of the sentence.

With respect to the internal structure of a noun phrase, the head noun can be modified by a determiner [Lexicon – Section 3.6], one or more adjectives [Lexicon – Section 3.4], quantifiers [Lexicon – Section 3.10.2], or a numeral [Lexicon – Section 3.10.1]. A noun phrase can also contain a complex modifier called a relative clause / relative clause [Syntax – Section 3.4]. In a noun phrase the head noun can be modified with any one or more or none of these constituents. The following is an example of a noun phrase in English, where the only obligatory constituent is the head noun *friends*.

some of our old *friends* who are not living in this town anymore

Nouns are typically classified as proper nouns (or proper names) [Lexicon – Section 3.1.2], e.g. *John, Pierre, Jane,* or common nouns [Lexicon – Section 3.1.1], e.g. *book, pencil, house, boy,* which may behave differently with respect to the type of modifiers they take. Common nouns are also further classified as count nouns, for example, *book, pencil, student,* versus mass nouns, for example, *water, air, electricity,* where the type of the noun determines number marking. Count nouns are those that can have singular and plural forms. Mass nouns do not typically have plural forms.

4.0.2 Further distinctions

Noun phrases are syntactic domains in which not only the head noun but also other constituents such as determiners and adjectives can carry marking for grammatical features such as gender, case, and number. This is usually referred to as agreement / agreement [Lexicon – Section 3.3.4] or concord. Sign languages generally differ from spoken languages significantly with respect to these morphosyntactic properties in that while agreement/concord is observed in many spoken languages, sign languages have typically been observed to lack it.

4.0.3 Methodological challenges

One of the challenges in describing the noun phrase in a sign language is to determine whether a sequence of a noun and a potential modifier such as PICTURE BEAUTIFUL/BEAUTIFUL PICTURE constitutes a noun phrase such as 'beautiful picture' or a clausal constituent with a subject and a predicate such as 'the picture is beautiful.' Determining the functions of the prenominal and postnominal modifiers (as attributive / attributive [Lexicon – Section 3.4.1] versus predicative / predicative [Lexicon – Section 3.4.2]) will help identify noun phrases. In the following ASL examples, for instance, the adjective OLD is interpreted as an attributive adjective in the prenominal position in (a), BEAUTIFUL as a predicative adjective in the postnominal position in (b).

a. [POSS_1 OLD FRIEND]
'my old friend' (ASL, MacLaughlin 1997: 196)

b. [BIG RED BALL IXadv_i] BEAUTIFUL
'The big red ball over there is beautiful.' (ASL, MacLaughlin 1997: 193)

For the sign language under investigation, the grammar writer needs to determine whether there is a difference in the interpretation of the prenominal and postnominal structures.

4.1 Determiners

4.1.0 Definitions and challenges

4.1.0.1 What is a determiner?

Determiners are a class of functional elements that modify the noun. Being functional, determiners lack descriptive content, represent a closed class, and sometimes can be unexpressed. In this section, determiners are categorized into two groups: articles and demonstratives.

Articles are elements whose function is to provide information on referentiality [Pragmatics – Chapter 2] (i.e. the relation between the noun and what the noun refers to). In traditional grammar books, articles are characterized as either definite or indefinite. Definite articles (prototypically *the* in English) are used when the interlocutors can identify the referent(s) of the nominal expression. Definite [Pragmatics – Section 1.2] articles can be used for three different purposes (Lyons 1999): i) to refer back to something or someone that has been previously mentioned in the discourse (e.g. 'The cat was feeling hungry', with the cat being already introduced in the discourse); ii) to refer to something or someone that is easily identifiable in the extra-linguistic context (e.g. 'Could you pass me the pen?', with the pen being visible to the interlocutors); iii) to refer to a referent that is unique in its genre (e.g. 'the Earth,' or 'the driver' when talking about a bus trip). Indefinite [Pragmatics – Section 1.3] articles (prototypically *a*/*an*), on the other hand, are used when the interlocutor cannot identify the referent(s) of the nominal expression. Indefinite articles are used to introduce new information, specifically new referent in the discourse (e.g. 'Yesterday I saw a cat,' with the cat being a first-mention entity).

Similar to articles, demonstratives provide information on referentiality in that they are intrinsically definite. In addition to that, they convey a deictic [Pragmatics – Section 1.1] / deictic interpretation. This means that in order to interpret demonstratives, it is necessary to consider the spatio-temporal context in which they are expressed. Demonstratives encode the deictic features [± proximal] and [± distal] which help the interlocutor locate the corresponding referent(s) with respect to the speaker's spatiotemporal coordinates. Roughly, [± proximal] means close to the speaker and [± distal] means far. This can be intended as a spatial relation (e.g. 'this book' is closer to the speaker than 'that book') or a temporal relation (e.g. 'this month' is closer to the utterance time than 'that month'). Some languages distinguish between [± proximal] with respect to the speaker and [± proximal] with respect to the interlocutor, in addition to [± distal]. As for sign languages, the use of the spatial dimension as a gradient continuum allows sign languages to be extremely precise in conveying deictic specifications.

4.1.0.2 Methodological challenges

In this section, we classify determiners as articles and demonstratives. Cross-linguistically, these two categories show an important distributional

difference: demonstratives are consistently found in all of the world's languages, whereas articles are not. Considering definite articles, there are several possibilities: they can constitute a distinct word class; they can be homophonous with demonstratives so that the two classes are not distinguishable; or they may be absent, leaving nouns unspecified for definiteness (Dryer 2013a). With respect to indefinite articles, the options are the following: they may constitute a distinct word class; they can be homophonous with cardinal 'one' so that the two types of elements are not distinguishable; or they may be absent, leaving nouns unspecified for indefiniteness (Dryer 2013b).

Importantly, demonstratives and articles should not be considered as being in complementary distribution since it might be the case that they may co-occur (Giusti 1997). In this respect, cross-linguistic variation is found, as shown below (Alexiadou, Haegeman & Stavrou 2007: 106).

a. *This the book
a'. *The this book (English)
b. Ez a haz (Hungarian)
this the house
c. Afto to vivlio (Greek)
this the book (Alexiadou, Haegeman & Stavrou 2007: 106)

The grammar writer should investigate whether an article and a demonstrative can co-occur within the same noun phrase.

In sign language linguistics, determiners are frequently identified as part of pointing signs [Lexicon – Section 1.2.2] / pointing signs. What the grammar writer should pay particular attention to is the linguistic function associated with these signs. As a matter of fact, in many sign languages, pointing signs are multi-functional elements in that they can function not only as articles or demonstratives [Lexicon – Section 3.7.1], but also as personal pronouns [Lexicon – Section 3.7.2] and locatives [Lexicon – Section 3.7.1] (Pfau 2011). In some cases, they might be used as possessive [Lexicon – Section 3.7.3] modifiers, too. Therefore, it may be hard to identify real determiners.

Another analytical challenge of studying determiners in sign languages is that both manual and non-manual components must be taken into consideration. As similarly noticed for negation [Syntax – Section 1.5], in some cases, a determiner's function can be conveyed even though no corresponding manual sign is produced. In such cases, determiners can be detected by looking at specific non-manual markers, such as eye gaze and head tilt (Neidle & Nash 2012).

4.1.1 Articles

Unlike demonstratives, articles are determiners that cannot be used in isolation or occur as an answer to a question. This is shown in the examples below (Alexiadou, Haegeman & Stavrou 2007: 106).

a. I like the *(book). (English)
b. I like that. (English)
c. Ho visto il *(ragazzo).
have.1SG see.PTCP the boy
'I have seen the (boy).' (Italian)
d. Ho visto quello.
have.1SG see.PTCP that
'I have seen that.' (Italian)

In order to study the syntactic behavior of articles, the grammar writer should consider word order issues (i.e. the distribution of the article with respect to the noun), simultaneous manual articulation (i.e. the use of both manual articulators), and the role of non-manual marking.

4.1.1.1 The position of the article

Considering word order within the noun phrase, some different distributional patterns may emerge in the sign language under investigation.

The article may appear at the beginning of the noun phrase, as shown in the example in ASL below.

IX_{3a} BOY LIKE CHOCOLATE
'The boy likes chocolate.' (ASL, Neidle et al. 2000: 89)

Another option is to produce the article in postnominal position. This happens, for example, in LIS.

FURNITURE_{a} ANTIQUE IX_{3a} BROKE
'The antique furniture is broken.' (LIS, Bertone 2009: 8)

We also expect the possibility to find two co-indexed pointing signs, one before and one after the noun, even if this does not seem to be a common option. Although no example from a sign language is available yet to the best of our knowledge, the following illustrates a potential example:

IX_{3a} TEACHER IX_{3a} ARRIVE
'The teacher arrived.'

The grammar writer should verify the nature of both elements in order to assess whether they both function as articles.

4.1.1.2 Simultaneous manual articulation

Another aspect that the grammar writer should bear in mind is the case of simultaneous articulation in which the noun and its modifiers (e.g. adjective, cardinal number,

etc.) are expressed by the dominant hand (d.h.) and the article by the non-dominant hand (n.h.). In the LIS example below, the noun and the article are articulated simultaneously.

d.h. FURNITURE$_a$ ANTIQUE
n.h. IX$_{3a}$----
'The furniture is antique.' (LIS, Bertone 2009: 8)

4.1.1.3 Non-manual marking

Definite and indefinite articles may be accompanied by eye gaze (eg) and wandering eye gaze in some sign languages. These non-manual markers accompanying the definite article may spread solely over this item, or over the entire noun phrase.

a. eg$_{3a}$
IX$_{3a}$ MAN$_a$
'the/that man' (ASL, Bahan 1996: 268)

b. eg$_{3a}$
IX$_{3a}$ MAN$_a$
'the/that man' (ASL, Bahan 1996: 269)

Similarly to what happens with definite articles, the markers co-occurring with indefinite articles may spread solely over this item, or over the entire noun phrase.

a. wandering gaze
SOMETHING/ONE WOMAN
'some/a woman' (ASL, Bahan 1996: 273)

b. wandering gaze
SOMETHING/ONE WOMAN
'some/a woman' (ASL, Bahan 1996: 273)

4.1.1.4 Articles expressed by non-manual marking only

In some cases, there may be no manual sign expressing the article but the function of an article may be expressed by non-manual markers *in lieu* of the corresponding manual sign. This is possible both with the definite and indefinite interpretation, as illustrated in the two HKSL examples below.

a. eg$_{3a}$
FEMALE-KID COME
'that/the girl is coming' (HKSL, Tang & Sze 2002: 300)

b. eg$_{3a}$
MALE CYCLE
'a man is cycling' (HKSL, Tang & Sze 2002: 302)

In HKSL, the definite and the indefinite interpretations are associated with different eye gaze patterns. When the noun has a definite reading, the eye gaze must point toward the locus of the referent. When the noun has an indefinite reading, the eye gaze points toward the addressee, so that the signer keeps eye contact with him or her. The grammar writer should verify whether articles can be expressed non-manually in the language under investigation.

4.1.2 Demonstratives

4.1.2.0 Definitions and challenges

In many sign languages, demonstratives and articles are phonologically very similar. They are both realized as pointing signs and it is not easy to draw a clear line between the two categories. This is not an accident since it probably reflects a diachronic process in which demonstratives gradually lose their deictic features and undergo phonological weakening resulting in the emergence of definite articles. This is well-attested in spoken languages: Latin demonstrative *ille*, for example, led to definite articles in Italian (*il*), French (*le*), and Spanish (*el*). The grammar writer is referred to Pfau (2011) for a discussion on the diachronic evolution of pointing signs.

Demonstratives do not display the same distributional restrictions as articles. In fact, a demonstrative can be combined with a noun (transitive usage) or can be used on its own (intransitive usage). These two distributional patterns are shown in the examples below (Alexiadou, Haegeman & Stavrou 2007: 95).

a. This (English)
b. This book (English)
c. Dat
   'that' (Dutch)
d. Dat boek
   'that book' (Dutch)

4.1.2.1 The position of the demonstrative

Considering the distribution of demonstratives vis-à-vis the noun, we expect in principle three different options. The demonstrative may precede the noun (a), follow it (b), or it can be doubled (c), so that it appears both before and after the noun. The three patterns are exemplified below.

a. IX-DEM BOOK EXPENSIVE
   'That book is/was expensive.' (NGT, Brunelli 2011: 56)
b. IX_1 DECIDE BOOK IX-DEM BUY
   'I decided to buy that book.' (DGS, Pfau 2011: 149)
c. IX-DEM_i BOOK NEW TWO IX-DEM_i MINE
   'These two new books are mine.' (LIS, Bertone 2009: 23)

The grammar writer should check the position of the demonstrative with respect to the noun. As for doubling, caution should be used in order to distinguish it from the reinforcer construction.

4.1.2.2 Demonstrative reinforcer construction

Some languages allow for the demonstrative reinforcer construction. This construction contains three items: a noun, a demonstrative, and a reinforcer, which is a locative element added to provide additional information about distance such as 'here' and 'there'. This construction has been observed in a number of spoken languages (Alexiadou, Haegeman & Stavrou 2007: 117–118).

a. Den här mannen
'the here man' (Swedish)
b. Ce livre-là
'that book there' (French)
c. This guy here (non-standard English)

The demonstrative reinforcer construction has also been observed in some sign languages. In the ASL example below, the first pointing sign functions as a demonstrative, whereas the second one functions as a locative adverb (Bahan et al. 1995).

top
IX WOMAN IX ARRIVE EARLY
'That woman (there), (she) arrived early.' (ASL, Bahan et al. 1995: 3)

The second pointing sign is analyzed as the reinforcer because the path length of this sign can be modified to iconically show proximity and distance. Crucially, this articulatory modification is not possible with the first pointing sign of the construction, which is analysed as the demonstrative, as shown below.

a. IX_{i} MAN $\text{IX}_{[+\text{DISTAL}]}$ KNOW PRESIDENT
'The/that man over there knows the president.'
(ASL, Neidle & Nash 2012: 270)
b. *$\text{IX}_{[+\text{DISTAL}]}$ MAN IX_{i} KNOW PRESIDENT

4.1.2.3 Non-manual marking

The ostensive nature of demonstratives may correlate with eye gaze directed in the same direction of the pointing sign. Typically, eye gaze, head posture, and eyebrows may provide additional information on how far the referent is with respect to the signer. The non-manual markers accompanying the demonstrative may spread solely over this item, or over the entire noun phrase.

4.1.2.4 Anaphoric usage

Demonstratives are not always deictic [Pragmatics – Section 1.1], and hence do not always need to rely on the extra-linguistic context. In some cases, they refer to an entity previously mentioned in the linguistic context. This entity functions as an antecedent and demonstratives are used anaphorically [Pragmatics – Chapter 2]. In some languages, the deictic and anaphoric function of demonstratives may be conveyed by different items and may display different distributional patterns.

This is the case in ASL, where the deictic demonstrative is a pointing sign and the anaphoric demonstrative is realized as a Y-shaped sign (THAT). Differently from its deictic counterpart, ASL anaphoric demonstrative does not often occur before the noun (Neidle & Nash 2012).

a. IX MAN
'the/that man' (deictic use) (ASL, Neidle & Nash 2012: 270)

b. ??THAT MAN
'that man' (anaphoric use) (ASL, Neidle & Nash 2012: 271)

Due to possible distributional differences, deictic and anaphoric demonstratives should be investigated separately.

References

Main sources on Determiners in sign languages:

Bahan, B. 1996. *Non-manual realization of agreement in American Sign Language*, Boston University PhD dissertation.

Bahan, B., J. Kegl, D. MacLaughlin & C. Neidle. 1995. Convergent evidence for the structure of determiner phrases in American Sign Language. In L. Gabriele, D. Hardison & R. Westmoreland (eds.), *FLSM VI, Proceedings of the Sixth Annual Meeting of the Formal Linguistics Society of Mid-America,* 1–12, Bloomington, IN: Indiana University Linguistics Club Publications, vol. 2.

Bertone, C. 2009. The syntax of noun modification in Italian Sign language (LIS). In *Working Papers in Linguistics 2009*, 7–28. Venezia: Dipartimento di Scienze del Linguaggio, Università Ca' Foscari.

Brunelli, M. 2011. *Antysimmetry and sign languages: A comparison between NGT and LIS*. Utrecht: LOT.

MacLaughlin, D. 1997. *The structure of determiner phrases: Evidence from American Sign Language*. Boston University PhD dissertation.

Neidle, C. & J. Nash. 2012. The noun phrase. In R. Pfau, M. Steinbach & B. Woll (eds.), *Sign language – An international handbook*, 265–292. Berlin: De Gruyter Mouton.

Pfau, R. 2011. A point well taken: On the typology and diachrony of pointing. In D. J. Napoli & G. Mathur (eds.), *Deaf around the world. The impact of language*, 144–163. Oxford: Oxford University Press.

Tang, G. & F. Sze. 2002. Nominal expressions in Hong Kong Sign Language: Does modality make a difference? In R. P. Meier, K. Cormier & D. Quinto-Pozos (eds.), *Modality and structure in signed and spoken languages*, 296–321. Cambridge: Cambridge University Press.

General sources on determiners:

Alexiadou, A., L. Haegeman & M. Stavrou. 2007. *Noun phrase in the generative perspective* (Studies in Generative Grammar 71). Berlin: Mouton de Gruyter.

Dryer, M.S. 2013a. Definite articles. In M. S. Dryer, M. Haspelmath (eds.), *The world atlas of language structures online*. Leipzig: Max Planck Institute for Evolutionary Anthropology. http://wals.info/chapter/37 (accessed on 2014-08-14).

Dryer, M.S. 2013b. Indefinite articles. In M. S. Dryer, M. Haspelmath (eds.), *The world atlas of language structures online*. Leipzig: Max Planck Institute for Evolutionary Anthropology. at http://wals.info/chapter/37 (accessed on 2014-08-14).
Giusti, G. 1997. The categorial status of determiners. In L. Haegeman (ed.), *The new comparative syntax*, 95–12. London: Longman.
Lyons, C. 1999. *Definiteness*. Cambridge: Cambridge University Press.

4.2 Possessive phrases

4.2.0 Definitions and challenges

The crucial components of a possessive noun phrase are the *possessor* [Semantics – Chapter 11], (someone who possesses something) and the *possessed* (often referred to as *possessum* or *possessee* as well) as in the following example from English:

John's	car
possessor	possessed

The most obvious interpretation of the noun phrase *John's car* is the car that John owns but other interpretations that do not involve ownership are also possible (the car that John picked for his daughter, the car that John wants to buy, the car that John rented etc.).

All languages distinguish syntactically between attributive and predicative possession constructions (Heine 1997). An NP like *John's car* exemplifies attributive possession, that is, a relationship between the possessor and the possessed within an NP. By contrast, predicative possession is expressed by a full clause (e.g. *This car is John's / his, John has a car*, *The car belongs to John*). This section only describes attributive possessive phrases.

Many languages mark the relation between the possessor and the possessed in some way, for example, by possessive markers, agreement markers or case suffixes. Languages may mark the possessor, the possessed, or both (Croft 2002).

4.2.1 Ways of expressing the possessive relation in the noun phrase

The following ways of expressing the possessive relation [Semantics – Section 11.1] in a possessive noun phrase have been observed in the sign languages studied so far:
(i) with attributive possessive pronouns
(ii) with a possessive marker/linker
(iii) with juxtaposition of the possessor and the possessed

These means are described in detail in the following sections. The grammar writer should investigate which of these means are attested in the sign language studied.

4.2.1.1 Attributive possessive pronouns

In possessive noun phrases, the possessor may be expressed by a pronominal element such as *my, your, his, our,* etc., as in 'my car'. These elements are called either (attributive) possessive pronouns, possessive determiners, or possessive adjectives. Note that they are different in meaning and function from predicative possessive pronouns such as *mine, yours, his, ours,* etc. as in 'This car is mine'. Since this section is only on (attributive) possessive pronouns, when we use the term possessive pronoun, we will be referring to pronouns such as *my, your, his, our,* etc.

Possessive pronouns in sign languages are directional like personal pronouns but they usually have a handshape that differs from the pointing [Lexicon – Section 1.2.2] handshape of personal pronouns (Cormier 2012).

Most sign languages have a set of pronouns that express the possessor. A small number of sign languages studied so far have been found to lack such pronouns (Perniss & Zeshan 2008). These sign languages use personal pronouns instead.

The grammar writer should investigate whether the language studied has a set of possessive pronouns different from the set of personal pronouns [Lexicon – Section 3.7.2] and also identify the different distributional possibilities of possessive pronouns within the noun phrase.

4.2.1.2 Possessive markers

Languages may use special markers to express the possessive relation between nouns/noun phrases in a possessive phrase. The possessive *-s* in English (as in *the old man's house*) is an example of possessor marking with a bound morpheme attached to the possessor.

In some sign languages, the possessive phrase may contain a sign that seems to mark the relation between the possessor and the possessee. In the following example this sign is glossed as POSS.

a. BRUNO POSS BOOK (ASL, Abner 2012: 24)

These possessive markers may occur between the possessor and the possessed as in the example (a) above, but they can also occur before the possessor as in (b) below:

b. POSS BRUNO BOOK (ASL, Abner 2012: 24)

The sign language studied may have more than one such marker. For ASL, two different signs have been observed. One is glossed as POSS, as in (a) above, and the other is a borrowing from English, and is glossed as APOSTROPHE-S, as in the example (c) below:

c. BRUNO APOSTROPHE-S BOOK (ASL, Abner 2012: 24)

The following is a similar example from LSC.

d. BOOK DE TEACHER
'the teacher's book' (LSC, Quer & GRIN 2008: 36)

The possessive marker (or 'linker') is glossed as DE, whose relation to the Spanish/Catalan preposition *de* is unclear (Quer & GRIN 2008).

The grammar writer should investigate the possibilities of possessive markers in the language studied.

4.2.1.3 Juxtaposition

Researchers have observed that in some sign languages it is possible to have a possessive noun phrase with only the possessor and the possessed but no possessive marker.

BRUNO BOOK
'Bruno's book.' (ASL, Abner 2013: 129)

Juxtaposition structures and structures with a possessive marker such as POSS have been reported to have different semantics in ASL.

4.2.2 The position of the possessive pronoun

Regarding the position of the possessive pronoun, in many languages the preferred order is possessor-possessed, but other word orders are also possible in some languages. The following examples show that possessive pronouns may precede or follow the possessed noun or they can be reduplicated.

a. POSS_1 COMPUTER
'my computer'
b. COMPUTER POSS_1
'my computer'
c. POSS_1 COMPUTER POSS_1
'my computer' (ASL, Chen Pichler & Hochgesang 2008: 217)

The grammar writer should investigate different possible word orders.

4.2.3 Agreement with the possessor

Possessive pronouns in sign languages show spatial agreement [Lexicon – Section 3.3.4] in much the same way as personal pronouns. In some sign languages like ASL

possessive pronouns display manual as well as non-manual agreement (MacLaughlin 1997; Neidle et al. 2000). Manual agreement is seen when a possessive pronoun is signed in the location of the possessor, whereas non-manual agreement involves a head tilt (towards the possessor) and eye gaze (in the direction of the possessed). The grammar writer should be aware of this possibility for the sign language he/she is working on.

4.2.4 Agreement with the possessed

In some spoken languages the form of the possessor inside a noun phrase varies according to the grammatical features (gender and number) of the possessed (Corbett 2006: 47). In ASL, for example, research has shown that agreement with the possessed may be established through eye gaze.

4.2.5 Possessive phrases with the possessed elided

Although possessive phrases usually occur with a possessed noun, this noun can be omitted as in the following examples:

a. $_{a}$BRUNO POSS$_{3a}$
'Bruno's' ('a [thing] of Bruno's') (ASL, Abner 2013:129)

b. POSS$_{3a}$
'his/hers' ('a [thing] of [his/hers]')

The grammar writer should check whether this is possible in the language studied.

References

Main sources on possessive phrases in sign languages:

Abner, N. 2012. *There once was a verb: The predicative core of possessive and nominalization structures in American Sign Language*. UCLA PhD dissertation.

Abner, N. 2013. Gettin' together a posse. The primacy of predication in ASL possessives. *Sign Language & Linguistics* 16(2). 125–156.

Chen Pichler, D., & J. Hochgesang. 2008. An overview of possessive and existentials in American Sign Language. In U. Zeshan. & P. Perniss (eds.), *Possessive and existential constructions in sign languages*, 213–233. Nijmegen: Ishara Press.

Chen Pichler, D., K. Schalber, J. Hochgesang, M. Milković, R. Wilbur, M. Vulje & L. Pribanić. 2008. Possession and existence in three sign languages. In R.M. de Quadros (ed.), *Sign languages: Spinning and unraveling the past, present and future. TISLR 9, forty-five papers and three posters from the 9th theoretical issues in Sign Language Research Conference*, 440–458. Petrópolis/RJ. Brazil: Editora Arara Azul.

Cormier, K. & J. Fenlon. 2009. Possession in the visual-gestural modality: How possession is expressed in British Sign Language. In W. McGregor (ed.), *The expression of possession*, 389–422. Berlin: Mouton de Gruyter.

Cormier, K. 2012. Pronouns. In R. Pfau, M. Steinbach & B. Woll, (ed.): *Sign language. An international handbook*, 227–244. Berlin: de Gruyter Mouton.
MacLaughlin, D. 1997. *The structure of determiner phrases: Evidence from American Sign Language*. Boston University PhD dissertation.
Quer, J. & GRIN. 2008. Structures of possession and existence in Catalan Sign Language. In U. Zeshan & P. Perniss (eds.): *Possessive and existential constructions in sign languages*, 33–55. Nijmegen: Ishara Press.
Zeshan, U. & P. Perniss. 2008. Possessive and existential constructions: Introduction and overview. In U. Zeshan & P. Perniss (ed.): *Possessive and existential constructions in sign languages*, 1–31. Nijmegen: Ishara Press.

4.3 Numerals

4.3.0 Definitions and challenges

4.3.0.1 What is a numeral?

Generally speaking, when the term 'numeral' is used in the nominal domain, it indicates an item specifying the number of the entities referred to.

At closer inspection, numerals can be classified according to three main categories: cardinals (which answer the question 'how many?'), ordinals (which answer the question 'in what order?'), and distributive numerals (which answer the question 'how many each?'). The grammar writer should first identify cardinals and then ordinals and distributive numerals which are usually derived from cardinals. Notice that not all languages have a distinct word class for ordinals and distributives (Dryer et al. 2013).

In particular, cardinal numerals are used to count entities and also as a strategy to express plurality [Semantics – Chapter 9]. In some sign languages plurality is expressed via noun reduplication [Phonology – Section 3.3.1]. However, in some sign languages (e.g. DGS), the two strategies, namely, modification by cardinal numerals and noun reduplication, are not compatible. In others (e.g. ESL), the presence of the numeral does not have a blocking effect over noun reduplication.

a. FIVE BOOK
'five books' (DGS, Steinbach 2012: 120)

b. *FIVE BOOK++
'five books' (DGS, Steinbach 2012: 120)

c. APPLE BIG FOUR
'four big apples' (ESL, Miljan 2003: 214)

d. CUP+++ FOUR
'four cups' (ESL, Miljan 2003: 214)

4.3.0.2 Numerals and number

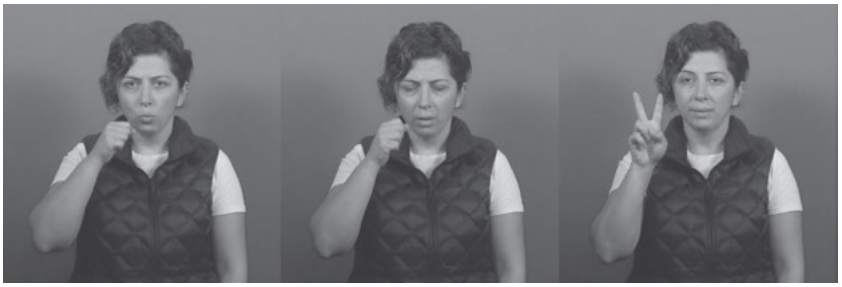
In the investigation on syntactic phenomena concerning the nominal domain of a language, it is important not to confuse two similar terms, namely numeral and

number. Numerals express a numerical quantification (e.g. 'two', 'seven', 'twenty-six'), whereas number marks count distinctions (e.g. singular, plural, dual, trial) on nouns, adjectives, determiners, etc.

4.3.0.3 Methodological challenges

Sometimes it may be difficult to determine whether a numeral co-occuring with a noun modifies it or whether it has a predicative function. Prosodic clues may help identify the construction. It has been noticed in TİD, for instance, that the numeral and the noun can be separated by a prosodic break, namely a head nod or an eye blink (Zwitserlood et al. 2012), as in (b). In this case, the two elements are not contained in the same syntactic constituent (as in (a)) and the numeral is predicative.

a. FOUR CUP
'four cups'



eyeblink
headnod
b. CUP TWO
'of cups, there are two'

(TİD, Zwitserlood et al. 2012: 1648)

Therefore, non-manual markers may help the grammar writer to determine whether the numeral is included in the noun phrase or not.

This section discusses the distribution of numerals, focusing on the case of cardinals since this type of numerals has received the most attention in the literature. Therefore, the two terms will hereafter be used interchangeably.

In order to study the syntactic behavior of cardinals, the grammar writer should consider several aspects: word order issues (i.e. the distribution of the cardinal vis-à-vis the noun), the possibility to have cardinals included in floating constructions, the distinction between definite and indefinite reading, phenomena of numeral incorporation, the role of the prosodic contour, and cardinals included in Measure Phrases.

4.3.1 The position of the numeral

In principle, cardinals can be found in three distributional patterns: i) they may precede the noun, as in NZSL, shown in (a); ii) they may follow the noun, as in LSQ, shown in (b); iii) they can be repeated so that they sandwich the noun, as it sometimes happens in VGT, shown in (c).

a. TWO LECTURER
'two lecturers' (NZSL, Wallingford 2008: 12)

b. STUDENT THREE
'three students' (LSQ, Bouchard & Parisot 2004)

c. TWO MONKEY TWO
'two monkeys' (VGT, Heyerick et al. 2010)

4.3.2 Floating numerals

Many languages are known to have constructions with floating quantifiers [Syntax – Section 4.4.2]. In these constructions a quantifier such as *all*, *both*, *each* is separated from the rest of the noun phrase, as shown in the example below:

The children have all read the books. (English)

In some languages, numerals may enter a floating construction similarly to quantifiers. In the following Japanese example, the numeral 'two' modifies its noun phrase 'student' even though another constituent 'office' occurs in-between.

Gakusei-ga	ofisu-ni	huta-ri	ki-ta.
student-NOM	office-to	two-CL	come-PST

'Two students came to the office.' (Japanese, Miyagawa 1989: 43)

This construction has been found in a sign language as well. In ASL, a numeral can be stranded when the noun phrase it modifies is topicalized [Pragmatics – Section 4.2] (Boster 1996).

top
BOOK I WANT THREE
'I want three books.' (ASL, Boster 1996: 159)

However, it is not possible to topicalize the numeral on its own, as in the following example.

top
*THREE I WANT BOOK
'I want three books.' (ASL, Boster 1996: 159)

If the noun phrase contains an adjective, it will accompany the noun rather than the stranded quantifier as shown in these examples:

a. top
RED BOOK I WANT THREE
'I want three red books.' (ASL, Boster 1996: 170)

b. top
* BOOK I WANT THREE RED
(Intended: 'I want three red books.') (ASL, Boster 1996: 170)

The grammar writer should check if these options are available in the language under investigation.

4.3.3 Definite and indefinite reading

In the study on the distribution of numerals, the grammar writer should verify the semantic interpretation of numerals. If they are associated with first-mentioned referents (i.e. entities that have not yet been introduced into the discourse), they receive an indefinite [Pragmatics – Section 1.3] / indefinite reading. If they are associated with already-mentioned referents (i.e. entities that have already been introduced into the discourse and can be identified by the interlocutor), they receive a definite [Pragmatics – Section 1.2] / definite reading.

In some languages, this semantic distinction corresponds to different distributional patterns. For example, in Shupamem, numerals with indefinite interpretation are prenominal, whereas numerals with definite interpretations follow the noun and trigger the presence of an obligatory agreement marker.

a. pɛʔ pón
two child.PL
'three books' (Shupamem, Vázquez-Rojas 2011: 235)

b. pón pí pà:
child.PL AGR two
'the two children' (Shupamem, Vázquez-Rojas 2011: 235)

The fact that the position of the numeral vis-à-vis the noun can be affected by information structure has also been reported in sign language research. In particular, it has been noticed that in LIS when numerals are associated with discourse-new information (i.e. indefinite reading), they can appear either before or after the noun. When they convey discourse-old information (i.e. definite reading), they must appear in postnominal position (Mantovan, Geraci & Cardinaletti 2014).

TWO CHILD
'two children'

CHILD TWO
'two children/the two children'

(LIS, Mantovan, Geraci & Cardinaletti 2014: 115–116)

The two cases might be distinguished also by different non-manual markers. This is the case in LIS, where cardinals with indefinite reading are usually accompanied by backward-tilted head and raised eyebrows, whereas those with definite reading are compatible with squinted eyes, lowered eyebrows, and chin down.

4.3.4 Numeral incorporation

In some special cases, it is not possible to determine the position of the cardinal with respect to the noun because the two signs come together to form a single sign. Specifically, the hand configuration of numerals (usually from 1 to 5, in some cases from 1 to 10) combines with movement, location, and orientation of a noun root. This complex phenomenon is an instance of simultaneous morphology and is known as numeral incorporation.

Numerals cannot be combined with any type of noun root. The signs which can undergo numeral incorporation are usually nouns indicating temporal information (e.g. HOUR, WEEK, MONTH) and pronouns.

a. TWO-HOUR
'two hours' (DGS, Steinbach 2012: 122)

b. TWO-YOU
'the two of you' (DGS, Steinbach 2012: 122)

Other signs that can be modified in order to accommodate numeral incorporation are classifiers.

THREE-HIGHWAY
'three lane highway' (ASL, Jones 2007: 87)

4.3.5 Measure Phrases

Cardinals might show a special distributional pattern when included in Measure Phrases (e.g. 'three weeks'). Measure Phrases are constructions containing a noun referring to a measure of time, capacity, weight, length, temperature, or currency.

For example, in LIS, cardinals within Measure Phrases consistently precede the measure noun showing a different pattern with respect to other cardinals.

a. FIVE MONTH
'five moths' (LIS, Mantovan, Geraci & Cardinaletti 2014: 115)
b. FOUR-HUNDRED METER
'four hundred meters' (LIS, Mantovan, Geraci & Cardinaletti 2014: 115)

References

Main sources on numerals in sign languages:

Boster, C. 1996. On the quantifier-NP slipt in American Sign Language and the structure of quantified noun phrases. In W.H. Edmondson & R. B. Wilbur (eds.), *International review of sign linguistics*, 159–208. Mahwah, NJ: Lawrence Erlbaum Associates.

Bouchard, D. & A. Parisot. 2004. Properties of number in Quebec Sign Language. Abstract presented at the workshop *Numerals in the World's Languages*, Leipzig.

Heyerick, I., M. Van Braeckevelt, D. de Weerdt, M. Van Herreweghe & M. Vermeerbergen. 2010. Expressing plural meaning in Flemish Sign Language. Poster presentation at TISLR 2010, Purdue University.

Jones, V.L. 2007. *Numeral incorporation in American Sign Language*. University of North Dakota M.A. dissertation.

Mantovan, L., C. Geraci & A. Cardinaletti. 2014. Addressing the cardinals puzzle: New insights from non-manual markers in Italian Sign Language. In *Proceedings of LREC 2014*, 113–116. Reykjavik.

Miljan, M. 2003. Number in Estonian Sign Language. *Trames*, 7 (3). 203–223.

Steinbach, M. 2012. Plurality. In R., Pfau, M. Steinbach & B. Woll (eds.), *Sign language – An international handbook*. Ber lin: De Gruyter Mouton, 112–136.

Wallingford, S.J. 2008. The pluralisation of nouns in New Zealand Sign Language. *Wellington Working Papers in Linguistics* 20. 1–24.

Zwitserlood, I., P. Perniss & A. Özyürek. 2012. An empirical investigation of expression of multiple entities in Turkish Sign Language (TİD): Considering the effects of modality. *Lingua* 122. 1636–1667.

General sources on numerals:
Miyagawa, S. 1989. Structure and case marking in Japanese. *Syntax and Semantics* 22. New York: Academic Press.
Vázquez-Rojas, V. 2011. Definite and indefinite numeral phrases in Shupamem. In N. Myler & J. Wood, *NYUWP*, 3 (3). 231–244.

4.4 Quantifiers

4.4.0 Definitions and challenges

4.4.0.1 What is a quantifier?

A quantifier is an expression that identifies the number or amount of the set denoted by the noun it modifies. The following are some of the quantifiers / quantifiers [Lexicon – Section 3.10.2] in English: *no, some, both, few, a few, several, enough, many, most, each, every, all,* and numeral [Lexicon – Section 3.10.1] quantifiers such as *two, three*. Since Section 4.4. describes numerals, in this section we concentrate on the quantifiers other than numerals. Quantifiers are typically classified together with determiners [Lexicon – Section 3.6] / determiners or nominal modifiers.

4.4.0.2 Methodological challenges

Similar to the methodological problem discussed for numerals [Syntax – Section 4.3], one challenge in analyzing quantifiers is to identify whether a sequence of a noun and a quantifier such as CHILDREN MANY constitutes a quantifier phrase such as 'many children' or a predicative structure such as 'As for children, there are many.'

4.4.1 The position of the quantifier

Quantifiers may precede or follow the noun they quantify, that is, the head noun. In the following example from ASL, the quantifiers precede the noun GIRL:

ALL/ONE/NONE GIRL LIKE MATH
'All/one/no girl(s) like math.' (ASL, Davidson & Gagne 2014)

NGT patterns with ASL in that quantifiers precede the head noun in NGT, as in (a) and (b). In LIS, however, quantifiers follow the head noun, as in (c) and (d) (Brunelli 2011).

a. ALL CAR EXPENSIVE NICE
'All expensive cars are nice.' (NGT, adapted from Brunelli 2011: 52)

b. PLACE MANY OTHER SIGN SPECIAL PLACE HAVE
'Many other signs have a special place.' (NGT, adapted from Brunelli 2011: 52)

c. CAR EXPENSIVE ALL NICE
'Expensive cars are all nice.' (LIS, adapted from Brunelli 2011: 52)

d. IX_1 APPLE MANY EAT
'I eat/ate many apples.' (LIS, adapted from Brunelli 2011: 52)

LIS and NGT also contrast in the order in which quantifiers and possessives appear. In LIS, the order is Noun-Possessive-Quantifier, as in (a), whereas it is Quantifier/Possessive-Noun in NGT, as in (b):

top
a. FRIEND(S) $POSS_1$ ALL (IX_3 ARC) DEAF
'All my friends are deaf.' (LIS, adapted from Brunelli 2011: 63)

top
b. ALL FRIEND DEAF
'All my friends are deaf.' (NGT, adapted from Brunelli 2011: 63)

Quantifiers and higher adjectives such as OTHER, NEXT/FOLLOWING, PAST/PREVIOUS are postnominal in LIS, but prenominal in NGT. OTHER appears in the order N-OTHER-Q in LIS. In NGT, on the other hand, it appears in the order Q/OTHER-N, or in the order Q-OTHER-N if the quantifier MANY is used for Q.

In some sign languages the order between the quantifier and the head noun depends on the quantifier. In TSL, for instance, the existential quantifier SOME can occur both prenominally and postnominally, as in (a) and (b) below, while A-LITTLE, ALL, ANY and MOST can occur only postnominally, as in (c) and (d) below, and the quantifiers EVERY, OTHER, ANOTHER are restricted to the prenominal position, as in (e):

a. IX_3 CLOTHES SOME UNWEARABLE
'He has some unwearable clothes.' (TSL, Lai 2005: 45)

b. IX_3 SOME CLOTHES UNWEARABLE
'He has some unwearable clothes.'

c. IX_3 MONEY ALL TAKE BUY BOOK
'He spent all the money buying books.' (TSL, Lai 2005: 48)

d. IX_2 QUESTION ANY HAVE ASK TEACHER
'If you have any questions, you can ask the teacher.' (TSL, Lai 2005: 49)

e. IX_3 ASK EVERY TEACHER QUESTION SAME.
'He asked every teacher the same question.' (TSL, Lai 2005: 55)

A combination of quantifiers and distributives can be used as well, as in the following cases:

FIVE BEDS CL(B)+++
'five beds in a row' (BSL, adapted from Sutton-Spence & Woll 1998: 107)

In this case the proform is repeated three times. The number information is in the '5'-hand quantifier and proform indicates the distributive.

4.4.2 Floating quantifiers

The following examples illustrate what are known as floating quantifiers in English:

a. The children have all read the books.
b. The students have each arrived.
c. John's brothers have both read the book.

In each of these cases, the quantifiers *all*, *each* and *both* are separated from their corresponding noun phrase, i.e. *the children*, *the students* and *John's brothers* respectively, thus creating a discontinuous constituent (Bobaljik 2003).

However, there are restrictions as to where these floating quantifiers can appear. In English they can appear to the left of an auxiliary verb, as in (a), between auxiliary verbs, as in (b) and (c), but not in any of the positions to the right of the lexical verb, as in (d) and (e) below:

a. The computers all will have been moved to the new office.
b. The computers will all have been moved to the new office.
c. The computers will have all been moved to the new office.
d. *The computers will have been moved all to the new office.
e. *The computers will have been moved to the new office all.

A floating quantifier can also appear between an auxiliary verb and an adjectival predicate, as in (a) and (b):

a. We were all fast asleep. (Quirk et al. 1985: 382)
b. The children are all healthy.

The possibility of floating quantifiers has been observed in sign languages as well. In the following LIS examples, the quantifier ALL appears in combination with a kind of relative clause labeled as 'PE-clause' (Branchini and Donati 2009). In (a) the quantifier ALL modifies the head noun CHILDREN but it is separated from it. Similarly, in (b), the negative quantifier NOBODY modifies the head noun BOY but is separated from it.

rel
a. CHILDREN$_i$ CAKE EAT PE$_i$ TODAY ALL [E] STOMACHACHE
'All the children that ate the cake today have stomachache.'
(LIS, Branchini & Donati 2009: 170)

rel
b. BOY$_i$ EXAM DONE PE$_i$ PASS [E] NOBODY
'No boy that took the exam passed.' (LIS, Branchini & Donati 2009: 170)

Grammar writers should pay attention to the possible positions for quantifiers given the basic word order of the language they are working with. They should also consider the possible word order options of combinations of quantifier + possessive + adjective + noun. Also, they should check in what conditions, if at all, quantifiers, can be floated.

References

Main sources on quantifier phrase in sign languages:

Boster, C. 1996. On the quantifier-NP slipt in American Sign Language and the structure of quantified noun phrases. In W.H. Edmondson & R. B. Wilbur (eds.), *International review of sign linguistics*, 159–208. Mahwah, NJ: Lawrence Erlbaum Associates.

Branchini, C. & C. Donati. 2009. Relatively different: Italian Sign Language relative clauses in a typological perspective. In A.Lipták (ed.) *Correlatives crosslinguistically*, 157–191. Amsterdam: John Benjamins.

Brunelli, M. 2011. *Antisymmetry and sign language: A Comparison between NGT and LIS*. Utrecht: LOT. http://dare.uva.nl/document/334404?origin=publication_detail

Davidson, K., & D. Gagne. 2014. Vertical representation of quantifier domains. *Proceedings of Sinn und Bedeutung* 18. Basque Country, Spain

Geraci, C. 2006. Negation in Italian Sign Language (LIS). In L. Bateman & C. Ussery (eds.), *Proceedings of the North East Linguistic Society 35*, 217–230. Amherst, MA: GLSA.

Lai, Y. 2005. *Noun phrases in Taiwanese Sign Language*. National Chung Cheng University, Taiwan, MA rhesis .

Petronio, K. 1995. Bare noun phrases, verbs and quantification in ASL. In E. Bach, E. Jelinek, A. Kratzer & B. H. Partee (eds.), *Quantification in matural language*: Vol. 2, 603–618. Dordrecht: Kluwer Academic Publishers.

Quer, J. 2012. Quantificational strategies across language modalities. In M.Aloni, et al. (eds.), *Selected papers from 18th Amsterdam Colloquium*, 82–91. Springer, Lecture Notes in Computer Science (LNCS) 7218.

Schlenker, P. 2011. Quantifiers and variables: Insights from sign language (ASL and LSF). In B.H. Partee, M. Glanzberg & J. Skilters (eds), *Formal semantics and pragmatics: Discourse, context, and models*. *The Baltic International Yearbook of Cognition, Logic and Communicatio*n 6. 1–22. http://newprairiepress.org/biyclc/vol6/iss1/16/

Sutton-Spence, R. & B. Woll. 1998. *The linguistics of British Sign Language: An introduction.* Cambridge: Cambridge University Press.

Zucchi, S., C. Neidle, C. Geraci, Q. Duffy & C. Cecchetto. 2010. Functional markers in sign languages. In D. Brentari (ed.) *Sign languages*, 197–224. Cambridge: Cambridge University Press.

General sources on quantifiers and the quantifier phrase:

Abney, S. 1987. *The English Noun Phrase in its sentential aspect*. MIT PhD dissertation.

Bach, E., E. Jelinek, A. Kratzer & Barbara H. Partee (eds.). 1995. *Quantification in natural languages*. Dordrecht: Kluwer Academic Publishers.

Baltin, M. 1995. Floating quantifiers, PRO and predication. *Linguistic Inquiry* 26. 199–248.

Barwise, J. & R. Cooper. 1981. Generalized quantifiers and natural language. *Linguistics and Philosophy* 4. 159–219.

Bobaljik, J. 2003. Floating quantifiers: Handle with care. In L. Cheng & R. Sybesma (eds.), *The second Glot International state-of-the-art article book,* 107–148. Berlin: Mouton de Gruyter.

Bošković, Ž. 2004. Be careful where you float your quantifiers. *Natural Language and Linguistic Theory* 22. 681–742.
Davidson, K., & D. Gagne. 2014. Vertical representation of quantifier domains. *Proceedings of Sinn und Bedeutung* 18. Basque Country, Spain.
Doetjes, J. 1997. *Quantifiers and selection: On the distribution of quantifying expressions in French, Dutch and English*. University of Leiden PhD dissertation.
Dowty, D. & B. Brodie. 1984. The semantics of "floated" quantifiers in transformationless grammar. In *Proceedings of the West Coast Conference on Formal Linguistics* 3, 75–90. Stanford, CA: CSLI Publications.
Fitzpatrick, J. M. 2006. *The syntactic and semantic roots of floating quantification*. Massachusetts Institute of Technology PhD. dissertation, Cambridge, MA.
Haegeman, L. & J. Guéron. 1999. *English grammar*. Oxford: Blackwell Publishers.
Heim, I. 1982. *The semantics of definite and indefinite noun phrases*. University of Massachusetts, Amherst PhD dissertation, Amherst, MA.
Heim, I. & A. Kratzer. 1998. *Semantics in generative grammar*. Malden: Blackwell.
Hoeksema, J. 1996. Floating quantifiers, partitives and distributivity. In J. Hoesksema, (ed.) *Partitives*, 57–106. Berlin: Mouton de Gruyter. http://odur.let.rug.nl/~hoeksema/flq.pdf
Kurtzman, H.S. & M. C. MacDonald. 1993. Resolution of quantifier scope ambiguities. *Cognition* 48. 243–279.
Lobeck, A. 1990. Functional heads as proper governors. In *Proceedings of the 20th Northeastern Linguistics Society Conference*, 348–362. Amherst, MA: GLSA, University of Massachusetts.
Maling, J.M. 1976. Notes on quantifier postposing. *Linguistic Inquiry* 7. 708–718.
McCawley, J.D. 1998. *The syntactic phenomena of English*. Chicago: The University of Chicago Press.
Murasugi, K. 1991. *Noun phrases in Japanese and English: A study in syntax, learnability, and acquisition*. University of Connecticut PhD dissertation.
Peters, S & D. Westerstahl 2006. *Quantifiers in language and logic*. Oxford: Oxford University Press.
Quirk, R., S. Greenbaum, G. Leech & J. Startvik. 1985. *A comprehensive grammar of English language*. London: Longman.
Sportiche, D. 1988. A theory of floating quantifiers and its corollaries for constituent structure. *Linguistic Inquiry* 19. 425–449.
Tanaka, T. 2008. Aspectual restriction for floating quantifiers. *Nanzan Linguistics Special Issue* 3. 199–228. http://www.ic.nanzan-u.ac.jp/LINGUISTICS/publication/pdf/NLSI3_2-11-tanaka.pdf

4.5 Adjectives

4.5.0 Definitions and challenges

4.5.0.1 Adjectival modification

Adjectives have two main functions: attributive [Lexicon – Section 3.4.1] / attributive and predicative [Lexicon – Section 3.4.2] / predicative. Typically, when an adjective occurs in a noun phrase, modifying the noun, it is considered to have an attributive function as in 'the new car'. When the adjective is in the predicate position as in 'The car is new,' it is considered to have the predicative function. In this section we will only concentrate on adjectives having attributive function as modifiers of nouns, since we are dealing with the structure internal to the noun phrase.

Adjectives are also categorized semantically. Most commonly identified adjective categories are the following: adjectives that denote quality, size, shape, color, provenance, value, dimension, physical property, speed, human propensity, age; those that are speaker-oriented or subject-oriented; and those that are manner adjectives and thematic adjectives (Sproat & Shih 1991; Cinque 1994; Dixon 1982). The position of an adjective within the noun phrase and with respect to other adjectives may depend on the semantic category it belongs to.

The distribution of adjectives within a noun phrase is mainly analyzed in two ways: (i) their position with respect to the head noun (prenominal versus postnominal) and (ii) their position with respect to other adjectives.

4.5.0.2 Methodological challenges

The grammar writer should take into consideration whether the relative order of the adjectival modifier with respect to the head noun makes a difference in its function. Given a sequence of a noun and an adjective such as CAR NEW, it may be a challenge to determine whether the adjective is a modifier and the sequence is a noun phrase as in 'new car' or whether the adjective functions as a predicate and the sequence is a predication structure as in 'The car is new'.

There are languages where a postnominal adjective is interpreted as predicative while a prenominal adjective is interpreted as attributive. Irish SL is such a language (Leeson & Saeed 2012). In the Irish SL examples below, the prenominal SMALL is interpreted as an attributive adjective, (a), but when it is postnominal, as a predicative adjective (b).

a. SMALL HANDBAG
'(It was a) small handbag.' (Irish SL: Leeson & Saeed 2012: 153)

b. WHEN JASON SMALL
'When Jason was small' (Irish SL: Leeson & Saeed 2012: 153)

In languages where both attributive and predicative adjectives can be postnominal, identifying the function of an adjective in a sentence might pose a harder challenge. However, there may be clues in the sign language under investigation that may help make the distinction. LIS has been reported to distinguish nominal constituents from verbal constituents non-manually (Bertone 2009: 8). In the example below, the non-manual marking associated with the noun phrase spreads over FURNITURE in (a) but over FURNITURE ANTIQUE $(IX)_i$ in (b). This leads to the analysis that the adjective ANTIQUE is a predicative adjective in (a) but an attributive adjective in (b).

a. NP VP
d.h. $FURNITURE_a$ ANTIQUE
'The furniture is antique.' (LIS, adapted from Bertone 2009: 8)

b. NP VP
d.h. FURNITURE$_a$ ANTIQUE (IX$_{3a}$) BROKEN
'The antique furniture is broken.' (LIS, adapted from Bertone 2009: 8)

Different positions of the adjectival modifiers do not always correlate with different functions. In TSL, for instance, the adjective can precede or follow the head noun without a difference in the functional meaning.

a. IX$_3$ RAISE [CUTE CAT FIVE] Adj N Num
'She raises five cute cats.'
b. IX$_3$ [CAT CUTE FIVE] HAVE N Adj Num
'She has five cute cats.' (TSL, Zhang 2007: 65)

The adjective CUTE in the prenominal and post-nominal positions in the two TSL examples above are both interpreted attributively.

We advise the grammar writer to determine whether different positions of adjectival modifiers correlate with different functions such as attributive [Lexicon – Section 3.4.1] and predicative [Lexicon – Section 3.4.2].

4.5.1 Prenominal versus postnominal adjectives

Depending on the language, we may observe the following distribution for adjectival modifiers: (i) strictly prenominal (i.e. before the noun), (ii) strictly postnominal (i.e. after the noun), or (iii) occuring prenominally and postnominally. In those languages where adjectival modifiers can occur in either position, again we have two possibilities: (i) all adjective classes can occur in either position, with no meaning difference, or (ii) the pre- versus post-nominal distribution is determined by the semantic class the adjective belongs to.

English belongs to the languages of the strictly prenominal type. In example (a) below all the adjectives precede the head noun. In the French example in (b), on the other hand, the possessive adjective precedes the head noun while most adjectives belonging to other classes follow it.

a. their big red cottage (English)
b. mes livres intéressants (French)
'my interesting books'

LIS seems strictly postnominal since all adjectives follow the head noun, as shown in (a–c) below.

a. [EXAMPLE **PAST**]
'previous/last example' (LIS, Brunelli 2011:54)
b. [EXAMPLE **NEXT**] EASY
'The next/following example is easy.' (LIS, adapted from Brunelli 2011: 55)

c. [MAN **OLD**] BOOK IX BUY
'The old man buys/bought the book.' (LIS, Brunelli 2011: 60)

In NGT, adjectives can be prenominal and postnominal but the position of an adjective is determined by its semantic type: while adjectives expressing relative temporal relations like PREVIOUS, FOLLOWING, typically precede the head noun, as in (a) and (b), an attributive adjective such as OLD can follow it, as in (c).

a. **[previous** EXAMPLE]
'previous/last example' (NGT, Brunelli 2011: 54)
b. LOOK [**FOLLOWING** EXAMPLE++]
'Look at the next/following examples.' (NGT, Brunelli 2011: 55)
c. [MAN **OLD**] BOOK BUY
'The old man buys the book.' (NGT, Brunelli 2011: 60)

The following provide further examples from TİD. OTHER precedes the head noun in (a) whereas an adjective expressing a physical property, BIG, follows it, as in (b).

5_4.5.1_1_TİD_other man money sit

a. [**OTHER** MAN] MONEY SIT
'The other man is sitting on money.'

5_4.5.1_2_TİD_rabbit big strong

b. [RABBIT **BIG**] STRONG
'The big rabbit is strong.' (TİD, Özsoy et al. 2012: 8)

The grammar writer should check whether adjectives must be prenominal or postnominal in the language studied or whether either order is possible.

4.5.2 Symmetric adjectives

There are also sign languages in which adjectives can freely precede or follow the head noun with no difference in meaning. For the TSL examples below the Adj-N and N-Adj orders are interpreted identically.

a. [**CUTE** CAT] IX_1 LIKE
b. [CAT **CUTE**] IX_1 LIKE
'I like cute cats.' (TSL, adapted from Lai 2005: 15)

The following TİD examples also show that both orders are possible in the same language.

5_4.5.2_1_TİD_sun yellow round

a. SUN **YELLOW ROUND**
'the yellow round sun' (TİD, Özsoy et al. 2012: 8)

5_4.5.2_TİD_red pants

b. **RED** PANTS
'red pants' (TİD, Özsoy et al. 2012: 8)

If the language the grammar writer is analyzing can have both prenominal and postnominal modifiers, he/she should check (i) whether all kinds of adjectives can freely occur in either of these positions and (ii) whether these different positions induce different interpretations of the adjectives.

4.5.3 Reduplicated adjectives

The adjective modifier of a noun phrase can be reduplicated. In constructions in which the adjective is reduplicated, one of the adjectives occurs prenominally and the other postnominally, as in the TİD example below.

5_4.5.3_1_TİD_pointed hat pointed

POINTED HAT **POINTED**
'a pointed hat' (TİD, Özsoy et al. 2012: 9)

The grammar writer should check whether reduplication is possible with adjectives and whether single occurence versus reduplication induces any difference in meaning.

4.5.4 Ordering restrictions among adjectives

In studies done on spoken languages, adjectives in a noun phrase have been observed to typically exhibit ordering restrictions (Dixon 1982; Sproat & Shih 1991; Cinque 1994; Teodorescu 2006). The ordering is mostly, but not uniformly, sensitive to the semantic classes of adjectives, that is, adjectives belonging to the same class pattern together with respect to their ordering restrictions. Adjectives that denote quality, for example, generally precede adjectives conveying size, which in turn precede adjectives conveying shape, in all languages as reflected in the following hierarchy.

a. Quality > Size > Shape > Color > Provenance (Sproat & Shih 1991)

The following two hierarchies represent other ordering restrictions that have been proposed:

b. Possessive > Speaker-oriented > Subject-oriented > Manner/Thematic
(Cinque 1994)

c. Value > Dimension > Physical property > Speed > Human Propensity > Age > Color (Dixon 1982)

In the absence of any intonational differences indicating different interpretations of the noun phrase, the only grammatical order of adjectives in a noun phrase in English, for instance, is the one in which the adjective denoting quality precedes the one which denotes size, which in turn precedes the color adjective, as exemplified below.

a beautiful small black purse
#a beautiful black small purse
#a small beautiful black purse
#a small black beautiful purse etc. (English, Teodorescu 2006: 399)

The following examples illustrate strict ordering of different adjective classes in LIS.

a. Origin precedes color: VASE CHINA RED
*VASE RED CHINA
'red Chinese vase'
b. Origin precedes quality: VASE CHINA OLD
*VASE OLD CHINA
'old Chinese vase'
c. Color precedes quality: VASE RED OLD
*VASE OLD RED
'red old vase' (LIS, Bertone 2009: 17)

In the LIS examples above the adjective indicating origin precedes the color and quality adjectives, while color adjectives typically precede quality adjectives.

We advise the grammar writer to investigate whether the sign language studied imposes ordering restrictions among different semantic classes of adjectives. The grammar writer should also aim at identifying the unmarked order of adjectives, and make sure that the different orders of adjectives are not correlated with different information structure interpretations like focus [Pragmatics – Section 4.1] or topic [Pragmatics – Section 4.2].

References

Main sources on adjectival modification in sign languages:

Bertone, C. 2009. The syntax of noun modification in Italian Sign language (LIS). *University of Venice Working Papers in Linguistics* 19. 7–28.

Brunelli, M. 2011. *Antisymmetry and Sign Languages: A Comparison between NGT and LIS*. Utrecht: LOT.

Cinque, G. 1994. On the evidence forp Partial N-Movement in the Romance DP. In G. Cinque, J. Koster, J.-Y. Pollock, L. Rizzi & R. Zanuttini (eds.), *Paths towards Universal Grammar. Studies in honor of Richard S. Kayne*, 85–110. Washington, DC: Georgetown University Press.

Dixon, R.M.W. 1982. *Where have all the adjectives gone? And other essays in semantics and syntax*. Berlin: Mouton.

Lai, Y-T. 2005. *Noun phrases in Taiwan Sign Language*. National Chung Cheng University MA thesis.

Miljan, M. 2000. *The noun phrase in Estonian Sign Language from the typological perspective*. Tallinn: Estonian Institute of Humantities BA thesis.
Özsoy, A.S., A. Göksel, M. Kelepir & D. Nuhbalaoğlu. 2012. Türk İşaret Dilinde Ad Öbeği Yapısı ve İşaret Dizimi (The structure of noun phrases in Turkish Sign Language and the order of signs). Paper presented at the VIIth International Turkish Language Conference. Türk Dil Kurumu (Turkish Language Association). 22–24 September 2012. Ankara.
Sproat, R. & C. Shih. 1991. The cross-linguistic distribution of adjective ordering restrictions. In C. Georgopoulos & R. Ishihara (eds.), *Interdisciplinary approaches to language: Essays in honor of S.-Y. Kuroda*, 565–593. Dordrecht: Kluwer Academic Publishers.
Teodorescu, A. 2006. Adjective ordering restrictions revisited. In D. Baumer, D. Montero & M. Scanlon (eds.), *Proceedings of the 25th West Coast Conference on Formal Linguistics*, 399–407. Somerville, MA: Cascadilla Proceedings Project.
Zhang, N.N. 2007. Universal 20 and Taiwan Sign Language. *Sign Language & Linguistics* 10(1). 55–81.

General sources on adjective modification:

Cinque, G. 2005a. Deriving Greenberg's Universal 20 and its exceptions. *Linguistic Inquiry* 36. 315–332.
Cinque, G. 2005b. The dual source of adjectives and phrasal movement in the Romance DP. Unpublished manuscript. University of Venice.

4.6 Multiple NP constituents

4.6.0 Definitions and challenges

Typological studies on a large number of languages have revealed that even though it seems that the order of the constituents in a noun phrase such as articles, demonstratives [Lexicon – Section 3.7.1], adjectival modifiers, numerals [Lexicon – Section 3.10] / numerals and quantifiers [Lexicon – Section 3.10] / quantifiers is not identical in every language, the variation is in fact quite restricted (Greenberg 1964).

The findings of these studies are summarized as the following generalization (Greenberg 1964, "Universal 20"):

i. In the prenominal position, the order of demonstrative, numeral, and adjective (or any subset thereof) modifiers conforms to the order **Dem>Num>A>N**
ii. In postnominal position, the order of the same elements (or any subset thereof) conforms to the order **N>Dem> Num> A** or
iii. to the order **N>A> Num>Dem**.

There are, however, exceptions to the statements in (ii)–(iii) (Hawkins 1983).

Many sign languages have also been shown to conform to the generalizations above at varying degrees (cf. Bahan et al. 1995 and MacLaughlin 1997 for ASL; Miljan 2000 for ESL; Bertone 2009, Brunelli 2011 and Mantovan & Geraci 2012 for LIS; Nuhbalaoğlu & Özsoy 2014 for TİD and Zhang 2007 for TSL).

4.6.1 Prenominal modifiers

In noun phrases with multiple modifiers, sign languages have been observed to exhibit differences with respect to how strictly they conform to the following ordering of the modifiers: Dem(onstrative) – Num(eral) – Adj(ective) – N(oun).

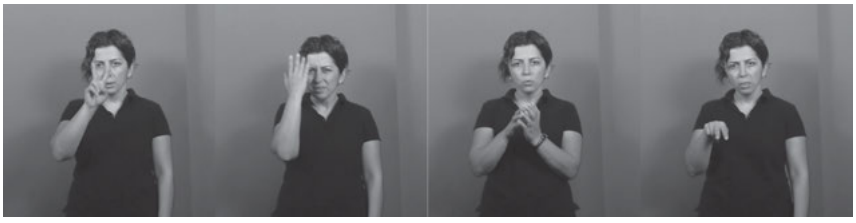
While there seems to be no exception to the generalization that Dem is in the leftmost position, sign languages vary with respect to the relative order of numeral and adjectival modifiers. TSL, for example, has the strict Dem-Num-Adj-N order in the head final noun phrase constructions.

a. Num-Adj-N
   IX_3 FIVE CUTE CAT HAVE
   'She has five cute cats.' (TSL, adapted from Zhang 2007: 65)
b. Dem-Adj-N
   IX_{DET} CUTE CAT IX_1 BELONG-TO
   'That cute cat belongs to me.' (TSL, adapted from Zhang 2007: 66)
c. Dem-Num-N
   $IX_{DET.PL}$ FOUR CAR IX_1 FRIEND BELONG-TO
   'Those four cars belong to my friend.' (TSL, adapted from Zhang 2007: 66)
d. Dem-Num-Adj-N
   $IX_{DET.PL}$ FIVE NAUGHTY BOY IX_1 BELONG-TO STUDENT
   'These five naughty boys are my students.'
   (TSL, adapted from Zhang 2007: 67)

However, the following orders have been reported to be unacceptable in TSL : *Adj Num N, * Adj Dem N and * Num Dem N (TSL, Zhang 2007:10).

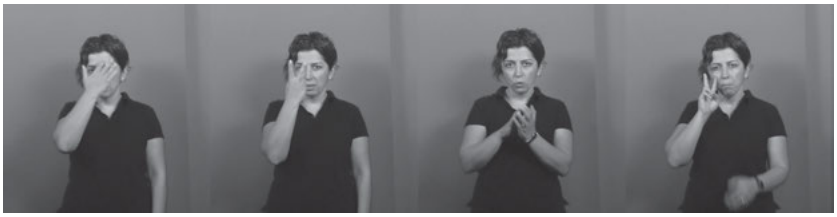
Some sign languages, on the other hand, have been observed to allow variation in the relative order of pre-nominal constituents. With respect to adjectival and numeral modifiers in TİD, for example, the two categories can occur in either order in the prenominal position without any semantic distinction between the two orders.

a. Num-Adj-N



TWO BLACK DOG SEE_3-PAST
'I saw two black dogs.'
(TİD, Nuhbalaoğlu & Özsoy 2014)

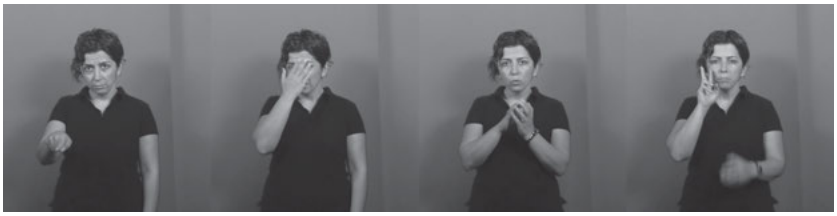
b. Adj-Num-N



BLACK TWO DOG SEE$_3$-PAST
'I saw two black dogs.'
(TİD, Nuhbalaoğlu & Özsoy 2014)

Even in TİD, however, demonstratives (and possessives) have been observed to be more restricted with respect to the position in which they can occur. In contrast to the grammaticality of orders in which Dem precedes all the other constituents as in (a) and (c) below, the corresponding *Adj-Dem-N (b) and *Num-Dem-N (d) orders are ungrammatical.

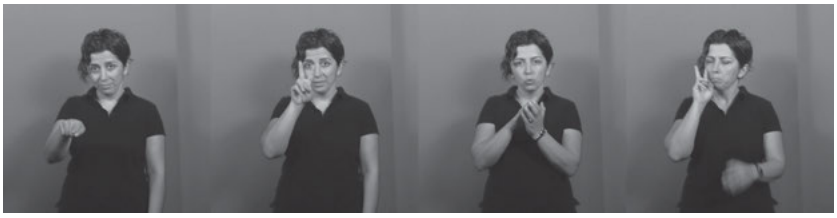
a. Dem-Adj-N



IX BLACK DOG SEE$_3$-PAST
'I saw the/that black dog.'

b. Adj-Dem-N
*BLACK IX DOG SEE$_3$-PAST
'I saw the/that black dog.'

c. Dem-Num-N



IX TWO DOG SEE$_3$-PAST
'I saw the/those two dogs.'

d. Num-Dem-N
*TWO IX DOG SEE_3-PAST
'I saw the/those two dogs.' (TİD, Nuhbalaoğlu & Özsoy 2014)

We advise the grammar writer to check which orders are possible among the prenominal modifiers.

4.6.2 Postnominal modifiers

TSL is a language which allows a symmetrical distribution of the constituents of the noun phrase in that all modifiers can precede and follow the head noun. The modifiers can be split between prenominal and postnominal position, as in (a) and (b) below or all modifiers can occur postnominally, as in (c) below.

a. $IX_{DET\cdot PL}$ **NAUGHTY** BOY **FIVE** IX_1 BELONG-TO STUDENT
b. $IX_{DET\cdot PL}$ **FIVE** BOY **NAUGHTY** IX_1 BELONG-TO STUDENT
c. $IX_{DET\cdot PL}$ BOY **NAUGHTY FIVE** IX_1 BELONG-TO STUDENT
All mean: 'These five naughty boys are my students.'
(adapted from Zhang 2007: 12)

When there are multiple modifiers in the postnominal position, as in (c) above, the relative positions of the noun phrase constituents in TSL must conform to Dem N Adj Num.

Similar to TSL, TİD allows split ordering of the modifiers in the pre- and postnominal positions. When there are multiple constituents postnominally, the relative order between a color adjective and a numeral seems to be free, as shown below.

a. IX_1 DOG **TWO BLACK** SEE_3-PAST
b. IX_1 DOG **BLACK TWO** SEE_3-PAST
'I saw two black dogs.'
(TİD, Nuhbalaoğlu & Özsoy 2014)

We recommend that the grammar writer check which orders are possible among the postnominal modifiers.

References

Main sources on multiple NP constituents in sign languages:

Bahan, B., J. Kegl, D. MacLaughlin & C. Neidle. 1995. Convergent evidence for the structure of determiner phrases in American Sign Language. In L. Gabriele, D. Hardison & R. Westmoreland (eds.), *FLSM VI: Proceedings of the Sixth Annual Meeting of the Formal Linguistics Society of Mid-America (Vol. Two)*, 1–12. Bloomington, Indiana: Indiana University Linguistics Club.

Bertone, C. 2009. The syntax of noun modification in Italian Sign language (LIS). *University of Venice Working Papers in Linguistics*, 17–28.

Brunelli, M. 2011. *Antisymmetry and sign languages: A comparison between NGT and LIS*. Utrecht: LOT.

Hawkins, J.A. 1983. *Word order universals*. San Diego: Academic Press.
Leeson, L. & J.I. Saeed. 2012. *Irish Sign Language*. Edinburgh: Edinburgh University Press.
MacLaughlin, D. 1997. *The structure of determiner phrases: Evidence from American Sign Language*. Boston University PhD Dissertation.
Mantovan, L. & C. Geraci. 2012. Sign language and language universals: The case of Universal 20 in Italian Sign Language. Poster presentation at FEAST II, University of Warsaw.
Miljan, M. 2000. *The noun phrase in Estonian Sign Language from the typological perspective*. Tallinn: Estonian Institute of Humantities BA thesis.
Neidle, C., J. Kegl, D. MacLaughlin, B. Bahan & G.R Lee. 2000. *The syntax of American Sign Language: Functional categories and hierarchical structure*. Cambridge, MA: MIT Press.
Nuhbalaoğlu, D. & A.S. Özsoy. 2014. Linearization in TID NPs. Paper presented at FEAST, University of Venice.
Zhang, N.N. 2007. Universal 20 and Taiwan Sign Language. *Sign Language & Linguistics* 10(1). 55–81.

General sources on multiple NP constituents:

Abels, K. & A. Neelemann. 2012. Linear asymmetries and the LCA. *Syntax* 15(1). 25–74.
Cinque, G. 2005a. Deriving Greenberg's Universal 20 and its exceptions. *Linguistic Inquiry* 36(3). 315–332.
Dixon, R.M.W. 2008 Comparative constructions: a cross-linguistic typology. *Studies in Language* 32(4). 787–817.
Greenberg. J. 1964. Some universals of grammar with particular reference to the order of meaningful elements. In J.H Greenberg (ed.), *Universals of language*. Cambridge, MA: The MIT Press.

Chapter 5 The structure of adjectival phrases

5.0 Definitions and challenges

5.0.1 What is an adjectival phrase?

Adjectival phrases (APs) are defined as phrases in which an adjective / adjective [Lexicon – Section 3.4] functions as the head of the phrase. Adjectival phrases [Syntax – Section 4.5] typically modify NPs.

APs can either precede or follow the noun / noun [Lexicon – Section 3.1] they modify. Modification is subject to language-specific rules, and, within one language, modification depends on the class of the adjective and on whether they perform an attributive / attributive [Lexicon – Section 3.4.1] or predicative / predicative [Lexicon – Section 3.4.2] function.

5.0.2 Internal structure and position with respect to the noun

Researchers have observed that the position of the AP affects its internal structure. Typically, languages tend to have what we might call a "side of recursion", that is, the side of the clause where subordination and other expansions are more likely to occur. APs sitting on the side of recursion tend to have a richer internal structure

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