

15. Negation

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Abstract

The expression of sentential negation in sign languages features many of the morphological and syntactic properties attested for spoken languages. However, non-manual markers of negation such as headshake or facial expression have been shown to play a central role in this type of languages and they interact in various interesting ways with manual negatives and with syntactic structure of negative clauses, thus introducing modality-specific features. Particular sign language grammars are parametrized as to whether sentential negation can be encoded solely with a manual or a non-manual element, or with both. Multiple expression of negation at the manual level is another point of variation. Pending further detailed descriptions and syntactic analyses of negation in a larger pool of sign languages, it can be safely concluded that negation systems in the visual-gestural modality show the richness and complexities attested for natural languages in general.

1. Introduction

Within the still limited body of research on the grammar of sign languages, the expression of negation is one of the few phenomena that has received a considerable amount of attention. Apart from quite a number of descriptions and analyses of negative structures in individual sign languages, negation has been the object of a crosslinguistic project which investigated selected aspects of the grammar of a wide sample of sign languages from a typological perspective (Zeshan 2004, 2006a,b). A reason for the special attention devoted to the grammar of negation might lie in the fact that it constitutes a domain of grammar where manual and non-manual elements interact in very rich and intricate ways: beyond the superficial first impression that all sign languages negate by resorting to similar mechanisms, their negation systems display remarkably diverse constraints that interact in complex ways with the different components of each individual grammar. The main manual and non-manual ingredients of linguistic negation can be traced back to affective and conventionalized gestures of the hearing community the languages are embedded in, and it is precisely for this reason that the results of the research carried out in this domain provide strong evidence for the linguistic properties that recruited those gestures and integrated them into sophisticated linguistic systems. At the same time, the origin of many negative markers reinforces the hypothesis that contemporary sign languages, as a consequence of their relative

youth and the medium in which they are articulated and perceived, systematically feature gestural and spatial resources which have been available during their genesis period and subsequent (re)creolization phases.

Looking into the properties of sign language negation systems is motivated by the need to offer a more accurate characterization of the role of the different non-manual markers that are used. It has been argued that non-manuals play different roles at each linguistic level (lexical marking, morphology, syntax, prosody; for an overview, see Pfau/Quer 2010), and detailed analyses of negatives in different languages strongly suggest that non-manual markers can be recruited for different functions at different levels across languages. This result is of utmost importance in order to tease apart linguistic vs. gestural non-manuals, which systematically co-occur within the same medium in visual-gestural languages.

This chapter offers an overview of the most representative traits of the sentential negation systems of the sign languages reported upon so far and highlights general tendencies as well as interesting language-specific particularities. As Zeshan (2004) points out, it might be too early to offer comprehensive typological analyses of sign languages, given the insufficient number of studied sign languages for statistical analysis as well as their unbalanced geographical distribution. Still, crosslinguistic comparison already yields quite a robust picture of the existing variation and it also allows for analyzing the attested variation against the background of spoken language negation. At the same time, theoretical syntax can also benefit from in-depth analyses of sign language negation systems, as they constitute the testing ground for existing accounts of the syntactic representation of functional elements.

The focus of section 2 is on the main types of manual and non-manual components of negation. The form of manual sentence negators is reviewed and regular and irregular negative signs are characterized. Next, the different head movements and facial expressions that encode negation are described. Section 3 focuses on certain syntactic properties attested in sign language negation: the interaction with other syntactic categories, manual negation doubling, and spreading of non-manual markers. Section 4 addresses the multiple expression of negation in patterns of split negation and negative concord from a syntactic point of view. In section 5, non-sentential manual negation is discussed, together with some morphological idiosyncrasies associated with it.

2. Manual negation vs. non-manual marking of negation

For almost all sign languages described to date, sentential negation has been found to rely on two basic components: manual signs that encode negative meanings ranging from the basic negative operator to very specific ones, as well as different types of non-manual markers that can be either co-articulated with manual negative signs or, in some cases, with other lexical signs in order to convey negation on their own. With respect to these two components, we find a first parameter of crosslinguistic variation: while some sign languages appear to be able to encode sentential negation by means of a non-manual marker alone which is obligatory (e.g., American Sign Language (ASL), German Sign Language (DGS), and Catalan

Sign Language (LSC)), in other languages, the presence of a non-manual marker is insufficient to negate the sentence and thus, a manual negator is required for that function (e.g., Italian Sign Language (LIS), Jordanian Sign Language (LIU), and Turkish Sign Language (TİD)). Zeshan (2006b, 46) labels languages of the former type “non-manual dominant” and languages of the latter type “manual dominant” languages. On the basis of her language sample, she establishes that non-manual dominant languages are a majority. In (1) and (2), examples of the two types of language with respect to this parameter illustrate the combinatorial possibilities of headshake with and without manual negation in LSC (Quer 2007) and LIS (Geraci 2005), which are non-manual dominant and manual dominant, respectively.

- (1) a. SANTI MEAT EAT NOT [LSC]
 (()) hs
 b. SANTI MEAT EAT
 ‘Santi doesn’t eat meat.’
- (2) a. PAOLO CONTRACT SIGN NON [LIS]
 ‘Paolo didn’t sign the contract.’
 ((()))
 b. * PAOLO CONTRACT SIGN

As we observe in the LIS example in (2), it is not the case that in manual dominant languages non-manual markings are totally absent. Rather, they are generally co-articulated with the manual negation and tend not to spread over other manual material. When there are several negative markers, the choice of non-manual is usually determined by the lexical negation, unlike what happens in non-manual dominant languages.

It is important to notice that the function of non-manual marking of negation in non-manual dominant languages is almost exclusively to convey sentential negation (although see section 2.2 for some data that qualify this generalization). This is in contrast to manual negations, which often include more specific signs encoding negation and some other functional category such as aspect or modality, or a portmanteau sign conveying the negation of existence.

2.1. Manual negation

2.1.1. Negative particles

Standard sentential negation is realized in many sign languages by a manual sign that simply negates the truth of the proposition, such as the one found in LIU and LSC consisting of an index handshape with the palm facing outwards and slightly moving from side to side, as illustrated in Figure 15.1 and exemplified in (3) for LIU (Hendriks 2007, 107).



Fig. 15.1: Neutral sentential negation NEG in LIU. Copyright © 2007 by Bernadet Hendriks. Reprinted with permission.

- (3) FATHER MOTHER DEAF INDEX₁ NEG // SPEAK [LIU]
 ‘My father and mother aren’t Deaf, they speak.’

However, basic sentential negation can occasionally carry an extra layer of pragmatic meaning: in a few instances, sentential negation signs have been claimed to convey some presupposition, as NEG-CONTR in Indo-Pakistani Sign Language (IPSL) (Zeshan 2004, 34f.) or NO-NO in TĪD (Zeshan 2006c, 154f.). In such cases, the negative particle explicitly counters a conversational presupposition, which may be implicit, as in (4), or explicit in the preceding discourse, as in (5).

- (4) PROBLEM NEG-CONTR [IPSL]
 ‘There is no problem (contrary to what has been said/what is usually assumed/what you may be expecting).’
- (5) VILLAGE GOOD / CITY NEG-CONTR [IPSL]
 ‘Villages are nice, but cities are not.’

A further nuance that is often added to basic sentential negation is emphasis, normally expressed through dedicated non-manual markings accompanying the manual negator, as reported in McKee (2006, 82) for New Zealand Sign Language (NZSL). Nevertheless, some languages have specialized manual negations that have been characterized as emphatic, with the meaning ‘not at all’ or ‘absolutely not’. An example of this is the Finnish Sign Language (FinSL) sign NO (‘absolutely not’) illustrated in (6) (Savolainen 2006, 296).

- (6) re head turn+back/neg mouthing/squint [FinSL]
 INDEX₁ COME NO
 ‘I’m definitely not coming!’

As we will see in section 4, doubling of a negative sign or negative concord results in emphasis on the negation as well.

As syntactic markers of negation, negative signs occasionally display features that are normally relevant in other domains of syntax. One such example might be what has been characterized as person inflection for the NZSL sign *NOTHING*, which can be articulated in locations associated with person features (McKee 2006, 85).

2.1.2. Irregular negatives

Manual sentential negation across sign languages usually features a number of lexical signs that incorporate negation either in a transparent way or opaquely in suppletive forms. Both types are usually referred to as instances of negation incorporation. Zeshan (2004) calls this group of items irregular negatives and points out that sign languages tend to display some such items crosslinguistically. The majority of such signs belong to recognizable semantic classes of predicates such as those expressing cognition ('know', 'understand'), emotion or volition ('like', 'want'), a modal meaning ('can', 'need', 'must'), or possession/existence ('have', 'there-be'). See, for instance, the minimal LSC pair *CAN* vs. *CANNOT* in Figure 15.2.



Fig. 15.2: LSC pair *CAN* vs. *CANNOT*

In addition, evaluative predicates ('good', 'enough') and grammatical tense/aspect notions such as perfect or future tend to amalgamate with negation lexically as well, as in the Hong Kong Sign Language (HKSL) negated future sign *WON'T* and the negated perfect sign *NOT-YET* (Tang 2006, 219):

- | | | |
|-----|--|--------|
| (7) | $\begin{array}{c} \text{neg} \\ \text{KENNY FEBRUARY FLY TAIWAN WON'T} \end{array}$ | [HKSL] |
| | 'Kenny won't fly to Taiwan in February.' | |
| (8) | $\begin{array}{c} \text{neg} \\ \text{(KENNY) PARTICIPATE RESEARCH NOT-YET} \end{array}$ | [HKSL] |
| | 'Kenny has not yet participated in the research.' | |

Some items belonging in this category can also have an emphatic nuance, as NEVER-PAST or NEVER-FUTURE in Israeli Sign Language (Israeli SL, Meir 2004, 110).

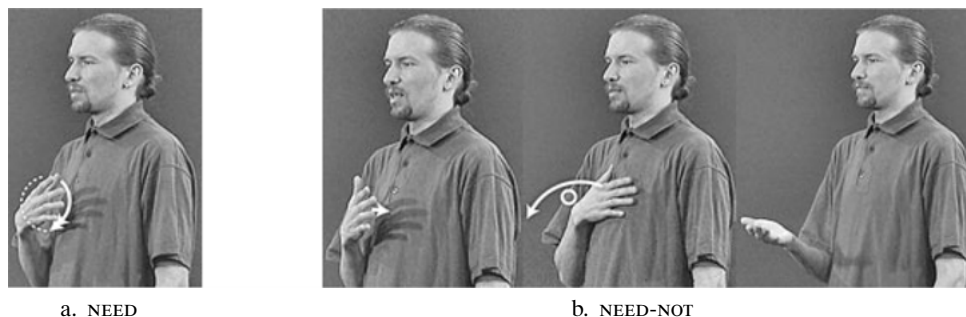
Among the set of irregular negative signs, two different types can be distinguished from the point of view of morphology: on the one hand, transparent forms where the negative has been concatenated or cliticized onto a lexical sign or else a negative morpheme (simultaneous or sequential) has been added to the root (Zeshan 2004, 45–49); on the other hand, suppletive negatives, that is, totally opaque negative counterparts of existing non-negated signs. An example of the latter group has been illustrated in Figure 15.2 (above) for LSC. In the case of negative cliticization, a negative sign existing independently is concatenated with another sign but the resulting form remains recognizable and both signs retain their underlying movement, albeit more compressed, and no handshake assimilation occurs. The interpretation of both signs together is fully compositional. An illustration of such a case is shown in Figure 15.3 for TlD, where the cliticized form of NOT can be compared to the non-cliticized one (Zeshan 2004, 46).



a. KNOW^NOT

b. NOT

Fig. 15.3: TlD cliticized (a) vs. non-cliticized (b) negation. Copyright © 2004 by Ulrike Zeshan. Reprinted with permission.



a. NEED

b. NEED-NOT

Fig. 15.4: Irregular simultaneous affixal negation with the verb NEED in FinSL. Copyright © 2004 by Ulrike Zeshan. Reprinted with permission.

The other process found in the formation of irregular negatives is affixation, which can be simultaneous or sequential. An illustrative case of simultaneous negative affixation found in FinSL (Zeshan 2004, 47–49; Savolainen 2006, 299–301) is illustrated in Figure 15.4: the affix consists of a change in palm orientation that, depending on the root it combines with, can result in a negative with a horizontal upwards or vertical inwards oriented open handshape. The simultaneous morpheme does not have an independent movement and in some cases it assimilates its handshape to the one of the root (e.g., SEE-NOT). In addition, the resulting negative sign can have a more specific or idiosyncratic meaning (e.g., perfective/resultative in SEE-NOT with the interpretation ‘have not seen, did not see’; HEAR-NOT meaning ‘have not heard, do not know’). The negative morpheme has no free-occurring counterpart and combines with a restricted set of lexical items, thus displaying limited productivity.

Occasionally, affixation involves a specific handshape, as the extended pinky handshape in HKSL (see section 5 for further discussion). This handshape is derived from a sign meaning BAD/WRONG and is affixed to certain items, giving rise to negative signs such as KNOW-BAD (‘don’t know’) or UNDERSTAND-BAD (‘don’t understand’), as illustrated in Figure 15.5 (Tang 2006, 223).

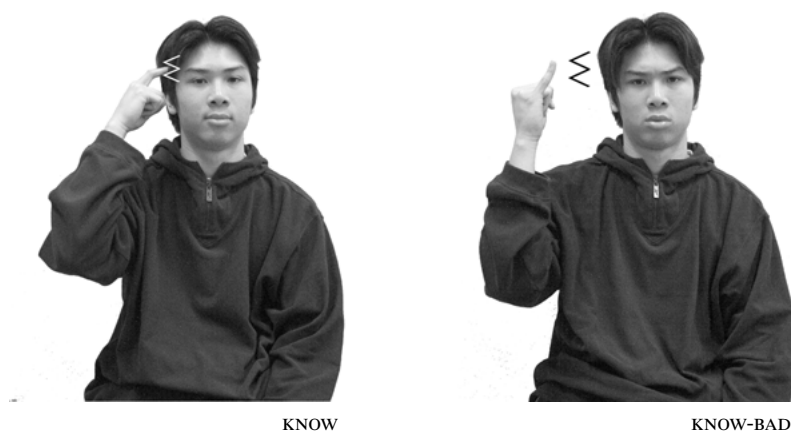


Fig. 15.5: Irregular simultaneous affixal negation by means of handshape with the verb KNOW in HKSL. Copyright © 2006 by Ishara Press. Reprinted with permission.

Sequential affixation has been shown most clearly to be at stake in the ASL suffix [^]ZERO, which is formationally related to the sign NOTHING. Aronoff et al. (2005, 328–330) point out that [^]ZERO shows the selectivity and behavior typical of morphological affixes: it only combines with one-handed plain verbs; the path movements get compressed or coalesce; the non-manuals span the two constituent parts of the sign; no handshape assimilation occurs; and some of the negative forms yield particular meanings. These phenomena clearly distinguish this process from compound formation. A similar derivational process is observed in Israeli SL, where the relevant suffix [^]NOT-EXIST can give rise to negative predicates with idiosyncratic

meanings such as SURPRISE+NOT-EXIST ('doesn't interest me at all') or ENTHUSIASM+NOT-EXIST ('doesn't care about it') (Meir 2004, 116; for more details, see section 5 below).

When an irregular negative is available in the language, it normally blocks the option of combining the non-negative predicate with an independent manual negator or with a non-manual marker, if this non-manual can convey sentential negation on its own. Compare the ungrammatical LSC example (9) with Figure 15.2 above, which shows the suppletive form CANNOT:

- (9) $\frac{(\quad) \text{ hs}}{* \text{ CAN (NOT)}}$ [LSC]

Nevertheless, this is not always the case and sometimes both options co-exist, as reported for LIS in Geraci (2005).

2.1.3. Negation in the nominal and adverbial domain

Apart from negative marking related to the predicate, negation is often encoded in the nominal domain and in adverbials as well. Negative determiners glossed as NO and negative quantifiers (pronouns, in some descriptions) such as NONE, NOTHING, or NO ONE occur in many of the sign languages for which a description of the negation system exists. The LIS example in (10) illustrates the use of a nominal negative (Geraci 2005):

- (10) $\frac{\text{CONTRACT SIGN NOBODY}}{\text{'Nobody signed the contract.'}}$ [LIS]

Two distinct negative determiners have been identified for ASL: NOTHING and NO^o, illustrated in (11) (Wood 1999, 40).

- (11) JOHN BREAK FAN NOTHING/NO^o [ASL]
'John did not break any (part of the) fan.'

Negative adverbials such as NEVER are also very common. For ASL, Wood (1999) has argued that different interpretations result from different syntactic positions of NEVER: when preverbal, it negates the perfect (12a), while in postverbal position, it yields a negative modal reading (12b).

- (12) a. BOB NEVER EAT FISH [ASL]
'Bob has never eaten fish.'
b. BOB EAT FISH NEVER
'Bob won't eat fish.'



Fig. 15.6: LSC negative imperative sign DON'T!

2.1.4. Other pragmatically specialized negators

Beyond the strict domain of sentential negation, other occurrences of negatives must be mentioned. Negative imperatives (or prohibitives) are usually expressed non-manually in combination with a more general negative particle, but some languages have a specialized sign for this type of speech act, as in the LSC negative imperative shown in Figure 15.6 (Quer/Boldú 2006).

In the domain of pragmatically specialized negations, a whole range of signs is found, including negative responses, refusal of an offer, or denial. Some of these signs constitute one-word utterances and have been classified as interjections. Metalinguistic negation can be included in this set of special uses. Although it is not common, Japanese Sign Language (NS) has a specialized manual negation to refute a specific aspect of a previous utterance: DIFFER (Morgan 2006, 114).

2.2. Non-manual markers of negation

It has already pointed out in the beginning of this section that negation is not only realized at the manual level, but also at the non-manual one, and that languages vary as to how these two types of markers combine and to what extent they are able to convey sentential negation independently of each other (for non-manual markers, cf. also chapter 4, Prosody). It seems clear that such markers have their origin in gestures and facial expressions that occur in association with negative meanings in human interaction. In sign languages, however, these markers have evolved into fully grammaticalized elements constrained by language-specific grammatical rules (see Pfau/Steinbach 2006 and chapter 34). Beyond the actual restrictions to be discussed below, especially in section 3, there is psycholinguistic and neurolinguistic evidence indicating that non-manuals typically show linguistic patterns in acquisition and processing and can be clearly distinguished from affective communicative behavior (Reilly/Anderson 2002; Corina/Bellugi/Reilly 1999; Atkin-

son et al. 2004). Moreover, unlike gestures, linguistic non-manuals in production have a discrete onset and offset, are constant, and have a clear and linguistically defined scope (Baker-Shenk 1983).

2.2.1. Head movements

The main non-manual markers of negation involve some sort of head movement. The most pervasive one is headshake, a side-to-side movement of the head which is found in virtually all sign languages studied to date (Zeshan 2004, 11). The headshake normally associates with the negative sign, if present, but it commonly spreads over other constituents in the clause. The spreading of negative headshake is determined by language-specific grammar constraints, as will be discussed in section 3. In principle, it must be co-articulated with manual material, but some cases of freestanding headshake have been described, for instance, for Chinese Sign Language (CSL). Example (13) illustrates that co-articulation of the negative headshake with the manual sign leads to ungrammaticality, the only option being articulation after the lexical sign (Yang/Fischer 2002, 176).

- (13) (* _____ hs) _____ hs [CSL]
 UNDERSTAND
 'I don't understand.'

Although other examples involving free-standing negative headshakes have been documented, they can be reduced to instances of negative answers to (real or rhetorical) questions, as shown in (14a) for NZSL (McKee 2006, 84), or to structures with contrastive topics, where the predicate is elided, as in (14b) from CSL (Yang/Fischer 2002, 178).

- (14) a. _____ rhet-q _____ hs [NZSL]
 WORTH GO CONFERENCE
 'Is it worth going to the conference? I don't think so.'
- b. _____ t _____ hs [CSL]
 HEARING TEACHERS
 '(but some) hearing teachers do not [take care of deaf students].'

A different use of a free-standing negative headshake is the one described for Flemish Sign Language (VGT) (Van Herreweghe/Vermeerbergen 2006, 241), where it functions as a tag question after an affirmative sentence, as shown in (15).

- (15) _____ hs + yn [VGT]
 CAN ALSO SATURDAY MORNING /
 'It is also possible on Saturday morning, isn't it?'

Headturn, a non-manual negative marker that is much less widespread than headshake, could be interpreted as a reduced form of the latter. It has been described for British Sign Language (BSL), CSL, Greek Sign Language (GSL), Irish Sign

Language (Irish SL), LIU, Quebec Sign Language (LSQ), Russian Sign Language (Zeshan 2006b, 11), and VGT.

A third type of non-manual negative marker that has been reported because of its singularity is head-tilt, which is attested in some sign languages of the Eastern Mediterranean such as GSL, Lebanese Sign Language (LIL), LIU, and TİD. Just like the headshake, this non-manual is rooted in the negative gesture used in the surrounding hearing societies, but as part of the relevant sign language grammars, it obeys the particular constraints of each one of them. Although it tends to co-occur with a single negative sign, it can sometimes spread further, even over the whole clause, in which case it yields an emphatic reading of negation in GSL (cf. (16)). It can also appear on its own in GSL (unlike in LIL or LIU) (Antzakas 2006, 265).

- (16) $\frac{\text{INDEX}_1 \text{ AGAIN GO WANT-NOT}}{\text{ht}}$ [GSL]
 ‘I don’t want to go (there) again.’

It is worth noting that when two manual negatives co-occur in the same sentence and are inherently associated with the same non-manual marker, the latter tends to spread between the two. This behavior reflects a more general phenomenon described for ASL as perseveration of articulation of several non-manuals (Neidle et al. 2000, 45–48): both at the manual and non-manual levels, “if the same articulatory configuration will be used multiple times, it tends to remain in place between those articulations (if this is possible)”. Spreading of a negative non-manual is common in sign languages where two negative signs can co-occur in the same clause, as described for TİD (Zeshan 2006c, 158f.). If both manual negators are specified for the same non-manual, it spreads over the intervening sign (17a); if the non-manuals are different, they either remain distinct (17b) or one takes over and spreads over the whole domain, as in (17c).

- (17) a. $\frac{\text{NONE(2) APPEAR NO-NO}}{\text{hs}}$ [TİD]
 b. $\frac{\text{NONE(2) GO}^{\text{ht}}\text{NOT}}{\text{hs}}$
 c. $\frac{\text{NONE(2) GO}^{\text{hs}}\text{NOT}}{\text{hs}}$

Non-manual markers are recruited in sign language grammars for a wide range of purposes in the lexicon and in the different grammatical subcomponents (for an overview, see Pfau/Quer 2010). Given the types of distribution restrictions reported here and in the next section, the negative non-manuals appear to perform clear grammatical functions and cannot just be seen as intonational contours typical of negative sentences. Building on Pfau (2002), it has been proposed that in some sign languages (e.g., DGS and LSC), the negative headshake should be analyzed as a featural affix that modifies the prosodic properties of a base form, in a parallel fashion to tonal prosodies in tonal languages (Pfau/Quer 2007, 133; also cf. Pfau 2008). As a consequence of this characterization, its spreading patterns follow naturally and mirror the basic behavior of tone spreading in some spoken languages.

It is worth mentioning that another non-manual, headnod, is reported to systematically mark affirmation – be it in affirmative responses to questions or for emphasis. The LIS example in (18) illustrates the latter use of headnod. Geraci (2005) interprets it as the positive counterpart of negative headshake, both being the manifestation of the same syntactic projection encoding clausal polarity, in line with Laka (1990).

- (18) $\frac{\text{ARRIVE SOMEONE}}{\text{hn}}$ [LIS]
 ‘Someone did arrive.’

2.2.2. Facial expression

Beyond head movements, other non-manuals are associated with the expression of negation. Among the lexically specified non-manuals, the ones that are more widespread crosslinguistically include frowning, squinted eyes, nose wrinkling, and lips spread, pursed or with the corners down. Other markers are more language-specific or even sign-specific, such as puffed cheeks, air puff, tongue protruding, and other mouth gestures. The more interesting cases are probably those in which negative facial non-manuals clearly have the grammatical function of negating the clause. Brazilian Sign Language (LSB) features both headshake and negative facial expression (lowered corners of the mouth or O-like mouth gesture), which can co-occur in negative sentences. However, it is negative facial expression (nfe) and not headshake that functions as the obligatory grammatical marker of negation, as the following contrast illustrates (Arrotéia 2005, 63).

- (19) a. $\frac{\text{IX}_1 \text{ } _1\text{SEE}_a\text{JO\tilde{A}O}_a\text{IX}_1 \text{ (NOT)}}{\text{nfe}}$ [LSB]
 ‘I didn’t see João.’
 b. $\frac{* \text{IX}_1 \text{ } _1\text{SEE}_a\text{JO\tilde{A}O}_a\text{IX}_1 \text{ (NOT)}}{\text{hs}}$

Other facial non-manuals have also been described as sole markers of sentential negation for Israeli SL (mouthing *lo* ‘no, not’: Meir 2004, 111f.), for LIU (negative facial expression: Hendriks 2007, 118f.), and for TİD (puffed cheeks: Zeshan 2003, 58f.).

3. Syntactic patterns of negation

It has been observed across sign languages that negative signs show a tendency to occur sentence-finally, although this is by no means an absolute surface property. Unsurprisingly, negation, as a functional category, interacts with other functional elements and with lexical items as well (see section 2.1) and it lexicalizes as either a syntactic head or a phrase. Moreover, both the manual and non-manual compo-

nents of negation must be taken into account in the analysis of negative clauses. As expected, the range of actual variation in the syntactic realization of negation is greater than a superficial examination might reveal. In this section, we will look at the syntactic encoding of sentential negation, concentrating on some aspects of structural variation that have been documented and accounted for within the generative tradition. It should be mentioned, however, that the structural analyses of sign language negation are still limited and that many of the existing descriptions of negative systems do not offer the amount of detail required for a proper syntactic characterization.



3.1. Interaction of negation with other syntactic categories

An interesting syntactic fact documented for Israeli SL is that different negators are selective as to the syntactic categories they can combine with (Meir 2004, 114f.). As illustrated in (20), NOT, NEG-EXIST(1), and NEG-PAST can only co-occur with an adjective, a noun, or a verb, respectively.

- (20) a. CHAIR INDEX_a COMFORTABLE NOT/*NEG-PAST/*NEG-EXIST(1/2) [Israeli SL]
 ‘The chair is/was not comfortable.’
 b. INDEX₁ COMPUTER NEG-EXIST(1/2)/*NEG-PAST/*NOT
 ‘I don’t have a computer.’
 c. INDEX₃ SLEEP NEG-PAST/*NEG-EXIST(1/2)
 ‘He didn’t sleep at all.’

This is an important observation that deserves further exploration, also in other languages for which it has been noted that certain negators exhibit similar combinatorial restrictions.

A clear case of an impact of negation on clausal structure has been documented for LSB. De Quadros (1999) describes and analyzes the distributional patterns of sentential negation with both agreeing and plain verbs and shows that only the former allow for preverbal negation (21a) while the latter bar preverbal negation and induce clause-final negation, as the examples in (21b) and (21c) show. De Quadros accounts for this difference in distribution within the framework of Generative Grammar. In particular, she derives this basic fact from the assumption that preverbal negation blocks the movement required for the lexical verb to pick up abstract agreement features in a higher syntactic position, thus resulting in clause-final negation. Agreeing verbs, by virtue of carrying inflection overtly, do not need to undergo this type of movement and allow for a preverbal negator.

- (21) a. $\frac{\text{neg}}{\text{IX JOHN}_a \text{ NO } {}_a\text{GIVE}_b \text{ BOOK}}$ [LSB]
 ‘John does not give the book to her/him.’
 b. * $\frac{\text{neg}}{\text{IX JOHN}_a \text{ NO DESIRE CAR}}$
 (‘John does not like the car.’)

- c. $\text{IX JOHN}_a \text{ DESIRE CAR NO}$ neg
 ‘John does not like the car.’

Interestingly, although both LSB and ASL are SVO languages, ASL does allow for the pattern excluded in LSB (21b), as is illustrated in (22). Such fine-grained crosslinguistic comparisons make it clear that surface properties require detailed analyses for each language, given that other factors in the particular grammars at hand are likely to play a role and lead to diverging patterns.

- (22) JOHN NOT EAT MEAT neg [ASL]
 ‘John does not eat meat.’

3.2. Doubling

Another interesting fact concerning the syntactic realization of negation has been noted for several languages (ASL, Petronio 1993; CSL, Yang/Fischer 2002; LSB, de Quadros 1999; NZSL, McKee 2006): negative markers are doubled in structures in which an emphatic interpretation – in some cases identified as focus – is at play. In this sense, negation resembles other categories that enter the same doubling pattern (modals, wh-words, quantifiers, lexical verbs, or adverbials). An example from CSL is displayed in (23), taken from Yang and Fischer (2002, 180).

- (23) $\text{NONE/NOTHING MASTER BIG-SHAPE NONE/NOTHING}$ nfe nfe [CSL]
 ‘There is nothing to show that you master the whole shape first.’

There is no unified account of such doubling structures, which feature several other categories beyond negation. At least for ASL and LSB, however, analyses of double negatives have been proposed that interpret the clause-final instance of negation as a copy of the sentence-internal one occupying a functional head high up in the clausal structure. For ASL, it has been proposed that this position is the C^o head occurring on the right branch and endowed with a [+focus] feature (Petronio 1993). For LSB, de Quadros (1999) argues that the clause-final double is in fact base-generated in the head of a Focus Phrase under CP; moving everything below Focus^o to the specifier of FocusP results in the attested linear order. For both analyses, it is crucial that doubling structures always feature heads and never phrases (for an opposing view on this leading to a different analysis in ASL, see Neidle et al. 2000; cf. the discussion about the proper characterization of wh-movement in ASL in chapter 14, on which the analysis of doubling structures also hinges). Interestingly, the categories that are susceptible to undergoing doubling can merge together, showing the same behavior as a single head, as exemplified for the modal CAN and negation in (24) from ASL (Petronio 1993, 134).

- (24) $\frac{\text{neg}}{\text{ANN CAN'T READ CAN'T}}$ [ASL]
 'Ann CAN'T read.'

Only a single double can appear per clause, be it matrix or embedded. This restriction follows naturally from an interpretation as emphatic focus, which generally displays such a constraint. This line of analysis builds on doubling data that do not feature a pause before the sentence-final double. Petronio and Lillo-Martin (1997) distinguish these cases from other possible structures in which the repeated constituent at the end of the clause is preceded by a pause. As Neidle et al. (2000) propose, the latter cases are amenable to an analysis as tags in ASL.

3.3. Spreading

A general property of double negative structures is that the non-manual feature can spread between the two negative elements. Therefore, next to cases like (23) above, CSL also provides structures where spreading is at play, such as (25) (Yang/Fischer 2002, 181).

- (25) $\frac{\text{nfe}}{\text{START TIME NOT-NEED GRAB DETAILS NOT-NEED}}$ [CSL]
 'Don't pay attention to a detail at the beginning.'

This is an instance of what Neidle et al. (2000, 45) have dubbed as perseveration of a non-manual articulation (see section 2.2). In this case, perseveration of the non-manual takes place between two identical manual signs, a situation different from the one described in (17) above.

Spreading patterns of non-manual negation are subject to restrictions. It is clear, for instance, that if a topic or an adjunct clause is present sentence-initially, the negative marker cannot spread over it and supersede other non-manuals associated with that constituent, as noted, for instance, in Liddell (1980, 81) for the ASL example in (26).

- (26) $\frac{\text{t} \quad \text{neg}}{\text{DOG CHASE CAT}}$ [ASL]
 'As for the dog, it didn't chase the cat.'

It has been argued that spreading of negative non-manuals is clearly restricted by syntactic factors. Specifically, in ASL, headshake can co-occur with the manual negator NOT only or optionally spread over the manual material within the verb phrase (VP) that linearly follows the negator, as exemplified in (27a). However, if the manual negation is absent, spreading is obligatory, as the contrast in (27b–c) shows. Neidle et al. (2000) interpret this paradigm as evidence that headshake is the overt realization of a syntactic feature [+neg] residing in Neg°, the head of NegP, which needs to associate with manual material. Generally, non-manuals must spread whenever there is no lexical material occupying the relevant functional head,

the spreading domain being the c-command domain of that head. In the case of the headshake, the relevant head is Neg^o and the c-command domain is the VP.

- (27) a. $\frac{\text{JOHN NOT BUY HOUSE}}{\text{neg}}$ [ASL]
 b. $\frac{\text{JOHN BUY HOUSE}}{\text{neg}}$
 'John didn't buy the house.'
 c. * $\frac{\text{JOHN BUY HOUSE}}{\text{neg}}$

Another piece of evidence in favor of the syntactic nature of negative non-manual spreading is offered in Pfau (2002, 287) for DGS, where it is shown that, unlike ASL, spreading of the headshake over the VP material is optional, even if the manual negator is absent from the structure. However, the spreading must target whole constituents (28a) and is barred otherwise, as in (28b), where it is articulated only on the adjectival sign of the object NP.

- (28) a. $\frac{\text{MAN FLOWER BUY}}{\text{neg}}$ [DGS]
 'The man is not buying a flower.'
 b. * $\frac{\text{MAN FLOWER RED BUY}}{\text{neg}}$

In some sign languages at least, non-manual spreading can have interpretive effects, which strictly speaking renders it non-optional. This is the case in LSC, where spreading over the object NP results in a contrastive corrective reading of negation (Quer 2007, 44).

- (29) $\frac{\text{SANTI VEGETABLES EAT, FRUIT}}{\text{hs hn}}$ [LSC]
 'Santi doesn't eat vegetables, but fruit (he does).'

Spreading of the headshake over the whole sentence gives rise to an interpretation as a denial of a previous utterance, as in (30).

- (30) $\frac{\text{SANTI SUMMER U.S. GO}}{\text{hs}}$ [LSC]
 'It is not true/It is not the case that Santi is going to the U.S. in the summer.'

A parameter of variation between DGS and LSC has been detected in the expression of negation: while in LSC, the non-manual marker can co-appear with the manual negator only (31), in DGS, it must extend at least over the predicate as well, as is evident from the sentence pair in (32).

- (31) $\frac{\text{SANTI MEAT EAT NOT}}{\text{hs}}$ [LSC]
 'Santi does not eat meat.'

- (32) a. $\overline{\text{neg}}$
MOTHER FLOWER BUY NOT [DGS]
'Mother is not buying a flower.'
- b. * $\overline{\text{neg}}$
MOTHER FLOWER BUY NOT

Pfau and Quer (2002, 2007) interpret this asymmetry as a reflection of the well-known fact that negative markers can have head or phrasal status syntactically (for an overview, see Zanuttini 2001). They further assume that headshake is the realization of a featural affix. This affix must be co-articulated with manual material, on which it imposes a prosodic contour consisting in headshake. In LSC, the manual marker NOT is a syntactic head residing in Neg^0 and $[+\text{neg}]$ naturally affixes to it, giving rise to structures such as (31). If the structure does not feature NOT, then the predicate will have to raise to Neg^0 , where $[+\text{neg}]$ will combine with it and trigger headshake on the predicate sign, as in (1b). The essentials of both types of derivations are depicted in Figure 15.7.

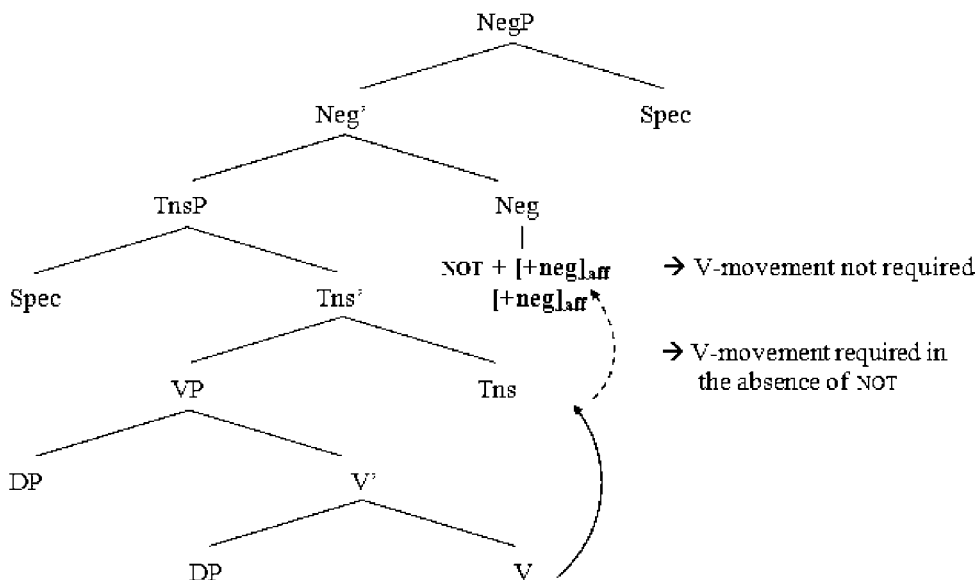


Fig. 15.7: LSC negative structures, with and without negative marker NOT.

In contrast, DGS NOT is a phrasal category that occupies the (right-branching) Specifier of NegP (the headshake it carries is lexically marked). Since $[+\text{neg}]$ needs to combine with manual material, it always attracts the predicate to Neg^0 (cf. Figure 15.8), thus explaining the ungrammaticality of (32b) with headshake only on NOT.

This type of analysis is able to account for the negation patterns found in other languages too, if further specific properties of the language are taken into account. This is the case for ASL, as shown in Pfau and Quer (2002). It also provides a natural explanation for the availability of (manual) negative concord in LSC and its absence in DGS, as will be discussed in the next section. The idiosyncratic behavior of negative modals (and semi-modals) also follows naturally from this line

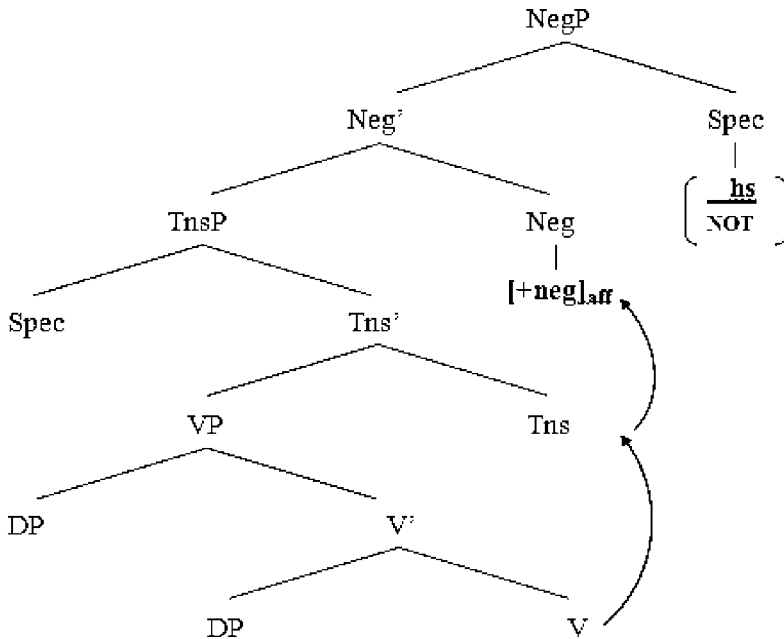


Fig. 15.8: DGS negative structure, with negative marker NOT and obligatory V-movement to Neg.

of analysis: being generated in the Tense head, they are always forced to raise to Neg° in order to support the [+neg] affix and surface as forms with a cliticized negation or as suppletive negative counterparts of the positive verb (cf. section 2.1 above).

4. Negative concord

It is a well-known fact that in many languages two or more negative items can appear in the same clause without changing its polarity, which remains negative. This phenomenon is known as split negation or *negative concord* (for a recent overview see Giannakidou 2006). In non-manual dominant sign languages (i.e. those languages where a clause can be negated by non-manual negation only), the non-manual negative marker (the [+neg] affix in Pfau/Quer's (2002) proposal) must be taken to be the main negator. Since in this type of language, manual sentential negation often co-occurs with non-manual negation yielding a single negation reading, it must be concluded that negative concord is at play between the manual and non-manual component, as in the following LSC example (Quer 2002/2007, 45).

- (33) IX_1 $\overset{\text{hs}}{\text{SMOKE NO}}$ [LSC]
 'I do not smoke.'

In addition, a second type of negative concord has been attested at the manual level, namely when two or more negative manual signs co-appear in a clause but do not contribute independent negations to the interpretation, as exemplified in the LSC example in (34). Crucially, the interpretation of this sentence is not ‘Your friend never doesn’t come (i.e. he always comes)’.

- (34) $\text{FRIEND IX}_2\text{COME NO NEVER}$ [LSC]
 ‘Your friend never comes.’

With a few exceptions (Arrotéia 2005 on LSB; Hendriks 2007 on LIU; Pfau/Quer 2002, 2007 and Quer 2002/2007 on LSC; Wood 1999 on ASL), the phenomenon of negative concord has not received much attention in descriptions of sign language negation systems. However, scattered cases of negative concord examples are reported for languages such as BSL (Sutton-Spence/Woll 1999, 77), CSL (Yang/Fischer 2002, 181), TİD (Zeshan 2006c, 157) and VGT (Van Herreweghe/Vermeerbergen 2006, 248). Some of the examples are characterized as encoding emphatic or strong negation. See (35) for a CSL example in which a lexically negative verb co-occurs with sentential negation. Again, the combination of two negative signs does not yield a positive reading.

- (35) $\text{INDEX DISLIKE SEE NO}$ [CSL]
 ‘I don’t like to watch it.’

In the LIU example in (36), cliticized negation is duplicated in the same clause by the basic clause negator NEG (Hendriks 2007, 124).

- (36) $\text{MATHS, LIKE}^{\wedge}\text{NEG INDEX}_1\text{NEG}$ [LIU]
 ‘I don’t like maths.’

As is the case in the better-known instances of spoken languages, negative concord is not a uniform phenomenon but rather shows parameters of variation. Comparable variation has also been documented across structurally very similar languages like LSC and DGS (Pfau/Quer 2002, 2007). While both display negative concord between manual and non-manual components of negation, only the former features negative concord among manual signs. This follows partly from the fact that the basic manual clause negator in LSC is a head category sitting in Neg^o, whereas in DGS, it is a phrase occupying the Specifier of NegP, as depicted in Figures 15.7 and 15.8 above. It might therefore be argued that the difference follows from the availability of a Specifier position for further phrasal negative signs in LSC, which is standardly occupied in DGS. Nevertheless, this cannot be the whole explanation, because LSC allows for two phrasal negatives under the same negative concord reading (cf. (37)), a situation that could be expected in DGS, contrary to fact.

- (37) $\frac{\text{hs}}{\text{IX}_1 \text{ SMOKE}} \frac{\text{hs}}{\text{NEG2}} \frac{\text{hs}}{\text{NEVER}}$ [LSC]
 ‘I never ever smoke.’

The difference must be attributed to the inherent properties of negative signs, which may or may not give rise to concord readings depending on the language. DGS can thus be characterized as a non-negative concord language at the manual level, despite having split negation (i.e., the non-manual negative affix and the manual sentential negator *NOR* jointly yield a single sentential negation reading). The presence of further negative signs leads to marked negation readings or simply to ungrammaticality. LIS is another language that does not display negative concord structures (Geraci 2005).

5. Lexical negation and morphological idiosyncrasies of negatives

In section 2.1, some processes of negative affixation were mentioned that yield complex signs conveying sentential negation. A number of those processes have also been shown to result in the formation of nouns and adjectives with negative meaning, normally the antonym of a positive lexical counterpart, with the important difference that in these items, the negation does not have sentential scope. As is common in processes of lexical formation, however, the output can have an idiosyncratic meaning that does not correspond transparently to its antonym. In accordance with the lack of sentential scope, no negative non-manuals co-occur and if they do as a consequence of lexical marking, they never spread. Occasionally, negative affixes are grammaticalized from negative predicates. For Israeli SL, for instance, Meir (2004, 15) argues that *NOT-EXIST* is a suffix which originates from the negative existential predicate *NOT-EXIST(I)*. Independent of the category of the root, the suffix invariably gives an adjective as a result, as can be observed in (38).

- (38) a. *INTERESTING+NOT-EXIST* ‘uninteresting’ [Israeli SL]
 b. *SHAME+NOT-EXIST* ‘shameless’
 c. *STRENGTH+NOT-EXIST* ‘exhausted’

A negative handshake characterized by pinkie extension has been shown to be operative in some East Asian sign languages in the formation of positive-negative pairs of lexical items. In HKSL, the negative handshake, which as a stand alone sign means *BAD/WRONG*, can replace the handshake of the sign it is affixed to, thus functioning as a simultaneous affix, or else be added sequentially after the lexical sign, as illustrated for the sign *TASTE/MOUTH* in Figure 15.9 (Zeshan 2004, 45). In this case, the resulting form *MOUTH^BAD* (‘dumb’) has non-transparent meaning compositionally derived from its parts. Next to transparent derivations such as *REASONABLE/UNREASONABLE*, *APPEALING/UNAPPEALING*, and *LUCKY/UNLUCKY*, some opaque ones are also attested, such as *MOUTH^BAD* ‘dumb’ (see Figure 15.9), *EAR^BAD* ‘deaf’, and *EYE^BAD* ‘blind’ (Tang 2006, 223).

MOUTH[^]BAD

Fig. 15.9: Example of sequential negative handshape in deriving an adjective in HKSL. Copyright © 2004 by Ulrike Zeshan. Reprinted with permission.

In a number of CSL signs, such as those in (39), the positive-negative pattern is marked by an actual opposition of handshapes: the positive member of a pair has the thumb up handshape (♯), the negative one an extended pinkie (Yang/Fischer 2002, 187).

- | | | | |
|------|------------------|-------------|-------|
| (39) | a. CORRECT/RIGHT | WRONG | [CSL] |
| | b. NEAT | DIRTY | |
| | c. SKILLFULL | UNSKILLFULL | |
| | d. FORTUNATE | UNFORTUNATE | |

Some formational features that occur in sentential negatives can appear in irregular lexically negative signs as well, such as the diagonal inward-outward movement that occurs in DGS modals but also in the sign NOT[^]VALID, or a change in hand orientation in FinSL (for an overview, see Zeshan 2004, 41 ff.). Sometimes the contrasts are not really productive, like the orientation change in the pair LEGAL/ILLEGAL in LIU (Hendriks 2007, 114).

Beyond lexically marked negation, it is worth mentioning that for some sign languages, certain peculiar features have been noted in the morphology associated with negation. One of these features is person inflection of the sign NOTHING in NZSL (McKee 2006, 85). The sign, which is standardly used to negate predicates, can be articulated at person loci and is interpreted in context. For instance, when inflected for second person, it will be interpreted as ‘You don’t have/You aren’t/Not you.’ It can also show multiple inflection through a lateral arc displacement, much in the same way as in plural verb agreement (see chapter 7). Although it has not been interpreted as such in the original source, this might be a case of verb ellipsis where the negative sign acquires the properties of a negative auxiliary. Another interesting morphological idiosyncrasy is reported for negated existentials in NS (Morgan 2006, 123): the language has lexicalized animacy in the domain of existential verbs and possesses a specific item restricted to the expression of exis-

tence with animate arguments, EXIST-animate, as opposed to an unrestricted EXIST-unmarked. While the former can co-occur with bimanual NOT, EXIST-unmarked cannot and negation of existence is conveyed by NOT, NOTHING, ZERO or FROM-SCRATCH.

6. Concluding remarks

This overview of the grammatical and lexical encoding of negation and negative structures across sign languages has documented the linguistic variation existing in this domain despite the still limited range of descriptions and analyses available. Even what might be considered a modality-dependent feature, namely the non-manual encoding of negation, turns out not to function uniformly in the expression of negation across the sign languages studied. Rather, its properties and distribution are constrained by the language-particular grammars they are part of. At the same time, however, it is also striking to notice how recurrent and widespread some morphological features are in the negation systems described. These recurrent patterns offer a unique window into grammaticalization pathways of relatively young languages in the visual-gestural modality. In any case, the scholarship reported here should have made it clear that much more detailed work on a broader range of sign languages is needed to get better insights into many of the issues that have been already raised for linguistic theory and description so far.

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