Chapter 4: Negation

4.1 Introduction

Negation in sign languages can be expressed both manually and non-manually. In some sign languages, non-manuals, such as a headshake, are sufficient to express sentential negation; in other sign languages, manual negators are needed to negate a sentence. In this chapter, I will give a short overview of several aspects of negation in LIU. These aspects include the use of several manual signs, non-manual features of negation, and negative concord. It will be shown that negation in LIU requires a manual negator whereas a headshake or other non-manual ways of negating a sentence are optional. The characteristics of negation in LIU are compared to negation in other sign languages with the aim of placing them in a cross-linguistic perspective, as explained in Chapter 1.

Before describing some properties of LIU negation, the data collection will be briefly described (Section 4.2). I will then discuss manual negative signs and negative morphology (Section 4.3) and non-manual markers of negation (Section 4.4). Finally, in Section 4.5, I examine negative concord structures in LIU. In all of the data sections, LIU data will be compared to patterns that have been described for other sign languages. These comparisons are further discussed in Section 4.6.

4.2 Data and methodology

The data specifically focusing on eliciting negative constructions was collected on video and amounted to approximately 60 minutes. Much of this material, however, turned out not to be suitable for the analysis, since it contained many single sign negative responses, and very few negated clauses. Some of the data was elicited by means of questions that required a negative answer. Four different Deaf informants were told to try and answer with sentences rather than just a headshake or the sign NO. This was a difficult task for most of them, and the elicited sentences may not always reflect the grammar of the language correctly. Most of the examples given in this

---

chapter, therefore, come from short stories that three different Deaf informants told to their Deaf peers. The stories were between 3 and 5 minutes in length and are mainly descriptions of the informants’ own experiences. The informants were asked to tell these stories in the presence of a hearing researcher and they were recorded on video. This situation may have somewhat influenced the data, but in general, the informants’ signing did not seem significantly different from that observed in natural, spontaneous settings. The informants were all students at the Holy Land Institute for the Deaf who learned to sign at a young age (cf. Chapter 1.3).

4.3 Manual negation

In this section, different manual signs are described that are used to negate clauses or other sentence constituents, or that function as a negative answer to a question. According to Zeshan (2004:29)\(^{19}\)

> “[s]ign languages overwhelmingly use negative particles, but the paradigms of negatives found across sign languages differ substantially, and syntactic patterns show some variation as well […]. To a lesser extent, sign languages also make use of morphological means of negation with a negative morpheme incorporated into the predicate […].”

In LIU, the use of manual negative particles is the most common way to negate clauses. In contrast to many Western sign languages, manual negative particles play a more important role than non-manual markers, such as a headshake (see Section 4.4 for non-manual negation). In the category of morphological negation, LIU has a negative suffix (Section 4.3.2).

In every subsection, I will first discuss examples from LIU and then compare these examples to selected data from other sign languages.

4.3.1 Manual negative signs: negative interjections and clause negators

There are several manual negators in LIU. Most of these have slightly different shades of meaning. Some of these negative signs can be used as negative interjections, which are single sign negative answers to a question, as well as clause negators.

---

\(^{19}\) Zeshan (2004) gives a typology of negative constructions in 38 different sign languages from around the world, taking into account both manual and non-manual aspects of negation in these sign languages. Since this is the most comprehensive typological study on negation to date, it is referred to frequently in this chapter.
Chapter 4: Negation

The sign in Figure 4.1 is the most neutral sign for “no” or “not”; it is glossed as NEG. It can be the answer to a question, but it may also negate a clause, as in (4.1). Note that in the examples in this section, the non-manual markers of negation are not transcribed (see Section 4.4)

(4.1) FATHER MOTHER DEAF INDEX1 NEG // SPEAK
    “My father and mother aren’t Deaf, they speak.”

Figure 4.2 shows the more emphatic form of this sign, which is often translated as “never”. This sign has a single, rather than a repeated movement and may also be used as a warning or a negative imperative. An example of its use is given in (4.2), which is a girl’s response to the question whether she smoked (note that smoking is considered inappropriate for women in Jordan).

(4.2) NEG:EMPH SMOKE NEG:EMPH // JORDAN NEG
    “No, of course I don’t smoke. That’s not done in Jordan!”

The neutral negator in Figure 4.1 can also be made more emphatic by using both hands and holding them higher, at about head-level (Figure 4.3). The resulting sign is only used as an interjection and usually has the meaning of a warning, or is used defensively, as in “it really wasn’t me!”
The sign in Figure 4.4 is not normally used to negate a clause, but it can be used to answer a question. It is used, for instance, when declining an offer or denying an accusation. I refer to it as NEG:APOL, because it is mainly used in an apologetic way, as in (4.3) where it is used to decline an offer.

(4.3) A: FOOD  B: NEG:APOL
    “Do you want something to eat?” “No thanks.”

The sign in Figure 4.5 is probably the most interesting of the manual negator signs. In this sign, a hand is held in front of the mouth and the fingers bend at the knuckles repeatedly. I have glossed it as NEG-EXIST.
This sign is usually accompanied by the mouth pattern *ma-fi*, which in spoken Jordanian Arabic means “there isn’t”. In LIU, however, the sign NEG-EXIST has a wider meaning. It can be used with the meaning “not have” to negate possession (cf. Chapter 5.4.2.1), but this is not a possible meaning of *ma-fi* in Arabic. It can also be used even more generally as a clause negator. It may occur in the same context as the more neutral sign NEG (Figure 4.1), as is shown by the semantically equivalent sentences in (4.4).

(4.4a) YESTERDAY EVENING PARTY COME NEG
(4.4b) YESTERDAY EVENING PARTY COME NEG-EXIST

“I didn’t come to the party yesterday evening.”

However, the examples in (4.5) indicate that there is a slight difference in the distribution of these two signs. In this context, the neutral sign NEG is grammatical (4.5a), but use of NEG-EXIST leads to ungrammaticality (4.5b). This grammaticality pattern seems to indicate that NEG-EXIST cannot be used for advice or warning.

(4.5a) EVENING PARTY COME NEG TOMORROW
(4.5b) *EVENING PARTY COME NEG-EXIST TOMORROW

“Don’t come to the party tonight, it’s tomorrow.”

There is another sign that appears to have the same distribution and meaning as NEG-EXIST. It often occurs with the mouthing *ma-fi*. This sign, which consists of an outward movement of the hand (palm up), can be suffixed to some verbs and adjectives (Section 4.3.2). A more emphatic form of this
sign is made with two hands (Figure 4.6). This two-handed form can be used as a clause negator or negative interjection like NEG-EXIST, but tends to convey a level of annoyance. When used with nouns, it may be translated as “absolutely nothing” or “completely useless”.

There are other signs with an inherently negative meaning like IMPOSSIBLE, EMPTY, and ZERO. The sign ZERO (Figure 4.7) can be used as a negative quantifier, as in PERSON ZERO (“nobody”). The sign EMPTY is particularly interesting in this respect, because it seems to be in the process of being grammaticalized into a negative particle. It is still used lexically, as in HOUSE EMPTY (“The house is empty”), but it can also be used more generally to indicate someone’s absence, as in (4.6).

(4.6) GO-OVER KNOCK // EMPTY GRANDMOTHER EMPTY NEG-EXIST

“They went over and knocked, but nothing, grandmother wasn’t there.”

It is not yet completely certain whether the grammaticalized form of this sign should be analyzed as a negative existential, since it does not occur in the data frequently. If it is in the process of becoming a negative existential, LIU would be particularly rich in having three different negative existentials: NEG-EXIST (Figure 4.5), the one-handed variant of the sign given in Figure 4.6, and EMPTY.

In summary, LIU has a wide range of negative particles. These include a neutral clause negator and three different emphatic negators, two of which can also function as clause negators. In addition, LIU has an apologetic negative interjection and two negative existentials, with a third one possibly in the process of being grammaticalized. The exact contexts in
which each of these signs is used is as yet not completely clear. It would seem that there is some overlap in meaning between different particles, although the sentences in (4.5) shows that there are also subtle differences.

Manual negators in LIU tend to occupy a clause-final position. This is in line with Zeshan’s (2004:52) observation that negative particles in sign languages “have a preference for post-predicate or clause-final position”, whereas, in contrast, spoken languages predominantly have pre-verbal articles (cf. Dahl 1979). Some sign languages do allow negative particles in pre-predicate position but, in addition, they all allow negative particles in clause-final position as well. According to Zeshan (2004:39), it is mostly Western sign languages, i.e. European sign languages and those that are derived from them, such as ASL or Auslan, that allow for pre-predicate negative particles. Non-Western sign languages tend to allow these particles only in clause-final position. Hence, typologically LIU fits the pattern of a non-Western sign language.

From a cross-linguistic perspective, LIU fits the pattern of other sign languages both syntactically and in terms of the types of negative particles. The types of negative particles found in LIU – negative existentials, emphatic negatives, and negative interjections – are common in other sign languages as well (Zeshan 2004:31). The fact that the negative existential can also function as a basic clause negator appears to be somewhat more uncommon, although this may also be the case for Tanzania Sign Language (Zeshan 2004:30). The fact that LIU has two, or maybe even three, negative existentials is unusual, but comparable to ISL that has two (Meir 2004).

In a comparison of the phonological properties of negative particles, Zeshan (2004:37) shows that certain characteristics are very common across sign languages. Negative particles often have a side-to-side movement. We have already seen that both the neutral clause negator NEG (Figure 4.1) and the apologetic NEG:APOL (Figure 4.4) in LIU have this type of movement. Moreover, emphatic negatives or negative imperatives typically have a single sideways movement. Again, the LIU emphatic negative, which can also function as a negative imperative, follows this common pattern (Figure 4.2). Zeshan suggests that all these forms are iconically motivated, albeit at a fairly abstract level. The side-to-side movement found in negative particles is similar in appearance to the movement of a negative headshake, and the single sideways movement in a negative imperative, often produced with an emphatic movement, mirrors the pragmatic force of the negation (Zeshan 2004:35-36). This would explain why negative particles in different, unrelated sign languages are so similar, whereas negators in unrelated spoken languages do not show comparable similarities. It is more difficult to see, however, in what way the negative existentials in LIU (NEG-EXIST in Figure 4.5 and the one-handed version of the sign in Figure 4.6) could be
iconic. Yet, it is interesting to note (personal observation) that the negative existential NO-HAY in Mexican Sign Language, a language which to the best of my knowledge is completely unrelated to LIU, is identical in form to NEG-EXIST. The equivalent sign in Spain (personal observation) is also very similar, although the hand has a sideways orientation in Spanish Sign Language (*Lengua de Señas Española*, LSE). Thus, there appear to be interesting cross-linguistic similarities in the form of negative particles, even when there is no obvious iconic motivation involved.

### 4.3.2 Negative morphology

Apart from negative particles, LIU also has morphological means of expressing negation manually. It has a suffix that appears to be an abbreviated form of the one-handed negative existential, that is, the one-handed version of the emphatic negator in Figure 4.6. This suffix can attach to adjectives (Figure 4.8) and verbs (Figure 4.9), but not to nouns.

![Image of sign language gesture](image.png)

*Figure 4.8: NICE^NEG*
Because this form can be used with more than one word category and is simply an abbreviated form of an independently occurring sign, it resembles to some extent a clitic (cf. Zeshan (2003) for a negative clitic in TID). However, according to the criteria proposed by Zwicky and Pullum (1983:503f), this form has more in common with a suffix. Zwicky and Pullum give the following six criteria for distinguishing clitics and suffixes:

(i) Clitics exhibit a low degree of selection with respect to their hosts, while affixes exhibit a high degree of selection with respect to their stems.
(ii) Arbitrary gaps in the set of combinations are more characteristic of affixed words than of clitic groups.
(iii) Morphophonological idiosyncrasies are more characteristic of affixed words than of clitic groups.
(iv) Semantic idiosyncrasies are more characteristic of affixed words than of clitic groups.
(v) Syntactic rules can affect words, but cannot affect clitic groups.
(vi) Clitics can attach to material already containing clitics, but affixes cannot.

According to (i) a clitic combines more freely with different categories of stems, whereas a suffix usually attaches to only one word category (e.g. the English suffix “-less” that can only combine with nouns). The LIU negative suffix can be used with more than one word category, both verbs and adjectives, but does exhibit a certain degree of selectivity in that it cannot be used with nouns. It is also highly selective in that it can only attach to a few verbs and adjectives and does not apply across the board. These verbs include UNDERSTAND, SEE, COME, and LIKE; the adjectives include
IMPORTANT, HAPPY, and NICE. This property is in accordance with criterion (ii). The gaps in the distribution of this form indicate that it is a suffix rather than a negative clitic.

According to criterion (iii), this form is also better analyzed as a suffix, because the shape of the suffix both depends on and influences the form of the stem. The sign SEE^NEG, for instance, may be produced with the V-hand (ring and middle finger extended) throughout the duration of the sign, that is, we observe progressive assimilation of the handshape of the stem. The sign UNDERSTAND^NEG may be produced in neutral space without touching the temple, i.e. the stem assimilates to the location of the suffix. The movement of the sign LIKE, a repeated up-and-down movement on the chest, is reduced to a single upward movement when the suffix is attached.

Affixes, in contrast to clitics, may change the meaning of the stem (criterion iv). In this respect, the LIU suffix behaves more like a clitic than a suffix. It does not normally change the meaning of the stem, but simply negates it. There is one sign, however, in which the suffix does seem to affect the meaning of the stem. LIU has a sign which can be glossed as SLOWLY or WAIT-A-MOMENT. This sign is a lexicalized form of a gesture that is common in the Arab world. When it is combined with the negative suffix, the meaning of the resulting sign (Figure 4.10) is NOT-YET, i.e. a negative completive.

More research on syntactic operations involving negative elements in LIU is necessary to be able to test criterion (v). There are no other clitics in LIU that might provide a suitable environment to test criterion (vi).

LIU also has some irregular negative forms, like the negative verb NOT-KNOW in Figure 4.11. This sign is suppletive, the sign KNOW being made
Chapter 4: Negation

...with the same handshape but tapping the temple. The negative form of LEGAL (Figure 4.12) is also irregular, being made by changing the orientation of the non-dominant hand (Figure 4.13). Also note that the negative sign NEG-EXIST (Figure 4.5) is itself a suppletive form of an existential sign with the Arabic mouthing “fi” (cf. Chapter 5.4.2.1 for the use of this sign in possessive constructions).

Figure 4.12: LAW/LEGAL  
Figure 4.13: ILLEGAL

Morphological ways of marking negation appear to be comparatively rare in sign languages (Zeshan 2004:41). Zeshan calls these “irregular negatives”. Negative suppletion is attested in a number of sign languages but is usually limited to one or a few items, just as it is in LIU. It is interesting to note that, like LIU, both Indian dialects of Indo-Pakistani Sign Language (IPSL) and LSE have a suppletive negative form of the existential. A further example is the suppletive verb-pair KNOW and NOT-KNOW from Lebanese Sign Language (Lughat al-Ishāra al-Lubnānīa, LIL), a sign language closely related to LIU. There are also suppletive forms of negative modals in

---

20 It is, in fact, hard to determine whether the form in Figure 4.13 is really a negative form or whether the two forms are simply opposites.

21 No wordlist was obtained from Lebanon in the lexical comparison presented in Chapter 2. However, my own observations and comments from Jordanian Deaf people indicate that the sign language used in Lebanon is closely related to the one used in Syria and Jordan. The first school for the Deaf in the Middle East (not counting Jerusalem) was founded in Lebanon and several influential figures in the Deaf community in Syria and Jordan attended this school before there were any schools in their own countries. Thus, the sign language used in Lebanon had an influence in both Syria and Lebanon.
Catalan Sign Language (*Llengua de Signes Catalana*, LSC) and DGS (Pfau and Quer 2007).

Negative suffixes are attested in Finnish Sign Language (FSL), ISL, and ASL (Zeshan 2004). The ISL suffix is very similar to the suffix in LIU, both in form and also with respect to the fact that it seems to be derived from a negative existential particle. Meir (2004) assumes that the suffix in ISL has evolved from this sign. The movement of the ISL suffix, however, is described as shorter than that of the negative existential, and a twisting movement that is part of the sign is deleted in the suffix. As in LIU, the suffix attaches to nouns and adjectives, but unlike LIU, the resulting complex signs are always adjectives.

“There are several indications that this sign is indeed a suffix and not an independent sign. First, its form is determined by the form of the base sign. [...] In ISL we find that the base word determines whether the suffix is one- or two-handed [...]. Additionally, the semantics of the resulting complex words are not always predictable” (Meir 2004:116).

The two-handed form of the suffix looks similar to the emphatic clause negator in Figure 4.6.

It is interesting that LIU and ISL have this very similar negative suffix because, as far as we know, they are two historically unrelated sign languages22, although they are geographically very close. The fact that the ISL suffix causes semantic changes in the word that it occurs with indicates that it is more grammaticalized and possibly older than the suffix in LIU. The political situation in the Middle East, however, makes it unlikely that ISL has influenced LIU in this aspect.

### 4.4 Non-manuals in negation

Let us now turn to the use of non-manual markers in the expression of negation. Non-manuals have been shown to be crucial in negative contexts in many sign languages studied to date. I will consider three groups of non-manual markers: backward head tilt (Section 4.4.1), headshake, head-turn,

---

22 According to Meir and Sandler (2008) ISL is influenced quite strongly by DGS because most of the original leaders of the Israeli Deaf community came from Germany or studied there, as did the teachers at the first schools for the Deaf. There is also some influence from other countries from which Deaf immigrants came, both European and Arab (mainly North African) countries. More recently there has been a great deal of influence of Russian Sign Language, through immigrants arriving from the Soviet Union.
and negative facial expressions (Section 4.4.2), and forward head-tilt (Section 4.4.3).

4.4.1 Backward head-tilt

As in many other Mediterranean cultures, Jordanians tend to use a backward head-tilt, accompanied by raising of the eyebrows and clicking of the tongue, instead of a headshake as a negative gesture (Figure 4.14). This cultural gesture is also used by Deaf signers of LIU, but they tend to omit the tongue-click. Sometimes this gesture is reduced to the extent that only a slight raising of the eyebrows can be noticed.

![Figure 4.14: backward head-tilt](image)

In LIU, the negative head-tilt does not appear to have a grammatical status. Deaf people use it generally in the same way as the hearing population\(^\text{23}\). It is often used as an informal way of saying “no”, mostly by children. The negative head-tilt usually occurs on its own, and does not appear to co-occur consistently with any manual negator sign except the sign LIKE^NEG (Figure 4.9), which has an upward manual movement. Crucially, this non-manual is not used as a clause negator on its own in any of the data. In fact, although the gesture is used regularly as a negative interjection in every-day conversation, it does not occur in my data. This may be due to the fact that recording a conversation on video makes the setting more formal, so that this gesture would be less appropriate.

Interestingly, it seems that in LIL, which is closely related to LIU, the backward head-tilt is often used together with manual clause negators.

\(^{23}\) In parts of Italy and in Israel, the backward head-tilt is used among hearing people, but it does not appear to occur at all in either LIS or ISL (Zeshan 2004:11).
However, as in LIU, it does not seem possible to use it by itself in the absence of a manual negator (Zeshan, personal communication). In Greek Sign Language (GSL) and TID, the backward head-tilt clearly has a grammatical status. In TID it “preferably combines with particular negator signs, and its scope is mostly limited to a single sign” (Zeshan 2003:13). According to Antzakas (2006) the backward head-tilt can spread over the whole sentence in GSL, although this is rare and mainly used for emphasis. Like headshake, backward head-tilt in GSL (in contrast to LIU and LIL) can also occur on its own to negate a sentence. In this case, it occurs on the predicate or after the sentence, as in (4.7), in which both the headshake and the backward head tilt are a grammatical way to negate the sentence (Antzakas 2004:266).

(4.7) INDEX1 AGAIN HELP INDEX3  
“There is no way for me to help him again.”

In both TID and GSL, it appears that the backward head-tilt tends to be used more with manual negators that have a backward or upward movement, whereas headshake tends to be used with negative signs that have a sideward or side-to-side movement. It would seem, then, that the movement of the manual and the non-manual negator tend to be synchronized, although this synchronization is not absolute. Zeshan (2004:19) also notes that all sign languages that have the backward head-tilt additionally use a negative headshake.

4.4.2 Headshake, head-turn, and negative facial expressions

The headshake is probably the most common negative marker in sign languages across the world. It occurs in all 38 sign languages studied in Zeshan (2004). Some sign languages also use a sideways head-turn, which may be interpreted as a reduced form of the headshake. In LIU, the headshake may be reduced to a sideward head-turn or a head-tilt. It may accompany a manual negative sign, but cannot replace it as a clause negator. The headshake can be used on its own only as a negative interjection. Moreover, a manual negative sign may occur without a headshake. Thus, manual negative signs are the main clause negators in LIU, whereas the headshake is optional and may be used to emphasize the negation. The headshake tends to be more prominent in negative answers than in spontaneous conversation or story-telling. As shown in example (4.8),
manual clause negators can occur both with and without negative head movement. 24

(4.8) dh: PAPER(2h) GIVE[NEG-EXIST] GIVE[NEG]
ndh: PAPER(2h) NEG GIVE[NEG] GIVE
“You didn’t give me the paper, you didn’t.”

In (4.8) there are three manual negators, and only the first one is accompanied by a sideways head-turn. The presence or absence of the headshake does not appear to be caused by the manual negator. For example, NEG-EXIST may be accompanied by a headshake, as in (4.9), and other negators may occur without a headshake, as in (4.10).

(4.9) TODAY EXAM NEG-EXIST, TOMORROW EXAM
“I don’t have an exam today, I have one tomorrow.”

(4.10) GIRL STUBBORN NEG:EMPH
“The girl was stubborn and said ‘Never!’”

There is only one example in the data which involves a headshake occurring without a negative sign. In example (4.11), the sign SMELL is made and followed by a headshake without a manual negator. This pattern appears to be an exception in LIU. However, there are not enough examples in the data in which a headshake occurs on its own as a negator to allow for a full analysis.

(4.11) GAS BOTTLE SMELL DRINK
“He didn’t smell that it was gas in the bottle and drank from it.”

In the LIU example in (4.11), the sign SMELL clearly has a negative facial expression, which spreads into the articulation of the headshake. The corners of the mouth are down and the lips are pursed. This is a common negative facial expression that has been described for many sign languages such as Swedish Sign Language (SSL) (Bergman 1995:94) and BSL (Sutton-Spence and Woll 1999:73f). The facial expression used in (4.11) is shown in Figure 4.15. Possibly this negative facial expression is sufficient for the headshake

24 Note that some manual simultaneity occurs in this example. The first line of glosses represents the dominant hand, the second line the non-dominant hand (cf. also Chapter 1.4 for glossing conventions). Manual simultaneity occurs quite frequently in LIU (cf. Chapter 6).
to occur without a manual sign. In one other example in the data, a sentence appears to be negated by just this facial expression (Figure 4.16) and a slight head-turn occurring, but with no manual negator. The context in which this facial expression was produced is shown in (4.12). The negative facial expression occurs during the production of the sign NORMAL, and thus co-occurs with the head-turn. The sentence clearly has a negative meaning, but no negative sign is made. Interestingly, then, these non-manuals occur on the sign which follows the clause that is negated, just as in (4.11) the headshake follows the negated clause. This, however, is only one example and appears to be an exception.

(4.12) dh: OLD-MAN WALK-AROUND OLD NORMAL(2h)  
ndh: BREATHE-HARD NORMAL(2h)  
“The old man walked around, he was very old but he didn’t breathe hard, it was normal.”

According to Zeshan (2004:16) a sideward head-turn is best considered a reduced form of the side-to-side headshake. In the sign languages she describes, the head-turn is not ‘strong’ enough to negate a sentence on its own. Likewise, Zeshan (2003) notes that negative facial expression has not been shown to occur as a negator by itself in any sign language, except in TID, which has a facial expression with puffed cheeks that can negate a sentence on its own. Consequently, the LIU example in (4.12) is exceptional cross-linguistically.25 However, there are not enough examples in the data in

---

25 For Chinese Sign Language, Yang and Fischer (2002) argue that a negative facial expression alone is sufficient to negate a sentence while a headshake is optional and
which either a headshake, a head-turn, or a negative facial expression would occur on its own to negate a sentence to allow for a full analysis.

Since manual negators tend to occur at the end of sentences in LIU, headshake also tends to occur towards the end of the sentence. It does not seem to spread backward over entire clauses or even predicates. In most cases, the headshake is limited to the duration of the manual negative sign, although sometimes it may start slightly earlier. But even when the headshake or head-turn starts slightly before the manual negator is signed, it does not spread over an entire constituent, but starts on the sign before the negator irrespective of whether that sign is a subject, predicate, or even an adverb. As there is a considerable amount of repetition of signs in LIU, manual negators are often repeated, and sometimes two different manual negators are used with the same meaning, as in (4.8) and (4.13). When more than one manual negator occurs in a sentence, the headshake may spread to a sign that occurs between the two negators. Further analysis is needed to show over which constituents headshake can spread in these cases and which constituents would stop the headshake from spreading. In the example in (4.13) the headshake spreads over the verb TAKE which occurs between two negative elements, but this utterance also contains a topicalized constituent (KEYS) which stops the headshake from spreading. In (4.14), the headshake spreads over the pronoun that occurs between the different negative elements.

(4.13) **NEG-EXIST NEG TAKE NEG-EXIST //** KEYS **TAKE NEG-EXIST**

“No, I didn’t take them, I didn’t take the keys.”

(4.14) **MATHS //** LIKE^NEG INDEX₁ **NEG**

“I don’t like maths.”

Although manual negative signs in LIU tend to occur at the end of a clause, pronouns may follow a manual negator. In this case, the headshake may spread over the pronoun and last until the end of the sentence, as in (4.15).

(4.15) FATHER COME INDEX₁ // **SEE^NEG INDEX₁**

“Did my father come? I didn’t see him.”

never co-occurs with manual signs (see (4.16)). Likewise, Arrotéia (2005) claims that facial expression can negate a sentence in Brazilian Sign Language.

26 Bergman (1995) points out that topicalized constituents tend to be outside the scope of negative headshake in SSL.
Thus, spreading of the headshake does occur in LIU, but it is quite limited.

In contrast to LIU, the headshake is the main way of negating a sentence in many Western sign languages. In fact, in these sign languages, the headshake is the obligatory part of clause negation, while manual negator signs are optional. This pattern has been reported, for example, for ASL, NGT, DGS, LSC, and SSL. This is the most frequent pattern described so far: headshake-only negation was confirmed possible in 26 out of the 38 sign languages studied by Zeshan (2004). This finding is possibly a reflection of the research bias towards sign languages of Europe and America, although Geraci (2005) claims that headshake-only negation is not possible in the northern Italian variant of LIS. Other sign languages that do not allow headshake-only negation are Japanese Sign Language (Nihon Syuwa, NS), and the village sign language Kata Kolok from Bali.

In contrast to the negative headshake, the sideways head-turn does not seem ‘strong’ enough to negate a sentence by itself. It normally has to co-occur with a manual negative sign. There are several sign languages, such as GSL and BSL in which a negative headshake can negate a sentence without the presence of a manual negator, while a sideways head-turn only has a negative meaning when combined with a manual negator. LIU differs from these sign languages in that even the negative headshake is not normally ‘strong’ enough to negate a sentence on its own, but requires a manual negator.

Even in sign languages that do allow headshake-only negation, the headshake is not obligatory in all negative sentences. In Chinese Sign Language (CSL), a headshake may occur after a sign to make it negative (4.16), but it is also possible to add a negative sign (a handwave) instead of the headshake (Yang and Fischer 2002:176). In CSL examples in which the headshake follows the manual sign(s), “the entire sentence is topicalized, or questioned, and the headshake is the answer” (Yang and Fischer 2002:177). This construction is similar to the LIU example in (4.11).

In CSL it appears that “negative non-manuals cannot by themselves simultaneously negate a sentence” (Yang and Fischer 2002:194). A negative non-manual cannot occur simultaneously with a positive sign to negate it,
but it may occur after the sign (4.16a). A comparable structure is impossible in sign languages like DGS and LSC (cf. Pfau and Quer 2002).

Manual negation without non-manual marking is also possible in ISL, where most, but not all, negative sentences are accompanied by a headshake. Negative imperative signs, for instance, are never accompanied by a headshake (Meir 2004). In NS, manual-only negation is also possible. But manual-only negation “is uncommon or impossible in several sign languages” (Zeshan 2004:18).

As far as the scope of negative head-movement is concerned, restriction of the headshake to the manual negator only, as is common in LIU, is also possible in other sign languages, like ASL, as shown in (4.17) from Neidle et al. (2000:44), and LSC (Pfau and Quer 2002).

(4.17) \[ hs \quad \text{JOHN NOT BUY HOUSE} \] \hfill [ASL]

“John is not buying a house.”

In contrast, in DGS, as shown in (4.18a) a similar construction with headshake on the manual negator only is ungrammatical. In DGS the headshake has to spread at least onto the predicate, as shown in (4.18b) (Pfau 2004). Note that in DGS, the manual negator is optional. A headshake co-occurring with the predicate is sufficient to negate the sentence (Pfau 2002).

(4.18a) \[ *\text{POSS1 BRUDER ARZT NICHT} \] \hfill [DGS]

“My brother is not a doctor.”

(4.18b) \[ \text{POSS1 BRUDER ARZT NICHT} \] \hfill [DGS]

“My brother is not a doctor.”

As shown in (4.15) the headshake in LIU spreads from the manual negator towards the end of the sentence, including any pronouns that come after the manual negator. This is in line with a cross-linguistic tendency for negative headshake to continue to the end of the clause, no matter where it starts. According to Zeshan (2004), this tendency is also observed in other clause types, such as questions marked by facial expression. According to Neidle et al. (2000) an example like (4.14), in which the negative headshake spreads over a sign occurring between two negative signs is also quite common in ASL. The authors point out that
“if the same articulatory configuration will be used multiple times in close proximity, it tends to remain in place between those two articulations (if this is possible). This phenomenon, referred to as “perseveration”, occurs in both the manual and nonmanual channels.”

(Neidle et al. 2000:118)

In summary, with respect to negation, LIU seems to belong to the relatively small group of manual dominant sign languages. These sign languages do not normally allow non-manual negation only. Whereas in most sign languages researched so far, a negative headshake, unlike the weaker head-turn, is ‘strong’ enough to negate a sentence on its own, this is not the case in LIU. LIU is also exceptional, but not unique, in that it allows manual negation on its own, without either a headshake or a head-turn. It would be interesting to investigate by means of cross-linguistic comparisons whether those languages that do not allow headshake-only negation are also more likely to have manual negation occurring without a headshake. In that case two typological classes could be distinguished: one in which headshake is the main way of negating a sentence and manual negators are optional, so-called non-manual dominant sign languages, and another class in which manual negators are the main way of negating a sentence and non-manual markers like a headshake are optional, so-called manual dominant sign languages (cf. Zeshan (2006b) for a proposal along these lines). With regard to scope and spreading of non-manual negation, LIU is not exceptional. In fact, it follows some well-established cross-linguistic rules for spreading of negative headshake. Finally, the negative facial expression used in LIU is very similar to that of at least a number of other sign languages.

4.4.3 Forward head-tilt
Apart from the headshake and negative facial expression, many LIU negative sentences are accompanied by a forward head-tilt. This is somewhat unexpected given that the backward head-tilt is the cultural gesture for negation in Jordan and the surrounding countries. The forward head-tilt tends to spread over entire sentences and seems to indicate denial or disbelief. The sentences in (4.8) and (4.13), for example, were accompanied by this forward head-tilt illustrated in Figure 4.17, although it was not noted there in the transcription. For the sake of clarity, these examples are repeated here as (4.19) and (4.20) with the forward head-tilt transcribed.
Chapter 4: Negation

Figure 4.17: forward head-tilt in a negative sentence

(4.19) dh: PAPER(2h) \textgreater\textless\textgreater GIVE$_1$ \textless\textgreater NEГ-EXIST \textless\textless GIVE$_1$ \textgreater\textgreater
dh: PAPER(2h) NEГ \textless\textless NEГ

“You didn’t give me the paper, you didn’t.”

(4.20) NEГ-EXIST NEГ TAKE \textless\textless NEГ-EXIST // KEYS TAKE NEГ-EXIST

“No, I didn’t take them, I didn’t take the keys.”

Forward head-tilt cannot negate a sentence by itself and does not preclude a headshake. It is fairly consistent in negative sentences when a signer feels she is being accused or when something completely unexpected happens. It seems that this forward head-tilt is not limited to negative sentences only, but is also used to indicate surprise in positive sentences. It is therefore not as clearly a negative marker as the headshake or the sideways head-turn. Its pervasiveness in negative sentences, however, makes this an interesting phenomenon to consider in this discussion. To the best of my knowledge, this phenomenon has not been described for other sign languages.

4.5 Negative concord

Negative concord is defined as two or more negative elements co-occurring in one sentence without changing the negative interpretation of the sentence.
back to affirmative. Negative concord may occur as a result of the co-
occurrence of a manual and a non-manual component, that is, a negative
headshake or facial expression combined with a manual negative sign, or as
a result of the combination of two manual negators. The first type of
negative concord, which is common in most sign languages, has already
been discussed above. The second type, however, is not attested in every
sign language, as Pfau and Quer (2007) show.

In LIU manual negative concord is possible, as illustrated in (4.20)
and (4.14), which is repeated here as (4.21).

(4.21) MATHS // LIKE\textsuperscript{\textasciicircum{NEG}} INDEX\textsubscript{1} NEG

“I don’t like maths.”

Different manual negators regularly co-occur to add emphasis, and they can
either be adjacent, as in (4.20) or non-adjacent, as in both (4.20) and (4.21).
It appears that when two different manual negators, including the negative
suffix, occur within a clause, NEG tends to appear in clause-final position
accompanied by headshake. Whether this is just a tendency or a rule is not
clear from the data. Whereas in (4.20) and (4.21) different manual negators
combine, manual negators may also be doubled, that is, the same negator
may occur twice in a sentence.

Manual negative concord has also been described for some other
sign languages. An example of negative concord in LSC (Pfau & Quer,
2007:135) is given in (4.22). LSC has a rule that says that if the negative
particle NO is present, other negative manual negators must follow it.

(4.22) INDEX\textsubscript{1} FUMAR NO MAI / NO-RES [LSC]

“I have never smoked / have not smoked at all.”

In ASL negative concord is also possible but two manual negative items
cannot occur adjacent to each other (Wood 1999:62). This is unlike LIU, as
is evident from example (4.20). Not all sign languages, however, allow
manual negative concord. In DGS, for instance, the use of two manual
negators within a clause is ungrammatical. Moreover, negative cliticization
(modal plus negation) combined with a manual negative sign is impossible
in both DGS and LSC (Pfau & Quer 2007). In contrast, example (4.21)
shows that in LIU a negative suffix can co-occur with a negative particle.
Thus, negative concord between two manual negators seems to be quite free
in LIU compared to other sign languages, in which there are either
combinatorial restrictions or restrictions with respect to the sequencing of manual negators. It may be, however, that further research will show that certain restrictions also pertain to LIU.

4.6 Conclusion: Cross-linguistic variation

In the domain of negation, LIU is an interesting language to consider from a cross-linguistic point of view. On the one hand, LIU has elements in common with other sign languages. On the other hand, LIU has a number of interesting characteristics that are uncommon cross-linguistically. A cross-linguistic comparison between LIU and other sign languages shows that much more variety is possible in the grammar of different sign languages than has often been thought.

There are a number of different manual negators in LIU. Interestingly, with very few exceptions, these manual clause negators are the obligatory markers of negation, whereas non-manual negative markers, although very common, are optional. This makes LIU a manual dominant language in the area of negation, a pattern that is uncommon among sign languages studied to date. In fact, most sign languages show the opposite pattern, with an optional manual negator and obligatory headshake. LIU is also interesting in that it has a negative suffix that occurs with certain verbs and adjectives. Negative affixes are uncommon across sign languages, but do occur in some, such as ASL and ISL.

Another interesting feature of LIU is the fact that it is used in a culture where a backward head-tilt is common. Unlike certain other sign languages in the region, in particular GSL and TID, this head-tilt is not clearly a part of the grammar of the language. Instead, it seems to remain a cultural gesture, even when used by Deaf people. This leads to questions about the way cultural gestures interact with sign languages and become part of their linguistic structure.

It is also interesting to see that LIU has certain aspects in common with CSL. Although the occurrence of headshake without a manual negator is exceptional in LIU and common in CSL, the fact that the headshake can occur after the negated element, rather than simultaneously with it is true for both languages. This pattern has been shown to be ungrammatical in other sign languages, for instance, DGS and LSC. With respect to negative concord, LIU seems to be very free in the way it allows both manual and non-manual negators to combine.

The negative system of LIU as a whole is not identical to that of any other sign language described so far. It therefore adds to our understanding of cross-linguistic variation in the realization of negation. Much more
Jordanian Sign Language: Aspects of grammar from a cross-linguistic perspective

analysis is needed and it would be interesting to see how negation works in related Arab sign languages.