

**Jordanian Sign Language:
Aspects of grammar from a
cross-linguistic perspective**

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Jordanian Sign Language: Aspects of grammar from a cross-linguistic perspective

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Chapter 1: Introduction

Jordanian Sign Language, or *Lughat al-Ishāra al-Urdunia* (LIU), is the sign language used in Jordan. The language has several dialects. The dialect described in this dissertation is that of the residential school for the Deaf in Salt, where the author worked for six years. This school is currently the only residential school for the Deaf in Jordan and has about 140 students. It also has a number of Deaf staff members, both in the school and in the workshops for vocational training. Thus, it forms a Deaf community in its own right.

LIU appears to be related to other sign languages in the Middle East, but none of these have been researched extensively. An introductory grammar of Jordanian Sign Language has been published (Hendriks 2004, with an Arabic edition published in 2006). The main aim of this publication was to make hearing Arabs with an interest in sign language more aware of the grammar of sign languages in general and LIU in particular. Apart from this grammar, very little research has been done into the sign languages of the Middle East. In the context of a wider typological project some research has been done by Ulrike Zeshan of the Max Planck Institute (MPI) for Psycholinguistics on certain aspects of Lebanese Sign Language (cf. Zeshan 2006b), which appears closely related to LIU. Apart from this, only dictionaries have been published (which are in fact wordlists, rather than dictionaries, because they contain no grammatical information or sample sentences).

Beyond describing selected aspects of the grammar of LIU, this dissertation will focus on placing LIU in a cross-linguistic context. Its aim is not only to contribute to our general knowledge of sign languages in the Middle East, but also to add to our knowledge about the way in which different grammatical structures can be expressed in different sign languages around the world. This, in turn, has implications for the study of language in general, as will be explained in Section 1.5.

Before starting to describe LIU some background information about the community who uses the language and the culture in which the language is used will be provided, since in some cases sociolinguistic and cultural factors may have an influence on the structure of the language (cf. Nyst 2007a). This introductory chapter will therefore mainly be concerned with the sociolinguistics of deaf people and sign language in Jordan. In Section 1.1 the sociolinguistic background of the Deaf community in Jordan is presented. Section 1.2 comments on the influence of Arabic and Arab culture on LIU and presents information about sociolinguistic attitudes of Deaf people towards LIU. Data and methodology of the research is discussed in

Section 1.3. An explanation of glosses and typological conventions is given in Section 1.4. The aim of the present cross-linguistic study and a brief outline of the following chapters are presented in Section 1.5.

1.1 The sociolinguistic situation of the Jordanian Deaf community

1.1.1 Introducing Jordan

The Hashemite Kingdom of Jordan is a small country in the Middle East, bordering on Israel and the Palestinian areas to the West, Syria to the North, Iraq to the East and Saudi Arabia to the South and South-East (see Figure 1.1). It has a total area of 92,342 square kilometres, which makes it a little more than twice the size of the Netherlands. Most of the country consists of desert, however, and the population is for a large part centred in some urban areas in the Western part of the country. Almost half of the population lives in or around the capital Amman. The current population numbers about 6 million. In an educational study about the activities of deaf students in Jordan al-Zraigat (2002:17) states that

“The population of Jordan was estimated at 5 million inhabitants in 1998 (Department of Statistics, 1999). The male constitutes about 52% and the female 48%. Those who are under the age of 19 years constitute 64% (The Manual of Disability and Institutes Welfare and Rehabilitation of Disabled Persons in Arab Countries, 1998). The vast majority of inhabitants are concentrated in urban regions, 77% of the whole population live in urban regions, 20% in rural regions, and 3% in the badiyah (desert).”

As far as religion is concerned, 92% of Jordanians are Sunni Muslims, 6% are Christians from various denominations, and 2% have a different religion, including Shi'i Muslims.



Figure 1.1: map of Jordan

A little more than half of the population (50-55%) is of Palestinian origin and registered as Palestinian refugees or displaced persons residing in Jordan. Most of them have citizenship. Since the 2003 Gulf War in Iraq many Iraqis have also fled to Jordan and are now living there. It is estimated that there are between 700,000 and 1.7 million Iraqis in Jordan, many of them illegally.

Jordan is classified by the World Bank as a “lower middle income country”. Education and literacy rates and measures of social well-being are relatively high compared to other countries with similar incomes. Jordan’s population growth rate, although declining, is still high, at approximately 2.8% currently. Unemployment rates are high, with the official figure standing at 12.5%, and the unofficial around 30%.

The official language of Jordan is Arabic, but English is used widely in commerce and government and among educated people. Arabic and English are obligatorily taught at public and private schools. A classic diglossia situation exists in Jordan (as in other Arab countries). There are considerable differences in both grammar and vocabulary between the written form of Arabic taught in schools around the Arab world (also referred to as Modern Standard Arabic, MSA or *fuṣḥa*) and the vernacular spoken on the streets of Jordan. Writing the vernacular is considered unacceptable in most contexts, although it is becoming more common

among young people using communication methods supported by modern media such as text messaging on mobile phones or internet chatting. In formal contexts MSA is used as a spoken language, for example, by the king, government officials, imams preaching in the mosque and in news bulletins on television.

1.1.2 Cultural and religious attitudes towards disability in Jordan

In Arab culture, disability has traditionally been seen as something shameful. It was considered an ordeal, not only for the disabled person him- or herself, but also for their family. Most Arabs would believe this ordeal is put upon the families of the disabled by God himself.

“Islam is the dominant faith for more than 92% of the population. A core message of Islam is that anything that occurs and everything that exists in the world can be attributed to the will of God. Accordingly, impairment may be explained as an act of God, designed to test the faith of individuals and their capacity to accept that fate with gratitude and patience. This perception of disability as a test of the faith and as God’s will plays a major part in shaping attitudes towards disabled people.” (Turmusani 1999b:196)

Another common, albeit somewhat contradictory, belief in Jordanian society, according to al-Zraigat (2002:74), is that disabled people are ‘special’ and have a certain power.

In some verses of the Qur’an disability is associated with sin, e.g. *sura* 16 verse 76 (translation by ‘Ali):

“God sets forth (another) Parable of two men: one of them dumb, with no power of any sort; a wearisome burden is he to his master; whichever way he directs him, he brings no good: is such a man equal with one who commands justice and is on a straight Way?”

In this verse it is implied that the dumb man is not on God’s straight Way and is not just. Additionally,

“in some Qur’anic verses, those with visual, hearing and speech impairments are referred to as those who lack mental capabilities. This is to describe those who do wrong and wicked people in society.” (Turmusani 1999a:107)

Not all verses in the Qur’an are as negative about disabled people; there are also verses which indicate that God sees all people as equal. Traditionally, however, disability has carried with it a cultural, as well as a religious,

stigma. Because of this stigma, the existence of disability in a family used to be (and in some areas of the countries still is) denied, as it was felt to be a disgrace to the whole family. Disabled children might be kept hidden away by their parents in order to avoid this disgrace, making it impossible for them to receive education or other necessary services. The stigma is especially associated with families with disabled daughters, and may prevent other families from marrying into such a family. According to al-Zraigat (2002:74) the negative attitude towards disabled persons and their families causes many of these families to look for medical treatment or use mythical methods such as placing a talisman or blue beads (to ward off the evil eye) on the chest of a disabled child.

Although all disabilities have carried this stigma, some disabilities are less stigmatized than others. Because Islam puts great emphasis on the importance of the Arabic language as the language of the Holy Book, and essentially of God Himself, it is very important for an Arab to be well-versed in Arabic. Being able to recite the Qur'an is something that has high prestige.

“Therefore, we can see from the vantage point of history that some of those blind people who have mastered skills of reciting *Qur'an*, have managed to reach positions of some power in their societies.”
(Turmusani 1999a:106)

Thus, people with a disability that prevents them from learning and speaking Arabic well, such as the deaf, are more stigmatized than, for instance, blind people or those that miss a limb.

However, Turmusani (1999b:197) indicates that fortunately:

“attitudes towards disabled people in Jordan seem to have improved over time, at least towards some sections of the disabled population. The changes are particularly apparent in relation to people with sensory and less severe physical impairments (rather than people with “mental retardation”), and in relation to men rather than women.”

This change in attitude, especially over the last 25 years, has also made it possible for care and rehabilitation services to be set up. Whereas traditionally the care for a disabled person was solely on the shoulders of the family, it is now perceived as being (at least partly) the responsibility of residential institutions or the state. This change in public perception has come about partly through the arrival of Western NGOs in the 1960s and the influence of Western style modernisation. The International Year of Disabled Persons in 1981 has also played a crucial role in making disability issues more prominent on the state's agenda. From my own observations, education plays a very important role in changing the attitude of society

towards disabled people. Section 1.1.4 will deal with education possibilities for the Deaf in Jordan in more detail.

1.1.3 Deafness in Jordan

No accurate figures on the number of deaf or hard-of-hearing people in Jordan or the Middle East are available. The only nationwide survey on impairment in Jordan, conducted in 1979, focused solely on the incidence of visible impairment (Turmusani 1999b). Results from a census in 2004 have not yet been made public. Al-Zraigat (2002:66) states that hearing impairment is the second most common disability in Jordan and affects around 1% of the population (according to figures from the Ministry of Social Development in 1995). This would mean that there are currently about 60,000 hearing impaired people in Jordan. It is not clear, however, what exactly is meant by hearing impairment. The figure seems too low to include those who suffer from age-related hearing loss, but rather high if it only includes those born with a hearing loss or with a hearing loss onset in childhood.

Widely differing statistics about deafness in the Middle East are in circulation. The World Health Organization (WHO) estimated that in 1998 there were approximately 8 million people with a disabling hearing loss in the Eastern Mediterranean region (WHO/CBM 1998). Some sources talk about two million hearing impaired children in Egypt alone (El Bakary 1999:72-73), which would be 2.7% of the population. This figure is very high, even if it includes everyone with even a slight hearing loss. For Lebanon, a more realistic number of around 10,000 deaf people (0.27% of the population) is given (Roumanos 1999:224). The Gallaudet Encyclopaedia states that in Israel “the overall incidence of deafness [...] in the population up to 18 years of age is about 1.2 per 1000”, but that among minorities, like the Druze, the Bedouin and the general Arab population the incidence of deafness is higher (Van Cleve 1987:102). Since Lebanon and Israel have better healthcare than many other Arab countries, we may assume that there is an even higher incidence of deafness in other Middle Eastern countries like Yemen.

For Jordan it would seem that a figure like that given for Lebanon, somewhere between 0.25% and 0.3% deaf people (that is, 15,000 to 20,000 people with severe to profound hearing loss), is realistic. This would mean that Jordan has a Deaf population which is comparable in size to that of a country like the Netherlands. The incidence of deafness in the Middle East is much higher than in Western countries, for which it has been calculated to be between 0.05% and 0.1%. The higher incidence is most likely due to the high incidence of consanguineous marriages in the Arab world. According to

Shahin, Walsh, Sobe, Lynch, King, Avraham and Kanaan (2002:284) “prelingual hereditary hearing impairment occurs in the Palestinian population at a frequency of approximately 1.7 per 1,000 and is higher in some villages.” This means that among Palestinians the incidence of deafness with hereditary causes alone is higher than the total incidence of deafness in Western countries.

In Jordan, most of the students enrolled in schools for the deaf have a genetic hearing impairment. A study by the Ministry of Social Development in 1994 showed that the genetic factor played a role in 51% of the students (al-Zraigat 2002:78). According to other researchers heredity causes 60% of early childhood deafness (al-Zraigat 2002:52). Among the students with a genetic form of deafness, 85% of the cases were caused by first-cousin marriages. The most common non-genetic causes of deafness were found to be Rubella in the mother during pregnancy, accidents, and hyperthermia (al-Zraigat 2002:79). Although people in general are becoming more aware of the risks of consanguineous marriages, the percentage of these marriages seems to be reducing only in the middle classes. Both among the poor and among the rich the percentage of consanguineous marriages is going up. The poor can often not afford the dowry that is needed to marry outside the family, whereas the rich intermarry to keep their money within the family.¹

As a consequence, numbers of deaf people in Jordan do not seem to decrease, as they are in some Western countries. Modern technology like Cochlear Implantation (CI) is relatively uncommon. At the moment there are only about 60 people with cochlear implants in Jordan. In Jordan, Syria, Egypt and Lebanon together there may be a few hundred CI patients. Implant operations done in this part of the world are often performed by Western surgeons, who are not allowed to practice on people in their home countries and therefore go to countries with less strict legislation to get experience. The biggest problem with CI in the Arab world is that the necessary follow-up in terms of training and technical services is not readily available. Consequently, a number of CI patients never use their implants and function in sign language. About 5,000 hearing aids are sold annually in Jordan. As new hearing aids are needed about every four years, this implies that between 10,000 and 20,000 people (depending on whether they need them for one or two ears) wear hearing aids. Many of the deaf with severe-profound hearing loss do not use hearing aids and function mainly in sign language.

¹ Much of the information presented in this section and Section 1.1.4 for which no published sources are given has been kindly supplied by Br. Andrew de Carpentier (personal communication), director of the Holy Land Institute for the Deaf, who is one of the main authorities on deafness and education for the Deaf in Jordan.

Little genetic research has been done on deaf people in Jordan. Most deafness appears to be non-syndromatic, although syndromes like Usher's are quite common. At the Holy Land Institute for the Deaf (HLID) about 8-10% of the students are affected by Usher's. In some cases Usher's can result in deaf-blindness. Deaf-blindness also occurs as a result of medical mistakes, whereby premature babies are taken out of incubators too suddenly without enough time for them to get used to the lower level of oxygen outside the incubator. The first unit for deaf-blind children in Jordan was established at the HLID in 2003. Currently it provides care and training (using a modified form of LIU) for four children.

In Jordan, the Ministry of Social Development is responsible for rehabilitation as well as educational services for the deaf, although the Ministry of Education also has an important say in the latter. A World Federation of the Deaf (WFD) survey report from 1991 stated that there were no interpreter services available for deaf people in Jordan. Although there has been some change in this situation since 1991, there are still no qualified interpreters. Interpreters are working in some of the universities and colleges (see Section 1.1.4) but they do not have a degree or diploma, and have not taken official exams. People who want to work as interpreters are generally sent to the HLID, where the director asks them to communicate with some of the staff and students. Depending on how well they do, and how well the deaf think they function, they receive a letter recommending them as interpreters. In 2006 a basic sign language course was developed at the Max Planck Institute for Psycholinguistics in Nijmegen (Netherlands), in co-operation with the HLID. So far this course has been used to train a small group of potential interpreters, who had to pass an exam at the end of the course and were given a (non-accredited) diploma. It is hoped that more advanced courses will be created in the future, and that the teaching of these courses can be done at one of the universities, so that an official interpreter training course can gradually be established. There are plans to integrate such a course within Jordan University and/or the recently established Jordan-German University in Madaba.

Due to the fact that interpreter services in higher education have only become available in the last five years or so, most deaf people in Jordan are involved in manual labor, such as carpentry, dressmaking, car maintenance, hairdressing or work in factories. A 1993 law states that public and private sector companies employing between 25 and 50 people have to employ at least 1% disabled people. Companies with more than 50 people have to employ at least 2% from the disabled population. However, by 2000 only 170 men and 7 women with hearing impairments were employed under this law (al-Zraigat 2002:83).

Because deaf people who have learned the local sign language can communicate freely with each other and will always have problems understanding those who do not know sign language, they tend to stick together and form a close-knit community of their own. In the Middle East, as in other parts of the world, there are many Deaf clubs², where Deaf people mix and talk together. Many Deaf people marry other Deaf and have Deaf friends. Thus, the Deaf form a sub-culture, with their own language, their own humour, their own values, traditions and their own problems, as is the case in many other Deaf communities (cf. Padden and Humphries 1988; Ladd 2003). Because of the high number of deaf people, this community is quite strong in the Middle East. Although in most cases hearing people who are proficient in the local sign language are welcomed with open arms, in some cases they may be viewed as intruders who want to take advantage of the Deaf.

The first Deaf club in Jordan was established in 1986 in co-operation with the Ministry of Youth. Some of the official aims of this club are the integration of hearing-impaired people into society, providing them with a job, and providing them with interpreting services (al-Zraigat 2002:83). Since then Deaf clubs have been established in the three main cities of Jordan (Amman, Irbid and Zarqa). However, with no national association for the Deaf and the clubs being run mainly by volunteers, it is impossible for the clubs to provide such services to Deaf people all over the country. The clubs do provide some sign language training, and the interpreters that work for the national television, which has sign language interpretation for the 6 pm news broadcast and the weekly Friday broadcast of the mosque service, have been trained in the clubs.

It is hard to say what percentage of deaf people in Jordan actually know LIU. I have personally met several deaf people from more rural areas who did not understand LIU and appeared to use a form of home signing to a greater or lesser degree. However, to the best of my knowledge no research has been done into this form of communication in Jordan.

1.1.4 Education for the Deaf in Jordan

Regular education in Jordan consists of two years of pre-school (kindergarten), a ten-year basic cycle (grades 1 to 10, from about age 6 to

² As is common in the literature, in this dissertation ‘Deaf’ is written with a capital D when it refers to people who belong to this Deaf community. They are the people who have a good command of sign language and a lot of contact with other Deaf people. In contrast, the term ‘deaf’ refers to the medical condition of those with a severe-profound hearing loss.

about age 16), which is compulsory (and free of charge) for all students in government schools, and a secondary education cycle of two years (grades 11 and 12). This latter cycle has two streams: a comprehensive stream (which includes general education plus academic training or vocational education) and a vocational training and preparation stream. The comprehensive stream is concluded with a national exam (*Tawjihi*) which allows those who pass it to go on to university if they have followed the academic track, or to college if they have followed the vocational track.

The first school for the Deaf in Jordan was the Holy Land Institute for the Deaf, established in 1964 as a charity under the Anglican Church. It has a kindergarten, primary and secondary school as well as a vocational training department. Students in this school have been able to take *Tawjihi* exams since 1999, following the vocational track. They can then go on to college. Recently it has also become possible for students to follow the academic track, although they all have obligatory vocational training up to grade 10. The HLID is currently the only residential school for the Deaf in the country and is also the leading institute in the country and the Middle East for deaf education and sign language research and implementation. According to Al-Fityani (2007:8) it is “now considered a model school for deaf people in the Middle East”.

In 1969 the Ministry of Social Development started to establish the al-Amal (meaning ‘Hope’) government schools for the Deaf in different parts of Jordan. There are currently eleven such schools scattered across the country (cf. Figure 1.2). In the past only primary education (up to grade 6, around age 12) was available in the government schools, but in 2006 some of the larger schools (Irbid, Amman and Aqaba) started secondary departments which aim to teach up to grade 9. This is still less than the compulsory education for hearing students, and Deaf students graduating from these schools cannot go on to higher education. It is the intention of the government, however, to create possibilities for secondary education up to *Tawjihi* level in all the schools for the Deaf. A vocational skills department for girls is also part of the programme at the al-Amal schools.

Finally, in 1977 a second private school was established near Zarqa. Al-Raja School for the Deaf is monitored by the Charitable Deaf Society and has classes from kindergarten level up to secondary *Tawjihi* level. Students who graduate from that school can go on to university or college. Al-Raja School, like the government schools, is a day school, which in practice means that only Deaf students from Zarqa and Amman can attend.



Figure 1.2: the locations of the schools for the Deaf in Jordan

Altogether there are about 850 Deaf children enrolled in the 13 schools just described. In addition, there are also Deaf units in some mainstream schools scattered throughout Jordan, which cater for another 400-500 children. Consequently, there are about 1300 Deaf children in total enrolled in Deaf education at the primary level (kindergarten up to grade 6). Nationwide about 17% of the population is of primary school age. If we assume that there are around 15,000 Deaf people in Jordan, this would give a figure of about 2500 primary school age Deaf children. About 1300 of these are enrolled in education, implying that around 50% of Deaf children currently receive primary education. A WFD survey report from 1991 gives a figure of 20-25% (Joutsalainen 1991:34), suggesting that the percentage of Deaf children receiving education has doubled over the last 15 years.

When we look at secondary education (ignoring the recently established grades 7-9 in some of the government schools), percentages decrease drastically. The two private schools for the Deaf have about 70 students enrolled at secondary level (grades 7-12). Most of these students end up taking *Tawjihi* exams. About half of the Deaf students taking *Tawjihi* have attended regular schools and may have had some home support. Hence, all in all there may be about 150 Deaf people enrolled in secondary education. Nationwide, more than 50% of the people are under 18 (64% of the population is aged under 19 according to the Manual of Disability and

Institutes Welfare and Rehabilitation of Disabled Persons in Arab Countries in 1998, quoted in al-Zraigat 2002). If we once again take the figure of 15,000 Deaf people in Jordan as a starting point, this means that there are at least 7,500 Deaf people under 18. Consequently, we have to assume that only 0.2% of the Deaf receive secondary education, half of them in mainstream schools with little support.

Currently about 35-40 Deaf students are enrolled in higher education (college and university). For comparable figures in European countries, cf. Stevens (2004). There are three universities that employ interpreters and have sign language support for Deaf people. These universities are al-Balqa' Applied University in Salt, which also has affiliated colleges all over the country, Jordan University in Amman, and al-Hashemiyya University in Zarqa. It is hoped that the Irbid University of Science and Technology will also start employing interpreters. An agreement between the universities and the Ministry of Education says that every two students have the right to one interpreter. This means that the subjects the Deaf students can choose from are limited. There is, for instance, one Deaf student studying English, but because she is alone (and there are no interpreters with enough knowledge of English) she has to go through university without an interpreter. The choice of subjects is also limited because the three universities that offer sign language support do not teach all subjects. Most Deaf students enrolled in colleges study special education, with the aim of becoming teachers of the Deaf. There is also a considerable group of Deaf people acquiring college-level computing skills, as well as Deaf people studying accounting and administration. Other subjects that Deaf people are studying are sports, physiotherapy, architecture and general education. Higher education for the Deaf plays an important role in reducing the stigma associated with deafness. In some cases, Deaf students have been the first in their families to graduate from college or university. This has been the source of great pride within these families and proves to people in general that Deaf people are not mentally deficient.

Great progress has been made in the education for the Deaf over the last 15 years, both in the numbers of Deaf students enrolled in schools and in the extent and quality of education. Jordan is now the leading nation in the Middle East in terms of education for the Deaf. It is, for example, the only country in the region where Deaf people can study at university level with the aid of interpreters. Deaf education, however, is still in need of improvement. One of the problems noted by al-Zraigat (2002:85) is that many schools lack sufficient tools and materials, as well as teachers that are specialized in teaching the hearing impaired. Many teachers come from regular schools and have no knowledge of special education. Even those who have studied special education have focused on a wide variety of target

groups, including education for the blind, deaf, physically disabled and mentally disabled. Most teachers that start working at schools for the Deaf do not know any sign language, and courses in LIU are not offered at most schools (the exception being the HLID). As a result, communication between Deaf students and their teachers is often limited, and this affects the level of education provided and achieved.

Because education in the Arab World focuses mostly on rote-learning, Deaf students with a good memory may pass exams which they do not understand. Until recently education in most of the government schools and in al-Raja school was strictly oral, but most teachers have switched to some form of manual communication because it yields better results (cf. Chamberlain and Mayberry (2000), who show that the same holds true in the United States). Most teachers nowadays call what they use Total Communication, whereas in fact it is some form of signed Arabic. Abdel-Fattah (2005:213) comments that “in Arabic [countries], hearing learners of sign language vernaculars have considerable difficulty in grasping the idea of not signing *every word* in an utterance as one would say it in the spoken variety.” This situation is not unique to Jordan or the Middle East. In fact, Burns, Matthews and Nolan-Conroy (2001:184), commenting on the situation in the United States, note:

“In the classroom...use of natural sign language has traditionally been viewed negatively and considered unworthy in the education of deaf children. Numerous studies have reported that where hearing teachers do use sign, they are not fluent in the natural sign language, and typically develop a contact code that intermixes spoken and sign language grammatical elements.”

Because there is no standard form of this ‘contact code’ of Arabic and LIU, teachers all have their own way of signing and this causes problems in communication. As a result of these language and communication problems, most Deaf people in Jordan (even the ones who have passed their *Tawjihi* exams) do not acquire the necessary reading skills to be able to read and understand MSA. Rather, when writing, they communicate in word-for-word translations from LIU, often writing words from the spoken dialect, which are not normally written.

Burns et al. (2001:183) state that “within Deaf communities, attitudes towards sign languages, and particularly their use in education, are a major issue worldwide.” This also holds true for Jordan. It is to be expected that education and reading skills will be improved if the use of LIU can be introduced in Deaf education in Jordan. For the US, Chamberlain and Mayberry (2000:226) give a brief overview of several decades of research which reveals “that most studies showed a positive effect of sign language

on reading and academic achievement”. It is encouraging, therefore, that LIU was recognized as a subject by the Ministry of Education in the spring of 2006. It is now supposed to be an official subject on the curriculum for schools for the Deaf. This means that all Deaf students should receive a grade for their sign language skills. It is also an elective subject in mainstream schools, provided that there are people available to teach it. LIU has not yet been recognized as an official language of Jordan, but proposals to have it recognized as such are in the making. Experiments with bilingual education in LIU and Arabic started at the HLID in 2005 with very positive results. An introductory grammar of LIU in Arabic, published in 2006 (a translation of Hendriks 2004), and other materials in sign language are hoped to make teachers (and others dealing with Deaf people) more aware of the fact that LIU is a real language with its own grammar.

In summary, we can say that with regards to the sociolinguistic situation of the Deaf community in Jordan, many positive changes have taken place within the last ten years. This is particularly true for urban areas of the country, where most schools for the deaf are situated. Social and religious stigmas associated with deafness appear to be gradually reduced. Better education for the deaf, as well as acceptance of their sign language as a real language, plays an important role in this process. Although much remains to be done in this area, Jordan plays a leading role in the Middle East when it comes to the acceptance and use of sign language in deaf education.

1.2 The status of LIU

With regards to the status of LIU, two aspects are of interest: the influence of the dominant language and culture on LIU, and the attitude of Deaf people towards LIU. These two aspects will be discussed in this section. More information on the relationship between LIU and Arabic will be presented in Chapter 3, which gives an overview of the grammar of LIU.

1.2.1 Influences from Arabic and Arab gestures on LIU

The lack of education for deaf people in the past has had an influence on the way sign language has developed in the Middle East. Extensive use of fingerspelling, as attested in American Sign Language (ASL) for example, is absent in LIU. Two fingerspelling systems are in use within the educational system, one for spelling Arabic script and one for spelling Roman script. The fingerspelling system used for Roman script languages like English is based on the American fingerspelling alphabet with some minor changes in

handshape (cf. Hendriks 2004). The fingerspelling system used to represent the Arabic alphabet is shown in Figure 1.3.

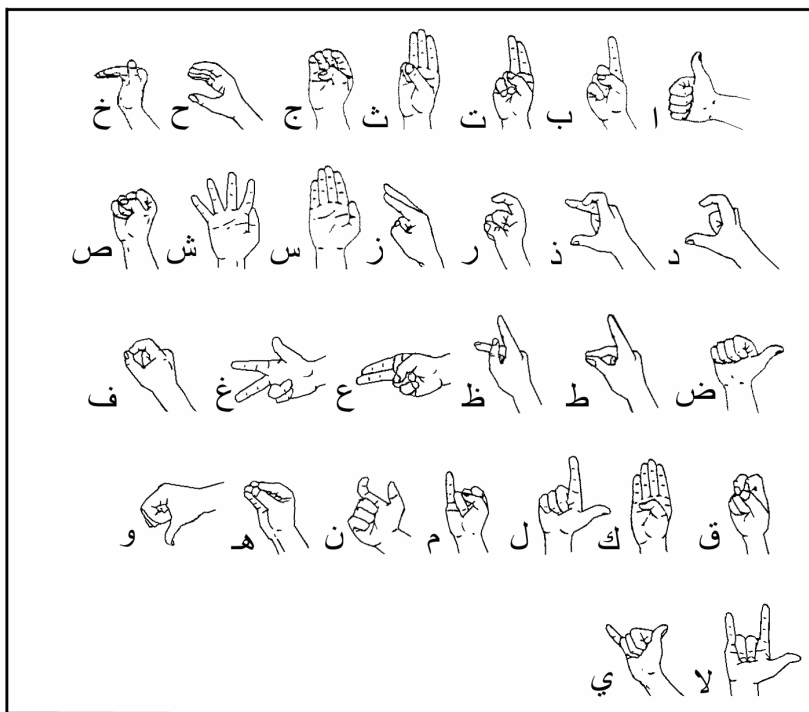


Figure 1.3: the Arabic fingerspelling alphabet

The Arabic fingerspelling alphabet appears to be replacing an older system that resembles cued speech and is based on the sounds of the Arabic language. This system is still in use in some Arab countries. However, the Arabic fingerspelling alphabet appears to be used increasingly in different Arab countries, with some slight modifications (cf. also Abdel-Fattah 2005:219 for a picture of the alphabet). For an important part, the shapes of the letters are based on the written form of the Arabic letters. For instance, the handshape for the letter *baa* (ب) has one finger extended because the written letter has one dot, the *taa* (ت) has two fingers extended because the written letter has two dots and the *thaa* (ث) has three fingers extended because it has three dots. The Arabic fingerspelling alphabet is used mainly to spell names and unfamiliar words and is not an integral part of LIU itself. Contrary to what Lucas (2000:149) claims for ASL, it includes a number of handshapes that do not occur in the phonology of LIU (cf. Figure 3.1). LIU

does not use lexicalized fingerspelling and there are no indigenous initialized signs or sign names, as is common in ASL (cf. Supalla 1990, 1992; Padden 1998). Instead, most sign names are descriptive and based on physical characteristics like a scar or a certain haircut. According to Nyst (2007a), such descriptive name signs are used in most sign languages, but their proportion varies.

Deaf people tend to use mouthings of Arabic words (as used in the spoken Jordanian dialect) to different degrees. The use of mouthings depends, to a certain extent, on their knowledge of spoken Arabic as well as the degree of their hearing loss. Mouthing of Arabic words tends to be used more when Deaf people sign to hearing people than when Deaf people are signing to each other. Some signs are almost always accompanied by the Arabic mouthing, but for most signs the mouthing appears to be optional (cf. Chapter 3.1.2).

In some cases LIU appears to follow Arabic word order. Numbers in LIU, for instance, have the same order as in both spoken Jordanian Arabic and MSA. In Arabic units follow tens (e.g. in the number 32 the 2 comes first and the 3 last ‘two and thirty’) and the same is true for LIU. In fact, it appears that many sign languages follow the word order of the surrounding spoken language in this respect. In Sign Language of the Netherlands (*Nederlandse Gebarentaal*, NGT) and German Sign Language (*Deutsche Gebärdensprache*, DGS) the digits are signed first, followed by the tens, as in Dutch and German, in ASL and British Sign Language (BSL) the tens come first followed by the digits, as in English. Also, adjectives normally follow the noun in LIU as they do in Arabic (both the spoken dialect and MSA). However, there are also quite a number of differences in word order between LIU and Arabic. In Arabic, for instance, numbers tend to precede nouns (at least in indefinite constructions³), whereas in LIU they tend to follow nouns. It is not clear to what extent similar word order patterns in LIU are caused by the influence of Arabic or are coincidental. The strongest influence from Arabic on the structure of LIU is seen in individual educated signers, who may be influenced by Arabic grammar to a greater or lesser extent. Interestingly, however, where there is a difference in word order between spoken Jordanian Arabic and MSA, the word order used appears to be derived from the spoken dialect. Moreover, the influence of Arabic on LIU can vary in different situations. Some educated signers tend to use Arabic constructions and word order more when they are signing with hearing people (cf. Section 1.2.2).

³ If the whole phrase is definite, as in “the five books” or “his five books” the number may follow the noun, but in indefinite constructions (which are by far the most frequent), such as “I have five books” the number precedes the noun.

Besides the spoken language, conventional hand and head gestures of the surrounding culture have some influence on LIU. In Arab culture, the use of gestures is very common (Barakat 1973) and many of these gestures also appear in LIU. In some cases they are used by Deaf people in the same way as by the hearing population, as is the case with the backward head-tilt expressing negation (cf. Chapter 4.4.1). In many cases, however, these gestures have been integrated into LIU to such an extent that their meaning is more specific than the same gesture used in the surrounding hearing culture. The gesture in Figure 1.4, for instance, is used by Arabs all over the Middle East, and in a similar form in India and Pakistan (cf. Zeshan 2006c:309-310) as a gesture to signal a question. In LIU the same gesture is used as a specific question word, which functions alongside other question words (cf. Section 3.5.1). In the same way, the gesture in Figure 1.5 is used by Arab children when requesting something. They may use this gesture before, during or after a request. In LIU the gesture has become a sign that can be glossed as PLEASE and that generally occurs at the beginning of an utterance to mark it as a request.



Figure 1.4: questioning gesture



Figure 1.5: requesting gesture

The process whereby a gesture becomes a lexical item is referred to as lexicalization. A lexical item derived from a gesture may subsequently become a grammatical marker, a process that is called grammaticalization. According to Pfau and Steinbach (2006) the grammaticalization of gestures in sign languages is a modality-specific phenomenon.

1.2.2 Sociolinguistic attitudes of Deaf people towards LIU

According to Kyle and Woll (1983) deaf people in Britain had no label for their language apart from ‘signing’ when research into BSL began. To the best of my knowledge, the same is true for Jordan. The term Jordanian Sign Language or LIU is not used by Deaf people and sign language is simply

referred to as ‘signing’, although distinctions may be made between ‘signing of Salt’ and, for example, ‘signing of Amman’ or ‘signing of the clubs’. In recent years an effort has been made to standardise the sign language to a certain extent, in order to create a dictionary that can be used throughout the country. This project was coordinated by a group of Deaf people working at the HLID, who started the project by holding several meetings with Deaf people from different parts of the country. The goal of these meetings was to decide which signs should be included in the dictionary, and which should be categorised as ‘non-standard’ and therefore excluded. In many cases the dictionary (which is hoped to be published in 2008) still includes two or three different regional signs for the same concept, but other variants have been left out. It seems, therefore, that Deaf people do have a certain awareness as to what varieties of the sign language constitute ‘acceptable forms of LIU’, and which varieties are ‘substandard’.

Because sign languages are viewed by many people in Jordan, including some deaf people, as substandard, some deaf people refuse to use the sign language because they regard it as inferior to the spoken language. Even deaf people who do use sign language do not generally realize that it is a real language with its own grammar, although this idea has started to take hold in some segments of Deaf society since the publication of Hendriks (2004). Deaf people sometimes distinguish between ‘hearing signing’ and ‘deaf signing’. They may view the latter as their own ‘slang’ and consider a hearing person’s sign language as more ‘standard’ than their own. When signing to a hearing person, they may even modify their own sign language to become more ‘hearing’ without realizing that this makes it less well-formed or grammatical. This situation is by no means unique to Jordan. Following Lucas and Valli (1989, 1991, 1992) Burns et al. (2001:192) note about ASL:

“It has been suggested that deaf people not only sign differently with other deaf people than with hearing people, but that they may initiate a conversation in one language and then radically switch when the interlocutor’s hearing status is revealed.”

That this also affects the way they view language in general becomes obvious when they distinguish ‘hearing Arabic’ (which is grammatical well-formed Arabic) from ‘deaf Arabic’ (usually a word-for-word translation of their sign language). This attitude is problematic, especially in education, because it may interfere with the learning of the spoken language and prevent students from learning grammatical Arabic. Many Deaf students do not expect to use the same language variety as their hearing teachers, and may view mistakes in Arabic as ‘differences’ rather than errors.

Overall, however, it seems that many Deaf people in Jordan are proud of their sign language and to a certain extent realise that it is a language, even if they do not have a name for it. This is clear from the fact that Jordanian Deaf people tend to be opposed to the idea of having a unified Arabic Sign Language to replace their own language, an idea that is promoted in some other Middle Eastern countries (cf. Chapter 2). However, some ambivalence can be seen in the attitudes of certain Deaf people towards their language and how it should be learned. On the one hand, they are proud of their language and compliment hearing people who learn it well. On the other hand, they do not seem to expect hearing people to learn to sign in the same way they do, and in some cases even try to prevent them from learning 'deaf signing'. This ambivalence is common in minority languages and particularly in sign languages (Burns et al. 2001:207). It can only be resolved when the language acquires more status. Burns et al. (2001:209) state that language attitudes change over time and that official recognition of the minority language as a language plays an important role in this process. An increased awareness among both the Deaf and the hearing population of the structure of LIU and its value as a language will eventually give the Deaf community more power and more self-esteem. Positive changes are already taking place in the language attitude of Deaf and hearing people towards LIU thanks to linguistic research into LIU. The recent official acceptance of LIU within the educational system and the production of a basic sign language course which does not teach only individual signs but also grammatical concepts are important results of this research. Both are expected to increase awareness of the linguistic status of LIU.

1.3 Data and Methodology

The data for this dissertation was collected between 1999 and 2007, mainly at the HLID in Salt. Most of the wordlists in Chapter 2 were recorded with the help of Deaf informants that were visiting the HLID, or during trips to other Arab countries in 2003 and 2004. Chapter 3, which gives a brief overview of the relevant aspects of the grammar of LIU, is based on Hendriks (2004). The data for the other chapters of this book consists of elicited and semi-spontaneous data. In the first couple of years very little data on video was used, because video recording was initially frowned upon by some of the leading figures of the Deaf community in Salt, who were very suspicious of the work of a hearing, non-Arab linguist. Also, within Islamic culture taking pictures or collecting data on video is sometimes problematic for religious reasons. From about 2003 onwards the resistance to linguists and video-recording had sufficiently subsided to be able to use this

much more efficient way of collecting and analyzing data. Chapters 4 to 7, therefore, are based on data recorded on video. Most of the data discussed in these chapters, then, was recorded between 2003 and 2007.

In total, about 12 hours of video were collected, ranging from elicited data to semi-spontaneous data. Data was elicited by means of games, particularly for the chapter on possession (Chapter 5), questions and answers, picture descriptions, re-telling of picture stories or stories shown on DVD or video (e.g. an episode from the famous *Canary Row* cartoons featuring Tweety and Sylvester, by Warner Brothers). Semi-spontaneous data include stories told by a Deaf person asked to sign a story (mostly to another Deaf person) in front of the camera. These stories include the re-telling of a film seen on television, a ghost story, Bible stories, and some stories about events the Deaf person had experienced in his or her own life or direct environment. These data also include some conversations between Deaf people and some teaching material. The data that was actually used in Chapters 4-7 was glossed and analyzed using Signstream[®] and later ELAN.⁴ There were a few utterances that were ambiguous or contained signs that were not well understood. These were not included in the analysis. Overall, no attempt was made to distinguish between signs and gestures, because this would have entailed a detailed study of the differences between the two, which is beyond the scope of this dissertation.

Signers that participated in the elicitation tasks were mainly students at the HLID, ranging between age 14 and 21 years, although some of the signers were older staff members. Students were asked because younger signers seemed, in general, to be the most fluent signers. Also, there were more students available to choose from. The signers who participated generally had either at least one Deaf parent, or at least one Deaf (in most cases older) sibling and used LIU at home. Informants signed a consent form allowing the use of their data for the purpose of research, as long as the data was confidentially stored. Additionally, informants could indicate whether they were happy to have their picture occur in a book or as part of a presentation. Naturally, all those whose pictures are shown in this dissertation consented to this. More detailed information about the signers and the data used in Chapters 4-7 is presented at the beginning of each of these chapters.

⁴ Signstream is a program for the Macintosh. The copyright belongs to Dartmouth College & Trustees of Boston University & Rutgers the State University of New Jersey. ELAN was created for both Macintosh and PC by the Max Planck Institute for Psycholinguistics in Nijmegen (Netherlands) and can be freely downloaded from their website: www.mpi.nl.

1.4 Glosses and typological conventions

In this book, signs from LIU are glossed in English for reasons of transparency and typographical convenience. When examples are given from languages other than LIU the glosses are presented in the same language as in the source article. Consequently, in some cases the glosses are in English with a free translation, and in some cases they are in a different language with both a literal and a free English translation.

I have tried to keep glosses consistent throughout the book, which means that glosses are based on the form of the sign rather than its meaning in a specific context. For example, the sign glossed as ONLY might be translated as “only” but also as “that’s enough”, or “that’s final”, depending on the context. Similarly the sign glossed as SELF can be translated as a possessive pronoun, as a reflexive pronoun or as “belong”.

The following conventions are used:

- For examples that are not from LIU, the source language is specified between square brackets. Examples from LIU are not marked.
- Glosses of signs are presented in small capitals.
- When more than one word is needed to gloss one sign, the words are separated by a hyphen, e.g. OPEN-DOOR.
- When a sign represents more than one concept in a single form, the glosses for these concepts are separated by a colon, e.g. NEG:EMPHATIC.
- When a compound sign is glossed with an English word for each compound part, these words are separated by a plus, e.g. RED+ETCETERA (“colours”).
- When a sign has an affix, the two are separated from each other in the gloss by a ^, e.g. NICE^NEG (“not nice”).
- When a description of a sign, rather than a gloss, is given below a picture, normal font is used, e.g. ‘negative affix’.
- Inflections for person on signs are represented by subscript numbers, directly adjacent to the gloss for the sign, e.g. ₁GIVE₂ (“I give to you”).
- Similarly, placement in the signing space is represented in subscript, e.g. INDEX_{right} or INDEX_i.
- Where relevant, additional information about a sign, such as whether it is a noun or a verb, may be given in brackets and in subscript after the gloss, e.g. PHONE_(V).
- Descriptions of classifiers or classifier constructions are preceded by CL:, e.g. CL:PERSON

- When a description of the movement of the classifier is important, it is presented in superscript adjacent to the gloss, e.g.
CL:PERSON^{go-around-in-circles}
- In some examples a double slash // appears in the gloss as a boundary marker. The placement of these markers is based on pauses, eye-blinks, and/or changes in facial expression.
- Translations of a sign, or a string of signs, are rendered between double quotation marks. Where information from the linguistic or situational context is needed for a correct interpretation of the utterance, this information is added to the translation between brackets, e.g. (she said:).
- Non-manual information is presented in subscript on the line above the main gloss. The scope (i.e. onset and offset) of the non-manual is indicated by means of a line, e.g.

yes/no question

LIVE AMMAN

“Do you live in Amman?”

For reasons of space this information may be abbreviated, i.e. “y/n” for “yes/no question”, or “hs” for “headshake”.

- Descriptions of simultaneous constructions are represented on two lines. The upper line represents the dominant hand and the lower line the non-dominant hand. Whenever two glosses are written directly above each other, the signs are produced simultaneously. If a sign that is normally produced with both hands occurs in the simultaneous construction, the sign is glossed on both lines and receives the specification (2h) for two-handed. If a sign (or the perseveration of a sign) is held on one hand, while the other hand simultaneously produces several signs, the duration of that prolonged sign is indicated by means of a line following the gloss. Any significant changes in the movement of such signs are represented in superscript, e.g.

CHILD(2h) TWO _____
CHILD(2h) _____ GIRL WHAT FATHER DEAD CRY ;

CL:BRIDGE KNOW CL:BRIDGE

CL:VEHICLE_{forward hold backward}

- Words transliterated from Arabic are presented in italics. In some cases, the Arabic word itself is added between brackets.
- In Arabic transliterations a letter with a period underneath represents a so-called ‘emphatic’ (pharyngealized) sound, e.g. ṣ for ص, ḥ for ح, a 9 represents the voiced pharyngeal fricative (ع) and an apostrophe

represents the glottal stop (ʔ). Long vowels are represented with a hyphen above them (ā, ī or ū).

1.5 Aim and outline of the book

As mentioned at the beginning of this chapter, the aim of the present study is to describe some aspects of LIU grammar from a cross-linguistic perspective. Beyond describing LIU, one of the main goals of the study is to investigate in how far a non-Western sign language like LIU is structurally similar or dissimilar to other sign languages that have been described. Zeshan (2008:672) notes that the cross-linguistic study of sign languages is still in its infancy and comments that

“[a]lthough typologists use a very wide range of language data to study patterns of language variation, including many ‘exotic’ languages in all parts of the world, sign language data have previously been almost entirely absent from research in linguistic typology.”

The fact that sign languages are produced and perceived in a different modality than spoken languages (visual-gestural vs. aural-oral modality) makes them an interesting topic for cross-linguistic research. In fact, due to the absence of sign language data from typological research, typologists cannot really claim to make statements about the true nature of human language. At most, they can claim that so-called ‘language universals’ are universal to spoken languages. Such universals need to be reassessed in the light of sign language data to find out whether they are true universals or whether they are modality-specific. A problem for sign language typology is that only a minority of the world’s sign languages has been documented to date, and these are mainly Western European and North American sign languages. No typological conclusions can be drawn from such a limited range of languages. Zeshan (2008:674) notes that one of the first aims of sign language typology must therefore be “to collect reliable and adequately structured information on a broad range of sign languages”. The aim of this dissertation, then, is twofold: firstly, to present a description of the grammar of a non-Western sign language, from a region which has seen very little sign language research to date; and secondly, to compare the patterns to be described with what is known about other sign languages from different parts of the world.

Because of the scarcity of research into Arab sign languages, Chapter 2 is devoted to placing LIU in its wider regional perspective, by presenting the results of a lexical comparison between different varieties of

sign language used in the Middle East. In addition, Chapter 3 gives a brief overview of relevant aspects of LIU grammar at the phonological, morphological, and syntactic level. The main body of this dissertation, however, consists of four chapters which discuss different syntactic and discursive phenomena in LIU and compare them to similar constructions in other signed (and where applicable spoken) languages. I have chosen to describe some grammatical aspects of LIU in depth, rather than attempt to give an overview of the entire grammar of the language in order to be able to ‘adequately structure’ the information presented and to allow for interesting cross-linguistic comparisons. Because of the cross-linguistic perspective taken in this dissertation, the topics that were chosen for detailed analysis were to a certain extent dependent on research done on other sign languages. Thus, Chapter 4 looks at negative constructions from a cross-linguistic perspective, making use of typological information available for negative constructions (cf. Zeshan 2004, 2006a). Chapter 5 constitutes part of a typological project comparing possessive and existential constructions in different sign languages (cf. Perniss and Zeshan 2008). Chapter 6 looks in detail at manual simultaneous constructions in LIU, comparing them to simultaneous constructions in other sign languages (cf. Vermeerbergen, Leeson and Crasborn, 2007a). Chapter 7 describes the use of perspective in LIU narrative discourse. This subject was chosen, despite the absence of typological studies in this area, because LIU displays a number of features which are interesting in light of what is known about other (mostly Western) sign languages. Finally, Chapter 8 summarizes the similarities and differences found between LIU and other sign languages, discussing the implications and giving suggestions for further research.

Chapter 2: Sign language varieties in Jordan and the Middle East

In this chapter I present the results of lexical comparisons using wordlists collected from ten different places in the Middle East. Although lexical comparisons by themselves are not sufficient to allow for definite conclusions about language relatedness, it is interesting to see the lexical differences and similarities between sign language varieties in the Middle East.

I will start this chapter by making some brief comments on the history of sign languages in the Middle East, including current attempts to unify Arabic sign languages (Section 2.1). Section 2.2 discusses the data and methodology on which the analysis is based. It describes the process of data collection (Section 2.2.1), the choice of the wordlist used (Section 2.2.2) and the analysis of the data (Section 2.2.3). Section 2.3 discusses the results of the lexical comparisons and their interpretation. Section 2.4 concludes this chapter.

2.1 The history of sign language in the Middle East

No research has been done on the age or history of sign languages in the Middle East. The only published source on this subject is Miles (2000), which deals with signing at the court of the Ottoman sultans in the 16th and 17th century and is based on reports by European visitors to the Ottoman court. Miles has found that

“Deaf people, known as ‘mutes’, worked in the Turkish Ottoman court from the fifteenth to the twentieth century in various roles along with dwarfs and other entertainers. Their signing system became popular, was used regularly by hearing people including successive Sultans, and was reportedly capable of expressing ideas of whatever complexity.” (Miles 2000:115).

Unfortunately, it is not known to what extent modern Turkish Sign Language (*Türk İşaret Dili*, TİD) is related to this sign language used at the Ottoman court. If it is related, TİD would be one of the oldest sign languages we are aware of worldwide. The Ottoman Empire stretched out across the Middle East and included Jordan. It is, therefore, possible that there has been mutual influence between the sign languages used in Turkey and in the Arab

world. This, however, remains speculation since no written sources are readily available.

The fact that hardly any research has been done into either the historical background of or the variation between the sign languages in the Middle East has resulted in the mistaken idea that there is, or at least should be, one standard Arabic Sign Language for Deaf people in the Arab world. According to Abdel-Fattah (2005) this is due to the diglossic nature of Arabic. Since Arabic consists of one standard language which is understood across the Arab world as well as a wide variety of vernaculars, Arab scholars think that there should likewise be a standard sign language which can be understood across the Arab world. Abdel-Fattah (2005:213) points out that “[p]eople and scholars outside the Deaf communities cannot appreciate the idea of having other sign language vernaculars”. The idea, launched by a group of medical specialists in Syria, that Deaf Arabs need a common sign language that functions as a standard language in the same way that Modern Standard Arabic functions as a standard language among hearing Arabs has led to attempts to create a ‘unified Arabic Sign Language’ over the past 10 years or so. According to Abdel-Fattah (2005) these attempts have been unsuccessful so far. Because this project was not informed by linguistic considerations and documented facts about the sign languages in the region, the ‘unified Arabic Sign Language’ is merely a list of signs compiled from different Arab sign languages in an artificial and communicatively unacceptable way. Still, the approximately 1200 signs from the unified Arabic Sign Language dictionary are used on pan-Arab television channels, like Al-Jazeera, and in some Arab countries (like Syria) the use of these signs is enforced in schools for the Deaf. In the light of these attempts to unify Arab sign languages, it is all the more important to have some comparative data of the different sign language varieties used in the Middle East. In fact, a recent lexical study conducted by Al-Fityani (2007) comparing sign language varieties from Jordan, Palestine, Kuwait, Libya and the Al-Sayyid Bedouin community comes to the conclusion that these languages are too far apart to be standardized (cf. also Al-Fityani and Padden 2008). She states that

“[t]he underlying assumption [in the project to unify sign languages of the Arab world] that sign languages of the region are similar enough to be standardized may in fact be wrong. It may be risky to devise a “standardized” sign language in the Arab world, given the difficulty of standardizing languages that are historically unrelated.” (Al-Fityani 2007:11-12)

More studies like the one by Al-Fityani are needed to be able to make an informed decision about standardization. These studies should preferably not

just look at lexical relatedness but also at other linguistic features, such as grammatical structure.

2.2 Lexical comparisons: Data and methodology

2.2.1 Data collection

In order to find out more about the relationships between sign language varieties used in different countries in the Middle East, I collected 14 wordlists during 2003 and 2004. Most of these wordlists were elicited and recorded on video, but for two wordlists I made use of existing digital dictionaries (note that Al-Fityani (2007) used published dictionaries in her comparative study; for the use of dictionaries in lexical comparisons cf. Johnston (2003)). Wordlists were collected from six different countries in the Middle East (Jordan, Syria, Iraq, Yemen, Egypt and Turkey) and from Brazil, which – given that the Brazilian Deaf use as a completely unrelated sign language – was included as a control.

In Jordan, three lists were elicited at the HLID in Salt from three different students and one was elicited in Amman. Two of the students in Salt (Salt 2 and 3) were sisters and two of them (Salt 1 and 2) were in the same grade at school. These three lists were used to determine what percentage of signs would be the same for two Deaf people who use the same dialect. For Syria, the elicited list represents the dialect used in Aleppo, in the North of the country. Both lists elicited in Iraq are from Baghdad. The lists compiled in Yemen are from three different towns in different parts of Yemen: the capital Sana'a, the Southern city of Aden (former capital of South Yemen) and the Eastern city of al-Mukalla. The lists from Egypt are from Cairo (for which a CD-rom dictionary was used) and from al-Minya in Upper Egypt. The list from Turkey partly consists of signs that were found in an on-line dictionary of TİD signs (<http://turkisaretdili.ku.edu.tr>) and was supplemented by Dr. Zeshan of the MPI, who provided some of the signs that were not available in the on-line dictionary. Both groups of signs represent the dialect of Istanbul. The Brazilian wordlist was elicited with the help of an interpreter from the Sao Paulo area of Brazil. The geographical spread of the wordlists was mainly motivated by the availability of informants and (excluding the one from Brazil) is shown in Figure 2.1:

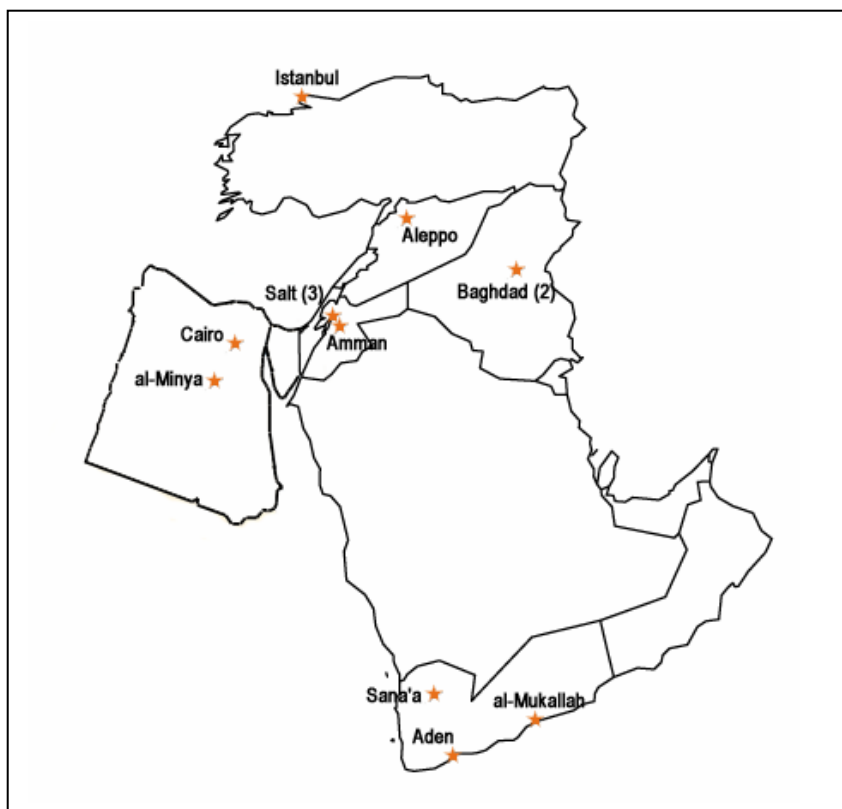


Figure 2.1: geographical spread of wordlists collected (N = 13)

2.2.2 The wordlist

There is no good standard word list available for lexical comparison in sign languages. A list commonly used for lexical comparisons in spoken languages is the Swadesh wordlist of 200 basic concepts. This list was designed by Morris Swadesh in the 1940-50s as a first step to determining the relatedness of two spoken languages or dialects on the basis of the percentage of cognates. The basic concepts included in this list are those learned in early childhood, because these are assumed to change very slowly over time, making it more likely to find cognates in languages that are quite distantly related. The Swadesh list, however, has been found to be unsuitable for comparing sign languages. Woodward (1993:16) comments:

“While it is common to use the original 200 word list Swadesh used to compare for cognates across spoken languages, it is not generally

desirable to use the same list for sign language research, because its use may result in slight overestimation of the relationship of closely related sign languages, moderate overestimation of the relationship of loosely related sign languages, and great overestimation of the relationship of historically unrelated sign languages. These overestimations are due to presence in the original 200 word Swadesh list of many items (e.g. body parts and pronouns) that are represented by pointing in sign languages. The comparison of indexic signs results in a number of false potential cognates.”

Woodward (1978) adapted the Swadesh list, excluding indexic signs, but his list of 100 words is still problematic when comparing sign languages, because it contains many words that potentially elicit iconic signs. The presence of a large number of words that elicit iconic signs in a wordlist can lead to high similarity scores between two unrelated sign languages, and is therefore not helpful in establishing the relatedness of two different sign languages. McKee and Kennedy (1999) used the list adapted by Woodward when comparing BSL, Australian Sign Language (Auslan) and New Zealand Sign Language (NZSL), but cautioned that comparisons based on this list revealed a much higher degree of overlap between the three sign language varieties than comparisons based on a random selection of signs taken from a sign language dictionary.

In order to avoid chance similarities due to iconicity, the wordlists collected for this research were based on a wordlist that was created by participants at a sign language linguistics course at the University of North Dakota (UND) in 2002 (cf. Appendix A). The participants in this course worked on different sign languages across the world. The aim was to come up with a list of words that would be suitable cross-culturally and could be used to determine relatedness (on the lexical level) between sign languages. The wordlist was designed such that there would be 200 words on a main list, with extras for words that might turn out to be problematic in a specific language. Half of these words should be easily obtained monolingually, with the assistance of pictures and props, the other half would have to be obtained bilingually, using a written language known by the Deaf informants. The words were arranged in a careful sequence to make it easier for participants to understand what is requested, and easier words were placed at the beginning of the list to build confidence. Words were grouped together by semantic domain, that is, similar or opposite meanings were presented subsequently. Some supplemental wordlists, which present words in systematic sets, were included as optional. Appendix A shows which of the words chosen were also used by Woodward, and in addition lists the words that were used by Woodward but were excluded in this study.

The choice of words in the list was motivated by the assumption that their signed translation would be unlikely to be identical or highly similar across unrelated sign languages, so that similarities would be likely to be the result of relatedness rather than chance. Since the course participants worked on different unrelated sign languages from around the world, it was possible to determine which signs were similar in many different sign languages and to avoid the corresponding words. Moreover, only words were included that were unlikely to yield a variety of responses from different people within the same linguistic group, and that would be usable in Deaf communities around the world, that is, words that are not geographically restricted or offensive to certain groups. An attempt was made to include only words that were not derivationally related to other words on the list and that were unlikely to be borrowed from other (spoken or signed) languages.

The list I used was slightly adapted from the UND wordlist and consisted of a total of 214 words. Half of those were elicited monolingually by means of pictures taken from an Arabic-Dutch picture dictionary. The other half was elicited by means of Arabic (or English) words. Additionally, I used some supplemental lists with the numbers 0-10, the days of the week, the names of several Middle Eastern countries and some Islamic and Christian religious words. In total 252 words were elicited. The final list that I used for lexical comparisons, however, only contains 185 signs (Appendix B). Sixty-seven words were excluded for various reasons. Thus, from each of the supplemental lists I chose three or four words each, so as not to include too many members of a systematic set (e.g. all seven days of the week). This reduced the number of signs to 228. Other words had to be excluded because the Arabic word which was meant to elicit the sign turned out to be too difficult and most of the signers did not recognize it. Some of the words elicited by means of pictures were excluded, too, because there did not seem to be a standard sign, and all signers (including those from the same dialect) produced a different sign (e.g. TAIL, FEATHER).⁵ Finally, words were excluded when all signers (including the one from Brazil) produced the same or a very similar sign (e.g. TELEPHONE, APPLE), because this was considered to be due to general iconicity rather than being an indication of lexical relatedness.

Although the number of signs that were finally compared was 185, not all signers signed all words. Some signers did not have a very good command of Arabic and were not able to sign some of the words on the bilingual list. One signer (the al-Minya wordlist) hardly knew any Arabic, so

⁵ It is interesting that Johnston (2003:63) mentions some of these same words, which also occur in Woodward's list, and argues that they also appear to be weakly lexicalized, if at all, in the dialects he was comparing and possibly also in ASL.

only the monolingual list was used. Where a dictionary was used, the total number of words depended on which signs were available in the dictionary. Thus, the number of words that were finally compared differs somewhat per wordlist. In the table that specifies the lexical similarity scores (Table 2.1) the number of words compared is given with the percentage of lexical similarity.

2.2.3 Data analysis

All recorded wordlists were glossed in Signstream®, and signs were analyzed according to three parameters: handshape (hs), location at the beginning of the sign (loc), and movement (mov).⁶ In this respect, the study differs from the one by Al-Fityani (2007) who added the parameter of orientation. For every sign, a description of these three parameters was entered into Toolbox. Signs from the different signers were then compared with respect to these three parameters. If all three parameters were the same between two signers, the signs were considered identical and given a score of one point. If two out of three parameters were the same, the signs were considered similar and given a score of half a point. If less than two out of the three parameters were the same, the signs were considered different and a score of zero was given (cf. McKee and Kennedy (1999) who used a similar way of scoring word pairs, but also included hand orientation as a fourth parameter). The total number of points between two wordlists was divided by the number of signs compared, and this gave the percentage of lexical similarity.

For the sake of illustration, Figures 2.2 to 2.5 show the sign MOUSE as signed in four different varieties, with their toolbox entries. The sign from Jordan-Salt3 (Figure 2.2) scores half a point when compared to both Jordan-Amman (Figure 2.3) and Iraq-Baghdad1 (Figure 2.4), because the handshape is different but the location and movement of the signs are the same. Jordan-Amman and Iraq-Baghdad1 have a similarity score of one, because all three parameters are the same. Yemen-Mukallah receives a similarity score of zero compared to the three other varieties, because both the handshape and the movement differ from the signs produced by the other three signers.

⁶ These parameters were considered to be the basic phonological parameters of a sign by Stokoe (1960), although since then other parameters, such as orientation and non-manual features, have been added.



/loc/ neutral space
/hs/ 
/mov/ zigzag forward

Figure 2.2: Jordan-Salt3 MOUSE



/loc/ neutral space
/hs/ 
/mov/ zigzag forward

Figure 2.3: Jordan-Amman MOUSE



/loc/ neutral space
/hs/ 
/mov/ zigzag forward

Figure 2.4: Iraq-Baghdad1 MOUSE



/loc/ neutral space
/hs/ 
/mov/ up and down forward

Figure 2.5: Yemen-Mukallah MOUSE

Following a similar study conducted in India and Pakistan (Zeshan 2000a), slight differences in handshape, such as whether or not the thumb is

extended, or the degree of bending of selected fingers, were disregarded. Also, extension or bending of non-selected fingers, as in the handshape  versus  was disregarded because these hand configurations were all considered to be phonetic variants. In contrast to Zeshan (2000a), however, in the present study the number of fingers that are extended if all the fingers are lined up was treated as relevant (e.g.  and  were considered two different handshapes). Also, Zeshan disregarded variation in local movement (e.g. bending vs. wiggling of fingers), whereas such variations (unless they were very minor) were counted as different movement types in the present study. When comparing compounds, Zeshan counted words that had at least one of the component parts in common as the same. In the present study compounds which had one part in common were counted as similar and given a score of half a point. All in all, the criteria for comparison were stricter than those applied in Zeshan's (2000) study. In the present study, presence or absence of a non-dominant hand was considered to be non-contrastive if both hands were specified for the same time of movement in neutral space (symmetrical or alternating; Battison's (1978) type I signs). If, however, the non-dominant hand functioned as a base-hand on which the dominant hand produced a sign (Battison's (1978) type II and III signs), the location entered was 'non-dominant hand'. A variant sign without the base-hand would have a different location (e.g. neutral space). Presence or absence of a base-hand would thus cause two otherwise identical signs to be scored as 'similar' rather than 'identical' (in contrast to Johnston (2003), who considered presence or absence of a base-hand as non-contrastive).

Signers were only asked to produce one sign for each word on the list. Theoretically, it would have been possible to ask signers to produce all signs they knew for every word. Johnston (2003) collected different variant forms of signs and scored two signs as identical in each of two sign languages if at least one variant form in one sign language matched at least one variant form in another sign language. If the same method had been used in this study, lexical comparison scores would have been much higher, since signers in the Middle East are often aware of more than one sign for a given word, whether or not they use it in their own dialect. Consequently, eliciting more than one sign per word would have made the task of comparing these fourteen wordlists almost impossible because of the size of the data pool.

2.3 Results and interpretation of lexical comparisons

2.3.1 Results

The percentages of lexical similarity (in bold), together with the number of signs compared (in *italics*) are given in Table 2.1:

185 words (non- iconic)	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Jordan-Salt1	Jordan-Salt2	Jordan-Salt3	Egypt-alMinya	Egypt-Cairo	Yemen-Aden	Yemen-Sana'a	Yemen-Mukallah	Syria-Aleppo	Iraq-Baghdad1	Iraq-Baghdad2	Jordan-Amman	Turkey	Brazil
Jordan-Salt1	x													
Jordan-Salt2	94% <i>177</i>	x												
Jordan-Salt3	95% <i>180</i>	93% <i>181</i>	x											
Egypt-alMinya	37% <i>88</i>	39% <i>88</i>	39% <i>88</i>	x										
Egypt-Cairo	36% <i>157</i>	37% <i>159</i>	38% <i>160</i>	61% <i>79</i>	x									
Yemen-Aden	43% <i>179</i>	45% <i>180</i>	44% <i>183</i>	36% <i>87</i>	42% <i>157</i>	x								
Yemen-Sana'a	42% <i>171</i>	44% <i>170</i>	43% <i>172</i>	43% <i>84</i>	49% <i>148</i>	64% <i>171</i>	x							
Yemen-Mukallah	42% <i>177</i>	42% <i>178</i>	43% <i>180</i>	47% <i>88</i>	45% <i>158</i>	67% <i>179</i>	66% <i>171</i>	x						
Syria-Aleppo	61% <i>172</i>	60% <i>172</i>	61% <i>173</i>	35% <i>85</i>	43% <i>153</i>	38% <i>173</i>	41% <i>165</i>	40% <i>170</i>	x					
Iraq-Baghdad1	51% <i>178</i>	53% <i>176</i>	53% <i>176</i>	32% <i>87</i>	34% <i>161</i>	37% <i>175</i>	41% <i>165</i>	40% <i>173</i>	51% <i>167</i>	x				
Iraq-Baghdad2	53% <i>175</i>	53% <i>174</i>	53% <i>176</i>	33% <i>86</i>	38% <i>154</i>	36% <i>175</i>	39% <i>166</i>	37% <i>173</i>	53% <i>169</i>	62% <i>169</i>	x			
Jordan-Amman	74% <i>178</i>	73% <i>180</i>	74% <i>182</i>	36% <i>87</i>	37% <i>158</i>	42% <i>181</i>	43% <i>169</i>	46% <i>178</i>	60% <i>172</i>	53% <i>175</i>	52% <i>175</i>	x		
Turkey	25% <i>149</i>	25% <i>150</i>	24% <i>151</i>	19% <i>67</i>	18% <i>133</i>	20% <i>153</i>	16% <i>145</i>	18% <i>148</i>	24% <i>147</i>	21% <i>146</i>	25% <i>150</i>	21% <i>151</i>	x	
Brazil	13% <i>172</i>	13% <i>173</i>	13% <i>175</i>	5% <i>84</i>	7% <i>152</i>	10% <i>176</i>	9% <i>161</i>	10% <i>172</i>	11% <i>166</i>	9% <i>168</i>	10% <i>171</i>	15% <i>175</i>	11% <i>151</i>	x

Table 2.1: lexical similarity scores

As expected, the percentages of the lexical comparisons from the same dialect (Salt 1-3) are the highest, with similarity scores of 93-95%. In most cases, differences between these signers were caused by different interpretations of the pictures on the monolingual list. For a picture of an infant, for instance, one signer signed BABY whereas another signer signed CHILD. The Brazilian control wordlist shows by far the lowest similarity score. In comparison with the Egyptian (al-Minya) wordlist, the percentage is as low as 5%, which shows that the wordlist has succeeded in reducing the role of iconicity as an intervening factor. The scores between these highest and lowest scores are the most interesting. The Turkish list, with a range of 16-25% similarity with the other lists, scores somewhat higher than the Brazil list. There are indeed some striking similarities between Turkish signs and those used in the Arab world. The sign YEAR, for instance, is made by tapping the teeth with the index finger in all the lists from the Arab world because the word “year” in Arabic is orthographically identical to the word “tooth”, both being spelled سنة. Similarly, in TID the sign YEAR is made by tapping the mouth with the index finger, even though in spoken Turkish there is no similar relationship between “tooth” and “year”. It may be that such similarities are caused by Arab influence during the Ottoman period, but this remains speculation.

Looking at the percentages within countries, we see that between Salt and Amman (which are only about 30 kilometres apart) there is about 74% lexical similarity. The three lists collected in Yemen show a similarity of 64-67%, and the two wordlists from Baghdad have a similarity score of 62%. Similarly, the varieties from Egypt (Cairo and al-Minya) have a 61% similarity score. Hence, all these varieties within countries show a score of more than 60%. In addition, the list from Aleppo (Syria) shows 60-61% lexical similarity with all the lists from Jordan. Other scores between different countries are lower than 60%. Syria and Iraq, as well as Iraq and Jordan, have similarity scores in the low fifties. Yemen appears to be more distantly related to all the other lists from Arab countries with percentages in the forties and high thirties. Compared to most other countries in the Middle East, Egypt has scores in the thirties. Egypt and Yemen have somewhat higher similarity scores, possibly because in Yemen many teachers in schools for the Deaf are Egyptian.

Although Al-Fityani (2007) used a methodology somewhat different to the one described here, her results from a comparison of Palestinian, Kuwaiti and Libyan Sign Language to LIU seem to fit nicely into the above table. In her study the varieties in Jordan and in Palestine score 58% similar. I would have expected these two languages to score somewhat higher (over 60%) because of the close historic ties between Jordan and the West-Bank and the fact that many people living in Jordan have relatives in the

Palestinian areas. However, the lower score may be due to the fact that Al-Fityani used printed dictionaries rather than material on video. It is interesting to note that most of the differences Al-Fityani found between Palestinian and Jordanian Sign Language are due to the movement parameter, which is exactly the parameter that would be obscured when looking only at pictures of signs. On the contrary, Al-Fityani's scores for Kuwaiti and Libyan Sign Language are somewhat higher than I would have expected on the basis of my study. In Al-Fityani's study Kuwaiti Sign Language has a 40% similarity score with LIU, which makes it about as related to LIU as Yemeni Sign Language. Libyan Sign Language scores 34% compared to LIU, which is similar to my scores for Egypt in comparison with LIU. Because Kuwait and Libya are both further removed from Jordan geographically than Yemen and Egypt, I would have expected these scores to be lower. The higher scores probably result from the fact that Al-Fityani did not try specifically to eliminate iconic signs, as I did in my survey. This difference in methodology would cause more distantly related languages to look more similar to LIU, but would not have as much effect on a closely related language like Palestinian Sign Language.

2.3.2 Interpretation of results

Although lexical comparison by itself is not sufficient for a detailed analysis of language relatedness, it seems clear from the above results that there is some relationship between the different sign language varieties in the Arab world. Higher similarity scores within countries than between countries were expected, especially since many of these countries have sign language interpretation on television once a day, which may be assumed to have some standardizing influence. This expectation is borne out nicely by the percentages. Percentages of 60% may seem very low, especially when compared to lexical comparison scores in related spoken languages or dialects⁷, but this may be caused by the way signs were analyzed and the fact that words were chosen in such a way as to avoid iconicity or chance similarities. Zeshan (2000a) notes that the criteria for comparing sign languages need to be less strict than those for spoken languages, because sign languages typically have a lot of lexical variation and can still be mutually intelligible. Zeshan's in-depth survey in India and Pakistan did not only consider lexical similarity and mutual intelligibility, but also grammar.

⁷ According to Crowley (1992) the lexicostatistical standard (for spoken languages) defines languages as dialects if they share 81-100% of cognates, as different languages of the same language family if they share 36-81% of cognates, and of different families of the same stock if they share 12-36% of the same cognates.

Her lexical similarity scores range between 60% (Calcutta-Calicut) and 90% (Karachi-Kashmir). The fact that the latter score is so high is partly caused by the fact the signer from Kashmir did not sign all the words on the list and therefore the number of lexical items to be analyzed for Kashmir was quite small. Zeshan's conclusion, taking into account mutual intelligibility and grammar, is that the sign language varieties in India and Pakistan are all dialects of the same language. The fact that her similarity scores go up to 90% whereas in the present study the highest score (disregarding the three scores from Salt) only reaches 74% may partly be caused by the stricter phonological criteria that were used in the present study, as has been explained in Section 2.2.3, as well as by differences in the number of signs that were compared.

From my own observation, mutual intelligibility between the different varieties in the Arab world appears to be quite high. This is even true between countries like Jordan and Egypt which in this survey show scores of only about 35% lexical similarity. A tentative suggestion would be to classify varieties with a 60% or higher score as dialects of the same language. This would mean that the varieties attested within a given Arab country are all dialects and that in this sample not more than one sign language per country has been found. It would also imply that Syria and Jordan have the same sign language with only dialectal differences. The varieties used in Lebanon and the Palestinian areas are not included in this survey but also show a lot of similarity to the sign language used in Jordan and Syria. They might therefore also be included in this sign language, which Hendriks and Zeshan (forthcoming) refer to as Levantine Arabic Sign Language. Two sign language varieties with a lexical similarity score of 30%-60% should probably be considered different but related sign languages. Anything below 30% is probably unrelated, although there may be some mutual influence through language contact.

2.4 Conclusion

In contrast to Al-Fityani's (2007) conclusion that different sign languages in the Arab world are unrelated, my lexical comparisons of sign languages used in Arab countries of the Middle East reveals that all these languages are related to each other, albeit to different degrees. This divergence does not seem to be caused by methodology as much as by the interpretation of the results. Al-Fityani holds to the lexicostatistical standards used for spoken languages, whereby two varieties need to be at least 81% similar in order to be considered dialects of the same language. As explained above, I do not consider these standards adequate for sign languages, and propose that 60%

would be a more appropriate threshold. A threshold of 81% would make the sign language varieties of Salt and Amman different languages, even though mutual intelligibility between these two varieties is very high.

The fact that such different conclusions can be reached on the basis of lexical comparisons shows that a more in-depth survey is necessary in order to make definitive claims about whether different sign languages are dialects of the same language or rather different related languages. Such a survey would have to take into account sociolinguistic factors, as well as mutual intelligibility and grammatical similarity. To be on the safe side, and because the research in this dissertation focuses on the sign language used in Jordan (specifically the dialect of Salt), I will continue to use the term LIU in the remainder of this book. This is not to say, however, that LIU itself may not be a dialect of a regional sign language that could be referred to as Levantine Arabic Sign Language. More research into the sign language varieties and the sign language communities of the Middle East is needed to be able to make this distinction.

Chapter 3: Brief outline of LIU grammar

In this chapter some basic information about the grammar of LIU is given, in order to provide a background for the discussion of specific aspects in later chapters. Although the chapter aims to give a general overview of LIU grammar, the focus will be on cross-linguistically relevant features as well as features that are important for the chapters that follow.

3.1 Phonology

Following Stokoe (1960) most sign language phonologists have considered the handshape, movement, and location of a sign to be its most important phonological parameters. Later, orientation of the hand and non-manual elements, such as mouthings and mouth gestures, were added to the phonological inventory. For an overview of different phonological models that have been proposed for the analysis of sign languages, see Brentari (1998) and Sandler and Lillo-Martin (2006). Since this chapter only gives a brief overview of different aspects of the grammar of LIU, no in-depth analysis of all these different parameters will be given. Rather, I will give a brief description only of the handshapes and mouthings as found in LIU, because these seem to be the most interesting aspects from a cross-linguistic perspective. The parameters of location, orientation and movement in LIU do not seem to differ much from those described for most other national sign languages. For instance, signs are not usually articulated below the waist or behind the signer's back, except for some name signs that are made on the thigh. Iconic whole body signs, in which, for instance, a kicking movement with the foot is made to express the concept of kicking a ball occur, but usually in less proficient signers like young children. Usually, there is also a manual equivalent, which may or may not be accompanied by the iconic movement. In contrast, the use of a large signing space and of whole-body signs appears to be common in village sign languages and emerging sign languages (cf. Nyst 2007a). Phonologically, then, LIU patterns with the more established national sign languages used by large groups of Deaf people, also referred to as urban sign languages.

3.1.1 Handshapes

About 55 different handshapes occur in LIU. A list of them is presented in Figure 3.1. It has to be noted, however, that no in-depth contrastive phonological analysis has been undertaken as yet. It is possible that some of

these handshapes are not separate phonemes, but rather allophones of the same phoneme. This is particularly likely for handshapes that only differ from each other in the extension of the thumb, or in the aperture between fingers and thumb. A few of these handshapes, like  and , occur only sporadically and mostly in iconic signs. A more in-depth phonological analysis would have to reveal whether these should be considered phonemes or not. Van der Kooij (2002), for example, explicitly separates iconically and phonetically motivated forms from their underlying phonological specification, proposing a set of 31 phonemic handshapes for NGT.

Based on criteria such as frequency of occurrence (within and across sign languages) and ease of articulation, a set of so-called unmarked handshapes has been identified (Battison 1978). There is some variation in the sets of unmarked handshapes that researchers have proposed, but six handshapes have been included in most sets. In fact, these handshapes occur in every sign language that has been described so far. These six are: , , , and .

Although all these handshapes do occur in LIU and most of them are indeed very common, not all of them seem to be among the most common handshapes in LIU. In particular, the last two, that is, the C-hand and the O-hand, are less common than some handshapes which would be considered marked in other sign languages, but are very common in LIU, for instance,  and .

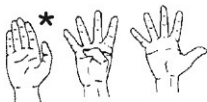
It is interesting, however, that in two-handed LIU signs in which the hands do not have the same handshape, the shape of the hand that does not move is most often one of the six unmarked forms (though the last one is not common in LIU), in line with Battison's (1978) Dominance Condition. The Dominance Condition states that if the non-dominant hand does not have the same handshape as the dominant hand, it does not move and can only have a limited number of handshapes (i.e. the unmarked handshapes shown above). It was originally proposed for ASL, but subsequently found to hold true in other sign languages as well (e.g. van der Kooij (2002) for NGT). In LIU there are certain signs with a very marked handshape on the non-dominant hand, which seem to blatantly violate the Dominance Condition, but most of these signs can probably be analyzed as simultaneous compounds (cf. also Section 3.2.3). The same goes for signs that violate Battison's Symmetry Condition, which states that if both hands are moving, they must be specified for the same handshape and the same movement (symmetrical or in alternation). Signs in which both hands move in different ways or have different handshapes should probably be analyzed as simultaneous compounds, too. Battison's Symmetry and Dominance Condition, then, only hold true for simple (non-compound) signs in LIU (but cf. also Chapter 6.4), just as in other sign languages studied to date (e.g. van der Kooij 2002).

Handshapes in Jordanian Sign Language

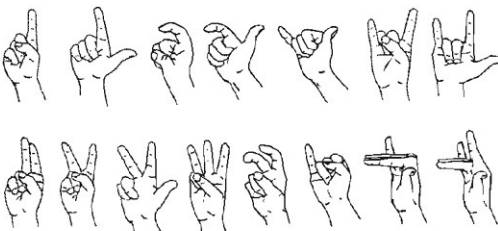
Fists



Flat hands



One or more extended
fingers



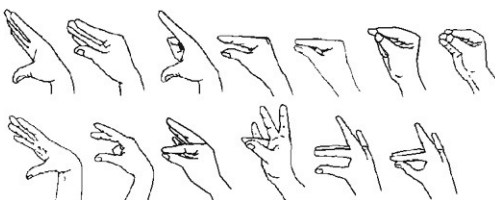
Round closed shapes



Round open shapes



Thumb opposite other
fingers



Remainder



*) May become



or



Figure 3.1: handshapes in LIU

3.1.2 Mouthings

Sign languages are not just produced by the hands. Non-manuals play an important role in the phonology of sign languages. This section focuses on the role of the mouth in LIU. A distinction is made between mouthings, in which the movement of the mouth is derived from a word in the spoken language, and mouth patterns, which are movements of the mouth that are not derived from the spoken language.

In LIU, the mouthing that goes along with a sign is the only part of the phonology of a sign that can be directly linked to the spoken language, Arabic (cf. Section 1.2.1). Mouthing of Arabic words is mainly used when signing to hearing people, but to a lesser extent also occurs when Deaf people are signing to each other. Some signs, like the negative existential (cf. Chapter 4.3.1) are almost always produced with the corresponding Arabic mouthing. For other signs, mouthing appears to be optional. In some cases, there is only one more general sign for several Arabic words and the Arabic mouthing may serve to distinguish between the interrogative signs. For instance, mouthing may distinguish between the question words WHAT, pronounced in Jordanian Arabic as *shū*, and HOW, pronounced *kīf*, which are expressed by the same manual sign. This sign is the most general question word in LIU and is derived from a well-known Arabic questioning gesture (cf. Section 3.5.2 and Figure 3.34). In many cases, the mouthing of Arabic words is not clearly recognisable for non-signers.

In addition, certain signs are produced with a mouth gesture that seems to be completely unrelated to the Arabic word that the sign corresponds to. An example is the sign for the word YELL (صرخ) pronounced *ṣarax*, which is made with the mouth pattern “waa”, as can be seen in Figure 3.2.

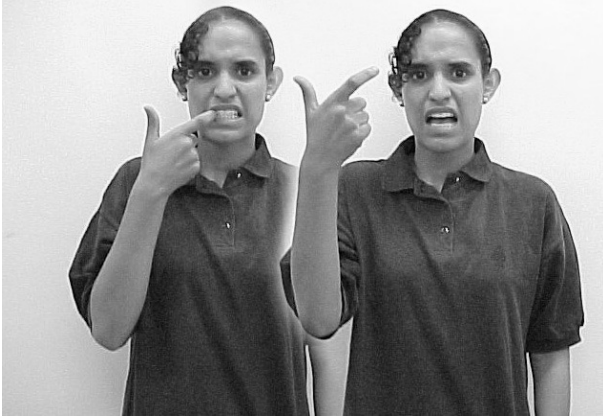


Figure 3.2: YELL, SCREAM

It is interesting to note that mouthings derived from Arabic words are exclusively derived from spoken Jordanian Arabic. Modern Standard Arabic (MSA), which is the written language taught in schools, is not reflected in the mouthings at all. MSA and spoken Jordanian Arabic can have very different words for frequently used concepts such as “to see” and “to go”. The 3rd person singular masculine present tense form of “see”, for example, is pronounced *bishūf* in the Jordanian dialect, whereas its MSA equivalent is pronounced *yara* (يرى). Similarly, the form for “he goes” in the local dialect is *birūh* whereas the MSA equivalent is pronounced *yaḏhab* (يذهب). In the corresponding signs, the words from the local dialect are reflected in mouthings like “shūf” and “rūh”. The fact that MSA forms are not reflected in the mouthings of Deaf people can be related to the fact that most Deaf people, including those that have been to school, do not know the MSA forms and tend to write (uninflected forms of) words from the spoken dialect in letters or when text-messaging to each other (cf. Chapter 1.1.4). Mouthings like “shūf” and “rūh” also show that, although spoken Jordanian Arabic is a highly inflecting language with many different verb forms, the Deaf do not normally inflect their mouthings, but use a general stem-like form to accompany the sign.

For more comparisons between Arabic and LIU, see Section 3.2.2 below.

3.2 Lexical signs and morphological processes in LIU

3.2.1 Iconicity and arbitrariness

Because sign languages are visual languages and are not based on sounds they have a higher potential for iconicity than spoken languages. Still, in sign languages, too, the relationship between a given sign and its meaning is often not completely clear, and in many cases entirely arbitrary. The LIU sign CAT (shown in Figure 3.3), for instance, while not being completely arbitrary (the form shows the stroking of a cat), will still not be immediately understood by people who do not know LIU. Theoretically, the same sign could refer to any other pet.



Figure 3.3: CAT

Klima and Bellugi (1979) have divided signs into arbitrary and iconic. In arbitrary signs there is no relationship between form and meaning. Iconic signs do show some kind of relationship between form and meaning and can be further subdivided into transparent signs and semi-transparent signs. In transparent signs the relationship between form and meaning is clear, even to those who know nothing about the sign or its history. The sign PRISON (Figure 3.4) is a good example of a transparent sign. It depicts someone who is bound by chains or handcuffs, thus visualizing the concept of a prisoner.

In contrast, in semi-transparent signs, the relationship between form and meaning is not necessarily clear to everyone. Either there was some relationship historically, but phonological changes in the sign have obscured this relationship, or the relationship is not completely unambiguous, as is the case with the LIU sign CAT. The sign TUESDAY (Figure 3.5) is an example of a semi-transparent iconic sign of the former type. I have been told that the meaning of this sign is derived from the sign PRISON as Tuesday was

considered the day for visiting people in prison. This connection, however, is not obvious (especially because Tuesday is no longer known as the day for visiting prison in contemporary Jordan) unless you happen to know the history of the sign and have the necessary cultural background information. The relationship between form and meaning appears to be arbitrary, even to Deaf people, unless they know the history of the sign (cf. Frishberg (1975) for similar developments in ASL).



Figure 3.4: PRISON



Figure 3.5: TUESDAY

My own research, based on research by Klima and Bellugi (1979), among a group of sixteen non-signers showed that there is a clear relationship between form and meaning in only a minority of LIU signs. In this experiment only signs in isolation were shown, but the percentage of signs for which the meaning cannot be guessed by non-signers is expected to increase dramatically when the same signs are used by Deaf people in conversation, because of the speed with which they are used and the assimilation and reduction processes that typically take place in connected signing (Klima and Bellugi 1979:9).

The non-signers were shown a video of 100 LIU signs and were asked to write down what they thought their meaning was. On average they correctly guessed the meaning of about 15-20 signs. This percentage is higher than that found by Klima and Bellugi (1979) for ASL, but similar to what Pizzuto and Volterra (2000) report for Italian Sign Language (*Lingua dei Segni Italiana*, LIS). The difference may lie in the types of words that were shown to the non-signers: nouns only in the studies on ASL, but nouns, verbs and adjectives both in the studies on LIS and in my own study on LIU. In addition, more ASL signs may have lost some of their iconicity over time. The difference may also be due to the fact that Arab culture is a ‘gestural

culture' and hearing Arabs tend to use more gestures to accompany their speech than hearing Americans. In fact, Pizzuto and Volterra (2000) comment that the difference in scores between ASL and LIS may well be explained by the fact that Italian culture is more 'gesture-prominent' than American culture.

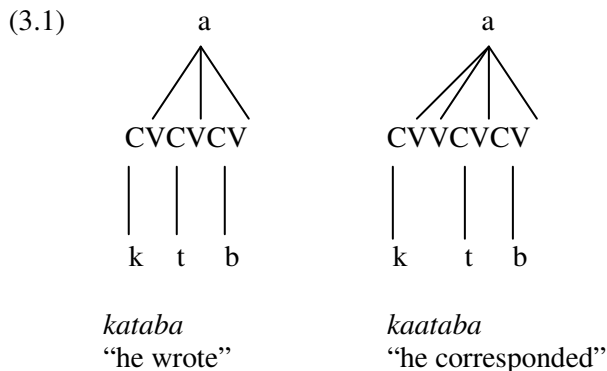
The video with signs from LIU was shown to both Arabs (11 persons) and foreigners who were either living in Jordan or visiting Jordan (5 persons). It was interesting to observe that one sign, the general question word WHAT (Figure 3.34), which is derived from a culture-specific gesture, was understood by all the Arabs, but not by the foreigners. Although the difference between the scores of Arabs and non-Arabs was not analyzed in detail, on average the two groups did not seem to vary widely in the percentage of signs they guessed correctly. In contrast, Pizzuto and Volterra (2000) found that for LIS signs the Italian hearing participants performed significantly better than non-Italian hearing participants. This contrast may be explained by the fact that most of the non-Arab participants had been living in Jordan for some time.

In a second test, the same hearing participants were shown the 100 signs again and were given the meaning of these signs. When asked if they understood why a particular sign was used, they were able to indicate the relationship between the sign and its meaning in almost 50% of the cases. It seems, then, that in LIU there is a large number of iconic signs, but a much smaller percentage of signs with a transparent meaning (cf. also Klima and Bellugi 1979 for ASL). For more than 50% of signs, non-signers can neither guess the meaning based on the sign alone, nor indicate the relationship between form and meaning when told the meaning of the sign.

3.2.2 Morphological relations in the lexicon: comparing LIU and Arabic

In this section, I compare the morphology of LIU and Arabic in light of the fact that some researchers have compared the morphology of sign languages, in particular that of ASL, with the morphology of Semitic languages. In contrast to these claims, I will show that there are, in fact, considerable differences between LIU and Arabic on the morphological level. Researchers who have claimed that sign language morphology is similar to the morphology of Semitic languages have stressed the fact that both make use of templatic morphology (e.g. Liddell 1984a; Fernald and Napoli 2000; Sandler and Lillo-Martin 2006). Arabic words, for example, have been analyzed as consisting of consonantal root templates that combine with different vowel melodies (cf. McCarthy 1981). McCarthy represented these word formation patterns using autosegmental phonology and associating

both the root consonants and the vowel melodies to a prosodic template, which specifies the sequence and duration of consonants (Cs) and vowels (Vs), as illustrated in (3.1):



In this model, the prosodic template is a morpheme in its own right. In a similar way sign languages (cf. Klima and Bellugi 1979; Brentari 1996 for ASL) can be said to make aspectual distinctions by mapping different movement ‘melodies’ to roots consisting of a handshape, location and orientation. Thus, a simple sign like SICK in ASL, which has a movement of the dominant hand towards the forehead (Figure 3.6a), can be said to consist of a template with an initial location (x), a straight movement (y), and a final location on the forehead (z). The same sign can also be made, however, with an aspectual inflection, making it durational, meaning “to be sick for a long time” (Figure 3.6b).



Figure 3.6a: SICK

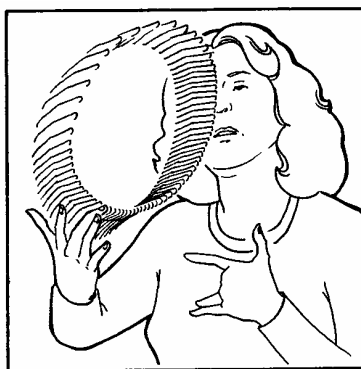


Figure 3.6b: SICK:DURATIONAL

[Reprinted by permission of the publisher from: The signs of language, by E. Klima and U. Bellugi, pp. 248,257, Cambridge, Mass.: Harvard University Press. Copyright ©1979 by the President and Fellows of Harvard College.]

The difference between these two forms would be represented with a different prosodic template, consisting of locations (L) and movements (M), as shown in (3.2), taken from Sandler and Lillo-Martin (2006).

(3.2)	L	M	L		L	M	L(redup)
	x	y	z		x	[arc]	z
	SICK				SICK:DURATIONAL		

Although this way of representing words and signs makes sign languages look similar to Semitic languages like Arabic, Fernald and Napoli (2000:15) observe that there is an important difference:

“Nevertheless, we must recognize an important distinction. Classical Arabic verb roots consist of only a series of consonants that do not constitute a well-formed word in the absence of a vowel melody.....[ASL] on the other hand, map[s] onto the template a root that is already a fully-formed sign.”

Another difference between Arabic morphology on the one hand and sign language morphology on the other hand, is that templatic morphology is a feature of the Arabic lexicon in general, whereas in sign languages only some phenomena (notably aspectual modulations) can be described using templates.

Thus, similarities between sign language morphology and the morphology of Arabic are greater at face value than when considered in depth. In fact, with respect to morphology, the lexicon of LIU is structured very differently from and independently of the coexisting spoken Arabic dialect, as well as written MSA. This is evident in a number of basic lexical domains, such as pronouns, numbers, colour, and kinship terms, which I will briefly discuss below (cf. Table 3.1 for a summary).

With respect to pronouns (cf. Chapters 5 and 6), for instance, there is considerable difference between Arabic (both the spoken dialect and MSA) and LIU, as shown in Table 3.1. Just as in other sign languages (cf. Bos (1990) on NGT; Engberg-Pedersen (1993) on Danish Sign Language (DSL); Meier (1990), Liddell (2000, 2003); Sandler and Lillo-Martin (2006) on ASL), personal pronouns in LIU are made by pointing to a referent when this referent is present and by associating a non-present referent with an (often arbitrary) location in the signing space. Moreover, there are several plural forms of the personal pronoun. In fact, in terms of number marking on pronouns, LIU has more possibilities than Arabic, which only distinguishes

between a dual and a plural. In contrast, in LIU it is possible to distinguish between “two of us” and “three of us”, etc. (Figure 3.7).⁸ When a signer does not want to be specific about the number of referents, or when the number of people referred to is greater than five, a pointing sign with sweeping movement can be used (Figure 3.8).



Figure 3.7: *1st person plural pronoun* Figure 3.8: *3rd person plural pronoun*

Apart from a variety of personal pronouns, LIU also has a more emphatic pronoun that can be used with possessive and emphatic-reflexive meaning, sometimes in combination with the personal pronoun (cf. Chapter 5.3.1 for a detailed description of the use of this sign). Different forms of the emphatic/possessive pronoun are shown in Figures 3.9 to 3.11. A comparable pronoun is not attested in Arabic. Instead, possessive pronouns take the form of suffixes which are attached to the noun.

⁸ This form can also be made with the palm up. For the quintuple the palm has to be up, otherwise this form would be confused with the sign ALL.



Figure 3.9: MY(SELf)



Figure 3.10: YOUR(SELf)



Figure 3.11: HIS/HER, HIM/HERSELF

As far as numbers are concerned, both Arabic and LIU derive multiples of ten morphologically from numbers below ten, but they use different morphological processes. In Arabic, multiples of ten are derived by adding a suffix, whereas in LIU they are derived by the addition of a side-to-side movement. Thus, Arabic combines morphemes sequentially, whereas LIU uses simultaneous morphology. Other differences occur at the level of individual numbers. The Arabic word for ‘twenty’ (*9asherīn*), for example, is derived from the word for ‘ten’ (*9ashera*) to which a dual suffix is added, whereas the LIU sign TWENTY is derived from the sign for TWO combined with a side-to-side movement.

Another area in which Arabic and LIU differ is that of colour terms. Whereas colour terms in Arabic mostly have the same prosodic template (‘aCCaC), LIU uses no systematic morphological template for colour terms. Instead, it tends to create colour terms from nouns. Thus, the sign GREEN is

derived from the sign TREE and the sign for YELLOW is the same as the sign for LEMON.

A final example of the way in which Arabic and LIU differ as far as the morphology of certain classes of lexical items is concerned, is the area of kinship terms. In Arabic, most kinship terms have a basic masculine form from which the feminine form is derived by adding a suffix (e.g. *xaal* “uncle”, *xaala* “aunt”). In contrast, in LIU the kinship terms tend to be gender neutral and both the masculine and the feminine are created by means of compounding. For example, the gender-neutral sign SIBLING can be combined with the sign for BOY or GIRL to create the signs BROTHER and SISTER.

The table below summarizes the morphological differences between pronouns, numbers, colour terms and kinship terms in Arabic and LIU.⁹

<i>Category</i>	<i>Spoken Arabic</i>	<i>LIU</i>
pronouns	paradigms of free personal pronouns and relative pronouns, suffixing for possessive pronouns	paradigms of free personal and emphatic/reflexive/possessive pronouns, no relative pronouns, no suffixing
	number distinctions: singular, dual, plural	number distinctions: singular, dual, trial, quadruple, quintuple, plural
	gender distinctions: masculine and feminine	gender distinctions: none
numbers	multiples of 10 are morphologically derived by adding a suffix (sequential morphology)	most multiples of 10 are morphologically derived by adding a side-to-side movement (simultaneous morphology)
	special dual forms with the dual suffix for 20, 200, 2000	no special dual forms
colour	most colour words have the same morphological template	no morphological relationship between colour words
kinship	no gender-neutral kinship terms, but several pairs of a basic masculine term and a derived feminine term with a suffix	gender-neutral terms for most kinship relationships, compounded with a sign for the gender (e.g. GIRL SIBLING “sister”)

Table 3.1: morphological comparison in different lexical domains between spoken Arabic and LIU

⁹ This table has been taken from Hendriks and Zeshan (in press).

It may be clear from this section that there is no relationship between the lexicons of LIU and Arabic with respect to morphological structure and morphological relations in the lexicon. On the one hand, similarities that have been pointed out in the literature between sign language morphology and Arabic are less significant than they appear to be at first sight; on the other hand, there are many differences in the way the lexicon of the two languages is structured. Arabic, then, does not appear to have influenced LIU in structural terms.

3.2.3 Sequential and Simultaneous Morphology¹⁰

All sign languages that have been documented so far display a preference for a particular type of morphological organization that is significantly different from that of spoken languages. In spoken languages, the predominant type of morphology is sequential (or concatenative) in nature, including compounding, cliticization and, most commonly, affixation (by means of prefixes, suffixes and infixes). Templatic morphology, such as that used in Semitic languages (see Section 3.2.2) is relatively uncommon. Sign languages show exactly the opposite pattern. Fernald and Napoli (2000:12) state that sign languages in general appear to have “a strong resistance to sequential morphology of the concatenative affixation type”. According to Sandler and Lillo-Martin (2006:51) “[i]t is the templatic type of non-concatenative morphology that is so abundant in sign languages.” Aronoff, Meir and Sandler (2005:301) attribute the lack of concatenative morphology in sign languages to the relative youth of most sign languages because “sequential patterns can be traced to normal historic development”. In contrast, the much more common simultaneous morphology of sign languages is grounded in spatiotemporal cognition and therefore not entirely arbitrary. According to Aronoff et al. this property makes sign language morphology relatively easy to learn and quick to develop. They point out that affixes in sign languages are uncommon, confined to derivational processes and relatively simple. LIU is typical in this respect in that there is little evidence for sequential derivational morphology other than a negative affix (Figure 3.12, cf. also Chapter 4) and a limited amount of compounding. In line with the generalization made by Aronoff et al. (2005), there does not appear to be any sequential inflectional morphology at all.

¹⁰ Parts of this section have been adapted from Hendriks and Zeshan (in press).

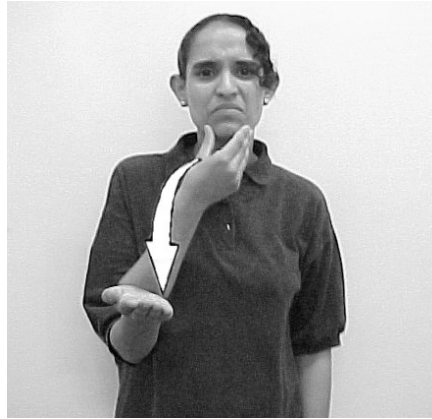


Figure 3.12: negative affix in LIU

Compounding in LIU can make use of either sequential or simultaneous processes. Sequential compounds combine two signs in a more linear way, like compounds in spoken languages. In these compounds two regular signs follow each other, although characteristic assimilation and deletion processes may apply: the movement of one or both may be shortened, repetitions may be deleted, and often the place in which one or both of the signs is normally made or the handshape of one or both of the signs changes to reduce the transition between the two signs. An example in LIU is the sign for COLOURS, which is made up out of the sign RED (the index making a left-to-right movement under the lower lip) and the sign for ETCETERA (index and middle finger making a repeated twisting movement away from the body in neutral space). In the compound COLOURS the movement of the sign for RED is left out and the sign ETCETERA assimilates in place, starting at the lower lip (Figure 3.13). It is typical for compounds to undergo this kind of reduction. If sequential compound signs are frequently used, the parts tend to assimilate over time to the extent that they may no longer be recognisable as compounds. Klima and Bellugi (1979) found that in ASL the duration of a compound is about the same as the duration of an average single sign.

Another example of a sequential compound in LIU is the sign for BELIEVE which is made up of the sign for MIND followed by the sign for TRUE, since “to believe” means to know in your mind that something is true (Figure 3.14).

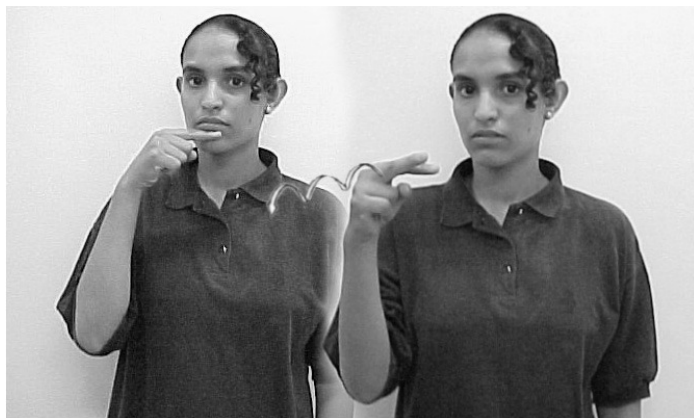


Figure 3.13: COLOURS



Figure 3.14: BELIEVE

Apart from sequential compounding and the negative affix shown in Figure 3.12, however, LIU, like other sign languages, mostly uses simultaneous morphology. The signs in Figures 3.15a,b are instances of numeral incorporation, a morphological process that is common in most sign languages (cf. Liddell 1997). The sign combines a base sign indicating a unit of quantification, such as time concepts (year, week, minute) or monetary units, with a handshape indicating a number. Both elements are produced simultaneously, forming a single complex sign.



Figure 3.15a: ONE-YEAR



Figure 3.15b: TEN-YEAR

Another important process is found in the domain of aspect marking. Like most sign languages, LIU has no grammatical category of tense. Time is indicated by individual time adverbials at the beginning of a discourse paragraph, and a spatial metaphor (‘time line’) is used in this sub-system (cf. also Brennan (1983) for BSL; Schermer and Koolhof (1990) for NGT; Zucchi (2006) for LIS). The time line is an imaginary line running through the signer’s body from back to front. In LIU the past is located behind the signer and the future is located in front (Figure 3.16).

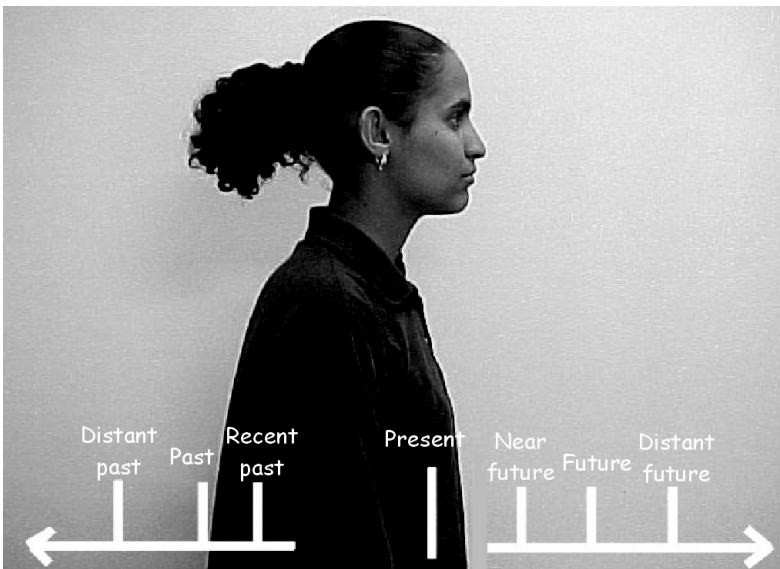


Figure 3.16: time line

Aspect marking, on the other hand, involves morphologically complex forms. A basic sign can occur with a number of different movement patterns to indicate, for example, durational aspect or intensive aspect (Figures 3.17 and 3.18). These different movement patterns are usually accompanied by a change in facial expression. (For an overview of aspectual modulations, cf. Klima and Bellugi (1979); Rathmann (2006) on ASL; Sutton-Spence and Woll (1999) on BSL.) Although this process is in some ways akin to the templatic morphology commonly found in Semitic languages, as explained in Section 3.2.2, the expression of tense and aspect in LIU is in itself not at all similar to any variety of Arabic.



Figure 3.17a: WRITE

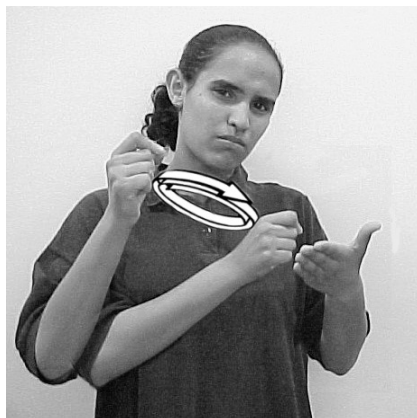


Figure 3.17b: WRITE-FOR-A-LONG-TIME



Figure 3.18a: CRY



Fig 3.18b: CRY-INTENSELY

Movement patterns are also an important clue for differentiating between derivationally related pairs of signs in LIU where the first sign has a verbal

and the second sign a nominal reading (cf. also Supalla and Newport (1978) for ASL; Johnston (2001) for Auslan; Hunger (2006) for Austrian Sign Language (*Österreichische Gebärdensprache*, ÖGS)). In these pairs, the nominal signs are usually characterized by restrained movement, sometimes with repetition of movement. Semantically, in such pairs the noun most commonly refers to an object and the verb to an action involving that object, e.g. “light” – “turn on light”, “boat” – “go by boat”, “medicine” – “take medicine”, etc.¹¹

Simultaneous compounds are made up of two signs that are produced simultaneously by the two hands. An example in LIU is the sign *HELICOPTER*, which combines the handshape for *PLANE* on the non-dominant hand with the sign for *FAN* (or *ROTOR*) on the dominant hand (Figure 3.19). Another example is the sign *ADDRESS* which is made by the non-dominant hand taking the shape of the classifier for flat objects (cf. Section 3.3.2), in this case a piece of paper, and the dominant hand making the sign *STREET* (which is normally made with both hands), as shown in Figure 3.20.



Figure 3.19: *HELICOPTER*

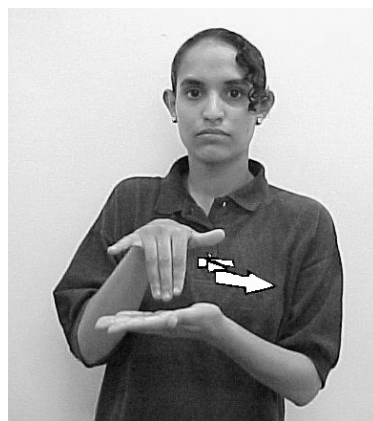


Figure 3.20: *ADDRESS*

Simultaneous compounding is a fairly productive morphological process and is one of the more common ways in which new signs are formed in LIU. For a detailed description of compounding processes in ASL, see Klima and Bellugi (1979). For a segmental analysis of compounds, see Liddell and Johnson (1986).

LIU, then, like other known sign languages, uses both sequential and simultaneous morphology, although the latter is much more common.

¹¹ In some cases, noun-verb pairs can be distinguished by the absence or presence of the non-dominant hand, although it is not clear how productive this kind of morphological process is. For examples, cf. Hendriks (2004:29-30).

Sequential morphology is attested most commonly in compounding, as is also true for other sign languages. Likewise, simultaneous morphology is found in the same areas as other sign languages. In summary, as far as its morphological structure is concerned, LIU does not show any significant differences compared to other sign languages.

3.3 Using the signing space

Sign languages being visual languages, they make extensive use of space, not just phonologically (the location of a sign being a component of sign formation) but also referentially in the pronominal system and in the verb agreement system (cf. Baker and Cokely 1980; Meier 1990; Padden 1990; Liddell 1990; Meir 2002; Sandler and Lillo-Martin 2006). Space can even be used to express time (cf. Figure 3.14). The general area in front of the signer's body in which signs are made is called the signing space. As already briefly shown in Section 3.2.2, pointing signs in LIU can target a certain position in the signing space to indicate a specific person, animal, place or object. If these persons, animals or objects are present in the vicinity of the signer, they will be pointed at directly. If they are absent, however, they will be assigned a certain point in the signing space and can be referred to by pointing to that particular spot or 'locus'.

Assigning someone or something a locus in the signing space is called localization (cf. Liddell (1990) who points out that there is a relationship of equality between the locus and the referent). Localization can be realized by articulating the sign for the particular noun followed by pointing to a certain position, or by articulating the sign itself at a certain location. Localization can even be achieved by means of eye-gaze towards a locus (cf. Rathmann and Mathur 2002). It seems that, when phonologically possible, LIU has a preference for producing signs in a certain place in the signing space when localizing a referent for the first time. Pointing is also used to refer back to the previously established referent, but according to my observation pointing is not used as frequently as has been reported for Western sign languages (cf. Chapter 7.5.1). A cross-linguistic comparison using naturalistic data from different sign languages would be interesting. Once a noun is assigned a position in the signing space, it keeps that position unless it is explicitly moved (e.g. when talking about a person who walks from one spot to another). Verbs associated with a localized noun may either be articulated at that location or move towards that same location. In this way complex spatial lay-outs can be created which are used to keep track of discourse referents. For a more detailed description of how these spatial lay-outs are created see Chapter 7.5.

3.3.1 Agreement verbs

One of the most important uses of the signing space is the expression of subject-object relationships in agreement verbs. These are morphologically complex verbs that change movement direction and/or hand orientation to show who is doing what to whom. These signs usually begin at the subject location and move towards the object location (as in Figures 3.21a,b), although there are also some verbs that move from object to subject. These latter verbs are called ‘backward verbs’ by Meir (1998). An example of an agreement moving from subject to object in LIU is the verb TELL (Figures 3.21a,b).



Figure 3.21a: ${}_1\text{TELL}_2$ “I tell you”

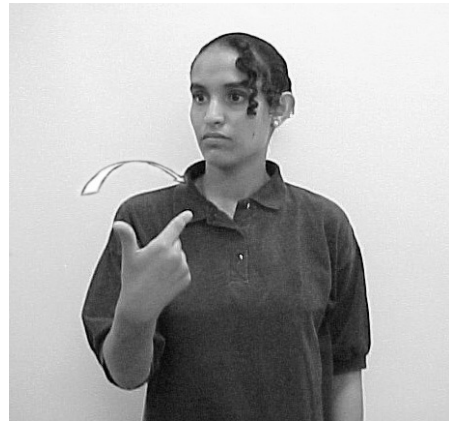


Figure 3.21b: ${}_2\text{TELL}_1$ “you tell me”

In many cases the palm and/or the fingers of the hand are oriented towards the object (referred to as ‘facing’ by Meir (1998)), and the back of the hand towards the subject, and in some cases palm or finger orientation alone expresses agreement (cf. Padden 1988; Meir 1998, 2002; Rathmann and Mathur 2002). For a non-exhaustive list of agreement verbs in LIU, see Hendriks (2004:48). Most of these are regular agreement verbs, although a few backward agreement verbs also occur. The grammatical mechanism of agreement closely interacts with the more general principle of localization, since it depends on the association of discourse referents with locations in the signing space. The spatial agreement with subject and object observed in sign languages parallels multiple person marking on verbs in spoken languages where bound pronouns represent subject and object (cf. Arabic *ya-s’alu-nī* “he-ask-me”).

According to Padden (1990) some verbs in ASL do not just show subject and object agreement, but can also be inflected for number agreement. Again, LIU behaves like ASL and other sign languages in this respect. An example of a verb in LIU which can be inflected for number agreement (also referred to as distributional quantification) is the verb GIVE, which can be directed towards a single object referent or towards multiple object referents. In the latter case, there are different ways in which the sign can be made. The inflection can be multiple, indicating that the meaning expressed by the sign applies to a whole group (Figure 3.22a), or exhaustive, indicating that it applies to individuals in an orderly fashion (Figure 3.22b). Yet another inflection expresses that the action of giving does not take place in a systematic and orderly fashion, but rather in a more random fashion to many individuals all over the place. It is made with a repeated circular movement of both hands.

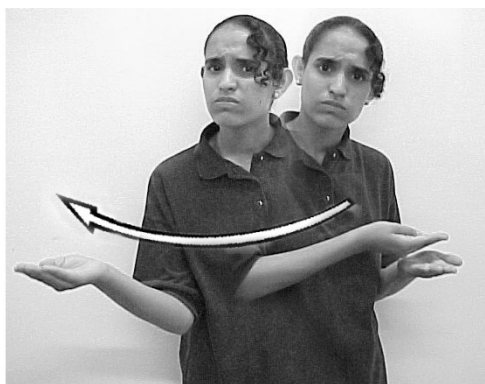


Figure 3.22a: GIVE: MULTIPLE



Figure 3.22b: GIVE: EXHAUSTIVE

For a more in-depth look at agreement verbs and they way they contribute to establishing spatial lay-outs in LIU, cf. Chapter 7.5.

3.3.2 Classifiers

According to Zwitserlood (2003:1)

“Many natural languages have elements called classifiers. Typically, these elements are morphemes that denote a salient characteristic of an entity, for instance, the characteristic of being human, being an animal, or having a particular shape. Classifiers are used in combination with nouns to refer to entities.”

Most sign languages appear to make use of classifiers, although some make far less use of certain types of classifiers than others (cf. Nyst 2007a). In sign languages, verbs of motion and location (Supalla 1986) commonly combine with certain handshapes that are strongly associated with the shape or function of a referent (e.g. people, vehicles, animals, cf. Figures 3.23 and 3.24). Because such handshapes can represent a whole class of objects that have more or less the same shape, they are called classifiers. For an overview of classifiers in LIU, cf. Van Dijken (2004).



Figure 3.23: person classifier



Figure 3.24: vehicle classifier

As can be seen from Figure 3.24, the shape of a classifier does not necessarily need to be transparent or iconic. The vehicle classifier as used in LIU (Figure 3.24) has a rather abstract shape and does not straightforwardly represent the shape of a vehicle. It is normally used for four-wheeled vehicles, like cars, buses and pick-up trucks. The classifiers in Figures 3.23

and 3.24 represent an entity directly – the hand *is* the entity – and have therefore been referred to as ‘entity classifiers’ (cf. Schembri 2003). Entity classifiers are usually part of (intransitive) verbs of motion or location. LIU also has handling classifiers, whereby the classifier handshape does not represent the entity itself, but the way an entity is held or handled by an agent. Handling classifiers are normally part of transitive verb constructions and can usually be spatially directed. Two examples of handling classifiers are given in Figures 3.25 and 3.26.



Figure 3.25: CL:GIVE-FLOWER



Figure 3.26: CL:GIVE-BUNCH-OF-FLOWERS

Classifiers, and particularly entity classifiers, often occur in complex spatial constructions. While the classifier handshape represents a referent, the movement and location of the classifier represents the movement or location of the referent in real space. Classifier constructions¹² are therefore highly flexible and productive and can be very complex, especially if both hands are involved. As can be seen in Figure 3.27, classifier constructions can be two-handed, with both hands simultaneously expressing classifiers which refer to different entities. In this way, the location or movement of two referents with respect to each other can be expressed. The third picture of Figure 3.27 shows a complex classifier construction in which the dominant hand represents a falling pen and the non-dominant hand represents the table on which the pen was lying. In Chapter 6.5 more complex simultaneous constructions involving classifiers will be discussed.

¹² Classifier constructions have been given various names in the sign language literature, like ‘verbs of motion and location’, ‘polymorphemic predicates’, ‘spatial-locative predicates’ etc. For an overview cf. Schembri (2003).



Figure 3.27: *PEN* *TABLE(2h)* *CL:LONG-THIN-OBJECT-FALLS*
 TABLE(2h) *CL:FLAT-OBJECT*
 “The pen falls off the table.”

Apart from two-handed constructions in which both hands function as an entity classifier, signers can also make use of what has been called ‘referent projections’ or ‘body classifiers’. In this case, the referent or entity is mapped onto the signer’s body. According to Engberg-Pederson (1993:293-294) this use of the signer’s head and body resembles mime, but with important differences.

“When the signer’s head and body are used to express a referent projection, the head and body of the signer represents one entity while at the same time the hand may represent another entity as the manual articulator of the verb. The simultaneous use of the signer’s head and body for one referent and the hand in a verb for another referent is impossible in mime.”

Van Dijken (2004) shows that referent projections are very common in LIU. Chapter 7 will deal in more depth with the mapping of referents on the signer’s body.

3.4 Word order

3.4.1 Basic word order patterns in LIU

Languages are often classified according to their basic word order pattern. This is usually done by looking at the order of the basic sentence elements subject (S), verb (V), and object (O) or by considering the information-structure status that elements have in a sentence (e.g. topic vs. focus). Languages differ from each other in the amount of freedom they allow with regards to the ordering of grammatical elements, but many languages do

have a ‘basic’ or ‘preferred’ pattern. Thus, although MSA allows for quite a lot of flexibility in word order, the basic word order is VSO. In contrast, spoken Jordanian Arabic has SVO word-order. Research has shown that over 75% of the world’s spoken languages have basic SVO or SOV word order. Some sign languages, such as ASL, have been analyzed as having SVO word order (cf. Fischer 1975; Liddell 1980; Neidle et al. 2000), while other sign languages, such as DGS and NGT, have been claimed to have SOV word order (cf. Glück and Pfau (1998) for DGS; Coerts (1994) for NGT). Although no extensive research has been done into the basic word order of most sign languages, some cross-linguistic generalizations can be made. In general, sign languages have been classified as topic-focus languages, which means that information known by both signer and addressee (the topic) is mentioned first and then new information about the topic (the focus) is presented. LIU is no exception to this generalization. Also, it seems that sign languages generally are quite flexible in their word order. This is probably due to the fact that syntactic relationships can not only be expressed by word-order but also in alternative ways, for instance, by means of directional verbs and classifiers. Sign languages also seem to rely heavily on context and knowledge of the real world. The fact that sign languages can express a considerable amount of information simultaneously also makes it harder to establish a basic word-order. LIU makes frequent use of simultaneous constructions whereby both hands express different information (cf. Chapter 6). In addition, it is also possible to express syntactic information non-manually, cf. Section 3.5.

Having said this, however, LIU does have word order rules, or at least tendencies. Word order is not completely free, and consequently certain sentences are judged ungrammatical by native signers. Although no complete overview of word order in LIU can be given yet, some general comments can be made about its basic word order.

In LIU, the subject tends to precede the predicate. The predicate may be verbal, but it does not have to contain a verb, in contrast to many European spoken languages like English. In this respect, LIU resembles other sign languages as well as Arabic (and many other non-Western spoken languages), in which, due to the lack of a copula verb, a predicate may also be non-verbal. Predicates in LIU can consist of verbs, adjectives, nouns or classifier constructions.¹³ Within the verb phrase both the order object-verb (OV) and verb-object (VO) are attested. The order OV is especially frequent for verbs that are performed on the object or which incorporate the shape of the object by means of a handling classifier. An example of a verb

¹³ Classifier constructions have often been analyzed as (polymorphemic) verbs, but a straightforward analysis is difficult because of their complexity. For this reason they have been named separately here.

performed on its object is the verb *CLEAN*. The location in which this verb is made may vary according to the location of its object in space. The verb may also change its orientation depending on its object, as shown in Figures 3.28 and 3.29¹⁴.



Figure 3.28: TABLE_i CLEAN_i



Figure 3.29: WINDOW_j CLEAN_j

Thus, when the location or handshape of a verb is determined by the location or shape of its object, the object generally precedes the verb. When there is no such agreement between the verb and its object, both orders (OV and VO) occur. In some cases an object does not to be specified apart from the verb,

¹⁴ Remember that the subscripts represent the location of the object in space, and show that the verb and object agree with respect to this location, that is, they are articulated at the same location.

because it is already an inherent part of the verb. Examples are the verbs WASH-CLOTHES and OPEN-DOOR (Figures 3.30 and 3.31).¹⁵



Figure 3.30: WASH-CLOTHES



Figure 3.31: OPEN-DOOR

3.4.2 Word order with pronouns

Although the basic word order in LIU is subject-predicate when the subject is a noun, several other patterns are possible with pronominal subjects. Just like most other sign languages (cf. Lillo-Martin (1986, 1991); Neidle et al. (2000) for ASL; Bos (1993) for NGT) and also spoken languages like Spanish and Arabic, LIU allows for pro-drop under certain circumstances. As was explained in Section 3.2.2, pronouns in LIU and other sign languages differ from spoken language pronouns in that they do not have a fixed form but are made by pointing to a certain position in the signing space. Because an infinite number of positions is available in the signing space, there is, in principle, an infinite number of possible pronouns. There is considerable discussion about the status and number of pronouns in sign languages (cf. Friedman 1975; Meier 1990; Lillo-Martin and Klima 1990; Liddell 2003). Following Meier (1990) many sign language researchers have adopted the view that pronouns in sign languages only show a distinction between first and non-first person. Unlike pronouns in many spoken languages, pronouns in sign language neither specify in their form whether they refer to a male referent, a female referent or an object, nor whether they are second or third

¹⁵ In the case of Figure 3.31, the phonological form of the noun DOOR is very similar to the form of the verb OPEN-DOOR, but has a repeated and restrained opening and closing movement, cf. Section 3.2.3 where such verb-noun pairs have been analyzed as examples of simultaneous morphology.

person.¹⁶ It is the position that the pronoun points to rather than any information inherent in the form of the pronoun that determines the referent. Because of this, there is even some doubt as to whether pronouns in sign languages are purely linguistic elements. Some scholars argue that pronouns also contain a gestural component (cf. Liddell 2003). In general, it seems that pronouns can be dropped more easily in sign languages than in spoken languages. In spoken languages pronouns can, generally speaking, only be dropped when features of the subject pronoun can be recovered by means of agreement information on the verb. There are only a few spoken languages, such as Chinese and Japanese, which permit null pronouns (i.e. pronouns that are not overtly expressed) in the absence of verb agreement. In LIU, too, subject pronouns can be left unexpressed even when the verb does not include information about the subject, that is, when the verb does not show agreement.

Because agreement verbs (cf. Section 3.3.1) generally involve a movement from the subject locus towards the object locus, the starting point of the verb identifies the position of the subject. The starting point of the verb thus gives the same information as an overt pronoun, because pronouns in LIU only point to a position but do not give any extra information about the subject. In this way LIU is similar to Arabic, where prefixes and suffixes on the verb express the same information as pronouns; hence, no separate pronouns are needed. What is more unexpected, however, is that subject pronouns can also be left unexpressed with verbs that do not show agreement, the so-called ‘plain’ verbs. This is true not only for LIU, but also for other sign languages (e.g. Bos (1993) for NGT; Lillo-Martin (1986, 1991) for ASL). Because these verbs do not contain any information about the position of the subject, it would be expected that the subject pronoun needs to be present. In a way these plain verbs resemble English verbs, which do not contain enough agreement information to unambiguously identify features of the subject pronoun. In English this means the pronoun has to be expressed separately. However, unlike the English sentence in (3.3) the LIU sentence in (3.4) is grammatical:

(3.3) *live in Amman

(3.4) LIVE AMMAN

“I live in Amman.”

¹⁶ See, however, Berenz (2002) and Alibašić Ciciliani and Wilbur (2006) for the distinction between second and third person on the basis of non-manuals, particularly eye-gaze.

Although the verb in this sentence does not contain the information needed to determine who the subject is, pro-drop can still take place if the subject can be inferred from the context. In statements like the one in (3.4) the subject is assumed to be the signer (first person singular) unless the context makes it clear that there is a different referent. In questions, on the other hand, the subject will be assumed to be the addressee, unless the context specifies otherwise. Thus, the only difference between (3.4) and (3.5) is in the facial expression (cf. Section 3.5.2) but the subject of (3.5) would normally be interpreted as “you” rather than “I”:

- (3.5) yes/no question
LIVE AMMAN
“Do you live in Amman?”

Subject pronouns can also be left unexpressed when the subject is a third person referred to in the context. Thus, if a signer is talking about a third person and the addressee asks the question in (3.5) the null pronoun will be interpreted as that particular third person. Likewise, if the signer relating a story about a certain person and utters the statement in (3.4), the null pronoun will not normally be interpreted as referring to the signer himself but to the person he is talking about. Thus, in a sequence of sentences which share the same subject, that subject does not need to be repeated in the form of a pronoun, as it does in English and other languages with little or no verbal agreement morphology. There appears to be a rule that when a verb does not have an overt subject in LIU, it will automatically be linked to the most recent overt subject in the discourse. When there is no overt subject at all, the subject is understood to be first person singular in statements and second person singular in questions on pragmatic grounds. This rule does not only apply within sentences, but also in strings of sentences. In this way LIU resembles languages like Chinese and Japanese which have been described as discourse-oriented languages (cf. Sandler and Lillo-Martin 2006:390-393).

So far, only the fact that pronouns may be dropped from their normal subject position has been discussed. When an overt pronoun does occur, however, it can also be more freely placed in the sentence than a nominal subject. As mentioned before, the most common position for a subject is at the beginning of the sentence, before the predicate. In contrast, pronouns may also follow the predicate. Moreover, a pronoun may be copied and occur both before and after the predicate. Thus, a sentence like “I am ill” can be signed in 4 ways:

- (3.6a) ILL
 (3.6b) INDEX₁ ILL
 (3.6c) INDEX₁ ILL INDEX₁
 (3.6d) ILL INDEX₁
 “I am ill.”

Although there are no regular word order differences that distinguish questions from statements in LIU, pronouns tend to appear in sentence-final position when the sentence is a question (cf. Section 3.5.2 for the non-manual markers). Thus, the question “Are you ill?” will most often be signed as illustrated in (3.7):

- (3.7) yes/no question
 ILL INDEX₂
 “Are you ill?”

Object pronouns differ from subject pronouns in LIU in that they do not have to be expressed separately with agreement verbs, but they are normally expressed with non-agreeing verbs. This is probably due to the fact that objects are more likely to change reference in the course of a conversation, or even within a sentence, than subjects.

3.4.3 Word order within noun phrases

Generally, in LIU the head of a (noun) phrase comes at the beginning of the phrase. That which is felt to be the most important element is signed first and anything that modifies the head follows it. Consequently, both adjectives and numbers generally follow the noun. This contrasts with Arabic, where adjectives also follow the noun, but numbers normally precede the noun. Because word order in LIU is fairly flexible and because signing (especially between deaf and non-deaf people) is often influenced by Arabic word order, there are exceptions to the general pattern. Nevertheless it seems to be a very basic principle of LIU grammar that the most important element in a phrase should come first. Thus the phrase “three deaf boys” in LIU would be signed BOY DEAF THREE.

Research on ASL has shown that this language has two kinds of adjectives (cf. Valli and Lucas 1995:120-121). Some adjectives can precede and follow the noun while others can only follow the noun. According to the analysis by Valli and Lucas (1995), attributive adjectives always precede the noun in ASL. Consequently, adjectives that cannot precede the noun cannot

be used in attributive position. This appears to be true for adjectives that describe physiological, psychological and emotional states (all temporary situations). These adjectives can only be used in predicative position, following the noun. Thus, the sequence in (3.8a) is grammatical in ASL, but the sequence in (3.8b) is not.

- (3.8a) TALL BOY [ASL]
 “a tall boy”
- (3.8b) *HAPPY BOY
 “a happy boy”

Like ASL, LIU appears to have adjectives that can be used both attributively and predicatively as well as adjectives that can only be used predicatively. However, because in LIU (unlike ASL, but like Arabic) all adjectives generally come after the noun, it is harder to see whether an adjective occurs in attributive or predicative position. One way to find out is to use adjectives in combinations with numerals and with other adjectives and see whether they all behave the same way. It turns out that LIU also has two classes of adjectives: those that describe a permanent state (often related to physical features, like TALL, THIN, DEAF etc.) and adjectives that describe a temporary situation, often related to emotional or physiological states (ILL, UPSET, HAPPY). These classes more or less correspond to the ones in ASL.¹⁷ The difference between the two classes can be seen in noun phrases that have both an adjective and a number. Adjectives that describe permanent states can occur both before and after the number, as in (3.9):

- (3.9a) BOY TALL THREE
 “three tall boys”
- (3.9b) BOY THREE TALL
 “The three boys are tall.”

Adjectives that describe temporary situations, on the other hand, cannot come before the number, cf. (3.10):

- (3.10) *BOY SICK THREE
 “three sick boys”

¹⁷ The distinction between permanent states and temporary situations appears to be the more general one. The fact that this corresponds to physical features as opposed to emotional states appears to be less relevant. DEAF, for instance is a physiological state, rather than a physical feature, but it is grouped together with adjectives like TALL and THIN because it is considered permanent.

This indicates that, as in ASL, adjectives that describe temporary situations are used only as predicates, and cannot be part of the subject (or any other noun phrase).

The same pattern shows up when permanent and temporary adjectives are used together. Thus, a signer may sign (3.11a), but (3.11b) is judged as incorrect:

(3.11a) BOY TALL SICK
“The tall boy is sick.”

(3.11b) *BOY SICK TALL
“The sick boy is tall.”

Note, however, that even in English the sentence in (3.11b) is a bit strange, even though it is not technically speaking ungrammatical. It would seem that in general people are more likely to describe a person by giving a description of their physical characteristics than by describing a temporary situation. The difference between English and both ASL and LIU is that in English temporary adjectives can be used attributively while in both sign languages they cannot.

3.5 Non-manual aspects of grammar

Sign languages do not only use the hands to encode linguistic information. Non-manual aspects of signing also contribute significantly to sign language grammar, with head movements and facial expressions being the most important features. Non-manual information has been compared to intonation in spoken languages (cf. Sandler 1999b). Like intonation, non-manual information can contain both linguistic and non-linguistic information, such as emotions. Also, like intonational contours, non-manuals can co-occur with more than one sign and can therefore be said to be suprasegmental. Non-manual information is important at different levels of sign language grammar. At the phonological level, certain facial expressions and mouth patterns can constitute part of the lexical features of certain signs (see Section 3.1.2). At the morphological level, certain facial expressions may add adverbial information (Section 3.5.1). At the syntactic level, different facial expressions can be used to distinguish between different sentence types (Section 3.5.2) and can mark topicalization. Given that to date no systematic research into topicalization in LIU has been conducted, this latter function of facial expression will not be discussed.

3.5.1 Non-manual adverbial marking

Non-manual markings are not just used to express sentence type, but can also contain adverbial information (cf. Baker and Cokely (1980); Liddell (1980) for ASL; Sutton-Spence and Woll (1999) for BSL; Meir and Sandler (2008) for Israeli Sign Language (ISL)). Thus, certain non-manuals can occur with adjectives or verbs to mark, among other things, intensity, unpleasantness, boredom, tiredness or inevitability. The adjectival signs FAR or TALL, for instance, can occur with a facial expression with the mouth rounded and the eyebrows lowered (Figure 3.32a) which expresses the same meaning as the English adverbial “very”, for example, “very tall” or “very far” (Figure 3.32b). The same facial expression can also be used with verbs, like the verb WORK. The resulting construction can be translated as “to work hard” or “to work a lot”.

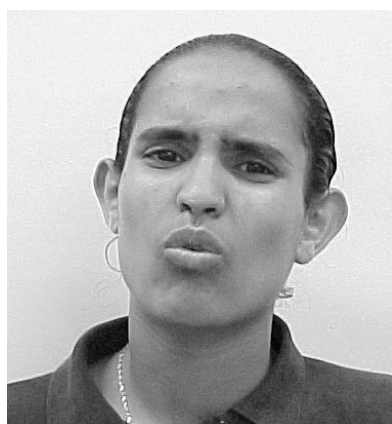


Figure 3.32a: non-manual intensifier



Figure 3.32b: VERY FAR

In this way, many meanings that are expressed by means of adverbs in English can be expressed by means of facial expression alone in sign languages. Because a facial expression can be articulated simultaneously with a sign, it often takes much less time to describe a particular situation in sign than it would take to describe the same situation in words. Sometimes a situation that requires quite a long description in spoken languages can be expressed by a single sign combined with the appropriate facial expression in sign language. This is a way of expressing adverbs that is unique to visual languages.

3.5.2 Sentence types

As in other sign languages (cf. Baker and Cokely (1980); Liddell (1980) on ASL; Sutton-Spence and Woll (1999) on BSL; Meir (2004) on ISL; Zeshan (2006a) on a range of sign languages), various syntactic constructions are marked by particular non-manual configurations in LIU. These include various types of questions, negation, imperatives, and conditional clauses, a few of which are discussed briefly below.

Cross-linguistically, there are three common strategies for marking questions: the use of question particles, changes in word order, and intonation. LIU does not have a yes/no question particle, and does not change its word order to form yes/no questions (although subject pronouns are more likely to occur at the end of the sentence in yes/no questions, cf. Section 3.4.2). Non-manual information alone usually marks a sentence as a yes/no question, as does intonation in many spoken languages. The non-manual for these questions consists of a head-tilt forward, raising of the eyebrows and wide open eyes, as shown in Figure 3.33. In contrast, content questions are generally produced with the head tilted slightly backward or to the side and eyebrows lowered, although the facial expression is more variable than that accompanying yes/no questions. A very slight headshake may also be observed. Content questions do contain question signs. The most general one, glossed as *WHAT*, is shown in Figure 3.34. The same sign is also used (with a different mouthing) with the meaning “how”. Moreover, it can be used to express the meanings “who”, “where”, “when” or “why”, although more specialized question signs also exist for those meanings. In some dialects, however, the sign in Figure 3.34 seems to be the only question sign available.



Figure 3.33: Non-manual marking for a yes/no question



Figure 3.34: WHAT

Different non-manuals, like a headshake, a head-turn and a backward head-tilt are attested in negative sentences, and normally accompany a manual negator. An in-depth description of negation in LIU as well as a comparison to other sign languages is the topic of Chapter 4.

Conditional sentences are marked by a non-manual configuration that is quite similar to the marking for yes/no questions, but with the head tilted more to the side. This marking spreads over the conditional part of the sentence with a clear intonational break after the condition. A conditional particle IF exists, but this sign is optional, and the non-manual alone is sufficient to mark the condition, as shown in Figure 3.35.



conditional
yes/no question
Figure 3.35: TOMORROW RAIN TRIP NEG-EXIST
“If it rains tomorrow, will there be no trip?”

The examples show that non-manual marking plays an important role in the syntax of LIU, as it does in other sign languages, sometimes being the sole means by which different clause types are distinguished.

3.6 Summary

In this chapter I have given a short introduction to some aspects of LIU grammar, in particular phonology, morphological marking, use of space, word order and non-manual marking. I have not attempted to provide more than a basic sketch of these different areas of LIU grammar. Each of these areas deserves further research and description, but this is beyond the scope of this dissertation. Some aspects of LIU grammar, however, will be described in more detail and from a cross-linguistic perspective in the next four chapters. In particular, negation (Chapter 4), possession (Chapter 5), manual simultaneity (Chapter 6) and the use of perspective (Chapter 7) will be discussed.

Apart from discussing differences and similarities between LIU and other sign languages, this chapter also offered some comparisons between the grammar of Arabic and that of LIU, where appropriate. Because visual

and oral languages are so different in structure, it is not always easy to compare the two. There is no Arabic equivalent, for instance, for the use of space or for non-manual marking in LIU. Some comparisons have been made, however, in areas such as word order or lexical classes. Although there are some similarities between Arabic and LIU, particularly in word order (both Arabic and LIU can leave pronouns unexpressed and can have non-verbal predicates), these similarities do not seem to be caused by influence of Arabic on LIU. Instead, they reflect features that sign languages from around the world tend to have in common. Moreover, there are also considerable differences between Arabic and LIU as far as morphology and word order are concerned. There may be some influence of the basic word order of spoken Jordanian Arabic on LIU, but a similar influence is harder to detect in other areas of word order. Although adjectives in LIU follow the noun, like in Arabic, both definite and indefinite numbers also follow the noun, unlike Arabic. Moreover, pronouns, kinship terms, colours, and numbers have different morphological patterns in LIU and Arabic. More research is necessary to determine exactly how much influence the grammar of Arabic has on LIU. The only area in which Arabic has clearly had an influence on LIU is on the phonological level, where mouthings have been borrowed from spoken Jordanian Arabic.

It is interesting to note that where there is a possible influence from Arabic on LIU, this influence comes only from the dialect that is spoken in Jordan and not from Modern Standard Arabic, which is the written form of the language. This seems counter-intuitive, because MSA is taught in all schools, including schools for the Deaf. However, this lack of MSA influence on LIU corresponds to the low level of functional literacy among the Deaf, as was explained in Chapter 1.1.4.

Chapter 4: Negation¹⁸

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

¹⁸ This chapter is a slightly adapted version of Hendriks (2007b), “Negation in Jordanian Sign Language: A cross-linguistic perspective”. In: *Visible variation: Cross-linguistic studies in sign language structure*, P. Perniss, R. Pfau and M. Steinbach (eds.). Berlin: Mouton de Gruyter, 103-128.

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.

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!”



*Figure 4.1: neutral clause negator
NEG*



*Figure 4.2: emphatic clause
negator NEG:EMPH*

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!”



Figure 4.3: *emphatic negative interjection*



Figure 4.4: *negative defensive or apologetic interjection NEG:APOL*

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: <u> </u> _{y/n}
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.



Figure 4.5: negative existential, may be used as clause negator

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”.



Figure 4.6: emphatic negator conveying annoyance



Figure 4.7: ZERO

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.



Figure 4.8: NICE[^]NEG



Figure 4.9: LIKE^{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 TlD). 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).

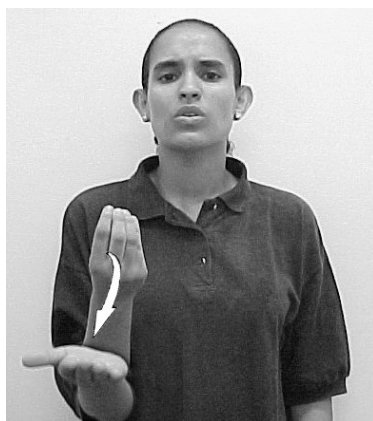


Figure 4.10: NOT-YET



Figure 4.11: NOT-KNOW

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

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).²⁰ 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*

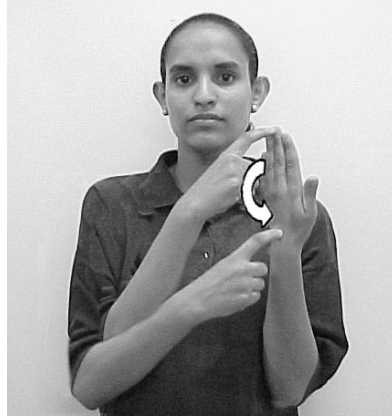


Figure 4.13: *ILLEGAL*

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-Lubnāniya*, LIL), a sign language closely related to LIU.²¹ 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

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 population²³. 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 TĪD, the backward head-tilt clearly has a grammatical status. In TĪD 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 headshake/head back [GSL]
 “There is no way for me to help him again.”

In both TĪD 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) ^{left turn} ₂GIVE₁ _____ NEG-EXIST ₂GIVE₁ _____
 ndh: PAPER(2h) _____ NEG _____ NEG
 “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 ^{headshake} 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 ^{headshake} 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 left turn
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.”



Figure 4.15: negative facial expression



Figure 4.16: negative facial expression

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 spreading²⁶. In (4.14), the headshake spreads over the pronoun that occurs between the different negative elements.

- (4.13) $\frac{\text{headshake}}{\text{NEG-EXIST NEG TAKE NEG-EXIST // KEYS TAKE NEG-EXIST}}$
 “No, I didn’t take them, I didn’t take the keys.”
- (4.14) $\frac{\text{y/n}}{\text{MATHS // LIKE}^{\text{NEG}} \text{INDEX}_1 \text{NEG}}$
 “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) $\frac{\text{yes/no question}}{\text{FATHER COME INDEX}_1 // \text{SEE}^{\wedge} \text{NEG INDEX}_1}$ $\frac{\text{headshake}}$
 “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).

- (4.16a) ^{headshake} DONG [CSL]
understand not
“I don’t understand.”
- (4.16b) DONG^BU (handwave)
understand-not
“I don’t understand.”

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) $\overline{\text{hs}}$ JOHN NOT BUY HOUSE [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) *POSS₁ BRUDER ARZT $\overline{\text{hs}}$ NICHT [DGS]
 my brother doctor NEG
 “My brother is not a doctor.”

- (4.18b) POSS₁ BRUDER $\overline{\text{hs}}$ ARZT $\overline{\text{hs}}$ (NICHT)
 my brother doctor.NEG (NEG)
 “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.



*Figure 4.17: forward head-tilt
in a negative sentence*

- forward head-tilt
- (4.19) dh: PAPER(2h) 2GIVE₁ left turn NEG-EXIST 2GIVE₁——
 ndh: PAPER(2h) NEG—— NEG
 “You didn’t give me the paper, you didn’t.”

- forward head-tilt
- (4.20) headshake NEG-EXIST NEG TAKE NEG-EXIST // KEYS TAKE headshake NEG-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) $\frac{y/n}{\text{MATHS}}$ // $\frac{\text{headshake}}{\text{LIKE}^{\wedge}\text{NEG INDEX}_1 \text{ NEG}}$
 “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) $\frac{hs}{\text{INDEX}_1 \text{ FUMAR}}$ $\frac{\text{headshake}}{\text{NO MAI / NO-RES}}$ [LSC]
 I smoke not never / NEG
 “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 TİD, 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

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

Chapter 5: Possession²⁷

5.1 Introduction

This chapter describes the different possessive constructions found in LIU. Both attributive and predicative possessives will be discussed. Attributive possessive constructions and one of the two types of predicative possessive constructions (the ‘belong’ construction) are very similar, and are probably one and the same construction, with the possessive item (SELF) able to function both as part of a nominal phrase and a predicate. LIU also has a predicative ‘have’ construction, which is expressed by an existential when the possessum is not modified, but by juxtaposition when it is modified. This existential (EXIST) is often accompanied by a headnod. In question-answer sequences the manual part of the sign can be left out, resulting in a non-manual possessive construction.

Although a great deal of typological research has been done into possessives in spoken languages, and several universal tendencies have been described, no such work has as yet been undertaken for sign languages. Perniss and Zeshan (forthcoming a), which contains references to 26 different sign languages, is the first typological study of possessive constructions in sign languages. This means that at present only limited data is available for a cross-linguistic comparison. However, even from this limited data, it is becoming clear that some of the universals that have been proposed for possessive constructions in spoken languages also apply to many sign languages.

In this chapter, I will first briefly describe the methodology and stimuli used to elicit data on possession (Section 5.2). The possessive constructions that were elicited have been divided into two main parts: attributive possessive constructions (Section 5.3) and predicative possessive constructions (Section 5.4). The latter can be subdivided into two types: ‘belong’ constructions (Section 5.4.1) and ‘have’ constructions (Section 5.4.2). These are compared to similar constructions in other signed, and sometimes spoken, languages. The chapter ends with the conclusions and the cross-linguistic comparisons (Section 5.5).

²⁷ This chapter is an expanded version of Hendriks (forthcoming) “I have therefore I exist: possession in Jordanian Sign Language (LIU)”. In: *Possessive and existential constructions in sign languages* (Sign Language Typology Series no. 2), P. Perniss and U. Zeshan (eds.), Nijmegen: Ishara Press.

5.2 Data and Methodology

Most of the possessive constructions described in this chapter were elicited by means of different exercises that were done in pairs.²⁸ These involved a picture-comparison game, a picture-matching game in which objects had to be matched to certain persons, a doctor-patient game, and an exercise in which signers had to talk about their family with the help of a family tree. Three pairs of signers were filmed doing each of the different exercises several times, using slightly different stimuli each time. Different elicitation games elicited different kinds of possessive constructions. Four of the signers were teenagers, who all had Deaf relatives. Two signers were somewhat older and did not have Deaf relatives, but did grow up at a boarding school for the Deaf.

In the picture-comparison game, two signers were each given a picture that differed in several details, as in Figure 5.1. The signers were expected to find out what the differences between their pictures were without showing each other their pictures. They then had to explain to the moderator what the differences between their pictures were. This task was intended to elicit responses such as “In my picture there is a boy” and “My boy has a basket but hers doesn’t”.



Figure 5.1 Two pictures used in the picture-comparison game

The picture-matching game consisted of 15 cards with different objects and a sheet of paper with pictures of three people of different ages, for example a boy, a woman and a grandfather. Two signers had to match the objects with the person they thought the object most appropriately belonged to, for example, a ball with the boy, a handbag with the woman and a television

²⁸ The elicitation material was developed by Dr. Zeshan’s sign language typology group at the Max Planck Institute for Psycholinguistics in Nijmegen.

with the grandfather. This game was expected to elicit ‘belong’ constructions, such as “The ball belongs to the boy”.

In the doctor-patient game one signer (the patient) described the symptoms of an illness to the other signer (the doctor). These symptoms were written on a card in Arabic. The doctor, with the aid of a sheet of paper listing several symptoms and the illness that caused them, had to tell the patient what illness he or she had. This was intended to yield possessive constructions involving body-parts and physical states, such as “my head” or “I have a headache”. Finally, two signers had to ask each other questions about their family with the aid of a family tree diagram. This was intended to elicit possessive constructions involving kinship terms, such as “How many uncles do you have?” Overall, the material was meant to elicit possessive constructions with both ‘have’ and ‘belong’ and with both alienable and inalienable (family members, body parts) possessions. A copy of all these materials and the accompanying instructions can be found in Perniss and Zeshan (forthcoming a).

Besides the data elicited with these stimuli, I also analyzed possessive constructions in semi-spontaneous data, such as filmed narratives, conversations and teaching situations. Altogether, the data described in this chapter is based on approximately 4 hours of video-material. A questionnaire developed for typological research into possessives in sign languages aided me in the analysis presented in this chapter. This questionnaire can be found in Perniss and Zeshan (forthcoming a). The questionnaire is based on typological information about possessive constructions in spoken languages as well as information available about possessive constructions in a limited number of sign languages. The structure of this chapter is based on the questionnaire.

5.3 Attributive possessive constructions

This section will provide a description of attributive possessive constructions in LIU and a comparison of these constructions to those of other sign languages. Attributive possessive constructions are those in which the relationship between a possessor (the one who possesses something) and a possessum (that which is possessed) is expressed within a noun phrase. The resulting construction is a phrase, not a complete sentence. There are two types of attributive possessive constructions: those involving pronominal possessors (e.g. “my book”, Section 5.3.2) and those involving nominal possessors (e.g. “the book of the teacher”, Section 5.3.3). Before discussing these two types of possessive constructions, I will first present some observations about the LIU sign SELF (Section 5.3.1), which, when used in

attributive possessive constructions, can function both as a pronominal possessor and as a linking item between a nominal possessor and its possessum.

5.3.1 The emphatic/possessive pronoun SELF

The sign that I have glossed as SELF (cf. also Chapter 3.2.2) has several uses. It is often used in possessive constructions, but it can also function as a pronoun with emphatic-reflexive meaning. This pronoun, which is articulated with a -hand, can be inflected for person, as shown in Figures 5.2 and 5.3.



Figure 5.2: SELF₂



Figure 5.3: SELF₁

Emphatic-reflexive pronouns are pronouns like “himself” in the English sentence in (5.1a). Note that the meaning of this pronoun is different from the reflexive pronoun “himself” in (5.1b).

(5.1a) John himself cut the bread.

[English]

(5.1b) John cut himself.

More recently, emphatic-reflexive pronouns have also been referred to as intensifiers to distinguish them from reflexive pronouns. Intensifiers differ from reflexives mainly in that they have no argument status (cf. König and Siemund 2000). About 45% of the world’s languages have one pronoun that functions both as an intensifier and as a reflexive (Gast and Siemund 2006). Among these are, for instance, English and Arabic. A language like Dutch, however, distinguishes between the two, the form of the reflexive being

“zichzelf” and of the intensifier “zelf”²⁹. It does not appear that the sign SELF is used as a normal reflexive pronoun in LIU, but further research is needed. An example of the sign SELF used as an intensifier is given in (5.2):

- (5.2) JOSEPH RESPONSIBLE SELF_{right} ARRANGE
 “Joseph himself had been responsible for arranging it.”

Apart from its use as an intensifier, the sign SELF is used mainly in attributive possessive constructions in LIU. It has various different translations and also appears to have different syntactic functions when used in possessive constructions. Apart from being used as a possessive pronoun (cf. Section 5.3.2), it can also link the possessor and the possessum in constructions with nominal possessors (cf. Section 5.3.3). In addition, it surfaces as a predicate in ‘belong’ constructions (cf. Section 5.4.1). The possessive use of SELF is often observed in emphatic contexts, and can in many cases, but not all, be translated as “my own” or “your own” depending on the spatial inflection.

From a typological point of view, it is interesting that the emphatic and possessive meanings are so closely related in LIU, particularly because a similar close relation is observed in the ‘have’ construction (Section 5.4.2). Cross-linguistically, it is uncommon that a language uses the same pronoun with both emphatic-reflexive meaning and possessive meaning. König and Siemund (2000) point out that intensifiers typically develop from expressions for body parts and typically develop into reflexive pronouns, as in (5.1b), but they do not mention the notion of possession with respect to intensifiers³⁰. The fact that SELF can be emphatic even in its possessive use, as mentioned above, may provide a link between these two different meanings.

5.3.2 Attributive possessive constructions with pronominal possessors

Most attributive possessive constructions in LIU involve the use of a pronoun. In many cases a personal pronoun can be used. This is particularly true for constructions with an inalienable possessum. Crowley (1996:428)

²⁹ Cf. de Clerck and van der Kooij (2005) for a comparison of the use of “zelf” in Dutch and the intensifier ZELF in NGT.

³⁰ Note that in classical Greek, the pronoun αὐτός is an intensifier, but in its genitive form it can also function as a third person possessive (cf. Smyth 1956). However, the oblique cases of this pronoun also function as the personal pronoun of the third person, and it seems more likely that the possessive meaning is derived from the personal pronoun than from the intensifier.

defines inalienable as follows: “an inalienable relationship holds between two things if, under normal circumstances, the referent of the ‘possessed’ noun does not exist independently of the referent of the ‘possessor’ noun”. The category of inalienable nouns includes body parts and names. According to Lehmann (1998), such possessive constructions involving inalienable nouns, especially body parts, have a minimal use of grammatical markers cross-linguistically, because the relationship between the parts and their possessor is inherent. In line with this observation, in LIU no explicit possessive marker needs to be used in sentences like (5.3)³¹:

- (5.3) wh-question
 INDEX₂ NAME INDEX₂ WHAT
 “What’s your name?”

In a sentence like (5.3) it would be very unusual for the pronoun SELF to occur as a pronominal possessive marker. If it were used it would add an emphatic, contrastive meaning and it could occur only in a context where, for some reason, it was unclear whose name was being asked for, as in (5.4):

- (5.4) wh-question
 NAME SELF₂ WHAT
 “What’s *your own* name?”

Interestingly, kinship terms, which are generally treated as inalienable and thus may be expected to exhibit minimal grammatical marking of possession³², often occur with the sign SELF in LIU, as shown in (5.5), although they can also occur with a personal pronoun as in (5.6). There is no apparent difference in meaning between the two options.

³¹ Note that pronoun doubling occurs frequently with personal pronouns in LIU (cf. Chapter 3.4.2) and does not change the meaning of the sentence.

³² Many Oceanic and Amerindian languages make a structural distinction between alienable and inalienable possessives. Most of these languages treat kinship terms as inalienable, but there are languages in which kinship terms are treated as alienable or contrasted with all other nouns (cf. Heine 1997:11; Seiler 1983:21). According to Heine the alienable/inalienable distinction is ultimately culture-specific.

(5.5) FATHER+MOTHER SELF₂ // ^{y/n q}STAY³³
 “Are your parents still alive?”

(5.6) FATHER+MOTHER INDEX₁ TWO DEAD
 “My parents have both died.”

The sign SELF occurs particularly frequently in complex possessive constructions involving more than one kinship term, as in (5.7):

(5.7) ^{wh-question}MOTHER SELF₂ SIBLING WHAT
 “What about your mother’s siblings?”

The emphatic/possessive pronoun SELF is also used with alienable possessions, as in (5.9). Sentences with a personal pronoun and alienable possessions do occur, but these are often ambiguous in structure, as indicated in the translation of (5.8).

(5.8) SHOES INDEX₁ RED INDEX₃ GREEN
 “My shoes are red and hers are green.” OR
 “I have red shoes, she has green ones.”

(5.9) PHARAOH RING SELF_{left} TAKE-OFF
 “Pharaoh took off his own ring.”

A sentence like (5.8) could be parallel to (5.3), where the personal pronouns have possessive meaning, or it could be a predicative ‘have’ construction (Section 5.4.2.2). If the pronouns in both (5.8) and (5.9) are interpreted as attributive, the difference between them would appear to be one of emphasis. In (5.9) SELF is best translated as “his own”, and the construction can be more or less emphatic depending on the facial expression of the signer. Thus, when used with alienable possessions, the pronoun SELF appears to be both possessive and emphatic. This emphatic meaning is not present when SELF is used with kinship terms.

It would seem, then, that kinship terms function as a separate class in LIU attributive possessive constructions, in that they behave differently from both alienable possessions and inalienable possessions like body-parts

³³ The yes/no question marker (consisting of raised eye-brows and a head-tilt forward) occurs only on the final sign, possibly because the first part of the sentence is topicalized (as indicated also by a slight pause between the signs SELF₂ and STAY). The scope of this marker is the whole sentence. A similar example is found in (5.11d).

and signs like NAME (as in (5.3) and (5.4)). SELF occurs more frequently with kinship terms than with any other type of possessive noun, and, in contrast to other uses with alienable and inalienable possession, its does not appear to add emphatic meaning when used with kinship terms.

When SELF is used in attributive position, it occurs most frequently after the noun it modifies, as in (5.7) and (5.9). In an elicitation exercise involving a family tree, the sign SELF occurred as a possessive pronoun 72 times. In 67 out of these 72 occurrences (93%) it followed the possessum.³⁴

When a personal pronoun is used with possessive meaning the word order appears to be more flexible than with the emphatic/possessive pronoun SELF. A personal pronoun functioning as possessor can precede or follow the possessum and it can also be doubled, appearing both before and after the possessum. However, since some of these constructions are ambiguous between an attributive construction and a predicative ‘have’ construction, it is problematic to compare the distribution of the personal pronoun in these constructions with that of SELF.

Both SELF and personal pronouns can also be articulated simultaneously with the possessum on the dominant or non-dominant hand (cf. Chapter 6.6.1). Often, however, the simultaneous construction involves perseveration of either the pronoun or the possessum (cf. (6.19)), which means that the relative word order of the pronoun and the possessum can still be determined.

Cross-linguistically, sign languages differ in the number of pronouns that can be used in attributive possessive constructions. Some sign languages, like CSL (Perniss and Zeshan, forthcoming a), Kata Kolok (a Balinese village sign language, Perniss and Zeshan, forthcoming b) and Adamorobe Sign Language (AdaSL, Nyst, forthcoming) only have personal - deictic - pronouns, which are also used in possessive constructions. Likewise, NS has two types of personal pronouns (neutral and polite) which can also be used in possessive constructions (Morgan, forthcoming). It is interesting to note that of the 26 languages in the Perniss and Zeshan corpus those that lack specifically possessive pronouns are either from South-East Asia or village sign languages.

Most sign languages, however, do have separate possessive pronouns, and in some cases even different types of possessive pronouns. Both Ugandan Sign Language (USL) and LSC, for instance, have two sets of possessive pronouns, one of which is emphatic and implies a permanent relationship. Moreover, these two sign languages can also use personal

³⁴ In the other five occurrences there were two cases in which it preceded the noun, two cases in which it was repeated and both preceded and followed the noun, and one case in which the noun itself was repeated and the pronoun occurred in between the two occurrences.

pronouns in possessive constructions (Lutalo, forthcoming; Quer and GRIN, forthcoming). Russian Sign Language even distinguishes three types of possessive pronouns: a possessive pronoun, a possessive/existential pronoun, and an emphatic impersonal possessive (Perniss and Zeshan, forthcoming a). IPSL is like LIU in that it can use personal pronouns for possession but also has a more emphatic possessive pronoun (Perniss and Zeshan, forthcoming a). Likewise, Flemish Sign Language (*Vlaamse Gebarentaal*, VGT) uses personal pronouns in attributive possessive constructions, but also has a separate set of possessive pronouns (Vermeerbergen and DeWeerd, forthcoming). The possessive pronouns in VGT, however, do not appear to be emphatic, as they are, at least when used with alienable possessums, in LIU.

Most sign languages, then, seem to be able to use personal pronouns in possessive constructions, although Schalber and Hunger (forthcoming) mention this is exceptional in ÖGS. In addition, however, some sign languages have one or more sets of specifically possessive pronouns. There are some differences as to the kind of relationships that can be expressed by a possessive or a personal pronoun. Thus, in IPSL the emphatic possessive pronoun is not used with kinship terms, whereas it is commonly used with kinship terms in languages like ASL and ÖGS (Chen Pichler et al. 2008), BSL (Fenlon and Cormier 2008) and LIU. In general it seems that an inalienable, inseparable possessum such as a body-part or name is more likely to be modified by a personal pronoun than by a possessive pronoun (cf. Quer and GRIN (forthcoming) for LSC). However, based on the available data on possessive constructions in sign languages, there is little evidence of the systematic use of different constructions for alienable and inalienable possession (Perniss and Zeshan, forthcoming a).

A special type of possessive marking that occurs only in certain sign languages is spatial inflection of the possessum. This spatial inflection is only possible on certain signs, namely signs that are not body-anchored. LSC, for instance, can use spatial marking instead of personal or possessive pronouns. In the example below spatial inflection on the possessum BOOK, that is, articulation in the direction of the respective possessor, is the exclusive marker of the possessive relationship (Quer and GRIN, forthcoming).

(5.10) BOOK₂ EASY // BOOK₁ DIFFICULT [LSC]
 “Your book is easy, my book is difficult.”

However, in the corpus of Perniss and Zeshan (forthcoming a) such constructions do not appear to be very productive. The extent of their productivity across sign languages has not yet been investigated.

As far as word order within the noun phrase is concerned, the cross-linguistic data show that in several sign languages there is no strict word order between a pronoun and its possessum. Thus, in ASL and VGT the order can be pronoun-possessum, possessum-pronoun, or pronoun-possessum-pronoun. In ASL all these orders are possible with possessive pronouns, despite the fact that there is a preference for personal pronouns used in possessive constructions to precede the possessum. Similarly, in Kata Kolok the pronoun in possessive constructions may precede or follow the possessum. When a sign language does have a strict word order, this may be due to influence from the spoken language. Thus, in ÖGS, as in German, the pronoun always precedes the possessum, although in ÖGS it may be repeated after the possessum. Likewise, the order possessum-pronoun in LIU may be influenced by Arabic, in which possessive pronouns are expressed as suffixes on the possessum.

5.3.3 Attributive possessive constructions with nominal possessors

Besides constructions involving a pronoun and a noun, an attributive possessive relationship can also be expressed by two nouns: one functioning as possessor and one as possessum. An example from English would be “John’s book”. In an attributive possessive relationship in LIU, the nouns denoting possessor and possessum can be simply juxtaposed, as shown in examples (5.11a) to (5.11e):

- (5.11a) LANGUAGE DEAF
“the language of the Deaf”
- (5.11b) BOTH_{right} SERVANT PHARAOH INDEX_{right}
“Both of them were servants of Pharaoh.”
- (5.11c) MOHAMMED PROBLEM NOT-MY-BUSINESS
“Mohammed’s problem is none of my business.”
- (5.11d) SAMIRA FATHER SIBLING // EXIST^{—y/n.q}
“Does Samira’s father have siblings?”
- (5.11e) BLOOD SLAUGHTER SHEEP
“the blood of a slaughtered sheep”

In an attributive possessive relationship in LIU, the possessum can be a concrete noun as in (5.11e), or an abstract noun as in (5.11a) and (5.11c). Also, the possessum can have an animate referent, as in (5.11b) and (5.11d),

or an inanimate referent, as in (5.11a), (5.11c) and (5.11e). In (5.11a) to (5.11d) the possessors are human, but the possessor can also be non-human as in (5.11e). The order of possessor and possessum appears to be somewhat flexible, although there seems to be a preference for the possessum to come first as in (5.11a), (5.11b) and (5.11e). In both examples in which the possessor precedes the possessum, (5.11c) and (5.11d), the possessor is human and referred to by name. Thus, the relative order of the possessor and the possessum in these examples may reflect differences in the topicality of the possessor. However, the data does not include sufficient examples of juxtaposition with different types of possessors to test this hypothesis.

The juxtaposition of two nouns to express a possessive relationship resembles the ‘construct state’ construction in Arabic (both spoken Jordanian Arabic and MSA). Thus, (5.12) shows an Arabic translation of (5.11a).

- (5.12) lughat al- ṣum [Arabic]
language DEF.ARTICLE-deaf
“the language of the Deaf”

Unlike LIU, however, the construct state in Arabic has a strict word order in which the possessum always precedes the possessor.

In LIU, it is also possible to explicitly mark the possessive relationship between two nouns with the pronoun SELF. Again, this strategy is found with both an abstract possessum, as in (5.13a) and a concrete possessum, as in (5.13b). Likewise, SELF can occur with an animate possessum, as in (5.13d) and an inanimate possessum, as in (5.13a), (5.13b) and (5.13c). Even inanimate possessors can occur with SELF, as in (5.13c).

- (5.13a) SIGNING LANGUAGE SELF_{neutral} DEAF
“Sign language is the language of the Deaf.”
- (5.13b) JOSEPH ONCE VISIT ROOM SELF_{left} POTIPHAR INDEX_{left}
“Joseph once visited Potiphar’s room.”
- (5.13c) FLAG SELF_{neutral} JORDAN BEAUTIFUL
“The flag of Jordan is beautiful.”
- (5.13d) WIFE FATHER SELF_{forward-right} HOUSE ALL LOCK-UP
“The wife’s father locked up the whole house.”

When the pronoun SELF occurs in an attributive construction with two nouns it normally follows the possessum. The most common order is possessum-SELF-possessor, as in (5.13a-c). SELF also follows the possessum in (5.13d) although the word order in that example is different, namely possessor-

possessum-SELF. This is in line with the fact that SELF usually follows the possessum when it functions as a possessor pronoun.

The construction with SELF does not appear to be possible when a possessive relationship involves body-parts or concrete part-whole relationships. It seems that the possessor and the possessum in a possessive construction need to be separable in order to use this construction. If one is attached to the other, signers will either use juxtaposition or spatial means to express the relationship. The example in (5.14) would appear to be an exception since it includes a part-whole relationship involving SELF. This is, however, not a possessive construction meaning “the grapes of the tree” but rather a specification of the type of tree (“a tree specifically for grapes”).

- (5.14) TREE GRAPES SELF_{neutral}
 “a grape-tree”

In Section 5.4.1 I will show that these attributive constructions in LIU have a predicative equivalent, which will be called the ‘belong’ construction. The two constructions are very similar in both form and meaning.

Cross-linguistically, there does not appear to be a great deal of variation between different sign languages when it comes to possessive structures involving two nouns. Most sign languages simply juxtapose the possessor and possessum. This has been reported for sign languages of very diverse origins, such as VGT, ASL, Kata Kolok and AdaSL (Perniss and Zeshan, forthcoming a). Juxtaposition is particularly common when part-whole relationships or body-parts are involved. This may have to do with the fact that these relationships are not canonically possessive, that is, I don’t ‘own’ my leg, and a tree does not ‘own’ its leaves or a printer its paper. To use an explicitly possessive construction in such cases appears to be impossible in many sign languages such as ASL or ÖGS.

Besides juxtaposition, some sign languages can mark a possessive relationship between two nouns more explicitly. In ÖGS, for instance, just as in LIU, juxtaposition is very common, but the possessive pronoun can be inserted between a possessor noun and a possessum noun (Schalber and Hunger, forthcoming). Likewise, VGT can use the possessive pronoun in attributive possessive constructions like (5.15a). Note that the order in this example (possessor-pronoun-possessum) is the opposite of the order found in LIU. VGT has yet another option, however, whereby the sign OF (VAN) is inserted, as in (5.15b). In this case the order of possessor and possessum is reversed (Vermeerbergen and DeWeerd, forthcoming). The sign OF is phonologically identical to the possessive pronoun, except for the mouthing *van*. Interestingly, it can also be used with the meaning “typical of” or “specific for”, like the sign SELF in LIU.

- (5.15a) FATHER POSS_{3rd person} LADDER [VGT]
 “father’s ladder”
- (5.15b) MOTHER OF SOETKIN
 “Soetkin’s mother”

Similarly, LSC has a linker item DE (“of”) which may intervene between the possessor and possessum to overtly mark the possessive relationship. This linker may also occur with pronominal forms. However, LSC also allows juxtaposition as well as the use of the possessive pronoun in these constructions. In addition, LSC has a special linker for kinship relationships, or, more generally, relationships between people (Quer and GRIN, forthcoming). The kinship linker in LSC is an interesting phenomenon that has not been found in other sign languages. More research needs to be done to explore the existence of similar linkers in other sign languages.

Some signers of ASL make a possessive relationship between two nouns explicit by signing a fingerspelled -S after the possessor noun. This is obviously a construction that has been borrowed from English, through Signed English, but it appears to be acceptable in ASL (Chen Pichler and Hochgesang, forthcoming), especially in complex noun phrases, such as (5.16).

- (5.16) POSS₁ FATHER -S BROTHER -S WIFE [ASL]
 “my father’s brother’s wife”

In general, it is interesting that there is so little cross-linguistic variation in nominal attributive possessive constructions. It appears that those languages that can mark the possessive relationship overtly, generally use the possessive pronoun to do so, except when a construction is borrowed from the surrounding spoken language, as in ASL. It may be that word order in these overtly marked possessive constructions is influenced by the surrounding spoken language, although ÖGS does not fall into this pattern. The influence of the spoken language is most clearly seen in the case of ASL, which uses a construction borrowed from English and also uses the corresponding English word order. It is also true for VGT, which has two different constructions, both of which also occur in Dutch with the same word order. Similarly, the LIU word order corresponds to the word order of Arabic construct states.

5.4 *Predicative possessive constructions*

In predicative possessive constructions the notion of possession is expressed by a complete sentence, the predicate of which contains the possessive element. Two different types of predicative possessive constructions can be distinguished: ‘have’ constructions (Section 5.4.2) and ‘belong’ constructions (Section 5.4.1). According to Heine (1997), all known languages have a conventionalized means for expressing a distinction between ‘have’ and ‘belong’ constructions. Sometimes this distinction is indicated only by a difference in word order, or by reversing case functions, but it is also possible that ‘have’ and ‘belong’ constructions are entirely different constructions, using different verbs, as in the English examples in (5.17)

(5.17a) I have a car.

[English]

(5.17b) The car belongs to me.

The semantic and syntactic differences between these constructions have been described in various ways. Watkins (1967) argues that in ‘have’ constructions the possessor receives emphasis whereas in ‘belong’ constructions the possessum receives emphasis. Structurally, in ‘have’ constructions the possessor tends to be the subject or topic of the clause whereas in ‘belong’ constructions the possessum is often the subject or topic, as is true for the examples in (5.17). Related to this is the fact that in ‘have’ constructions the possessum is usually indefinite, whereas in ‘belong’ constructions the possessum is typically definite. A difference in meaning between ‘have’ constructions and ‘belong’ constructions is that the former frequently have a wider range of meaning than the latter. In particular, ‘belong’ constructions usually express permanent ownership only.

5.4.1 ‘Belong’ constructions

LIU has a ‘belong’ construction, which appears to be derived from attributive constructions and uses SELF as part of the predicate, as in (5.18). The sign SELF may be directed towards the location of the possessor, or, if the possessor has not been localized explicitly, it may be directed to a point in neutral space ahead of the signer.

(5.18a) SCISSORS SELF_{neutral} OLD-PERSON

“The scissors belong to the old lady.”

- (5.18b) PURSE GIRL SELF_{neutral}
 “The purse belongs to the girl.”

The examples in (5.18) were produced as complete utterances in the matching game, described in Section 5.2. In these utterances SELF functions as a predicative element, rather than a pronoun or linking item within a noun phrase.³⁵ LIU is not unique in employing a very similar construction for attributive and predicative possession. In Dutch, for instance, the preposition *van* (“from/of”) can be used with possessive meaning in both attributive (5.19a) and ‘belong’ constructions (5.19b).

- (5.19a) Dat is het boek van Jan. [Dutch]
 that is the book of John
 “That is John’s book.”
- (5.19b) Dat boek is van Jan.
 that book is of John
 “That book belongs to John / That book is John’s.”

Using a pronoun in a predicative function in a possessive construction is also observed in English (“It is mine.”). Ultan (1978:27) refers to constructions like “it is mine” or “the book is John’s” as possessive substantives. Although little cross-linguistic data on ‘belong’ constructions in sign languages exists, it appears that possessive substantives occur in a number of sign languages (Perniss and Zeshan, forthcoming a).

The examples in (5.18) show that SELF can come both before and after the possessor. The possessum in these constructions normally precedes the possessor, in line with cross-linguistic expectations for ‘belong’ constructions. In Section 5.3 it was shown that the same word orders occur in attributive constructions in LIU. Although the sign SELF in (5.18a,b) has been translated as “belong”, it can also mean “for” in the sense of “specifically for” or “just right for someone”. Thus, depending on the context, sentence (5.18b) could also mean “the purse is just right for the girl”. This is very similar to the meaning of the pronoun SELF in the attributive construction in (5.14).

When SELF is inflected for person, it is not always clear whether it functions as a predicate or as part of a noun phrase, since it usually follows

³⁵ The pronoun SELF can even be used with adjectival meaning in a sentence like INDEX₁ EXIST PROBLEM SELF, which means “I have a problem of my own/ a personal problem”.

the possessum in both constructions. Thus, a sentence like (5.20) is ambiguous between an attributive and a predicative meaning.³⁶

(5.20) INDEX CAR SELF₁
 “That is my car.” OR “That car is mine”

It is possible that the ‘belong’ construction has been derived from the attributive construction through a process of re-analysis. In that case the pronoun in attributive position, the first reading of (5.20), would be re-analyzed as a possessive substantive, as in the second reading of (5.20), and could subsequently also be used in constructions like (5.18), in which it does not really function as a pronoun anymore, but rather as a predicative/verbal element. Since LIU does not have a copula, the difference between the first and second reading of (5.20) cannot be derived from the location of the copula, as in English. The re-analysis may also be related to the emphatic nature of SELF. Heine (1997) mentions that possession is presupposed in attributive constructions but is asserted, and thus more emphatic, in predicative constructions.

The ‘belong’ construction in LIU is normally used for permanent ownership and is less likely to be used for temporary possession. Thus, a sentence like (5.20) conveys the meaning that the signer owns the car. It would not normally be used to indicate, for example, that the signer has rented or borrowed a car for a short period of time. This is one of the ways in which the ‘belong’ construction differs from the ‘have’ construction. This point will be further discussed in 5.4.2.1.

As in attributive constructions, the sign SELF is not normally used in predicative constructions with body-parts or part-whole relationships. The semantic reasons for this constraint are quite obvious. Generally, it is redundant, if not odd, to express ownership of something that is an inherent part of a person or object unless it is for emphatic or contrastive purposes. Hence, SELF can only be used in a non-contrastive sense when the possessum and possessor are separable. It could be used, for instance, to indicate that a set of false teeth in a cup on the sink belongs to a certain person. If it were used in reference to teeth that are in a person’s mouth, it could only have emphatic/contrastive meaning, namely to assert that those teeth really are someone’s own teeth rather than false teeth.

In summary, it would seem that SELF functions in the same way in attributive constructions and predicative constructions on several counts. Structurally, the word order in both constructions is the same. As far as

³⁶ Prosodic markers, such as a slight pause between either the index and CAR or between CAR and SELF, and non-manuals might disambiguate between the two readings. More research into such prosodic markers is needed, however.

distribution is concerned, SELF in both constructions occurs with alienable and kinship relationships, but not with inalienable part-whole relationships. Also, from a semantic point of view, SELF can mean both “belong” as well as “for” in attributive and predicative constructions. In the attributive constructions in (5.13) SELF could also be translated as “belonging to”. Thus, rather than treating the ‘belong’ construction as separate from attributive constructions with SELF, it could be claimed there is one construction with SELF and the interpretation of this element as either a possessive pronoun or a possessive substantive depends on the context.

Cross-linguistically, there is not much data on ‘belong’ constructions in sign languages and much of the available data is ambiguous. It appears that, where sign languages have a ‘belong’ construction, it functions like the construction in LIU, with a possessive pronoun in the predicative slot. This is true, for instance, in VGT, which is also similar to LIU with respect to the related attributive possessive constructions (Vermeerbergen and DeWeerd, forthcoming). Similarly, in TID, the same possessive pronoun can be used in attributive and in predicative constructions, as in (5.21) (Perniss and Zeshan, forthcoming a). In contrast to LIU, however, the two constructions can be distinguished in TID by a word order difference, the pronoun occurring before the possessum in the attributive possessive construction (5.21a) and after the possessum in the predicative construction (5.21b).

- (5.21a) POSS₁ CAR GOOD [TID]
 “My car is good.”
- (5.21b) CAR POSS₁
 “The car is mine.”

Likewise, in CSL, the personal pronoun, which is also used as a possessive pronoun, can be used predicatively in ‘belong’ constructions, but in this case its movement is repeated (Perniss and Zeshan, forthcoming a). A similar form of reduplication of the pronoun has also been described for ASL (Chen Pichler and Hochgesang, forthcoming). LSC uses a sign in ‘belong’ constructions that appears to be a reduplicated form of the linker DE (“of”), which is also commonly used in attributive possessive constructions (Quer and GRIN, forthcoming).

Pronouns that are used in predicate position can usually be inflected in the same way as attributive possessive pronouns. As in attributive possessive constructions, spatial inflection may not only occur on the pronoun, but also on the possessum in some sign languages. As was stated in Section 5.3.2, this spatial inflection is not productive in that it can only occur on a limited number of signs, namely those that are not body-anchored. Apparently, in ASL, when the possessum is spatially inflected, the

possessive element is optional, as illustrated in (5.22) (Chen Pichler and Hochgesang, forthcoming). When it is present, both the possessums and the possessive pronouns are directed in space towards the possessors. (The ‘++’ in this example represent reduplication.)

- (5.22) GREEN₂(POSS₂++), BLUE₁(POSS₁++) [ASL]
 “The green one is yours, the blue one is mine.”

From the limited available data, it would seem that sign languages are very similar in the type of ‘belong’ constructions that occur. Basically, almost all sign languages for which a ‘belong’ construction has been established thus far use the possessive pronoun, or the personal pronoun when they do not have a separate possessive pronoun, in predicate position. There are slight differences between sign languages as to whether the form of this pronoun differs depending on whether it occurs in attributive or predicative position. In some sign languages, for example, differences in word order occur, as in (5.21), or one of the forms is reduplicated, as in (5.22). In general, however, there seems to be a close relationship between attributive possessive constructions and ‘belong’ constructions in sign languages.³⁷ Although these two constructions are also related in certain spoken languages, as shown by the Dutch examples in (5.19), it is striking that this relationship is attested in all sign languages for which data on both constructions is available.

5.4.2 ‘Have’ constructions

In ‘have’ constructions the main emphasis is on the possessor. In these constructions, the possessor is the subject or topic of the sentence and the possessum is typically indefinite. According to Heine (1997:45)

“possession is a relatively abstract domain of human conceptualization, and expressions for it are derived from more concrete domains. These domains have to do with basic experiences relating to what one does (Action), where one is (Location), who one is accompanied by (Accompaniment) or what exists (Existence).”

Possessive ‘have’ constructions are generally derived from one of these domains by means of grammaticalization. Although Arabic does not

³⁷ Morgan (forthcoming) mentions that the sign EXIST-unmarked in NS may occur with and without spatial inflection. He hypothesizes that the inflected EXIST form may have the meaning ‘belong’. However, the data he supplies does not show that there is a semantic difference between the two forms, and the hypothesis seems to be based merely on the phonological difference.

construe possessives in terms of existence, LIU has borrowed an existential from Arabic and uses it as a possessive with unmodified nouns.

This section will distinguish between two types of ‘have’ constructions in LIU: those with unmodified nouns (Section 5.4.2.1), and those with modified nouns (Section 5.4.2.2).

5.4.2.1 'Have' constructions with unmodified nouns

LIU uses the existential EXIST in ‘have’ constructions (Figure 5.4). This sign is usually made with the mouthing “fi” and may be accompanied by a headnod. In addition, the negative existential NEG-EXIST (Figure 4.5, repeated here as Figure 5.5), which was introduced in Chapter 4.3.1 as a clause negator, can also be used with negative possessive meaning.



Figure 5.4: *EXIST*



Figure 5.5: NEG-EXIST

In spoken Jordanian Arabic, the word *fī* (في) can either be a preposition meaning “in”, or an existential that could be translated as “there is/are”. When *fī* occurs as a preposition, it is usually followed by a definite noun, whereas it is followed by an indefinite noun when it is used as an existential. According to Freeze (1992), who claims that locatives, existentials and possessives have a basic underlying structure, the existential use of *fī* is derived from a locative consisting of the preposition “in” and the third person singular object pronoun. A sentence from spoken Jordanian Arabic containing both uses of *fī* is presented in (5.23).

- (5.23) fi ḥisān fi al-maghāra [Jordanian Arabic]
there-is horse in DEF.ARTICLE-cave
‘There is a horse in the cave.’

Neither MSA nor spoken Jordanian Arabic uses the existential *fī* in possessive constructions, as LIU does. In Nubi, an Arabic-derived creole from Kenya, however, this word is used both as an existential and in possessive constructions (Heine 1997:137). The following two examples show the use of EXIST in LIU with existential and possessive meaning. In (5.24) EXIST has an existential function, which parallels that of *fī* in Arabic. In (5.25) it is used possessively with the meaning “have”.

(5.24) ^{conditional} IF PERSON STEAL EXIST // KILL³⁸
 “If there is a person who has stolen, kill him.”

(5.25) ^{yes/no question} INDEX₂ SIBLING EXIST INDEX₂
 “Do you have siblings?”

When EXIST is used in existential or possessive constructions it typically occurs with nouns, as in the two examples above. In LIU, however, EXIST can also occur with verbs as a marker of emphasis or assertion. Thus, the LIU ‘have’ possessive is not only closely related to existential constructions but also to assertive/emphatic constructions. There is an interesting parallel here to the use of SELF, which can also have both possessive and emphatic meaning (Sections 5.3 and 5.4). An example of EXIST with emphatic/assertive meaning is presented in (5.26). Like the possessive meaning, the emphatic/assertive meaning does not exist for Arabic *fī*.

(5.26) ^{headnod} EXIST STEAL JOSEPH SAY STEAL EXIST
 “You *have* stolen, Joseph says, you *have* stolen.”

Some signers appear to inflect the sign EXIST in possessive constructions by changing its position in space. Thus, the sign can be articulated close to the signer to mean “I have” and close to the addressee to mean “you have”. This inflection for subject-agreement does not occur in existential constructions, because the subject of an existential construction is not usually present in the vicinity of the signer. Inflection is not observed in emphatic constructions either, because in these constructions EXIST does not modify a noun but a verb. The subject agreement in possessive constructions appears to be optional and occurs most frequently when EXIST is followed by a personal

³⁸ In fact, this example is ambiguous between an existential and an assertive reading (cf. 5.26). It could also be interpreted as: “If someone really has stolen, kill him.”

pronoun. Thus, it may be a kind of regressive assimilation to the location of the pronoun, as illustrated by (5.27).

- yes/no question
- (5.27) STOMACH PAIN EXIST₂ INDEX₂
 “Do you have a stomach ache?”

The sign EXIST can be made once with a single downward movement of the index finger, or with a smaller, repeated movement. In the latter case, the accompanying headnod is also repeated and more restrained and the accompanying mouth pattern is reduced to “ffff”. The repeated form of EXIST is not used in questions and is less emphatic than the form with a single downward movement. The phonological form of the sign is interesting because it looks like a locational, thus providing support for Freeze’s (1992) claim that locatives, existentials and possessives are related. Indeed, it is probable that the phonological form of the LIU sign is derived from the locative sign HERE, which is very similar in form but is not accompanied by the mouthing.

In informal signing, the manual part of the sign EXIST can be dropped. This is particularly common in question-answer sequences, but does not occur frequently in narratives. In (5.28) the headnod³⁹ at the end of the construction indicates that the construction is possessive:

- yes/no question
headnod
- (5.28) WOMAN INDEX_{picture} APRON
 “Does the woman in the picture have an apron?”

The negative form of the sign EXIST is the suppletive form NEG-EXIST (Figure 5.5 above). This sign is normally accompanied by the mouthing “ma-fi” consisting of the existential *fi* and the negative particle *ma* borrowed from spoken Jordanian Arabic. Like its positive counterpart, *ma fi* can only be used in existential constructions in spoken Jordanian Arabic. In LIU, the sign NEG-EXIST can be used as both a negative existential and a negative possessive with nouns. Moreover, as has already been discussed in Chapter 4.3.1, it can also function as a more general clause negator. Because NEG-EXIST is produced at the mouth, that is, body-anchored, it cannot undergo any spatial inflection in possessive constructions. In (5.29) NEG-EXIST is used as a negative existential, corresponding to its use in spoken Jordanian Arabic, albeit with a different word order. In (5.30) it has a negative

³⁹ The mouthing “fi”, which normally accompanies the headnod, is difficult to see in the video clip of this example.

possessive meaning, and in (5.31) it functions as a clause negator. Other examples of NEG-EXIST as a clause negator are found in Chapter 4.3.1.

- (5.29) PROBLEM NEG-EXIST
 “There is no problem.”
- (5.30) INDEX₁ EXIST FISH NEG-EXIST INDEX₃
 “I have a fish and she doesn’t.”
- (5.31) SIBLING SAY INDEX₁ STEAL NEG-EXIST
 “The brothers said: ‘I didn’t steal’.”

As possessives EXIST and NEG-EXIST can be used with both animate and inanimate possessors and with both alienable and inalienable possessions. Inalienable possessions include kinship terms, body-parts, and physical states. The two signs can also be used with abstract concepts, like time. Sometimes more than one construction is possible, as shown in (5.32).⁴⁰

- (5.32a) STOMACH ^{yes/no question} PAIN INDEX₂
 “Does your stomach hurt?”
- (5.32b) STOMACH PAIN ^{yes/no question} EXIST₂ INDEX₂
 “Do you have a stomach ache?”

The distribution of use shows that constructions with EXIST can be used in more contexts than constructions with SELF. Notably they can be used with inalienable possessions like body-parts, albeit in specific contexts. Constructions with EXIST also have a wider range of meaning than attributive or ‘belong’ constructions involving SELF. Thus, a sentence like INDEX₁ CAR EXIST can mean that the signer owns a car, but also, depending on the context, that the signer has borrowed a car for a period of time.

There does not appear to be a strict word order in possessive ‘have’ constructions in LIU. Most frequently, the possessor comes first as subject of the sentence, followed by the possessum and then the sign EXIST or NEG-EXIST. If the possessor is a pronoun, however, it often follows the sign (NEG-) EXIST or is repeated at the end, particularly in questions, as in (5.25) and (5.32b).

⁴⁰ Note the difference between the scope of the yes/no question marking in the two examples. More research is needed in order to determine the rules governing the scope of non-manual question marking in LIU.

Cross-linguistically, there has been much emphasis on the relationship between locationals, existentials and possessives in both spoken languages (cf. Freeze 1992) and sign languages (Kristoffersen (2003) for DSL; Perniss and Zeshan (forthcoming a) for a variety of sign languages). In general, it appears that the relationship between locationals, existentials and possessives is very prominent in sign languages. In LIU this is evidenced by the sign EXIST, which is phonologically similar to the locational HERE and can have both existential and possessive meaning. Interestingly, existentials and possessives are also generally expressed in the same way in creole languages (Sebba 1997; Fischer 1978), such as the Arabic-based creole Nubi, mentioned above. Creoles emerge when speakers from contact languages or pidgins have children. They are the mother tongue of a new generation growing up with a pidgin. Like sign languages, creoles appear to have certain grammatical properties in common cross-linguistically, even when they derive from completely different spoken languages. Many of these grammatical properties are also common in sign languages, and some linguists have claimed that sign languages are, in fact, creoles (Fischer 1978; Deuchar 1987). However, cross-linguistic data from sign language grammars has, to my knowledge, not been combined with research into the grammar of creoles in an attempt to explain these similarities.

In some sign languages, notably the village sign languages Kata Kolok and AdaSL there is a great deal of ambiguity in these constructions, since locationals, existentials and possessives can all be expressed by means of pointing signs. Examples of these three uses in Kata Kolok (Perniss and Zeshan, forthcoming b) are given in (5.33).⁴¹

- yes/no question
- (5.33a) COW pointing to location [Kata Kolok]
 “Is the cow over there?” (loc.) OR
 “Are there cows over there?” (exist.)
- yes/no question
- (5.33b) COW pointing to third person possessor
 “Does s/he have (a) cow(s)?” OR “Is it her/his cow?” (poss.)

Example (5.33a) can have both a locational and an existential reading. There does not appear to be a structural difference between the two. Additionally, the possessive structure in (5.33b) is structurally very similar. The possessive reading is arrived at by contextual clues, namely that the signer

⁴¹ Note that the glosses in these examples are taken from Perniss and Zeshan (forthcoming b) and have not been adapted.

points at a person, rather than a location. Note that (5.33b) can be interpreted as either a predicative or an attributive possessive construction.

The examples from Kata Kolok are unusual in their considerable ambiguity. In most (urban) sign languages there appear to be more clearly designated structures for existence and possession. In a large number of sign languages from all around the world, possessive constructions are derived from existential constructions, as they are in LIU (Perniss and Zeshan, forthcoming a). The main difference between the two structures in these languages is the presence of a possessor argument in possessive constructions. This appears to be the most common pattern found for possessive constructions in sign languages. In some sign languages, such as CSL, USL and Brazilian Sign Language, the existential sign can be inflected spatially. Spatial inflection is also attested in LIU (5.27), although it does not appear to be a very productive process and may in fact be the result of assimilation to a following pronoun.

Some sign languages have more than one verb that can be used in ‘have’ constructions. Often, at least one of these is based on an existential. NS, for example, has three different verbs that can be used in possessive constructions. The sign HOLD can be employed to express ownership or physical possession (the latter implying that an object is with its possessor at the time of speaking). This verb can only be used for concrete inanimate objects. Apart from this sign, there are also two types of existential verbs, EXIST-animate and EXIST-unmarked, which are used in possessive constructions. The former is used for kinship relationships and can also be translated as “live” or “stay” while the latter is used for various types of possessive relationships, including abstract nouns, states and conditions, inalienable possessions, such as body parts, and alienable concrete objects not necessarily in the physical possession of their owner at the time of speaking (Morgan, forthcoming). Likewise, Venezuelan Sign Language (*Lengua de Señas Venezolana*, LSV) has three different signs that can be used to express possession in predicative constructions. The verb HAVE1 is used with personal property that is not with the possessor at the time of speaking, whereas the pronominal form POSS-IX is used to indicate property that is present with the possessor. The existential particle EXIST can be used for possessions that are near the possessor but not in his/her immediate power. In addition, another verb HAVE2 is used in existential constructions when a location is emphasized (Ravelo, forthcoming). Whereas in NS the nature of the possessum (abstract vs. concrete, animate vs. inanimate) determines which possessive item is used, the LSV data suggest that the possessive structure is determined by the amount of immediate control that a possessor has over the possessum. Thus, sign languages differ in the number

of possessive verbs they have and the amount of semantic differentiation expressed by these possessive verbs.

Among the negative ‘have’ constructions, suppletive forms like NEG-EXIST in LIU are common in sign languages. Although negative existentials may be suppletive in spoken languages (e.g. Turkish *var* “there is” versus *yok* “there is not”), their use appears to be more common in sign languages. In ASL, for instance, the suppletive sign NONE is used most frequently for negative possession (Chen Pichler and Hochgesang, forthcoming), and USL has a negative suppletive form PA, glossed after its accompanying mouth-pattern (Lutalo, forthcoming). On the other hand, VGT negates the verb HAVE with a negative sign and a non-manual headshake (Vermeerbergen and DeWeerd, forthcoming), as does ÖGS (Schalber and Hunger, forthcoming). The USL negative existential PA is very similar to the sign NEG-EXIST in LIU in that it is not only a negative possessive and existential, but can also negate other verbs. In contrast to NEG-EXIST in LIU, however, PA can co-occur with the verb HAVE, as in HAVE PA meaning “not have”, as well as replace it. It cannot be used with abstract nouns, like “time”. It also implies temporary absence of possession as “I don’t have at the moment”, which is not the case for the LIU sign NEG-EXIST. USL has another suppletive form, glossed NONE, which, like PA, can negate possession, existence and other verbs. However, NONE indicates a permanent lack of possession and can be used with abstract nouns, as well as with concrete nouns referring to large objects (Lutalo, forthcoming). Like LIU, Kata Kolok has one negative sign that can be used both in negative possessive constructions and as a clause negator. This negative sign, however, appears to have a wider meaning than NEG-EXIST in LIU, because it can also be used as a negative imperative (Perniss and Zeshan, forthcoming b). LIU appears to be unusual, albeit not unique (cf. Zeshan (2000b) for IPSL), in that it has a possessive sign used in ‘have’ constructions that is also used in emphatic or assertive constructions.

5.4.2.2 ‘Have’ constructions with modified nouns

When a possessed item is modified, that is, additional information is given about it in the form of an adjective or a numeral, a different structure than the one described in the previous section is used in LIU. For example, a declarative possessive construction containing a numerically quantified possessum does not require the possessive EXIST, as illustrated in example (5.34). Similarly, EXIST is not used in interrogatives with a quantifying question word, like HOW-MANY, as in example (5.35).

(5.34) FATHER SIBLING THIRTEEN INDEX₃⁴²
“Her father has thirteen siblings.”

(5.35) INDEX₂ SIBLING GIRL HOW-MANY
“How many sisters do you have?”

If EXIST is used in a statement like (5.34), it is no longer merely possessive, but adds emphatic/assertive meaning. A signer would utter the sentence in (5.36) only if he thought the addressee was denying the truth of the statement in (5.34).

(5.36) FATHER SIBLING THIRTEEN EXIST INDEX₃
“Her father *does* have thirteen siblings.”

However, if a signer wants to ask a question like “Does your father have thirteen children?”, in order to check the truth of previously obtained information, the sign EXIST can be used.

Adjectives modifying a possessed item function in the same way as numerals. Thus in (5.37) EXIST is absent; if it were present, it could only have emphatic/assertive meaning.

(5.37) MOTHER APRON PINK DARK
“The mother has a purple apron.”

Actually, just like example (5.8), constructions like (5.37) are ambiguous between a predicative and an attributive reading, since attributive possessive constructions in LIU can also be realized by this kind of simple juxtaposition (Section 5.3.3). Thus, the translation of (5.37) could equally be: “The mother’s apron is purple.” There is no way to distinguish between these two readings, since no overt possessive item is present.

LIU is not unusual in this respect. It is very common for sign languages not to use an overt possessive item in a predicative clause when the possessum is modified (Perniss and Zeshan, forthcoming a). However, in some sign languages, like ÖGS, a possessive item can be used in a construction with a modified possessum, apparently without emphatic meaning, as example (5.38) from Schalber and Hunger (forthcoming) shows. The sign DA, which functions as a possessive element in this example, is similar to LIU EXIST in that it can also be used with existential meaning. The corresponding German word *da* means “here” and cannot be used in possessive constructions.

⁴² The pointing sign is actually made with the thumb in this example.

- (5.38) IX₁ DREI COMPUTER DA [ÖGS]
 I three computer have
 “I have three computers.”

In LIU, a sentence like (5.38) would be used emphatically, either for contrastive purposes (“in contrast to you, *I* have three computers”) or to affirm something that the addressee might not believe (“I *do* have three computers”). In VGT (Vermeerbergen and DeWeerd, forthcoming) HAVE occurs with modified possessums, but it can also be left out. Chen Pichler and Hochgesang (forthcoming) found that when HAVE was dropped in ASL predicative constructions, this occurred usually with quantified kinship terms, for example in “he has four children”. In contrast, however, HAVE in ASL does not usually occur with body-parts, but may occur with body parts when they are modified, as in “she has beautiful hair”. In LSC (Quer and GRIN, forthcoming) the existential verb predominantly occurs between the possessum and its modifier. Thus, although the pattern used in LIU is very common, there are several sign languages in which the verb that is used in unmodified ‘have’ constructions is also used when the possessum is modified. LIU seems to be the only sign language found to date in which constructions with modified possessums and an overt possessive element are claimed to be emphatic.

5.5 Conclusion

In this chapter I have shown that there are two basic constructions for the expression of possession in LIU. The first construction uses the sign SELF in either an attributive or predicative position. When SELF is used in attributive position in possessive constructions, it is translated as a possessive pronoun. When it is used in predicative position, I have translated it as ‘belong’. The second construction is a ‘have’ construction involving the sign EXIST or its negative counterpart NEG-EXIST. The construction with SELF is more limited in scope than the one with EXIST, as it cannot be used for temporary possession or for inalienable relationships. The exception to this generalization is kinship, which is marked as inalienable in many languages, but appears to form a separate class in LIU.

A third type of possessive construction in LIU does not involve any overt possessive marker. Rather, it involves the juxtaposition of two items in an attributive possessive relationship, or the use of a personal pronoun instead of the more specialized possessive/emphatic pronoun SELF. Similarly, no overt possessive item is required in ‘have’ constructions in which the

possessum is modified. These constructions occur mostly with inalienable nouns, but can also be used non-emphatically with alienable nouns.

There is an interesting parallel between EXIST and SELF in that neither of the two signs is limited to possessive constructions, and they can both be used with emphatic meaning. It seems that when both the absence and the presence of a possessive marker are grammatical, constructions with an overt possessive marker are more emphatic than those without. This suggests that possessive constructions with an overt possessive marker are marked compared to those without such a form.

Cross-linguistically, there are some striking similarities between possessive and existential constructions in different sign languages. Thus, constructions with no overt possessive markers are quite common in many sign languages, particularly in attributive possessive constructions and in predicative constructions with a modified possessum. Another similarity is that most sign languages appear to derive the possessive verb used in 'have' constructions from an existential particle or verb, a grammaticalization pattern that is also common, albeit not to the same extent, in spoken languages. It is a particularly common construction also in creoles, which, more generally, appear to share several grammatical properties with sign languages. The use of a possessive pronoun as a predicative element in 'belong' constructions, the so-called possessive substantive, is very common across sign languages, but not so common in spoken languages. Generally, however, the sign languages that have been described so far do not appear to employ possessive constructions that are not attested in spoken languages. One way of expressing the possessive relationship that is particular to spatial-visual languages is the use of spatial marking. Thus, some sign languages can mark possessive relationships by spatial modulation of the sign for the possessum or by spatially inflecting a possessive item. Possessive pronouns are commonly inflected spatially, too, in the same way as personal pronouns are. The non-manual headnod strategy, which is found in LIU informal signing, is also modality specific.

Differences between possessive constructions in sign languages can be found, for instance, in the number of possessive elements that are available in a given sign language. Thus, Russian Sign Language has three possessive pronouns, whereas a language like AdaSL does not have a dedicated possessive pronoun at all. Similarly, a language like NS has three possessive verbs that are used with different kinds of possessions in 'have' constructions, whereas other sign languages have only one, or simply use juxtaposition. There are also differences with respect to the use of an overt possessive item in constructions with a modified possessum, and in the way negative possession is expressed. In many sign languages a suppletive form serves as a negative possession marker, but in some sign languages

possessive constructions are negated in the same way as other clauses. Some aspects of possessive constructions in sign languages, for example, the order of the possessor and the possessum in attributive constructions, may be influenced by the word order of the surrounding spoken language. In other respects, there are important differences between sign languages and the spoken languages that are used in the same area. Thus, the use of EXIST in possessive constructions in LIU is different from the use of the existential particle *fī* in both spoken Jordanian Arabic and MSA. Similarly, the particle DA can be used in possessive constructions in ÖGS, but the word *da* cannot be used in possessive constructions in German.

In sum, the possessive constructions in LIU have much in common with those of other sign languages. The use of one pronoun functioning as both an intensifier and a possessive marker appears to be cross-linguistically rare, at least for spoken languages. However, sufficient data is not available yet in order to determine whether possessive pronouns and intensifiers are more commonly expressed by the same sign in sign languages. One interesting feature which, to my knowledge, has only been described for LIU and IPSL is the fact that both the possessive pronoun SELF and the possessive/existential marker EXIST can be used with emphatic meaning.

Chapter 6: Simultaneous use of the two hands⁴³

6.1 Introduction

Sign languages have unique possibilities with regards to simultaneity because they make use of more than one articulator. Whereas in spoken languages simultaneity is limited by the fact that people have only one vocal tract with which to produce speech, sign languages use two hands as well as facial expressions, mouthings, body postures etc. Thus, sign languages can make use of manual simultaneity, the two hands producing different signs simultaneously, as well as manual/non-manual simultaneity, as in simultaneous signing and mouthing. The focus of this chapter will be on manual simultaneity because this is the area in which LIU proves to be interesting cross-linguistically.

This chapter provides an overview of manual simultaneity in narrative discourse in LIU. Forms and functions of manual simultaneity from the literature are discussed (Section 6.3) and simultaneous constructions in LIU are compared with those in other sign languages. Based on examples from LIU I will propose a strict phonological rule for manual simultaneity and discuss its possible universality (Section 6.4). It will be shown that this rule explains the simultaneity effects in LIU better than other functional explanations that have been suggested in the literature. Different syntactic and pragmatic functions of simultaneity in LIU will be discussed in detail. In Section 6.5 I will look at simultaneity in classifier constructions, and in Section 6.6 the term ‘buoys’ will be discussed in relation to simultaneous constructions in LIU. Manual simultaneity in LIU often interacts with dominance reversal, a grammatical phenomenon whereby the hand that is usually non-dominant becomes the primary signing hand for a string of signs. Because of this interaction, the different functions of dominance reversal and the environments in which it takes place will be discussed in Section 6.7. Constructions which illustrate this interaction between simultaneity and dominance reversal will be discussed in Section 6.8. Section 6.9 will summarise similarities and differences between LIU and other sign languages, concluding that certain simultaneous constructions in

⁴³ This chapter is an adapted and expanded version of Hendriks (2007a) “Simultaneous use of the two hands in Jordanian Sign Language”. In: *Simultaneity in sign languages*, M. Vermeerbergen, L. Leeson and O. Crasborn (eds.). Amsterdam: John Benjamins, 237-255.

LIU appear to violate constraints that have been proposed for manual simultaneity.

6.2 Data and methodology

The data used for this chapter is taken from five signers videotaped at the Holy Land Institute for the Deaf. Each signer told a different story of their own choice. Four of the stories are informal stories told by Deaf students aged between seventeen and twenty years old. All of these students learned LIU at a very young age, having a Deaf parent and/or Deaf brothers and sisters. The content of these stories varies from students' own experiences to a ghost story and the re-telling of a movie seen on television. Three of the stories were told to another Deaf student who sat next to the video camera. The fourth story was told to the author of this chapter, who is a fluent signer of LIU. For two of the students their right hand is their dominant hand, the other two are left-handed. One of the left-handed signers is particularly ambidextrous in his signing and uses dominance reversal much more often than any of the other signers.

The fifth story was told by a 36-year old Deaf signer, who is a staff member at the school. Although he went to residential school and learned LIU from other students at a young age, education at that time was much more oral than it is at present. The story he tells is a fragment of a biblical story that he had learned by heart. This story differs from the other stories in the way it is told. It is less casual and signed much more slowly and deliberately. Although this older signer uses some dominance reversal and also some simultaneity, these phenomena occur much less frequently than in the other stories. This difference may be due to the different style of the story. Klima and Bellugi (1979) have suggested that style may play a role in the occurrence or non-occurrence of simultaneous constructions in ASL. Similarly, Crasborn (2006) observes that simultaneity in NGT is more prominent in sign language poetry than in story-telling. These studies suggest that simultaneity is most common in formal register or a special, creative use of language, whereas the LIU data indicates that it is particularly prominent in informal story-telling (cf. also Kyle & Woll 1985). However, it is also possible that the difference between the four stories signed by students and the more formal biblical story is less related to style than to the fact that the signer of the latter story is of an older generation that makes less use of simultaneous constructions. From my own observations, dominance reversals seem to be particularly common in younger LIU signers (students in their late teens), who have provided most of the data for this chapter. Leeson and Saeed (2004) found that native signers of Irish Sign Language (IrSL) from a Deaf family used simultaneous constructions more frequently

than fluent signers of IrSL who did not have Deaf family or siblings.⁴⁴ Similarly, although the older LIU signer does have an older Deaf brother, the brother is not a signer. In contrast, the younger signers all had Deaf signing siblings or parents. It would seem, then, that the use of simultaneous constructions can also be a mark of fluency, but further research is needed to establish which of these factors is the most important.

The analysis presented here is based on stories because they provide the most natural data. Sign language stories, however, are difficult to analyze because of the many different articulators that can be used in a sign language and the way they jointly contribute to the meaning of the utterance. Thus, facial expression, eye gaze, head position, body lean, and the two hands may all simultaneously convey different aspects of the signers' communication. Although all these aspects are important in the analysis of discourse, this chapter will focus on manual activity. A transcription of the other articulators will only be presented in examples if they were seen to make a crucial contribution to the analysis.

6.3 Simultaneity in sign languages: forms and functions

Although simultaneous constructions have been mentioned in the early sign language literature (Friedman 1975), until recently few studies on simultaneity in sign languages existed. Miller (1994) made the first attempt at a cross-linguistic overview of different simultaneous constructions, illustrating them with examples from Quebec Sign Language (*Langue des Signes Québécoise*, LSQ) and Engberg-Pedersen (1994) described some simultaneous constructions in DSL. Liddell (2003) mentions some types of simultaneous constructions in ASL, although the focus of his book is on the use of space, rather than on simultaneity. In France, Cuxac (1985, 2000) conducted research on simultaneity (cf. Sallandre 2007) but because his research is published in French, and is embedded in a different research tradition, it has received little attention internationally. Similarly, Vermeerbergen (2001) has published a paper on simultaneity in VGT written in Dutch. In 2007 the first collection of articles on simultaneity (Vermeerbergen, Leeson and Crasborn 2007a) was published.

⁴⁴ In addition, Leeson and Saeed found that simultaneous constructions are used more by male Deaf signers than by female Deaf signers in IrSL. They suggest that this difference may be caused by strict segregation of the sexes in the educational system in Ireland (cf. also Leeson & Grehan 2004). No similar distinction was found in LIU, where, despite the segregation of the sexes in the Arab world, schools for the Deaf are (and always have been) mixed gender schools.

As a linguistic phenomenon, simultaneity appears to be typical of sign languages, because they have several articulators, whereas spoken languages only have one. Simultaneity does occur at some levels in spoken languages as well, for example in the simultaneous production of speech sounds and intonation. These might be compared to certain forms of manual/non-manual simultaneity in sign languages. In particular, Semitic languages such as Arabic have been analyzed as making extensive use of simultaneous constructions (Miller 1994:110).

“many spoken languages do make use of grammatically relevant simultaneous organisation of distinct elements on different representational tiers, both at the phonological and morphological levels, [but] it is only in Semitic languages such as Arabic, Hebrew [...] and so on that such simultaneous organisation reaches a level of complexity and sophistication approaching that of sign languages.”

An example of such simultaneity in Arabic was given in Chapter 3.2 where, in the framework of autosegmental phonology, the consonants of a root interact with a vowel melody to produce a lexical item. However, in my opinion it is debatable whether such constructions can truly be called simultaneous even in a Semitic language like Arabic, since the consonants and vowels are still produced sequentially. Moreover, as Miller observes, these ‘simultaneous constructions’ in Arabic are limited to the sound- or word-level, that is to phonology and morphology. In this chapter I will deal only with simultaneity above the word-level, that is, in syntactic constructions. This kind of simultaneity is not found in spoken languages, unless one takes into account gestures that people make while speaking. The way such ‘co-speech gestures’ are used is an interesting study in itself (McNeill 1992; Kendon 2004) but further discussion falls outside the scope of this chapter. Vermeerbergen and Demey (2007) show that there are many similarities between the co-occurrence of speech and co-speech gestures and simultaneous constructions in sign languages. They suggest that some constructions that have been analysed as simultaneous constructions in sign languages might, in fact, rather be constructions which involve simultaneous signing and the use of gestures, in the same way as co-speech gestures are used with speech (Liddell 2003; Crasborn 2006). Because the distinction between signs and gestures requires a study in its own right, however, I have not attempted to distinguish between them (cf. Chapter 1.3).

Different types of simultaneity in sign languages can be distinguished. Manual simultaneity occurs when a signer uses both hands to convey different information. Manual-oral simultaneity refers to the simultaneous use of the hands and the mouth, which can either produce lexical items from the spoken language or mouth gestures (Sutton-Spence

(2007) for BSL; Nyst (2007b) for AdaSL). Another type of simultaneity involves the simultaneous use of the hands and some other articulator, such as eye-gaze or body-lean (Perniss 2007a). As was stated in the introduction, the focus of the present chapter is on manual simultaneity.

Although descriptions of simultaneous constructions show that there are many similarities between these constructions in different, unrelated, sign languages (Liddell, Vogt-Svendsen and Bergman 2007), the classifications of different types of simultaneity and the terminology used in the literature has varied considerably. Engberg-Pedersen (1994) distinguishes between ‘central’ and ‘noncentral’ types of simultaneity. In the central type of simultaneity both hands participate in a classifier construction and express a locative relationship between two elements. Noncentral simultaneity includes all types of simultaneity not involving a locative relationship between two elements. Example (6.1) from LIU (also Figure 6.2 in Section 6.4), shows that central and noncentral simultaneity, following the definition of Engberg-Pedersen, can be combined within a single utterance. In this example, the classifiers BRIDGE and VEHICLE express a locative relationship, but the signs KNOW, STAY and WHAT on the dominant hand are not classifiers and do not have a locative relationship with the vehicle classifier on the non-dominant hand. (For a more elaborate discussion of this example, cf. Section 6.4).

- (6.1) dh: CL:BRIDGE KNOW CL:BRIDGE STAY WHAT
 ndh: CL:VEHICLE forward hold backward-forward hold

“The car passed under the bridge, you get it? It passed under the bridge and stayed there. What (could he do)?”

The terms ‘central’ and ‘noncentral’ simultaneity have not been very precisely defined and do not appear to me to be helpful. In the literature, however, some distinctions have been found between simultaneous constructions involving classifiers and those that do not involve classifiers. For instance, spreading of the non-dominant hand is limited to certain prosodic domains, in particular the phonological phrase, but this constraint does not apply if the non-dominant hand is interpreted as a classifier morpheme (Sandler 1999a). In this chapter I will argue that, in LIU, constructions involving classifiers and those not involving classifiers obey the same rule.

Miller focuses on “non-classifier constructions involving the simultaneous production of distinct signs” (Miller 1994:89) and distinguishes between ‘full simultaneity’ and ‘perseverations’. Full simultaneity occurs when two signs are produced simultaneously by the dominant and non-dominant hand moving independently. The two signs do

not have to begin and end at exactly the same time, as long as there is simultaneous movement on the two hands. Perseverations, on the other hand, occur when one hand holds the end-state of a sign while another sign or signs are made on the other hand. If the dominant hand holds the end-state of a sign and the non-dominant hand continues signing, a dominance reversal occurs (cf. Frishberg (1985) for an overview of dominance reversals in ASL). An example of full simultaneity (Miller 1994:101) is presented in (6.2). In this chapter, however, I will argue that no distinction needs to be made between full simultaneity and perseverations, at least in LIU, but that both are the result of the same phonological rule.

In (6.2) the dominant hand produces a classifier moving towards the signer and then away from the signer, while the non-dominant hand produces a lexical sign, which also contains movement:

(6.2) dh: CL:1 (person: approaches) CL:1 (person: moves away) [LSQ]
 ndh: KNOWLEDGE-INCREASE KNOWLEDGE-DIMINISH

“When I’m around them (i.e. ASL) signers, (my ability) increases and when I’m not around them, it decreases.”

In contrast to this example, Liddell describes simultaneous constructions in which the non-dominant (weak) hand produces signs “that are held in a stationary configuration as the strong [dominant] hand continues producing signs” and calls these ‘buoys’ because they “maintain a physical presence that helps guide the discourse as it proceeds” (Liddell 2003:223).

It would seem from these descriptions that full simultaneity is rare. In the most common type of simultaneity the two hands are involved in the production of different signs, but are not moving simultaneously (Miller 1994; Engberg-Pedersen 1994). In other words, one hand is holding a sign, or the end state of a sign, which it produced earlier, while the other hand makes a different sign. In Section 6.4 I will propose that full simultaneity, at least in LIU, is rare for phonological reasons.

Manual simultaneity may take different forms and have different functions. Vermeerbergen (2001) mentions five different constructions in VGT; these have also been found in several other sign languages:

- (1) the simultaneous production of two classifiers, each on a different hand, showing the locative relationship of two referents
- (2) the simultaneous production of a classifier on one hand and one or more signs on the other hand,
- (3) the perseveration of a sign on one hand while the other hand produces one or more signs (this category includes Liddell’s ‘fragment buoys’)

- (4) the simultaneous production of an index on one hand and one or more other signs on the other hand, often used in localization (including Liddell's 'pointer buoys')
- (5) the simultaneous production of a numeral on one hand and one or more signs on the other hand, often used to keep track of and refer back to several distinct discourse referents (this category includes Liddell's 'list buoys')

Simultaneous constructions involving an index are very common in LSQ (Miller 1994) and NGT (Crasborn 2006). According to Vermeerbergen (2001) the most common types of simultaneity in VGT are those involving an index or a numeral. An index is often produced simultaneously with a referent in the discourse and localizes this referent in the signing space. Friedman (1975:954-955) comments on these structures in ASL: "[w]hen an index is made at the same time as the dominant hand articulates a verb phrase, this indicates the location of an action" and "[t]he referent of an index made simultaneously with a verb may incorporate the subject of the verb plus its location." It is not clear, however, if and how a simultaneous construction involving an index differs semantically from similar constructions that are not simultaneous, that is where the index precedes or follows the referent. In certain cases simultaneity appears to be purely phonological.⁴⁵

When a simultaneous construction involves a numeral, "each fingertip may serve as an indexical location for a distinct discourse referent" (Miller 1994:100). The term 'indexical location' is used to indicate that these fingertips, when pointed at by the index of the other hand, have a function similar to that of a location in the signing space (Liddell 1990). In LIU, however, numerals can also occur in simultaneous constructions without serving as indexical locations, as is shown in Section 6.6.2. Simultaneous constructions involving perseverations can have several functions in the discourse. Vermeerbergen (2001) mentions the two hands representing two different referents; the expression of simultaneous action; topic marking whereby the topic of the discourse is held while one or more expressions relating to that topic are signed; and one hand holding the cause of an action while the other hand signs the result. According to Miller (1994) the non-dominant hand in simultaneous constructions often carries background information, whereas the dominant hand carries foreground information. In

⁴⁵ Sandler (1999a) mentions cases where a two-handed symmetrical sign is followed by a pronoun. Rather than being produced sequentially, however, the dominant hand produces the index halfway through the production of the two-handed sign, whilst the non-dominant hand completes this sign. She calls this process 'coalescence' and states that it is a form of cliticization.

addition, he mentions that simultaneous constructions can establish contrast, for example between one person and a mass of people, and a conditional relationship between two different propositions. According to Liddell (2003) buoys help guide the discourse by pointing out what is important. The function of manual simultaneity in all these cases has to do with information structure.

Simultaneous constructions, then, can have different functions. It would seem that these functions are similar in the different sign languages for which they have been described. In the remainder of this chapter we will look at restrictions on and functions of simultaneous constructions in LIU.

6.4 Simultaneity in LIU: phonological restrictions

In LIU, perseverations can be held on either the dominant or the non-dominant hand and can have different syntactic, prosodic and discursive functions. When fragments of signs are held on the dominant hand, a reversal of dominance takes place whereby the non-dominant hand ‘becomes dominant’ and continues signing (see Frishberg (1985) for a discussion of this process in ASL). Dominance reversal does not always coincide with simultaneity, however, and may have its own functions in the discourse.

At first sight, examples of full simultaneity, that is, both hands moving independently at the same time, appear to be present in LIU. However, a closer look reveals that most of these examples do not differ much from the more commonly occurring kind of simultaneous construction (see Section 6.6 for further discussion). In fact, it will be suggested here that manual simultaneity in LIU is limited by very strict phonological criteria and that perseveration is one of the strategies used to fulfil these criteria. It is therefore not necessary to distinguish between fragment buoys or perseverations as opposed to full simultaneity.

As mentioned above, Miller (1994) suggests that in simultaneous constructions the two hands have different functions. In his analysis, the non-dominant hand conveys background information whereas the dominant hand expresses information that is foregrounded. For Miller this explains why in simultaneous constructions it is usually the dominant hand that moves, whereas the non-dominant hand is held still. He prefers this functional explanation to a phonological analysis confining movement to the dominant hand. In Section 6.5 I will show that the functional analysis provided by Miller does not work for all examples in LIU. Instead, I propose a phonological rule that leaves room for dominance reversal. The functional properties of dominance reversal will be discussed in Section 6.7.

I propose the following rule for simultaneity:

- (6.3) Manual simultaneity can only take place when at least one of the hands makes no lexically specified movement, or when the movement of the two hands is symmetrical.

This rule makes it impossible for signs to be made simultaneously when they both have a different inherent movement. Inherent movement is movement that is specified in the lexicon as belonging to a specific sign, or that is the result of a productive morphological form such as a classifier construction (Emmorey 2003). The rule does not allow, for instance, the simultaneous production of a sign with up-and-down movement on one hand and a sign with side-to-side movement on the other hand. This is also articulatorily almost impossible.

Thus, when one hand produces a sign with a certain inherent movement, the other hand can only produce a sign that has no movement, a symmetrical movement, or a very simple phonetically inserted movement from one location to another, that is, not a lexically specified movement. The LIU numerals one to five are examples of signs that have no movement. Thus, numbers can occur simultaneously with any (one-handed) sign on the other hand. Liddell (2003) mentions list buoys in ASL as a special kind of construction on the non-dominant hand, as different from numbers. In LIU, however, signs that look very similar to Liddell's list buoys, as well as number signs in their regular form, can occur simultaneously on either the dominant or the non-dominant hand (Section 6.6.2) because they are well-formed under the phonological simultaneity condition in (6.3).

Signs with only a phonetically inserted movement are those that make a straight movement towards a certain location in the signing space, or from one location to another, as represented in many phonological models since Liddell (1984b). Pointing signs are examples of signs that move towards a certain 'locus' in the signing space. According to Liddell (1990), a locus is a point in space representing either a referent or the location of an entity. An index pointing at a locus does not have an inherent movement. It simply makes a 'transitional' movement towards that locus. This movement resembles the transitional movements between two signs, in not being lexically specified. Once an index has reached the position where it points at a certain locus, it can be held there without movement. This makes pointing signs another set of forms likely to be found in simultaneous constructions. As we will see in the LIU data below (specifically Section 6.6.1), indexes do indeed occur in simultaneous constructions and, like numbers, may be held on either the dominant or the non-dominant hand.

Classifier constructions express the location or the movement of an entity in the signing space. When both hands simultaneously produce a

classifier, it is often the case that only one of these classifiers expresses a path movement, whereas the other hand simply makes a phonetic movement to a certain location. One classifier may be located at a certain point in the signing space, while the other classifier moves in relation to that position. An example can be seen in the interaction between the BRIDGE and VEHICLE classifier in Figure 6.2. Constructions in which a classifier is made simultaneously with a sign that does not involve a classifier also occur. In these cases the classifier does not normally move in LIU (Figure 6.2).

Under the phonological rule for simultaneity presented in (6.3), the only examples of simultaneity in which there is more than just a short phonetic movement on both hands are classifier constructions in which both hands make a simultaneous path movement. The LIU data show that in these cases the two hands make the same movement or mirror each other's movement. Where this is not the case, a perseveration tends to occur. Thus, these constructions seem to adhere to a strict symmetry rule for movement, similar to Battison's (1978) 'Symmetry Condition' for two-handed signs, given in (6.4).

(6.4) *Symmetry Condition:*

If both hands of a sign move independently during its articulation, then both hands must be specified for the same handshape, the same movement (whether performed simultaneously or in alternation) and the specification for orientation must be either symmetrical or identical.

The phonological rule in (6.3) may even be analysed as an extension of Battison's symmetry condition for movement, in which case this condition would have wider application than just for two-handed lexical signs (Engberg-Pedersen 1993; Kita, van Gijn and van der Hulst 1997)⁴⁶. However, Battison imposes a restriction on the articulators, the lexical symmetry condition, whereby the two hands should have identical handshapes and identical or symmetrical orientations. This restriction is not applicable to the rule proposed here, because the rule in (6.3) applies to morphologically complex constructions rather than two-handed mono-morphemic signs (cf. Engberg-Pedersen 1993; Emmorey 2002).

⁴⁶ Engberg-Pedersen (1993:295) notes that simultaneous constructions involving classifiers (or in her terms, 'polymorphemic verbs') resemble two-handed signs in some ways. She explicitly mentions many of these constructions can be subsumed under Battison's Symmetry Condition, but that there are differences between two-handed signs and simultaneous constructions with classifiers in the handshapes and the sequences of movement that are allowed. Moreover, Kita, van Gijn and van der Hulst (1997) show that the Symmetry Condition even applies to co-speech gestures.

In fact, the rule in (6.3) may not just be a phonological rule for LIU, but a universal rule that is governed by articulatory constraints. According to Vermeerbergen, most simultaneous constructions in VGT involve either a pointing sign or a number on one of the hands because most other signs have a movement component and it is very hard to produce two different movements on both hands (Vermeerbergen 2001). Leeson and Saeed (2004) stress the fact that the constructions they describe for IrSL are referred to as simultaneous, but that one element is typically introduced prior to the second element. In other words, simultaneous constructions in IrSL are typically not ‘fully simultaneous’ but involve perseverations. With regard to NGT, Crasborn (2006) mentions that full simultaneity is rare, but ‘spreading of the weak hand’, that is perseveration, is very common. This may be due to “the complex motor control required to actually produce two different movements with (potentially) different articulatory configurations” (Crasborn 2006:74). Such statements lend support to an analysis in which simultaneous constructions are restricted by a phonological rule, which is itself determined by articulatory constraints and is therefore expected to be universal, in the same way as Battison’s Symmetry Condition.

The claim that the rule in (6.3) is universal would mean that some of Miller’s examples of full simultaneity in LSQ have to be re-analyzed. In fact, the LSQ example in (6.2.), cited by Miller as an example of full simultaneity, can be included in the rule in (6.3) because the classifier does not have an inherent lexical movement, but makes a simple, phonetically inserted movement towards a locus. Miller’s translation shows that in this example the emphasis is not on the path of the classifier, but on a locus near or far from the ASL signers.

6.5 Simultaneity in classifier constructions in LIU

Simultaneity has often been discussed in connection with classifier constructions (e.g. Engberg-Pedersen (1994) for DSL). In this use simultaneity expresses the locative relationship of two referents. An overview of the different classifiers used in LIU has been provided by Hendriks (2004) and Van Dijken (2004). In the previous section, I have already observed that such constructions in LIU are only possible if the two hands move in a symmetrical way, or if one of the classifiers does not move or has no lexically specified movement. An example of such a simultaneous classifier construction is in (6.5).⁴⁷

⁴⁷ An overview of the conventions used here for transcription is given in Section 1.4.

(6.5) dh: TOGETHER(2h) SCHOOL(2h) CL:PERSON^{go around in circles}
ndh: TOGETHER(2h) SCHOOL(2h) CL:PERSON^{go around in circles}

“Together they walked around the school.”

In this example the two classifiers move around together, representing two people walking next to each other. The two hands make the same movement, thus providing evidence for the generalization in (6.3). In constructions where both hands move simultaneously, it is not evident that the information on one hand is more in focus than the information on the other hand.

There are, however, also constructions in which one hand holds a classifier, while the other hand produces signs that are not classifiers. One example of this type of simultaneous construction in LIU is presented in Figure 6.2. The LIU classifier vehicle is shown in Figure 6.1.



Figure 6.1: vehicle classifier



dh: CL:BRIDGE	KNOW	CL:BRIDGE	STAY
ndh: CL:VEHICLEforward	hold	backward-forward	hold



dh: WHAT CL:VEHICLE^{move-forward-repeatedly} INDEX_{cl:vehicle}
 ndh: _____

Figure 6.2: “The car passed under the bridge, you get it? It passed under the bridge and stayed there. What (could he do)? That parked car was passed by other cars.”

In the first picture of Figure 6.2 the non-dominant hand produces the LIU vehicle classifier (Figure 6.1), which moves forward⁴⁸, while the dominant hand produces a classifier depicting a bridge under which the vehicle passes. Since the classifier representing the bridge only has transitional movement, that is, it moves to the point in the signing space where the bridge is located, the two signs can be produced simultaneously according to the rule in (6.3). In the second picture the vehicle classifier on the non-dominant hand is held still in its final location, while the dominant hand signs the verb KNOW, slightly tapping the forehead. Again, it is possible to make these two signs simultaneously, because the vehicle classifier has stopped moving. In the third picture, the signer repeats the earlier classifier construction, during which the vehicle classifier makes the same movement as before and, when it stops in the same location as before, the dominant hand continues signing STAY WHAT (pictures 4 and 5). Subsequently, the dominant hand also takes on the handshape of the vehicle classifier and represents other cars that are passing the car parked underneath the bridge (pictures 6 and 7). Finally, in the last picture, the dominant hand produces an index pointing to the vehicle classifier on the non-dominant hand.

In this example the two hands move in alternation. If the movement of a particular hand indicates that the information presented on that hand is foregrounded, as suggested by both Miller (1994) and Engberg-Pedersen (1994) for some of their examples, this would mean that foregrounding of information can occur on both the dominant and the non-dominant hand in LIU. However, in Figure 6.2, it would seem that the vehicle classifier on the non-dominant hand is foregrounded throughout the construction. This

⁴⁸ The non-dominant hand was already holding the vehicle classifier in the previous utterance. It starts moving simultaneously with the production of the bridge classifier.

vehicle plays an important role in the story because the hero of the story is trapped inside. The idea that this vehicle is foregrounded, even when it does not move, is confirmed by the final index on the dominant hand in Figure 6.2, which points to the vehicle classifier, making sure that the addressee understands it is still this vehicle that forms the centre or focus of the discourse, rather than any of the vehicles passing it.

This example from LIU shows that the non-dominant hand does not necessarily hold background information. It is also not necessarily the case that the non-moving hand in a simultaneous construction conveys background information, at least in classifier constructions. In fact, I propose that, in this particular classifier construction, it is the classifier on the non-dominant hand that is foregrounded throughout the construction, because it is the focus of the discourse, whether it moves or not. The fact that it is held on the non-dominant hand, rather than the dominant hand, may be the result of a phonetic constraint for movement to occur on the dominant hand. This is, however, a tendency rather than a rule, since the vehicle classifier on the non-dominant hand does move. If movement in these constructions were confined to the dominant hand, the vehicle classifier would have to switch hands repeatedly. This would not only slow down the story, but might also lead to confusion on the part of the addressee because of the discontinuity. Instead, a repeated reversal of dominance takes place. In this example, then, dominance reversal is simply a part of the simultaneous construction and does not seem to have a meaning or function of its own. In Section 6.7, however, we will see that dominance reversal can also occur with its own discursive functions.

The examples in this section show that in LIU the two hands can be used flexibly, creating two-handed classifier constructions, or combining lexical signs and classifier constructions, but the flexibility in creating these combinations is limited by the phonological restriction in (6.3). From a cross-linguistic perspective, LIU is not very different from other sign languages as far as simultaneity involving classifiers is concerned. As was mentioned in Section 6.3, Vermeerbergen (2001) finds that simultaneity in VGT occurs both in two-handed classifier constructions and in constructions where a classifier is held still while the other hand produces one or more signs. As far as backgrounding and foregrounding in simultaneous constructions is concerned, LIU behaves the same way as IrSL.

“[T]he features foregrounded, animacy and activity typically map into articulation on the dominant hand while the features backgrounded, inanimacy and inactivity map into articulation on the non-dominant hand” but “discourse-related factors can influence the assignment of the most active element on the non-dominant hand.” Leeson and Saeed (2007:59-60)

Not all sign languages have two-handed classifier constructions similar to the examples in (6.5) and Figure 6.2. In certain village sign languages the use of bimanual simultaneous constructions seems to be much more restricted. Simultaneous classifier constructions such as described in this section are not found in AdaSL, for example, because AdaSL does not use constructions involving entity classifiers at all. Instead, “AdaSL uses a series consisting of a manner verb and a generic directional verb or a spatially modified whole body sign” (Nyst 2007b:143). Nyst (2007b:127) infers that “simultaneous constructions are a pervasive feature of large Deaf communities”.

It would appear, then, that sign languages which make use of entity classifiers can use these in simultaneous constructions similar to the ones in LIU. Thus, LIU patterns with other sign languages of large Deaf communities as far as two-handed classifier constructions are concerned, although there is no a priori reason why all sign languages of large Deaf communities should function in this way. Further cross-linguistic research might show that there are more sign languages like AdaSL, in which such simultaneous classifier constructions do not occur.

6.6 ‘Buoys’ in LIU

Liddell (2003) presents a detailed analysis of four types of simultaneous constructions, which he refers to as ‘buoys’. He defines these buoys as signs produced on the non-dominant hand and held stationary as the dominant hand continues signing. (cf. also Liddell, Vogt-Svendsen and Bergman (2007) for buoys in ASL, SSL and Norwegian Sign Language (NSL)). The list buoy is used for making associations with from one to five entities. These are produced with handshapes corresponding to the numeral signs ONE to FIVE, but with the fingers oriented sideways rather than upward. The POINTER⁴⁹ buoy is an index pointing towards an important element in the discourse, like the final index in Figure 6.2. The fragment buoy is the perseveration of a two-handed sign on the non-dominant hand during the production of a subsequent sign on the dominant hand. The THEME buoy, does not occur in the LIU data, and so will not be discussed in this chapter.

The simultaneous constructions I want to discuss in this section are those which involve the use of numerals, the use of an index or the use of perseverations. These constructions resemble Liddell’s list buoys, POINTER

⁴⁹ The convention to write the POINTER and THEME buoy in capitals and list buoy and fragment buoy in small letters is taken from Liddell (2003).

buoy and fragment buoys respectively. LIU has a much wider range of such constructions than have been described for other sign languages. In LIU these ‘buoys’ are not special kinds of constructions in terms of their phonological characteristics, they do not have to be held on the non-dominant hand, and are by no means limited to the categories listed in Liddell (2003). In the analysis presented here, buoys are simply simultaneous constructions that are possible under the phonological simultaneity rule in (6.3), and their function of ‘guiding the discourse’ (cf. Liddell 2003:223) is considered a function of simultaneity in general and will therefore not be discussed.

6.6.1 Simultaneity involving pronouns

Liddell (2003:250) defines the POINTER buoy as a buoy which “*points toward* an important element in the discourse” (italics in the original). One of his examples is given in (6.6).⁵⁰

- (6.6) dh: BUT FOOD DELICIOUS [ASL]
 ndh: POINTER_{food}_____
- “But the food was delicious.”

Similar examples are also found in LIU, as in (6.7). Here an index on the non-dominant hand is held stationary while the dominant hand continues signing.

- (6.7) dh: INDEX_{right} MOTHER INDEX_{left} KNOW OLD MOTHER SELF_{right}
 ndh: INDEX_{left}_____
- dh: OLD KNOW GO_{right} KNOCK EMPTY
 ndh: _____
- “I know, mother is at grandmother’s, at grandparents’, I know. So we went there and knocked, but there was no-one.”

In (6.7) the locus of the mother (INDEX_{left}) in the signing space is held on the non-dominant hand, while the dominant hand signs where she might be, which is located on the right hand-side of the signing space (GRANDMOTHER’S). At this point in the story, the mother is the focused element in the discourse, and the index is held in position as long as she is in

⁵⁰ This example is taken from Liddell (2003:255), but includes pictures in the original, which are left out here.

focus, and as long as no two-handed sign occurs to break up the sequence.⁵¹ In this example, therefore, the index could be seen as a POINTER buoy, because it points to something that is important in the discourse.

However, in LIU not only indexes have this function, but other pronouns do, too. LIU has a pronoun which I describe as an ‘emphatic/possessive pronoun’ and gloss as SELF (cf. Chapter 3.2.2 and Chapter 5.3.1). It can be seen as the emphatic version of the index when it is used as a pronoun. Both indexes and emphatic/possessive pronouns can occur in simultaneous constructions, because they do not have lexically specified movement. The emphatic/possessive pronoun is held on the non-dominant hand while the dominant hand continues signing in (6.8). In this example the girls are located on the left-hand side of the signing space.

(6.8) dh: GIRLS LAND(2h)————— ONLY
 ndh: LAND(2h) SELF_{left}—————

“The land belongs to the girls, and that’s final.”

Although this example is not as long as (6.7), it is clear that the emphatic/possessive pronoun, which has possessive meaning here, is held on purpose by the signer until the end of the utterance. This is especially clear, because the sign glossed as ONLY is normally a two-handed sign, but is here produced with one hand so that the pronoun can be left in its position. This seems to give additional emphasis to the statement. Thus, both the index and SELF can point to important elements in the discourse, functioning in a similar way. Combined with dominance reversal, they can also occur on the dominant hand, as will be shown in (6.19).

Although the use of indexes in simultaneous constructions has been mentioned for many sign languages as well as for co-speech gestures (Vermeerbergen and Demey 2007), and is one of the most common forms of simultaneity (Miller 1994; Vermeerbergen 2001), I have not found descriptions of simultaneous constructions involving a pronoun which is not an index. In fact, Liddell (2003:255) suggests that the pointer buoy is not a pronoun and one of the reasons he gives is that he is not aware “of any evidence that other pronouns...are produced and held as other signs are produced”. In LIU such evidence can be found in the occurrence of simultaneous constructions with SELF. Therefore, the fact that indexes occur in simultaneous constructions does not mean they cannot be ordinary

⁵¹ The index is still held while the signs GO_{right} KNOCK are produced, although the subject has changed. However, it is slowly moving from the left side to a more neutral position. It would seem that at this point the index has lost its semantic function and can no longer be properly called a buoy.

pronouns. It would appear, then, that in LIU simultaneous constructions can involve pronouns, which, according to Liddell, is not possible in ASL.

6.6.2 Numerals in simultaneous constructions

Three different kinds of simultaneously produced numerals were found in the LIU data. The first type is comparable to what Liddell (2003) describes in ASL as a list buoy. Other than for cardinal number signs, the fingertips typically point sideways and are associated with referents. Enumeration of referents starts at the thumb in LIU, as in ASL. The non-dominant hand signs the list buoy and the dominant hand typically touches the fingertips of the list buoy for each consecutive enumerated referent (Figure 6.3). As appears from this LIU example, however, this contacting of the fingertips is optional (Liddell, Vogt-Svendsen and Bergman 2007). The thumb, which is the first digit that is held up for the list, is not touched by the dominant hand or even pointed at. In LIU, the dominant hand does not make contact with the first item of a list in particular.

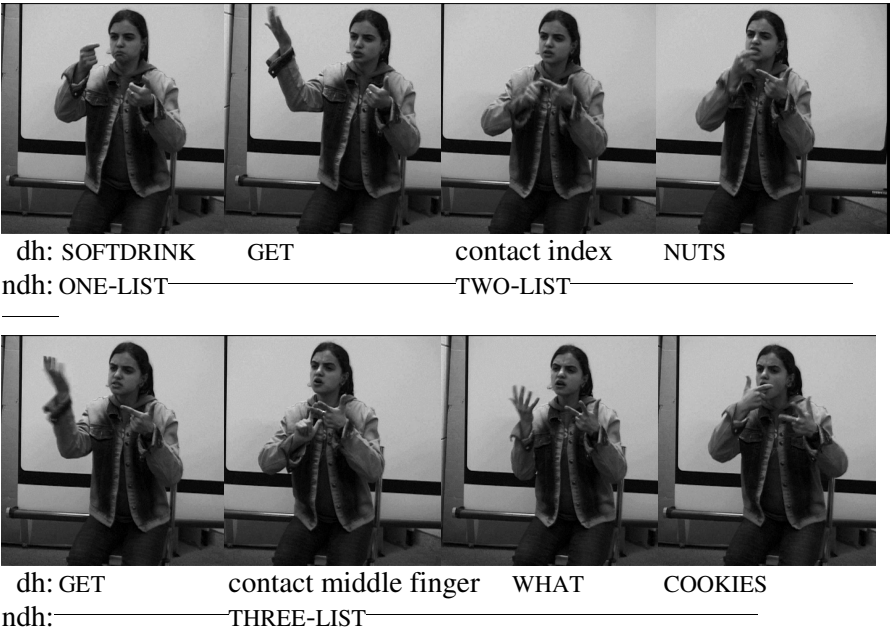


Figure 6.3: “We got softdrinks, we got nuts, and what else.....cookies.”

In ASL, SSL, and NSL the hand configuration found in list buoys is in most cases the same as those found in the corresponding numeral signs of the language (Liddell, Vogt-Svendsen and Bergman 2007). In LIU there is,

however, a difference between the hand configuration of the first two items of a list and the corresponding cardinal number signs. Whereas for the list buoy counting mostly starts at the thumb, cardinal numbers start at the index.⁵² The difference between a cardinal number TWO and a LIST-TWO in LIU is shown in Figure 6.4a and 6.4b. Otherwise, however, this construction appears to have mostly the same characteristics as described for ASL, SSL and NSL.



Figure 6.4a: the number TWO used in a list



Figure 6.4b: the cardinal number two in a simultaneous construction

However, lists are not the only types of numerals that can occur in a simultaneous construction in LIU. The cardinal number TWO, which compared to the list numeral has both a different handshape (index and middle finger extended) and a different orientation (palm outward, fingers upward), also occurs simultaneously on the non-dominant hand, as shown in Figure 6.4b. In (6.9) the numeral is not a buoy according to Liddell's definition because it is not held stationary on the non-dominant hand, but on the dominant hand. In this case it is the non-dominant hand that continues signing. In Liddell's definition buoys only occur on the non-dominant hand. Also, the sign TWO does not represent an item in a list, but modifies the noun GIRL in a simultaneous construction, meaning "the two girls".

⁵² In some cases the LIU list does start with the index, particularly if this finger is already extended in the lexical sign which precedes the list. In this case, however, the hand configuration of the number THREE differs for the list buoy and the cardinal number. The cardinal number THREE is made with the thumb, index and middle finger extended, whereas a list that starts at the index has the index, middle finger and ring finger extended for the THREE-list.

(6.9) dh: CHILD(2h) TWO_____

ndh: CHILD(2h)_____GIRL WHAT FATHER DEAD CRY

“And what about the two children, the girls? Their father was dead and they cried.”

The third way in which a simultaneous construction involving a numeral appears in the LIU data, albeit only once, is shown in Figure 6.5. This is a very interesting example, because the numeral is different from both the list numeral in Figure 6.4a and the cardinal number in Figure 6.4b. In fact, it has some characteristics of both. Although the hand orientation is like that of the number TWO, the counting starts at the thumb, like the list numeral.⁵³ This numeral is used to modify a verb. The signer is talking about a person who keeps sending e-mails but gets no reply. She then signs the verb SEND several times, each time adding a finger to the numeral on her non-dominant hand, as shown in Figure 6.5. Note that this signer is left-handed.



dh: E-MAIL(2h) SEND NEG-EXIST SEND

ndh: E-MAIL(2h) ONE TWO_____



dh: NEG-EXIST SEND SEND NEG-EXIST

ndh: _____THREE _____FOUR-FIVE_____

Figure 6.5: “He sent an e-mail, no (reply). He sent another one, but no (reply). He sent again and again, but no (reply).”

⁵³ The thumb position cannot be seen very clearly in the pictures. The third picture of Figure 6.5, however, shows that the thumb is extended and it remains in that position throughout the sentence.

Although the numeral signs in this example have certain properties of Liddell's category of list buoys, they cannot be considered list buoys because the fingers or fingertips are not associated with different referents. In (6.9) the numeral is also clearly used to quantify a noun, and the numerals in Figure 6.5 are 'quantifying' the verb in that they indicate repetition of the action. So following Liddell, Vogt-Svendsen and Bergman (2007:191) this means it cannot be a buoy: "[n]umerals can be used to quantify nouns, but list buoys cannot". These examples, then, show that in LIU the list buoy in which the fingertips are associated with referents is not the only type of numeral that can occur on the non-dominant hand in a simultaneous construction. Under the phonological rule given in (6.3), certain numerals, including 1 to 5, can always be produced simultaneously because they have no inherent movement. This is also borne out by the data.

There is not much cross-linguistic data on the use of numeral signs on the non-dominant hand that are not list buoys. One of the differences between numerals and list buoys is claimed to be that "[n]umeral signs are produced by the strong hand and list buoys are produced by the weak hand" (Liddell, Vogt-Svendsen and Bergman 2007:189). This appears to exclude numeral signs produced on the weak hand in the languages they have studied (ASL, SSL and NSL). Friedman (1975:953), however, gives an example from ASL in which a number of verbs occur on the dominant hand, and numerals expressing the time at which those actions took place on the non-dominant hand, as shown in (6.10).

(6.10) dh: ENGLISH CLASS GO HOME STUDY EAT [ASL]
 ndh: TWO (O'CLOCK)_FOUR SIX_____SEVEN

"At two (I go to) English class; from four to six (I) go home and study; at seven (I) eat."

The construction in (6.10) shows that numerals other than list buoys can be found on the non-dominant hand in ASL as well. Moreover, Vermeerbergen and Demey (2007), discussing number signs produced on the non-dominant hand in simultaneous constructions in VGT, comment that they

"are not 100% sure whether the production of the non-dominant hand should be considered a sequentially built list in all these cases....at this stage we are not inclined to make such a clear-cut distinction between list buoys and the corresponding signs as other authors have done."
 (Vermeerbergen and Demey 2007:263)

There clearly are sign languages other than LIU, then, in which the distinction between ‘list buoys’ and other numerals on the non-dominant hand is not clear-cut.

Miller (1994), in discussing list buoys (in his terms ‘enumeration morphemes’) also gives one example of a numeral ONE that is held on the non-dominant hand while the other hand continues signing. He does not seem to consider this a separate category of simultaneity, however, as the example is given to illustrate the use of simultaneous mouthing, which also occurs in the same sentence.

Vermeerbergen and Demey (2007) mention examples of the simultaneous production of speech and co-speech enumeration gestures on the hands. Using a game whereby players had to recall a list of items, they found that many of the players built sequential lists while they were naming the items on the list, that is, they extended the first digit when naming the first item, the second when naming the second and so on. Simultaneous constructions using enumeration (list buoys), then, are not limited to sign languages but also occur when speech is combined with co-speech gestures.

In summary, although simultaneous constructions involving enumeration appear to be very common in most sign languages, and are even found in co-speech gestures, not much attention has been paid in the literature to simultaneous constructions involving non-list numerals. It is unclear whether these are separate constructions and whether they can occur as freely in other sign languages as they seem to occur in LIU. If a distinction is made between perseverations and full simultaneity, it is not clear in which category such constructions fall. In the analysis presented here, however, no distinction of this kind needs to be made. It is precisely because they have no movement, and therefore obey the rule in (6.3), that different kinds of numerals can freely occur in simultaneous constructions in LIU. I would expect that the same is true for other sign languages, but more cross-linguistic research in this area will need to be done.

6.6.3 Perseverations

Liddell (2003:248) gives the following definition of perseveration:

“When a one-handed sign follows a two-handed sign, it is common for the weak hand to maintain its configuration from the preceding two-handed sign as the strong hand produces the following one-handed sign. When this occurs, the weak hand is said to *perseverate* into the succeeding one-handed sign.”

According to Liddell many perseverations do not appear to serve any semantic function. However, when a signer assigns significance to a

perseveration, that is, directs attention to it, it becomes a ‘fragment buoy’, because it helps guide the discourse. Although Liddell only mentions perseverations of the non-dominant hand of two-handed signs, Miller (1994:98) finds for LSQ that “[a] perseveration may involve either a one-handed sign or one hand of a two-handed sign”. When a perseveration of a one-handed sign occurs, a reversal of dominance needs to take place, with the perseveration occurring on the previously dominant hand. Examples of such constructions in LIU are given in Section 6.8. Thus, perseverations, at least in LSQ, and also in LIU, do not have to occur on the non-dominant hand as Liddell claims for fragment buoys in ASL.

In LIU, as in ASL, perseverations do not always have a clear syntactic or discursive function and may sometimes be purely phonetic. However, even when the grammatical function of perseverations is not clear, it would seem that they can mark prosodic domains (see also Nespor & Sandler (1999) and Sandler (1999a) for the delineation of phonological domains by the non-dominant hand in Israeli Sign Language). In this section I will, however, concentrate on meaningful instances of perseveration, that is, examples in which perseveration has a function.

In the analysis given here, such meaningful perseverations occur when two signs with inherent movement occur together in a simultaneous construction, but are not allowed to move simultaneously because of the simultaneity rule in (6.3). In these cases, one hand moves first and the end state of that sign is held while the other hand produces the other sign. Engberg-Pedersen (1994) mentions perseverations in classifier constructions (polymorphemic verbs in her terms) in DSL and argues that these verbs have a ‘hold morpheme’. She assumes that this hold morpheme occurs on the hand that expresses information that is not in focus. In the phonological analysis presented here for LIU, however, perseverations are not treated as a special kind of construction and do not have hold morphemes. They are simply considered a phonological strategy that allows simultaneity for syntactic or discursive purposes when two signs are involved that do not obey the rule in (6.3). Perseverations can be held on one hand while the other hand produces several signs. In this way they behave like signs that have no inherent movement, such as numbers, indexes, and classifiers.

Perseverations, when purposely held by the signer, and signs with no inherent movement can function in the same way, as shown in the following examples. Example (6.11) shows the perseveration of the sign CAR on the non-dominant hand, while the dominant hand signs what happens during the driving.

- (6.11) dh: CAR(2h) GO INDEX_{forward} RECOGNIZE INDEX BUILDING(2h)
 ndh: CAR(2h)—————BUILDING(2h)

“She drove around and recognized the building over there.”

Example (6.12) shows the one-handed sign PHONE_(v), which has no inherent movement and is held on the non-dominant hand, while the dominant hand signs what is said on the phone.

- (6.12) dh: ASK_{right} NO ASK HELLO
 ndh: PHONE_(v)—————

“He phoned and asked, but no, he asked someone else and said ‘hello’...”

Both (6.11) and (6.12) are examples of an almost iconic type of simultaneity, expressing simultaneous action (cf. Section 6.3). These examples show that perseverations of two-handed signs, such as CAR in (6.11), can function in the same way as one-handed signs with no inherent movement, such as PHONE_(v) in (6.12). Therefore, I conclude that they are not a special kind of construction in LIU with regard to simultaneity and that they do not have to be distinguished from full simultaneity. In fact, I have not found any clear distinctions in function between perseverations and full simultaneity in the literature on simultaneity, which indicates that, even when a distinction between the two is made, this distinction might be purely phonetic cross-linguistically. In LIU at least, the different functions of simultaneity presented in 6.3, such as establishing contrast, or representing different referents (Section 6.8) apply to simultaneity in general and it is the phonological rule in (6.3) which determines whether two signs can be produced simultaneously or whether a perseveration needs to be used.

6.7 Functions of dominance reversal

Frishberg (1985) defines grammatical dominance reversals⁵⁴ as: “instances in which a signer switches the expected dominance relations between the hands for a stretch of one or more signs.” (Frishberg 1985:81). Dominance reversals tend to occur mainly to express contrasts or transitions in the discourse. The two hands may, for instance, represent two different participants in the story. They may also mark a transition from narration to

⁵⁴ As opposed to lexical dominance reversals, which are produced mainly by non-native signers in two-handed signs and are not relevant for simultaneity.

the direct speech of one of the characters in the story, or from narration to interjections addressed directly to the addressee. An example of an interjection that is marked by dominance reversal is given in (6.13). In this example the non-manual markers, in particular head position, also indicate that the verb on the non-dominant hand is addressed directly to the person listening to the story, rather than being part of the narrative.⁵⁵ The story involves someone who is guilty of hurting someone else. The daughters of the victim, who are the protagonists of the story, want to know who has done it. In (6.13) the signer produces the first five signs as their direct speech and then utters the last sign as an interjection.

- (6.13) dh: PERSON WHO INDEX_{forward} EXIST WHO wh-question // yes/no question
 ndh: KNOW
 “Which person did it? Someone did it, but who? Do you know?”

The dominance reversal in (6.13) seems to mark a transition in the discourse, and is independent of simultaneity, since similar constructions without simultaneity also occur. In this example, the dominance reversal does, however, interact with simultaneity. The dominant hand holds the sign WHO, while the non-dominant hand produces the interjection. It is not entirely clear what the function of the simultaneity in this example is. It may tie the interjection to the previous utterance, or establish a certain prosodic domain within which spreading of phonological features is allowed.

An example of dominance reversal for contrastive purposes is given in (6.14). One of the characters is having a meal, while the other character is leaning on the table and staring at her. The person eating gets nervous and wants to know why the other person is staring. She offers him some food, but he declines.

- (6.14) dh: LEAN STARE wh-question // y/n-ques // headshake
 ndh: CL:TABLE — WHAT — FOOD — NEG:APOL

“He leaned on the table and stared at her. What is he staring at me for? (She said:) ‘Some food?’ (He replied:) ‘No thanks.’”

⁵⁵ It is interesting to analyze the non-manual markers in this example. The dominant hand holds a wh-sign, while the non-dominant hand signs a yes/no question, but these types of questions have contrasting non-manual markers. For a content question the head is tilted backward, whereas for a yes/no question it is tilted forward. The non-manual markers clearly change when the sign KNOW is produced and thus follow the hand that is active, rather than the dominant hand.

In this example, too, the dominant hand holds the end state of the sign FOOD while the non-dominant hand signs the reply. This may be done to establish a link between the question and the answer, but similar constructions without simultaneity are also found, as in (6.15).

- (6.15) dh: YESTERDAY COME // PRESENT(2h)
 ndh: YESTERDAY PRESENT(2h)
 “(She said:) ‘I came yesterday.’ (They replied:) ‘But we were here yesterday!’”

An example of a dominance reversal marking a contrast between narration and direct speech can be seen in (6.16). This utterance is part of a story in which the relatives of two young girls, who have lost both their parents, want them to give up ownership of their land.

- (6.16) dh: GIRLS STUBBORN
 ndh: NEVER
 “The girls were stubborn (and said:) ‘Never!’ ”

The construction with dominance reversal can be replaced by a longer construction which does not contain dominance reversal. In such a construction the sign for the person uttering the direct speech would have to be repeated, as in GIRLS STUBBORN GIRLS (SAY) NEVER. A few longer examples illustrating this same phenomenon were produced by the same signer.

A fourth use of dominance reversal seems to mark the transition from subject to predicate, or possibly, more generally, from topic to comment. Although dominance reversal is not the only or the most common way to mark this transition, it is regularly used in this way, and is used by the older signer in a more formally told story, as shown in example (6.17).

- (6.17) dh: MULTI-COLOURED-COAT
 ndh: BEAUTIFUL GOOD
 “The multi-coloured coat was beautiful and good.”

Although this use of dominance reversal often occurs when the predicate is an agreement verb or a classifier directed to, or located at, the non-dominant hand side of the signing space, it can also occur with body-anchored verbs or predicates made in neutral space. A perseveration of the subject can be held on the dominant hand, creating a simultaneous construction (Section 6.8).

In addition to marking transitions or contrasts, dominance reversals may also be used to locate an entity on the side of the non-dominant hand in the signing space, using a pointing sign, a classifier or an agreement verb. In these cases, dominance reversal is not necessarily a discourse strategy, but often seems to be used to make articulation easier and faster, because the dominant hand does not have to cross the midsagittal plane to reach the other side of the signing space.

There is considerable variation between LIU signers as to the extent to which dominance reversal is used. As was noted earlier, younger signers appear to use dominance reversals more frequently than older signers, but there is also variation within these generations. It is not always apparent what the linguistic function of dominance reversals is for signers who switch hands very frequently. Similarly, there are individual differences in frequency of the use of dominance reversals in ASL (Frishberg 1985). Left-handed signers seem to use dominance reversals more frequently than right-handed signers. Grammatical dominance reversals are used more often by Deaf signers than by hearing signers, which Frishberg interprets as a mark of fluency. This also appears to be the case in LIU. It is used mostly by the younger generation of signers, who tend to be more fluent than older signers, who were educated orally.

Frishberg (1985) claims that dominance reversals in ASL mark strong contrasts in the text. These contrasts may be firstly between two referents (arguments) placed on opposite sides of the signing space and indexed by two different hands, secondly between the main narrative and a parenthetical remark, and thirdly between signing and gestures. Example (6.18) taken from Frishberg (1985:84) is of the second type, which, according to Frishberg, is one of the most common types of dominance reversal. In this example the signer interrupts the narrative to explain to the addressees why she was given ten dollars.

(6.18) dh: GIVE-ME TEN DOLLAR [ASL]
 ndh: BECAUSE ME FOUR QUEEN

“They gave me ten dollars, because I had four queens.”

This example is similar to the LIU example in (6.13), where a dominance reversal is likewise used to interrupt the narrative with a comment to the addressee. The difference between the LIU example in (6.13) and the ASL example in (6.18) is that there does not appear to be any simultaneity involved in the ASL example.

Dominance reversals in LIU and ASL, then, appear to function in a similar way. In both languages dominance reversals are not obligatory and there are alternative ways to express such contrasts. The fact that dominance

reversals signal contrasts in an almost iconic way may explain why these constructions function in such a similar way in two unrelated sign languages.

In the next section we will see that, when combined, dominance reversals and simultaneity can have very interesting syntactic and discursive functions in LIU.

6.8 The interaction of simultaneity and dominance reversals

The most interesting examples of simultaneity in LIU occur in interaction with dominance reversals. We have already seen an example of dominance reversal and simultaneity interacting in classifier constructions in Figure 6.2. In such examples, the locative relation between two elements, like the bridge and the car from that example, is expressed simultaneously, leading to reversal of dominance if the classifier on the dominant hand (in this example, the vehicle classifier) is held for a longer stretch of discourse. In the constructions presented in this section, it is not always clear whether the signers use a dominance reversal in order to create a simultaneous construction, or whether simultaneity is merely a side effect of a dominance reversal. The linguistic function of dominance reversals is not always clear, especially for those signers who use this device more frequently.

Example (6.19) shows that both the emphatic/possessive pronoun SELF and the INDEX can occur on the dominant hand in a simultaneous construction, when combined with a dominance reversal, as stated in Section 6.6.1. In this case a dominance reversal is used to contrast the location of two referents in the story: a mother and her sister who have had a fight.

- (6.19) dh: REMEMBER(2h) INDEX_{right}____SELF₁____FIGHT
 ndh: REMEMBER(2h) MOTHER__INDEX_{left} RELATIVE(2h)

“They remembered: our mother and her relative had a fight.”

In this example the dominance reversal also seems to be phonetically motivated. The signer uses a large signing space and the pointing signs are made with outstretched arms. Because the locus for the mother is on the right-hand side of the signing space, the signer uses her right (dominant) hand to point to it. She uses her non-dominant hand to indicate a locus on the left side of the signing space, making articulation easier. Note, however, that the nouns MOTHER and RELATIVE are both signed on the non-dominant hand. The sign RELATIVE is normally a two-handed sign, but is produced here with one hand. Although the noun MOTHER is signed simultaneously with its

determiner (the index pointing to the right), the sign *RELATIVE* is signed on the same hand as its determiner and follows it. It would also have been possible, and even more clearly contrastive, to also sign the two nouns on different hands, or to use the dominant hand for both. I suggest that the signer chooses to sign both *MOTHER* and *RELATIVE* on the non-dominant hand, because she intentionally creates a simultaneous construction. The fact that the two-handed sign *RELATIVE* is only signed with one hand further supports this interpretation. If the simultaneous construction is indeed created intentionally, it must have a function.

In this example simultaneity may occur to help the addressee to interpret the syntactic structure of the clause. The NP [det. noun poss.] is complex, because the sign *MOTHER* is modified by both a determiner (the index) preceding it and a possessive pronoun following it. In order to make sure that the addressee understands that both these signs belong to the same syntactic constituent, the signer uses a simultaneous construction linking the three signs together. The last sign of the constituent is then held as a ‘fragment’, or perseveration, of the constituent as a whole, while the other hand signs the next NP. Because the prolonged possessive pronoun represents the entire previous constituent, it is clear that it is “my mother’s sibling” who is the other party in the conflict, rather than the signer’s or someone else’s sibling. This type of simultaneity may be an alternative strategy to localization, which appears to be used less frequently in LIU than in many documented Western sign languages (cf. Chapter 7.5).

A similar example of the use of simultaneity is found in (6.20).

- (6.20) dh: MOTHER SELF ^{squint/head-tilt} SIBLING LAND(2h) TAKE
 ndh: DEAD BOY LAND(2h)
 dh: SAY OUT GIRL TWO ^{body-lean forward}
 ndh: _____

“The brother of their mother who had died, took the land and told the two girls to get out.”

This example contains a very complex NP “the brother of their mother who had died”, the structure of which is clarified by simultaneity and a dominance reversal. There is no ambiguity in the possessive pronoun glossed as *SELF*, since it can only modify the noun *MOTHER*. Simultaneity is therefore not needed to disambiguate the syntactic structure. The sign *DEAD* is used as a relative clause, as is shown by the facial expression (Hendriks 2004). The dominance reversal may mark the transition between the main clause and the relative clause. A perseveration of the sign *DEAD* is held on

the non-dominant hand, while the dominant hand continues with the main clause, indicating that this is still the same noun phrase and that the referent mentioned next is the brother of the woman who had died. It is not clear why dominance reversal takes place between the signs SIBLING and BOY, which together mean “brother”, unless this is a parenthetical comment to be translated as “a sibling, a brother, of their mother who had died”.

In this example simultaneity does not only occur in the complex NP, but also with the two-handed sign LAND. The non-dominant hand holds this sign, while the dominant hand continues signing what the brother did to the land, namely that he took it and told them to get out. It is interesting to see how the perseveration of the sign LAND stops before the last two words of the utterance and the hand is put on the knee. This may be due to the fact that the NP “two girls” is a constituent that is extraposed for reasons of focus (indicated by a strong body lean forward), and that therefore does not form a syntactic and prosodic unit with the preceding signs. It could also be true, however, that this body lean makes it phonetically difficult to keep the perseveration in place, and that this is the reason for dropping the non-dominant hand. A translation of (6.20) which takes into account all the instances of simultaneity and dominance reversal would then read (*italics indicate emphasis*): “a sibling, a brother, of their mother, who had died, took the land and said ‘get out!’ *to the two girls!*”

Although in the examples of complex noun phrases presented here simultaneity seems to have a semantic or syntactic function, this is not always very clear. Many instances of simultaneity in the data do not appear to be as deliberate as the ones presented in (6.19) and (6.20), and the perseveration of a sign may be held on the non-dominant hand for phonetic reasons only, such as ease of articulation. It is precisely the presence of dominance reversal that makes the intentional use of a simultaneous construction clearly visible. When perseverations of two-handed signs occur on the non-dominant hand, as in LAND in (6.20), it is less clear that they serve to clarify syntactic structure. In fact, perseverations are often held across syntactic boundaries and seem to be constrained more by prosodic boundaries or other phonological contexts, such as a subsequent two-handed sign. Investigations into the prosodic structure of ISL (Nespor and Sandler 1999; Sandler 1999a) have revealed that the non-dominant hand functions as a delineator of boundaries of the phonological word and the phonological phrase, but more research is needed into the prosodic structure of LIU before similar claims can be made.

The examples presented in this section have a very complex structure. I have not found similar complex interactions between dominance reversals and simultaneity in descriptions of other sign languages. It would appear, then, that simultaneous constructions are particularly productive and

complex among some younger native signers of LIU. The interaction of dominance reversals and simultaneity among these signers gives a very ‘two-handed’ impression of LIU. Although similar constructions may also be found in other sign languages, they have, to my knowledge, not been described.

6.9 Conclusion

This chapter has presented several examples of manual simultaneity in LIU. The examples illustrate that manual simultaneity commonly occurs in various types of constructions, but is restricted in its possible forms by a clear phonological rule that can be seen as an extension of Battison’s (1978) symmetry constraint on movement. Full simultaneity, with both hands moving at the same time, is only possible when one of the signs produced does not have inherent movement or when both hands make identical or alternating movements, as in (6.5). In all other cases, perseverations are found. This rule may well turn out to be universal, in which case the distinction between full simultaneity and perseverations, as made by Miller (1994) would be superfluous. The universality of the rule presented here is supported by descriptions from other sign languages, such as VGT. A re-analysis of examples of full simultaneity shows that these are actually well-formed under the phonological rule. It will be interesting to see whether this rule does indeed cover all instances of manual simultaneity in different sign languages, as Battison’s symmetry rule does for two-handed signs.

There does not seem to be a good reason for proposing that ‘buoys’ are different from other types of simultaneous constructions in LIU. Rather, these constructions can be seen as well-formed instances of simultaneity and are closely paralleled by structures that contain elements that would not be considered buoys. In this respect, LIU appears to differ from ASL as described by Liddell (2003). The non-dominant hand does not necessarily have the function of holding backgrounded information in LIU, as was suggested by both Miller (1994) and Engberg-Pedersen (1994). Movement is also not confined to the dominant hand in LIU.

Although the function of simultaneity is not always completely clear, some examples have been presented where simultaneity, often in combination with a dominance reversal, may help the addressee to understand the syntactic structure of complex phrases. Further research will be necessary to investigate this hypothesis. Simultaneity can also be iconic, representing two things happening at the same time on different hands. This is particularly true for classifier constructions, but examples of this use of simultaneity outside of classifier constructions were also presented, as in

(6.12). More research on dominance reversal and simultaneity, as well as research into other grammatical and discourse structures in LIU, is needed in order to verify and elaborate on the analysis presented here.

Cross-linguistically, it seems that simultaneous constructions in LIU have many characteristics in common with other sign languages in both form and function. The range of simultaneous constructions, however, appears to be wider than that described for other sign languages. In particular, LIU can use pronouns other than indexes in simultaneous constructions, something that Liddell (2003) claims is not possible in ASL. Also, although dominance reversal functions in a way that is very similar to ASL, the interaction between dominance reversal and simultaneity in LIU leads to complex constructions that I have not seen described for other sign languages. Thus, although certain simultaneous constructions in LIU are similar to those in other sign languages, there are also constructions that appear to be unique to LIU. These constructions therefore add to our understanding of both cross-linguistic restrictions on sign language structure as well as the range of variation possible within those restrictions.

Further analysis of the interaction of simultaneous constructions and phonological domains in LIU and other sign languages is needed to determine the restrictions on the range of these constructions. In addition, more in-depth descriptions of simultaneous constructions in other sign languages are necessary to determine whether the level of complexity of these constructions in LIU is unusual.

Chapter 7: Perspective in narrative discourse

7.1 Introduction

This chapter deals with the use of signing perspective in narrative discourse in LIU. In both spoken and sign languages, linguistic devices are used to indicate whether utterances express the point of view of the speaker/signer or of someone else. These devices can be at the lexical level (e.g. deictic words ‘I’ vs. ‘you’ or ‘he/she’, ‘here’ vs. ‘there’), at the syntactic level (active vs. passive structures), and at the discourse level (different literary styles). All these devices appear to be present in both spoken and sign languages. As Emmorey (1996:184) remarks, however, “[t]he linguistic mechanisms used to express point of view in sign languages appear to be more explicit than in spoken languages.” One of the ways in which sign languages can overtly mark perspective, is through referential or role shifts. Also, whereas in spoken languages the choice of different perspectives is limited mainly to reporting speech, thoughts or emotions, sign languages also have the option to report events and actions from different perspectives.

The data used for the analysis in this chapter is described in Section 7.2. In Section 7.3 I introduce the different perspectives that are available to signers and give an overview of terminology used in the literature. I will distinguish between spatial perspective in event structures (Section 7.3.1) and non-spatial perspective in reporting a character’s emotions, thoughts or words (Section 7.3.2). In Section 7.4 I will take a look at non-spatial means to introduce character perspective in LIU narratives. In Section 7.5 I will describe the way referents are introduced and localized, and the way perspective is signalled spatially in event structures in LIU. Since signing perspective is most particularly evident in classifier constructions, deictic signs, and agreement verbs, the focus of this section will be on constructions involving these linguistic devices. In Section 7.6 cases of ‘mixed’ or ‘double’ perspective, which are quite frequent in LIU, are discussed. In each of the sections, the description of perspective in LIU and the way it is expressed in narrative discourse is supplemented by a comparison with other sign languages. In Section 7.7 I will present the conclusions from these comparisons.

7.2 Data and methodology

This chapter is based on an analysis of 42 short elicited stories. The stories were signed by 13 different signers, all fluent signers in their teens (between age 14 and 19). They were all students at the Holy Land Institute for the Deaf and either had a Deaf parent or Deaf siblings. Signers were paired and took turns re-telling a cartoon story which was shown on DVD or a picture story on paper. The resulting signed stories vary in length between about 20 seconds and five minutes. The total length of the elicited data is about 45 minutes. The stories that were shown were taken from three sources. Firstly, *Canary Row* (Warner Brothers 1949), an episode from the Tweety and Sylvester series, was shown on DVD to one of a pair of signers, who subsequently signed it to the other person. This story was signed by five different signers in total. Secondly, a one-page picture story of a little boy (by the French cartoonist Sempé) was signed by three different signers. Thirdly, nine different Mouse stories (selected from *Die Sendung mit der Maus*, a German children's television program broadcast by Westdeutscher Rundfunk) were each signed by four signers (except for two stories which were signed by three signers), resulting in the remaining 34 signed stories. Images from the Mouse cartoons discussed in this chapter and a copy of the picture story are shown in Appendix C.

The Mouse stories were chosen because they are short stories containing a limited number of characters (in the stories that were selected usually two or three), interacting with each other in a fairly simple way. The story of the little boy was particularly interesting for eliciting the way a signer shifts from one character to another. *Canary Row* is a cartoon that has been used to elicit data from several different sign languages. It was included both to allow for comparison with other sign languages and because it is longer than the Mouse stories and contains more complicated actions. All stories were glossed and analyzed using ELAN. In the analysis, particular attention was paid to role shift devices, as well as classifier types and perspective.

Most of the signed stories in my corpus involve a mix of narrator and character perspective. There are a few signers, however, who produce entire stories in narrator perspective and there is one signer who uses only character perspective in one of the Mouse stories. Pyers and Senghas (2007:283) mention that character perspective enriches narratives “by providing multiple perspectives on a single event.” Likewise Liddell (2003:175) states that character perspective (‘surrogate blends’ in his terminology) has “the potential to add interest, drama and humor to the discourse” and Quinto-Pozos (2007:1287) mentions that character perspective (“becoming the object”) can provide various types of affective

information about a character. These comments are confirmed by my data, in that, in my opinion, the stories that are produced entirely in narrator perspective are less interesting to watch (and are also significantly shorter) than those that include character perspective. This would imply that not all signers in my corpus are equally good story-tellers. Although this is not surprising, the different levels of skill in story-telling among the signers may influence the analysis of perspective to some extent. However, in this chapter I will try to give a general description of perspective in LIU based on what the signers have in common. Where there are significant differences between signers, I will provide examples from several signers to illustrate the range of variation.

7.3 Types of perspective in sign language narratives

As mentioned in the introduction, there are basically two kinds of perspective that a signer can choose when narrating a story. The signer can be outside of the story itself, as the narrator, and depict the characters in the story at different locations in the signing space in front of him. Alternatively, the signer can get ‘inside’ the story and take the role of one (or more) of the characters. These two perspectives have been given various names in the sign language literature. Liddell (1995, 2000) refers to the first as ‘token space’ and to the second as ‘surrogate space’, Schick (1990) refers to ‘model space’ versus ‘real-world space’, Emmorey (2002) to ‘diagrammatic space’ versus ‘viewer space’, Slobin et al. (2003) label these perspectives as ‘narrator perspective’ and ‘protagonist perspective’, Janzen (2004) to ‘narrator perspective’ versus ‘character perspective’, and Perniss (2007b) applies the terms ‘observer perspective’ versus ‘character perspective’, just to name a few. It must be noted, however, that both Schick (1990) and Perniss (2007b) deal with spatial perspective only, notably with location and motion events expressed by classifier constructions, and this is reflected in their terminology. In this chapter I will adopt the terms ‘narrator perspective’ and ‘character perspective’, as used by Janzen (2004). The term ‘character perspective’ is used to refer to a signer who views the story from ‘inside’, that is, a signer who has taken on the role of one of the characters, expressing that character’s location, action, words, emotions or thoughts, using either lexical signs or imitative gestures and facial expressions. I will use the term ‘narrator perspective’ to describe the signer’s view from outside the story. This term is used in a general sense, including the signer as observer in a location or motion event, the signer as narrator in non-spatial constructions, or the signer directing an interjection at the addressee.

Whereas narrator perspective is objective, in the sense that the signer is outside the story, character perspective requires that the signer takes on the role or the point of view of one of the characters in the story. The mechanism by which a signer does this has been referred to as ‘role shifting’ (Engberg-Pedersen 1993, 1995), ‘referential shift’ (e.g. Poulin and Miller 1995; Emmorey 1996), or ‘point of view shift’ (Lillo-Martin 1995). Padden (1990:192) notes that the term ‘role shift’ is unfortunate because it “suggests a global description for what are most certainly several different structures”. It is true that the term ‘role shift’ has been used with different meanings. In the narrow sense it appears to refer to non-manual markers, such as body shift or facial expression, of character perspective. This is the way the term seems to be used by most researchers (e.g. Emmorey 1996). Engberg-Pedersen (1993, 1995), however, uses the term in a broader sense and distinguishes three different phenomena within the category of role shifts in DSL. These three phenomena are: (1) shifted reference, that is, the use of the first person pronoun to refer to somebody other than the signer; (2) shifted attribution of expressive elements, that is, the use of the signer’s face and body posture to express the emotions or attitude of someone other than the signer; and (3) shifted locus, that is, arranging the signing space in such a way that the point of view of someone other than the signer is expressed. In my opinion, shifted reference is a subtype of shifted locus. In shifted locus, the signer’s position in the signing space becomes identified with someone other than the signer. This means that when the signer points at himself, he is not referring to himself but to the character with whom his position (and in a sense his body) has become identified. This kind of character perspective, which involves shifted reference and shifted locus, I will refer to as ‘spatial perspective’ because it involves the way the signing space is structured. In the sections below I will avoid the terms role shift and referential shift altogether when talking about character perspective and instead make a distinction between spatial and non-spatial perspective. The latter involves non-manual expressions like body shift, eye-gaze and facial expressions and is used mainly to represent a character’s words, thoughts or feelings. The term ‘body shift’ will be used in a strictly phonological sense, namely the turning of the body (or parts of the body) in a certain direction.

7.3.1 Spatial ways to signal perspective in events

Perspective in sign languages determines the way in which the signing space is structured for spatial representations (cf. Perniss 2007b). This structuring of the signing space is particularly important in the description of events. Thus, the signer can decide to view an event or a spatial lay-out from the perspective of one of the characters in a story or from the perspective of an

observer (the narrator). In a story in which a mouse and an elephant throw a ball at each other, for example, the signer can choose to have the ball move between two characters placed in front of him, or he can, as it were, become one of the characters and alternately throw the ball forward and receive it back. Spatial perspective is typical for sign languages, since these are produced spatially and can therefore use space to talk about space.

In both narrator perspective and character perspective, the signer associates characters within a narrative with particular locations in the signing space, thereby creating an event space. Many descriptions of perspective focus on role shifts (in the form of body shifts) to distinguish between narrator perspective and character perspective, although Janzen (2004) claims that body shifts in ASL are optional and that the difference between narrator perspective and character perspective is mainly expressed spatially. Although body shifts may accompany character perspective in a spatial construction, the focus in this section is on the way the signing space itself is organized to express perspective.

One of the ways in which perspective is expressed in the signing space is through the size of the event space. In observer perspective, the event space is reduced in size (which is reflected by Schick's (1990) term 'model' space) and mapped out in front of the signer's body. In character perspective, the signer's location coincides with that of one of the characters and therefore the event space is seen through the eyes of that character. This means that the event space is not reduced in size but life-sized (cf. Schick's (1990) term 'real-world' space). This difference in the size of the event space is particularly clear in the use of classifiers (cf. Van Dijken (2004); Hendriks (2004) and Chapter 3.3.2 for an overview of classifiers in LIU). In her dissertation on the use of space and iconicity in DGS, Perniss (2007b) has done groundbreaking work on perspective in a sign language, using systematic elicitation tasks and quantitative data. She has found prototypical co-occurrences (which she refers to as 'alignments') between observer perspective and entity classifiers on the one hand, and character perspective and handling classifiers on the other hand.

“...the correspondence between the use of classifiers and signing perspective is apparent. With handling classifiers, the entity in motion is represented on the hands through a depiction of its manipulation by the character mapped onto the body. The representation of motion and action correspond to the character's own experience, and are depicted from the character's perspective. On the other hand, when entity classifiers are used, the entity in motion is represented directly, through a depiction of the whole entity on the hand. The location/motion of the entity is represented through the movement/position of the hand. This

corresponds to the signer's external vantage point in observer perspective.” (Perniss 2007b:194)

A second way in which a signer can express perspective spatially is by using different axes. Perniss (2007b) found that when a scene was represented on the lateral axis in front of the signer (e.g. one character was placed on the left, the other on the right), this prototypically corresponded with observer perspective, whereas use of the sagittal axis (e.g. motion towards or away from the signer's body) corresponded to character perspective. These two axes are shown in Figure 7.1

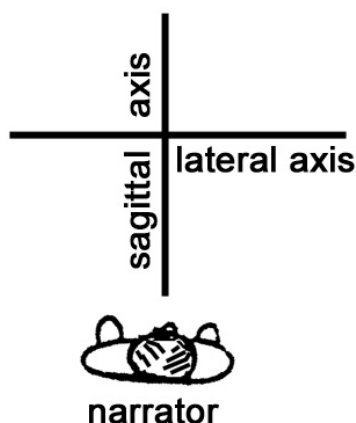


Figure 7.1: the lateral and sagittal axes

The difference between character and narrator perspective in spatial constructions is not only found in classifier constructions, however. Agreement verbs can also be spatially modified. Again, this spatial element can be combined with non-spatial characteristics of perspective which are discussed below. According to Liddell (2003), for example, a key element of character perspective in ASL is directing the eye-gaze away from the addressee.

Likewise, the use of indexical signs can indicate whether a signer is using narrator perspective or character perspective, although to date no studies have focused on the use of indexes in relation to the use of perspective. A signer can use indexical signs to point to the location of characters or objects in the story. For example, the signer can place two characters on the lateral axis in front of him, in which case indexes

localizing these characters will point forward/left or forward/right. This indicates the use of narrator perspective. However, the signer can also choose to take on a character perspective and ‘become’ one of these characters himself. In that case he will point at himself to indicate one of the characters, and to the addressee or some other point (usually in front of him) to indicate the location of the other character (this is what Engberg-Pedersen (1993, 1995) refers to as ‘shifted reference’).

This chapter will focus on spatial ways to signal perspective in narrative discourse in LIU, which means that classifier constructions, agreement verbs and indexes will figure prominently in the description of LIU data. However, spatial ways to express perspective are often combined with non-spatial features, such as changes in facial expression or body-shifts. These non-spatial ways to signal perspective are introduced in the next section.

7.3.2 Non-spatial ways to signal perspective

Creating spatial lay-outs and thereby expressing a certain perspective is typical for sign languages. However, both sign languages and spoken languages make use of non-spatial ways to express perspective. In spoken languages a speaker can choose between different perspectives when reporting someone’s speech, thoughts or emotions. When reporting what someone said, for instance, a speaker can use ‘direct speech’ or ‘indirect speech’. In the use of direct speech, the speaker, as it were, becomes the person who uttered the words he is reporting, whereas when using indirect speech, he remains himself. Thus, in the English example (7.1a) the pronoun “I” means something different than in (7.1b). In the indirect speech in (7.1b) “I” refers to the speaker, whereas in the direct speech of (7.1a) it refers to Mary.

(7.1a) Mary said: “I used to be a liar”

(7.1b) Mary said that I used to be a liar.

Direct speech in spoken languages can be uttered with special intonation or vocal changes (Tannen 1986) as if the speaker is incorporating aspects of the speech and emotions of the person he is reporting. Speakers can also use gestures to imitate the person who uttered the speech. In spoken languages this has been referred to as ‘constructed dialogue’ (Tannen 1989) and it is marked in written texts by the use of quotation marks.

In sign languages, likewise, a signer has the option to report emotions, thoughts or speech as himself (narrator perspective) or as the person whose emotions, thoughts or feelings he is reporting (character

perspective). Additionally, signers can report a character's actions as if they were that character, or as the narrator. The use of character perspective to depict a referent's actions has been referred to as 'referent projection' by Engberg-Pedersen (1993) and 'constructed action' Metzger (1995) and Aarons and Morgan (2003) among others. In this chapter I will distinguish between constructed action and constructed dialogue as subtypes of character perspective, as do Pyers and Senghas (2007). Note that constructed action may be gestural, that is, an imitation of the action of a referent without the use of lexical signs, but it may also co-occur with the use of lexical signs.

The use of character perspective in sign languages, then, takes the place of special intonation in spoken languages, although it can be used more widely than intonation. Quinto-Pozos (2007:1287) says that

“[i]ntonational features in spoken languages can certainly communicate affective, attitudinal, and emotional states of the speaker (Laver, 1994) but they do not appear to be equipped to portray the actions, movements or relative size of an object.”

In other words, intonation in spoken languages can only express constructed dialogue, whereas character perspective in sign languages can also express constructed action.

The literature on character perspective is mainly based on ASL and focuses on body shifts, that is, a signer turning his shoulders (or in some cases his whole body) slightly to the left or to the right to express the viewpoint of different characters localized in the signing space. Thus, Lillo-Martin (1995) talks about character perspective as a 'Point of View (POV) predicate' in which a body shift functions as a complement-taking predicate. In their overview of sign language grammar, Sandler and Lillo-Martin (2006:379) claim that “by shifting the body position, and possibly changing aspects of the facial expression, the signer presents another's words, thoughts or 'point of view'”. However, body shifts may not be the only or even the most common non-spatial way in which character perspective is expressed in ASL or cross-linguistically. Emmorey (1996) mentions four ways in which non-spatial character perspective (which she refers to as referential shifts) can be expressed in ASL: through a shift in body position, and/or through changes in eye-gaze, head position or facial expression. As mentioned above, Janzen (2004) says that body shifts are optional in ASL and perspective is expressed mainly spatially and by means of eye-gaze. Likewise, Poulin and Miller (1995:120) found that in LSQ “the breaking of eye-gaze with the addressee is the most consistent change to indicate that the signer has entered a referential shift”. Pyers and Senghas (2007) observe several differences between the way character perspective is expressed in

ASL and Nicaraguan Sign Language (NiSL) and wonder whether these differences reveal domains of cross-linguistic variation, or whether they are due to the age difference between the two languages, ASL being about 200 years old and NiSL being an emerging sign language. One of the objectives of this chapter is to shed more light on this question by describing the way character perspective is expressed in LIU and comparing the attested patterns to both ASL and NiSL. In Section 7.4, I will give some examples of the way character perspective is expressed non-spatially in LIU. In Section 7.5, I will discuss to what extent LIU signers use spatial means to express perspective and how they create spatial set-ups.

7.4 Non-spatial ways to express character perspective in LIU

This section will focus on non-spatial ways to express character perspective in LIU. Three strategies will be discussed in particular, namely body shift (Section 7.4.1), the lexical introduction of referents (Section 7.4.2) and the use of non-manuals to express perspective (Section 7.4.3). These strategies are then compared to those used in other sign languages (Section 7.4.4).

7.4.1 Body shift

As was stated in Section 7.3.1, descriptions of Western sign languages have focused on body-shifts as a marker of character perspective, although non-manual features such as eye-gaze and facial expression are also said to be important in distinguishing between different perspectives. LIU, however, does not appear to have a systematic system of body shift to express narrator perspective. In the data I have analyzed (cf. Section 7.2) there is only one signer out of 13 who fairly consistently marks character perspective by a body shift (turning movement) or body lean to the right or left. This same signer also uses more indexical pointing than other signers (cf. Section 7.5.1). In general, then, she seems to make spatial relationships more explicit than other signers. Figure 7.2 shows how she employs body-shift to take on the role of the cat (Figure 7.2a) and the bird (Figure 7.2b) in the *Canary Row* narrative. Although this signer uses body shifts, she tends to do this only when two characters in a story are located opposite each other. In Figure 7.2 the cat and the bird are looking at each other through binoculars.

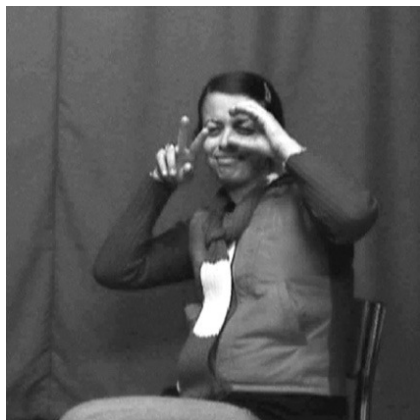


Figure 7.2a: body shift expressing the cat's perspective



Figure 7.2b: body shift expressing the bird's perspective

In one of the mouse stories, in which a mouse and an elephant are standing opposite each other building a tower (Appendix C, mouse story: *blocks*), she initially uses a body shift to the left for the mouse and a body shift to the right for the elephant. When a bird comes along, however, the body shift to the left is used for the bird, and the character perspective of the mouse is no longer clearly expressed with a body shift, except once when the mouse is interacting with the bird and a slight body shift to the right is used. In other stories, when the interaction of the characters is more complex and the characters are not located opposite each other, she does not use consistent body shifts at all. Also, she does not generally use body-shift as the only way to mark perspective, but tends to combine it with other strategies. Other signers sometimes use a body-lean forward or backward to distinguish between different referents, as can be seen, for instance, in Figure 7.7 below. In this example, the signer reproduces the actions of the father, who is sitting in a chair, with a body-lean backward, whereas his body leans slightly forward to express the son's actions.

Many signers, however, do not use body shifts at all, or not consistently. One signer introduces the main characters of the *Canary Row* cartoon by naming them and mentioning their colour, as shown in (7.2). Again, this is an example which illustrates that the spatial relationships of referents are not necessarily specified when the characters are introduced.

- (7.2) FIRST SUBJECT CAT // YELLOW CHICK // CAT BLACK
 “First, it’s about a cat and a yellow chick, the cat is black.”

She then signs (7.3) and continues after this example with a lengthy enactment of the cat looking through binoculars. Next she signs (7.4). Note that in (7.2) she has introduced the cat as being black and the bird as yellow, and sometimes she refers to these characters by their colour.

(7.3) BLACK CAT BINOCULARS HOUSE LOOK-AROUND-WITH-BINOCULARS
“The black cat looked at the houses with binoculars.”

(7.4) YELLOW LOOK-AROUND-WITH-BINOCULARS SAME LOOK_{reciprocal}
“The yellow (bird) also looks around through binoculars and they look at each other.”

The verbs this signer uses are shown in Figure 7.3. She uses no body shift at all. The signer rotates her head from left to right for both characters to show that they look around through their binoculars. At the end of (7.4) a reciprocal verb is added to show that the bird and the cat are looking at each other from opposite sides.



Figure 7.3a: The cat looks around



Figure 7.3b: The bird looks around



7.3c: They look at each other

Instead of using body shifts, this signer uses a different strategy to change perspectives. This strategy will be explained in the next section.

7.4.2 Lexical introduction of referents

The examples in (7.3) and (7.4) above show a common strategy for changing perspective in LIU. Rather than introducing referents at a certain position in the signing space and then systematically using body shift to distinguish between the perspectives of these different referents, the signer introduces the referent by means of a lexical sign and then assumes the perspective of this referent. The use of lexical signs to introduce character perspective is widespread in LIU. It appears to be the most important way of marking

perspective, although non-manuals such as eye-gaze and facial expression are also important. In some cases, the lexical sign is accompanied by an indexical point (cf. also Section 7.5.1). In (7.5), part of a re-telling of a picture story is presented (pictures 5-8 of the *Boy story* in Appendix C). In this example, the lexical signs that mark a perspective change are marked with italics.⁵⁶

(7.5) dh: *MOTHER* TRY₁ SHOUT-AT_{right} WHY HIT

ndh:

FATHER

dh: WIFE_{right} SHOUT-AT₁ WHAT ALLOWED SHOOT-AT₁

ndh:

dh: *MOTHER* CORRECT_{right} SLAP_{forward} _____ *BOY SMALL*

ndh:

CL:HOLD-BOY SECOND-TIME

dh: INDIGNANT WALK_{up} WANTS GRANDPARENTS

“Mother (says): ‘I’ll try’ and shouts at (father): ‘Why did you hit him?’ Father, who gets shouted at by his wife, (says): ‘What, is he allowed to shoot at me?’ Mother (says): ‘You’re right’ and slaps the boy for the second time. The small boy is indignant and walks up the stairs, he wants his grandparents.”

In this example the lexical signs introducing character perspective clarify which character is speaking or acting. Note that dominance reversal can be used as an additional way to mark perspective change, although in this example the reversal of dominance is limited only to the lexical sign *FATHER*. The passage in (7.5) consists entirely of character perspective, except for the lexical items that introduce a change of perspective. These are employed by the signer for clarification and are therefore best analyzed as being produced in narrator perspective. The use of character perspective in (7.5) is signalled both non-spatially, by means of non-manuals, and spatially through the use of first person agreement verbs. Non-manuals expressing character perspective, however, may already be visible during the production of the introductory lexical items. The sign WALK_{up} which contains an entity classifier and would therefore be expected to express narrator perspective in

⁵⁶ In this example I have shown the signs produced on the non-dominant hand on a separate line. In other examples the non-dominant hand is not shown separately. I show the non-dominant hand separately only when the two hands produce different signs simultaneously or when there is a case of dominance reversal. Note that this example also contains spatial ways to mark perspective. These will be discussed in more depth in Section 7.5.

the framework used by Perniss (2007b), appears in this example to be part of a stretch of discourse expressing character perspective. An important clue that this verb is within the range of character perspective introduced by the signs BOY SMALL comes from the fact that it is both preceded and followed by a verb expressing the inner state of the boy, with appropriate facial expressions continuing during the production of WALK_{up} (cf. Section 7.6, especially Figure 7.9).⁵⁷ This example, then, shows that non-manuals are also important in signaling perspective and perspective changes. Non-manual markers of perspective are discussed in more depth in the next section.

7.4.3 Non-manual markers of perspective

Non-manuals, such as facial expression and eye-gaze, play a role in determining what perspective a signer is expressing. In general, it appears that narrator perspective is often accompanied by eye-gaze at the addressee. When signers use a construction with entity classifiers, however, they tend to direct their eye-gaze at their hands. When signers use character perspective, eye-gaze is directed away from the addressee when the referent whose perspective is adopted is interacting with other referents (unless one of those referents has been associated with the locus of the addressee). However, eye-gaze by itself is not a completely reliable indicator of perspective, since there are several occasions where a signer directs his eye-gaze at the addressee during an utterance in character perspective. To determine what perspective a signer is using it is important to look at the combination of lexical signs, eye-gaze and facial expressions, as well as spatial expressions of perspective such as the direction of agreement verbs, indexes and classifier constructions (cf. Section 7.5).

Non-manuals, as well as gestures, are particularly important in signaling a change from character perspective to narrator perspective, since the latter is not lexically introduced. They are also important in those cases in which a change to character perspective is not introduced lexically. When a signer changes from character perspective to narrator perspective, this is sometimes signalled spatially by indexing or entity classifiers, but this is not always the case. In some cases it is very hard to distinguish between character perspective and observer perspective. This is due largely to the fact that there does not appear to be a very clear-cut spatial difference between the two perspectives, as will be shown in Section 7.5, and to the fact that

⁵⁷ Note that examples of constructed action accompanied by entity classifiers are also given by Quinto-Pozos (2007) for ASL and by Pyers and Senghas (2007) for NiSL.

most signers do not consistently use body-shifts to mark character perspective. An example of eye-gaze, facial expression and gestures signaling perspective change is presented in Figure 7.4.



dh: ELEPHANT LOOK-AROUND
ndh: _____ CL:TAIL_{back} CL:TAIL_{neutral space}_____



dh: IX_{left} MOUSE COME
ndh: _____ CL:PULL-TAIL



dh: LOOK-AROUND WHO
ndh: gesture:annoyance_____

Figure 7.4: “The elephant looks around. The mouse comes up and pulls his tail. He looks around annoyed: who (did that)?”

In this example, eye-gaze and facial expression signal the change from character perspective to narrator perspective. During the production of the verb LOOK-AROUND and the start of the sign TAIL, which is initially made at the signer’s back, the eye-gaze is away from the addressee as the signer has assumed the perspective of the elephant, lexically introduced by the sign

ELEPHANT. However, partway through the sign TAIL the signer directs her eye-gaze at the addressee and then produces the sign TAIL again in neutral space. This indicates that she has now taken on narrator perspective. She then switches back to character perspective to show the mouse coming and pulling the elephant's tail. The fact that eye-gaze is directed away from the addressee during the verb COME and the first part of the sign PULL-TAIL is the only indicator of the use of character perspective. Eye-gaze is directed to the addressee halfway through the sign PULL-TAIL, although this does not appear to introduce a change in perspective. Note that the facial expression is gleeful, expressing the perspective of the mouse, who enjoys teasing the elephant. As mentioned above, signers sometimes direct their eye-gaze at the addressee even when they use character perspective. Next, the signer takes on the role of the elephant, but in this case, the change in perspective is not lexically introduced. Instead it is marked by yet again directing eye-gaze away from the addressee and with a gesture (hand on hip) and the appropriate facial expression showing the attitude of the elephant.

7.4.4 Summary of LIU data and cross-linguistic comparisons

The previous sections have shown that character perspective in LIU is not generally marked by body shifts, although it is possible to do so and some signers may use them occasionally. Instead, character perspective tends to be introduced lexically. The signer names one of the characters⁵⁸ and then continues to use the perspective of that character. Non-manuals play an important role in this. When a perspective change is not introduced lexically, it tends to be marked by non-manuals, such as eye-gaze and facial expression. These non-manuals may show a change in perspective before the change is expressed manually. Because perspective changes are mainly marked lexically and non-manually in LIU, spatial set-ups do not play as important a role as they do in sign languages that do not mark perspective changes lexically. As will be shown in Section 7.5.3, LIU signers are not always completely consistent in their use of spatial set-ups.

Cross-linguistically, the use of a lexical sign to introduce the character whose perspective is being taken on by the signer has also been reported for TİD (cf. Perniss and Özyürek, in press). Interestingly, TİD is geographically close to LIU, although the two languages do not appear to be closely related, at least at the lexical level (cf. Chapter 2). Perniss (2007b) also mentions that signers of TİD use a high proportion of narrator

⁵⁸ The signer is free to choose the way he names the character. In (7.4), for example, the signer chooses to introduce character perspective by naming the character's colour.

perspective compared to DGS signers. She hypothesizes that this may be due to the fact that DGS has a body shift mechanism to express changes in character perspective, while TĪD appears to lack such a system. According to Perniss (2007b:191), the availability of such a body shift system may motivate a continuous use of character perspective. The data from LIU, however, shows that, although some of the signers predominantly use narrator perspective, this cannot be explained by the absence of a body shift mechanism in the language. Even when signers do not use a body shift mechanism, they may predominantly use character perspective and lexically mark perspective changes. The absence of a body shift system, then, does not necessarily result in a predominant use of narrator perspective.

Pyers and Senghas (2007) found that, like LIU and TĪD, NiSL does not use body shifts in the same way as ASL. Instead, NiSL signers use a break in eye-gaze (similar to ASL and to LIU), a change in body position, and an ‘indexical point’ (an index pointed at the signer) to mark a shift from narrator perspective to character perspective. Sometimes the indexical point is followed by the lexical sign for the represented character. The indexical point itself is outside of the constructed action. Thus, like LIU, NiSL tends to mark changes into character perspective lexically. An important difference between LIU and NiSL is that LIU usually marks such changes with a noun, whereas NiSL uses a first person pronoun.

Having looked at non-spatial ways which signers use to shift into character perspective, the next section will take a closer look at spatial ways of expressing perspective in LIU and to what extent spatial set-ups are used consistently.

7.5 Introducing referents and creating spatial set-ups

Pyers and Senghas (2007) note that the way in which character perspective is expressed phonologically as well as its function in narrative discourse appears to be very similar across different (Western) sign languages. However, when comparing ASL with NiSL, they found significant differences in the use of spatial information. Thus, it appears that

“[a]nalyses of perspective shift in sign languages other than American Sign Language [...] typically focus on those features that are shared with ASL, while those that differ from ASL seem absent from the discussion (cf. Engberg-Pedersen 1993; Poulin and Miller 1995).” (Pyers and Senghas 2007:279)

In this section I will show that perspective in LIU has many features that are different from those reported for ASL. I will briefly compare these findings to those reported for other sign languages and discuss their cross-linguistic implications. In Section 7.5.1 I will focus on the use of indexical pointing in narrator perspective to introduce characters at the beginning of a narrative, in Section 7.5.2 I will give some examples of referents being introduced by means of verbs in either narrator or character perspective. In Section 7.5.3 I will show how spatial lay-outs can be created in character perspective by means of agreement verbs and indexical pointing. In Section 7.5.4 I summarize my findings for LIU and compare them with descriptions of other sign languages.

7.5.1 Indexical pointing in narrator perspective

In descriptions of different Western sign languages, notably ASL, narrator perspective is said to occur early on in narratives in order to, as it were, ‘set the scene’ (cf. Emmorey and Falgier 1999; Morgan 1999). In narrator perspective a signer can explain how characters and objects are spatially related to each other. This is often achieved by means of indexing and entity classifiers. Only when the spatial lay-out of a scene has been established in narrator perspective will a signer switch to character perspective. Poulin and Miller (1995), discussing LSQ, therefore refer to narrator perspective as the ‘main frame of reference’ and to character perspective as ‘dependent frames of reference’. Descriptions of sign languages other than ASL and LSQ have revealed strikingly similar patterns.

Although in LIU most stories appear to start out in narrator perspective, indexical pointing to establish spatial relationships is not a common strategy. In my corpus of 34 mouse stories (with a total length of more than 24 minutes) indexical pointing to establish spatial relationships is used with narrator perspective only 31 times, which means on average less than once per story. Out of these 31 instances, only seven are used right at the beginning of the narrative to introduce characters and ‘set the scene’. An example involving two cases of indexical pointing to introduce two characters is given in (7.6). Such explicit localization of two characters in narrator perspective, however, is quite rare. In some other cases only one character is localized using an indexical point.

- (7.6) dh: FIRST ELEPHANT IX_{right} _____ CL:ROUND-OBJECT_{right}
 ndh: IX_{left} _____ MOUSE CL:ROUND-OBJECT_{right}
 dh: CL:ROUND-OBJECT_{left}
 ndh: CL:ROUND-OBJECT_{left}

“First, the elephant is on the left and the mouse on the right.”

In this example the elephant is introduced on the left by a simultaneous construction, and the mouse is located on the right in a similar way. The index establishing the location of the mouse is made on the dominant hand and is held during the production of the lexical item MOUSE on the non-dominant hand (cf. also Chapter 6.5.1 on simultaneously produced indexes). Thus, not only are the elephant and the mouse introduced on opposite sides of the signing space, they are also introduced by different hands. The function of the two-handed classifier constructions following the simultaneous constructions with the indexes is not altogether clear. The classifiers do not appear to provide additional information. Example (7.6) is the most explicitly localizing construction in all 34 stories, but after the signer has established the location of the mouse and the elephant, she does not use indexical pointing to the left and right to refer back to these characters. Thus, the loci established in (7.6) do not fulfil a function in the remainder of the discourse.

In the remaining 24 cases indexical points are not used to introduce a referent, but only occur later on in the story. In 22 of these cases, the index that localizes a character is immediately followed by, and in some cases preceded by or made simultaneously with, the lexical item for that character, as in (7.7). Hence, localization is not used to uniquely identify a referent in these cases, but functions as additional information.

- (7.7) IX_{left} MOUSE IDEA
 “The mouse has an idea.”

There are just two cases in the Mouse stories in which the index occurs by itself and its referent is not explicitly signed. Only in these two cases the addressee needs to actually be aware of the location of the referents in the signing space to understand which character is being referred to.

In order to test whether the lack of indexical pointing in narrator perspective is related to the duration of the stories (cf. Pyers and Senghas (2007:292), who state that signers of NiSL do not use classifiers or indexical points to set up spatial relationships “at least not in short narratives” like the ones they analyzed), I compared the 34 mouse stories (with an average length of about 42 seconds) with the five Canary Row narratives, which are

much longer (on average 3 minutes and 25 seconds). In those five stories I found 28 instances of indexical pointing in narrator perspective to localize referents. Out of these, 16 were produced by one signer while the other signers used this strategy between one and four times. Of the 28 instances, only two were used at the beginning of a narrative to introduce the main characters in the story. These two were produced by the signer who used indexical pointing most. Note that this signer also produced more indexes than most of the other signers in the Mouse stories. It does not seem, then, that the duration of the stories makes a difference in whether or not indexing in narrator perspective is used as an important strategy for localizing referents.

7.5.2 Introducing referents using verbs

The infrequent use of indexical pointing in LIU to establish spatial relationships in narratives, be it to introduce characters at the beginning of the narrative or to refer to them later on in the narrative, contrasts with what has been found in many Western sign languages.⁵⁹ This contrast appears to be related to the fact that LIU has a preference for lexically introducing character perspective, as was explained in Section 7.4.2. In fact, using narrator perspective to introduce and localize the main characters of a narrative right at the beginning of the story, and only switching to character perspective later on, is not common in LIU. This strategy is found in only 7 out of 42 stories. Two examples of the introduction of referents right at the beginning of a narrative are presented in (7.8a) taken from the *blocks* story, and example (7.8b), taken from the Mouse story *duck and elephant*, in which the duck rides on the back of the elephant (Appendix C). Note that the signer who produces (7.8a) signed the entire story in narrator perspective. In these examples the verb WALK is used to localize referents in narrator perspective.

(7.8a) dh: ELEPHANT MOUSE WALK_{right-left}
 ndh: WALK_{left-right}

“An elephant comes walking from the left, and a mouse comes walking from the right.”

(7.8b) dh: ELEPHANT WALK DUCK(2h) WALK_{in front}
ndh: DUCK(2h) WALK_{behind}

“An elephant is walking, and a duck is walking behind him.”

⁵⁹ It would be interesting to know what the influence of sign language education is on these kinds of differences.

In (7.8a,b) as well as in (7.6), localization is established through a simultaneous construction, whereby the location of the character corresponds with the hand that is used. In (7.8a) the elephant is located on the left using the non-dominant (left) hand and the mouse is located on the right, using the dominant (right) hand.⁶⁰ Likewise, in (7.8b), a simultaneous construction is used to locate the second character with respect to the first. Thus, dominance reversals and simultaneity are used frequently for contrastive purposes in LIU when characters are introduced in narrator perspective.

Although the signer of (7.8a) explicitly localizes both the mouse and the elephant by means of the verb WALK, she continues to mention only the elephant explicitly in the remainder of this story. Moreover, she is not consistent and localizes the elephant once on the left and once on the right, even though the elephant does not change his location in the cartoon. Thus, although the mouse and the elephant are localized at the beginning of the story, these locations are not used consistently throughout the story. It is interesting that in (7.8a) the verb WALK is used to localize the mouse and the elephant, because in the cartoon story the elephant and the mouse do not come walking into view at all. This can be seen in Figure 7.5 below, which shows the first frame of the *blocks* cartoon.

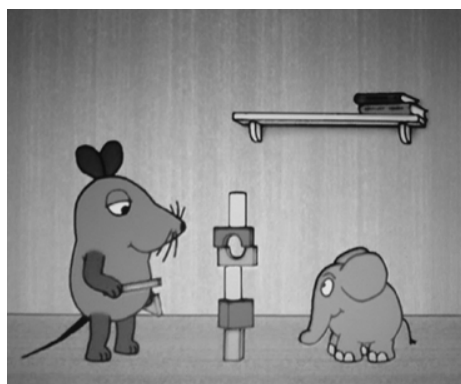


Figure 7.5: initial frame in blocks cartoon



Figure 7.6: first picture in the Boy Story

Another example in which the verb WALK is used to introduce a referent is shown in (7.9), taken from the *Boy Story* (Appendix C). Again, although the

⁶⁰ Note that the actual locations of the mouse and elephant in Figure 7.5 are the opposite of the locations used by this signer to introduce them.

verb WALK is used in this example, the first picture in the picture story does not show the boy walking at all (cf. Figure 7.6).

(7.9) dh: AFTER⁶¹ BOY WALK WATER CL:POUR-INTO GUN // BOY WALK

ndh: CL:HOLD-GUN

dh: SEE_{forward} FATHER // CL:HOLD-NEWSPAPER

ndh: CL:HOLD-NEWSPAPER

“A boy walks up, holding a gun with water poured into it. The boy walks and sees his father with a newspaper.”

Apparently, the verb WALK can be used even if its referent is not actually seen walking. It is possible that the verb WALK in these cases simply functions as an entity classifier expressing the location of the referents (cf. Perniss (2007b) for a similar function of the sign LOOK in DGS). The use of entity classifiers for localization is also common in Western sign languages.

Examples (7.8a,b) and (7.9) show how referents are introduced in narrator perspective using a construction with an entity classifier (the sign WALK). However, as I mentioned above, this strategy of introducing and localizing the main characters of a narrative right at the beginning of a story in narrator perspective, and only then switch to character perspective is not commonly used by LIU signers. In fact, this can be seen in (7.9) where the boy is introduced in narrator perspective, but the father is introduced, as it were, through the eyes of the boy. The father is localized as being forward from the boy (on the sagittal axis), through the use of the verb SEE which is directed ahead of the signer. In some cases, characters are introduced at the beginning of the story, but not localized at all, as in (7.10), which is taken from the *horizontal bar* story. In other cases only one character is localized, as in (7.11), taken from the *chair* story.

(7.10) ELEPHANT SMALL MOUSE BIG // MOUSE BIG WANT SPORTS

“There’s a small elephant and a big mouse, the big mouse wants to do sports.”

(7.11) dh: FIRST ELEPHANT SIT SLEEP//

ndh: AFTER IX_{left} MOUSE_{left} COME

“First, an elephant is sitting, asleep, then a mouse comes from the left.”

⁶¹ This is actually the first word in the story. Most signers start their stories with the sign FIRST and use the sign AFTER to mark new developments in the story. In this case, the signer starts her story with the sign AFTER, which I have not translated.

Examples (7.9) and (7.11) illustrate the use of verbs when introducing characters. In fact, most signers introduce the characters in the story lexically and then describe their actions, rather than explicitly localizing them. The verbs used in these descriptions can be signed in either narrator perspective (e.g. the first instance of the verb WALK in (7.9)) or in character perspective (e.g. the verb SEE_{forward} in (7.9)).

The fact that LIU tends to introduce animate referents by giving a description of their actions, this description being given either in narrator or in character perspective, shows that the ASL ‘rule’ that characters are first localized in narrator perspective and that character perspective in some way ‘depends’ on this spatial set-up, does not hold for LIU. In the examples below I will contrast the way two different signers introduce the characters in the picture story of the boy. The signer who signed (7.12) ‘sets the scene’ using narrator perspective in a way similar to what has been described for Western sign languages. She starts by introducing all the characters in the story and localizes some of them. This signer is the only signer in my corpus who consistently introduces the main characters in the story before she describes their actions (cf. also (7.10) which was signed by the same person). Note that she localizes the mother and the grandparents but not the father and the son, who occur in the first picture of the story.

(7.12) FIRST FATHER GUEST SIT NEWSPAPER // SON BOY LITTLE //
MOTHER WHERE WASH-DISHES IX_{forward-right} // GRANDPARENTS WHERE
IX_{up} ROOM SEPARATE

“First, the father is sitting in the guest(room) with a newspaper, he has a little son. Mother is washing dishes over to the right and the grandparents are upstairs in a separate room.”

Most signers, however, introduce the characters consecutively, in the course of the story. They switch back and forth between narrator perspective and character perspective, introducing a character and then reproducing the actions of that character. This strategy is exemplified by the sequence of pictures in Figure 7.7.



dh: FIRST FATHER // CL:OPEN-PAPER READ //
ndh: CL:OPEN-PAPER_____



dh: SUBJECT NEWS // NEWS SPECIFIC //
ndh: _____



dh: CL:OPEN-PAPER // BOY SMALL // GUN
ndh: _____



dh: REAL NO PLAY WATER



dh: CL:WATER-SQUIRT GOT-IT // WALK_{right-left} SHOOT_{forward}

Figure 7.7: “First, there is a father who is reading a paper. It’s about the news, some specific news. He’s reading the paper and a small boy with a gun, not a real one but a toy, one that has water squirting out, you understand? He walks up and shoots.”

In this example, the father is introduced first, followed by a description of what he is reading. This description is partly in character perspective, which is clear from the facial expression and the eye-gaze of the signer. Then, the signer switches back to narrator perspective and introduces the boy. He even addresses the addressee directly to check that she has understood the concept of a water pistol. He then goes back to character perspective and imitates the boy shooting his gun. Likewise, in contrast to the signer who signed (7.12), the mother and the grandparents are only introduced as they appear in the story.

7.5.3 Creating spatial lay-outs in character perspective

LIU signers tend to do a great deal of their localization in character perspective. They show the location of the characters relative to each other, rather than absolute locations in the signing space. In character perspective, signers use agreement verbs, in particular SEE (cf. example (7.9)), indexical points, and non-manuals like eye-gaze, to establish the relative position of one referent with respect to another. An example of the verb SEE (with accompanying eye-gaze) used this way, occurs in the *horizontal bar* story (Appendix C). The mouse is trying to swing on the horizontal bar, but does not succeed. One signer introduces the elephant, which appears behind the back of the mouse partway through the story, as in (7.13). This signer produces the sign COME, which is not a classifier verb but can be spatially modified, with a starting point behind him. Thus, the location of the elephant is signed from the perspective of the mouse, that is, the signer has taken on the role of the mouse.

- (7.13) dh: CL:HOLD-BAR ^{eye-gaze right}SEE_{right-back} ELEPHANT SMALL(2h)_{behind}COME
 ndh: CL:HOLD-BAR _____ SMALL(2h)

“He’s holding the bar and sees a small elephant coming up behind him.”

In (7.14), which is taken from a Canary Row narrative, the cat is localized by directing the verb SEE (with accompanying eye-gaze) and an indexical point upwards, thereby indicating that the location of the cat is lower than the location of the previously introduced bird and old lady. In this case, the relative position of the cat is established by the signer taking the cat’s perspective.

- (7.14) BIRD HOUSE UP // OLD-PERSON SIT // CAT ^{eye-gaze up}SEE_{up}IX_{up} WANT GRAB BIRD

“The bird is up in the house, an old lady is sitting there and a cat sees them there (from down below) and wants to grab the bird.”

Example (7.5), here repeated as (7.15), also shows the use of agreement verbs in character perspective to create a spatial set-up. Note that, in contrast to (7.5), here the relevant agreement verbs are presented in italics.

- (7.15) dh: MOTHER TRY *1SHOUT-AT*_{right} WHY HIT
 ndh: FATHER
 dh: WIFE *rightSHOUT-AT*₁ WHAT ALLOWED SHOOT-AT₁
 ndh:
 dh: MOTHER *CORRECT*_{right} *SLAP*_{forward} BOY SMALL
 ndh: CL:HOLD-BOY SECOND-TIME
 dh: INDIGNANT WALK_{up} WANTS GRANDPARENTS

“Mother (says): ‘I’ll try’ and shouts at (father): ‘why did you hit him?’ Father, who gets shouted at by his wife, (says): ‘What, is he allowed to shoot at me?’ Mother (says): ‘You’re right’ and slaps the boy for the second time. The small boy is indignant and walks up the stairs, he wants his grandparents.”

In this example, the father is associated with a location to the right of the mother by means of agreement verbs. When verbs are directed from the mother to the father, they are directed to the right. Thus, the verb *1SHOUT-AT*_{right} is an agreement verb, which is directed from the signer (who has taken on the mother’s perspective) to the father’s location to the right of the signer.

Similarly, when producing the sign CORRECT, the signer turns to the right, as if addressing the father. The verb SLAP_{forward} shows that the boy is located in front of the mother. The spatial set-up created in this way is shown in Figure 7.8

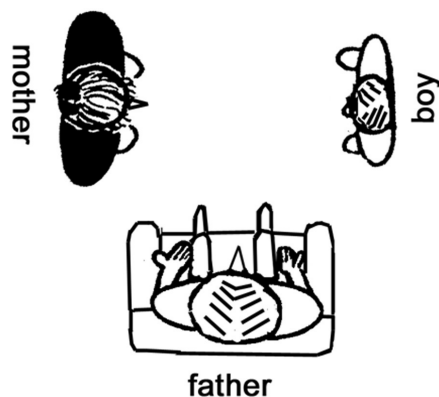


Figure 7.8: spatial set-up created in (7.15)

This spatial set-up, however, is rather ad hoc, in that it has not been introduced previously in narrator perspective and is also not entirely consistent. The verb _{right}SHOUT-AT₁, which expresses the perspective of the father, is produced with a starting point to the right of the signer, even though the mother (the one who is doing the shouting) should be located to the left of the father in a consistent spatial set-up. Note that the signer's eye-gaze is on the addressee throughout this example (cf. Section 7.4.3 where eye-gaze by itself was said not to be a reliable indicator of character perspective), and therefore does not contribute to the localization. However, because characters are introduced lexically before their actions or words are described, referents can still be identified without a consistent spatial lay-out.

Note also that there are two verbs _{right}SHOUT-AT₁ and SHOOT-AT₁ that are directed towards the signer. Because these two verbs are within the passage that has been lexically introduced by the sign FATHER, it is clear that the signer has taken on the perspective of the father and the first person reference functions in the same way as first person reference in direct speech (constructed dialogue) in English. In fact, the second verb is part of a direct speech by the father and can be directly translated into English using first person reference: "shoot at me". The first verb, however, is not part of direct

speech, but rather expresses an action happening to the father. Since English, and spoken languages in general, cannot use character perspective for actions (there is no such thing as ‘constructed action’ in spoken languages), this cannot be translated using a first person pronoun. Instead, it is best translated with a passive construction to make clear that the father is the undergoer of the action.

Besides using agreement verbs to establish spatial set-ups, signers can also use indexical pointing in character perspective to show the position of two referents relative to each other. An example of indexical pointing in character perspective is given in (7.16), which is taken from the Canary Row narrative. The cat is looking around through his binoculars and spots a bird up on a window-sill. The direction of the index and the following agreement verb GRAB shows the position of the bird in relation to the cat.

- (7.16) LOOK-WITH-BINOCULARS SPOT $IX_{forward-up}$ THINK GRAB $_{forward-up}$ HOW
 “He (the cat) looked through the binoculars and spotted him (the bird) up there and thought: ‘How can I grab him?’”

Apart from pointing at locations in the signing space, the signer can also use first person indexical pointing in character perspective to refer to the character whose perspective he has taken on. Compared to indexing in narrator perspective to localize referents, which is not very frequently used, as we have seen, first person indexing in character perspective is quite common in LIU. In my corpus of 43 stories, first person referencing in character perspective occurs 78 times, mostly in longer narratives. An example is given in (7.17). In this example a first person index on the non-dominant hand is followed by a two-handed first person index.

- (7.17) dh: CAT LOOK $_{forward}$ EASY IX_1 _____ MONKEY IX_1
 ndh: COME-HERE IX_1 IX_1
 dh: CLOTHES(2h) EXCHANGE(2h) $IX_{right-up}$ OLD-LADY
 ndh: CLOTHES(2h) EXCHANGE(2h)
 dh: BELIEVE IX_1 MONKEY IX_1
 ndh:

“The cat looks ahead of him (and thinks): ‘It’s easy, I will beckon the monkey to come over and I will exchange my clothes. The old lady up there will believe I am the monkey.’”

In (7.17) first person referencing takes place within a constructed dialogue, albeit an internal dialogue, going on in the cat's mind. Engberg-Pedersen (1993) mentions that shifted reference can only take place in constructed dialogue and never in constructed action in DSL. Likewise, Poulin and Miller (1995) observe that a first person pronoun in LSQ signals constructed dialogue. The same is apparently true for ASL (Pyers and Senghas 2007). In LIU, however, first person referencing can be used in constructed action, as illustrated in (7.18), which describes the last two pictures of the Mouse story with the chair (Appendix C).

- (7.18) dh: CL:PUSH-OVER CHAIR CL:PUSH-OVER IX₁ SIT(2h)_____
- ndh: CL:PUSH-OVER_____ CL:FALL_____SIT(2h) SLEEP MOUSE
- dh: _____
- ndh: UPSET
- “He pushes over the chair and it falls. He sits down and sleeps, and the mouse is upset.”

Previously in this story, the elephant was the last referent to be mentioned, so it is clear that the first person indexical point refers back to the elephant. Note that in English it is impossible to translate the first person reference with “I”, whereas in the constructed dialogue in (7.17) this is no problem.

7.5.4 Summary of LIU data and cross-linguistic comparisons

In this section, I have shown how referents are introduced and localized in LIU. Although different signers have different preferences with respect to indexical pointing and introducing characters at the beginning of a narrative, LIU appears to employ strategies that are quite different from those described for Western sign languages. Most LIU signers do not introduce and localize referents at the beginning of a narrative in narrator perspective. In fact, most signers introduce characters only when these start playing an active role in the story. When signers do localize referents, they regularly use dominance reversals and simultaneous constructions to localize and contrast different referents. However, the locations that *are* established for referents when they are introduced in narrator perspective are not always referred back to later on in the story and appear not to play an important role in distinguishing between different characters (cf. Van Dijken 2004). Indexical pointing and the use of entity classifiers, in particular the verb WALK, to introduce or refer to referents both occur, but are relatively uncommon. There appears to be a great deal of variation between signers in this area. Many signers of LIU use character perspective and localize

referents in relation to each other, using the verb *SEE* and other agreement verbs, as well as indexing, to create spatial set-ups. These spatial set-ups, however, are quite ‘ad hoc’ and are not always consistently used across multiple perspective shifts. In character perspective, a signer can also use first person reference, that is, indexical pointing at the signer, to refer to the character whose perspective he has taken on. This is possible not only when the signer relates the words or thoughts of a character (constructed dialogue) but also when he imitates the actions of a character (constructed action).

Cross-linguistically, as pointed out at the beginning of Section 7.5, most descriptions of perspective in Western sign languages have focused on features shared with ASL. Only recently have researchers started to look for differences between sign languages. Perniss (2007b) found that, like LIU, DGS prefers to use character perspective over narrator perspective for scene-setting. Pyers and Senghas (2007) report that narrator perspective in NiSL is rarely used to give spatial information, either to set the scene at the beginning of a narrative, or later on in the narrative. Indexical pointing in narrator perspective is rare in NiSL, just as in LIU. In contrast to LIU, however, entity classifiers were hardly used in NiSL and never with the objective of establishing spatial relations.⁶² Aronoff, Meir, Padden and Sandler (2003) compare ASL and ISL and find that, in ordinary conversation, ISL uses more character perspective (referent projections) than ASL. They suggest that the use of entity classifiers (signaling narrator perspective) in a sign language is linked to the age of the language. ISL being a younger sign language than ASL uses more handling classifiers (i.e. character perspective). This fits in with the fact that in NiSL, a very young sign language, entity classifiers are very rare. However, the LIU data does not fit neatly into this theory, since it does use both abstract entity classifiers and character perspective, as shown by Van Dijken (2004). It would seem, then, that the predominant use of character perspective for scene-setting in narrative discourse in LIU (and DGS) is independent of language age. The use of narrator versus character perspective for scene-setting in narrative discourse simply appears to be one of the aspects in which sign languages can differ cross-linguistically. Moreover, at least in LIU, individual signers can differ in the way they use perspective.

As far as spatial set-ups are concerned, there appear to be a number of similarities between LIU and NiSL. According to Pyers and Senghas (2007) NiSL signers are not consistent in the spatial lay-out they use within a narrative across perspective shifts. Such inconsistencies are also found in LIU, although they may not be as common as in NiSL. In contrast to this,

⁶² Note that Pyers and Senghas (2007) do qualify their findings somewhat by saying that these strategies were not found in short narratives like the ones they analyzed.

DGS signers, who also tend to use character perspective for localizing, are consistent in the way they use spatial loci. Also, NiSL signers did not use spatial means to indicate whether narrator or character perspective was being used, but rather used a break in eye-gaze (similar to ASL and to LIU), a change in body position, and an ‘indexical point’ (an index pointed at the signer) to mark a shift from narrator perspective to character perspective. Sometimes the indexical point was followed by the lexical sign for the represented character. The difference between this first person indexical point in NiSL and a first person pronoun used in character perspective in LIU (as in (7.17) and (7.18)) is that in NiSL, the indexical point is produced before the character perspective, whereas in LIU it is part of the character perspective. Likewise, LIU and NiSL are similar in that they can use first person referencing not only in constructed dialogue, but also in constructed action. This has been claimed to be impossible in other sign languages, like DSL, ASL and LSQ.

7.6 *Multiple perspectives*

When signers describe the actions of one of the characters in a story, they frequently use what has been called ‘multiple perspectives’ to represent actions or events from more than one perspective simultaneously. Aarons and Morgan (2003:128) mention that the creation of multiple perspectives involves the simultaneous occurrence of three phenomena; the signer’s use of a handling classifier, the signer’s use of an entity classifier, and the signer’s use of his face or body to express “the first-person point of view”, that is, character perspective. However, it is also possible to express multiple perspectives when only two out of these three phenomena occur simultaneously. I briefly discussed an example of this in Section 7.4. The relevant part of this example is repeated here with accompanying illustrations as Figure 7.9. Note the facial expression and head position indicating the use of character perspective.

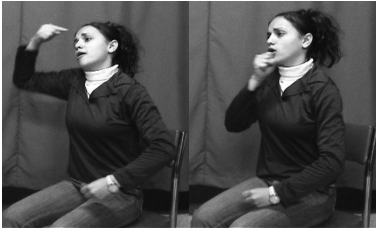


BOY

SMALL

INDIGNANT

WALK_{up}



WANT

GRANDPARENTS

Figure 7.9: “The small boy is indignant and walks up the stairs, he wants his grandparents.”

Aarons and Morgan (2003:152) mention that “constructed action can occur either accompanied or unaccompanied by linguistic items.” They note that when it is accompanied by entity classifiers this usually means more than one perspective is expressed simultaneously. The sign WALK_{up} in Figure 7.9 occurs in the middle of a sequence of signs expressing character perspective and is signed with the facial expression of the boy whose perspective the signer has taken on. The sign WALK_{up}, which involves an entity classifier, is a description of the boy’s action by the signer as narrator, while at the same time the signer expresses character perspective non-manually. It can, therefore, be viewed as an instance of multiple perspectives. Liddell (2003) refers to such constructions as ‘partial blends’, suggesting that the signer is taking on character perspective only partially. The reason that the signer uses multiple perspectives in this example is that she cannot express the path movement of the boy going up the stairs in character perspective without actually climbing a set of stairs herself. Perniss (2007b) observes that the depiction of path movement is something that can only be expressed in narrator perspective using entity classifiers.

The use of multiple perspectives is quite common in LIU. Not only can a signer ‘be’ a character non-manually and describe the actions of that character as narrator manually, but a signer can also express character perspective with one hand and narrator perspective with the other hand in a simultaneous classifier construction. An example of this is presented in (7.19), taken from the *horizontal bar* narrative (Appendix C).

(7.19) dh: MOUSE WANT CL:GRAB-BAR IX₁ CL:GRAB-BAR CL:LEGS-SWING
 ndh: CL:GRAB-BAR CL:GRAB-BAR _____
 dh: LIKE CL:LEGS-MAKE-SUMMERSAULT HOW
 ndh: _____

“The mouse wants to grab the bar: I grab the bar and swing. I would like to make a summersault, but how?”

In this example, the first sign is a lexical item introducing character perspective. The rest of the example is signed in character perspective, as can be seen from the use of the first person pronoun.⁶³ Throughout most of the example the signer holds the non-dominant hand over his head, using a fist-shaped handling classifier, as if he is holding on to the horizontal bar. With his dominant hand he describes the actions of the mouse using an entity classifier, as well as describing the thoughts of the mouse. Obviously, the mouse swinging on the bar or making a summersault cannot be described by the signer in character perspective, using real space. In that case, the signer would have to have a horizontal bar present and dangle in the air or actually make a summersault.

In fact, any actions involving the legs cannot be made in character perspective, unless the signer actually uses his legs. In most sign languages the use of the legs is not permitted, and the legs are not even used as a location for signs. Meir, Padden, Aronoff and Sandler (2008:370), for example, observe that

“[b]ody parts that are lower than the waist [...] hardly ever function as locations for signs. Therefore, actions which are performed by the legs and feet of the subject are not articulated by these appendages; rather, the legs and feet are represented by the arms and hands.”

In my data, there are only two signers who use their feet, in a Mouse story in which the elephant and the mouse kick the ball to each other. One signer uses a  classifier to depict the ball and brings this hand to his foot. This

⁶³ I have chosen to translate this example using the first person in English in order to make the translation consistent with the glosses and to indicate that this example uses character perspective (after the first sign which introduces character perspective). Because English, unlike sign languages, cannot use first person referencing to express constructed action, the normal English translation of this example would have a third person pronoun: “The mouse wants to grab the bar and swing, he grabs the bar and swings, he wants to make a summersault, but (doesn’t know) how.” This translation, however, obscures the fact that the signer uses character perspective to report the mouse’s actions.

entails him having to bend forward repeatedly and lift his foot from the ground. Another signer simply makes a kicking movement with her foot and does not attempt to depict the ball at the same time. Such activity of the legs is quite rare, however, and never occurs when path movement is involved. A third signer signing this story touches his leg once, to indicate that the ball is being kicked, and then uses his non-dominant hand to depict his foot. This representation is more well-formed phonologically. In fact, most of the examples of the use of multiple perspectives in my data involve the use of the 'legs' classifier. It seems that, when it is phonologically impossible for a signer to use character perspective, the nearest thing he can do is to use multiple perspectives, with one hand expressing character perspective (representing the hands of the character with his own hands), while the other hand describes the actions of the character as a whole with an entity classifier.

Another situation in which multiple perspectives are used occurs in the representation of the Mouse story *duck and elephant*, in which a duck jumps on the neck of an elephant (Appendix C). The signer does not use the two hands to express different perspectives, but places an entity classifier on her own body. In this case, the reason to use multiple perspectives appears to be that the signer wants to be exact about the location of the duck with respect to the elephant. She first uses narrator perspective to clarify the spatial locations of the two animals with respect to each other, representing the back of the elephant with the back of her non-dominant hand and using a legs classifier for the duck jumping onto the back of the elephant. This representation, however, does not clearly show that the duck jumps onto the neck of the elephant. She therefore clarifies the position of the duck by representing the elephant with her own body (i.e. in character perspective) and uses the legs classifier to represent the duck jumping onto her own neck. The first picture in 7.10 shows her depicting the situation in narrator perspective, the second picture shows her using multiple perspectives. Note that another signer uses exactly the same strategy to depict this situation, except that he reverses the order and uses multiple perspectives first, followed by narrator perspective.



Figure 7.10: two constructions representing a duck jumping onto the neck of an elephant

Additionally, in both pictures of Figure 7.10, the expression on the signer’s face is the gleeful expression of the duck jumping onto the elephant. Thus, if we take into account the facial expression, three perspectives are expressed simultaneously in the second picture; that of the signer as narrator, expressed by the entity classifier on the dominant hand; the signer as duck, shown by the facial expression; and the signer as elephant (the signer’s neck representing the neck of the elephant). Likewise, Van Dijken (2004:46) has found some examples of three perspectives being expressed simultaneously in LIU. She also presents a very interesting example in which two different character perspectives are expressed simultaneously. I cite her example here as (7.20).⁶⁴

(7.20) dh: MAN LEASH CL:HOLD-LEASH tongue out lean forward PAW
ndh: DOG CL:HOLD-LEASH _____ PAW

“A dog is holding a leash, a man is at the end of the leash and walks like a panting dog.”

The signer, describing a picture of a dog walking upright keeping a man on all fours on a leash, first uses constructed action to show the dog holding the leash on her non-dominant hand. She holds this hand in place and then imitates the panting of the man on the leash non-manually, while using her

⁶⁴ In this example, I have adapted the glosses somewhat so that they fit in better with the conventions used in this dissertation. I have also added a free translation.

dominant hand to show the leash on his neck using a handling classifier held next to her own neck. At this point she is simultaneously representing the perspective of the dog holding the leash and the perspective of the man at the end of the leash. Note that she lexically introduces both character perspectives, but the character perspective of the dog is continued on her non-dominant hand while she produces the lexical sign MAN, as well as when she shifts into the character perspective of the man with her dominant hand and her non-manuals. Note also the dominance reversal in this example to contrast the two perspectives.

Another example in my data of two different character perspectives being expressed simultaneously occurs in the *Boy Story*, where the boy runs to his mother in the kitchen to complain about his father hitting him (picture 4 in the *Boy Story* in Appendix C). One signer signed this as shown in Figure 7.11.



dh: MOTHER WASH-DISHES CL:PULL-APRON_{behind} CL:PULL-APRON_{forward}
 ndh: WASH-DISHES _____ IX_{left}

Figure 7.11: “Mother is washing the dishes and gets pulled on her apron, (the boy) pulls her apron and points (to the father).”

In this example the perspective of the boy and the mother are mixed in a complex way. The facial expression of a whining boy is made simultaneously with the sign WASH-DISHES and continues during the rest of the utterance. However, the signer also turns her head whilst signing CL:PULL-APRON_{behind}, like the mother in the picture. Thus, even the signer’s non-manuals express multiple perspectives at this point: with her facial expression she represents the boy, while the head-turn represents the mother. Also, the action of pulling the apron is made first at a location representing the mother’s perspective, and then made again at a location representing the boy’s perspective. Rather than calling this a multiple perspective construction, it might be better to refer to ‘merged’ perspectives, as does Van Dijken (2004).

In a sense, certain agreement verbs inherently express multiple character perspectives simultaneously. An example of this is the sign SHOOT-AT₁, in (7.5). This sign is directed at the signer, who has taken the role of the

father in the *Boy Story*. This is shown by the facial expression of the signer. Non-manually, then, the signer expresses the father's perspective. Simultaneously, the signer manually expresses the action of the boy holding the gun and pulling the trigger. However, such constructions are not normally considered multiple perspective constructions. Rather, the sign SHOOT-GUN can be viewed as a lexicalized handling classifier. (For a discussion on the role of the body and the hands in agreement verbs, cf. Meir et al. (2008)).

Multiple perspectives can be expressed simultaneously, as in the examples above, but a signer may also choose to express multiple perspectives on the same event sequentially. An example of this has already been given in Figure 7.11 where the signer imitates the pulling of the apron twice, once from the perspective of the mother and once from the perspective of the boy. The expression of narrator and character perspective sequentially also occurs. This happens, for instance, when a signer needs to use both hands to depict the actions of a referent in character perspective. A nice example is found in a re-telling of the Canary Row cartoon, in which the cat climbs up a rain-pipe to reach the bird. To describe the cat's actions, the signer alternates between character perspective and narrator perspective. She first imitates the manner in which the cat climbs up the rain-pipe, putting her arms around an imaginary pipe and moving them down several times. She then switches to narrator perspective to describe the path movement of the cat up the rain-pipe using two entity classifiers. Finally, she switches back to constructed action again (Figure 7.12). Other signers describing this event choose to either only express the path movement of the cat in narrator perspective or represent the cat climbing in character perspective.



Figure 7.12: sequential construction expressing multiple perspectives

LIU, then, uses multiple perspective constructions frequently. Such constructions may be either simultaneous or sequential. The focus of this

section has been on simultaneous constructions expressing multiple perspectives. Most descriptions of such constructions deal with the simultaneous expression of narrator and character perspective in classifier constructions, or with the simultaneous production of imitative constructed action and a lexical sign expressing narrator perspective. The LIU data, however, shows that it is also possible to express multiple character perspectives simultaneously. Such constructions can be quite complex, with the different perspectives merged in both the non-manuals and the manual signs. It is even possible, albeit not very common, to represent three perspectives simultaneously in LIU, as shown in Figure 7.10.

The expression of multiple perspectives simultaneously is something unique to sign languages, but does not occur in all sign languages. In fact, Nyst (2007a) states that in AdaSL no entity classifiers are found at all. This means that simultaneous constructions involving narrator perspective and constructed action cannot occur in this language. Pyers and Senghas (2007) mention that the ability to hold multiple perspectives is present in both ASL and NiSL, although in the latter it appears to be an emerging feature, since these structures appear more frequently in younger signers, who learned NiSL from the first generation of signers.⁶⁵ They present a NiSL example, in which a signer takes on the facial expression and body rhythm of a child walking while simultaneously producing the sign WALK-FORWARD. This is an example of a sign that expresses path movement in narrator perspective produced simultaneously with constructed action, expressed non-manually. Since NiSL signers use entity classifiers very infrequently, there are no examples of a simultaneous construction in which the signer produces an entity classifier on one hand and a handling classifier on the other hand, as in (7.19). Note that the presence or absence of entity classifiers and the resulting ability or inability to manually express multiple perspectives appears to be independent of language age, since AdaSL is a relatively old sign language. Aarons and Morgan (2003) give examples of the use of multiple perspectives in South African Sign Language (SASL), and state that signers “invariably use constructed action in conjunction with classifier predicates to create simultaneous perspectives on an event” (Aarons and Morgan 2003:153). They also mention that signers use classifier constructions and constructed action sequentially within a single utterance. Perniss (2007b) describes ‘double-perspective’ constructions in DGS in which signers take on character perspective (expressed through handling classifiers and appropriate facial expressions) but use the spatial lay-out appropriate to narrator perspective. However, none of these authors give

⁶⁵ These later signers, who learned the language in the mid-1980s and later, are referred to as the ‘second cohort’ in studies that track the changes and developments that have occurred in NiSL since its beginning (e.g. Senghas 1995).

examples of the expression of three perspectives simultaneously. In fact, this phenomenon, which occurs in LIU, has thus far not been described for any other sign language. Similarly, to the best of my knowledge, the complicated ‘merged perspective’ constructions presented in (7.20) and Figure 7.11 have not been described for other sign languages.

7.7 Conclusion

In this chapter I have attempted to give a detailed description of the use of perspective in narrative discourse in LIU. Although my data shows that there is considerable individual variation between signers in the way they structure their narratives, there are still general trends that I have been able to observe. Overall, the LIU data reveals that there are considerable differences between LIU and ASL. Pyers and Senghas (2007) observe that descriptions of perspective in most Western sign languages appear to be based on ASL, stressing the similarities with ASL rather than the differences. Consequently, a description of a non-Western sign language which does not follow the ‘rules’ of ASL is particularly interesting cross-linguistically. Although LIU has several features of perspective, such as the use of eye-gaze and facial expressions, in common with Western sign languages, there are also some important differences.

One difference between LIU and descriptions of Western sign languages relates to the way referents are introduced in a narrative. Rather than using narrator perspective and indexical points to introduce referents at the beginning of a narrative before switching to character perspective, most LIU signers introduce a referent without explicit localization, and express the actions of that referent in character perspective before they introduce the next referent. In this respect LIU is similar to DGS, which also tends to use character perspective for the introduction of referents. However, compared to DGS, the use of indexes in narrator perspective to localize referents is relatively rare in LIU. Moreover, DGS signers appear to be more consistent in their use of spatial lay-outs than LIU signers.

Also, most LIU signers do not express the perspective of different referents by means of role-shift, as has been described for ASL, DGS and other Western sign languages. Instead, they tend to introduce the referent whose perspective they are assuming lexically before shifting into character perspective. In character perspective referents are localized with respect to each other by means of indexing, agreement verbs and non-manuals. This localizing appears to be quite ad hoc, however, and is not always used consistently throughout a narrative.

It is interesting that LIU has certain characteristics in common with other non-Western sign languages like TİD and NiSL. All three languages introduce character perspective lexically, although LIU and TİD use a noun, whereas NiSL uses a first person indexical point, optionally followed by a noun. A similar pattern has not been described for Western sign languages. Another similarity between LIU and TİD is the absence of body-shift, although certain LIU signers do use this mechanism to some extent. A difference between LIU and TİD, however, appears to be that the former uses a great deal of character perspective (although there is considerable variation between signers), at least in narrative discourse, whereas the latter apparently uses narrator perspective to a greater extent.

Some of the similarities between NiSL and LIU are quite striking. The fact that spatial set-ups are not always used consistently in both languages may be related to language age (although we know very little of the age of LIU) but this is not necessarily the case. Inconsistencies in spatial set-ups can be compensated for by the fact that character perspective is introduced lexically in both LIU and NiSL. Signers of both languages do not regularly use narrator perspective to set up referents in space, although some LIU signers use this strategy more than others. This indicates that NiSL signers and most signers of LIU are less concerned about spatial lay-outs than signers of ASL or other Western sign languages. However, it does not appear that intelligibility is impeded by spatial inconsistencies or the absence of localization, at least in LIU.

As far as the use of multiple perspectives is concerned, LIU has some striking features that have not been previously described for other sign languages. In particular, the expression of three perspectives simultaneously, as well as the expression of multiple character perspectives simultaneously is something I have not encountered in the literature. If the ability to express multiple perspectives simultaneously is something that gradually evolves during the development of a sign language, as suggested by Pyers and Senghas (2007) in their account of NiSL, this would be an indication that LIU is, in fact, older than NiSL. This would imply that the similarities between LIU and NiSL are not due to the fact that they are both emerging or young sign languages, but are related to other structural properties, as I suggested above. Rather than reflecting language age, it may well be that differences between LIU and NiSL on the one hand, and languages like ASL on the other hand, simply show that there is much more cross-linguistic variation in sign languages in this area than appears from the literature.

Chapter 8: Conclusion

The main aim of this dissertation is to describe different aspects of the grammar of LIU from a cross-linguistic perspective in order to add to our understanding of the differences and similarities that can be found in the grammar of unrelated sign languages. In Chapter 3, I started by giving a brief overview of the grammar of LIU. Subsequently, in Chapters 4 to 7, I focused on the description and cross-linguistic comparison of four selected aspects of the grammar of LIU. The first two subjects, namely negation and possession (Chapters 4 and 5) can be located at the morphology-syntax interface, whereas the last two subjects, namely manual simultaneity and the use of perspective (Chapters 6 and 7), are more pragmatic in nature, focusing in particular on narrative discourse. Hence, the selection of topics makes a comparison on different grammatical levels possible. However, because very little typological research has been done into sign languages, the LIU material could only be compared with data from a limited number of other sign languages. Moreover, the choice of topics was to some extent constrained by the availability of cross-linguistic material. In the areas of negation and possession, I was able to profit from available typological studies (Zeshan 2004, 2006a; Perniss and Zeshan, forthcoming), but similar cross-linguistic investigations were not available for the more discourse-oriented topics. In Chapters 6 and 7, therefore, LIU data has been compared mainly to that of sign languages for which the respective topics have been described in depth. This obviously limits the ability to make cross-linguistic generalizations in these domains, but since typological research into sign languages is still in its infancy, this is often the case. In particular, I would have liked to include more data on village sign languages, since the little research that has been done into the grammar of village sign languages suggests that sign languages of small closed communities may be quite different grammatically compared to ‘urban’ or national sign languages, such as LIU. However, due to the limited information available, such generalizations can only be tentative.

Below, I give an overview of three different aspects of LIU grammar, namely the use of space (Section 8.1), non-manuals (Section 8.2), and the use of simultaneity (Section 8.3), focusing on the main similarities and differences between LIU and other sign languages. On the basis of these comparisons, I make an attempt to draw conclusions about the way in which grammatical features relate to language age (Section 8.4). This chapter is concluded by a number of suggestions for further research (Section 8.5).

8.1 Use of space

With regard to the use of space, LIU does not differ from other urban sign languages in the most basic aspects. As in most other sign languages described to date, the signing space is used to localize discourse participants and objects by means of indexing, classifiers and agreement verbs. As explained in Chapter 3.3, verbs associated with a localized noun may be directed towards the locus of the noun to create complex spatial lay-outs in LIU. Similarly, as shown in Chapter 5, the possessive/emphatic pronoun SELF can be directed towards loci in the signing space. On the phonological level, too, agreement verbs in LIU are similar to those described for other sign languages (cf. Section 3.3.1). In general, these verbs move from source to goal location, while the palm of the hand faces the object and the back of the hand faces the subject (Meir 1998, 2002). The classifier system of LIU also functions in a way similar to that described for most other sign languages (cf. Section 3.3.2), and includes entity and handling classifiers, as well as referent projections or body classifiers (Supalla 1986; Schick 1990; Zwitserlood 2003; Emmorey 2003). In fact, these aspects of sign language grammar seem to be more or less universal, at least among urban sign languages. However, as shown in Chapter 7, in the area of perspective there are significant differences in the use of space between LIU and many other sign languages for which descriptions are available.

One of the differences between LIU and many Western sign languages is that localization of referents in LIU is much less explicit than in Western sign languages such as ASL and DSL (Liddell 1990; Engberg-Pedersen 1993). First of all, in LIU localization by means of indexing is infrequent and body-shifts are hardly used by most signers. Also, agreement verbs tend to be produced only on the sagittal axis away from or towards the signer, while third person to third person agreement on a lateral axis in front of the signer is rare. I have argued that this pattern is related to the fact that, whereas in many Western sign languages referents are introduced in narrator perspective using indexical points, LIU tends to use character perspective for the introduction of referents and only makes infrequent use of explicit localization when referents are introduced. Instead, changes in perspective are introduced lexically, using a noun describing the referent whose perspective the signer takes on. This lexical marking of perspective changes also takes the place of body-shift, which is rare in LIU. Although referents are localized in the signing space, this localization often appears to be ad hoc and is not used consistently throughout a stretch of discourse. This lack of consistency may be related to the way perspective changes are expressed. The LIU strategy of lexically introducing character perspective reduces the

importance of the spatial lay-out in identifying referents (cf. Pyers and Senghas (2007) on NiSL).

Since most in-depth descriptions of narrative discourse have been based on Western sign languages, it has long been assumed that sign languages are very similar in their use of space and the way in which they express perspective. The analysis of non-Western sign languages such as LIU, however, shows that there is more variety between sign languages in this area than has often been assumed.

8.2 Non-manuals

LIU, like other sign languages, makes extensive use of non-manuals for both linguistic and non-linguistic, affective, purposes. While mouthing of spoken Jordanian Arabic words may be very common with certain LIU signs, such as the negative existential (cf. Chapter 3.1.2, Chapter 4.3.1 and Chapter 5.4.2.1), it is also clear that it is subject to situational variation. In particular, mouthing is more common when Deaf signers communicate with hearing signers than when they communicate with other Deaf. As in other sign languages, non-manuals are used in LIU to convey both morphological and syntactic information (cf. Chapter 3.5). Yes/no questions, for instance, are distinguished from declaratives mainly by non-manuals, such as facial expression and head-tilt, as is common in sign languages (Zeshan 2006a). Other non-manuals may also accompany negative sentences and possessive constructions. For example, in LIU possessive structures with the sign EXIST are often accompanied by a slight headnod, and in informal signing, particularly in question-answer sequences, the manual sign can be dropped (Chapter 5.4.2.1). As a consequence, in these cases, the headnod is the only element indicating possessive meaning. However, constructions in which the manual sign is dropped are uncommon in narratives. Similarly, although in informal signing negative responses to a question may consist of only a headshake or a backward head-tilt, a manual negator appears to be required in narratives (cf. Chapter 4.4). In LIU narrative discourse, non-manuals do not normally occur as the sole marker of negation, although this is common in many other sign languages. Based on this pattern I have argued that, at least in the area of negation, LIU is a manual dominant sign language. In sign languages of this type non-manual negative markers are optional and manual negative markers are obligatory (cf. also Geraci (2005) for LIS). There is no apparent reason for this cross-linguistically uncommon pattern. Possibly there is influence here from the hearing culture: a negative headshake, which appears to be the most common non-manual means for expressing negation in sign languages cross-linguistically, is a less common

gesture in Jordan than in most Western countries. Instead, the backward head-tilt, accompanied by an eyebrow-raise and a tongue-click, is most often used in Middle East cultures as a negative gesture. Unlike some other sign languages in the region, however, LIU does not appear to have fully integrated this culture-specific gesture into its grammar; the backward head-tilt is not a common way of negating a sentence in LIU. It would be interesting to have more cross-linguistic sign language data from different countries in which this backward head-tilt is used culturally, to find out to what extent this gesture is integrated into the grammar of local sign languages. Such a cross-linguistic comparison could lead to interesting findings about the integration of cultural gestures into sign language grammar, that is, about the grammaticalization of gestures.

8.3 Simultaneity

The fact that sign languages make use of more than one articulator, that is, both hands as well as non-manual features, allows them to use more than one articulator simultaneously. The simultaneous occurrence of manual signs with non-manual markers is very common in all known sign languages and LIU is no exception in this respect, as shown in Section 8.2. The use of the two manual articulators simultaneously, however, is restricted by articulatory constraints. In LIU, just like in other sign languages described to date, two phonological rules constrain the form of two-handed signs: the Dominance Condition and the Symmetry Condition (cf. Chapter 3.1.1 and Chapter 6.4). These rules were first formulated by Battison (1978) for ASL and seem to hold universally for simple (non-compound) signs. In addition, Battison's Symmetry Condition governs the production of two-handed compound signs in LIU as far as movement is concerned. In fact, I have shown in Chapter 6 that an extension of the Symmetry Condition, which only focuses on movement, restricts any form of manual simultaneity in LIU.

A striking feature about LIU narratives is the frequent use of manual simultaneity and dominance reversals, at least in younger signers, who have provided most of the data used in this dissertation. The fact that these characteristics are less frequent among older signers indicates that LIU is changing and developing in this area. The occurrence of manual simultaneity in LIU is not exceptional. After all, manual simultaneity, which occurs frequently in constructions with entity classifiers, numerals and indexes, has been described for several sign languages (e.g. Engberg-Pedersen (1994) on DSL; Miller (1994) on LSQ; Vermeerbergen (2001) on VGT). Although some researchers have made a distinction between full simultaneity and perseverations, I have proposed one phonological rule for LIU that restricts

simultaneity and determines whether both hands can move at the same time. This rule makes the distinction between full simultaneity and perseverations superfluous on the phonological level. I believe that this rule is not unique to LIU and that it may well turn out to be a universal rule for sign languages, although such an adaptation may require a reanalysis of certain examples of full simultaneity discussed in the literature.

In the area of manual simultaneity, differences between LIU and other sign languages described to date are found in the apparent freedom LIU has when it comes to combining signs on the dominant and non-dominant hand, sometimes leading to complex constructions with multiple dominance reversals. The function of these complex simultaneous constructions is not always clear, although I have suggested that in some cases they may aid the addressee in understanding the syntactic structure of complex phrases. Also, certain constructions that are reportedly not found in ASL, such as the simultaneous production of a possessive pronoun with a lexical sign (Liddell 2003), are common in LIU.

Taken together, these facts suggest the following conclusion: although the phonological rule I proposed, which restricts the movement of the two hands in simultaneous constructions, may be universal, manual simultaneous constructions are also subject to language-specific constraints. Manual simultaneous constructions in LIU may have much in common with those in other sign languages in both form and function, but they are used more frequently and appear less restricted than in other sign languages described to date.

8.4 General conclusions: sign language grammar and the language age issue

Overall, sign languages around the world are grammatically more similar to each other than spoken languages although recent in-depth research into non-Western sign languages, and especially into village sign languages, shows that there are also significant differences (cf. Perniss, Pfau and Steinbach (2007) for an overview). LIU, as an example of a non-Western sign language, neatly illustrates both the fact that sign languages are grammatically similar, and the fact that there are differences within the similarities. Some of the most striking similarities between sign languages are caused by the visual modality in which they operate (Meier 2002). Functional elements such as (spatial) adpositions, which in spoken languages can be expressed in many different ways, tend to be absent in sign languages because the meanings they convey can be expressed in a more iconic way, that is, more directly, in the visual modality than in the aural-oral modality.

Other similarities between the grammars of unrelated sign languages are less easily attributed to modality effects. An example is the fact that most sign languages have similar forms for possessives and existentials. Although this is also common in spoken languages of different ages, it is striking that this is a feature that occurs in almost all sign languages described thus far. Possibly, the fact that sign languages in general are relatively young languages may account for these types of similarities. With respect to language age, sign languages are similar to creoles. It has been argued that, just like sign languages, creoles around the world show surprising similarities on the grammatical level, even when they have emerged from completely unrelated spoken languages (Sebba 1997). With respect to their sociolinguistic properties there are also commonalities between sign languages and creoles. Children learning these languages generally have parents that are not native speakers of the language. In the case of creoles, the parents speak a pidgin, which is not their native language, whereas in the case of sign languages, most Deaf children have hearing parents that are not native signers. The question remains why creoles and sign languages would show such cross-linguistics similarities, and many answers to this question have been proposed, but this is beyond the scope of this dissertation. Further investigation into this area, using comparative data from sign languages on the one hand and creoles on the other hand might yield some interesting insights into language genesis and language universals.

Cross-linguistic differences between sign languages may be caused by several factors. Some apparent differences between LIU and other sign languages mentioned in this dissertation may be due to differences in analysis. An example is the simultaneity rule that I have proposed in Chapter 6, which may turn out to be a universal rule for sign languages. Differences may also be due to regional or cultural factors. For instance, the fact that headshake is not obligatory in LIU negative constructions, may be related to the fact that headshake is not as common a gesture in the Middle East as it is in Western cultures. The preferred use of character perspective over narrator perspective might also be related to cultural factors, some cultures preferring a more ‘engaged’ or subjective way of story-telling, whereas other cultures might prefer more detachment. The surrounding spoken language clearly has some influence on the structure of a sign language, mainly in areas like mouthings and word order. In the grammatical domains I have focused on, however, the influence of Arabic on the structure of LIU seems negligible. Syntactically, the structures used to express both negation and possession are very different in LIU and Arabic. In the area of pragmatics, that is, with respect to simultaneity and the use of perspective, a direct comparison between Arabic and LIU is difficult if not impossible, because of the different modalities involved. Still, aspects of culture, features of the

surrounding spoken language, as well as the age of a sign language and its developmental stage may all play a role in the differences found between sign languages.

I believe, however, that the factors mentioned above are sometimes given too much weight in sign language research, and that certain differences are simply the result of different developmental paths. There seems to be a general idea among sign linguists that sign languages will all develop in the same direction given enough time. Aronoff, Meir, Padden and Sandler (2003), for example, have suggested that differences between ISL and ASL in the use of classifiers may be caused by their relative age difference. In general, younger sign languages are expected to show less structural complexity, more iconicity, and more use of character perspective than older sign languages. Some aspects of LIU grammar suggest that this idea of a continuum in the development of grammatical structures may need to be revised.

Van Dijken (2004) already showed that LIU shows both characteristics of a young sign language and of an older sign language in its use of classifiers. Thus, abstract, non-iconic entity classifiers, such as the vehicle classifier (Figure 3.24), which are claimed to be characteristic of older sign languages (such as ASL), are combined with a predominant use of body classifiers, supposedly a characteristic of younger sign languages (such as ISL). I have argued in Chapter 7 that this unexpected pattern is related to the fact that LIU prefers character perspective to narrator perspective. Whether this is a characteristic of young sign languages, or whether it is simply one of the parameters in which sign languages can differ, remains to be seen. The same argument can be made for the inconsistency in spatial set-ups found in both LIU and in NiSL. This inconsistency may be typical of emerging sign languages like NiSL (Pyers and Senghas 2007). I would be hesitant, however, to relate the inconsistency found in spatial set-ups in LIU to language age, since LIU has other features that are more typical of established sign languages, such as the ability to express complex arrangements of multiple perspectives simultaneously. As pointed out in Section 8.1, it seems to me that this lack of consistency may be related to the way perspective changes are expressed. Whereas many Western sign languages mainly use spatial set-ups to identify referents, both NiSL and LIU mainly use lexically introduced character perspective, which makes the spatial lay-out less important for identifying referents. Whether or not this pattern will change as these languages develop remains to be seen.

The use of complex simultaneous constructions by younger LIU signers further illustrates that the idea of a grammatical continuum is too simplistic. At first sight, the fact that older signers use these complex constructions less frequently than younger signers seems to support the idea

that grammatical complexity increases as a sign language develops. Still, it is not possible to draw conclusions about the age of the language as a whole solely based on the availability of these structures. In my opinion, the complexity of manual simultaneous constructions is not sufficient proof that LIU is a very old sign language. Similarly, the inconsistency in spatial layouts, found in the same generation of signers, does not prove that LIU is a young sign language. In fact, because we do not know the age of LIU it is hard to know how to interpret these grammatical characteristics at all.

One research area that promises to provide important cues for the discussion on the relation between language age and grammatical features is the area of village sign languages, which needs more investigation. To date, few village sign languages have been researched in depth, but the available descriptions (e.g. Nyst (2007a, 2007b), forthcoming for AdaSL; Marsaja (2008); Perniss and Zeshan (forthcoming b) for Kata Kolok) already suggest that there may be some very basic differences between village sign languages and sign languages of large deaf communities ('urban' sign languages). Thus, as illustrated in Chapter 5, the village sign languages AdaSL and Kata Kolok appear to allow for more ambiguity in possessive constructions than urban sign languages. In these languages, locationals, existentials, and possessives can all be expressed by pointing and different interpretations are disambiguated only by the context of the utterance. Also, to the best of my knowledge, an almost complete absence of entity classifiers has so far only been reported for AdaSL, where referents are generally not depicted on a smaller than life-size scale. These features are particularly interesting in light of the fact that some of these village sign languages may be older than established sign languages like ASL. Village sign languages thus illustrate that there is no straightforward relationship between the age of a sign language and the presence, or absence, of certain linguistic features. Unfortunately, no comparative data from village sign languages is available for most of the areas described in this dissertation, making a detailed comparison of LIU with village sign languages impossible.

8.5 Suggestions for further research

As far as grammatical features are concerned, one of the areas in which further research is needed to make typologically relevant claims about sign languages is that of village sign languages, as mentioned in the previous section. The results presented in this thesis suggest that more in-depth research into non-Western urban sign languages, such as LIU, is also needed in order to determine the range of grammatical variation occurring in sign languages. This type of research may show that certain ideas that tend to be

taken for granted among sign linguists, such as generalizations about the developmental path of sign languages, need revision. Cross-linguistic comparisons between sign languages on the one hand and creoles on the other hand may yield interesting results as far as the syntactic features of young languages cross-modally are concerned.

Obviously, in-depth research is still needed for many areas of LIU grammar, too. One of the main areas needing investigation is that of syntactic and prosodic phrasing and boundary markings, since research into these areas would help to fine-tune some of the analyses presented in this dissertation, particularly with respect to manual simultaneity. Getting a clearer view on where constituent and sentence boundaries are also facilitates research in other areas of syntax. Furthermore, a study into the structure of questions in LIU would add to the typological data already available on this subject. Further research into the phonology and morphology of LIU is also needed.

On the sociolinguistic level, a comparison of the signing of older generation signers to that of younger generations might yield interesting insights into the way LIU has developed over time and possibly give some indication of its age. A grammatical comparison between LIU and other sign languages in the Middle East and the Arab World would also be valuable in this respect and might give us a clearer view of the history of sign languages in the Middle East.

Once data from these different domains is available, we will be able to make more well-founded claims not only about typological features of sign languages, but also about the way these languages develop and how their developmental path is different from spoken languages. Being able to compare grammatical structures from a wide variety of Western, non-Western, urban, and village sign languages will also make it possible to locate LIU into the big picture.

Appendix A: Comparative Lexical Research in Signed Languages: The UND Wordlist (August 2002 version)

Monolingual

Word	UND #	Woodward #	POS	Sem. class
cat	1-1	096	n	animals
mouse, rat	1-2	-	n	animals
dog	1-3	013	n	animals
chicken	1-4	-	n	animals
rabbit	1-5	-	n	animals
horse	1-6	-	n	animals
goat	1-7	-	n	animals
lion	1-8	-	n	animals
elephant	1-9	-	n	animals
monkey	1-10	-	n	animals
bear (the animal)	1-11	-	n	animals
frog	1-12	-	n	animals
cricket	1-13	-	n	animals
spider	1-14	-	n	animals
apple	1-15	-	n	food
grapes	1-16	-	n	food
tomato	1-17	-	n	food
carrot	1-18	-	n	food
onion	1-19	-	n	food
cabbage	1-20	-	n	food
chili	1-21	-	n	food
bread	1-22	-	n	food
rice	1-23	-	n	food
tea	1-24	-	n	food
egg	1-25	018	n	food
meat	1-26	042	n	food
bone	1-27	-	n	body
feather	1-28	021	n	body
tail	1-29	072	n	body
blood	1-30	007	n	body
flower	1-31	024	n	plants
tree	1-32	074	n	plants
grass	1-33	026	n	plants
earth (dirt)	1-34	017	n	nature
mountain	1-35	044	n	nature

rock, stone	1-36	070	n	nature
water	1-37	077	n	nature
sun	1-38	071	n	nature
moon	1-39	094	n	nature
star(s)	1-40	069	n	nature
clouds	1-41	-	n	weather
lightning	1-42	-	n	weather
ice	1-43	032	n	weather
day	1-44	010	n	time
night	1-45	048	n	time
man	1-46	041	n	people
woman	1-47	088	n	people
boy	1-48	008~	n	people
girl	1-49	008~	n	people
baby	1-50	-	n	people
soldier	1-51	-	n	occupation
doctor	1-52	-	n	occupation
student	1-53	-	n	school
beggar	1-54	-	n	occupation
shirt	1-55	-	n	clothes
shoe	1-56	-	n	clothes
ring (jewelry)	1-57	-	n	clothes
table	1-58	-	n	furniture
bed	1-59	-	n	furniture
candle	1-60	-	n	household
light bulb	1-61	-	n	household
telephone	1-62	-	n	communication
television	1-63	-	n	household
broom	1-64	-	n	household
clock	1-65	-	n	time
doll	1-66	-	n	toy
rope	1-67	058	n	tools
paper	1-68	-	n	school
door	1-69	-	n	household
window	1-70	-	n	household
blue	1-71	-	a	colors
green	1-72	027	a	colors
yellow	1-73	092	a	colors
black	1-74	006	a	colors
white	1-75	082	a	colors
money	1-76	-	n	shopping
hundred	1-77	-	n	numbers
thousand	1-78	-	n	numbers
city	1-79	-	n	social
movie	1-80	-	n	communication
bus	1-81	-	n	transportation
boat	1-82	-	n	transportation

Appendices

train	1-83	-	n	transportation
wheel	1-84	-	n	transportation
sit	1-85	064	v	body
lie (down)	1-86	037	v	body
run	1-87	-	v	body
hurt (it hurts)	1-88	-	v	body
dry	1-89	014	a	descriptions
wet	1-90	078	a	descriptions
long	1-91	039	a	size
short	1-92	062	a	size
light (not heavy)	1-93	-	a	descriptions
dirty	1-94	012	a	hygiene
rough (surface)	1-95	-	a	shape
smooth (surface)	1-96	065	a	shape
empty (glass)	1-97	-	a	descriptions
full (glass)	1-98	093	a	descriptions
old (person)	1-99	050	a	age
young (person)	1-100	-	a	age
weak (person)	1-101	-	a	descriptions
strong (person)	1-102	-	a	descriptions
fat (person)	1-103	019~	a	body
thin, skinny (person)	1-104	073	a	body

Bilingual

Word	UND #	Woodward #	POS	Sem. class
sign (word in a signed language)	2-1	-	v	communication
name	2-2	045	n	people
picture, photograph	2-3	-	n	arts
wood	2-4	089	n	materials
glass (the material)	2-5	-	n	materials
gold (the metal)	2-6	-	n	materials
iron (metal)	2-7	-	n	materials
sharp (e.g. knife)	2-8	061	a	shape
dull (not sharp, blunt, e.g. knife)	2-9	015	a	shape
fat, grease	2-10	019	a	food
leaf	2-11	036	n	plants
wind (breeze)	2-12	086	n	weather
louse	2-13	040	n	animals
animal	2-14	002	n	animals
color	2-15	-	n	colors
morning	2-16	-	n	time
month	2-17	-	n	time
week	2-18	-	n	time

year	2-19	091	n	time
friend	2-20	-	n	kinship
hearing (person)	2-21	-	a	senses
interpreter	2-22	-	n	senses
school	2-23	-	n	school
class (in a school)	2-24	-	n	school
teacher	2-25	-	n	school
principal, director, person in charge (of a school)	2-26	-	n	school
scold, bawl out	2-27	-	v	communication
enemy	2-28	-	n	people
revenge	2-29	-	n	social
god	2-30	-	n	religion
police	2-31	-	n	occupation
judge (person)	2-32	-	n	morality
mother	2-33	043	n	kinship
father	2-34	020	n	kinship
married	2-35	-	a	kinship
person	2-36	052	n	people
male	2-37	-	n	people
female	2-38	-	n	people
poor (person)	2-39	-	a	people
rich, wealthy (person)	2-40	-	a	people
cook (prepare food)	2-41	-	v	food
live	2-42	038	v	daily activities
dead	2-43	011~	a	body
kill	2-44	034	v	body
dream	2-45	-	v	daily activities
work	2-46	100	v	daily activities
play (have fun)	2-47	053	v	daily activities
sports	2-48	-	n	movements
party, celebration	2-49	-	n	social
dance	2-50	097	v	arts
birthday	2-51	-	n	social
age (of person)	2-52	-	n	age
buy	2-53	-	v	shopping
sell	2-54	-	v	shopping
count	2-55	009	v	numbers
repair	2-56	-	v	movements
problem	2-57	-	n	questions
go	2-58	-	v	movements
understand	2-59	-	v	communication
love	2-60	-	v	daily activities
like (have a preference for)	2-61	-	v	emotions
need	2-62	-	v	daily activities
wait	2-63	-	v	daily activities

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ignore	2-64	-	v	communication
smell	2-65	-	v	senses
visit	2-66	-	v	social
talk together	2-67	-	v	communication
gossip	2-68	-	n	communication
laugh	2-69	035	v	emotions
vacation	2-70	-	n	time
story	2-71	-	n	communication
silly	2-72	-	a	behavior
lazy	2-73	-	a	behavior
responsible	2-74	-	a	behavior
ask	2-75	-	v	communication
lie (deceive)	2-76	037~	v	communication
yes	2-77	-	misc	questions
no	2-78	-	misc	questions
true	2-79	-	a	morality
correct	2-80	056	a	morality
good	2-81	025	a	morality
bad	2-82	003	a	morality
happy	2-83	-	a	emotions
sad	2-84	-	a	emotions
afraid	2-85	-	a	emotions
nervous, tense	2-86	-	a	emotions
relaxed, calm	2-87	-	a	emotions
hot	2-88	-	a	descriptions
warm	2-89	076	a	descriptions
early	2-90	-	adv	time
late	2-91	-	adv	time
easy	2-92	-	a	descriptions
difficult	2-93	-	a	descriptions
begin, start	2-94	-	v	time
end, finish	2-95	-	v	time
continue	2-96	-	v	time
what?	2-97	079	interr	questions
			pn	
where?	2-98	081	interr	questions
			adv	
who?	2-99	083	interr	questions
			pn	
always	2-100	-	adv	time
many	2-101	-	n	quantity
some, a little	2-102	-	a	quantity
new	2-103	047	a	age
other	2-104	051	a	descriptions
because	2-105	004	conj	questions
if	2-106	033	conj	miscellaneous
with	2-107	087	p	miscellaneous

**Supplemental list:
kinship**

Word	UND #	Woodward #	POS	Sem. class
husband		031	n	kinship
wife		085	n	kinship
spouse		-	n	kinship
family		-	n	kinship
child		008	n	kinship
son		-	n	kinship
daughter		-	n	kinship
brother		095	n	kinship
sister		099	n	kinship
grandfather		-	n	kinship
grandmother		-	n	kinship
grandson		-	n	kinship
granddaughter		-	n	kinship
uncle		-	n	kinship
aunt		-	n	kinship
nephew		-	n	kinship
niece		-	n	kinship
cousin		-	n	kinship

**Supplemental list:
days**

Word	UND #	Woodward #	POS	Sem. class
Monday		-	n	time
Tuesday		-	n	time
Wednesday		-	n	time
Thursday		-	n	time
Friday		-	n	time
Saturday		-	n	time
Sunday		-	n	time
afternoon		-	n	time
evening		-	n	time
weekend		-	n	time

**Supplemental list:
months**

Word	UND #	Woodward #	POS	Sem. class
January		-	n	time
February		-	n	time

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March	-	n	time
April	-	n	time
May	-	n	time
June	-	n	time
July	-	n	time
August	-	n	time
September	-	n	time
October	-	n	time
November	-	n	time
December	-	n	time

Supplemental list: numbers

Word	UND #	Woodward #	POS	Sem. class
one	-	n		numbers
two	-	n		numbers
three	-	n		numbers
four	-	n		numbers
five	-	n		numbers
six	-	n		numbers
seven	-	n		numbers
eight	-	n		numbers
nine	-	n		numbers
ten	-	n		numbers
twenty	-	n		numbers
nothing	-	n		quantity

Supplemental list: religion

Word	UND #	Woodward #	POS	Sem. class
church	-	n		religion
priest, pastor	-	n		religion
monk	-	n		religion
nun	-	n		religion
Jesus	-	n		religion
Mary (mother of Jesus)	-	n		religion
angel	-	n		religion
confess	-	v		communication
sin	-	v		morality religion

**From Woodward, not
included in this list**

Word	UND #	Woodward #	POS	Sem. class
all		001	a	quantity
bird		005	n	animals
boring		015~	a	emotions
die		011	v	body
dust (powder)		016	n	nature
fire		022	n	nature
fish		023	n	animals
heavy (weight)		028	a	descriptions
how?		029	interr adv	questions
hunt		030	v	movements
search, look for		030~	v	daily activities
narrow		046	a	size
not		049	misc	negation
rain (precipitation)		054	n	weather
red		055	a	colors
river		057	n	nature
salt		059	n	food
sea, ocean		060	n	nature
sing		063	v	arts
snake		066	n	animals
snow		067	n	weather
stand		068	v	movements
vomit		075	v	body
when?		080	interr adv	questions
wide		084	a	size
worm		090	n	animals
pig		098	n	animals

Appendix B: words used in wordlist comparisons Middle East

monolingual (elicited by means of pictures)

- | | |
|----------------|--------------|
| 1. cat | 2. mouse |
| 3. dog | 4. chicken |
| 5. rabbit | 6. horse |
| 7. goat | 8. lion |
| 9. monkey | 10. bear |
| 11. frog | 12. locust |
| 13. spider | 14. grapes |
| 15. tomato | 16. carrot |
| 17. onion | 18. pepper |
| 19. bread | 20. rice |
| 21. tea | 22. egg |
| 23. meat | 24. bone |
| 25. blood | 26. flower |
| 27. grass | 28. rock |
| 29. water | 30. sun |
| 31. moon | 32. star |
| 33. ice | 34. day |
| 35. night | 36. man |
| 37. woman | 38. boy |
| 39. girl | 40. soldier |
| 41. doctor | 42. student |
| 43. shirt | 44. shoes |
| 45. bed | 46. candle |
| 47. television | 48. toy/doll |
| 49. paper | 50. door |
| 51. window | 52. blue |
| 53. green | 54. yellow |
| 55. black | 56. white |
| 57. hundred | 58. thousand |
| 59. city | 60. bus |
| 61. sit | 62. pain |
| 63. dry | 64. tall |
| 65. dirty | 66. empty |
| 67. full | 68. old age |
| 69. fat | 70. wood |
| 71. glass | 72. gold |
| 73. iron | 74. sea |
| 75. house | |

Bilingual (elicited by means of Arabic or English words)

76. name	77. light
78. rough	79. smooth
80. young	81. weak
82. oil	83. wind
84. louse	85. animal
86. color	87. morning
88. month	89. week
90. year	91. friend
92. hearing	93. interpreter
94. school	95. class
96. teacher	97. director
98. shout	99. enemy
100. police	101. judge
102. mother	103. father
104. married	105. person
106. poor	107. rich
108. cook	109. life
110. dead	111. kill
112. dream	113. work
114. play	115. sports
116. party	117. birthday
118. age	119. buy
120. sell	121. number
122. problem	123. understand
124. love	125. ignore
126. smell	127. visit
128. talk	129. laugh
130. holiday	131. story
132. crazy	133. lazy
134. responsible	135. ask
136. (tell a) lie	137. yes
138. true	139. correct
140. good	141. bad
142. happy	143. sad
144. afraid	145. tense
146. relaxed	147. hot
148. early	149. late
150. easy	151. difficult
152. start	153. finish
154. continue	155. what?
156. where?	157. who?
158. always	159. many
160. some	161. new
162. other	163. because
164. if	165. with

- 166. family
- 168. peace
- 170. law

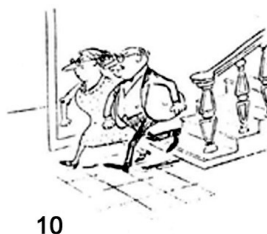
- 167. pay
- 169. free (no cost)
- 171. tired

Supplemental lists

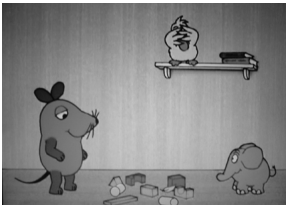
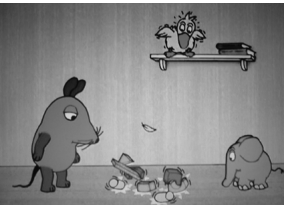
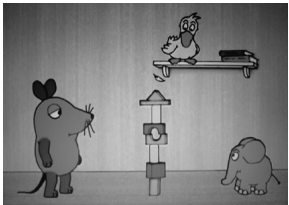
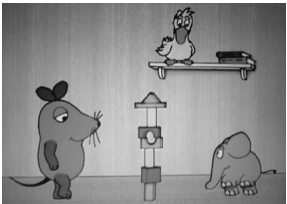
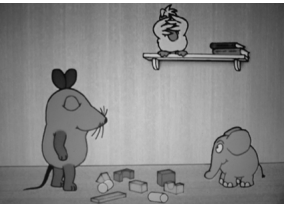
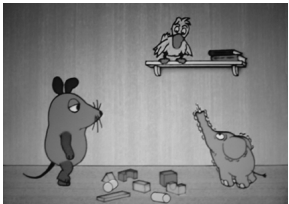
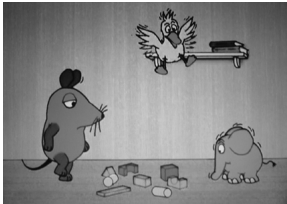
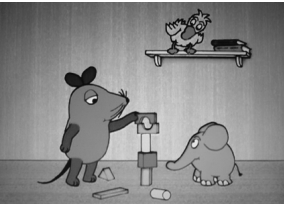
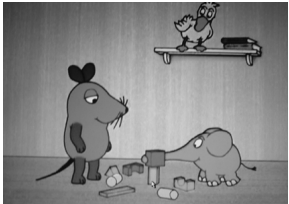
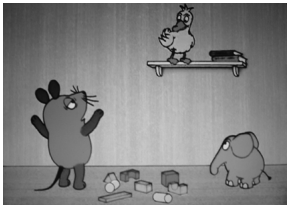
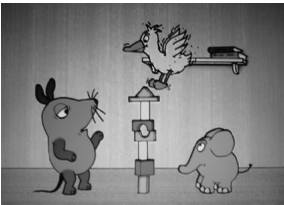
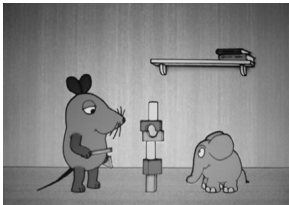
- 172. three
- 174. ten
- 176. Wednesday
- 178. Syria
- 180. Iraq
- 182. mosque
- 184. Muslim

- 173. eight
- 175. Monday
- 177. Saturday
- 179. Egypt
- 181. Turkey
- 183. devil
- 185. Christian

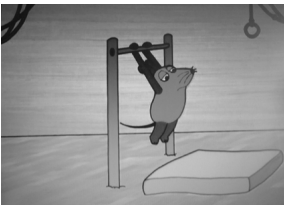
Appendix C: Stories used for elicitation of perspective

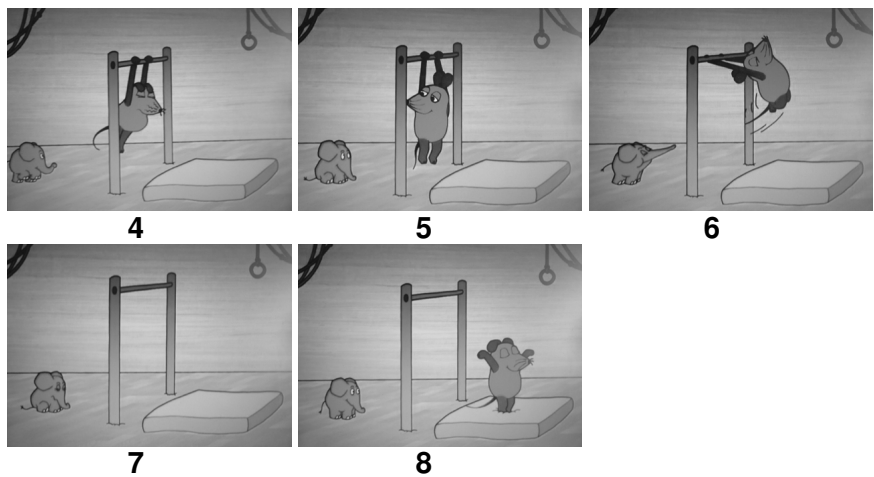


Boy story (Sempé)

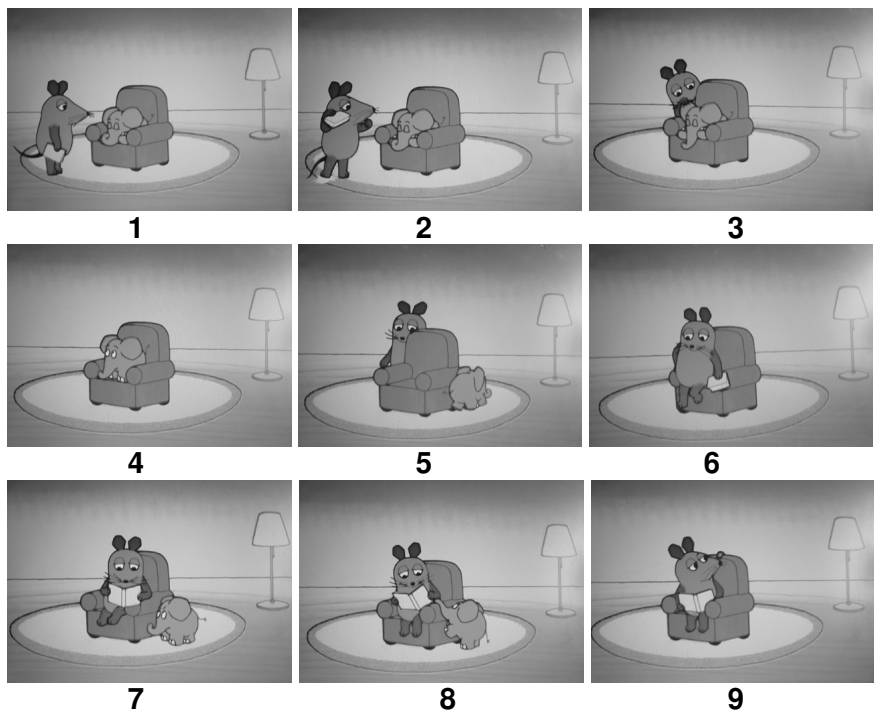


Mouse stories: blocks



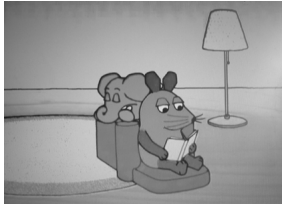


Mouse stories: horizontal bar





10

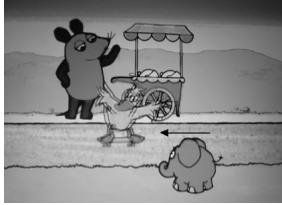


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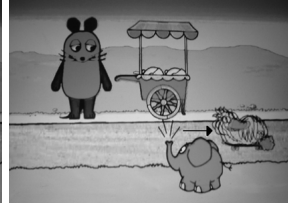
Mouse stories: chair



1



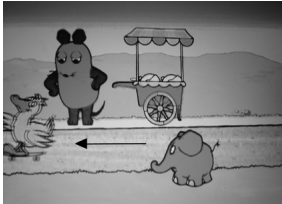
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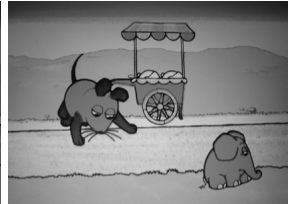
3



4



5



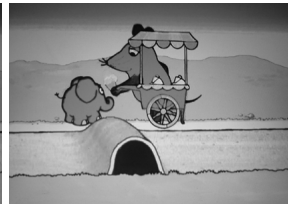
6



7



8

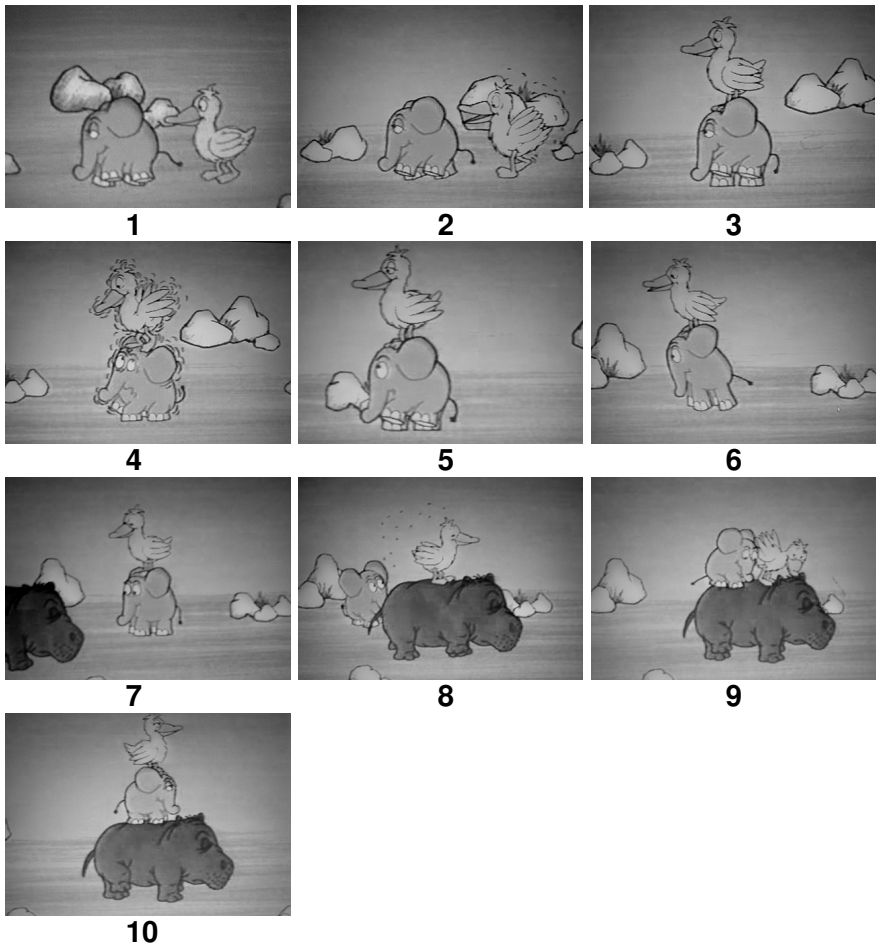


9



10

Mouse stories: ice-cream



Mouse stories: duck and elephant

List of sign language names and abbreviations

Adamorobe Sign Language (AdaSL)
American Sign Language (ASL)
Australian Sign Language (Auslan)
Austrian Sign Language (*Österreichische Gebärdensprache*, ÖGS)
Brazilian Sign Language
British Sign Language (BSL)
Catalan Sign Language (*Llengua de Signes Catalana*, LSC)
Chinese Sign Language (CSL)
Danish Sign Language (DSL)
Finnish Sign Language (FSL)
Flemish Sign Language (*Vlaamse Gebarentaal*, VGT)
German Sign Language (*Deutsche Gebärdensprache*, DGS)
Greek Sign Language (GSL)
Indo-Pakistani Sign Language (IPSL)
Irish Sign Language (IrSL)
Israeli Sign Language (ISL)
Italian Sign Language (*Lingua dei Segni Italiana*, LIS)
Japanese Sign Language (*Nihon Syuwa*, NS)
Jordanian Sign Language (*Lughat al-Ishaara al-Urdunia*, LIU)
Kata Kolok
Kuwaiti Sign Language
Lebanese Sign Language (*Lughat al-Ishaara al-Lubnānia*, LIL)
Levantine Arabic Sign Language
Lybian Sign Language
Mexican Sign Language
New Zealand Sign Language (NZSL)
Nicaraguan Sign Language (NiSL)
Norwegian Sign Language (NSL)
Palestinian Sign Language
Quebec Sign Language (*Langue des Signes Québécoise*, LSQ)
Russian Sign Language
Sign Language of the Netherlands (*Nederlandse Gebarentaal*, NGT)
South African Sign Language (SASL)
Spanish Sign Language (*Lengua de Señas Española*, LSE)
Swedish Sign Language (SSL)
Tanzania Sign Language
Turkish Sign Language (*Türk İşaret Dili*, TİD)
Ugandan Sign Language (USL)
Venezuelan Sign Language (*Lengua de Señas Venezolana*, LSV)
Yemeni Sign Language

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Summary

Jordanian Sign Language (*Lughat al-Ishāra al-Urdunia*, LIU) is the sign language used in Jordan. The language has several dialects. The dialect described in this dissertation is that used at a residential school for the Deaf in Salt. LIU appears to be related to other sign languages in the Middle East, but none of these have been researched extensively.

Jordan has a little over 5 million inhabitants, more than half of whom are from Palestinian descent. The official language of Jordan is Arabic, but English is used widely among educated people. The grammar and vocabulary of the written form of Arabic taught in schools, which is known as Modern Standard Arabic, is very different from the vernacular spoken in the streets.

In Arab culture, disability has been traditionally regarded as something shameful, and a punishment of God. The attitude towards disabled people has, however, improved over the last 25 years, which has made it possible for rehabilitation services to be set up. No accurate figures on the number of deaf and hard-of-hearing people in Jordan are available, but a percentage of between 0.25% and 0.3% seems realistic. This would mean that Jordan counts between 15,000 and 20,000 people with a severe to profound hearing loss. More than half of these people have a hereditary, genetic hearing impairment, caused by the high incidence of consanguineous marriages in the Arab World. Most deaf people in Jordan are involved in manual labour, as interpreter services in higher education have only recently become available. Currently, around 50% of deaf children receive primary education, but only 0.2% finishes secondary education. Still, Jordan is the leading nation in the Middle East in terms of education for the Deaf.

The lack of education of Deaf people in the past has had an influence on the way LIU has developed. Extensive use of fingerspelling, for example, is absent. There are no initialized signs or sign names in LIU. Mouthing is used by different Deaf people to different degrees, but when it is used it is derived from the vernacular and never from the written form of Arabic taught in the schools. There appears to be some influence from Arabic on the word order of LIU, but this is found mostly among more educated signers. On the other hand, common cultural gestures, of which there are many in the Arab world, have readily been integrated into LIU.

This dissertation describes selected aspects of the grammar of LIU and puts them in a wider cross-linguistic context. Its aim is to contribute to our general knowledge of sign languages in the Middle East as well as to add to our understanding about the way different grammatical structures can be expressed in different sign languages.

Because of the scarcity of research into Arab sign languages, Chapter 2 is devoted to placing LIU in its wider regional perspective, by presenting the results of a lexical comparison between different varieties of sign languages used in the Middle East. The results show that different sign language varieties are related to each other to different degrees. Based on lexical similarity scores, the sign language varieties used in Jordan and Syria may be classified as the same language, but other varieties in the region are more divergent, and should probably be considered related languages. Mutual intelligibility testing and grammatical comparisons between these varieties are needed, however, to be able to make definitive claims about the number of sign languages in the Middle East and their relation to each other.

Chapter 3 presents a brief sketch of the grammar of LIU, in order to provide a background for the description of specific aspects of grammar in later chapters. This overview includes elements from the phonology, morphology and syntax of LIU. In several areas comparisons with the structure of Arabic are made. In general, the influence of Arabic on LIU seems to be limited to word order and mouthings.

Chapter 4 deals with negation in LIU. Negation in sign languages can be expressed by negative signs produced on the hands (manually) as well as by means of head movements and facial expressions (non-manually). In most sign languages described to date negation is expressed mainly non-manually, often by means of a headshake, while manual negative signs are optional. In contrast, LIU can be classified as a manual dominant language. This implies that it has a number of manual negative signs, which are the obligatory markers of negation, whereas non-manual negative markers are optional. This pattern is uncommon cross-linguistically.

Chapter 5 describes possessive constructions in LIU. There are two main types of possessive constructions. The first type involves the sign SELF, which occurs as a possessive pronoun in attributive possessive constructions (e.g. “his book”) and also with the meaning “belong” in predicative possessive constructions (e.g. “The book belongs to John.”). The second type involves the sign EXIST, which can be translated as “have”. The use of an existential marker in possessive constructions is common in both spoken and sign languages. The signs SELF and EXIST can also be used in other contexts in LIU and can have emphatic meaning. In general, there are striking similarities between possessive constructions across different sign languages and LIU fits well into the patterns described for many other sign languages.

Chapter 6 analyzes manual simultaneity in LIU, a phenomenon which is especially common in younger LIU signers. There are several types of constructions in which the two hands form different signs simultaneously. A phonological rule restricting the movement of the two hands in

simultaneous constructions is proposed. According to this rule manual simultaneity can only take place when at least one of the hands makes no lexically specified movement, or when the movement of the two hands is symmetrical. It is suggested that this rule may turn out to be universal for sign languages. Although all the examples presented from LIU adhere to this phonological rule, LIU appears to allow for a wider range of simultaneous constructions than other sign languages previously described.

Manual simultaneity appears to have different functions, although these are not always completely clear. Thus, simultaneity can be iconic in the sense that two things happening at the same time are represented on different hands. It can also show that two signs belong together, for example when a signer simultaneously articulates the sign for an entity on one hand while localizing that entity by means of a pointing sign on the other hand. In complex phrases, simultaneity may be used to clarify the syntactic structure, by showing which elements in the sentence belong together. Other functional explanations that have been suggested for simultaneity in other sign languages, such as foregrounded information being expressed on the dominant hand and backgrounded information on the non-dominant hand, do not seem to hold true in LIU. In general, simultaneity in LIU has many characteristics in common with other sign languages, both in form and function, but also has a few complex structures that appear unique to this language.

Chapter 7 deals with the use of signing perspective in narrative discourse. Signers can choose to tell a story from a 'neutral' perspective as narrator, or they can choose to become, as it were, part of a story by expressing the perspective of one or more of the characters in the story. Different sign languages appear to differ in the relative predominance of either character or narrator perspective.

LIU story-tellers differ in their use of perspective, although the more skilled story-tellers predominantly use character perspective. These signers identify with different characters in the story, frequently switching from one character to another. These switches are not normally marked by means of body-shift, as is common in many Western sign languages, but by lexically introducing the character whose perspective is taken. In addition, non-manuals play an important role in this process. The introduction of character perspective by means of lexical signs has also been described for a few other non-Western sign languages.

Spatial lay-outs, which indicate where a character in a story is localized, do not appear to be as important or consistent in LIU as in most Western sign languages. Pointing to a location in space to establish spatial relationships is relatively uncommon in LIU narratives, and when a signer chooses to explicitly localize the characters in a story, this is not always

done consistently. This inconsistency may be linked to the fact that character perspective is introduced lexically. Therefore, the identification of the character whose perspective the signer has taken on is not dependent on the spatial set-up.

Signers can also express multiple perspectives simultaneously. In the LIU narratives some extremely complex constructions have been found, in which signers express up to three different perspectives simultaneously. Such complex constructions are usually considered a hallmark of older sign languages, whereas the predominant use of character perspective has been associated with younger sign languages. In the area of perspective, then, LIU appears to have characteristics of both an older and a younger sign language.

Chapter 8 puts the results from the previous chapters in a broader perspective. In particular, it compares the characteristics of LIU with those of other sign languages, focusing on the use of space, non-manuals and the use of simultaneity. An important question that is addressed in this context is in how far the age of a sign language can be deduced from grammatical properties of the language. It appears that some of the similarities between the grammars of different, unrelated sign languages may be due to the fact that sign languages in general are relatively young languages. It is less obvious, however, whether grammatical differences between sign languages are also related to age differences, as has been suggested by some researchers. Young sign languages are expected to show less structural complexity, more iconicity, and more use of character perspective than older sign languages. Some aspects of LIU grammar, however, suggest that the idea of a continuum in the development of grammatical structures may need to be revised. On the one hand, the fact that LIU signers use a great deal of character perspective, and are not always consistent in spatial set-ups, may support the idea that LIU is a young sign language. On the other hand, signers also use complex simultaneous constructions and multiple-perspective constructions, that is, grammatical features which are expected to occur in older sign languages. Research into village sign languages similarly shows that the relationship between language age and grammatical properties is not as clear-cut as sometimes assumed. Rather, it seems that different languages follow different developmental paths. More research into non-Western sign languages, both urban and village sign languages, is needed, however, to be able to make typologically relevant claims about sign language grammar and the way it develops.

Samenvatting

Jordaanse Gebarentaal (*Lughat al-Ishāra al-Urdunia*, LIU) is de gebarentaal die gebruikt wordt in Jordanië. De taal heeft diverse dialecten. Het dialect dat in dit proefschrift wordt beschreven, wordt gebruikt op een internaat voor doven in Salt. LIU vertoont verwantschap met andere gebarentalen in het Midden-Oosten, maar geen van deze andere talen is uitgebreid geanalyseerd.

Jordanië heeft iets meer dan 5 miljoen inwoners, van wie meer dan de helft van Palestijnse afkomst is. De officiële taal van Jordanië is Arabisch, maar Engels wordt veel gebruikt onder hoogopgeleiden. De grammatica en het lexicon van de geschreven variant van het Arabisch, die op scholen wordt onderwezen en wordt aangeduid als Modern Standaard Arabisch, verschilt erg van de informele spreektaal.

In de Arabische cultuur wordt een handicap traditioneel gezien als iets dat schande brengt en zelfs als een straf van God. De manier waarop tegen gehandicapten wordt aangekeken is echter sterk verbeterd in de afgelopen 25 jaar. Hierdoor is het mogelijk geworden om integratie projecten op te zetten. Er bestaan geen nauwkeurige cijfers met betrekking tot het aantal doven en slechthorenden in Jordanië, maar een percentage van tussen de 0,25 en 0,3% is een realistische schatting. Dit zou betekenen dat er in Jordanië tussen de 15.000 en 20.000 mensen wonen die zwaar slechthorend of volledig doof zijn. Meer dan de helft van deze mensen heeft een erfelijke vorm van doofheid, die wordt veroorzaakt door het hoge percentage huwelijken tussen familieleden in de Arabische wereld. De meeste doven in Jordanië doen ambachtelijk werk, omdat voorzieningen voor doventolken in het hoger onderwijs nog niet zo lang geleden tot stand zijn gekomen. Op dit moment krijgt ongeveer 50% van de dove kinderen onderwijs op basisschoolniveau, maar slechts 0,2% maakt de middelbare school af. Toch heeft Jordanië een voorbeeldfunctie in het Midden-Oosten waar het gaat om onderwijs voor doven.

Het gebrek aan onderwijs voor doven in het verleden heeft invloed gehad op de manier waarop LIU zich heeft ontwikkeld. Vingerspelling, een van de gesproken taal afgeleid hulpmiddel waarbij elke letter van het woord wordt gespeld, wordt bijvoorbeeld niet op grote schaal gebruikt. Er zijn ook geen gebaren of naamgebaren in LIU die gemaakt worden met een handvorm die is afgeleid van de eerste letter van het geschreven woord. Mondbeelden van Arabische woorden worden door verschillende Doven* in

* Als het woord “doof” met een kleine letter wordt geschreven duidt het op mensen die een slecht of niet kunnen horen. Als het met een hoofdletter is geschreven

verschillende mate gebruikt, maar zijn altijd afgeleid van de gesproken variant van het Arabisch en nooit van de geschreven taal die op scholen wordt onderwezen. De woordvolgorde van LIU lijkt in zekere mate te zijn beïnvloed door het gesproken Arabisch, maar dit is vooral het geval onder de hoger opgeleide Doven. Culturele gebaren, die ook onder horenden in de Arabische wereld worden gebruikt, zijn wel vaak opgenomen in LIU.

Dit proefschrift beschrijft een aantal aspecten van de grammatica van LIU en plaatst deze in een breder kader door ze te vergelijken met andere gebarentalen. Zulk taalvergelijkend onderzoek wordt ook wel taaltypologie genoemd. Het doel is om bij te dragen aan de algemene kennis van gebarentalen in het Midden-Oosten, maar ook om iets toe te voegen aan de kennis van de manier waarop verschillende grammaticale constructies kunnen worden uitgedrukt in verschillende gebarentalen.

Aangezien er maar heel weinig onderzoek is gedaan naar Arabische gebarentalen, is Hoofdstuk 2 gewijd aan de plaats van LIU in een internationaal perspectief. De woordenschat van verschillende varianten van gebarentalen die gebruikt worden in het Midden-Oosten wordt hierin vergeleken. De resultaten laten zien dat deze varianten in verschillende maten aan elkaar verwant zijn. Als we kijken naar de overeenkomsten en verschillen tussen de gebaren, lijken de gebarentaal varianten die gebruikt worden in Jordanië en Syrië dialecten van dezelfde taal te zijn, maar andere varianten in de regio tonen minder overeenkomsten en zijn waarschijnlijk verwante talen. Het is echter ook nodig om te testen in hoeverre Doven uit de verschillende landen elkaar begrijpen en de grammatica's van deze varianten te vergelijken om duidelijke uitspraken te kunnen doen over het aantal gebarentalen in het Midden-Oosten en de manier waarop zij verwant zijn.

Hoofdstuk 3 geeft een kort overzicht van de grammatica van LIU als achtergrond voor de beschrijving van specifieke aspecten van die grammatica in latere hoofdstukken. Dit overzicht omvat elementen uit de fonologie, morfologie en syntaxis van LIU. Op verscheidene punten worden vergelijkingen gemaakt met de structuur van het Arabisch. Over het algemeen is de invloed van het Arabisch op LIU beperkt tot woordvolgorde en mondbeelden.

Hoofdstuk 4 gaat over ontkenning in LIU. Ontkenning kan in gebarentalen worden uitgedrukt door middel van handgebaren (manueel) en door middel van hoofdbewegingen en gezichtsuitdrukkingen (niet-manueel). In de meeste gebarentalen die tot nu toe beschreven zijn, wordt ontkenning vooral op een niet-manuele manier uitgedrukt, vaak door hoofdschudden, en

verwijst het naar mensen die een Dove identiteit hebben, gebarentaal gebruiken en een onderdeel zijn van de Dovengemeenschap.

zijn handgebaren die ontkenning uitdrukken optioneel. LIU kan echter worden geclassificeerd als een taal waarin handgebaren de belangrijkste component van ontkenning vormen. Er zijn namelijk verscheidene negatieve handgebaren, die verplicht zijn in ontkenkende zinnen, terwijl niet-manuele vormen van ontkenning optioneel zijn. Dit patroon komt weinig voor in andere onderzochte gebarentalen.

Hoofdstuk 5 beschrijft constructies die bezit aanduiden in LIU. Bezitsconstructies kunnen worden onderscheiden in twee hoofdsoorten. De eerste soort wordt gemaakt met het gebaar ZELF, dat als een bezittelijk voornaamwoord gebruikt wordt in attributieve bezitsconstructies (bijv. “zijn boek”) en ook met de betekenis “van” voorkomt in predicatieve bezitsconstructies (bijv. “Het boek is van Jan.”) De tweede soort wordt gemaakt met het gebaar BESTAAN, dat ook vertaald kan worden als “hebben”. Zowel in gesproken als in gebarentalen komt het vaak voor dat een woord met de betekenis “bestaan” ook gebruikt kan worden in bezitsconstructies. De gebaren ZELF en BESTAAN worden ook in andere contexten gebruikt in LIU en kunnen beide een emphatische betekenis hebben. Over het algemeen gesproken zijn er opvallende gelijkenissen tussen bezitsconstructies in verschillende gebarentalen en past LIU goed in het patroon dat beschreven is voor veel andere gebarentalen.

Hoofdstuk 6 analyseert het gelijktijdig gebruik van de twee handen (manuele simultane constructies) in LIU, iets dat vooral voorkomt onder jongere gebaarders van LIU. Er zijn verschillende constructies waarin de twee handen tegelijkertijd verschillende gebaren vormen. In dit hoofdstuk wordt een fonologische regel voorgesteld die het bewegen van de twee handen in simultane constructies beperkt. Volgens deze regel mag een simultane constructie alleen plaatsvinden als één van beide handen geen lexicaal gespecificeerde beweging maakt, of als de beweging van beide handen symmetrisch is. Er wordt gesuggereerd dat deze regel voor alle gebarentalen geldt. Hoewel alle voorbeelden uit LIU zich aan deze regel houden, lijkt LIU een breder scala aan simultane constructies toe te staan dan andere gebarentalen die tot nu toe beschreven zijn.

Manuele simultane constructies lijken verschillende functies te hebben, al zijn deze niet altijd even duidelijk. Zo kunnen simultane constructies iconisch zijn in de zin dat twee situaties die zich tegelijkertijd afspelen worden weergegeven door de twee verschillende handen. Ze kunnen ook laten zien dat twee gebaren bij elkaar horen, bijvoorbeeld wanneer een gebaarder het gebaar voor een voorwerp of persoon maakt met de ene hand, terwijl dat voorwerp of die persoon tegelijkertijd ergens gelokaliseerd wordt met behulp van een wijsgebaar gevormd door de andere hand. In complexe zinnen kunnen simultane constructies gebruikt worden om de syntactische structuur te verduidelijken, door te laten zien welke

elementen van de zin bij elkaar horen. Andere functionele verklaringen die zijn gegeven voor simultane constructies in andere gebarentalen, zoals het idee dat informatie waar de nadruk op ligt door de dominante hand (de rechterhand voor rechtshandigen, de linker- voor linkshandigen) geproduceerd wordt, terwijl achtergrond informatie door de niet-dominante hand wordt geproduceerd, lijken niet te kloppen voor LIU. Over het algemeen vertonen simultane constructies in LIU veel overeenkomsten met andere gebarentalen, zowel in vorm als in functie, maar er zijn ook een aantal complexe structuren die uniek lijken voor deze gebarentaal.

Hoofdstuk 7 behandelt het gebruik van perspectief in verhalen. Gebaarders kunnen ervoor kiezen om een verhaal te vertellen vanuit een ‘neutraal’ perspectief als verteller, of als het ware deel te worden van het verhaal door het te vertellen vanuit het perspectief van één of meerdere personages uit het verhaal. Dit is te vergelijken met het gebruik van directe versus indirecte rede in gesproken talen. Gebarentalen verschillen in de mate waarin zij voorkeur geven aan karakterperspectief dan wel vertellersperspectief.

LIU-gebaarders die verhalen vertellen, verschillen in hun gebruik van perspectief, maar de betere vertellers gebruiken vooral karakterperspectief. Deze gebaarders identificeren zich met verschillende personages uit het verhaal en wisselen regelmatig van het ene personage naar het andere. Deze wisselingen worden meestal niet aangeduid met behulp van een rotatie van het lichaam, zoals dat gewoonlijk het geval is in veel westerse gebarentalen, maar door het personage wiens perspectief wordt aangenomen te introduceren met behulp van een gebaar. Ook spelen niet-manuele elementen een belangrijke rol in dit proces. De introductie van karakterperspectief door middel van lexicaal gebaren is ook beschreven voor een paar andere niet-westerse gebarentalen.

Ruimtelijke lay-outs, die bepalen waar een personage in een verhaal gelokaliseerd is, lijken in LIU niet zo belangrijk of constant te zijn als in de meeste westerse gebarentalen. Het wijzen naar een bepaald punt in de ruimte om ruimtelijke relaties te leggen komt vrij weinig voor in verhalen in LIU en als een gebaarder er voor kiest om de personages uit een verhaal expliciet te lokaliseren, gebeurt dit niet altijd op een consequente manier. Deze inconsequentie kan worden verklaard door het feit dat karakterperspectief meestal lexicaal geïntroduceerd wordt. Daardoor is de identificatie van het personage wiens perspectief de gebaarder aangenomen heeft niet afhankelijk van de ruimtelijke lay-out.

Gebaarders kunnen ook verschillende perspectieven tegelijkertijd uitdrukken. In de LIU verhalen kunnen soms zeer complexe constructies worden aangetroffen waarin gebaarders tot drie verschillende perspectieven tegelijkertijd weergeven. Zulke complexe constructies worden meestal

gezien als kenmerkend voor oudere gebarentalen, terwijl het overwegende gebruik van karakterperspectief wordt beschouwd als een kenmerk voor jongere gebarentalen. Op het gebied van perspectief lijkt LIU dus zowel kenmerken van een oudere als van een jongere gebarentaal te hebben.

Hoofdstuk 8 plaatst de resultaten van de voorgaande hoofdstukken in een breder perspectief. In het bijzonder worden de kenmerken van LIU vergeleken met die van andere gebarentalen op het gebied van het gebruik van ruimte, niet-manuele markeringen en het gebruik van simultane constructies. Een belangrijke vraag waarop in dit verband wordt ingegaan is in hoeverre de leeftijd van een gebarentaal kan worden afgeleid van grammaticale eigenschappen van de taal. Het lijkt erop dat bepaalde overeenkomsten tussen de grammatica's van verschillende, niet-verwante gebarentalen veroorzaakt zouden kunnen zijn door het feit dat gebarentalen in het algemeen vrij jonge talen zijn. Het is echter minder duidelijk of grammaticale verschillen tussen gebarentalen ook gerelateerd zijn aan leeftijdsverschillen, zoals door bepaalde onderzoekers is beweerd. Er wordt dan aangenomen dat jonge gebarentalen minder ingewikkeld zijn qua structuur, meer iconiciteit bevatten, en meer karakterperspectief gebruiken dan oudere gebarentalen. Bepaalde aspecten uit de grammatica van LIU wijzen erop dat het idee van een continuüm in de ontwikkeling van grammaticale structuren wellicht herzien moet worden. Aan de ene kant zou het feit dat gebaarders van LIU veel karakterperspectief gebruiken en niet altijd even consequent zijn in het creëren van ruimtelijke lay-outs erop wijzen dat LIU een jonge gebarentaal is. Aan de andere kant gebruiken gebaarders ook complexe simultane constructies, waaronder constructies die meerdere perspectieven tegelijkertijd uitdrukken. Dit zijn grammaticale structuren die verwacht worden in oudere gebarentalen. Ook onderzoek naar dorpsgebarentalen, die heel oud kunnen zijn, maar zich toch in bepaalde opzichten gedragen als jonge gebarentalen, laat zien dat de relatie tussen de leeftijd van een gebarentaal en grammaticale eigenschappen niet zo duidelijk is als soms wordt gesuggereerd. Het lijkt er meer op dat verschillende talen zich langs verschillende wegen ontwikkelen. Meer onderzoek naar niet-westerse gebarentalen, zowel stedelijke als dorpsgebarentalen, is echter nodig om typologisch zinnige opmerkingen te kunnen maken over de grammatica van gebarentalen en de manier waarop zich die ontwikkelt.

Curriculum Vitae

Bernadet Hendriks (1972) studied General Linguistics at the Rijksuniversiteit Leiden (the Netherlands). After obtaining her MA (doctoraal) in 1995 she worked at the same university for about a year, both in free-lance capacity and as an employee. She received some intercultural training in the UK and in 1998 she went to Jordan and started working as a volunteer at the Holy Land Institute for the Deaf in Salt. Her main task was to describe the grammar of Jordanian Sign Language with the aim of making local teachers and other professionals more aware of the differences between the grammar of Arabic and that of Jordanian Sign Language, thus improving the communication with Deaf students. Her *Introduction into the grammar of Jordanian Sign Language* was published in 2004, with an Arabic translation published in 2006. Apart from doing research into the grammar of Jordanian Sign Language, she also taught Deaf students at the Institute, as well as participating in the creation of training courses for Deaf assistant teachers from surrounding Middle Eastern countries. At the end of 2004 she left Jordan and returned to the Netherlands, where she continued working on Jordanian Sign Language. In 2006 she temporarily worked at the Max Planck Institute for Psycholinguistics in Nijmegen (the Netherlands) with the sign language typology group. During this time a basic sign language course in Jordanian Sign Language was created which is currently used to train interpreters in Jordan. At the beginning of 2007 her PhD proposal was accepted by the Universiteit van Amsterdam and she started working on her dissertation as an external promovendus.